1. Legal Ad

    Documents:

        PB LEGAL AD 9-11-18.PDF

2. Agenda

    Documents:

        PB AGENDA 9-11-18.PDF

3. 222 St. John Street

    3.I. Report And Attachments

        Documents:

            ST. JOHN ST. - 222 (REPORT).PDF
            ST. JOHN ST. - 222 (REPORT ATTACHMENTS).PDF
            ST. JOHN ST. - 222 (APPLICANTS SUBMITTAL) 1 OF 4.PDF
            ST. JOHN ST. - 222 (APPLICANTS SUBMITTAL) 2 OF 4.PDF
            ST. JOHN ST. - 222 (APPLICANTS SUBMITTAL) 3 OF 4.PDF
            ST. JOHN ST. - 222 (APPLICANTS SUBMITTAL) 4 OF 4.PDF
            ST. JOHN ST. - 222 (PUBLIC COMMENT).PDF
            ST. JOHN ST. - 222 (PLANS) 1 OF 2.PDF
            ST. JOHN ST. - 222 (PLANS) 2 OF 2.PDF

    3.II. Additional Public Comment

        Documents:

            PUBLIC COMMENT - ASHLEY SANBORN 9-11-18.PDF
            PUBLIC COMMENT - BAILEY NUNAN 9-11-18.PDF
            PUBLIC COMMENT - BETH PROSSER 9-11-18.PDF
            PUBLIC COMMENT - GREG DURGIN 9-11-18.PDF
            PUBLIC COMMENT - ZACH BAROWITZ 9-11-18.PDF
            PUBLIC COMMENT - KATIE ORCUTT 9-11-18.PDF

4. 56 Hampshire Street

    4.I. Report And Attachments

        Documents:

            HAMPSHIRE ST. - 56 (REPORT).PDF
            HAMPSHIRE ST. - 56 (STAFF COMMENTS).PDF
            HAMPSHIRE ST. - 56 (APPLICANTS SUBMITTAL).PDF
            HAMPSHIRE ST. - 56 (PUBLIC COMMENT).PDF
            HAMPSHIRE ST. - 56 (PLANS).PDF

    4.II. Additional Public Comment

        Documents:

            PUBLIC COMMENT - GEORGE RHEAULT 9-10-18.PDF

5. Hope Avenue

5.I. Report And Attachments

Documents:

0 HOPE AVE - PB REPORT.PDF
HOPE AVE. (STAFF ATTACHMENTS).PDF
HOPE AVE. (APPLICANTS SUBMITTAL).PDF
HOPE AVE. (PLANS).PDF

6. 1185 Forest Avenue

6.I. Report And Attachments

Documents:

FOREST AVE. - 1185 (REPORT).PDF
FOREST AVE. - 1185 (STAFF ATTACHMENTS).PDF
FOREST AVE. - 1185 (APPLICANTS SUBMITTAL).PDF
FOREST AVE. - 1185 (PLANS).PDF

LEGAL ADVERTISEMENT - PORTLAND PLANNING BOARD

The Portland Planning Board will hold a meeting on Tuesday, September 11, 2018, Council Chambers, 2nd Floor, City Hall, 389 Congress Street. Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to planningboard@portlandmaine.gov

THERE IS NO WORKSHOP PORTION OF THIS MEETING

Public Hearing - 6:00 p.m. (Note change in time)

i. Level III Site Plan; Parking Garage; 190 and 222 St. John Street; Maine Medical Center, Applicant. (6:00 – 7:15 p.m. estimated time) The Board will hold a public hearing to consider a plan by Maine Medical Center for a parking garage at 190 and 222 St. John Street. The 812,797 sq. ft. garage is proposed to include 2,400 parking spaces, with 52 parking spaces in an adjacent surface lot. Access to the garage is proposed behind the existing building at 222 St. John and at the D Street intersection. The site lies within the Maine Medical Center Institutional Overlay Zone. The project is subject to the site plan standards of the land use code.

ii. Level III Subdivision/Site Plan and IZ Conditional Use Applications; 56 Hampshire Street; New Height Group LLC, Applicant. (7:15 – 8:00 p.m. estimated time). The Board will hold a public hearing to consider a proposal for the development of 30 residential condominium units with one retail space. Parking for 62 vehicles is also proposed. The proposed building is 3-6 stories with 64,377 sf in total. The site is in the India Street Form-based Code Zone (IS-FBC) and is subject to review under the subdivision, site plan, and affordable housing ordinances.

iii. Zoning Map Amendment to Residential R-3; Hope Avenue; Peter Bouchard, representing Estelle Estates, LLC., Applicant. (8:00 – 8:30 p.m. estimated time) The Planning Board will hold a public hearing to consider a map amendment to zone the 14-acre site at 0 Hope Avenue to the Residential R-3 zone. The zone change would allow for a planned residential development with 27 duplexes, consisting of 54 residential units, as identified under a 2001 Agreement between the City of Portland and the former owners Robert Adam and AJS Family Limited Partnership that enabled the land transfer to establish the Presumpscot River Preserve. The Planning Board will make a recommendation on the proposed zoning map amendment to the City Council.

iv. Level II Site Plan and Conditional Use Application; 1185 Forest Avenue; B & D ME Realty, LLC., Applicant. (8:30 p.m. estimated time) The Planning Board will hold a public hearing to consider a 1,333 sq. ft. addition to the existing car wash at 1185 Forest Avenue. The addition is for a convenience store, which will replace the existing store that will be demolished. A new canopy is proposed over the existing 8 gas pumps along with grading and repaving of the site. The site is in the B-2 and IL Zones and is subject to review under the site plan and conditional use standards for a major service station in the B-2 zone.

SEAN DUNDON , CHAIR - PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE

PLANNING BOARD

Sean Dundon, Chair
Brandon Mazer, Vice Chair
David Eaton
David Silk
Austin Smith
Maggie Stanley
Lisa Whited

AGENDA
PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will hold a meeting on Tuesday, September 11, 2018, ROOM 209, Council Chambers, 2nd Floor, City Hall, 389 Congress Street. **Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to** planningboard@portlandmaine.gov

THERE IS NO WORKSHOP PORTION OF THIS MEETING

PUBLIC HEARING – 6:00 p.m. (Note change in time)

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATIONS AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON AUGUST 14, 2018:

Workshop: Dundon, Mazer, Eaton, Silk, Stanley and Whited present; Smith absent.

Public Hearing: Dundon, Mazer, Eaton, Silk and Stanley present; Whited recused for Item 2 (arrived at 7:45 p.m.) and Smith absent.

4. REPORT OF DECISIONS AT THE MEETINGS HELD ON AUGUST 14, 2018:

i. Level III Subdivision/Site Plan and Conditional Use Applications; 56 Hampshire Street; New Height Group LLC, Applicant. Mazer moved and Stanley seconded a motion to table the item until a date to be determined. Vote: 5-0, Smith and Whited absent.

ii. Zoning Map Amendment to B-6 Height Overlay Map; 100 Fore Street; 100 Fore Street, LLC., Applicant. Mazer moved and Stanley seconded a motion to find that the proposed amendments to the B-6 Building Height Overlay and Building Overlay are consistent with the Comprehensive Plan and recommends adoption of the proposed amendment to the City Council. Vote: 5-0, Whited recused and Smith absent.

iii. Level III Site Plan Application, 28 Vannah Avenue, Walsh Engineering, Applicant.
Mazer moved and Stanley seconded a motion to waive the technical manual standard for percentage of compact spaces to allow 11 spaces on site. Vote: 6-0, Smith absent. Mazer moved and Stanley seconded a motion approve the subdivision with 3 conditions of approval. Vote: 6-0, Smith absent. Mazer moved and Stanley seconded a motion approve the site plan with six (6) conditions of approval (conditions 2 through 7, as written). Vote: 6-0, Smith absent.

5. NEW BUSINESS

i. Level III Site Plan; Parking Garage; 190 and 222 St. John Street; Maine Medical Center, Applicant. (6:00 – 7:15 p.m. estimated time) The Board will hold a public hearing to consider a plan by Maine Medical Center for a parking garage at 190 and 222 St. John Street. The 812,797 sq. ft. garage is proposed to include 2,400 parking spaces, with 52 parking spaces in an adjacent surface lot. Access to the garage is proposed behind the existing building at 222 St. John and at the D Street intersection. The site lies within the Maine Medical Center Institutional Overlay Zone. The project is subject to the site plan standards of the land use code.

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PLANNING BOARD REPORT
PORTLAND, MAINE

MMC Employee Garage & Associated Site Improvements
190 & 222 St. John Street
Level III Site Plan
Project #000207-2018
CBLs: 64-A-2, 64-A-8, 64-A-9, 64-A-11, 75-A-6, 74-A-7, 68-D-13, 68-D-14, 68-D-16
With off-site improvements at 64-A-1 and 68-D-3 and in the public right-of-way
Maine Medical Center, Applicant

Submitted to: Portland Planning Board Public Hearing Date: September 11, 2018	Prepared by: Nell Donaldson Date: September 7, 2018

I. INTRODUCTION

Maine Medical Center (MMC) appears before the Planning Board for a final hearing on their proposal to construct a 2,400 space employee parking garage with associated surface parking, landscaping, utilities, and right-of-way improvements at 190 and 222 St. John Street in the city's St. John/Valley Street neighborhood. The proposal is subject to the standards of the Maine Medical Center Institutional Overlay Zone (MMC IOZ) and qualifies for Level III site plan review under the city's land use code. A workshop was previously held on July 10, 2018. Advertisement of this hearing appeared in the *Portland Press Herald on* August 31 and September 3, 2018. In addition, 99 notices were sent to property owners within 500 feet and to the City's interested citizens list.

Applicant: Maine Medical Center
Consultants: David Senus, Woodard & Curran; Mark Wilcox, Winton Scott Architects; Randy Dunton, Gorrill-Palmer; Gretchen Guimarro, Michael Boucher Landscape Architects; Owen Haskell, Surveyor

II. REQUIRED REVIEWS

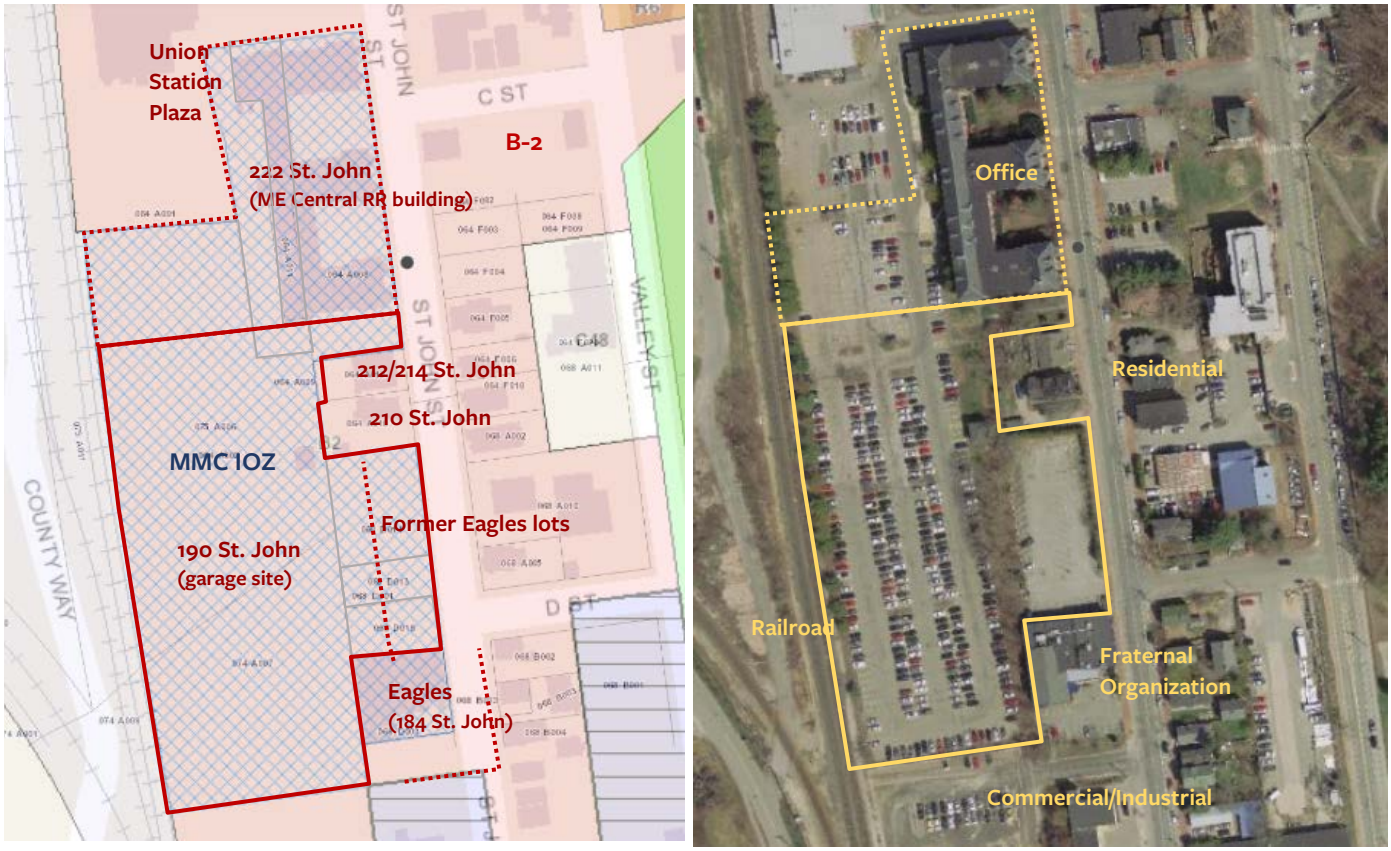
Waiver Requests	*Applicable Standards*
Bicycle parking – to allow 40 bicycle parking spaces on site, less than required.	*Section 14-526(a)4.b.* Bicycle parking for non-residential uses required at a ratio of 2 bike spaces:10 vehicular spaces required (for first 100 spaces), and 1:20 thereafter. *Supported by staff.*
Driveway width – to allow a 30' wide driveway from St. John St. at D St.	*Technical Manual,* Section 1.7.2.4. Two-way driveways to commercial developments shall be a maximum of 24' in width. *Supported by staff.*
Parking lot and parking space design – to allow spaces inside the garage at less than standard width (8.5')	*Technical Manual,* Section 1.14. Standard parking space dimensions shall be 9' x 18'. *Supported by the City's consulting traffic engineer (Attachment 2).*
Parking lot and space design – to allow aisles less than a 24' wide within the garage (23' 9.5") and greater than 24' in the adjacent surface lot (27' 4")	*Technical Manual,* Figures I-28 to I-31. Standard aisle width for two-way right angle parking shall be 24'. *Supported by the City's consulting traffic engineer (Attachment 2).*
Illumination levels – to allow an average illumination level in the north parking area of 1.9 footcandles and average and maximum illumination levels on the top deck of the garage of 2.4 and 6.4 footcandles respectively.	*Technical Manual,* Section 12.2.3. Average illumination levels shall not exceed 1.25 foot candles and maximum illumination levels shall not exceed 5 footcandles. *Supported by staff.*

Review	*Applicable Statute*
Institutional Overlay Zone	*Section 14-282*
Site Plan	*Section 14-526*

III. PROJECT DATA

Existing Zoning	Institutional Overlay Zone
Existing Use	Surface parking
Proposed Use	Structured and surface parking
Parcel Size	Approximately 5.5 acres (including 190 St. John and 222 St. John)

	Existing	*Proposed*	*Net Change*
Building Footprint	480 SF (190 St. John only)	92,334 SF	92,334 SF
Building Floor Area	960 SF (190 St. John only)	812,797 SF	812,797 SF
Impervious Surface Area	190,582 SF	176,076 SF	-14,506 SF
Parking Spaces	283	2,452	2,169
Bicycle Parking Spaces	0	40	40



Figures 1 & 2: Project site zoning context (left) and land use context (right).

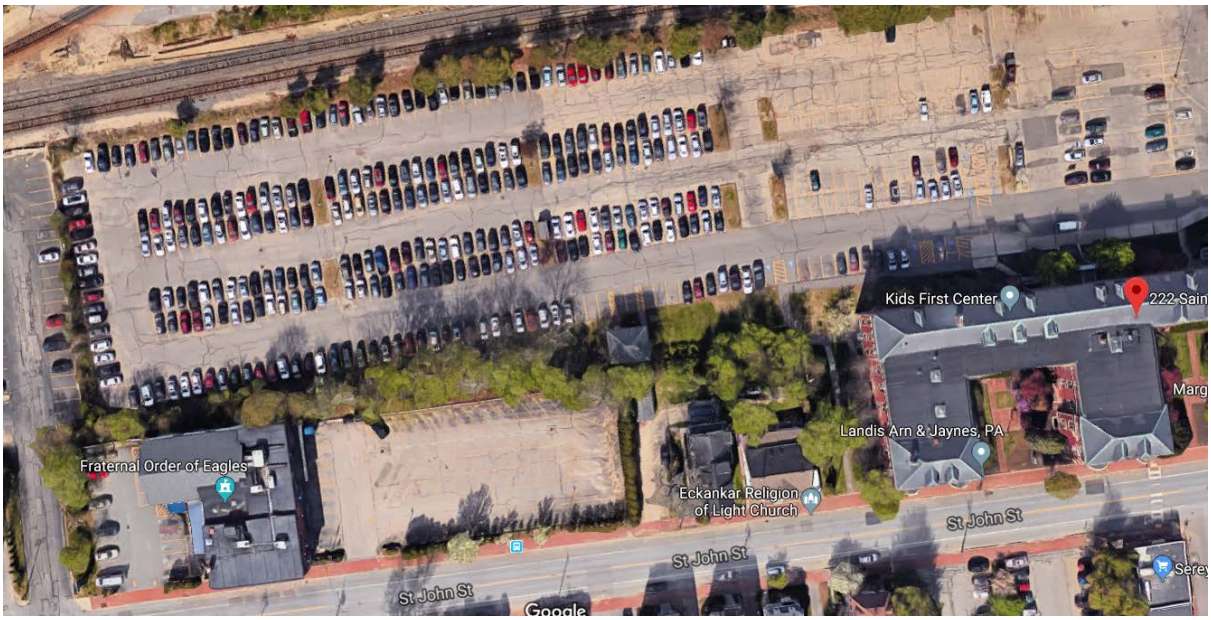
IV. CONTEXT

Maine Medical Center's approximately 6,000 existing employees currently park in a number of parking facilities, including lots and garages both on-campus and in remote locations in the vicinity. For almost 50 years, one of the hospital's primary employee parking locations has been a 1,274 space garage at the southeast corner of Gilman and Congress Streets. The Gilman garage was originally permitted in the 1970s and is now nearing the end of its useful life. For this reason, MMC has been planning for the construction of a replacement employee garage for several years, with the goals of eliminating a current deficit in parking supply, concentrating employee parking in one location, and accommodating projected employee growth. In their initial Institutional Development Plan (IDP) proposal, submitted in conjunction with their application for an Institutional Overlay Zone (IOZ), MMC proposed a new employee garage at the southwest corner of Gilman and Congress Streets, directly opposite Gilman Street from the existing employee garage. In response to strong concerns from neighbors about this location, MMC looked, through the IDP review process, for an alternate site. Ultimately, MMC was able to find an alternative in the St. John Street lot which is the

subject of this site plan application. The final IDP, submitted in October of 2017 and approved by the Planning Board, laid the framework for an employee garage in this location *(Attachment A)*.

The project site lies on the western side of the city's St. John/Valley neighborhood *(Figure 2)*. The site is bounded by a Portland Terminal Company railroad line and Mercy Hospital on the west, industrial and commercial uses to the south, residential properties and an auto service business to the east along St. John Street, and residential and commercial to the north. There are two residential properties with frontage on St. John Street, 210 St. John Street and 212/214 St. John Street, that are effectively surrounded by the site. The site also sits behind the Fraternal Order of Eagles at 184 St. John Street.

The site plan application includes proposed work across a number of existing parcels, including the Union Station Plaza parcels, the historic Maine Central Railroad office building parcels (which currently house surface parking used by MMC), three parcels used as surface parking by the adjacent Fraternal Order of Eagles and recently purchased by MMC, and the Eagles Lodge lot itself. In the site plan application, the Maine Central Railroad parcels, formerly under single ownership, have been divided into two lots under separate ownership, with a new lot line running perpendicular to St. John Street between the Maine Central Railroad building and the adjacent property at 212/214 St. John Street *(Figure 1)*. The northerly of these two lots, 222 St. John Street, has been designed around the Maine Central Railroad building and its parking. The southerly, with a new address of 190 St. John Street, is the site of the proposed garage. MMC holds rights to both under long-term lease agreements.



Figures 3 & 4: 190 St. John Street from the D Street intersection (left) and project site from above, showing existing MMC surface parking, Eagles' parking, and the Maine Central Railroad building at bottom right.

As noted above, the project site includes the Maine Central Railroad office building, which fronts St. John Street, as well as a small associated building which sits at the bottom of a slope behind 210 St. John Street. The Maine Central Railroad building is listed on the National Register; the second building has not been deemed historic.

The site lies within the MMC Institutional Overlay Zone, a zoning designation adopted into the land use code by the City Council in November of 2017. The IOZ establishes use and dimensional standards which govern proposed development by MMC within the zone, as well as a series of general development standards. Development within the IOZ which meets the criteria for site plan review is also subject to the site plan standards of the land use code.

V. PROPOSED DEVELOPMENT

The proposed MMC employee garage would include 2,400 parking spaces on nine floors of parking, one of which would be located below grade from St. John Street *(Figure 5)*. Vehicular access to the lowest two of these floors is proposed via an entrance north of the existing Maine Central Railroad building, the "Margarita's entrance." MMC has proposed access to the seven upper parking decks via a new driveway from St. John Street directly opposite D Street. In the revised plans, a direct entrance to 50 reserved spots in the first parking deck is also proposed from the Eagles Lodge driveway. This access would serve Eagles patrons only. All access to the garage would be controlled with an electronic reader system akin to an EZ pass.

The site plan also includes 52 additional surface parking spaces to the north of the garage, most of which would lie on the 222 St. John Street lot. A storage and treatment unit is proposed below this parking area. The plan also shows stormwater treatment on the east side of the building. Utilities are generally proposed from St. John Street.

The parking structure is proposed to sit back from St. John Street by approximately 120', with primary pedestrian access to Level 1 via concrete pathways to a door fronting St. John Street, and secondary pedestrian access to the ground level at the northeast corner of the building. The preliminary plans show landscaping around the site, including a broad landscaped area in the space between the garage's main pedestrian entrance and St. John Street.

Under the proposed plans, the garage would operate as a remote parking facility for MMC, meaning that staff would park and then access the main hospital campus, at a distance of approximately ¼ mile, by either shuttle or by foot. The proposed shuttle system would involve 13 shuttles operating at 15-minute headways during peak hours, with access to both the hospital's Bramhall entrance and to the future entrance on Congress Street. The site plan application includes modifications to the Margarita's entrance and to St. John Street to accommodate employee vehicles and shuttle traffic, as well as to various sidewalks in the area to accommodate pedestrian access between the garage and the hospital.

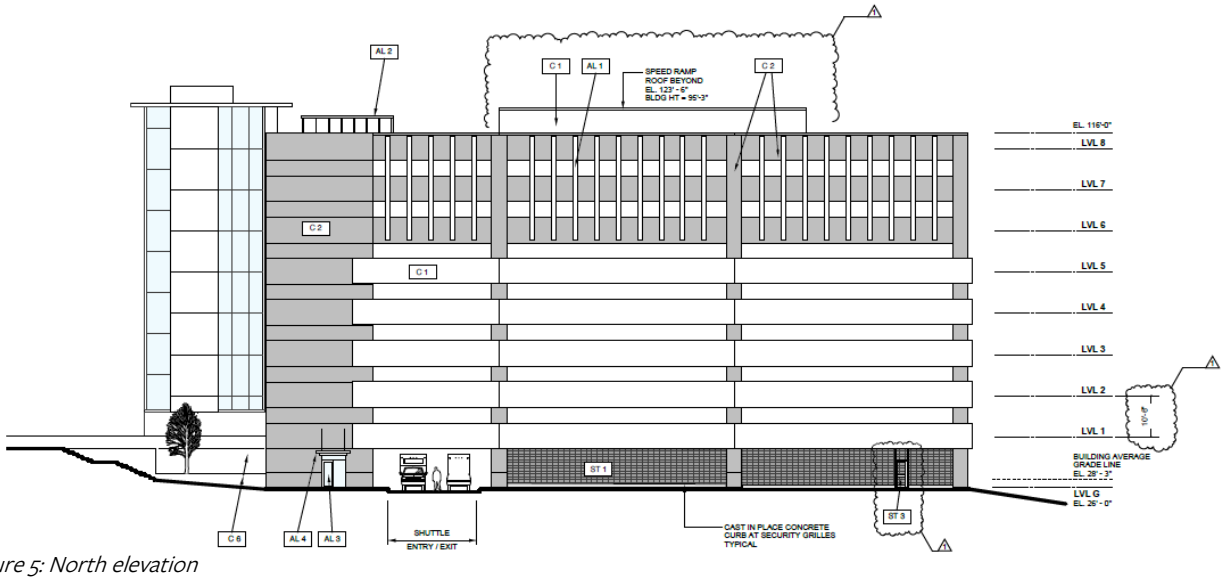
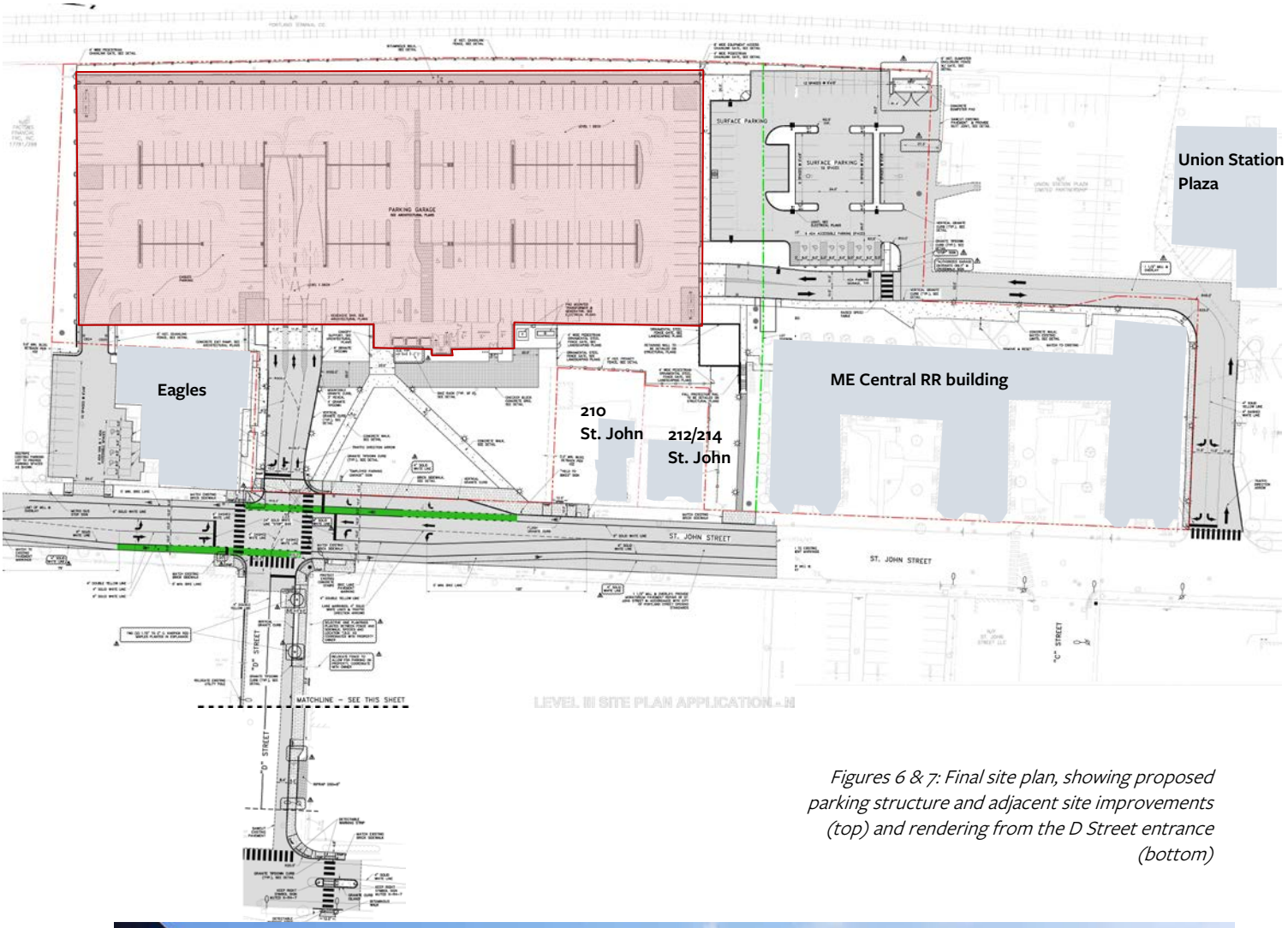


Figure 5: North elevation



Figures 6 & 7: Final site plan, showing proposed parking structure and adjacent site improvements (top) and rendering from the D Street entrance (bottom)

Figures 8 & 9: Rendering looking north from St. John Street at night (top) and south from the Maine Central Railroad building (bottom)

VI. PUBLIC COMMENT

The applicant hosted a neighborhood meeting on June 25, 2018 and has provided written notes as documentation *(Attachment V).* The notes reflect questions from attendees regarding traffic movement from nearby driveways to and from St. John Street, loss of on-street parking, plant selections, site grading, soils, and the possibility of alternative access points for construction vehicles. Public comments were also received at the Planning Board workshop held on July 11, 2018. At the workshop, three members of the public commented on traffic impacts, loss of trees, snow ban parking, safety and security issues, and the loss of on-street parking. Lastly, the Planning Division also received a number of public comments on the application *(Attachments PC 1 – PC 17).* These comments raise concerns regarding construction impacts to adjacent buildings, the design of the St. John Street bike lanes and signal timing at the proposed D Street garage entrance, the loss of on-street parking due to the proposed reconfiguration of St. John Street near the project site, the scale of the building and shadow impacts, backing maneuvers from nearby residential driveways, the TDM plan, snow ban parking, and the impacts of the D Street sidewalk construction.

It should be noted that a particular outreach effort has been made around the design of the proposed D Street sidewalk, which is shown in the final plans on the north side of D Street. There are several encroachments into the right-of-way in this area. In the design, all efforts have been made to avoid impacts to neighboring properties to the extent possible.

VII. RIGHT, TITLE, & INTEREST

The MMC IOZ is only applicable to properties to which MMC has right, title, or interest. As noted above, the application includes work proposed on a number of parcels, including three previously held by the Fraternal Order of Eagles but now owned by MMC. The plans also show work on lots originally held under single ownership by Cowcatcher, LLC, which have been split into two parcels, one retained by Cowcatcher (222 St. John Street) and one now owned by Caste Cow, LLC (190 St. John Street). MMC holds long-term land leases for both of these parcels and has provided evidence of rights to make improvements *(Attachment F)*.

In addition to the construction of the parking structure and associated infrastructure on lots to which MMC holds title or land lease, the plans include improvements to the Eagles lot, some grading on the 210 St. John Street lot, and some improvements to the Union Station Plaza parcel as well. Staff has suggested a condition of approval requiring documentation of rights to make improvements on these adjacent lots.

The project site is both subject to and benefits from several easements, including easements between the 190 and 222 St. John Street lots and access and stormdrain easements across the Union Station Plaza lot to the north of the site *(Attachment I)*. Staff has suggested a condition of approval requiring documentation of access and utility easements that are necessitated by the plans. These include access and utility easements between 190 St. John and the MMC-owned parcels, access easements between 190 St. John and the Eagles lot, and a drainage easement for stormwater infrastructure associated with the garage across the 222 St. John Street lot as well.

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided a description of the project team and a letter regarding their financial capacity *(Attachment J)*.

IX. ZONING ANALYSIS – INSTITUTIONAL OVERLAY ZONE REGULATORY FRAMEWORK

As noted above, the site lies within the Maine Medical Center Institutional Overlay Zone, which establishes use, dimensional, and development standards for MMC projects within its bounds. The project has been reviewed for conformance with these standards. Staff comments are below.

a. Use

Parking lots and parking garages are permitted uses within the IOZ.

b. Dimensional Requirements

The project meets requirements related to building height, length, and setbacks.

c. Design

New buildings within the IOZ are required to adhere to the design guidelines of the IDP, which are intended to promote campus cohesion, activation of the public-realm, neighborhood compatibility, pedestrian-scaled edges, the use of high quality materials, the integration of gateway features, and quality of long-views. In their final submittal, the applicant has provided elevations *(Plans 23 and 24)*, renderings *(Attachment AA)*, and a design narrative reflecting these guidelines *(Attachment E)*.

The proposed building is of significant size, approximately 480' long and almost 100' in height. The building itself is proposed with precast reinforced concrete of two tones, clear anodized aluminum windows in the stair tower and at the entrance, extruded aluminum fins, and black metal security grilles. The mass of the building is broken by the stair and elevator tower, which is also used to signify the main entrance from St. John Street.

In the final submittal, the applicant has provided material samples that address previous comments regarding the level of contrast between the proposed colors of the two precast concrete elements of the building composition. They have also extended the canopy at the main entrance, added bicycle parking to this area, and added windows to address previous concerns regarding street activation. Lastly, as requested, the applicant has modified the spacing on the spandrel panels so as to achieve a regular pattern of solid to void.

Caitlin Cameron, the city's Urban Designer, has documented the results of the city's review of the revised plans *(Attachment 1).* This review generally found that the design meets the design standards of the IDP. Outstanding comments can be summarized as follows,

> *Upon review, the sign design and branding is consistent with the new MMC sign master plan also submitted as part of this application. Staff commented that the hierarchy and design of this sign differs from those proposed elsewhere on campus – please clarify. Staff should verify this sign does not interfere with traffic sight lines.*

Staff has suggested a condition of approval to address the design of the proposed freestanding sign in conjunction with the proposed master sign plan.

d. Signs

Signs within the IOZ are required to conform to a unified, campus-wide signage plan and relate in proportion and character to building facades and adjacent street typology. In the final submittal, MMC has provided a draft sign plan *(Attachment Y).* Staff has reviewed this plan and provided the following comments:

> *No signs will be permitted on properties not owned by MMC (e.g. 1.b).*
>
> *There are concerns about sight line obstructions on several of the signs, including 1.a, CS.2, and EG.1a. Please provide a sight line analysis.*
>
> *There are concerns about the size of the signs in general. Could those proposed as 11' in height be brought to a more pedestrian scale (e.g. 8'?) There are particular concerns about the size of 4.a, which is replacing a much smaller sign, and 6.a. Both of these should be brought to a pedestrian scale.*
>
> *Eliminate one of the signs marked 5.b and reduce the size of the remaining to the scale of the existing sign*

Please indicate dimensions of CS.1 and method of illumination. At first blush, this sign appears out of scale.

The layout of EG.1a is inconsistent with other signs of similar purpose (e.g. ST.3a). Please provide some explanation.

Final review of the sign plan has been suggested as a condition of approval.

e. *Transportation*

The IOZ requires the submission of a TDM plan. Because MMC had not yet hired a TDM coordinator at the time of the preceding site plan review for the visitor garage and East Tower expansion, that site plan was approved with a condition that the applicant submit a TDM plan prior to issuance of a certificate of occupancy for the East Tower. In an effort to satisfy this condition, a TDM plan has been included within this application *(Attachment L)*. This most recent version of the TDM plan has been informed by MMC's newly-hired TDM coordinator, and includes a summary of current employee commuting behavior, an analysis of baseline employee parking demand, and a description of existing TDM measures employed by MMC. In the short term, the plan targets a reduction in MMC's parking demand/employee ratio of 2% (or approximately 50 spaces, assuming no change in the number of employees) and in the long term, the plan targets a 5% reduction (or 114 spaces, assuming no change in the number of employees). The plan lays out a series of strategies designed to achieve those targets, including full subsidies for transit users, implementation of a guaranteed ride home program, a reassessment of parking pricing in the mid-term, enhanced data collection, and improved education and incentives. Additionally, MMC has pledged in their TDM plan to participate in regional partnerships to improve employee travel choice. It is anticipated that the TDM plan will receive a targeted workshop before the Board in association with the Congress Street hospital building review.

Per the IOZ, parking requirements are to be established at the time of site plan review based on a parking study that examines campus-wide supply and demand. In their submittal, MMC speaks to existing and projected parking demand and supply in both their traffic and parking analysis and in their TDM plan *(Attachment L)*. Based on data provided in the IDP, in 2016, MMC hosted an average of 4,615 employees, students, and contractors on campus on a typical weekday, and served these employees, students, and contractors with a total of 2,027 on-campus and remote parking spaces *(Tables 1 & 2)*. These spaces include the existing lot at 222 St. John Street (the First Atlantic Lot, which will be replaced by the garage), the existing Gilman Garage (which will be demolished to make room for a new hospital building), and a number of lots and garages located remotely to campus. Given the total parking supply available to MMC in 2016 and the total average weekday employee population cited above, the hospital currently supplies parking at a ratio of .44 spaces/average weekday employee. Per the TDM plan, which speaks to a higher employee parking demand figure (2,250) as well as the *total* number of Bramhall campus employees (and not those on campus on an average weekday)(6,000), the existing parking demand per employee ratio is lower: .375. This is the figure cited in the plan as the baseline for future parking demand analysis.

According to the applicant's traffic and parking analysis, the hospital's existing parking system operates at or above capacity during weekday daytime hours. Per the TDM plan, MMC parking staff has estimated the existing employee parking deficit at 200-300 spaces. It should be noted that MMC acknowledges that a number of employees are currently using on-street spaces for all-day parking, and estimates that this accounts for approximately 200 occupied spaces in the neighborhoods surrounding the campus on an average weekday. For reference, the TDM plan cites an observed *total* parking demand, including patients and visitors, during weekday peak hours of 3,125. This figure is approximately 250 spaces higher than the 2,877 total parking spaces currently provided by the hospital.

Table 1: Existing and Projected MMC Employees, Students, and Contractors: Average Weekday

	2016	2026	Change
Shift 1	*3,640*	*3,900*	*260*
Shift 2	*210*	*220*	*10*
Shift 3	*520*	*550*	*30*
Total Employees	4,370	4,670	300
Med Students	100	110	10
Nursing Students	100	100	-
Other Students	20	25	5
Non-MFP Related Contractors	25	25	-
Total	*4,615*	*4,930*	*315*

Table 2: Existing and Projected Parking Facilities Used by MMC Employees

2016/2018		Post-Garage Construction	
First Atlantic Lot (222 St. John St.)	283 spaces	Employee Garage (190 St. John St.)	2,252 spaces*
Gilman Garage	1,274		
Sportsman Lot (905 Congress)	60		
Gateway Garage (181 High St.)	100		
Classic Lot (993 Congress St.)	97		
321 Brackett St.	9		
Forest Street Garage	178	To remain in use by MMC	178
7 Bramhall St.	26		26
On-Street Parking (estimated)	200	Not to remain in use by MMC	0
Total	*2,227 spaces*		*2,456 spaces*

* 200 spaces in the Employee Garage and adjoining surface lot will be allocated to the Eagles Lodge (50 spaces) and to tenants of 222 St. John (150 spaces)

The IDP and traffic submittals for this application also speak to future demand. The IDP estimates a projected increase of approximately 300 employees, students, and contractors on an average weekday over the next ten years. Per the applicant's traffic and parking analyses, approximately 500 to 600 additional employee parking spaces are required to meet projected demand associated with growth in employees. The TDM plan commits MMC to better data-keeping with respect to parking demand and supply in the future.

According to the applicant's submittal, the proposed garage has been designed to achieve multiple purposes with respect to the preceding figures: to address existing employee parking shortfalls experienced by the hospital, to consolidate a number of existing employee parking facilities in use by MMC, and to accommodate future projected parking demand. When completed, the structure and associated surface parking will bring the total employee parking supply to 2,456 spaces, or 200 spaces more than existing estimated employee parking demand.

It should be noted that the parking structure and adjacent surface lot have been designed to serve not only MMC, but tenants of the Maine Central Railroad building and the Eagles as well. Together, these secondary users are proposed to occupy approximately 200 spaces in the garage and adjoining surface lot. In the final submittal, the applicant has provided documentation as to the parking supply associated with 222 St. John, which is not anticipated to change as a product of the garage construction. The proposed parking for the Eagles Lodge will meet zoning requirements for places of assembly. The 50 Eagles spaces will be accommodated in a segregated area of the first floor of the garage, with access from a separate driveway on St. John Street. As this arrangement is specific to the use of the adjacent lot by the Eagles, staff has suggested a condition of approval that requires a reassessment of this arrangement at such time as the Eagles use changes.

f. Environment

The IOZ requires that development proposed by MMC be designed to integrate with the surrounding context. Review comments related to this standard can be found under site plan review below.

g. Mitigation Measures

The IOZ requires that MMC mitigate impacts to off-premise infrastructure in a manner proportionate to those impacts. Review comments related to this standard can be found under site plan review below.

h. Neighborhood Integration & Neighborhood Engagement

The IOZ also requires that MMC engage neighbors consistently through ongoing community engagement and through periodic and more intensive engagement during construction periods. MMC continues to hold regular expansion group meetings and use their website, www.mmc.org/modernization, to communicate with surrounding neighborhoods and the public more broadly.

i. Construction Management

The applicant has provided a revised construction management plan in the final submittal *(Attachment K)*. This construction management plan identifies points of contact, establishes a construction schedule, outlines measures to be taken to ensure public safety, and describes construction logistics. It should be noted that the final construction management plan includes provisions for quarterly updates, including updates on construction schedule, delivery impacts to traffic, off-hours work, and notice of impactful work, to the city and neighbors. The plan also includes provisions for pre-construction surveys of neighboring properties.

Tom Errico, the City's consulting traffic engineer, has reviewed the plan and writes,

> *Construction plans shall be provided for the roadway/signal work in St. John Street, D Street, and Valley Street…A condition of approval shall include development of a Construction Management Plan prior to any City Permit.*

A condition of approval has been suggested to address this comment.

j. Other

The IOZ also requires MMC to provide neighborhood parking during snow bans, much as the hospital currently does. In the final submittal, MMC has noted that it is "exploring ways to improve access to [snow ban parking.] For example, in the July newsletter sent to all neighborhood representatives, MMC requested feedback regarding MMC's proposed parking garage and asked specific questions about utilization, frequency of use, and preferred location in the future" *(Attachment EE).*

X. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527)

The application has been reviewed against the submittal requirements of the site plan ordinance. In the site plan submittal, MMC has identified several required state and federal permits, including a Maine Construction General Permit and an FAA Aeronautical Study for Determination of Hazard for height. All required documentation has been submitted.

XI. SITE PLAN REVIEW *(Section 14-526)*

The proposed development has been reviewed for conformance with the relevant review standards of the City of Portland's site plan ordinance. Staff comments are below.

1. *Transportation Standards*

a. *Impact on Surrounding Street Systems*

The applicant has projected traffic volumes entering and exiting the proposed garage and evaluated potential impacts to the adjacent roadway network. These projections are based largely on traffic counts at existing MMC employee parking facilities, the First Atlantic Lot at 222 St. John Street and the existing Gilman Garage, which will be replaced by the proposed employee garage. The analysis assumes that the proposed garage will experience much the same traffic pattern as these facilities, with the exception that the Gilman Garage peaks may shift modestly to account for the increased travel time associated with a walk or shuttle ride from the proposed parking structure to the hospital campus. The garage is projected to generate peak traffic from 6:00 to 7:00 AM (with 1,097 trip ends) and 4:15 to 5:15 PM (with 571 trip ends). The AM peak hour of the garage is offset significantly from the peak hour of the adjacent street, St. John Street, which experiences its peak hour from 7:30 to 8:30 AM. The projected PM garage peak is closer to the PM peak hour of St. John Street, which occurs between 4:00 and 5:00 PM.

Because the proposed garage is not technically anticipated to generate new traffic, but instead to shift existing traffic from other locations, no Traffic Movement Permit (TMP) is required. It is assumed that under the site plan review for the future Congress Street hospital building, the TMP requirement will be triggered.

As proposed, all of the vehicles parking on the ground level and first deck of the garage, including visitors to the Maine Central Railroad building and the Eagles, some MMC employees, and all shuttles providing access to and from the campus, would use the "Margarita's entrance" at the north end of the Maine Central building. All vehicles parking on the second deck and above would use a separate entrance directly off St. John Street at D Street. Given projected traffic volumes entering and exiting at D Street, MMC has suggested a traffic signal in this location. However, the traffic evaluation finds that the intersection of the garage entrance at D Street and St. John Street does not warrant a signal. As such, while a signal would be installed as a product of the plans, it would not be activated at time of completion. Tom Errico, the city's consulting traffic engineer, has reviewed the plans for this signal and writes,

> *A traffic signal is proposed at the St. John Street/D Street/Garage Driveway location. I support the installation of a traffic signal given vehicle volume conditions and anticipate pedestrian movements. I would note that the applicant is responsible for development of design plans and equipment specifications for review and approval by the City. All costs associated with the installation of the traffic signal is the responsibility of the applicant…The applicant is responsible for development of design plans and equipment specifications for review and approval by the City. All costs associated with the installation of the traffic signal is the responsibility of the applicant. The applicant will also be responsible for all data collection in association with activation of the traffic signal. I would recommend the initial monitoring effort occur after one week of opening and six months after opening (if needed). Additional monitoring efforts shall be determined following the review of the data collected after 6 months. I would note that the applicant shall be responsible for final activation under the supervision of City staff following a review and approval of the installation by City staff.*

A condition of approval has been drafted to address this comment.

The applicant has conducted capacity analyses at nearby intersections, and found that, in the post-development condition, movements at studied intersections are forecasted to operate at levels of service of C or higher during the AM and PM peak hours of the garage. This includes all approaches to the Congress Street/St. John Street and Congress Street/Valley Street intersections. The only level of service below C in the post-development condition is forecasted for eastbound vehicles exiting the Margarita's entrance during

the AM peak hour of the garage, when there will be heavy conflicting southbound volumes on St. John Street. Changes in shuttle routing may resolve this issue. Mr. Errico has reviewed the level of service analysis and writes,

> *During the TMP process, refinement of the model may be required. As noted in the applicant's response to comments, the pedestrian phasing at the Congress Street/St. John Street intersection is inefficient and a contributing factor to long vehicular delays and queues. In conjunction with this application, the traffic signal equipment shall be upgraded to allow for concurrent pedestrian phasing. Implementation shall take place prior to the opening of the garage....The applicant shall be responsible for traffic signal changes that would allow for concurrent pedestrian phasing at the Congress Street/St. John Street intersection. As part of this effort, the applicant shall be responsible for development of a plan for the Congress Street/Valley Street intersection under a traffic signal removal scenario. This plan shall include recommendations that provide for safe pedestrian movements. Additionally, the applicant shall coordinate with MaineDOT (providing supporting technical information) on approval of the traffic signal removal. If MaineDOT does not approve the removal, the applicant shall implement traffic signal equipment modifications at the Congress Street/Valley Street intersection to allow for the previously noted pedestrian concurrent phasing.*

A condition of approval has been suggested to address this comment.

It should be noted that, at the city's request, the applicant did pursue the possibility of providing access to the garage from Fore River Parkway as a means of minimizing impacts to Congress, St. John, and Valley Streets *(Attachment L).* This access would require a railroad crossing. The analysis identified grade and right, title, and interest issues as obstacles to direct access from Fore River Parkway, but suggested that a connection through the Mercy Hospital campus is the most feasible of the three options studied. This connection would require easements from both Mercy Hospital and the Portland Terminal Company. It could also have significant implications for Mercy's long-term plans. While this connection is therefore not being pursued at this time, it is staff's understanding that the garage has been designed in such a manner so as not to preclude a connection should it be possible at some point in the future.

b. Access and Circulation

As noted above, primary vehicular access is proposed at a modified curb cut at the intersection of St. John and D Street. Secondary access is proposed at an existing access point north of the Maine Central Railroad building, the "Margarita's entrance." Tenants of the Maine Central Railroad building, the Eagles, some MMC employees, and shuttles destined for the ground floor and first deck of the garage are proposed to use the Margarita's entrance. The remainder of the employees would use the primary D Street entrance, which, as noted above, will operate with an EZ pass type of card reader system. The D Street entrance has been designed with three lanes, including a center lane which will function primarily as an egress lane. This lane has been designed to operate in reverse in emergency situations. Due to the three-lane configuration, the driveway is wider than allowed per the City's technical standards. A waiver is supported by staff.

In the final submittal, MMC has responded to Board concerns regarding the impact of garage traffic on nearby residences, particularly around the D Street intersection, which, in the post-development condition, will essentially function as a four-leg intersection with the garage entrance acting as the fourth leg. In their final submittal, MMC has noted that peak exiting traffic will generally occur during daylight hours, dropping off sharply after 7 pm *(Attachment DD).*

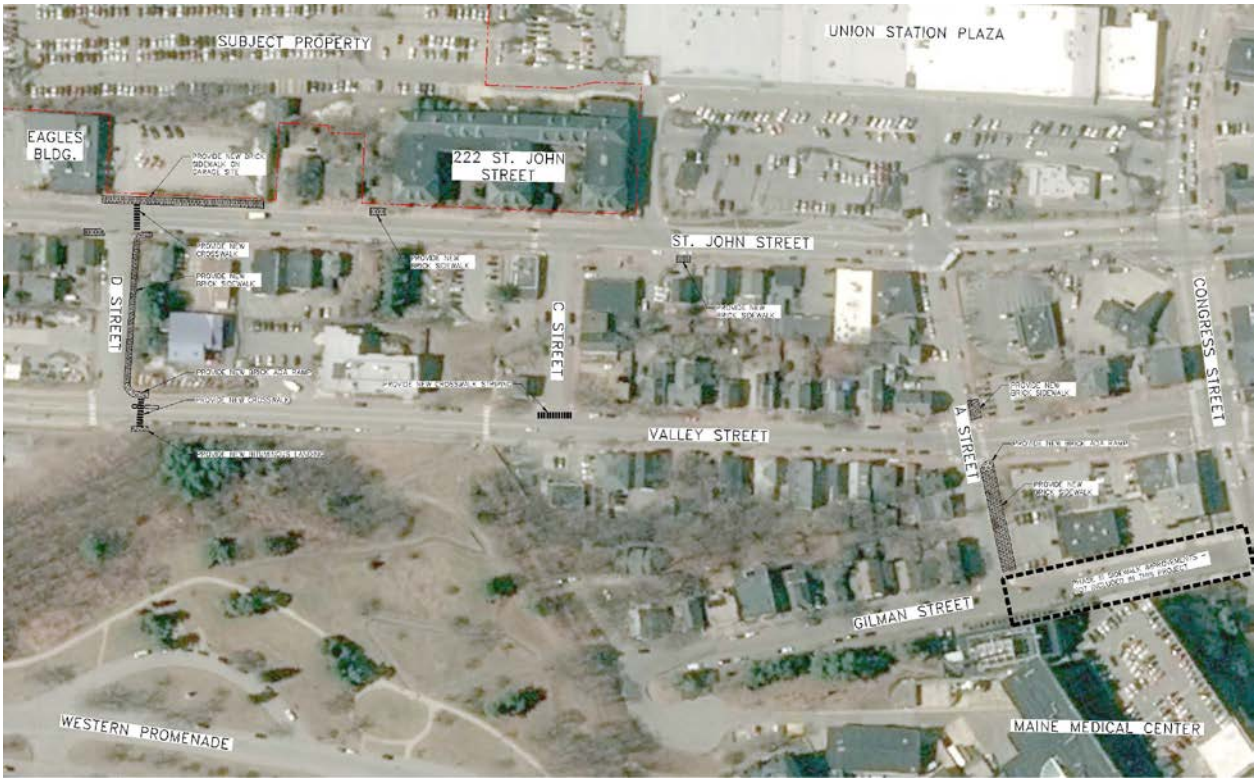


Figure 10: Proposed off-site pedestrian improvements

The final site plan site plan shows some significant changes to the configuration of St. John Street along the front of the site near the D Street entrance, including the addition of left-turn lanes in both the northbound and southbound directions and a southbound right-turn lane into the garage entrance. In order to accommodate these turn lanes, through movements, and bicycle lanes, the elimination of approximately 13 on-street parking spaces is proposed. As noted above, neighbors have raised concerns about this proposed loss of on-street parking. Neighbors have also raised concerns about access to and from adjacent residential driveways, particularly at 210 St. John and 212/214 St. John.

The applicant has proposed to provide shuttle service to the main hospital campus at 15-minute headways during peak hours. Given the garage's proximity to the main campus, however, there is a high likelihood that employees will walk between the proposed garage and the hospital. Pedestrians electing to walk would exit the garage at either the front door on the first parking deck or at the ground floor on the northeast corner of the building, and from there proceed either up the stairs adjacent to the Maine Central Railroad building or on a sidewalk around the building's north side. The final plans show concrete sidewalks, with site lighting, from all pedestrian entrances to public sidewalks on St. John Street.

From the internal sidewalk network, pedestrians could either traverse adjacent neighborhood streets or access the hospital via the Valley Street Trail through the Western Promenade. In order to improve pedestrian access, the plans show new sidewalks and curb ramps at both garage entrances, a new crosswalk at C Street and Valley Street, new brick sidewalk on the northerly side of A Street, and small areas of sidewalk repair on St. John Street *(Figure 10)*. In addition, a new 6.5' brick sidewalk is proposed on the north side of D Street, and a new crosswalk with median treatment is proposed at D Street and Valley Street near the base of the Valley Street Trail.

Bruce Hyman, the City's Transportation Program Manager, has reviewed the plans and writes,

> *Further revisions to the Site Layout and Material Plan 1 C-100 are to be made -*
>
> *The final Pavement Marking and Signage Plan(s) is to be revised and approved by DPW and the Planning Authority for corrections, including but not limited to correcting the striping around the refuge island on Valley Street, the bike lane pavement markings on St. John Street, and the "Yield to Bikes" sign*
>
> *Move label for CB30 on D Street to not obscure the light fixture*
>
> *Revise the design of the curb ramp on the SW corner of St. John at the garage driveway to eliminate the skewed area with the vertical curb next to the ramp flares between the curb ramps*
>
> *The site plan is not consistent with C-104 Utility plan - the utility pole placement on C-100 on the SE corner is incorrect.*

A condition of approval has been drafted to address these comments.

Valley Street is currently being repaved by MaineDOT. Given the timing of this review, MMC was not able to complete the proposed Valley Street improvements in advance of that paving. Instead, MMC has arranged for MaineDOT to pave all areas of Valley Street except the intersection with D Street. MMC will complete the Valley Street improvements this fall. This has been suggested as a condition of approval.

In the final plans, street trees and street lights are shown along the proposed D Street sidewalk. Staff has reviewed these plans and generally found that they meet technical standards. While staff has also approached all D Street neighbors on the block between St. John and Valley to discuss sidewalk design, curb cuts, and existing encroachments into the right-of-way, staff anticipates that there may be minor modifications to plan details based on future correspondence with abutting neighbors. The submittal of final details for the D Street sidewalk design, based on the results of continued discussion with adjacent neighbors, has been suggested as a condition of approval.

In previous review comments, staff requested that MMC conduct an assessment of access through the Western Promenade, which is transected by a desire line between the proposed garage site and the MMC campus. In fact, there are several existing 'goat paths' that traverse the Western Promenade in a direct line between the Dana Center and the Valley Street entrance to the park (and MMC's surface parking at 222 St. John Street beyond). These depart from the existing bituminous Valley Street Trail *(Figure 11)*. In the final submittal, MMC's assessment found existing ADA, erosion, and lighting issues associated with the pathways through the Western Promenade *(Attachment Z)*. Ethan Hipple, the city's Parks Director, and Deb Andrews, the Historic Preservation Manager, have both reviewed this assessment. Mr. Hipple writes,

> *In speaking with our sidewalk plow operators, they have made it clear that even during light snow events, the grade and tight radius of the Valley Street Paved Path switchbacks makes it very difficult/impossible to clear snow with our existing Trackless or Holder sidewalk plows. The root of the problem is that the switchbacks themselves are too small and steep, making it very tricky to get the plows around the steep corners. The narrowness of the path also contributes to the difficulty. Enlarging and flattening the switchbacks (requiring alteration or additional retaining walls) would reduce the problem. Because of the difficult passage there, when an*

operator is clearing snow on the neighborhood routes, they will typically skip the Valley St Path and come back later with a different piece of equipment that can clear the steep sections. This can lead to delay of up to several days because we will complete our standard routes first (using Trackless or Holders), then return to get problem areas/pinch points with specialized equipment when all other routes are cleared.

If we were to improve the trail so that we could clear it safely with the normal Trackless or Holder equipment, it would be cleared as part of the regular route and would result in much timelier completion. If we leave it as is, we will continue to clear it using alternative equipment, but it will cause delays and will certainly have an impact on the higher expected volume of pedestrians using that route.

For the goat paths leading from Valley St to Gilman Place, then up the grassy slope to MMC, we recommend the following:

- *Lower Goat Path (Valley St to Gilman Place): At Valley Street, create a break in the retaining wall with stairs leading to the lower goat path. Install timber box stairs and stone dust fill on steep, eroded sections of trail.*

- *Upper Goat Path (Gilman Place to MMC): Combine braided system of multiple goat paths into a single improved trail. Install timber box steps and stone dust fill on steep sections. Alternative is to pave this section of trail.*

Figure 11: Western Promenade "goat paths"

Any plans for modifications to the Western Promenade would be subject to review by both the Parks Department and Historic Preservation. A condition of approval has been drafted to address future access improvements serving MMC employees who traverse the park.

The final plans show bicycle lanes in both the north and southbound directions on St. John Street. On the recommendation of the consulting traffic engineering firm, the southbound bicycle lane, whose through movements will conflict with heavy right turns for vehicles traveling in the same direction entering the garage, has been relocated to the inside of a separate southbound right-turn lane for vehicles. This design was deemed to provide the safest condition for bicyclists.

c. Public Transit Access

The site is located on METRO Route 1, with service to Congress Street and Munjoy Hill. There is an existing transit stop on the site's St. John Street frontage. Per the site plan standards, a transit facility is required for a project of this size if the development is

proposed along a public transit route and the nearest existing transit shelter and/or pullout is further than ¼ mile from the site. In this case, there is a pullout located in front of the Union Station Plaza, approximately 700 feet to the north. Thus, no transit facility is technically required. In the final plans, the bus stop has been moved to the south of the Eagles driveway, so as to avoid conflicts with turning vehicles entering and exiting the garage.

d. Parking

Staff has reviewed the final parking layout within the garage, as well as within adjacent surface parking areas proposed under the site plan application. Mr. Errico writes,

> *Sufficient traffic analyses have been conducted to document acceptable operations at the St. John Street signalized entrance. The applicant should provide documentation/examples of 2,400+ parking garages that have adequate internal traffic circulation capacity with one primary entrance.*
>
> *To efficiently manage parking circulation, dynamic ITS signage noting parking availability per level shall be provided…A condition of approval shall be included that requires submission of specific ITS devices for optimizing vehicle circulation and counting for review and approval by the City.*

MMC has indicated that they have contracted with a third party to provide documentation regarding the internal parking layout. Final review of both this documentation and the plan for ITS devices has been suggested as a condition of approval.

In the final submittal, the applicant has provided several drawings which show an interim and final revised striping layout for parking spaces currently used by tenants of 222 St. John in the Union Station Plaza lot. Mr. Errico has reviewed these layouts and raised concerns regarding backing maneuvers. A condition has been suggested.

Per the site plan standards, the applicant is required to provide two bicycle parking spaces/10 vehicular spaces required for the first 100 vehicular spaces, plus one/20 vehicular spaces over 100. The applicant has proposed to provide 40 bicycle parking spaces and requested a partial waiver from the bicycle parking standard on the grounds that most employees traveling to and from work at MMC would opt for bicycle storage on the main campus rather than bicycle to an off-campus parking location and walk or shuttle to the main campus. This waiver is supported by staff. MMC's final plans show bicycle parking on the northwest and southeast corners of the ground (below-grade) floor of the building, as well as at the main entrance on St. John Street.

e. Snow Storage

The applicant has proposed to remove snow from the top deck of the garage with a snow melt system. This system will not encroach on parking or pedestrian areas.

f. Transportation Demand Management

The applicant has submitted a TDM plan with the final submission. This TDM plan is discussed under the zoning analysis above.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

The applicant has provided documentation to confirm that there are no critical habitats, conserved lands, or protected wetlands on the site *(Attachment M)*.

b. Landscaping and Landscape Preservation

The applicant has provided a planting plan designed to feature low-maintenance and predominantly native plants. The planting is organized in four zones around the site.

The first zone encompasses the surface parking behind the Maine Central Railroad building, which lies primarily on the 222 St. John Street lot. This zone is proposed with sweet ferns and honey locust trees in the islands, which together meet the parking lot landscaping standards of the land use code. Honey locust trees are listed among the approved plant species in the city's *Technical Manual.*

The second zone, in the area between the Maine Central Railroad building and the northeast corner of the proposed garage, is proposed for major regrading such that the site and portions of the adjacent 210 St. John Street lot are brought up to the level of St. John Street along the easterly face of the garage. Under the site plan, existing invasive species in this area would be removed. Shad trees, sumac, four Freeman maples, and clethra are proposed. A metal fence is proposed to prevent access into the area between the garage face and the rear of 210 and 212/214 St. John. A 6' cedar fence is proposed along the rear of these properties; along the northerly side of 212/214 St. John, this fence is proposed to taper to 4'. As requested in the design review, the proposed fence along the northerly property line of 212/214 is proposed as metal.

In the third zone, which occupies the approximately 120' between the garage's main pedestrian entrance and St. John Street, the applicant has proposed bearberry, yellowroot, sweetfern, hay-scented fern, bayberry, and clethra, with turf, one shad tree, and six Princeton elms at the street line. This area will be graded with 3' berms to provide some added measure of visual interest. Checkerblock pavers with turf are proposed in a utility access corridor that runs parallel to the building at the rear of this space.

The final landscaping zone, on the south side of the building, is proposed with clethra and hedge maples to provide some buffering and limit movement through the area behind the Eagles' building.

It should be noted that the final landscaping plan also shows two street trees and plantings to be selected in coordination with the adjacent D Street property owner along the new sidewalk on the north side of D Street.

c. Water Quality/Storm Water Management/Erosion Control

The project site is currently almost entirely impervious. The garage proposal is projected to result in a decrease of approximately 14,500 SF of impervious surface. Under the applicant's proposal, a small area of the site around the D Street entrance would drain to an existing 30" separated storm drain in St. John Street to the east of the site. The remainder of the site, including the entire area of the parking garage and the surface parking behind the Maine Central Railroad building, would drain underneath the railroad tracks to an existing 18" stormdrain. Per the applicant's stormwater management plan, the existing 18" receiving pipe is not sufficiently sized *(Attachment M).* As a result, the applicant has proposed to both store and treat runoff in this direction with R-tanks and a jellyfish filter system underneath the surface parking area on 222 St. John Street. A StormBasin catch basin filter is proposed to treat the eastbound runoff.

Michael Geuthle, the city's consulting civil engineer, has reviewed the stormwater management plan and writes,

> *The MaineDEP approval letter dated January 21, 2015 for the Jellyfish Filter requires manufacturer approval for each design, as noted in item 7 of this letter (page 14 of Section 12, original submission). The applicant has noted this letter has been requested and will be forwarded upon receipt.*

Grading review identified that Pipe 14 between CB15-CB16 has a negative slope. On C-103, the Pipe Table reflects this change to a positive slope, but the Structure Table indicates a negative slope between basins. Please revise.

Drainage for an elevator pit connection is provided. It is recommended this connection enter an oil/water separator prior to entering the storm drain system.

A condition of approval has been suggested to address these outstanding comments.

3. Public Infrastructure and Community Safety Standards

a. Consistency with Related Master Plans

The site plan application is generally deemed consistent with related master plans.

b. Public Safety and Fire Prevention

As noted above, the garage is proposed to sit back over 100' from St. John Street, behind several residential properties, the Eagles, and the Maine Central Railroad building. This means that large portions of the site are not readily visible from the street or sidewalk, and that some portions of the site are screened entirely from the public way. Railroad tracks lie at the property's rear.

With respect to building program, the garage has been designed such that shuttle service will be provided within the garage's ground floor, which, given topography of the site, would lie below the grade of St. John Street. This means that the pedestrian activity associated with the shuttle service will be entirely hidden from public view. The only exterior natural surveillance opportunity generated by the garage itself is from pedestrians walking to and from the building to the hospital.

Without the benefit of significant intrinsic natural surveillance opportunities, the applicant has generally designed the site to allow sight lines into the main entrance area and pursued an access control strategy in areas without clear lines of sight. All garage decks at grade level would include security grilles. The plans show fencing in the space between 210 and 212/214 St. John and the garage *(Figure 11)*, between the Eagles Lodge and the garage, and between the garage and the railroad tracks. The applicant has also provided a lighting plan which demonstrates the intent to light exterior spaces. Pedestrian-scaled light fixtures are proposed around the D Street entrance from St. John Street, as well as along the walkway by 222 St. John. Building lights are proposed on all building facades. In the final submittal, MMC has also tried to activate the space by widening the canopy over the main entrance to the garage, adding bicycle parking at this main entrance, and adding horizontal windows on the first floor adjacent to the open space.

Mike Thompson, of the city's Fire Prevention Bureau, has reviewed the plans and has not provided any outstanding comments.

c. Availability and Capacity of Public Utilities

Underground electric, gas, water, and telecommunication services are proposed from St. John Street under the proposed driveway at D Street. A transformer and generator are proposed north of the entrance on the east side of the building. Sewer associated with two single fixture bathrooms is proposed to leave the site to St. John Street via a pump station along the south side of the Maine Central Railroad building. An oil/water separator is proposed to filter runoff from vehicles within the garage. A dumpster is proposed at the northwest corner of the site in a chain link enclosure. All required capacity to serve letters have been provided.

4. Site Design Standards

a. Massing, Ventilation, and Wind Impact

The bulk, location, or height of the proposed parking structure is not deemed likely to result in ventilation or wind impacts.

b. Shadows

The project is not anticipated to result in shadows on publicly accessible open space.

c. Snow and Ice Loading

The project is not anticipated to result in snow or ice accumulation on public ways or adjacent properties.

d. View Corridors

The project does not abut a protected view corridor.

e. Historic Resources

The proposed garage lies within 100 feet of the Maine Central Railroad Office Building at 222 St. John Street, which is listed as a historic landmark on the National Register. As such, the design is subject to an advisory review under the historic preservation ordinance. The city's Historic Preservation Board met on April 18, 2018 to review the preliminary design for the garage building *(Attachment 9)*. Deb Andrews, the City's Historic Preservation Program Manager, provided an update to the Historic Preservation Board at their July 11, 2018 meeting. Ms. Andrews has indicated that the Historic Preservation Board was generally satisfied with the direction of the garage design at that time.

f. Exterior Lighting

The applicant has provided a lighting plan which shows full cutoff building-mounted lights on all facades, as well as lights under the pedestrian entry canopies and along walkways, on poles along the entrance drives, and within the surface parking area. 18' pole-mounted lights are also proposed on the roof deck of the garage. These have been clustered at the interior of the top floor so as to minimize impact. All lights would be on motion sensors after 11 pm. The applicant has also proposed new street lights in association with proposed sidewalk work on D Street.

It should be noted that the applicant has requested a waiver for average and maximum illumination levels in the surface lot north of the garage and on the top deck of the garage. For safety reasons, this waiver is supported by staff.

g. Noise and Vibration

The applicant has requested that HVAC be reviewed as a condition of approval.

h. Signage and Wayfinding

As noted above, the applicant has proposed a freestanding sign at the St. John entrance. This sign will require a separate permit.

i. Zoning-Related Design Standards

Review comments related to design can be found under the zoning analysis above.

XII. STAFF RECOMMENDATION

Planning Division staff recommends that the Planning Board approve the proposed MMC Employee Garage and associated site improvements at 190 St. John Street subject to the proposed motion and conditions of approval listed below.

XIII. PROPOSED MOTIONS FOR THE BOARD TO CONSIDER

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 September 11, 2018 for application 207-2018 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 staff review, that extraordinary conditions exist or undue hardship may result from strict compliance with the site plan standard *Section 14-526(a)4.b,* which establishes a bicycle parking standard for non-residential uses of 2 bicycle spaces per 10 vehicular spaces for the first 100 vehicular spaces and 1 per 20 spaces thereafter, that substantial justice and the public interest are secured with the variation in this standard, and that the variation is consistent with the intent of the ordinance. The Planning Board **waives/does not waive** the site plan standard *Section 14-526(a)4.b* to allow 40 bicycle parking spaces on site;

2. The Planning Board **finds/does not find**, based upon the consulting transportation engineer's review *(Attachment 2),* that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard *(Section 1.7.2.4)* which establishes a maximum driveway width of 24 feet for commercial sites with two-way access, that substantial justice and the public interest are secured with the variation in this standard, and that the variation is consistent with the intent of the ordinance. The Planning Board **waives/does not waive** the *Technical Manual* standard *(Section 1.7.2.4)* to allow a driveway of 30 feet in width at D Street;

3. The Planning Board **finds/does not find**, based upon the consulting transportation engineer's review *(Attachment 2),* that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard *(Section 1.14)* which requires that aisle width for right-angle parking be 24 feet per *Figure I-27*, that substantial justice and the public interest are secured with the variation in this standard, and that the variation is consistent with the intent of the ordinance. The Planning Board **waives/does not waive** the *Technical Manual* standard *(Section 1.14)* to allow a 23' 9.5" wide aisle in the garage and a 27' 4" wide aisle in the north parking area;

4. The Planning Board **finds/does not find**, based upon the consulting transportation engineer's review *(Attachment 2),* that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard (*Section 1.14 and Figures I-27 to I-29)* which establishes standard parking space dimensions of 9' x 18', that substantial justice and the public interest are secured with the variation in this standard, and that the variation is consistent with the intent of the ordinance. The Planning Board **waives/does not waive** the *Technical Manual* standard (*Section 1.14 and Figures I-27 to I-29)* to allow spaces inside the proposed garage at 8.5' in width*;* and

5. The Planning Board **finds/does not find,** based on staff review, that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard (*Section 12.2.3)* which establishes average and maximum illumination levels of 1.25 footcandles and 5 footcandles respectively, that substantial justice and the public interest are secured with the variation in this standard, and that the variation is consistent with the intent of the ordinance. The

Planning Board **waives/does not waive** the *Technical Manual* standard *(Section 12.2.3)* to allow an average illumination level in the north parking area of 1.9 footcandles and average and maximum illumination levels on the top deck of the garage of 2.4 and 6.4 footcandles respectively.

B. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on September 11, 2018 for application 207-2018 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 and the MMC IOZ Regulatory Framework, subject to the following conditions of approval, which must be met as follows:

Prior to the issuance of a building permit:

1. The applicant shall provide evidence of rights to make improvements to adjacent lots where site work is proposed, including 184 St. John, 210 St. John, and the Union Station Plaza lot, for review and approval by the Planning Authority;
2. The applicant shall provide a final construction management plan including details related to the proposed roadway/signal work in St. John Street, D Street, and Valley Street for review and approval by the Department of Public Works;
3. The applicant shall submit a revised site plan including:
    i. Revised striping around the refuge island on Valley Street;
    ii. Revised bike lane pavement markings on St. John Street;
    iii. "Yield to Bikes" sign;
    iv. Modified label for CB30 on D Street to not obscure the light fixture;
    v. revised design of the curb ramp on the SW corner of St. John at the garage driveway to eliminate the skewed area with the vertical curb next to the ramp flares between the curb ramps; and
    vi. Revised utility pole placement consistent with C-104 Utility plan

    for review and approval by the Planning Authority and Department of Public Works;
4. The applicant shall provide final details for the sidewalk installation on D Street for review and approval by the Planning Authority and Department of Public Works;
5. The applicant shall provide:
    i. Evidence of the adequacy of internal parking circulation capacity;
    ii. Revised plans for the final Union Station Plaza parking layout that address safety and circulation standards

    for review and approval by the Department of Public Works; and
6. The applicant shall provide:
    i. Documentation of design approval from the manufacturer of the stormwater treatment system;
    ii. Revised plans addressing slope inconsistencies on Pipe 14;
    iii. Revised plans showing a drainage from the elevator pit into an oil/water separator prior to entering the storm drain system

for review and approval by the Department of Public Works.

Prior to the issuance of a sign permit:

1. The applicant shall provide a revised signage master plan for review and approval by the Planning Authority.

Prior to the issuance of a certificate of occupancy:

1. The applicant shall provide evidence of all utility and access easements necessitated by the development of the site for review and approval by the Planning Authority:
2. The applicant shall provide design plans and equipment specifications for the D Street signal for review and approval by the Department of Public Works. Within one week of certificate of occupancy and six months thereafter if necessary, the applicant shall provide an assessment of the operation of the D Street intersection for review by the Department of Public Works. Should such an assessment show that the signal at this intersection is warranted, the applicant shall submit a plan for activation of the signal for review and approval by the Department of Public Works. Following such approval, the applicant shall activate the D Street signal under the supervision of the Department of Public Works;
3. The applicant shall submit plans for Intelligent Transportation Systems (ITS) devices to enhance efficiency within the garage for review and approval by the Department of Public Works;
4. The applicant shall submit a plan for trail improvements associated with employee pedestrian access through the Western Promenade for review and approval by the Planning Authority, the Parks Department, and the Historic Preservation staff. Following approval, MMC will be responsible for implementing such improvements; and
5. The applicant shall provide evidence that HVAC systems meet the standards of the land use code for review and approval by the Planning Authority.

Other or ongoing conditions:

1. The applicant shall complete pedestrian and roadway improvements on Valley Street prior to the end of the 2019 paving season for review and approval by the Department of Public Works;
2. Prior to issuance of a demolition permit for the Gilman Garage, the applicant shall:
    i. Submit a plan for traffic signal changes at Congress Street/St. John Street that would allow for concurrent pedestrian phasing for review and approval by the Department of Public Works. The applicant shall implement such a plan following approval;
    ii. Submit a plan for the Congress Street/Valley street intersection under a traffic signal removal scenario, including recommendations that provide for safe pedestrian movements, for review and approval by the Department of Public Works, and coordinate with MaineDOT on traffic signal removal. The applicant shall implement such a plan following approval. If MaineDOT does not approve of the removal, the applicant shall submit a plan for traffic signal equipment modifications at the Congress Street/Valley Street intersection to allow for concurrent pedestrian phasing at Congress Street/St. John Street for review and approval by the Department of Public Works. The applicant shall implement such a plan following approval; and
3. The connection between the Eagles lot (184 St. John) and the proposed garage shall be approved for such time as the Eagles Lodge remains in active use. At such time as the use is changed, the connection between the Eagles lot and the garage shall be reevaluated by the Department of Public Works and the Planning Authority. Should such evaluation find the connection unwarranted, it shall be discontinued by the property owner.

XIV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Design review (memo from Caitlin Cameron, 8/27/18)
2. Traffic Engineer review (memo from Thomas Errico, 9/5/18)
3. Transportation Program Manager review (memo from Bruce Hyman, 9/7/18)
4. Civil Engineer review (memo from Mike Geuthle, 9/5/18)
5. Parks review (memo from Ethan Hipple, 9/5/18)
6. HP Board memo (memo from Deb Andrews, 4/12/18)

PUBLIC COMMENT

PC-1. MacKenzie 3-27-18
PC-2. Holder 6-7-18
PC-3. Noddin 6-26-18
PC-4. Prosser 6-26-18
PC-5. Heald 6-26-18
PC-6. Flexon 6-27-18
PC-7. Durgin 6-28-18
PC-8. Barowitz 7-10-18
PC-9. Barowitz 7-11-18
PC-10. Chase 7-16-18
PC-11. Chase 7-16-18
PC-12. Chase 7-19-18
PC-13. Snyder 7-20-18
PC-14. Barowitz 7-27-18
PC-15. Heald 7-27-18
PC-16. Chase 8-29-18
PC-17. Libbytown Neighborhood Association 8-30-18
PC-18. Moldaver 8-30-18

APPLICANT'S SUBMITTALS

A. MMC Institutional Development Plan
B. Cover & Table of Contents
C. Application Form
D. Application Fee
E. Project Description
F. Evidence of Right, Title, & Interest
G. Evidence of State & Federal Permits
H. Assessment of Zoning
I. Easements & Other Burdens
J. Evidence of Financial & Technical Capacity
K. Construction Management Plan
L. Traffic & Parking Analyses
M. Significant Natural Features
N. Stormwater Management Plan & Calculations
O. Consistency with Comprehensive Plan
P. Utility Capacity to Serve
Q. Solid Waste
R. Summary of Fire Codes

S. Consistency with Portland Land Use Code
T. HVAC
U. Soils
V. Neighborhood Meeting Documentation
W. Waiver Requests
X. Lighting Design
Y. Master Sign Plan
Z. Western Promenade/Valley Street Trail Assessment
AA. Renderings
BB. Night Renderings
CC. Response to Comments 7-24-18
DD. Response to Comments 8-24-18
EE. Public Comment Responses

PLANS

Plan 1. General Notes, Legend
Plan 2. Boundary & Topographic Survey
Plan 3. Existing Conditions & Demolition Plan
Plan 4. Site Layout & Materials Plan – 1
Plan 5. Site Layout & Materials Plan – 2
Plan 6. Grading & Drainage Plan – 1
Plan 7. Grading & Drainage Plan – 2
Plan 8. Utility Plan – 1
Plan 9. Utility Plan – 2
Plan 10. Fire Truck Movement Plan
Plan 11. Sidewalk Improvement Plan
Plan 12. Civil Details – 1
Plan 13. Civil Details – 2
Plan 14. Civil Details – 3
Plan 15. Civil Details – 4
Plan 16. Civil Details – 5
Plan 17. Civil Details – 6
Plan 18. Planting Plan
Plan 19. Planting Details
Plan 20. Ground Level Code Information
Plan 21. Level 1 Code Information Plan
Plan 22. Level 2 Code Information Plan
Plan 23. Building Elevations
Plan 24. Building Elevations
Plan 25. Grade Level Parking Layout
Plan 26. Level 1 Parking Layout
Plan 27. Levels 2, 4, & 6 Parking Layout
Plan 28. Levels 3 & 5 Parking Layout
Plan 29. Level 7 Parking Layout
Plan 30. Roof Deck Parking Layout
Plan 31. Site Lighting Calculation Plan - 1
Plan 32. Site Lighting Calculation Plan - 2
Plan 33. Site Lighting Calculation Plan - 3
Plan 34. Site Lighting Calculation Plan - 4
Plan 35. Roof Deck Lighting Calculation Plan

Plan 36. Electrical Site Plan - 1
Plan 37. Electrical Site Plan - 2
Plan 38. Electrical Site Plan – 3
Plan 39. Roof Deck Electrical Plan
Plan 40. Union Station Plaza Parking Figure 1
Plan 41. Union Station Plaza Parking Figure 2
Plan 42. Union Station Plaza Parking Figure 3
Plan 43. Core Floor Plans

Planning and Urban Development Department
Planning Division

Subject: IOZ Design Review – 222 St. John Street (Maine Medical)

Written by: Caitlin Cameron, Urban Designer

Date of Review: Monday, August 27, 2018

The proposed garage at 222 St. John Street for the Maine Medical Campus was reviewed for the Planning Board workshop by Caitlin Cameron, Urban Designer, Nell Donaldson, Senior Planner, and Deb Andrews, Historic Preservation Program Manager. This project was reviewed according to the adopted IOZ IDP and Regulatory Framework standards.

The new construction is a large garage with no other uses on-site and is set back from the street. Therefore, the design evaluation is focuses on the impact on the overall campus design, long views, safety and CPTED, and the St. John Streetscape.

Design Review Comments: *(Staff questions/comments and unmet guidelines in red for Planning Board consideration)*

- Provide updated renderings including the monument sign

Historic Preservation Advisory Design Review:

Previous Comment: The one aspect of the current proposal that HP staff suggests be given further consideration is the color/tonal palette. The current proposal features a high level of contrast, which is visually striking, but also demanding. In staff's view, were the colors warmer in tone and "knocked down" in terms of contrast, the building would likely achieve a greater level of compatibility with its surrounding context.

Updated Comment: Staff are now satisfied with the selected materials – samples provided during the meeting. The greys include warm tones and a degree of aggregate is revealed in the finish to soften the affect of the spandrel panels. The upper story, dark grey panels will also have the metal fins in front of them which will mitigate the dark color.

Signage:

Previous Comment: The site plan application includes signage proposal which must be consistent with the existing MMC Sign Master Plan. A monument sign is proposed at the sidewalk; building signage is minimal with wayfinding signage only. Staff support the choice to not use upper story signage on this building.

Updated Comment: Upon review the sign design and branding is consistent with the new MMC sign master plan also submitted as part of this application. Staff commented that the hierarchy and design of this sign differs from those proposed elsewhere on campus – please clarify. Staff should verify this sign does not interfere with traffic sight lines.

IDP Design Guidelines

Summary of Design Review:
Staff believe the proposed design now meets the applicable standards and concerns have been addressed with one exception. Some revision are requested below to the fence and lighting on the path from St. John Street to the side entrance to address both Crime Prevention through Environmental Design (CPTED) standards as well as the Historic Preservation advisory comments as the new design is adjacent to and relates to the historic landmark railroad building.

1. New buildings will be designed to contribute to the campus vision and organizational goals identified in the Master Facility Plan and the Transportation Plan, and best practice design standards for healthcare.

Previous Comments: The architectural character of the new garage is consistent with the campus vision as presented in the IDP and subsequent project proposals. In addition to furthering the transportation and campus design goals of the MMC master plan, the building architecture is intended to have a relationship with the main campus which is only really seen from long views. This is not intended to be a gateway building to the campus and MMC does not want to confuse visitors as to the orientation to the main campus. The City's priority is the long views of this building, however, staff are also considering how this project contributes to the activity and streetscape of St. John Street as stated in the IDP design guidelines and principal statements.

Updated Comments: The design was revised to provide activity and transparency to more portions of the St. John Street-facing façade with an extended canopy at the entrance, bike parking, windows and transparency at the mechanical rooms for "eyes on the street." The park space is not design for extended use – amenities such as benches are not provided.

2. The overall composition and experience of the campus will be considered for cohesive identity from approaches along Congress Street and I-295.

Previous Comments:

- Staff recommend in order for the garage to be visually cohesive with the MMC campus and the surrounding context, the material color palette should be coordinated to include warm tones of the grey and white.
- Consider whether the high level of contrast is appropriate – though staff are supportive of the grey and white materials, the level of contrast may bring too much attention to the garage that otherwise is intending to be recessive.

Updated Comments: The applicant selected two grey materials with the staff comment in mind. Staff are satisfied by the selection which is grey but with warm tones and not too high contrast.

3. Building entrances will be oriented toward, located adjacent to, accessible from, a sidewalk in a public right-of-way to create a pedestrian-oriented environment.

Previous Comments: The building placement is set back from the street. There are two primary entrances into the garage – one on the side accessible from St. John Street via a path along the railroad building and the other oriented to St. John Street.

- Staff suggest more emphasis can be brought to both entrances – increase scale of entrances, canopies, lobby area, etc. to increase scale of these entrances in relationship with the scale of the building and the distance from the street.

Updated Comments: More emphasis was brought to the St. John Street entrance with an extended canopy. The entrance here will also be emphasized by the circulation tower element which has glass in the stairwells and will be lit at night. The paths in the park area lead directly to this entrance for additional emphasis.

4. Building designs will relate to and be compatible with the existing, or – in areas of change – planned character of residential and commercial neighbors. Design elements and characteristics to consider include:

- Building placement and relationship to the street

- Overall massing and scale

- Roof forms

- Proportion, directional expression, and composition of facades

- Rhythm of solids to voids

- Rhythm and proportion of openings

- Rhythm of entries and projections

- Relationship of materials, texture, and color

Previous Comments:

- The building use and placement away from the street do not further the vision of improving the activity and streetscape of St. John Street. However, given the scale of the building, setting it back from the street has advantages for mitigating the scale impacts of the building.
- The overall massing and scale are largely dictated by the functional needs of the garage and the capacity needs for growth of the hospital. As seen in the long views – the height is not overwhelming and being set back from the street, allows the older and smaller scale buildings to create the street wall relationship to the sidewalk.
- The material selection and placement relates to the function of the garage but is designed in a consistent and dynamic way to bring some visual interest and texture without having gimmicks.
- There is a frequent solid to void ratio given the need to have an open garage. The vertical fins provide rhythm and bring a finer grain to the large façade.
- The gap between floors has uneven spacing – would suggest that the spaces should be consistent with the spandrel modifying in height instead.
- As stated previously, staff would like to see further detail on the material color palette in relationship with the surrounding buildings which tend to have a warmer tone and less contrast.
- The roof is simple and where projections are needed, are glass and low in height.

Updated Comments: Material palette has been addressed. The uneven spacing between floors was revised – floor spacing is now equal. No additional comment.

5. Façade materials of buildings will be of high quality, and contribute to an attractive public realm.

Previous Comments: The proposal uses a material palette of concrete, glass, metal screen, and aluminum fins. These materials meet the quality criteria, convey the garage use, and balance the desire to mitigate the scale of the long building while providing visual interest from the long views as one enters the city. The design of the central circulation tower contributes to the public realm using height and material changes to provide an accent point along the façade and indicate to the street where to enter the building. The design and material placement were simplified in response to the Historic Preservation Board and staff review – the general direction proposed is a consistent application of materials that provide visual interest and texture without calling attention to the building.

- What is the material of the ramp roof? Is that depicted in the renderings?

Updated Comments: Ramp roof will be concrete and is shown in the elevations and renderings. Staff agree these have been mitigated from long views as much as possible.

*6. The design process will **consider long views** of new buildings including roofs and associated structures to minimize visual impacts and **provide visual interest**. Rooftop appurtenances will be either screened from view or integrated into the building design, and will not be visible from adjacent streets, Western Promenade, or the Congress Street approach (helipad excluded).*

Previous Comments: The project successfully balances the goals of being recessive while visually tying into the overall MMC campus and providing visual interest from views from I-295 and the Veterans Bridge. This is accomplished with the height being capped at seven stories and the consistent use of texture and articulation elements. There are some outstanding questions regarding the roof level design in relation to long views:

- Are the ramp and circulation tower roofs adequately depicted in the renderings? It is difficult to tell how visible these will be with the materials provided.
- Concern about the visibility of the roof lighting poles and light levels, especially the impact on the Western Promenade.
- The roofs at the top level are proposed to be glass to mitigate their visibility.

Updated Comments: The applicant confirmed the rooftop appurtenances are depicted in the renderings. The nighttime rendering shows the impact of the lighting at night from the Western Promenade – the ideal condition is for no lighting at this rooftop level. The applicant responded by placing all the poles as far away from the building edge as possible, selecting fixtures that will not spread glare outwards, and the roof will not be open for parking at night if not needed. Staff are satisfied with this aspect of the project.

7. Vibrant, contributing and sustainable active ground floors will be provided to add activity and a sense of place to the priority node identified in the City's Comprehensive Plan.

Previous Comments: The project proposes limited activity at the ground floors – the building use is garage only and is set back from the street. There is a garage entrance oriented to St. John and shuttle activity and an entrance facing the side surface parking.

- Consider ways of introducing more "eyes on the street" facing St. John Street whether that be more glass on the circulation tower, increasing the size of the entrance lobby, adding windows to the security/utility area of the façade (clerestory, 2nd level waiting lobby, etc.).

Updated Comments: The design was revised to provide activity and transparency to more portions of the St. John Street-facing façade with an extended canopy at the entrance, bike parking, windows and transparency at the mechanical rooms for "eyes on the street." The park space is not design for extended use – amenities such as benches are not provided. Consider having the mechanical rooms lit at night so those windows are activated.

8. In areas where the occurrence of limited blank facades along public right-of-ways are unavoidable due to changes in topography or building use requirements, the following strategies will be used to mitigate visual impact:

- providing elements of visual interest along any black walls facing public streets, and,

- working with the City of Portland to ensure adequate lighting of public sidewalks to create a safe pedestrian experience.

Not applicable. Landscape design addresses the standard adjacent to sidewalk.

9. Any parking structure within the IOZ will:

- screen views of cars from the public rights-of-way

- provide elements of architectural interest on upper floors to contribute positively to long views and gateway approaches

- for garage structures within 20' of the public right-of-way, meet street activation intent according to street type

Previous Comments:

- Staff request more information regarding the screening of cars. Screening methods include solid concrete spandrel wall with metal mesh railing on the ground floor. It is not clear whether the spandrel panels will conceal the headlights of cars. Will cars be screened from view on the top floor, from the Western Prom?
- Visual interest is provided by the textures and composition of the materials – the angled fins provide texture, shadow lines; the contrasting color materials break up the scale of the building.
- The building is not within 20' of a public right-of-way.

Updated Comments: The spandrel panels are high enough they will screen headlights of cars. The top level parapet is also tall enough to screen the headlights. However, no additional screening above the parapet is proposed on the roof level so if there is nighttime activity, there will be some visibility of cars and headlights. Again, the applicant is proposing to limit the rooftop parking at night.

Building Relationship to Public Street

Urban Commercial Arterial (St. John Street) *While it has some elements of a walkable street such as sidewalks and on-street parking, large stretches of the street prioritize the car with frequent curb-cuts, and street-facing parking lots. . . . To the extent possible, extend the character developed for the Congress Street frontage along St. John Street.*

Previous Comments: The building does not contribute directly to the St. John streetscape because it is setback from the street. The open space, paths, and building entrances will enhance the existing conditions but does not go as far as to establish a street wall or introduce active uses on St. John Street. The project will provide some streetscape improvements including sidewalks, lighting, and street trees/landscape.

Updated Comments: No additional comments.

Crime Prevention Through Environmental Design (CPTED)

MMC will incorporate the following design strategies that have been demonstrated to deter crime:

- *Providing a clean and aesthetically pleasing campus environment that is designed with vandal-resistant materials*
- *Providing clear and properly-sized signs in safe locations to ensure safe wayfinding*
- *Ensuring that paths from transit stops, bike storage areas, and parking areas to main pedestrian entrances are well-lit, with clear sight lines*
- *Designing street-level elevations to minimize potential hideouts*
- *To the extent possible, given clinical program demands, providing views in and out of building ground floors populated by users to serve as "eyes on the street"*
- *Generating foot traffic on public sidewalks with pedestrian entrances*

Previous Comments: There are several areas around this building with potential safety concerns and the potential for hiding spaces. The project uses landscape plantings and fencing to limit access to areas between the building and the property lines. Site lighting is provided with wall packs on all sides of the building. The open space between the building and the street is open and has good visibility and includes site lighting along the pedestrian paths.

- Staff suggest the lobby entrance facing St. John Street could increase in size, include more fenestration, and/or include additional lighting.
- Regarding "Eyes on the street" See Comment 7.
- Rather than extend a wood fence to the street between the Railroad Building and the residential building, staff recommend using landscape.

Updated Comments: The "eyes on the street" comments were addressed by emphasizing the entrance, adding windows to the façade, and demonstrating the level of lighting/activity the stair tower will add at night. Staff continue to ask for landscape and metal fence in the side yard between the residential property and the railroad building for visibility and character. The lights in that pathway are critical for CPTED concerns – please use black fixtures to minimize their appearance next to the historic building.

Mitigating Impacts Through Design

Minimizing Shadow Impacts - Shadow impacts were evaluated as part of the IDP process. Refer to Plan 13 for shadow analysis of the approved IDP building heights. This project orients its long dimensions north/south meaning the broadest sides of the buildings are oriented to cast more shadow. However, the building position is only directly adjacent to three buildings where new shadow will have some impact. The neighboring properties are primarily commercial, railroad, and prison. The two residential properties and the Eagles property on St. John Street will experience shadow impact in the afternoon from this building.

Context-Sensitive Lighting Design – Lighting at the ground level is adequate per City of Portland Technical Standards.

- Clarify whether there is building lighting above the ground level – **No lighting on upper stories except the poles on roof level.**
- Concern about light trespass on neighboring residential properties and level of light visible from the Western Promenade at night. More information is requested regarding the impact of site lighting from the long views, especially light trespass and visibility of the lighting on the upper stories and roof from the Western Promenade. – **Applicant provided rendering to convey the level of light and glare from the roof level.**
- Street lighting in this location is standard cobra head – there is not a special lighting district on St. John Street. However, the pedestrian lighting within the Western Promenade, a connection between the new garage and the main campus, will be replaced with LED fixtures to be recommended by staff and the Historic Preservation Board and approved by the Planning Board at a future time. – **Staff will provide the applicant with the correct light fixture information for the pedestrian path in the Western Promenade once that is approved. This should likely be a condition of approval given the uncertainty at this time.**

Mitigating Wind Impact – No information was provided to evaluate this item. Staff do not anticipate significant wind impacts from the building given its height and permeability.

Preserving and Enhancing Viewsheds – The building does appear within the Western Promenade viewsheds as demonstrated in the three renderings provided from vantage points within the prom. The height of the garage is such that the building is visible from the prom but does not negatively impact the views of the river, mountains, or scenery beyond the jetport.
The garage is also rendered from multiple long views including Veterans Bridge and I-295. The renderings from the long views reveal the general design and height fit well into the context and does not stand out as overly obtrusive.

- Staff comment that the material color palette causes the building to stand out or be less recessive than desired. Therefore, the suggestion is that the grey and white materials should have a warm tone to be cohesive not only with the existing MMC campus but also the surrounding context. - **Addressed, no further comment.**

- The rooftop design including light poles, ramp and circulation tower roofs, and any mechanicals should be accurately demonstrated in these renderings. It appears in the materials given that these rooftop appurtenances have minimal visual impact and are integrated into the design but staff would like to clarify whether all these features have been included in the rendering images. – **Addressed, no further comment.**

Regulatory Framework

1. ***Mixed Uses: . . .*** *healthcare facility development fronting onto Congress Street and St. John Street shall activate the public realm, to the extent able, with uses such as service and retail/restaurant, landscaping, active building entrances, pocket parks, etc., on the ground or other publicly accessible level, consistent with the design intent contained in the approved IDP. . . .*

Previous Comments: The project does not provide mixed-uses or active uses. The proposal uses landscape and building entrances to address this design guideline – an open, landscaped area transitions between the sidewalk and the building entrance with direct paths to the entrance emphasized by a canopy, glass, and circulation tower. Staff has two recommendations:

- Given the scale of the building and the set back from the street, the scale of the entrance lobby could increase to be more visible and provide a more "lively" space.
- Consider ways of introducing more "eyes on the street" facing St. John Street whether that be more glass on the circulation tower, increasing the size of the entrance lobby, adding windows to the security/utility area of the façade (clerestory, 2nd level waiting lobby, etc.).

Updated Comments: The "eyes on the street" comments were addressed by emphasizing the entrance, adding windows to the façade, and demonstrating the level of lighting/activity the stair tower will add at night.

Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

MMC Employee Parking Garage - Updated Final Traffic Comments

Helen Donaldson <hcd@portlandmaine.gov> Thu, Sep 6, 2018 at 12:00 PM
To: Helen Donaldson <hcd@portlandmaine.gov>

---------- Forwarded message ----------
From: **Tom Errico** <thomas.errico@tylin.com>
Date: Wed, Sep 5, 2018 at 6:55 PM
Subject: RE: MMC Employee Parking Garage - Updated Final Traffic Comments
To: Helen Donaldson <hcd@portlandmaine.gov>

Hi Nell – I have conducted comprehensive review of current application materials and offer the following updated final traffic comments as a status update of prior comments.

- The parking garage has a number of spaces that do not meet the City's dimensional standards for size. The applicant should request a formal waiver with supporting documentation.

  Status: The applicant has provided supporting information and given long-duration parking conditions, I support a waiver from the City's Technical Standards.

  Updated Status: I have no further comment.

- The garage plans should include dimensions for parking aisle widths.

  Status: The plans include aisle widths and some do not comply with City standards. The applicant should request a formal waiver with supporting documentation.

  Updated Status: The applicant has provided a waiver request and I find it to be reasonable given long parking duration and that the width nearly meets City standards.

- A traffic signal is proposed at the St. John Street/D Street/Garage Driveway location. I support the installation of a traffic signal given vehicle volume conditions and anticipate pedestrian movements. I would note that the applicant is responsible for development of design plans and equipment specifications for review and approval by the City. All costs associated with the installation of the traffic signal is the responsibility of the applicant.

  Status: The Applicant has acknowledged this comment. I would note that I continue to communicate with Steve Landry at MaineDOT regarding the timing of traffic signal activation. I support the activation of the traffic signal at garage opening given traffic data and engineering judgement regarding area conditions and minimizing local street parking. I would note that if MaineDOT requires traffic data collection prior to activation, the applicant shall collect data at the time of garage opening, and periodically until sufficient data supporting traffic signal activation is obtained.

  Updated Status: The applicant is responsible for development of design plans and equipment specifications for review and approval by the City. All costs associated with the installation of the traffic signal is the responsibility of the applicant. The applicant will also be responsible for all data collection in association with activation of the traffic signal. I would recommend the initial monitoring effort occur after one week of opening and six months after opening (if needed). Additional monitoring efforts shall be determined following the review of the data collected after 6 months. I would note that the applicant shall be responsible for final activation under the direction/supervision of City staff following a review and approval of the installation by City staff.

- The general layout of the St. John Street/D Street/Garage Driveway intersection is generally acceptable. It should be noted that the City is currently reviewing bicycle facility recommendations and final direction will be provided in the future. Some initial comments are provided below:

    - The number of pavement marking arrows is excessive and should meet either City of MaineDOT standards (they may be for traffic flow reasons). I would suggest the through lane arrows be eliminated on St. John Street.

  Status: While the plans have been revised, the number of arrows continues to be excessive.

  Updated Status: The plans have been revised and I have no further comment.

    - A crosswalk on the St. John Street southerly approach shall be provided.

  Status: A crosswalk has been included and I have no further comment.

  Updated Status: I have no further comment.

    - I continue to review the garage approach as it relates to providing a three-lane section with a reversible center lane and traffic control design elements.

  Status: Specific details on how the three-lane approach will be managed shall be provided. Specifically, how will the two egress lanes (and when needed) be signed for use. One of the egress lanes will become the right-turn lane onto southbound St. John Street and the other will become the shared through/left lane. Dynamic signage is suggested. For entry movements, the applicant should note how the lane drop (two to one lane) will work under peak morning volume time periods.

  Updated Status: The applicant has noted the entrance will function as a single lane configuration, unless emergency situations warrant a second lane. I find their response to be acceptable and I have no further comment.

- The applicant has provided a traffic evaluation and my initial comments are noted below:

    - I have requested the Synchro traffic model for review.

  Status: The requested files have been provided. I find the models to be reasonable but would note additional calibration may be requested during the TMP process during Phase 3 permitting.

  Updated Status: I have no further comment.

    - I have requested the traffic count data collection reports for review.

  Status: The requested count data has been provided. I have no further comment.

  Updated Status: I have no further comment.

    - I find the methods used to estimate traffic volumes associated with the garage to be reasonable. I would note that additional review is required. The evaluation notes that a broader review of the area transportation system and parking garage will occur during Phase 3 of MMC's expansion.

  Status: I have no further comment.

  Updated Status: I have no further comment.

- From a vehicle capacity perspective, I would recommend a shared through/right shared lane configuration on the southbound St. John Street approach.

Status: In conjunction with a multi-modal review of conditions, the City has provided comments on the preferred lane configuration. This comment is not valid.

Updated Status: I have no further comment.

- Some of the intersection level of service conclusions seem better than actual field conditions. I would suggest the applicant field confirm intersection delays and queues.

Status: During the TMP process, refinement of the model may be required. As noted in the applicant's response to comments, the pedestrian phasing at the Congress Street/St. John Street intersection is inefficient and a contributing factor to long vehicular delays and queues. In conjunction with this application, the traffic signal equipment shall be upgraded to allow for concurrent pedestrian phasing. Implementation shall take place prior to the opening of the garage.

Updated Status: The applicant shall be responsible for traffic signal changes that would allow for concurrent pedestrian phasing at the Congress Street/St. John Street intersection. As part of this effort, the applicant shall be responsible for development of a plan for the Congress Street/Valley Street intersection under a traffic signal removal scenario. This plan shall include recommendations that provide for safe pedestrian movements. Additionally, the applicant shall coordinate with MaineDOT (providing supporting technical information) on approval of the traffic signal removal. If MaineDOT does not approve the removal, the applicant shall implement traffic signal equipment modifications at the Congress Street/Valley Street intersection to allow for the previously noted pedestrian concurrent phasing.

- The applicant should provide information on the provision of temporary parking conditions for both MMC and 222 St. John Street during construction activities.

Status: The applicant has noted that the existing MMC vehicles parked at 222 St. John Street will be accommodated at the Gateway Garage. The applicant shall provide documentation noting an adequate parking supply. The applicant conducted a study of existing parking demand at 222 St. John Street and determined through field observations that parking during construction can be accommodated in the Union Station Plaza Limited Partnership parking lot and the St. John Street east side parking lots. Based on the one day sample, it appears parking demand can be accommodated. The applicant should note occupancy of 222 St. John Street during the survey day to confirm future parking demand can be accommodated.

Updated Status: Documentation of available parking supply at the Gateway Garage is outstanding. Otherwise, I have no further comment.

- The sidewalk from St. John Street to the rear of 222 St. John Street should be ADA compliant and continuous.

Status: The plans have been revised and I have no further comment.

Updated Status: I have no further comment.

- The applicant should provide a parking analysis for the parking demand and supply condition for 222 St. John Street.

Status: This comment is intended to confirm the final parking condition for 222 St. John Street complies with City standards for parking supply, not during construction.

Updated Status: The applicant has noted that the parking supply is not expected to change from today's condition and accordingly I have no further comment.

- I would suggest a crosswalk be provided across the 222 St. John Street driveway.

Status: The plans have been revised and I have no further comment.

Updated Status: I have no further comment.

- The median refuge island on Valley Street needs to be a minimum width of 6-feet to meet ADA requirements. The ramp configuration on the west side should be revised to eliminate the flare condition. Warning signs may be required and direction will be provided in the future.

Status: City staff is coordinating this design and I have no further comment.

Updated Status: I have no further comment.

- It is my assumption that Bruce Hyman will provide comments as it relates to sidewalk design conditions for the entire project.

Status: I have no further comment.

Updated Status: I have no further comment.

Please note that these are initial comments and additional clarifying and new comments are likely. If you have any questions, please contact me.

Additional Comments

- Construction Management Plan
    - Construction trucks time limits shall be extended to include both MMC and general traffic peak hours.

Updated Status: The plan complies with this request. I have no further comment.

    - The secondary storage yard shall be specifically identified.

Updated Status: The secondary storage yard is Portland Yacht Services and I have no further comment.

    - The applicant should note how will the Eagles parking demand be accommodated during construction.

Updated Status: No impacts are expected and I have no further comment.

    - All temporary crosswalks shall be ADA compliant.

Updated Status: The applicant has acknowledge this requirement and I have no further comment.

    - Construction plans shall be provided for the roadway/signal work in St. John Street, D Street, and Valley Street.

Updated Status: A condition of approval shall include development of a Construction Management Plan prior to any City Permit.

- The applicant shall narrow the Eagles driveway width to match the aisle width.

  Updated Status: The plans have been revised and I have no further comment.

- The Eagles existing parking lot shall provide an aisle width dimension.

  Updated Status: The plans have been revised and I have no further comment.

- The applicant shall provide the grade of parking ramps within the garage.

  Updated Status: The requested information has been provided and I have no further comment.

- To efficiently manage parking circulation, dynamic ITS signage noting parking availability per level shall be provided.

  Updated Status: A condition of approval shall be included that requires submission of specific ITS devices for optimizing vehicle circulation and counting for review and approval by the City.

- End islands for parking spaces to remain in the Union Station Plaza Limited Partnership parking lot should be considered.

  Updated Status: The applicant does not control this property and accordingly is unable to implement these islands. I have no further comment.

- The applicant should note when (and how will they be managed) movements to Level 1 from St. John Street be permitted.

  Updated Status: The applicant has noted the addition of a STOP sign. I would note that movements will need to be manage to ensure little delay for the main entrance.

- A STOP sign shall be installed at the egress from the 52 space parking lot.

  Updated Status: The plans have been revised and I have no further comment.

- The northern aisle width for the 52 space parking lot shall be dimensioned.

  Updated Status: The plans have been revised and I support a waiver for exceeding aisle width given interface with the existing Union Plaza Limited Partner parking lot.

- The applicant shall note who will park in the Union Station Plaza Limited Partnership parking lot and why not physically separate from the 52 spaces lot.

  Updated Status: The applicant is maintaining existing conditions and I have no further comment.

- The applicant should provide information on how internal garage traffic circulation will generally work if a connection to Fore River Parkway is implemented in the future.

  Updated Status: It is my understanding a response is to be provided by others.

- The applicant should note plans for expansion for electric vehicle charging to accommodate future demand.

  Updated Status: The plans have been revised and I have no further comment.

- Sufficient traffic analyses have been conducted to document acceptable operations at the St. John Street signalized entrance. The applicant should provide documentation/examples of 2,400+ parking garages that have adequate internal traffic circulation capacity with one primary entrance.

  Updated Status: Pending

- The applicant should note who will be permitted to park on the ground level and level 1.

  Updated Status: The applicant has noted parking allocation and I have no further comment.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL
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"One Vision, One Company"

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Nell Donaldson
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Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about

government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

--
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Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

Final Comments - PL 207-2018: MMC ST. John St Garage - Final Comments

Bruce Hyman <bhyman@portlandmaine.gov> Fri, Sep 7, 2018 at 9:23 AM
To: Helen Donaldson <hcd@portlandmaine.gov>
Cc: Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, Keith Gray <kgray@portlandmaine.gov>

Good morning, Nell,

These are my final comments in response to the revised plans submitted for the MMC Garage, dated 9/5/18:

Further revisions to the Site Layout and Material Plan 1 C-100 are to be made -

- the final Pavement Marking and Signage Plan(s) is to be revised and approved by DPW and the Planning Authority for corrections, including but not limited to correct
  - the striping around the refuge island on Valley Street
  - bike lane pavement markings on St. John Street
  - "Yield to Bikes" sign
- move label for CB30 on D Street to not obscure the light fixture
- revise the design of the curb ramp on the SW corner of St. John at the garage driveway to eliminate the skewed area with the vertical curb next to the ramp flares between the curb ramps
- the site plan is not consistent with C-104 Utility plan - the utility pole placement on C-100 on the SE corner is incorrect

Please let me know if you or the applicant have any questions about the above items.

Best regard,

Bruce
--
Bruce Hyman
Transportation Program Manager
Transportation Division

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

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

WRIGHT-PIERCE
Engineering a Better Environment

MEMORANDUM

TO:	Helen Donaldson, Senior Planner	**DATE:**	9/5/2018
FROM:	Michael Guethle, PE; Ryan Wingard, PE	**PROJECT NO.:**	13982B
SUBJECT:	St. John St. - 222; MMC Parking Garage (PL-000207-2018)		

Wright-Pierce has reviewed the Level III Site Plan Application information provided for the Employee Parking Garage redevelopment proposed at 222 St. John Street, including the responses to initial and secondary review comments. The project will include redeveloping an existing parking lot into a nine-level parking garage with approximately 2,400 parking spaces; redeveloping another existing parking surface to provide a pedestrian access and vehicle access to levels 1-8 of the building; and redeveloping a third parking surface to provide 52 additional spaces of surface parking. Off-site improvements to St. John Street and D Street are also included in the proposed work. The work will reduce the total impervious surface area on the property.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) August 24, 2018.
- Engineering Permitting Plans, dated (most recent) August 24 2018.
- Construction Management Plan, dated (most recent) August 24, 2018.
- Response to Public Comments, dated July 24, 2018
- Response to Public Comments 2, dated August 24, 2018

Comments:

1) Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)
    a. General Standard: The applicant has provided information regarding the size and scope of the project and has indicated the project is subject to the Redevelopment

Standard within the City of Portland. This standard is more stringent than the Chapter 500 requirements for redevelopment. The following items have been reviewed:

i. The MaineDEP approval letter dated January 21, 2015 for the Jellyfish Filter requires manufacturer approval for each design, as noted in item 7 of this letter (page 14 of Section 12, original submission). The applicant has noted this letter has been requested and will be forwarded upon receipt.

2) Capacity to Serve:
   a. The applicant has sent Capacity to Serve Letters to Utilities. The applicant has indicated they will be provided to the City as these letters are received. A wastewater capacity review form has been provided by the Department of Public Works indicating down-slope sewers have the capacity to serve the proposed project. An email confirming Capacity to Serve from Central Maine Power has been provided by the applicant. Outstanding capacity to serve letters may become a Condition of Approval for Site Plan Approval.

3) Site Grading
   a. Grading review identified that Pipe 14 between CB15-CB16 has a negative slope. On C-103, the Pipe Table reflects this change to a positive slope, but the Structure Table indicates a negative slope between basins. Please revise.
   b. The applicant has provided a note indicating that crosswalks will not exceed a 2% cross-slope. No further action necessary.

4) Elevator Pit Connection
   a. Drainage for an elevator pit connection is provided. It is recommended this connection enter an oil/water separator prior to entering the storm drain system.

Portland Maine Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

MMC's Western Promenade Assessment

Helen Donaldson <hcd@portlandmaine.gov> Wed, Sep 5, 2018 at 9:51 PM
To: Helen Donaldson <hcd@portlandmaine.gov>

---------- Forwarded message ----------
From: **Ethan Hipple** <ehipple@portlandmaine.gov>
Date: Wed, Sep 5, 2018 at 12:33 PM
Subject: Re: MMC's Western Promenade Assessment
To: Helen Nell Donaldson <hcd@portlandmaine.gov>, Sally Deluca <sld@portlandmaine.gov>, Tuck Stuart O Brien <sgo@portlandmaine.gov>
Cc: Ethan Owens <eowens@portlandmaine.gov>, Matthew Coleman <mcoleman@portlandmaine.gov>

Hi Nell,
Here are our comments on the Valley St Paved Path and the associated goat paths.

In speaking with our sidewalk plow operators, they have made it clear that even during light snow events, the grade and tight radius of the Valley Street Paved Path switchbacks makes it very difficult/impossible to clear snow with our existing Trackless or Holder sidewalk plows. The root of the problem is that the switchbacks themselves are too small and steep, making it very tricky to get the plows around the steep corners. The narrowness of the path also contributes to the difficulty. Enlarging and flattening the switchbacks (requiring alteration or additional retaining walls) would reduce the problem. Because of the difficult passage there, when an operator is clearing snow on the neighborhood routes, they will typically skip the Valley St Path and come back later with a different piece of equipment that can clear the steep sections. This can lead to delay of up to several days because we will complete our standard routes first (using Trackless or Holders), then return to get problem areas/pinch points with specialized equipment when all other routes are cleared.

If we were to improve the trail so that we could clear it safely with the normal Trackless or Holder equipment, it would be cleared as part of the regular route and would result in much timelier completion. If we leave it as is, we will continue to clear it using alternative equipment, but it will cause delays and will certainly have an impact on the higher expected volume of pedestrians using that route.

For the goat paths leading from Valley St to Gilman Place, then up the grassy slope to MMC, we recommend the following:

Lower Goat Path (Valley St to Gilman Place): At Valley Street, create a break in the retaining wall with stairs leading to the lower goat path. Install timber box stairs and stone dust fill on steep, eroded sections of trail.

Upper Goat Path (Gilman Place to MMC): Combine braided system of multiple goat paths into a single improved trail. Install timber box steps and stone dust fill on steep sections. Alternative is to pave this section of trail.

Ethan Hipple
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HISTORIC PRESERVATION BOARD
CITY OF PORTLAND, MAINE

WORKSHOP – ADVISORY REVIEW
222 ST. JOHN STREET

TO: Chair Sheridan and Members of the Historic Preservation Board

FROM: Deborah Andrews, Historic Preservation Program Manager

DATE: April 12, 2018

RE: April 18, 2018 – **Workshop** – Advisory Design Review of Proposed Parking Garage

Address: 222 St. John Street
(project site is located within 100 ft. of Maine Central Railroad Office Building, an individually designated landmark structure)

Applicant: Maine Medical Center (MMC)
Represented by Jeff Sanders, Chief Operating Officer

Project Architect: Mark Wilcox, Winton Scott Architects

Introduction

A workshop has been scheduled to review Maine Medical Center's preliminary proposal for a new freestanding parking garage at 222 St. John Street. The project site is located in close proximity to the landmark Maine Central Railroad Office Building and as such the site plan ordinance's "100-foot rule" applies. Under this provision, the Historic Preservation Board conducts an advisory review of the project and comments are forwarded to the Planning Board for its consideration, along with a written analysis of the proposed development's immediate context.

Beyond the required HP advisory review that addresses specifically the compatibility of the proposed development with the adjacent landmark, Planning staff and project consultants are seeking the Historic Preservation Board's general feedback about the preliminary design direction and material palette while the project is still at an early stage of design development. In this respect, Wednesday's review session is somewhat unique because most projects are well advanced in terms of design development when they come before the Board for advisory review. As the applicant is not yet scheduled for a first workshop with the Planning Board, Wednesday's HP workshop provides an opportunity to engage in a discussion about the proposed design direction at a time when the input can be most productive. The Board is encouraged to identify any particular aspects of the preliminary design that might warrant further consideration.

Background Information

The St. John Street garage is proposed by Maine Medical Center for employee parking and is one element of MMC's recently approved "Institutional Development Plan", an overall master plan for expansion and upgrade of the hospital's campus. In December, the City Council formally approved a Maine Medical Center Institutional Overlay Zone (IOZ) that establishes zoning parameters and conditions for MMC's expansion. The proposed employee parking garage is specifically addressed in the IOZ. As such, threshold dimensions for the St. John Street garage have been set by zoning. Under the IOZ, the garage is allowed a maximum height of 100 feet and a maximum building length of 500 feet. Other characteristics of the development are subject to design review.

The garage will be located on a portion of same lot occupied by the former Maine Central Railroad Office Building. The large irregular-shaped lot includes an extensive surface parking area behind and to the south of the historic structure. The garage will be positioned southwest of the railroad office building and approximately 120 feet back from St. John Street. Along the street in front of the proposed parking garage are two privately-owned residential structures and a surface parking lot currently owned by the Eagles fraternal club. The two residential structures will remain and MMC is negotiating with the Eagles to purchase or lease their lot to provide access to the garage. As shown, the principal entrance will be from St. John Street. Secondary access will be from the surface parking lot behind the MCRR office building.

Project Context

The project's immediate and general St. John Street context is decidedly mixed in terms of building type and architectural character and is generally lacking in any strong unifying development pattern, particularly on the west side of St. John where the garage is proposed.

The historic Maine Central Railroad Office Building dominates the western side of St. John Street and is an architecturally impressive three-story Romanesque Revival style brick and stone building with hip roof. Constructed over a 28-year period, the building is not only impressive architecturally, but also in size; it occupies approximately 320 feet of frontage along St. John Street. Its bulk is broken up by its E-shaped configuration. Three distinct building masses project out to the street and are separated by two landscaped courtyards. The building exhibits a distinct sense of solidity and permanence, which is achieved in part by the use of brick and stone and heavy details.

The rear elevation of the MCRR office building--the portion of the historic structure that will have the closest visual relationship to the proposed garage—is an expansive wall of masonry twenty-five bays in width. It is interrupted only by an arched entrance portico of recent construction in the middle of the elevation.

Immediately south of the historic structure are two wood-frame houses that are 1½ and 2½ stories tall. These buildings will be in front of the northern end of the new garage. Beyond these buildings is a surface parking lot with a row of arborvitae at the sidewalk edge. This row of evergreens provides screening for the open lot and continues some sense of street wall. The

brick two-story building that houses the Eagles is the last substantial structure located at the street edge. Beyond this point, the development pattern becomes even more frayed, with several industrial or commercial buildings set back a considerable distance from the street.

The eastern side of St. John Street in the vicinity of the proposed project is predominantly residential and the late 19th and early 20th century houses are in generally good condition. A one-story autobody garage (located directly across the street from the proposed development) interrupts this otherwise regular development pattern.

Proposed Structure

The applicant's submission includes aerial views of the site, general elevations, renderings and information regarding some of the building materials under consideration. The submission does not include detailed elevations or dimensional information, such as the building's distance from the street, height, length, etc. At staff's request, the applicant has provided several perspective views from various view corridors. These will be instructive in assessing relative visibility and visual impact.

Architect Mark Wilcox will make a more detailed presentation on Wednesday and answer any specific questions not addressed in the enclosed material. He is also prepared to address the project's response to applicable design guidelines.

Note that the principal entrance to the garage will located off St. John Street. The surface parking lot now occupied by the Eagles will be redeveloped to provide ingress and egress from the garage, as well other site improvements. A secondary entrance will be located on the building's north elevation, which is accessed from drive behind the MCRR office building. The north elevation of the garage will have the most direct visual relationship with the landmark structure. Here, the garage is viewed against the rear elevation of the MCRR office building, which is somewhat distinct from the building's more elaborate St. John Street façade.

Applicable Design Guidelines

In reviewing the proposed development under the applicable site plan ordinance provision, the Board should be guided by the following language:

> *"When any part of a proposed development is within 100 feet of any designated landmark, historic district or historic landscape district, ...such development shall be generally compatible with the major character-defining elements of the landmark, or portion of the district in the immediate vicinity of the proposed development. ...For the purposes of this provision, "compatible" design shall be defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, is a distinct product of its own time."*

The Board should first consider the major design characteristics of the historic MCRR office building and then determine whether the proposed development is generally compatible with one or more of those key characteristics. Design characteristics of the new building need not relate to specific features of the adjacent landmark, such as the use of brick and stone, to achieve compatibility. General characteristics, such as the relative "weightiness" of the historic structure, the tonal range of the building materials, the organization of the elevations, etc. might be considered in evaluating compatibility.

In addition to reviewing the preliminary design proposal under the "100-foot rule" provision, Planning staff and project consultants are interested in the Board's input on the proposal's response to design guidelines adopted by reference in the MMC Institutional Overlay Zone (IOZ). These guidelines were reviewed and approved by the Planning Board to guide future development within MMC's expanded campus. See ATTACHMENT 1 for the IOZ design guidelines. As you will note, the design guidelines address such issues as long views of new buildings, the impact of rooftop appurtenances, the quality of façade materials, etc. In addition to general design guidelines, there are specific guidelines for any parking structures within the IOZ.

Preliminary Comments and Questions for Consideration

*Given the nature of the building type and the fact that key characteristics of the structure such as its setback from the street, building height and building length have been predetermined by zoning, the parameters of any design review are inevitably constrained. That said, factors such as the organization of the façade, relative transparency vs. solidity of the parking decks, character and combination of exterior materials, treatment of the entry, the presence of any rooftop appurtenances, etc. will play an important role in its overall design expression.

*Given the position of the garage well back from the street edge and behind other buildings and given its size, is it preferable that it be approached as a "background building" that is relatively recessive in design or should its design be more assertive? To what extent might this building set the tone for redevelopment along this portion of St. John Street?

*To what extent can/should the building relate to the historic structure, given the offset between the two buildings and the very eclectic nature of the surrounding context?

*What characteristics of the historic structure are most appropriate to reinforce or respond to in the garage structure?

*Given the fact that the north elevation of the garage will have the most direct visual relationship with the MCRR office building, how does the new structure relate to the rear elevation of the historic structure? Are there ways that the two elevations might better relate?

Are the proposed exterior materials of high quality and are they likely to age well? Is the color or tone of the material palette compatible with the historic structure and/or larger context?

ATTACHMENTS

1. Adopted Design Guidelines applicable to proposed development within MMC's Institutional Overlay Zone
2. Cover letter from Jeff Sanders, MMC Chief Operating Officer
3. Existing and proposed aerial view of project site
4. Preliminary elevations, renderings, product information
5. Perspective views of garage in context,

AH. 1

DESIGN GUIDELINES

MMC has collaborated with the City of Portland planning staff and sought input from its neighbors to create context-specific "Design Guidelines" for future development within the IOZ boundary. These Guidelines, which are outlined below, are informed by design best practices seen in Portland, and in and around urban hospitals across the US; from City staff recommendations; and from information presented by neighbors in the various public forums held by MMC. They are intended to assist future development in the IOZ to meet the goals and vision for the MMC campus and create context-sensitive buildings.

GENERAL GUIDELINES

MMC will follow these general guidelines for building design within the IOZ boundary:

1. New buildings will be designed to contribute to the campus vision and organizational goals identified in the Master Facility Plan and the Transportation Plan (see Chapters 2 and 3), and best practice design standards for healthcare.

2. The overall composition and experience of the campus will be considered for cohesive identity from approaches along Congress St and I-295.

3. Building entrances will be oriented toward, located adjacent to, or accessible from, a sidewalk in a public right-of-way to create a pedestrian-oriented environment.

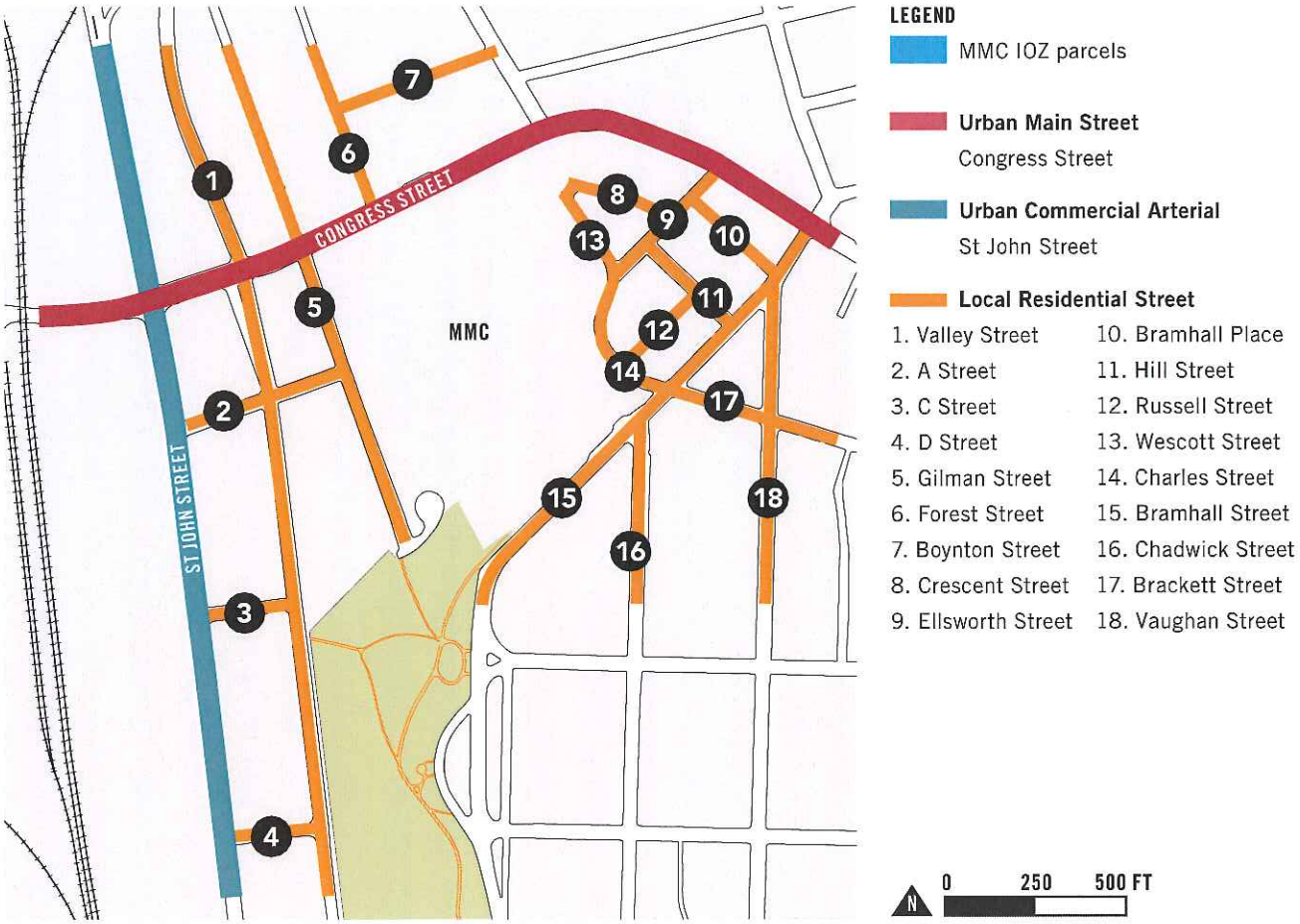
4. Buildings designs will relate to and be compatible with the existing, or—in areas of change—planned character of residential and commercial neighbors. Design elements and characteristics to consider include:
    - » Building placement and relationship to the street
    - » Overall massing and scale
    - » Roof forms
    - » Proportion, directional expression, and composition of facades
    - » Rhythm of solids to voids
    - » Rhythm and proportion of openings
    - » Rhythm of entries and projections
    - » Relationship of materials, texture, and color

5. Façade materials of buildings will be of high quality, and contribute to an attractive public realm.

6. The design process will consider long views of new buildings including roofs and associated structures to minimize visual impacts and provide visual interest. Rooftop appurtenances will be either screened from view or integrated into the building design, and will not be visible from adjacent streets, Western Promenade, or the Congress Street approach. (The helipad cannot be screened for safety reasons.)

7. Vibrant, contributing and sustainable active ground floors will be provided to add activity and a sense of place to the priority node

Fig.5.14 Typologies of Public Streets in and around MMC IOZ

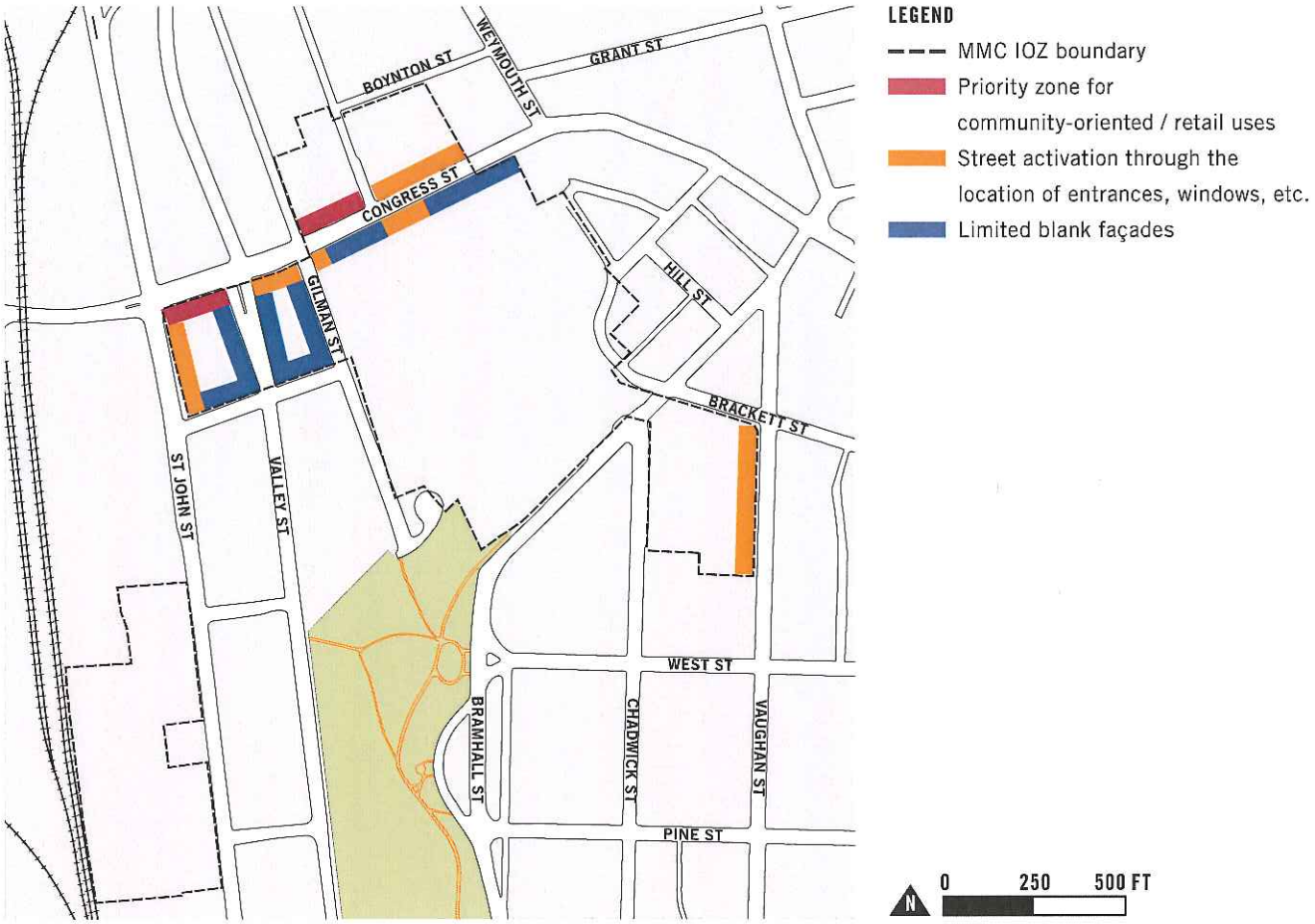


identified in the City's Comprehensive Plan. **Fig.5.15 on page 118** illustrates zones along Congress St deemed to be most suitable for community-oriented uses / retail.

8. In areas where the occurrence of limited blank façades along public right-of-ways are unavoidable due to changes in topography or building use requirements, the following strategies will be used to mitigate visual impact:
   - » providing elements of visual interest along any blank walls facing public streets, and,
   - » working with the City of Portland to ensure adequate lighting of public sidewalks to create a safe pedestrian experience.

Fig.5.15 on page 118 illustrates potential locations of blank walls within the IOZ boundary.

Fig.5.15 Frontage: Types of Activation



9. Any parking structure within the IOZ will:
   - » screen views of cars from public rights-of-way;
   - » provide elements of architectural interest on upper floors to contribute positively to long views and gateway approaches; and,
   - » for garage structures within 20' of the public right-of-way, meet street activation intent according to street type (see **Fig.5.15** above).

BUILDING RELATIONSHIP TO PUBLIC STREET

In walkable urban environments, buildings are designed with pedestrian scale and uses in mind. Buildings contribute to the public realm through the siting and design of street-facing façades, and of lower floors that engage with street-level activity.

A building's relationship to a public street should be informed by the typology of that street, which in turn is defined by the character of existing or planned development lining the street. MMC has identified three distinct typologies of streets within the MMC's IOZ boundary (see **Fig.5.14 on page 117)**. Design guidelines for future redevelopment along these street types are outlined below.

1. Urban Main Street (Congress Street)

Congress St is considered by many to be Portland's "main street". The winding street is defined by "zero-lot line" developments that border the sidewalk, and a series of civic monuments and squares distributed along its length. The IDP planning process has identified an opportunity to extend this "main street" feel from the emergent Bramhall Square (at Bramhall and Congress Sts) all the way to the railroad crossing where Congress St emerges from the influence of the I-295 interchange. MMC aims to contribute positively to the regeneration of Congress St in this area by ensuring orderly redevelopment of abutting IOZ parcels.

MMC buildings abutting Congress St will be designed to:

- provide urban-levels of density;
- create an urban street wall that provides a sense of enclosure to the public realm;
- have their primary orientation towards Congress St;
- activate the public sidewalk with building entrances, lobbies, etc.;
- to the extent possible, given programmatic needs, provide visual interest and ensure pedestrian safety with views into and out of the building along the public sidewalk;
- to the extent possible, given programmatic needs, provide space for community-oriented uses such as services or retail that can be shared between MMC users, neighbors and the broader Portland community; and,
- support the existence of neighborhood amenities such as restaurants and other retail uses providing services to local residents and employees both during the day and evening hours.

The topography and orientation of Congress St in this zone, however, poses significant challenges to achieving some of these design goals. The steady, steep climb of the street makes it impractical for large footprint buildings to align ground floor windows with the rising profile of the sidewalk (see

Fig.5.5 on page 106 for an analysis of building ground elevations). The east-west orientation of the street, combined with the more than 50-ft rise of Bramhall Hill south of Congress St, makes it challenging to provide an urban street wall that does not shade Congress St for most of the time (see shadow studies on page 124). To the extent possible, MMC buildings will utilize the general guidelines related to blank façades to mitigate these conditions (see page 117).

In addition to the guidelines listed above, buildings that have frontage on Congress St and that include parking components will activate portions of or place liner buildings along the ground floor facing Congress St. MMC has no plan to develop a stand-alone garage on Congress St as of the date of this IDP.

2. Urban Commercial Arterial (St John Street)

St John St is a significant arterial linking vehicular traffic between I-295 / Park Drive / Congress Street to the north, and Veterans Memorial Bridge / W Commercial Street to the south. The commercially-zoned street is flanked by a wide variety of uses that hint at its railroad-era origins (warehouses and workers' homes) as well as its current-day arterial use (strip centers and fast food restaurants). While it has some elements of a walkable street such as sidewalks and on-street parking, large stretches of the street prioritize the car with frequent curb-cuts, and street-facing parking lots.

MMC's IOZ boundary abuts St John Street between Congress and A Streets. MMC envisions this block to be redeveloped, in the long-term, in accordance with the Congress St design guidelines outlined on the previous pages. The new development will aim to provide architectural definition to the corner of Congress and St John Streets, and—to the extent possible—extend the character developed for the Congress St frontage along St John St.

3. Local Residential Street

The MMC IOZ boundary is crossed by and abuts a number of local streets that are lined with a wide variety of residential structures ranging from 3-4 story multi-family apartments on Boynton St to single-family mansions along the Western Promenade. During the IDP process, MMC has worked with the City of Portland planning staff, the Planning Board, and neighborhood representatives to identify a balanced approach to redevelopment along local streets that provides appropriate height transition from institutional to residential character. This approach is outlined in detail under "Transitional Zones" on page 110.

Fig.5.16 Photographs illustrating existing character of streets in and around the MMC IOZ

Urban Main Street (Congress Street)

Urban Commercial Arterial (St John Street)

Local Residential Street

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

MMC aims to create a safe environment for all in and around its campus. MMC will incorporate the following design strategies that have been demonstrated to deter crime:

- Providing a clean and aesthetically pleasing campus environment that is designed with vandal-resistant materials
- Providing clear and properly-sized signs in safe locations to ensure safe wayfinding
- Ensuring that paths from transit stops, bike storage areas, and parking areas to main pedestrian entrances are well-lit, with clear sight lines
- Designing street-level elevations to minimize potential hideouts
- To the extent possible, given clinical program demands, providing views in and out of building ground floors populated by users to serve as "eyes on the street"
- Generating foot traffic on public sidewalks with pedestrian entrances

MITIGATING IMPACTS THROUGH DESIGN

MMC is committed to addressing any perceived negative impacts that campus development may have on adjoining neighborhoods. This includes actions to mitigate impacts of daily campus operations, which are discussed under "Operational Sustainability" on page 93. A plan for mitigating construction impacts is outlined, along with a plan for continuous neighborhood input and engagement, in the "Neighborhood Engagement" chapter on page 128. This section summarizes strategies that may be used, as appropriate, to minimize negative impacts of proposed new development.

Minimizing Shadow Impacts

In order to understand the potential shadow impact of proposed campus projects on surrounding properties, MMC has prepared detailed shadow studies during the Master Facility Planning process (see **Fig.5.17** through **Fig.5.20** on the following pages). The overall building heights were kept to a minimum to minimize shadow impacts in areas such as Congress St where street alignment and topographic changes contribute to longer shadows. The proposed Congress St Development (see "Short-Term Projects on page 44) was pulled back from the street to the extent possible to minimize this impact, while also providing a more generous public sidewalk that supports pedestrian activity in front of this new gateway structure.

Context-Sensitive Lighting Design

The location and context of buildings are considered in the design of artificial lighting for new development. While a majority of this work is completed later during the design process and presented during Site Plan review, MMC has already incorporated some preliminary concepts related to lighting intensity into its Master Facility Plan. A key example is the concept design for the Congress St Development, which is intended to animate the Congress St frontage 24/7 with light emanating from its glazed circulation and waiting areas facing the street on the lower floors.

Mitigating Wind Impact

Upon final design of applicable site plans, MMC will consult with the City of Portland's Arborist to selectively determine the placement of trees or other landscape features on any new landscape areas to minimize any wind impacts created by the mass of new development.

Preserving and Enhancing Viewsheds

MMC understands the significance of historic and gateway viewsheds to the Portland community. The Maine General Hospital, a landmark civic building situated atop a hill, was designed to complement the sweeping views of the Fore River from the Western Promenade. Likewise, MMC will design new buildings along Congress St to provide an aesthetically pleasing gateway experience for all entering into the peninsula at this point.

MMC embraces the historic Western Promenade as a site from which to take in views of the countryside and the White Mountains, and a valuable open space amenity for campus users as well as for the broader community.

MMC has met with the Parks Department to review the potential impact of the proposed 222 St John St Garage to public views from the Western Promenade towards the White Mountains, and will work to mitigate potential impacts through design. MMC will also work to minimize potential impacts to the Maine Central Railroad Building as a designated historic landmark.

AH.2

Memorandum
Maine Medical Center

Maine Medical Center
MaineHealth

To:	Members of the City of Portland Historic Preservation Board
From:	Jeff Sanders, Chief Operating Officer, MMC
Date:	April 11, 2018
Re:	St John St Employee Garage Project Review

Maine Medical Center (MMC) is pleased to submit its proposed design for the St John St Employee Garage for an advisory review by the Historic Preservation Board.

BACKGROUND

Maine Medical Center, recognized as a "Best Regional Hospital" by U.S. News and World Report for 2017-2018, is a complete health care resource for the people of Greater Portland and the entire State, as well as northern New England. Incorporated in 1868, MMC is the State's largest medical center, licensed for 637 beds and employing nearly 8,000 people – roughly 2,000 of whom are Portland residents. MMC's unique role as both a community hospital and a referral center requires an unparalleled depth and breadth of services, including an active educational program and a world-class biomedical research center. As a not-for-profit institution, Maine Medical Center provides nearly 23 percent of all the charity care delivered in Maine. MMC is a member of the MaineHealth system, a family of health care services in northern New England (www.mmc.org).

In early 2017, Maine Medical Center (MMC) applied for a zoning amendment to create an MMC-specific Institutional Overlay Zone (IOZ) to allow MMC to modernize and expand their overall campus. The IOZ is available to the City's four major medical and higher education campuses where an improved regulatory structure is needed to facilitate a consistent, predictable growth management process. The IOZ requires eligible institutions to prepare an Institutional Development Plan (IDP), a standalone document that describes the institution's tentative plans for the future, in addition to identifying a regulatory framework that establishes the parameters to allow each institution to grow as envisioned. In November 2017, the City of Portland City Council adopted an MMC-specific IOZ regulatory framework into the City's Land Use Code.

WHY WE'RE ASKING FOR YOUR REVIEW

MMC is preparing to submit a Level III Site Plan application, in compliance with the IOZ regulatory framework, to the City of Portland's Planning Department for construction of a free-standing employee parking garage at the site of an existing surface parking lot at 222 St. John Street. The proposed employee garage is within 100 feet of the Maine Central Railroad General Office Building located at 222 St. John Street which was added to the National Register of Historic Places in 1988.

MMC is submitting the proposed design to the Historic Preservation Board for an advisory review to assist the Planning Board in compliance with Article 5 of the City of Portland Land Use Code, Section 14-526 (d).5.b Design Standards, Historic Resources, Adjacency which states:

> *"Development adjacent to designated landmarks, historic districts or historic landscape districts: when any part of a proposed development is within one hundred (100) feet of any designated landmark, historic district.... or historic landscape district, such development shall be generally compatible with the major character-defining elements of the landmark... "compatible" design shall be defined as design which respects the established building patterns and visual characteristics that exist in a given setting and, at the same time, in a distinct product of its own time...to aid the planning board in its deliberations, historic preservation staff shall provide a written analysis of the proposed development's immediate context, identifying the major character-defining elements and any established building patterns that characterize the context."*

Our presentation on April 18th, 2018 will detail how the proposed project is generally compatible with the major character defining elements of the designated landmark. The Historic Preservation Board is requested to provide a review and written summary of the project to the Planning Board. Attached to this memo is a part of our presentation that includes renderings of the proposed St John St employee garage for your consideration prior to the April 18th presentation.

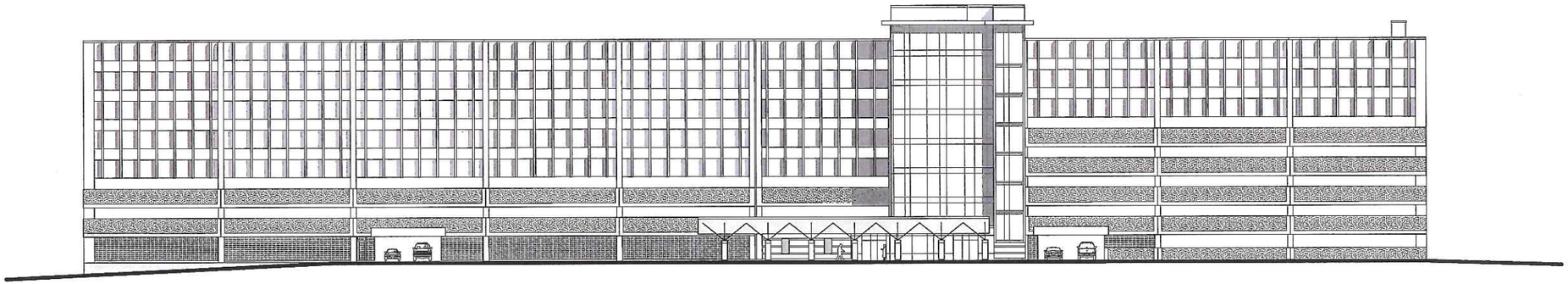
AH.3

FIGURE 1 EXISTING CONDITIONS

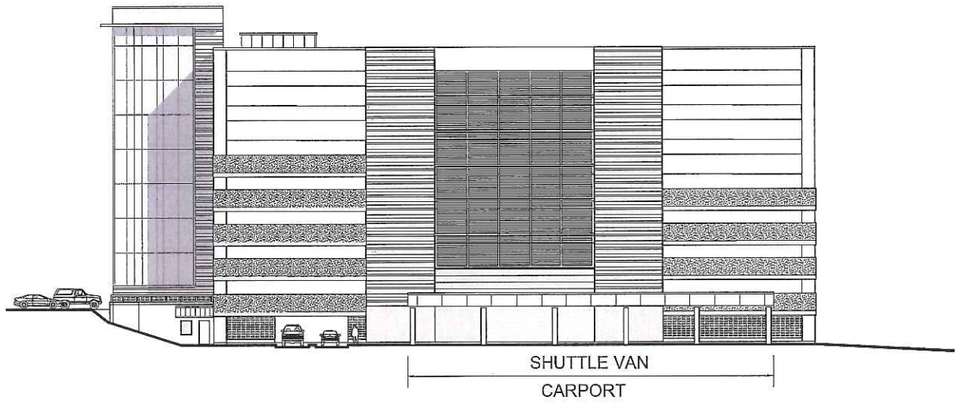
FIGURE 2 PROPOSED CONDITIONS

Att.4

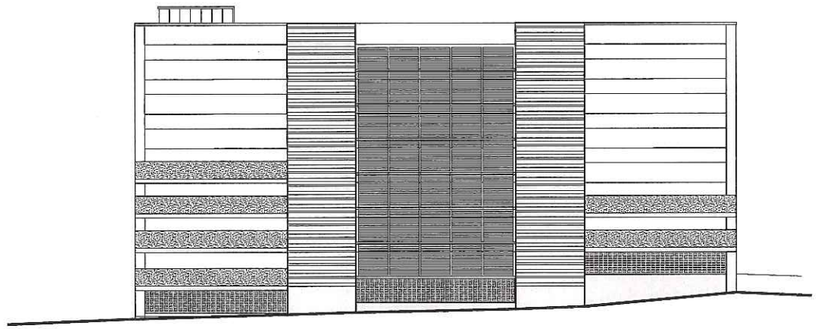
Winton Scott Architects
5 Milk Street
Portland, Maine 04101
207 774 4811
www.wintonscott.com



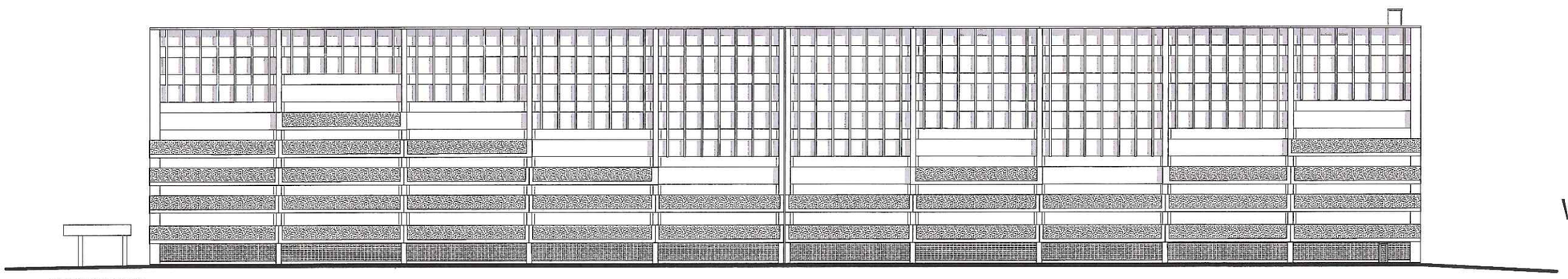
EAST



NORTH



SOUTH



WEST

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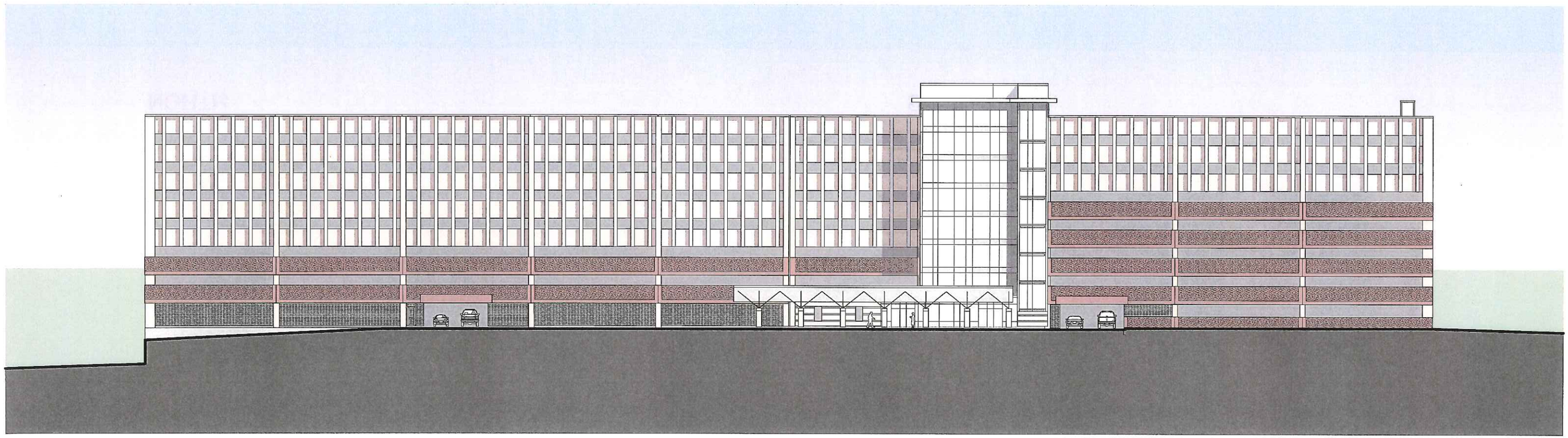
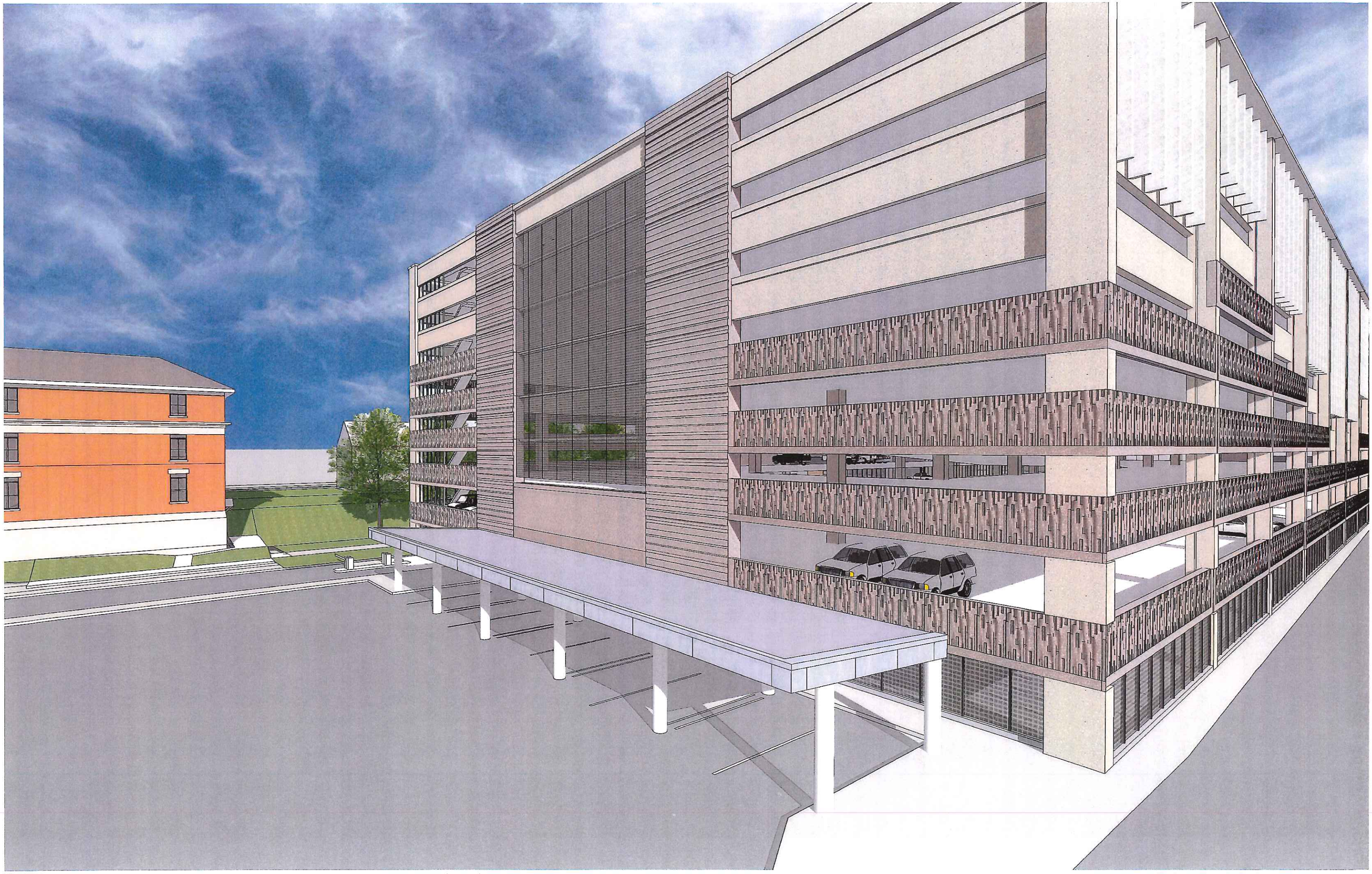
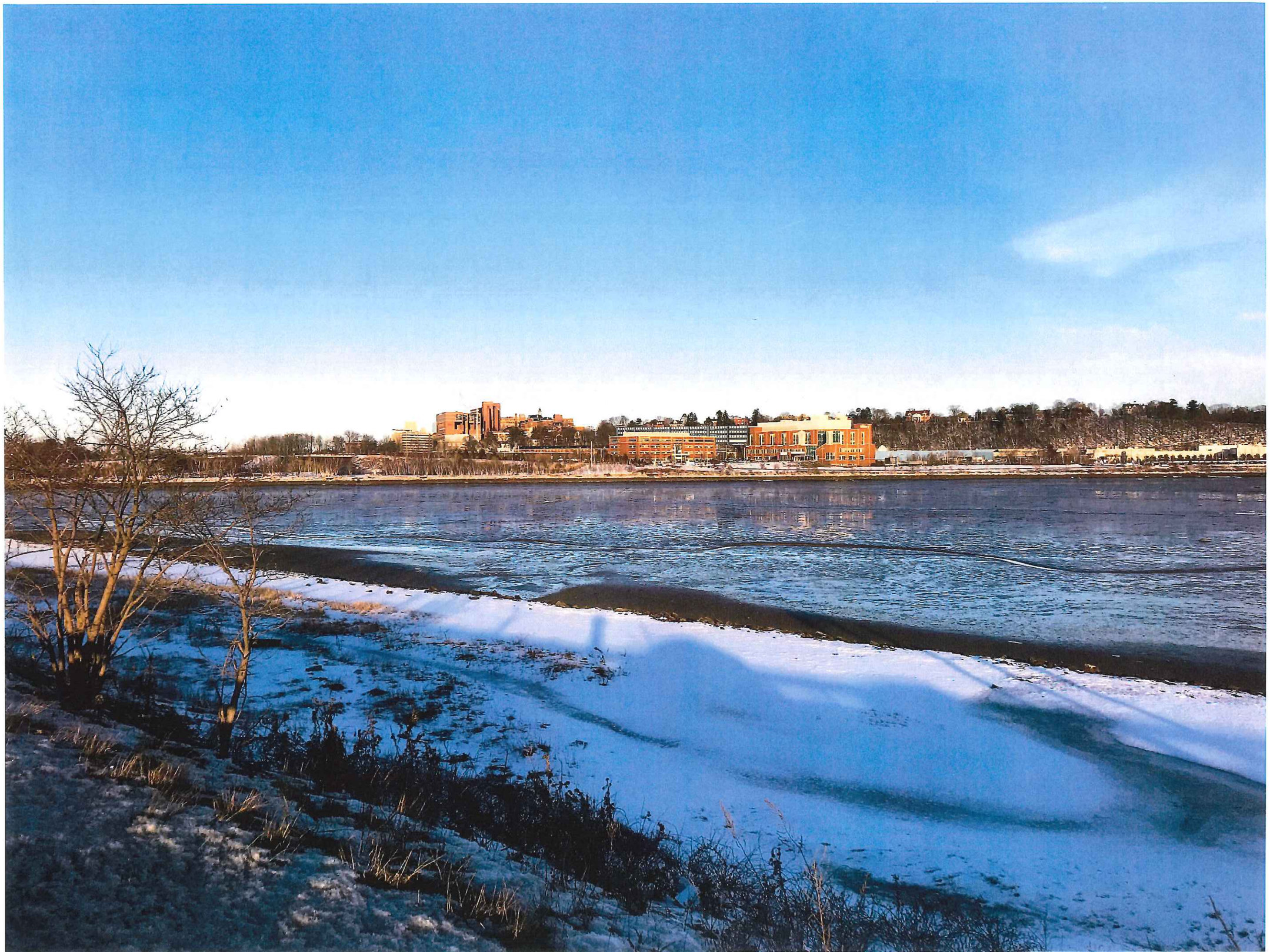
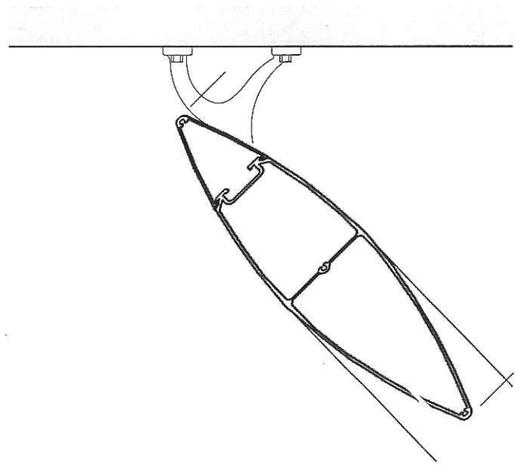


EAST ELEVATION







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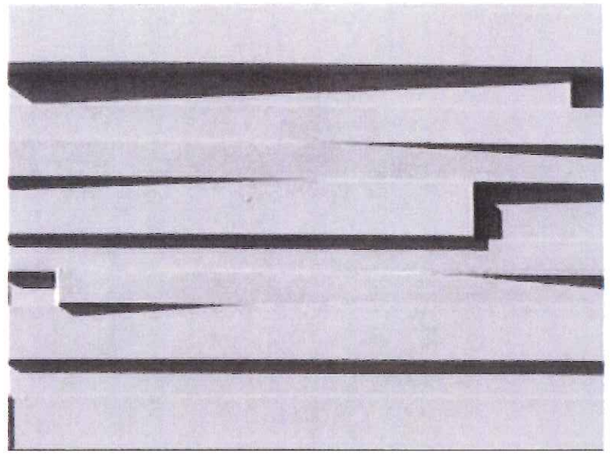
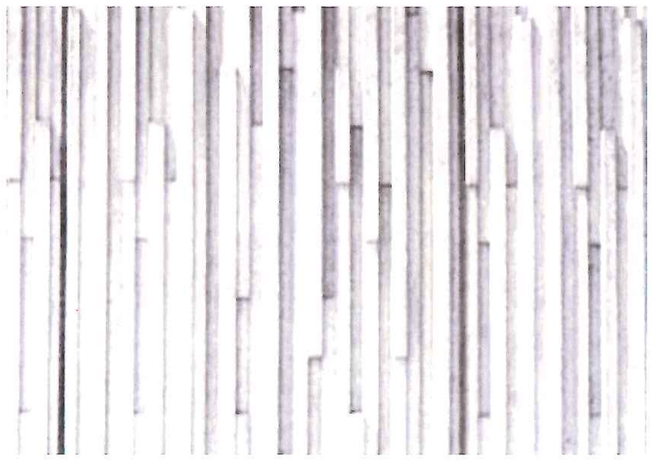


SHEAR WALL TEXTURE



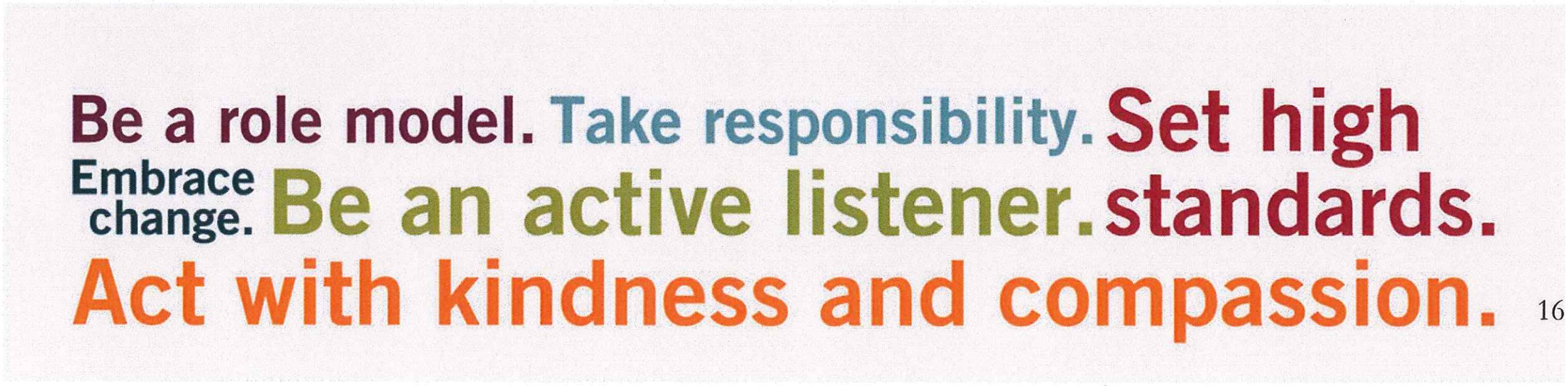
LOWER SPANDRELS TEXTURE

SECURITY GRILLES

AH.5

222 St. John Street Employee Garage
Views & Context

Mark Wilcox
Maine Registered Architect
Winton Scott Architects



View from Rear Parking Lot

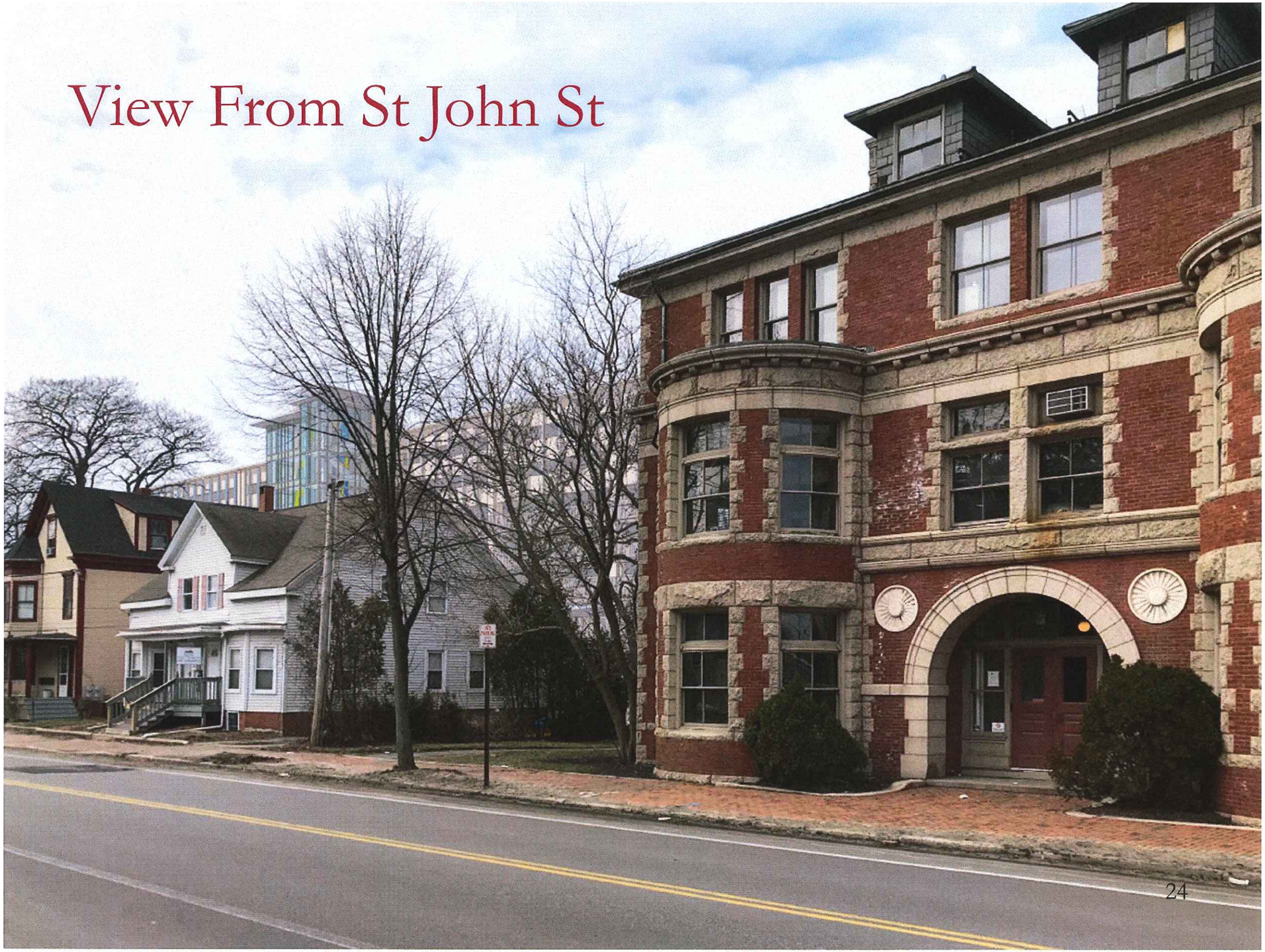
Northwest View

View from Shopping Center

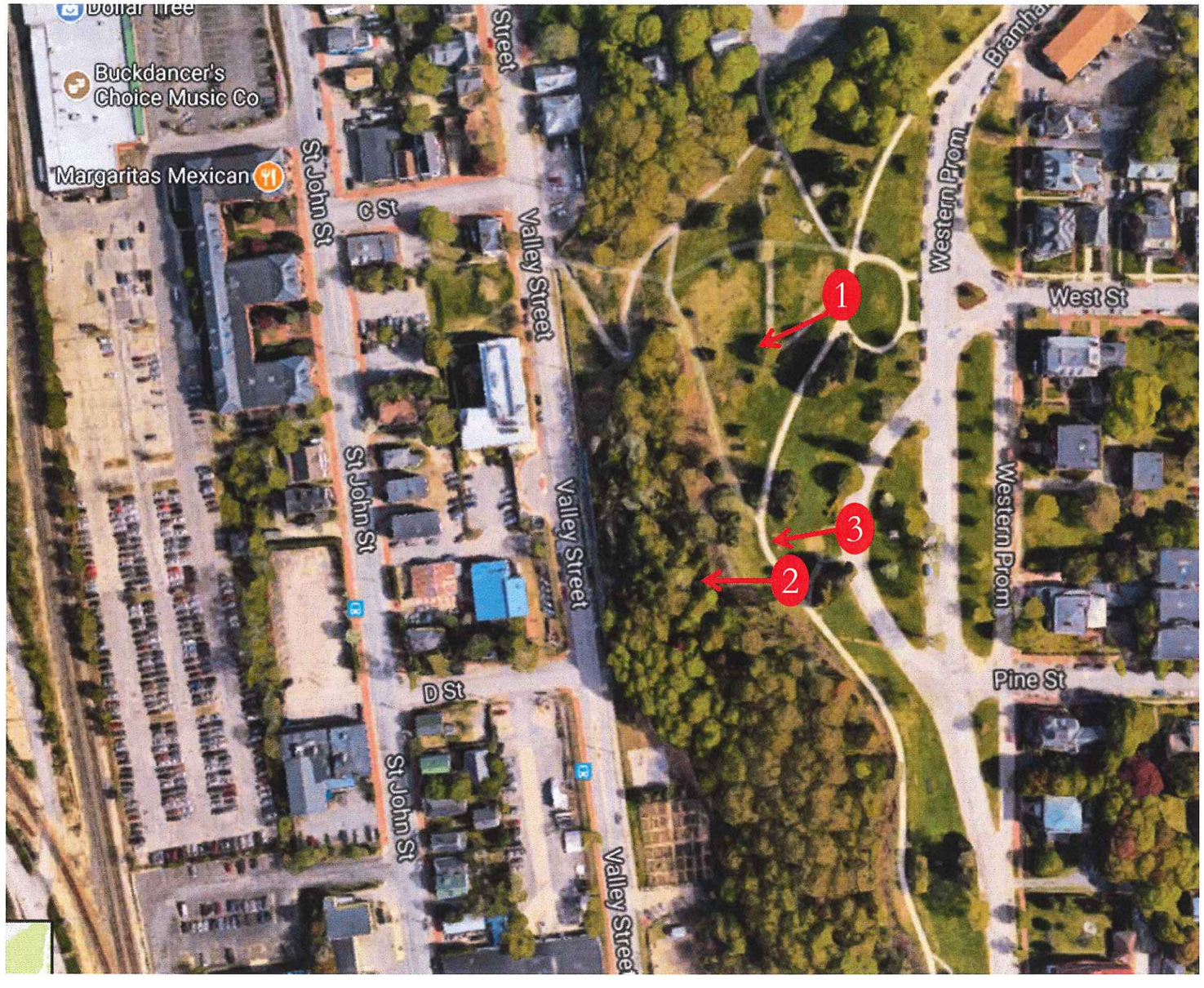
View From A St & St John St

View From St John St @ METRO Garage

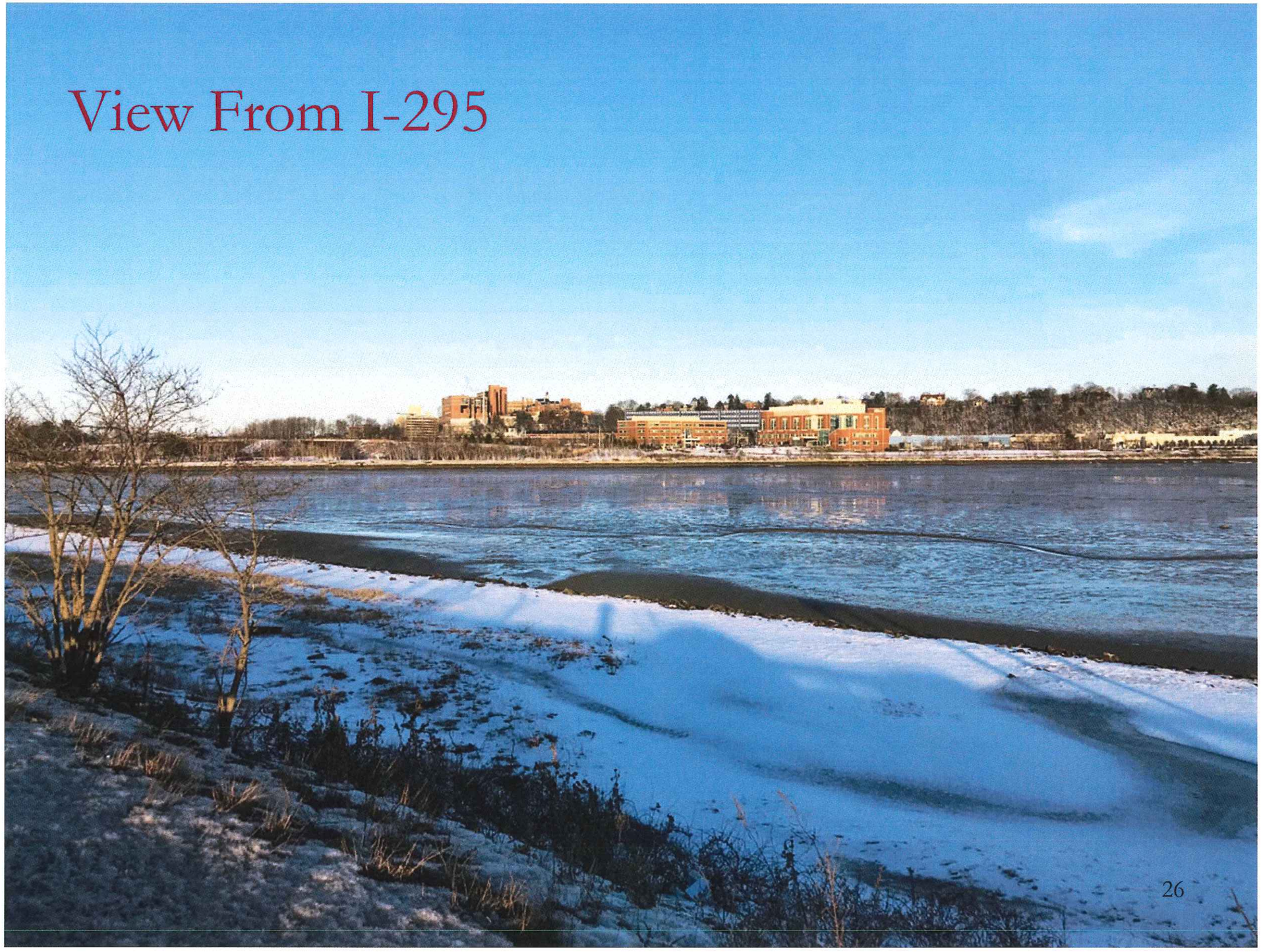
View From St John St



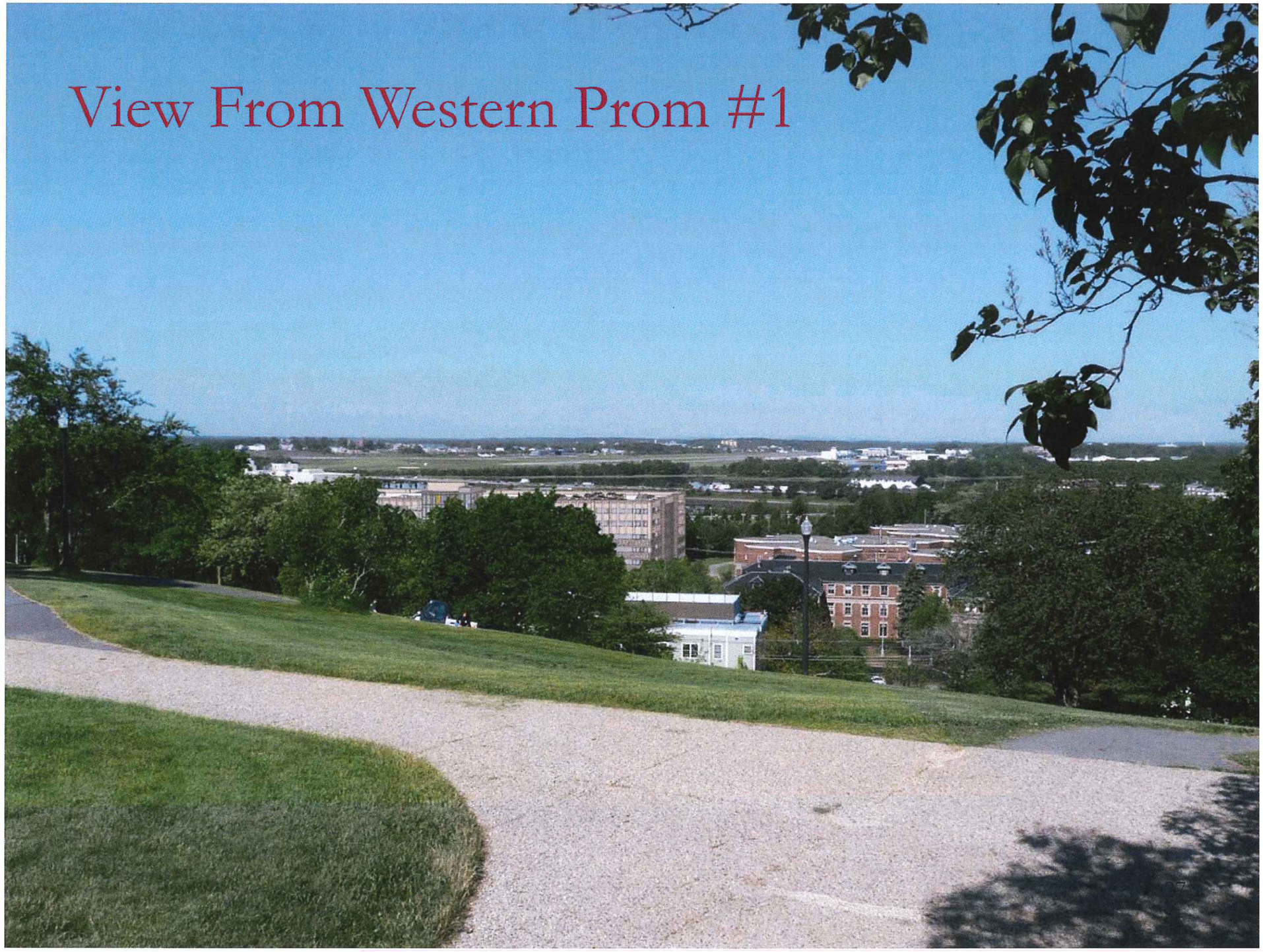
West Prom Views



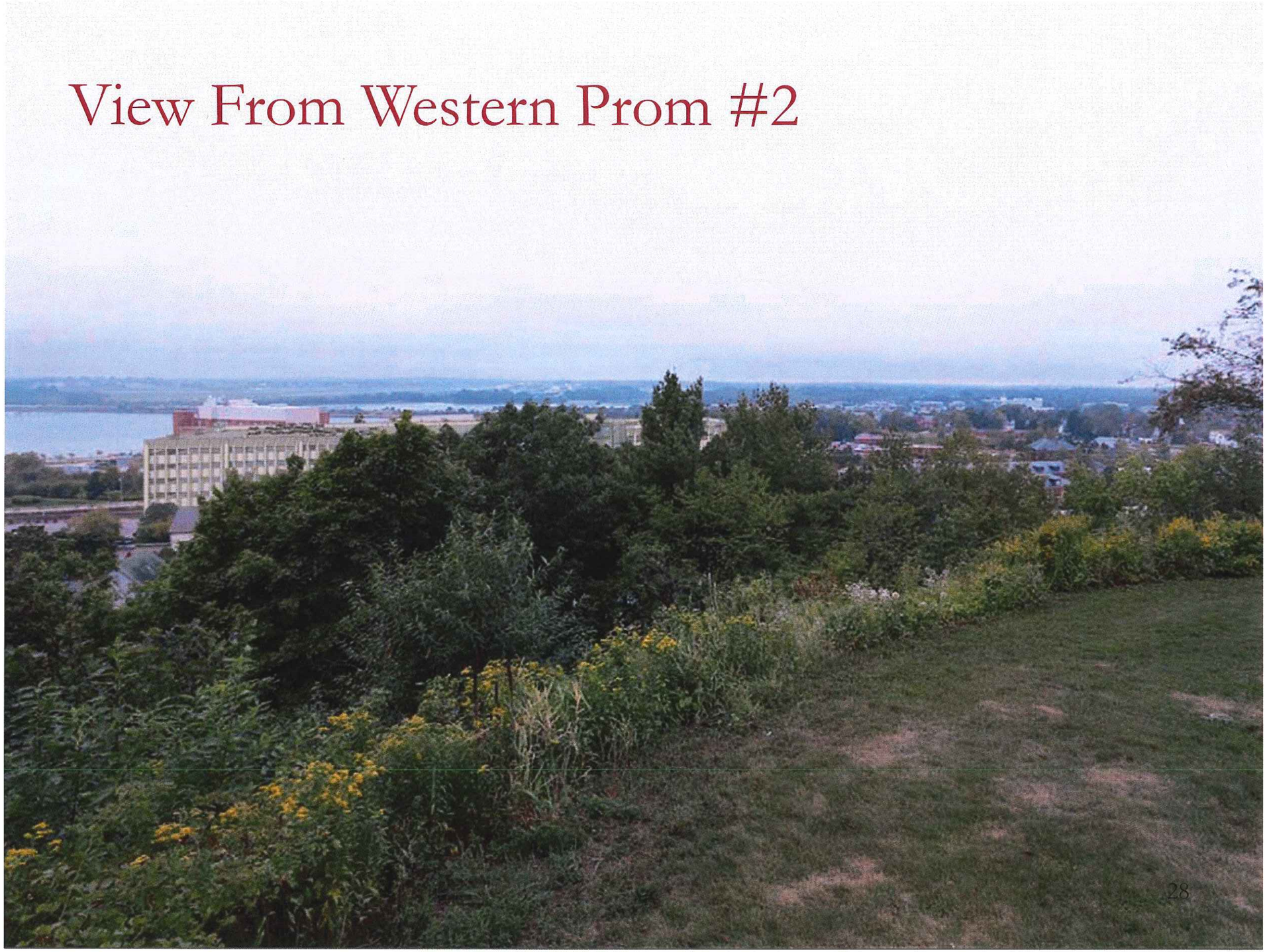
View From I-295



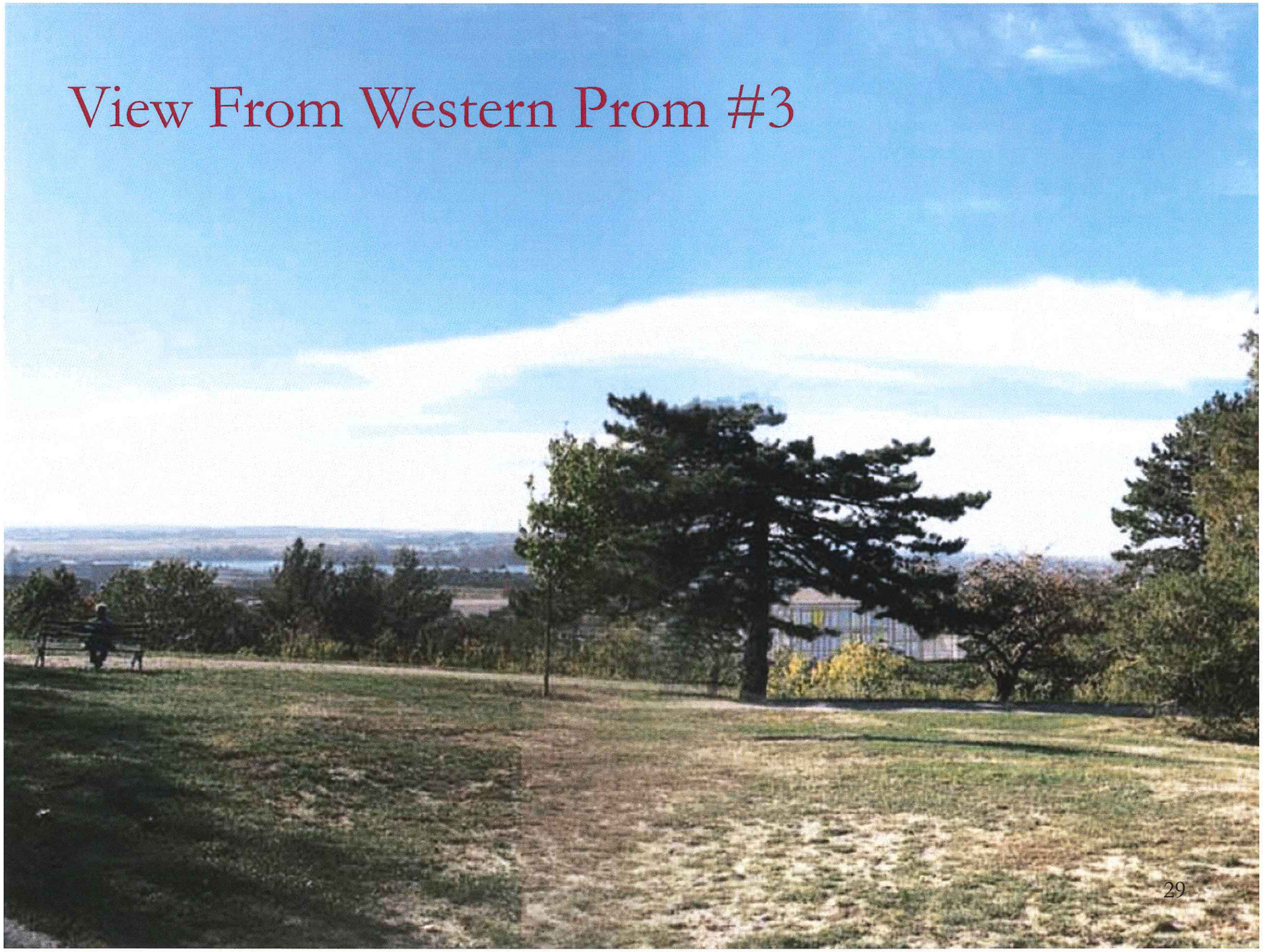
View From Western Prom #1



View From Western Prom #2



View From Western Prom #3



Maine Medical Center
MaineHealth

Institutional Development Plan

Maine Medical Center
MaineHealth

Institutional Development Plan

FINAL / October 9, 2017
Submitted to Portland City Council for Review

This document is valid until superseded by an approved update.

About This Plan

DATE: October 9, 2017
STATUS: Final / Submitted to Portland City Council for Review

Maine Medical Center (MMC) applied in January, 2017 for a zoning amendment to create an **MMC Institutional Overlay Zone (IOZ)** to allow MMC to modernize and expand their Bramhall St campus. The IOZ ordinance that provides the framework for this zoning was enacted by the City of Portland Code of Ordinances effective May 31, 2017.

The IOZ requires eligible institutions to submit an **Institutional Development Plan (IDP)**, a stand-alone document that describes the institution's tentative plans for the future, in addition to a **Regulatory Framework**, a land use code component that establishes the parameters to allow each institution to grow as envisioned in the IDP. The IDP and Regulatory Framework are institution-specific supplements to the more general provisions provided in the IOZ ordinance, and designed to provide a full list of variances from underlying zoning that are adopted by the Portland City Council.

Since January, MMC has met weekly with members of the neighborhood associations and City staff from Planning and other departments, to develop its IDP. This IDP was approved and the accompanying Regulatory Framework was recommended for approval to the City Council by the City of Portland Planning Board on September 26, 2017.

Once approved by the City Council, the MMC Regulatory Framework will establish the boundary for the MMC IOZ and provide zoning requirements that govern MMC's long-term development within the IOZ. Individual projects proposed by MMC in the IOZ in the future for such properties will be reviewed for zoning compliance with the MMC Regulatory Framework and any underlying zoning requirements that are not superseded by the IOZ.

This document was prepared for MMC by Perkins+Will with input from MMC, VHB, Gorrill Palmer, Sebago Technics, Colliers, Turner, and HeliExperts International. MMC would like to thank its neighbors in the Western Promenade, St John Valley, Parkside, West End, and Libbytown and the City of Portland for their contributions to the IDP process.

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CHAPTER ONE

INTRODUCTION

Maine Medical Center has been a member of the Portland community, a Portland landmark and a destination for excellent health care since it was built as Maine General Hospital in 1874. The campus has grown in size and complexity within its footprint to meet growing demand and changes in healthcare technology and care delivery.

ABOUT MAINE MEDICAL CENTER

Maine Medical Center (MMC) is a complete health care resource for the people of greater Portland, the entire state of Maine, and northern New England.

MMC is the state's largest medical center, licensed for 637 beds and employing more than 6,000 people. MMC's unique role as both a community hospital and a tertiary referral center requires an unparalleled depth and breadth of services, including the state's only medical school, through a partnership with Tufts University School of Medicine, and a world-class biomedical research center, the Maine Medical Center Research Institute.

The MMC care model includes the state's largest multispecialty medical group, Maine Medical Partners. Maine Medical Partners provides a wide range of primary, specialty, and subspecialty care delivered through a network of more than 40 locations throughout Maine.

Maine Medical Center is named one of "America's Best Hospitals" by US News & World Report. MMC's Trauma Center is the busiest in Maine, providing the most advanced tertiary care in the state.

MISSION, VISION AND VALUES

Maine Medical Center is dedicated to maintaining and improving the health of the communities it serves by:

- Caring for its community
- Educating tomorrow's caregivers
- Researching new ways to provide care

It proudly carries its unique responsibility as Maine's leader in patient care, education and research. MMC is dedicated to the traditions and ideals of not-for-profit healthcare. It provides care to all who seek it.

MMC's efforts to execute its Mission are aimed at achieving a simple, yet powerful Vision: "Working together so (Maine's) communities are the healthiest in America."

MMC is guided by a set of Values, helping to meet and exceed the expectations of those it is privileged to serve. MMC's Values:

- Patient-Centered
- Integrity
- Ownership
- Excellence
- Respect
- Innovation

PROGRAMS AND SERVICES

MMC provides a scope and depth of specialty and subspecialty inpatient and surgical care that is unparalleled in Maine.

MMC is the only Level I American College of Surgeons (ACS) trauma center in Maine and has the only Level III Neonatal Intensive Care Unit (NICU) and the only kidney transplant program in the state. MMC is an American Nurses Credentialing Center (ANCC) Magnet Hospital and has received numerous awards including: Best Regional Hospitals (2016-2017) from US News and World Report, Gold Seal of Approval and Top Performer in Key Quality Measures from the Joint Commission.

MMC is also the leading provider of tertiary services in the State of Maine. Tertiary services are defined as a set of Medicare severity diagnosis-related groups (MS-DRGs) that are rare and complex, require collaboration across treatment modalities, complex treatment decisions dependent upon unique diagnostic tests, regionalized care, and associated with complex co-morbidities and complications.

MMC's clinical services are organized into six service lines listed in **Table 1.1** at right. More information is available on the MMC website at http://www.mmc.org/care-and-services

Table 1.1 List of MMC Service Lines

ADULT MEDICINE	**MMC's Adult Medicine Service Line extends across the continuum of care, spanning from primary care, to emergency and critical care, medical services for hospitalized adults, subacute rehabilitation and long-term care. It includes a wide array of specialty programs and services including Digestive Health, Endocrinology, Geriatrics, Infectious Disease, Nephrology, and Palliative Care. This service line also includes the procedural areas of Endoscopy and Transplantation.**
CARDIOVASCULAR	**MMC's Cardiovascular Service Line addresses the treatment needs of patients with cardiovascular diseases such as coronary artery disease, valvular heart disease, congestive heart failure, arrhythmias, congenital heart disease, and peripheral vascular disease.**
ONCOLOGY	**MMC's Oncology Service Line provides health services to patients diagnosed with cancer such as medical oncology, radiation oncology, gynecological oncology, and surgical oncology.**
SURGICAL	**MMC's Surgical Service Line addresses specific health problems requiring surgical intervention including cancer, cardiovascular disease, eye diseases and injuries, gastric and intestinal diseases and injury, gynecological diseases and injury, joint and bone diseases and injury, neurological and spinal diseases and injury, bariatric, trauma, and genito-urologic diseases and injury.**
NEUROSCIENCES	**MMC's Neurosciences Service Line addresses the treatment needs of patients with neurological diseases such as stroke, epilepsy, neuro-oncology, multiple sclerosis, neuroendovascular diseases, Parkinson's disease, Alzheimer's disease and dementia, neuromuscular diseases, peripheral nerve and muscle conditions, and spine disorders as well as an array of neurodiagnostic services including electroencephalography (EEG) and sleep lab.**
WOMEN'S AND CHILDREN'S	**MMC's Women's and Children's Service Line addresses the health problems and needs of women and of children under 18 years of age with such clinical services as child birth and pediatric subspecialties including, neonatology, pediatric medicine, oncology, cystic fibrosis, gastroenterology and nutrition, cardiology and cardiac surgery, nephrology, neurology, pulmonology, ophthalmology, orthopedics, and urology.**

HISTORY

MMC opened its doors in 1874 as Maine General Hospital on Bramhall Hill, at the northern end of the tree-lined Western Promenade and adjacent to the Bramhall Reservoir.

The campus, designed by architect Francis Fassett, included four pavilions around a central administration building. The east pavilion and two outbuildings were erected first, providing patients with sweeping views of Casco Bay and the Fore River. The hospital was designated as the training facility for the Portland School for Medical Instruction and the Medical School of Maine at Bowdoin College, and had its own School of Nursing. Built of red-brick in Italian Gothic style, Maine General soon became a local landmark and a destination for the most up-to-date medical care in the state.

The opening of Union Station (1888) down the hill at Congress and St John Sts brought commercial uses to the area and improved access to the hospital. The hospital also catalyzed development of the area with medical uses such as the 1891 Maine Eye and Ear Infirmary as well as residential uses. The Western Promenade neighborhood gained prominence at the turn of the century as high-end homes and apartment buildings were built near the hospital and improvements were made to the

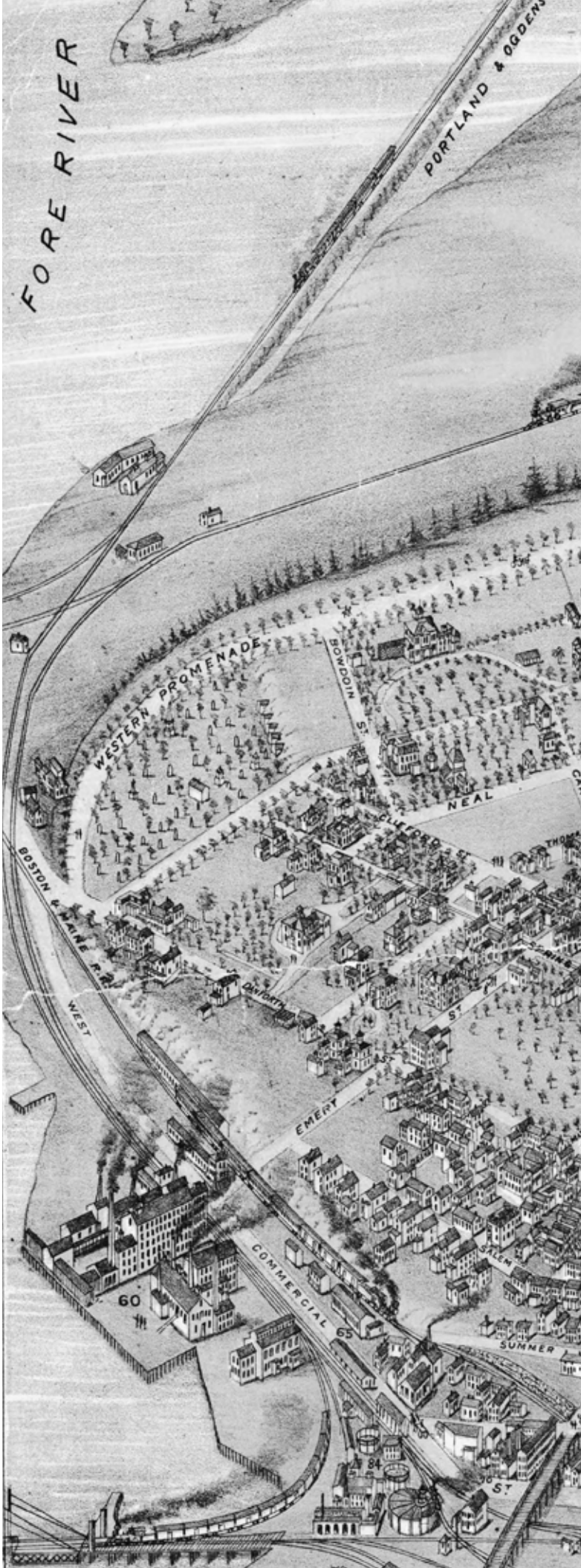

Fig.1.1 1876 Bird's eye view of Portland.

MAINE CENTRAL R.R.
ST. JOHN ST.
CARTER
FOREST
WEYMOUTH
ELLSWORTH
WESTERN PROMENADE
BRAMHALL ST.
CHADWICK ST.
WEST ST.
PINE ST.
VAUGHAN ST.
CARLETON ST.
BRACKETT ST.
CONGRESS ST.
GROVE ST.
PORTLAND ST.
GRANT ST.
SHERMAN ST.
CUMBERLAND AVE.
MELLEN ST.
AVE.
STATE ST.
DEERING
SPRING
CLARK
DANFORTH
PARK
HIGH
YORK ST.
CENTER
10
11
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59

Western Promenade parklands. Maine General Hospital modernized its facilities through the 1920s and added a third pavilion in 1929.

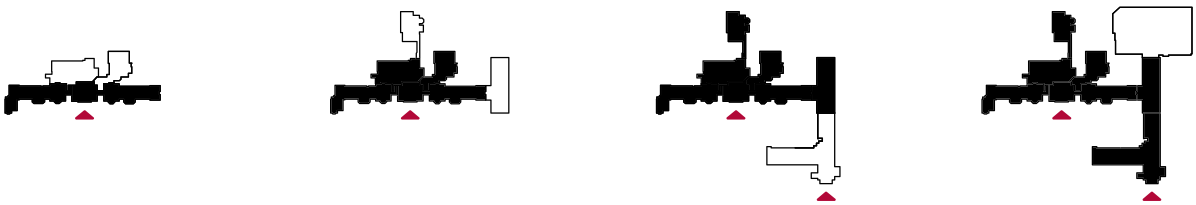
In 1951, Maine General Hospital, the Maine Eye and Ear Infirmary, and Children's Hospital merged to become MMC. Two new pavilions were added in 1956 to provide modern patient rooms. Suburban growth and the construction of interstate highways in the 1960s increased demand for parking at the Medical Center, which was met by converting the Bramhall Reservoir into a surface parking lot (current South Lot).

In 1968, MMC doubled the size of its facilities with the addition of the eleven-story Richards Wing. The campus expanded its footprint down towards Congress St with the addition of its first parking garage (now known as Employee Garage) in the 1970s. In the late 1970s, MMC became a teaching hospital for the University of Vermont College of Medicine.

In 1985, MMC opened the six-story LL Bean Building, another major addition to the campus. The Bean Building housed the new Neonatal Intensive Care Unit (NICU), operating suites, and specialty departments; it also now houses the Barbara Bush Children's Hospital (BBCH). The Dana Building was built in 1987, adding much-needed classroom and conference space to the campus.

Through the 2000s, MMC has renovated and expanded its facilities to meet its role requirements as the highest acuity provider of healthcare in the state. In 2008, MMC opened the 190,000 SF East Tower including new units for prenatal care, labor, delivery and recovery, neonatal intensive care, and mother-baby units. The Emergency Department expanded into the basement of the East Tower the

Fig.1.2 Historical evolution of MMC



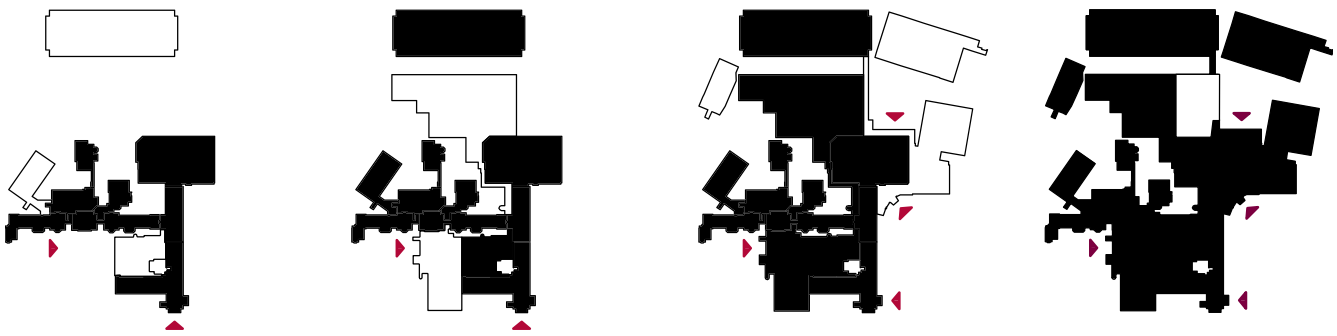
1890s 1920s 1950s 1960s

following year. The campus transformation project also included a new central utility plant and the 512-car Patient and Visitor Garage.

As its partnership with the University of Vermont came to a close, MMC initiated a new training program for medical students at the Tufts University School of Medicine in 2011. Today, MMC also hosts students from the Geisel School of Medicine at Dartmouth and University of New England College of Osteopathic Medicine.

In 2015, MMC completed construction on a portion of the LL Bean building roof to add new operating rooms and perioperative care beds.

Today, MMC is undertaking a new planning effort driven by the need to replace semi-private patient rooms with private rooms and to provide additional surgical capacity. The plan also provides an opportunity to address infrastructure needs, parking, wayfinding, and overall building organization to improve the delivery of care (see **Chapter 2** for details).



1970s **1980s** **2000s** **PRESENT DAY**

CAMPUS CONTEXT

MMC Bramhall campus is located at a high point in the west end of the Portland peninsula that is renowned for the Western Promenade—an 18-acre park and national historic landmark designed by the Olmsted Brothers, among others. The campus abuts the Western Promenade in a dense urban setting that serves, in many ways, as a transitional zone between areas with diverse character, land uses, and demographics.

The campus, which serves the entire state of Maine as well as eastern New Hampshire, is located within less than a mile's distance of I-295, which links Portland to destinations across New England. To the north, the campus fronts on Congress St —Portland's main street that extends along the spine of the peninsula to Portland's downtown and beyond. The MMC campus is located at the western gateway into the City.

Fig.1.3 Bird's eye view of the campus in its urban context

Fig.1.4 Bird's Eye View of the Campus in Context, Looking North

ADJOINING NEIGHBORHOODS

The 21.8-acre MMC Bramhall campus abuts four distinct neighborhoods. To the west and north is the St John Valley Neighborhood, a diverse area featuring a wide mix of uses including industrial warehouses, a large food processing plant, bus garages and facilities, single-family residential, local and chain restaurants, multi-family rentals, and alternative grocery stores. St John Valley, and the largely residential Parkside neighborhood to its east, are among the most ethnically and racially diverse in Portland. (City of Portland GIS Maps, 2010 Diversity Index). The two neighborhoods share easy access to Hadlock Field, Fitzpatrick Stadium, and Deering Oaks Park north of Park Avenue.

The Western Promenade neighborhood is located to the south of the medical campus. The focal point and namesake of the neighborhood is the 18-acre linear park that wraps the 120-feet tall escarpment, providing sweeping views of the Fore River. Designated as a park as early as 1836, and designed in 1905 by the Olmsted Brothers. The Western Promenade neighborhood and large sections of the adjoining West End neighborhood are included in the West End local historic district in recognition of their cohesive residential character featuring major architectural styles from 1850 to the 1920's (see Historic Resources at right).

ZONING CONTEXT

Development on the MMC campus has been historically governed by Contract Zone agreements C41 (main campus) and C18 (Congress St Medical Building).

At the request of the City, and with input from its neighbors, MMC has developed an Institutional Development Plan (IDP) in the new Institutional Overlay Zone (IOZ). See **Fig.1.5 on page 19** for a map of MMC's IOZ in its zoning context.

HISTORIC RESOURCES

The MMC Bramhall campus abuts the West End Historic District, one of the eleven locally-designated historic districts in the City of Portland (see **Fig.1.5 on page 19** for district boundary). The locally-designed West End Historic District includes the Western Promenade, an 18-acre public park that dates back to the 1830s.

The West End Historic District was added to the National Registry of Historic Places (NRHP) under the name "Western Promenade Historic District" in 1984. The Western Promenade was also added to the NRHP database as a Historic Landscape in 1989.

MMC's IOZ boundary includes the Maine Central Railroad General Office Building located at 222 St John St, which was added to the NRHP in 1988. The IOZ boundary also includes McGeachey Hall at 216 Vaughan St, which is listed as a contributing structure to the Western Promenade Historic District (see **Fig.1.5 on page 19** for locations).

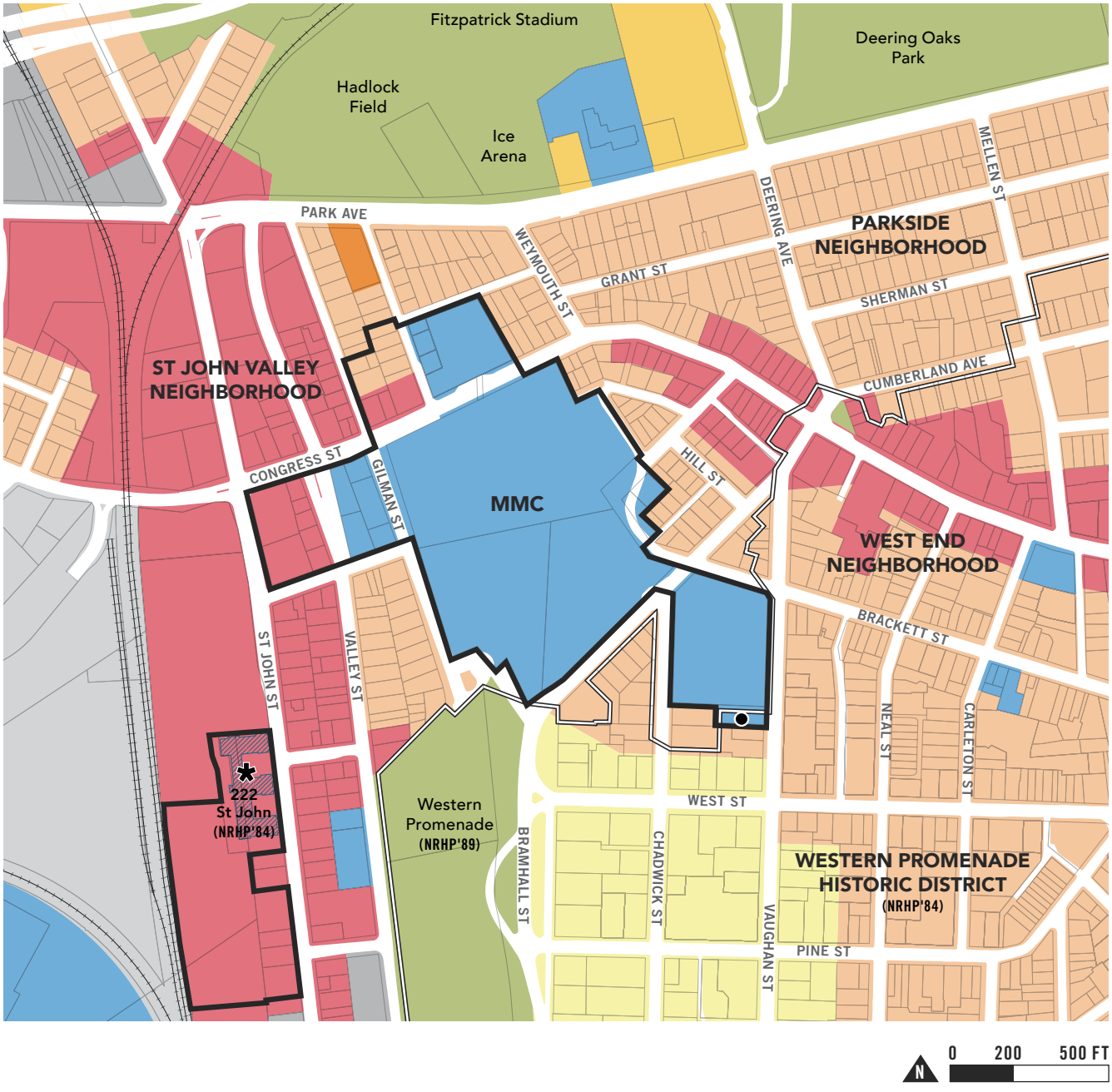
Any development within the IOZ boundary that is adjacent to or within 100 feet of any designated landmark, historic district, or historic landscape district will be subject to applicable requirements listed in Article 5 (Site Plan) of the City of Portland Land Use Ordinance.

Fig.1.5 MMC Campus: Neighborhood and Zoning Context (Data Source: City of Portland GIS)

MMC Institutional Overlay Zoning (IOZ) District Boundary
West End Local Historic District Boundary
NRHP-Listed Structure within IOZ Boundary
Contributing Structure to National Historic District within IOZ Boundary
Parcel Boundaries

CITY OF PORTLAND EXISTING ZONING DISTRICTS

R4 Residential
R5 Residential
R6 Residential
RP Residential Professional
B2 or B2b Business Community
IL Industrial - Low Impact
IM or IMb Industrial - Moderate Impact
ROS Recreation Open Space
Contract Zones (including existing MMC Contract Zones 18 and 41)



PROPERTY OWNERSHIP

MMC owns and leases a number of properties across the City of Portland. These properties are listed and identified on a map on the following pages (see **Fig.1.7** and **Tables 1.2 and 1.3** on the following pages).

Properties that have a functional relationship to the MMC Bramhall campus, which is the subject of this IDP are highlighted with an * on **Tables 1.2 and 1.3**. Per the requirements of the IOZ, a functional relationship is defined as uses or activities that are integrally linked to the day-to-day operations of the MMC Bramhall Campus, without which activity at MMC would be severely limited in one or more services.

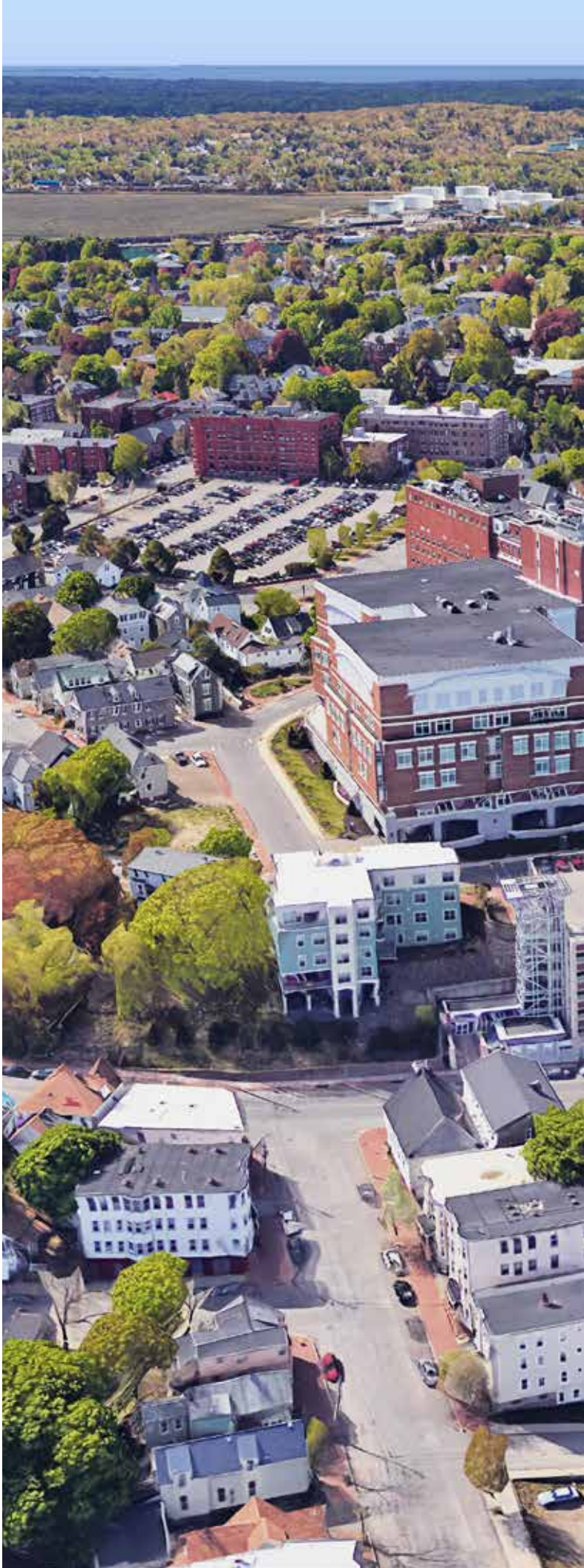


Fig.1.6 Bird's Eye View of the Campus in Context, Looking South

Maine Medical Center

Fig.1.7 Map of MMC-Owned Parcels and Leased Properties

All Parcels within the City of Portland owned by Maine Medical Center or MMC Realty Corp.

Locations where MMC leases space (map extent only)

Table 1.2 List of Properties Owned by MMC within the City of Portland

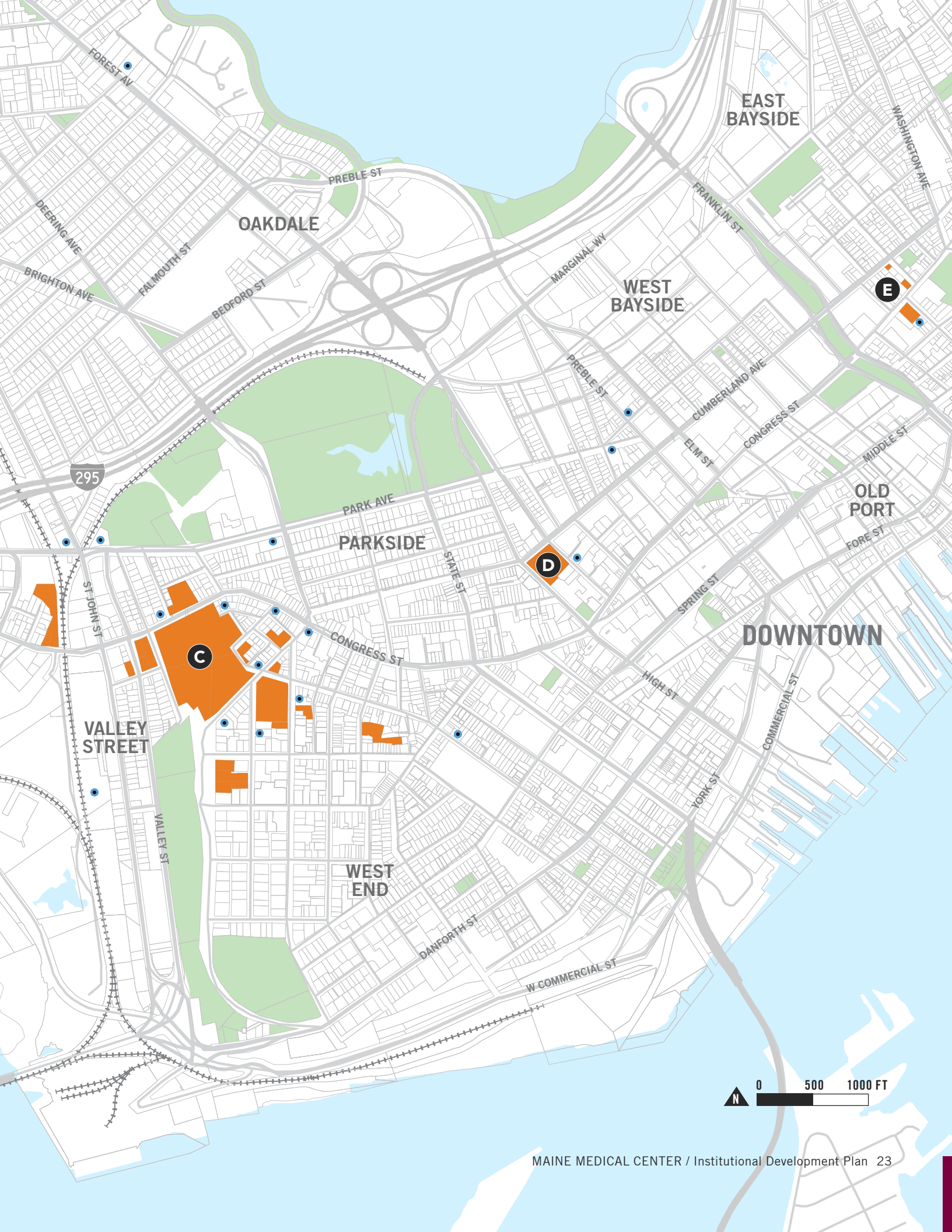
Parcel Address	*Current Use*
A MMC BRIGHTON CAMPUS	
335 Brighton Ave	MMC Brighton
367 Brighton Ave	Residential
27 Hollis Rd	Residential
136 Prospect St	Residential
142 Prospect St	Residential
170 Prospect St	Residential
B MMC BEHAVIORAL HEALTHCARE	
556 St John St	Medical Office
D GATEWAY GARAGE BUILDING	
177 High St	Business Office
429 Cumberland Ave	Business Office
Note: MMC does not own but leases parking spaces in the Gateway Garage.	
E PORTLAND FAMILY MEDICINE	
272 Congress St	Medical Office
263 Congress St	Parking Lot
148 Cumberland Ave	Parking Lot

Parcel Address	*Current Use*
C MMC BRAMHALL CAMPUS AREA	
22 Bramhall St	MMC Bramhall
930 Congress St	Medical Office
932 Congress St	Business Office
887 Congress St	Medical Off. / Pkng
308 Brackett St	Parking (South Lot)
993 Congress St	Parking
995 Congress St	Business Office
98 Chadwick St	Maint. Garage
94 Chadwick St	Parking / Storage
47 Bramhall St	Business Office
229 Vaughan St	Business Office
216 Vaughan St	Medical Office
66 Bramhall St	Medical Office
19 West St	Medical Office
120 West St	Residential
34 Ellsworth St	Vacant Land
40 Ellsworth St	Vacant Land
231 Western Prom	Residential
227 Western Prom	Vacant Land
44 Gilman St	Parking
52 Gilman St	Medical Office
261 Valley St	Parking
262 Valley St	Parking
264 Valley St	Vacant Land

Table 1.3 List of Properties Leased by MMC in the City of Portland

Parcel Address	*Current Use*
131 Chadwick St	Business Office
180 Park Ave	Business Office
233 Vaughan St	Business Office
241 Oxford St	Business Office
315 Park Ave	Business Office
39 Forest Ave	Business Office
509 Forest Ave	Business Office
7 Bramhall St	Bus. Off. / Pkng
794 Congress St	Business Office
295 Park Ave	Medical Office
20 Portland St	Medical Office
818 Congress St	Medical Office
181 High St	Parking
222 St John St	Parking

Parcel Address	*Current Use*
905 Congress St	Parking
98-100 India St	Parking
183 Brackett St	Residential
25-29 Crescent St	Residential
321-325 Brackett St	Res. / Pkng
75 St. James St	Storage
85 St. James St	Storage
Located off the map extent:	
12 Andover Road	Medical Office
1250 Forest Ave	Medical Office
1577 Congress St	Medical Office
901 Washington Ave	Business Office
190 Riverside St	Business Office
87 Central Ave	Medical Office


EAST BAYSIDE
WASHINGTON AVE
FRANKLIN ST
FOREST AV
PREBLE ST
OAKDALE
DEERING AVE
FALMOUTH ST
BRIGHTON AVE
BEDFORD ST
MARGINAL WY
WEST BAYSIDE
E
PREBLE ST
CUMBERLAND AVE
CONGRESS ST
ELM ST
MIDDLE ST
295
PARK AVE
PARKSIDE
OLD PORT
FORE ST
STATE ST
D
SPRING ST
ST JOHN ST
CONGRESS ST
C
DOWNTOWN
HIGH ST
COMMERCIAL ST
VALLEY STREET
YORK ST
VALLEY ST
WEST END
DANFORTH ST
W COMMERCIAL ST
N
0
500
1000 FT

COMPLIANCE WITH THE COMPREHENSIVE PLAN

MMC, being a long term member of the Portland community, recognizes the Comprehensive Plan contains the City's overall goals for growth and change through the articulation of a variety of policy directives and goals for the development. Among other things, the Plan addresses the City's infrastructure, commercial/business development, transportation resources, industry, and commerce and residential housing plans.

The MMC IDP and Regulatory Framework are in basic harmony with the City's overarching goals and policies. With its IDP and Regulatory Framework, MMC has balanced and accommodated the many City goals and policies in a way that advances the City's overall best interests while at the same time addresses the high priority healthcare needs of Portland's residents and the people of the State of Maine. This balancing is exactly the type of flexibility that the City's recently drafted IOZ ordinance is meant to facilitate.

The Comprehensive Plan challenges the City to "support the vision of large, transformative projects [such as the MMC modernization project] through strategic, cost effective, and incremental actions" (*Comprehensive Plan*, p.74).

MMC IDP: COMPLIANCE WITH THE COMPREHENSIVE PLAN

In this IDP, MMC conveys the need to modernize its facility in order to meet the healthcare needs of the people of northern New England. This includes not only upgrading clinical space and providing for the needs of patients and families, but also continuing its investment in its personnel and their ability to travel to and from the workplace and secure needed parking. The adopted 2035 Comprehensive Plan "promotes the orderly expansion of institutional uses, such as educational and hospital campuses, which are central to workforce development, employment, and the health of the local and regional economies" (*Comprehensive Plan*, p.45).

Economic Growth

Employee engagement indicators reveal that one of the issues of greatest importance to current and future employees, in addition to compensation, is parking availability. In order to attract a high quality, highly educated workforce, MMC factors into its operations these two important considerations. Following the completion of its short-term modernization project, MMC projects a growth in its employment base into the future in part because of its status as an excellent academic medical center. Portland's Comprehensive Plan promotes the growth in employment base and supports sustainable growth in education and medical institutions (*Comprehensive Plan*, pp. 44 and 88)

Transportation

MMC has considered its transportation needs holistically, factoring into its future development alternative means of transportation. Since 2009, MMC has implemented a Transportation Demand Management (TDM) plan called "Get on Board!". MMC is updating that plan and considering enhancements to encourage more walking, cycling, and public transportation by its employees.

MMC's ability to promote alternative modes of transportation and success in TDM relies on the availability of a regional system of safe and reliable alternative modes of transportation. Therefore, MMC supports the City's effort to 'explore the technical and financial feasibility of a Transportation Management Association (TMA) as a means of improving access to, and mobility around, downtown, and the waterfront.' (Comprehensive plan, p.76)".

MMC has been, and continues to be, committed to the process and has often been cited by the City of Portland Planning Department as a TDM role model in the City.

Environment

A clean environment is important for healing and health. MMC is environmentally conscious and engages in recycling to minimize the generation and environmental impacts of solid waste. The Hospital conserves water when possible, and has switched away from pesticides to more organic landscape solutions reflecting Portland's goal of "model[ling] environmentally sound landscape management practices, such as planting native species, and limiting the use of pesticides and fertilizers" (*Comprehensive Plan*, p. 20). Buildings are built with energy efficiency standards in mind. Local farmers visit the campus weekly during harvest months and employees are encouraged to support the local food movement. The Comprehensive Plan also notes the need to "support a healthy, resilient, and sustainable food system by collaborating with local and regional stakeholders" (*Comprehensive Plan*, p.20).

MMC REGULATORY FRAMEWORK: COMPLIANCE WITH THE COMPREHENSIVE PLAN

In keeping with the goals of the Comprehensive Plan, MMC has projected its future expansion needs, taking into account the neighborhood context in which it is situated. MMC has minimized future expansion into residential areas adjacent to its campus, thereby preserving housing stock in the City (*Comprehensive Plan*, pp. 48-50). It has appreciated the neighborhood involvement in

its zoning process and has been responsive to the concerns raised.

MMC is taking the bold step of reorienting its front entrance to Congress St, which serves as a gateway corridor to the City of Portland. The area presently is commercial in nature and in need of investment and activation as is recognized by the City's *Comprehensive Plan* (pp. 84, 86). Welcoming the public at the new entrance accomplishes a number of land use goals: it adds tremendous activity to the streetscape, with people coming and going. It also eliminates traffic in the residential neighborhoods of the West End and Western Promenade by providing clear wayfinding directly off of Interstate 295 and the major arterials entering the City. Further, investment in this area will transform the area with the expectation that other properties in the vicinity will likewise invest. In fact, the owners of Union Plaza, located at the junction of Congress St and St John St, testified before the Portland Planning Board that they have been waiting for such investment before they took the step of redesigning and investing further in that property. MMC expects, and is excited about, a transformation of the area into a more vibrant, active and clean area, good for local merchants, hospitality businesses, restaurants and residents.

The *Comprehensive Plan* identifies the St John St / Congress St area as a "priority node, an area that has seen disinvestment, grown in sprawling patterns, simply have the potential to serve as focal points for change in the forms of increased density or, height, streetscape improvements, or diversification of uses to better serve neighborhood needs" (*Comprehensive Plan* p. 84, see **Fig.1.8 on page 27**). MMC's IDP will serve as the catalyst to stimulate new development, investment and reinvestment in this area of the City.

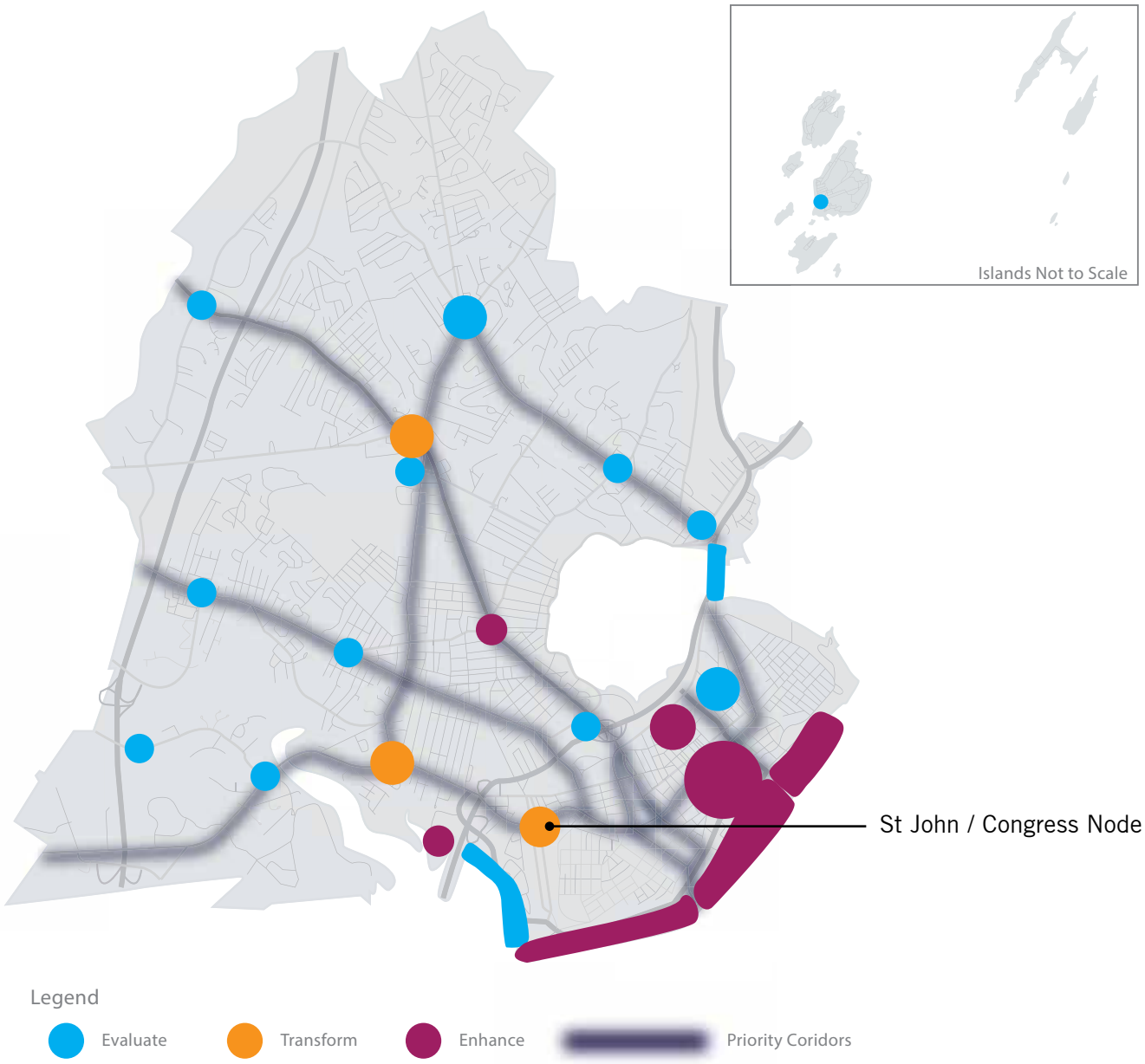
MMC's IOZ Regulatory Framework provides the mechanism for thoughtful, future development to transform the priority corridor identified by the City into an area of "additional mixed uses, higher density growth to take advantage of the transit benefits and services that well-designed, diverse corridors can offer" (*Comprehensive Plan*, p.84).

CONCLUSION

From an analysis of MMC's IDP, it becomes clear that the IDP is consistent with the City's Comprehensive Plan and the purposes contained within the City's IOZ ordinance.

From an analysis of the Regulatory Framework that accompanies MMC's IDP, it becomes clear that the Regulatory Framework is consistent with the City's Comprehensive Plan and with MMC's IDP.

Fig.1.8 Diagram Showing Priority Nodes and Corridors, City of Portland Comprehensive Plan (2017)



PUBLIC INPUT ON IDP

MMC appreciates the importance of maintaining an open dialogue with its neighbors and keeping its neighbors up to date on its evolving plans for replacement and modernization at its Bramhall Campus. In August 2016, MMC leadership met with the neighborhood representatives of its four adjacent neighborhood groups: St John Valley, West End, Western Promenade, and Parkside to explain its need to modernize its campus. Shortly thereafter the Libbytown Neighborhood Association was added to the group.

Since November 2016, MMC has met on a monthly basis with two representatives of each neighborhood ("Expansion Group") to engage in a productive dialogue regarding the City's new IOZ process and MMC's IDP. The City's Planning Director and the City's District 2 Councilor has been invited to each of these monthly meetings. The minutes of the monthly meetings are distributed to the Group members who are asked to disseminate them to respective neighborhood constituents.

MMC also has created a website (http://www.mmc.org/modernization) to ensure open communication with the community at large and specifically its adjacent neighbors. The minutes of each Expansion Group meeting are posted on the website, as are any updates or current events occurring which involve MMC's plan. These include dates for the Planning Board workshops and hearings and a link to the City's Planning website. A designated contact

Fig.1.9 Public Meeting #1 (January 12, 2017): Open House Portion for Collecting Public Comments

email has been established where residents can ask questions, provide suggestions, etc., and a text about sign-up is provided for those who want to receive them.

Finally, to date, MMC has held two larger neighborhood meetings where information has been shared about MMC's needs and its plans to address its issues of bed capacity, operating needs and transportation and parking. These meetings have been well attended and have allowed time for participants to ask questions, voice opinions and to get answers. The minutes of these meetings are posted on the MMC website as well as submitted to the City of Portland.

MAJOR AREAS OF PUBLIC CONCERN

At the initiation of MMC's Master Facility Planning engagement with its neighbors, it was recognized there would be concerns identified by neighborhood residents that would require ongoing dialogue and an openness to new ideas or suggestions. It was understood that there may be many areas where consensus of approach will be reached, and other areas where reasonable minds could differ. MMC and the participants in this process have identified the following "areas of major public concern":

- By far the biggest concern with the MMC proposed IDP revolves around transportation and parking, and specifically with the location of future parking structures;
- The extent of IOZ boundaries and a fear of property acquisition by MMC in residential zones;
- Fear of loss of local amenities, and the desire for mixed-use development that includes street-level retail and restaurants;
- Patients, visitors, or employees smoking in the neighborhood; and,
- Hope for continued public engagement between MMC and its neighbors.

MMC's IDP has addressed each of these concerns in the following chapters. In addition, the public indicated concern with the height of the proposed Gilman St parking structure as well as the need for a well-thought-out Construction Management Plan to apply during the course of construction. MMC has listened to each of these concerns and has addressed them as follows:

- MMC has relocated the parking structure from Gilman St to a nearby location that is tucked behind existing buildings on St John St. By doing so it was able to lower the height of the structure while also removing it from the priority node designated by the City for gateway treatment.
- MMC has hired Turner Construction Company to manage the daily operations of construction. Turner is well-versed in managing construction projects adjacent to residential uses and has agreed to comply with all requirements of the City Construction Management Template, which is attached as an appendix to this IDP.

CHAPTER TWO

MASTER FACILITY PLAN

As it nears its 150th anniversary, Maine Medical Center continues to improve its facilities and services to fill its role as Maine's leader in patient care, education, and research. MMC is engaged in master facility planning to address clinical, building, and parking needs.

MASTER FACILITY PLANNING PROCESS

The goal of any healthcare facility planning process is to evaluate the suitability of the campus or facility to meet anticipated needs for the delivery of healthcare with enough flexibility to allow for adjustments within an ever-changing healthcare market. Future development opportunities are identified in this process.

Maine Medical Center's campus has grown in size and complexity throughout the years. This growth brought changes in programmatic and infrastructure needs and to allow it to serve patients in the State.

PLANNING FACTORS SPECIFIC TO HEALTHCARE

There are a multitude of factors to consider in healthcare planning that are unique to the industry and some that limit the ability to plan too far into the future. Due to the unpredictability of many of these factors, healthcare planning beyond three years with relative accuracy is challenging. Therefore, healthcare planning is typically completed in three-year increments. For example, the rate of change in healthcare payment and policy often follows federal and state election cycles but can change as often as annually. A summary of factors that affect healthcare planning is included in the **Table 2.1** at right.

MMC'S MASTER FACILITY PLAN: PROCESS

Each of the following are aspects of a master facility plan and have been evaluated to determine the needs and projected growth for MMC.

Facility Assessment

The baseline for any master plan is to evaluate the current state of the campus including age of buildings, capacity of infrastructure, and appropriateness of building layout to accommodate the modern delivery of healthcare. This helps the organization identify areas which must be addressed by any future facility work.

Programmatic Requirements

Anticipating the healthcare needs of a community is challenging beyond a three-year period. Healthcare facilities are designed to last several years and attempt to anticipate change by allowing for flexibility and multi-use spaces. Best-practices and industry standards in healthcare delivery are used as benchmarks to anticipate programmatic needs.

Adjacencies

Maximizing key programmatic adjacencies is next in developing a functional master plan once a campus baseline and programmatic requirements are understood. Currently dispersed programs and long travel distances existing on the campus are to be evaluated and studied as an opportunity for improvement. Assessing the flow patterns and travel distances enables proper reorganization of program adjacencies for current and future design interventions.

Table 2.1 Planning Factors Specific to Healthcare

Factor	Definition
POPULATION	Changes in utilization due to population growth: — Population increase or decrease — Population aging — Population distribution — Consumer preference
EPIDEMIOLOGY	The underlying causes of disease (divided into two categories): — Disease-based: Estimates the incidence and prevalence that are impacted in the long-run by preventative measure (i.e. vaccinations effectiveness) — Behavioral-based: Changes in disease incidence and prevalence due to behavioral and sociocultural factors (i.e. obesity, smoking, diet)
ECONOMICS	Macro-economic factors that affect healthcare utilization: — Employment — Healthcare Consumer Price Index — Gross domestic product growth or decline — Employer-based coverage levels — Benefit level and out-of-pocket expense — Regional/Local healthcare environment
PAYMENT & POLICY	Legislative and market-driven reform, including specific payment and policy innovations that will impact utilization: — Health insurance coverage expansion — Bundled payment initiatives/pilots — Accountable Care Organizations (ACOs) — Publicly-funded prevention and wellness initiatives
INNOVATION & TECHNOLOGY	Structural technology that shifts the site at which care is delivered or innovations that affect utilization across different care settings: — Imaging and diagnostics — New therapeutics — Pharmaceutical advancements — Quality innovations
SYSTEMS OF CARE	Increased efficiency resulting from better care coordination and serve integration across various care sites: — Clinical Integration: Use of evidence-based practices and elimination of redundant care — Alignment: Coordination between providers, including inpatient and outpatient providers — Information Technology: Includes computerized physician order entry (CPOE) and e-care
WORKFORCE AVAILABILITY	The healthcare workforce is highly specialized which requires years of training. The availability of qualified individuals can severely limit a healthcare organization's ability to provide care.

KEY INSTITUTIONAL NEEDS

MMC's facility needs are multi-factorial but can be summarized into four categories:

1. Clinical Need
2. Building Need
3. Campus Reorganization
4. Parking Need

1. CLINICAL NEED

Increasing Severity of Case Mix

MMC treats Maine's sickest patients and estimates that the average patient seeking care at MMC will continue to get sicker. MMC's case mix index (CMI) was 1.86 in fiscal year 2015 (October – September); the highest in the state of Maine. A hospital's case mix index is calculated by finding the average severity of diagnosis-related groups at that hospital. The average case mix index for a hospital in the United States is 1.31 (CMS.gov). MMC's CMI grew to over 2.00 in fiscal year 2016 and is expected to continue to increase in the future.

Bed Shortage

Over half of MMC's inpatient beds are located in semi-private rooms (see **Fig.2.2)**. MMC closes an average of 60 inpatient beds in semi-private rooms every day to prevent infection due to disease-resistant organisms (DROs), or to address behavior related issues or other room sharing restrictions. This, along with construction closures for renovations and repairs, reduces MMC's licensed bed capacity of 637 beds to an effective bed capacity closer to 560 on an average day (see **Fig.2.3).**

On a routine day, MMC can expect approximately 100 admissions from Surgery and the Emergency Department and 35 to 50 transfer requests per day from other healthcare and provider organizations. When 500 patients are in the hospital and over 60 beds are closed, a limited number of inpatient beds are available for new patients. Inpatient beds are specialized for medical/surgical, intermediate care,

Fig.2.1 MMC's Case Mix Index: Historic Data and Projections

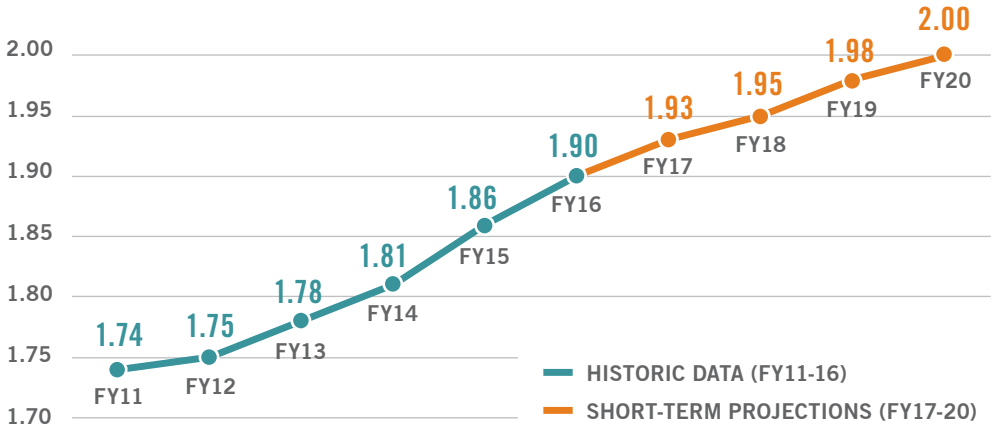


Fig.2.2 Existing Inventory of Private vs Semi-Private Beds

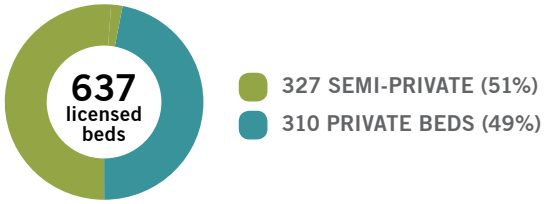
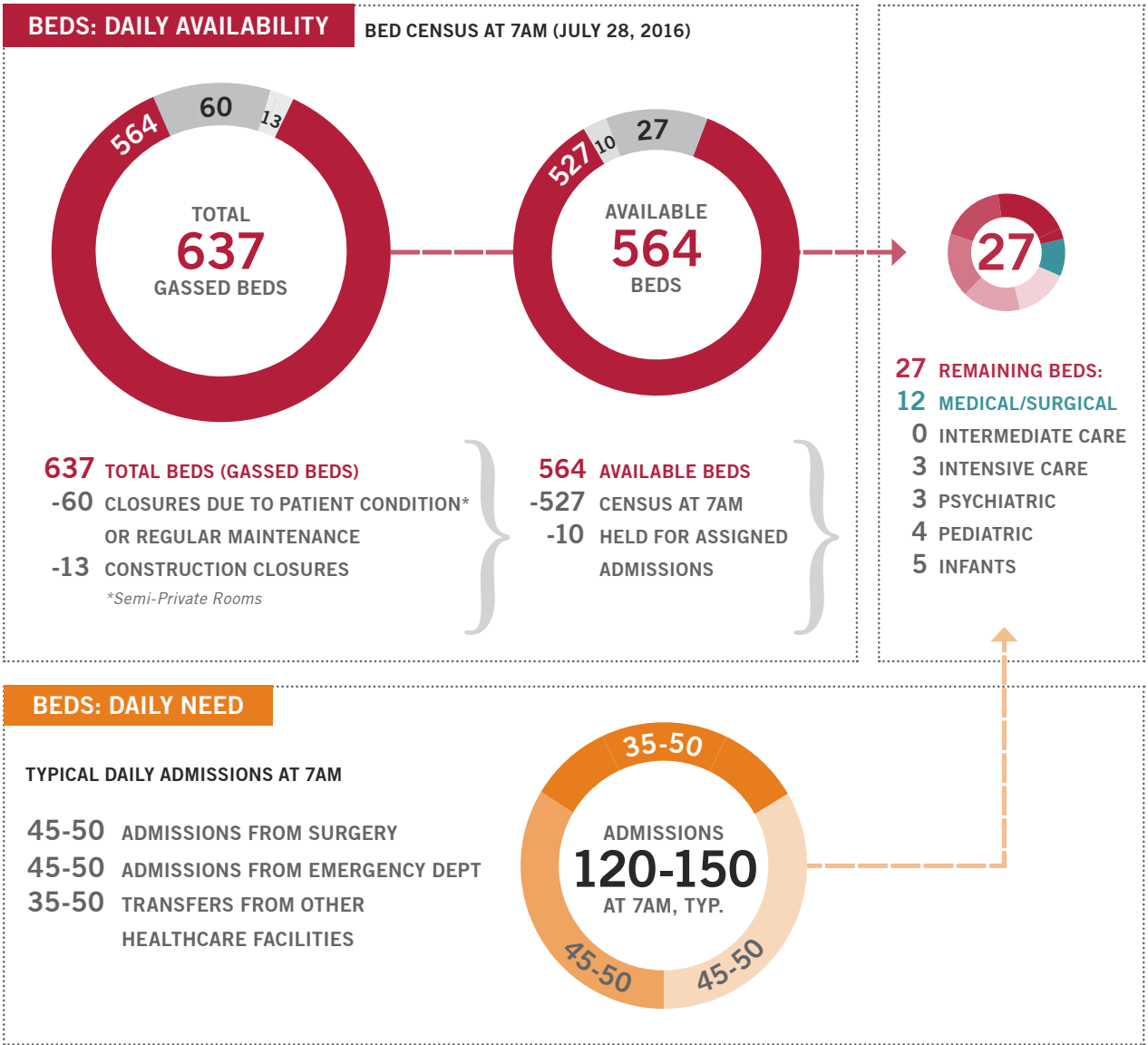


Fig.2.3 A Day in the Life of MMC: Bed Shortage



intensive care, psychiatric, pediatric, or infant care services. The actual number of beds available for specific populations of patients is much smaller. For example, if a patient needs a critical care bed but, the only beds that are available are general medical/surgical, then MMC struggles to meet that patient's needs.

Fig.2.3 demonstrates a snapshot of the challenge MMC is faced with daily to meet the needs of the community due to bed shortages. The challenge is expected to grow in complexity as patients get sicker and require highly specialized care. Many of the rooms are also too small and not flexible enough to meet the demands of the growing universality of medical equipment. The Master Facility Plan recommends adding private patient rooms and procedural capacity to meet current needs and to plan for the future. Adding new private rooms was also identified as a key strategy to decompress existing buildings, maximizing infrastructure capacity.

2. BUILDING NEED: AGING FACILITIES

The age of campus buildings is the first key element of assessing the overall suitability as structures for continued use in healthcare delivery. Facilities at MMC date back to the 1870's with the construction of the Maine General Building. Since the early 1900s, MMC has grown to meet the needs of patients. Close to 77% of MMC's clinical activities occur in buildings more than 30 years old.

MMC regularly conducts building assessments to inform future investment and development decisions on campus. The assessments evaluate the condition of building structure and systems, and compliance with current building codes and regulations including fire safety. The 2015 assessment illustrates the age and condition of the buildings on campus (see **Fig.2.4 and Fig.2.5**). Among those that are listed, continued investment is cautioned in the Pavilions, the Richards Building and the LL Bean Building, which together host a large percentage of the hospital's bed inventory. These include a large number of semi-private beds that must be replaced by beds in private rooms to conform to current patient care standards. The Employee Garage is identified for replacement in the short-term due to its structural challenges.

MMC's Care teams work collaboratively with MMC's Facilities and Engineering teams to ensure patients are cared for in the best possible environment. This requires continuous maintenance and improvements to the facilities. The remaining opportunities for

improvement and retrofits in the existing buildings are marginal. It is impossible to enlarge operating rooms or make semi-private rooms private without major disruptions to the delivery of patient care, reduction in capacity, major facility expansion, or some combination.

The proposed short-term projects (see page 40) will partially replace and modernize MMC's campus to meet anticipated future need. Proposed patient rooms will be private and adaptable to the level of care needed by patients. They will be "universal rooms" capable of being occupied by a wide spectrum of patient populations from intensive care to general medical or surgical care. Procedure rooms will be large enough to fit the equipment and technology needed for the complex procedures that patients increasingly require at MMC.

3. CAMPUS REORGANIZATION

Healthcare facility plans seek to optimize adjacencies between critical departments to reduce travel distances across campus for staff and patients.

Currently dispersed programs and long travel distances present an opportunity for future improvement on the MMC campus. The planning team assessed multiple flow patterns and travel distances to enable proper reorganization of program adjacencies to improve safety and efficiency of healthcare delivery, and ease of wayfinding for patients and families.

4. PARKING NEED

MMC hosts a wide variety of people on the Bramhall campus every day. Patients, families, staff, and students all require access to the facility. Patients and families from all over northern New England come to MMC for care. These people do not live close enough to take advantage of alternative methods of transportation like buses, cycling, or walking that are provided locally. Clinical and support staff require safe, reliable, and often emergent, access to the facility in order to provide services to patients. Providing parking is a priority at MMC, and a key driver of the Master Facility Plan (see **Chapter 3. Transportation Plan** for details).

Fig.2.4 Existing Facilities by Age

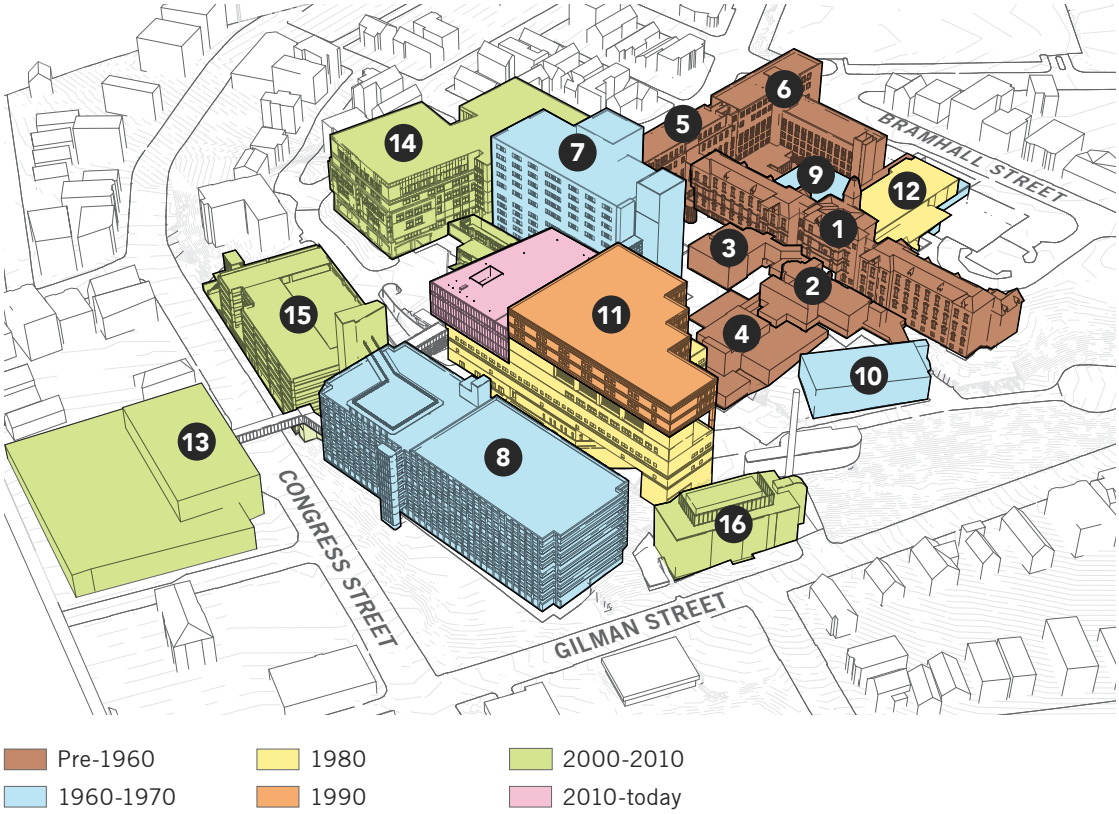


Table 2.2 Inventory of Existing Facilities

#	Building Name	Date	Gross SF
1	Maine General	1870s	72,920
2	Annex B	1870s	36,250
3	Annex C	1870s	13,190
4	Annex A	1929	10,110
5	Pavilion A	1929	66,380
6	Pavilions C & D	1956	83,460
7	Richards Building	1968	228,920
8	Employee Garage	1970s	--
9	Diagnostics Building	1976	89,150
10	Engineering Services Bldg	1978	23,840
11	LL Bean Building	1985	231,830
12	Dana Building	1987	19,310
13	Congress St Medical Office Building	1999	47,000
14	East Tower	2008	200,000
15	Patient and Visitor Garage	2008	--
16	Central Utility Plant	2008	--
		TOTAL	**1,122,360 GSF**

Fig.2.5 2015 Facility Assessment Results

Continued investment in this building is:

Recommended Cautioned Not recommended for future use.

See Table 2.2 on opposite page for building numbers.

PROJECTED DAILY CENSUS

While the number of patients, visitors, and employees on MMC's Bramhall campus varies day-to-day, a daily census estimate can be produced for a typical week day using a variety of data sources, including the annual patient counts (see **Table 2.3 at right**). The estimated daily census of individuals on campus is included in **Table 2.4** and exceeds six-thousand individuals.

The anticipated change in campus users over time is summarized in **Table 2.4**. MMC developed this estimate considering the following summarized factors:

- MMC is Maine's largest medical center, the only American College of Surgeons Level 1 trauma center, only American Academy of Pediatricians Level III nurseries and the largest academic medical center, in partnership with Tufts University School of Medicine and is therefore best equipped to meet the rising patient need.
- The number of Maine residents seeking care outside of Maine has been decreasing over the past several years.
- MMC's share of inpatient discharges has increased over the past several years.
- MMC's Case Mix Index is increasing.
- Complex healthcare services are consolidating across the country.

MMC uses national healthcare consulting firm Sg2 and The Advisory Board to consider additional factors impacting the evolving healthcare industry and local demand for services. Additional factors considered in the volume estimate include the following and those listed in **Table 2.1 on page 33**:

- Changes in healthcare utilization as a result of changes in the population within the hospital's service area;
- Changes in the underlying causes of disease (i.e. incidence and prevalence of disease and the impacts of a focus on prevention) and behavioral-based impacts to health (i.e. smoking and obesity);
- Macro-economic factors affecting healthcare utilization (i.e. employment, employer-based insurance coverage, health care consumer price index);
- Legislative and market-driven healthcare reform;
- Innovations in technologies and models of care;
- Improvements in the systems of care that improve coordination among providers; and,
- Continuous process improvements within care models that reduce potentially avoidable admissions and 30-day readmissions.

The Projected Daily Census is the basis of calculations for future campus transportation needs discussed in the following chapter.

Table 2.3 Historic Data: Annual Census of Patients on Bramhall Campus (FY 2013-2016)

	2013	2014	2015	2016
Inpatient Discharges	29,253	29,401	30,196	30,889
Outpatient Activity	138,626	132,257	140,862	154,434
Bramhall Outpatient Clinics	39,829	40,694	38,209	39,709
TOTAL	**207,708**	**202,352**	**209,267**	**225,032**

Table 2.4 Individuals on Campus on an Average Week Day: 2016 Estimates and 2026 Projection

	2016 (FYE Sept-Oct)	Forecast, 2026	Projected 10-Year Growth	CAGR (2016-2026)
Inpatient Discharges	100	110	7.84 %	0.76 %
Inpatient Visitors	250	270	7.84 %	0.76 %
Outpatient Activity	600	620	4.45 %	0.44 %
Outpatient Visitors	600	620	4.45 %	0.44 %
Bramhall Outpatient Clinics	150	150	-1.79 %	-0.18 %
Employees: Shift 1 (inc. volunteers)	3,640	3,900	6.96 %	0.67 %
Employees: Shift 2	210	220	6.96 %	0.67 %
Employees: Shift 3	520	550	6.96 %	0.67 %
Students on Campus: Medical	100	110	10 %	0.96 %
Students on Campus: Nursing	100	100	10 %	0.96 %
Other Students (PA, Pharma, etc.)	20	25	10 %	0.96 %
Non-MFP Related Contractors	25	25	--	--
TOTAL / AVERAGE	**6,315**	**6,700**	6.43 %	0.63 %

CAGR = Combined Annual Growth Rate

Assumptions:

- Daily inpatient discharges for 2016 estimated from annual count, using six-day weeks to accommodate for reduced activities Sun-Tue.
- Daily outpatient activity for 2016 estimated from annual count, using five-day weeks.
- Inpatient visitors estimated at 2.5 per patient for the base year of 2016.
- Outpatient visitors estimated at one per patient for the base year of 2016.
- 60% of employees are estimated to be on campus at one time for the base year of 2016.

IDENTIFICATION OF PROJECTS

In considering all possible scenarios for development to meet the goals outlined above, the Master Facility Plan has identified the following necessary projects needed to modernize of the MMC Bramhall campus:

- Vertical expansion of East Tower to add private, universal patient rooms;
- Removal of the Employee Garage, which is nearing the end of its structural lifespan;
- Construction of a new building in place of the Employee Garage that can provide new private, universal patient rooms and surgery suites in close proximity to the Emergency Department and the hospital's core diagnostic and treatment services located in the LL Bean Building;
- Providing a new patient entrance on Congress St that clarifies the arrival sequence for the majority of patients and visitors arriving on campus via Congress St, and parking in the Visitor Garage; and,
- Construction of a new Employee Garage within walking distance to campus will provide reliable access to parking spaces for all campus employees who choose to drive to work.

See **Fig.2.6** on the opposite page for an illustration of projects included in the Master Facility Plan.

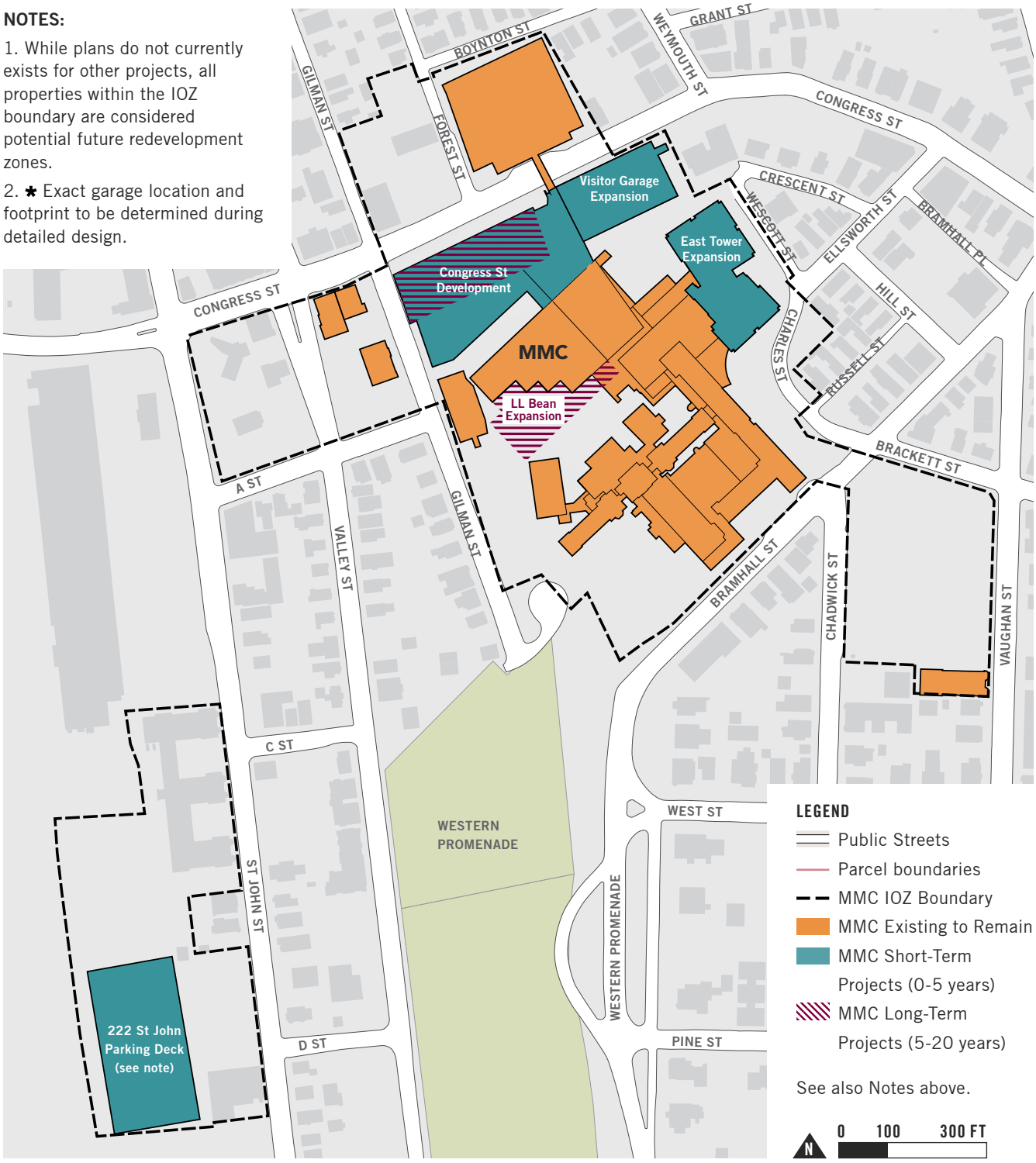
The short- and long-term project plans do not represent the only projects within this timeframe. Due to the various factors impacting healthcare planning and their short horizons, there may be other projects proposed within this timeframe.

Fig.2.6 MMC Facilities Master Plan: Projects

NOTES:

1. While plans do not currently exists for other projects, all properties within the IOZ boundary are considered potential future redevelopment zones.

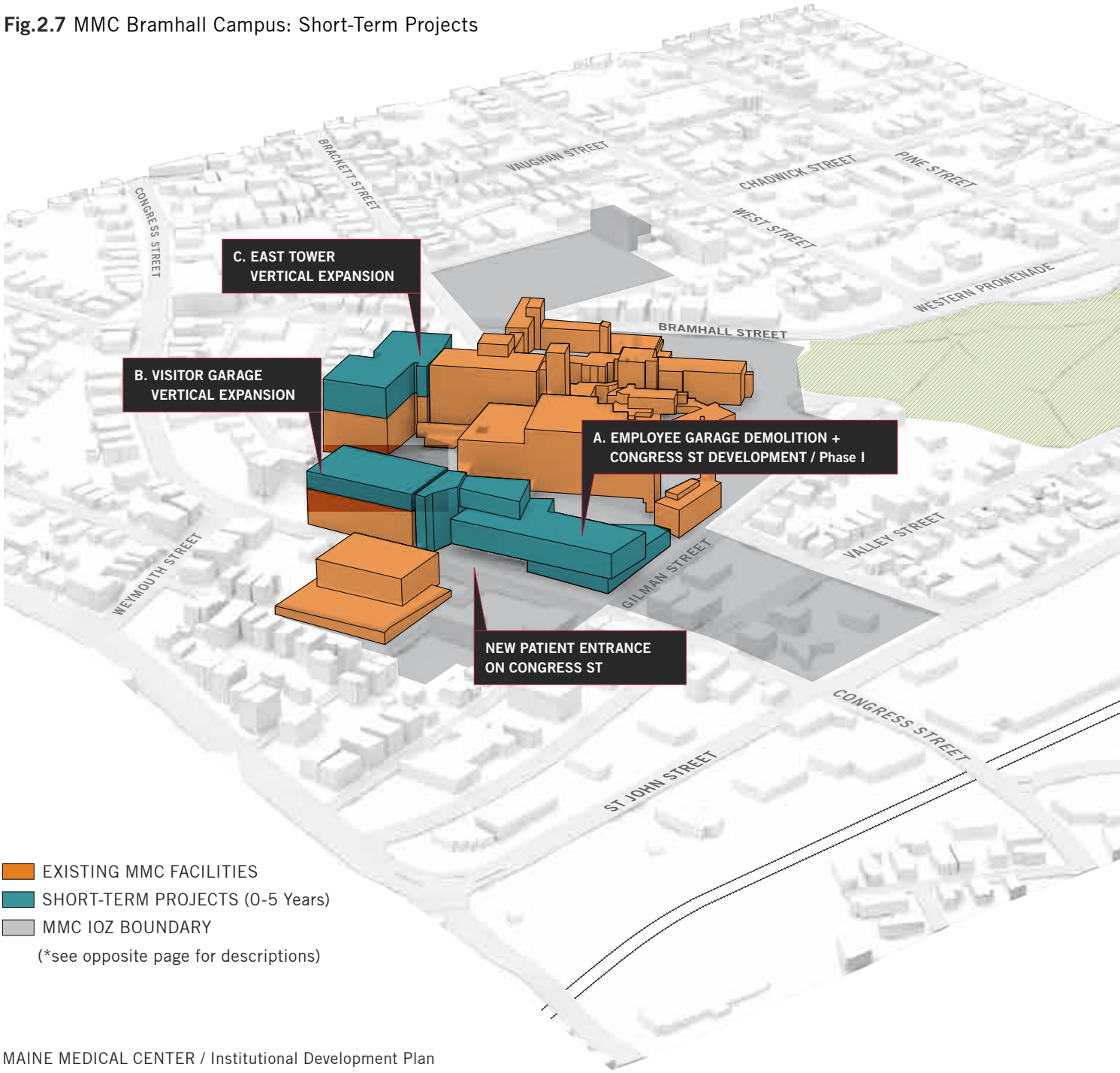
2. ✱ Exact garage location and footprint to be determined during detailed design.



SHORT-TERM PROJECTS (0-5 YEARS)

A series of short-term projects are in the planning stages to meet MMC's current needs and to improve the efficiency of care delivery. These do not represent the only projects that could be proposed within this timeframe: due to the various factors impacting healthcare planning and their short time horizons (0-3 years), there may be other projects proposed within this timeframe.

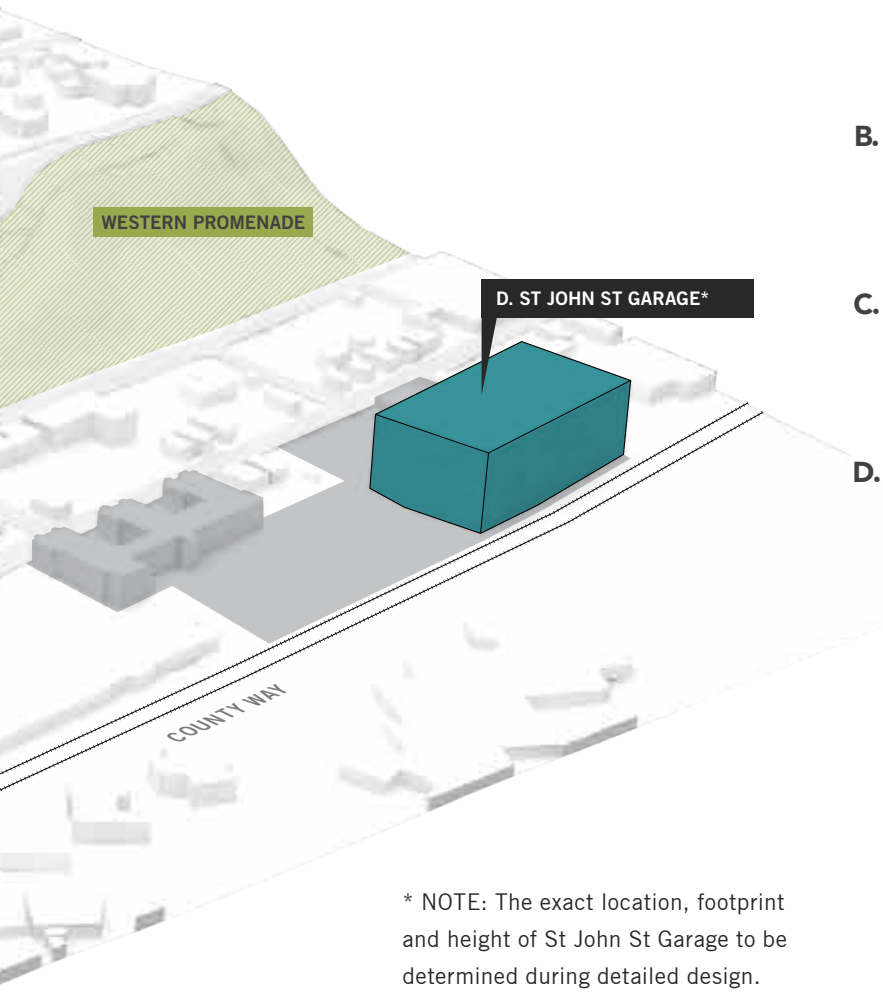
Fig.2.7 MMC Bramhall Campus: Short-Term Projects



Demolitions

A. Employee Garage Demolition

The 2015 building assessment does not recommend continued investment in this structure (see **Fig.2.5 on page 39**).



* NOTE: The exact location, footprint and height of St John St Garage to be determined during detailed design.

Additions / New Construction

A. Congress St Development, Phase I (285,000 GSF)

New six-story building along Congress St on former site of the Employee Garage, plus two-story connector to the LL Bean Building. Building program includes: a new patient entrance, universal, private inpatient beds and new procedure rooms. The new entrance changes the campus's orientation to Congress St.

B. Visitor Garage Vertical Expansion

Addition of three floors at top to accommodate 225 new parking spaces.

C. East Tower Vertical Expansion (60,000 GSF)

Addition of two floors at top to accommodate 64 inpatient beds and relocated heliport.

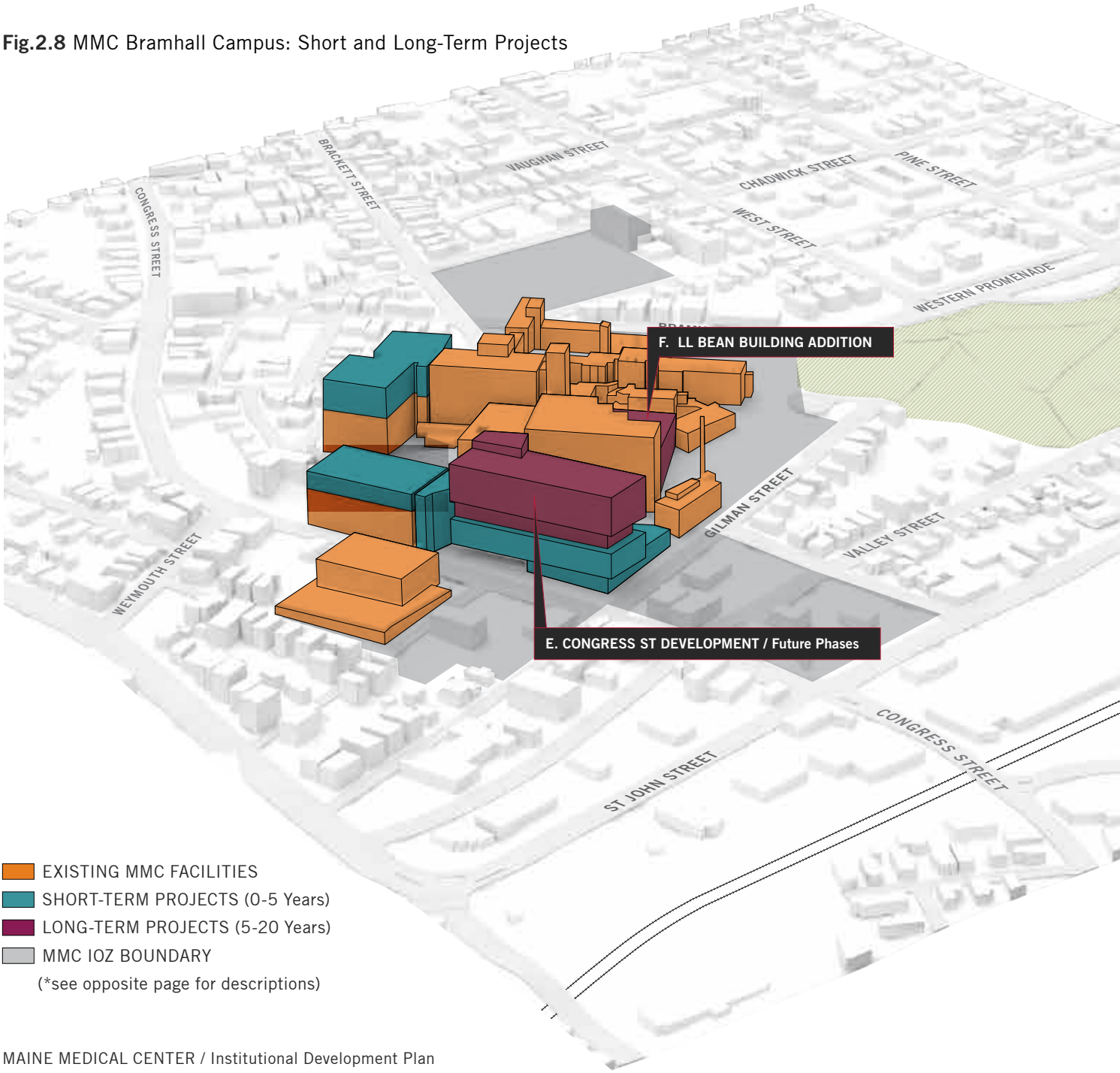
D. St John St Garage

New 10-story, free-standing garage at 222 St John St to accommodate roughly 2,200 new parking spaces. The garage replaces spaces lost in the Employee Garage, in addition to consolidating parking from multiple surface lots owned or leased by MMC. (See **Chapter 3. Transportation Plan** for details).

LONG-TERM PROJECTS (5-20 YEARS)

The facility planning process has also identified potential long-term projects that are identified below. Given the changing nature of the healthcare industry, it is currently uncertain if these projects will be implemented. MMC will continue to evaluate its facility needs following the implementation of short-term projects by 2022. These do not represent the only projects that could be proposed within this timeframe: due to the various factors impacting healthcare planning and their short time horizons (0-3 years), there may be other projects proposed within this timeframe.

Fig.2.8 MMC Bramhall Campus: Short and Long-Term Projects



Additions / New Construction

E. Congress St Development, Future Phases (Approx. 300,000 GSF)

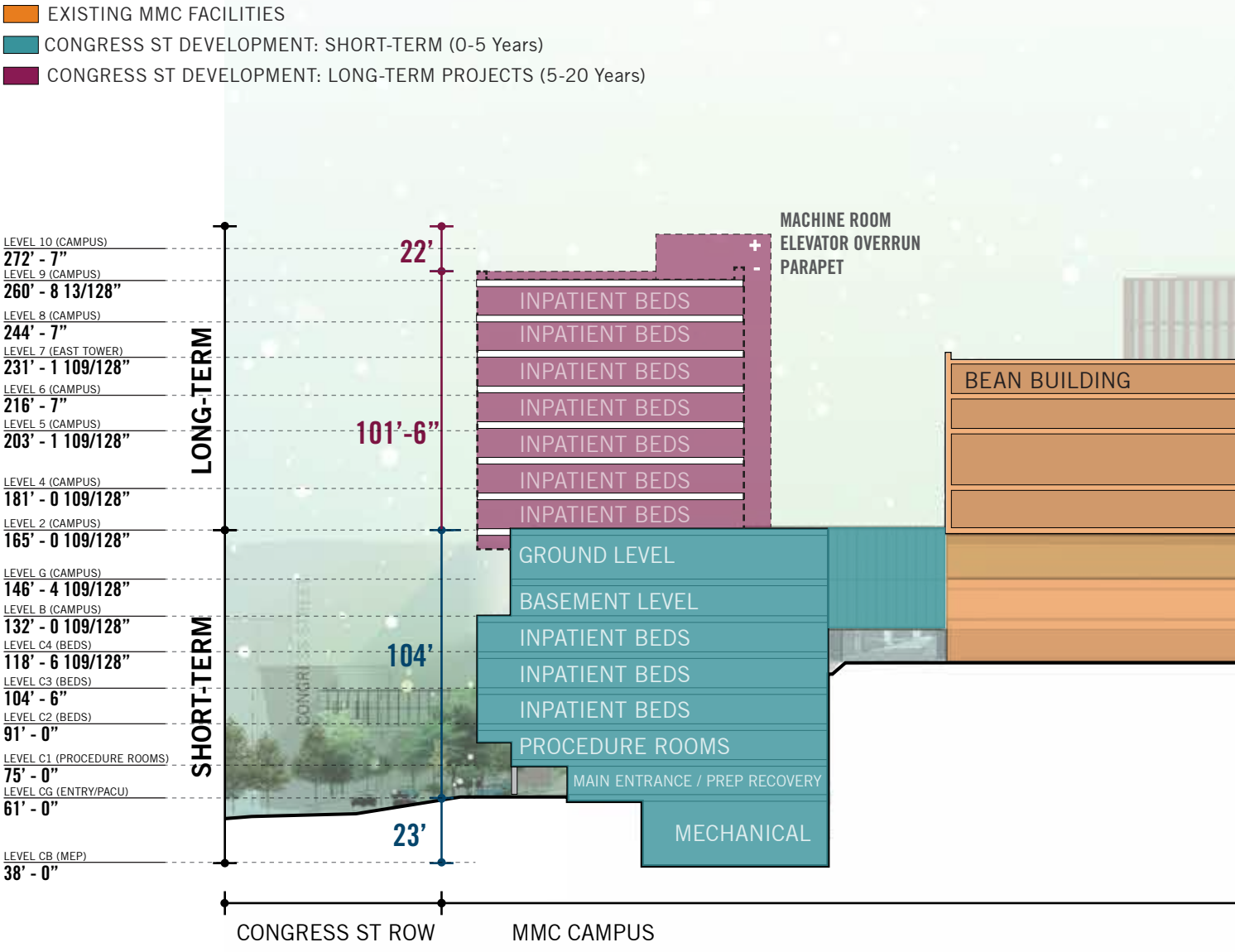
Future vertical expansion to include additional private inpatient beds.

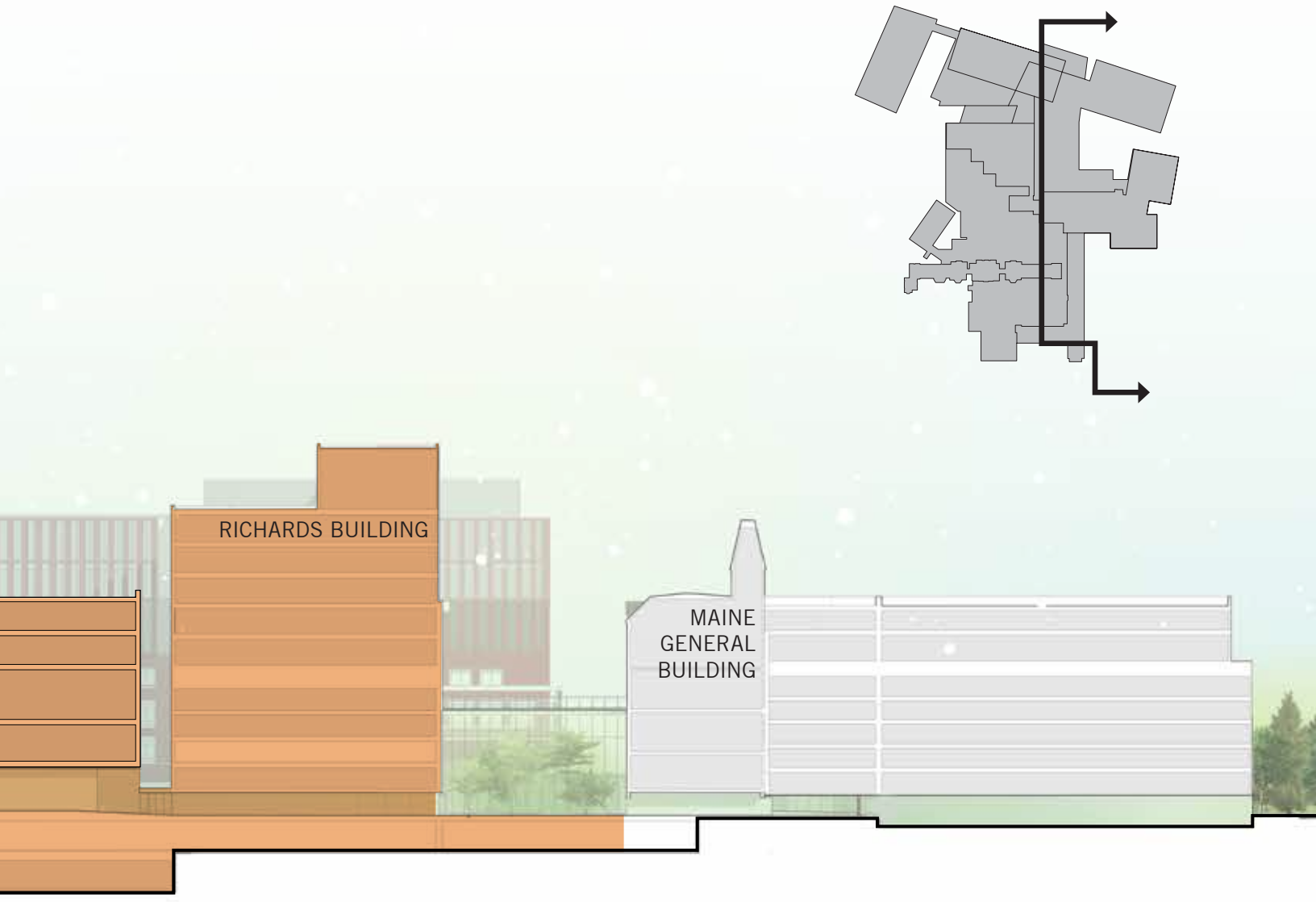
F. LL Bean Building Expansion (Approx. 120,000 GSF)

Expansion of diagnostics and treatment, and interventional platforms. If necessary, existing Laundry Building and Engineering Services Building may be modified or removed to facilitate expansion.

* NOTE: The exact location, footprint and height of St John St Garage to be determined during detailed design.

Fig.2.9 MMC Bramhall Campus: Longitudinal Cross-Section through the Proposed Congress St Development

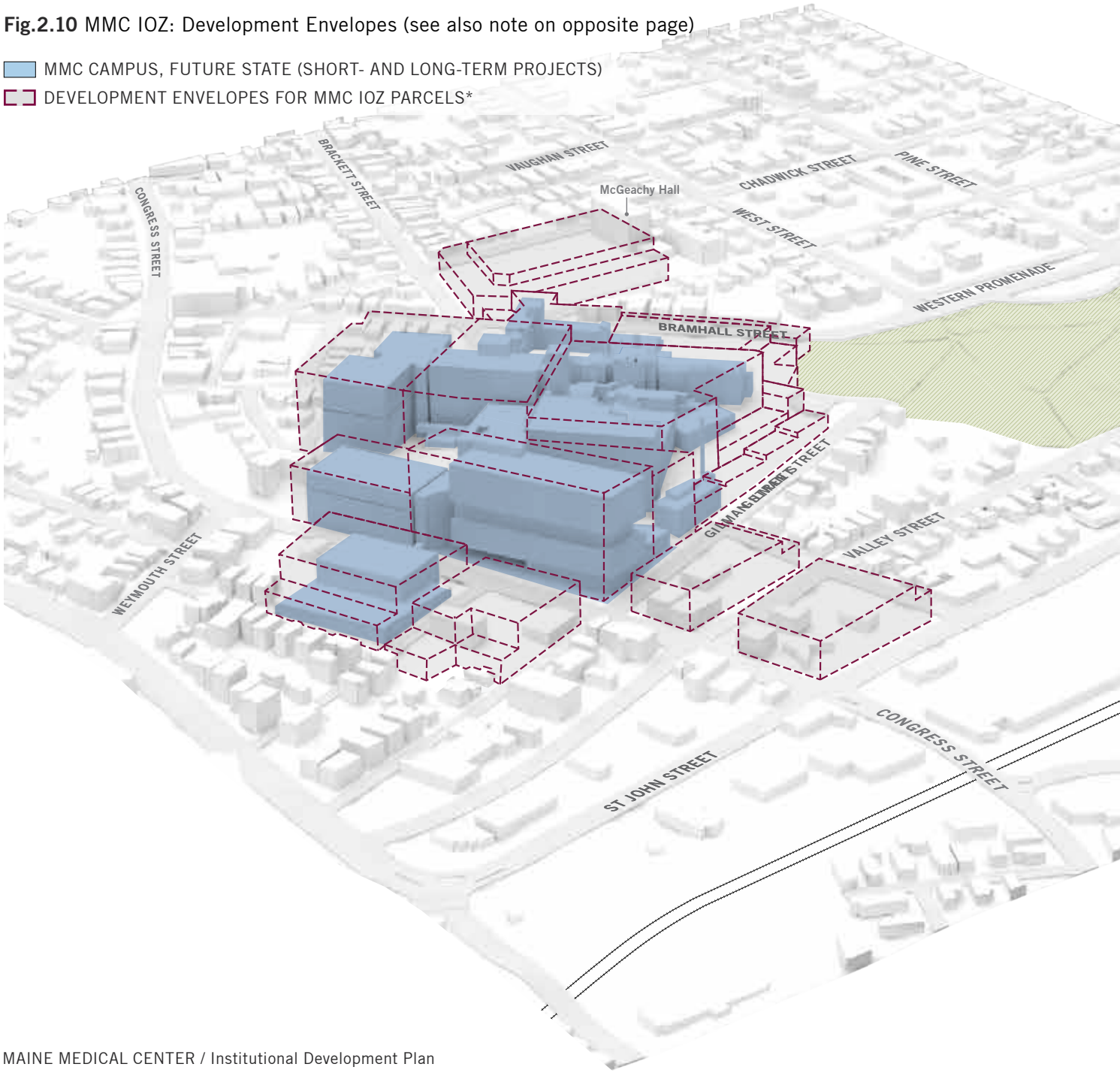



RICHARDS BUILDING
MAINE
GENERAL
BUILDING

LONG-TERM DEVELOPMENT ENVELOPES

While MMC's Master Facility Plan does not identify specific projects other than those listed on the previous pages (see Fig.2.7 on page 42), all parcels included within MMC's IOZ boundary are considered to be potential zones for redevelopment that supports the effective delivery of healthcare services by MMC to our community in the long-term. Towards this end, MMC has identified context-appropriate uses (see **Table 2.5** at right), development envelopes and design criteria for all IOZ parcels.

Fig.2.10 MMC IOZ: Development Envelopes (see also note on opposite page)



NOTE: **Fig.2.10** illustrates the maximum height envelopes listed in the MMC IOZ Regulatory Framework. Per the IOZ, the development envelopes only apply to properties that MMC holds right, title, or interest at the time of development. All future development within the IOZ boundary is subject to review for compliance with guidelines and requirements included in MMC's IDP, Regulatory Framework and City of Portland site plan review requirements.

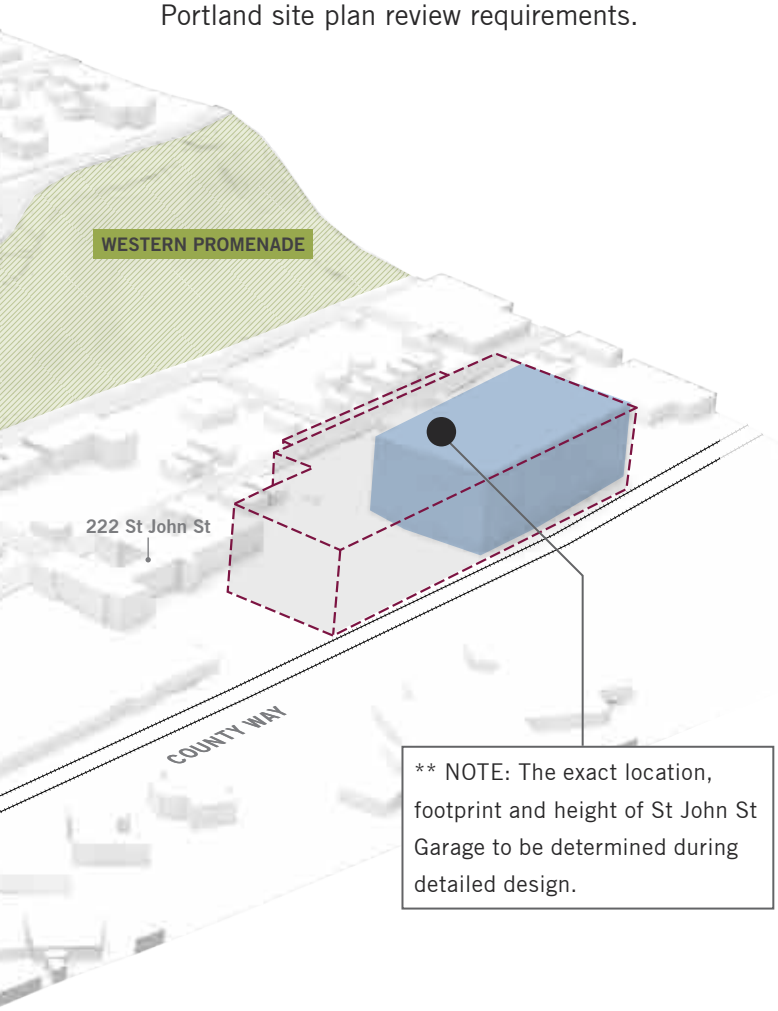


Table 2.5 MMC Potential Future Uses

MMC may locate the following uses within its IOZ boundary:

In addition to the uses permitted in the underlying zone, the following uses are permitted as a matter of right:

Healthcare facilities including but not limited to the following ancillary and/or supporting uses:

- **Hospital**
- **Medical Office / Clinic**
- **Laboratory Center / Services**
- **Research and Development (R&D) Laboratory or Facility**
- **Educational Facility / Conference Center**
- **Administrative / Business Office**
- **Accessory Service or Trade Uses**
- **Guest House**
- **Multi-family housing for healthcare staff and students**
- **Rehab / Skilled Nursing Facility**
- **Retail Facility**
- **Restaurant / Café**
- **Employee Service Amenities**
- **Day Care Center**
- **Fitness Center or Gymnasium**
- **Parking Lot**
- **Parking Garage**
- **Bicycle Storage**
- **Heliport**
- **Antenna Station**
- **Outdoor use areas, such as green areas, parks, gardens, art installations, and other active and passive non-commercial recreation spaces**

CHAPTER THREE

TRANSPORTATION PLAN

Maine Medical Center is developing a long-term transportation plan that will improve campus access, circulation, and wayfinding for patients and visitors. Ongoing initiatives are aimed at providing alternative transportation options to reduce traffic and parking impacts as well as to be responsive to neighborhood concerns about a large parking structure near residential properties.

TRANSPORTATION PLAN: OVERVIEW

Maine Medical Center is developing a long-term Transportation Plan that will improve campus access, circulation, and wayfinding for patients and visitors. It is also developing a Transportation Demand Management (TDM) plan focused on reducing the number of single occupancy vehicles on campus. Ongoing initiatives are aimed at providing alternative transportation options to reduce traffic and parking impacts.

MMC's Transportation and TDM plans are designed to address neighborhood concerns, and to improve campus access, circulation, and wayfinding for patients, visitors, physicians, and staff. The Transportation Plan will be developed and refined during the Maine Department of Transportation (MDOT) required Traffic Movement Permit (TMP) process, with input from the Medical Center's neighbors and City of Portland's traffic engineer. The TDM includes an explanation of the assessment of the Hospital's parking needs to adequately support the Bramhall Campus, and includes strategic initiatives aimed at providing alternative transportation options to reduce long-term traffic and parking impacts. The goal is to provide effective and intuitive transportation solutions that emulate best management practices in transportation infrastructure and operations that support tertiary academic medical centers, enhance and optimize the patient experience, and improve overall traffic flow in the surrounding area.

The purpose of this chapter is to provide an overview of the key transportation elements of the Transportation Plan and the TDM.

The Traffic Management Permit process may require modifications that MMC does not anticipate. The following provides MMC's best analysis of traffic generation and traffic patterns in the short term.

VEHICULAR ACCESS AND CIRCULATION

MMC's service area includes all of Maine and parts of New Hampshire. The majority of MMC patients and visitors do not live within walking distance or near public transportation and arrive by car (see **Fig.3.1 on page 57** for a map of patient origin). The nature and acuity of patient needs create a challenge to the use of alternative modes of transportation. This situation is not atypical for a hospital, but rather is the norm, even in locations with a robust public transit system.

MMC is open to patients every hour, every day of the year. Most MMC staff and physicians, who also fill shifts 24 hours a day, do not live within walking distance or near public transportation (see Fig.3.6 for a map of MMC employee residences). Work responsibilities that require the use of an automobile, a lack of transit options to accommodate staff schedules, seasonal weather extremes, and an insufficient bicycle infrastructure in the surrounding municipalities are all factors that contribute to a high drive share by staff.

EXISTING VEHICULAR FLOWS

Vehicle access and circulation on the MMC Bramhall Campus was planned and designed to maintain a safe and efficient transportation system. Most notably, the concept of separating patients, employees, emergency department operations and loading/service are all considerations that exist at MMC currently and have been approved by the City of Portland. Existing vehicular circulation patterns in and around the Bramhall campus are illustrated on **Fig.3.2 on page 58** and summarized below.

One advantage of its proximity to I-295 is the ease of vehicular access to campus by patients/visitors, employees, and emergency and service vehicles, and the avoidance of high traffic volumes in neighborhood streets.

Patients and Visitors

Patients and visitors have several choices when accessing the hospital. Through a strong wayfinding and signage plan, they are directed to park directly in the Patient / Visitor Garage or the South Lot. They also have access to a convenient patient drop-off area that is located off of Bramhall St, with direct access to parking in the South Lot.

Well-designed curbside drop-off / pick-up areas for patients and visitors are critical to the functionality of any medical center campus. These amenities provide the opportunity for patients and visitors to quickly reach their destination, without the need to park their vehicle, and in some cases, having to

walk long distances, often times unprotected from weather conditions.

MMC provides both inpatient and outpatient care at the Bramhall campus. Outpatient care services experience higher curbside demands for patient drop-off / pick-up activities because of the shorter visits whereas inpatient care generates less turnover, but requires greater accessibility. In addition to general patient access and egress by private vehicles, MMC drop-off / pick-up zones also experience other demands created by taxis (including ride-share such as Uber, Lyft, etc.), shuttle buses, short-term deliveries (like flowers, etc), and staff—vehicles that do not necessarily park, but intend to only drop-off passengers and then exit the hospital campus.

Emergency Department Access

MMC's Emergency Department (ED) is located near the main entrance but is clearly delineated and separated from it. Within the ED area, ambulances have their own dedicated area and are separated from patient ED access and short-term ED parking.

Staff Access

Staff primarily park in the Employee Garage, which is located on Congress St with access off of Gilman St. Other employee parking locations include the various satellite lots listed in **Fig.1.7 on page 22**. This design limits the mixing of patient and staff traffic, resulting in fewer staff vehicles near patient access zones.

Service Access

Trucks destined for MMC are directed to a dedicated loading and service facility located off of Gilman St, separate from all active patient access and circulation functions. MMC does not accept large deliveries from any location other than through the loading dock area.

EXISTING TRAFFIC CONDITIONS

An analysis of existing traffic conditions on and around the Bramhall Campus was completed by Gorrill Palmer, a South Portland based land development, transportation and municipal engineering firm. Gorrill Palmer observed several street intersections during the morning and afternoon in December 2016. In order to estimate the peak summer traffic volume on the two busiest intersections observed (Congress St / St John St and Congress St / Valley St), trip counts were increased by 1.1% on St John St and 11.4% on Congress St. The trips observed are summarized on **Table 3.1** below.

Table 3.1 Seasonally Adjusted 2016 Volumes

	2016 ESTIMATED VOLUMES		MMC TRAFFIC AS A PERCENT OF TOTAL TRAFFIC	
INTERSECTION	AM	PM	AM	PM
Valley St. / Congress St.	1,170	1,200	17%	7%
Congress St. / Saint John St.	1,860	2,100	14%	7%

Fig.3.1 Dot Density Map Showing Patient Origin by Zipcode (2016)

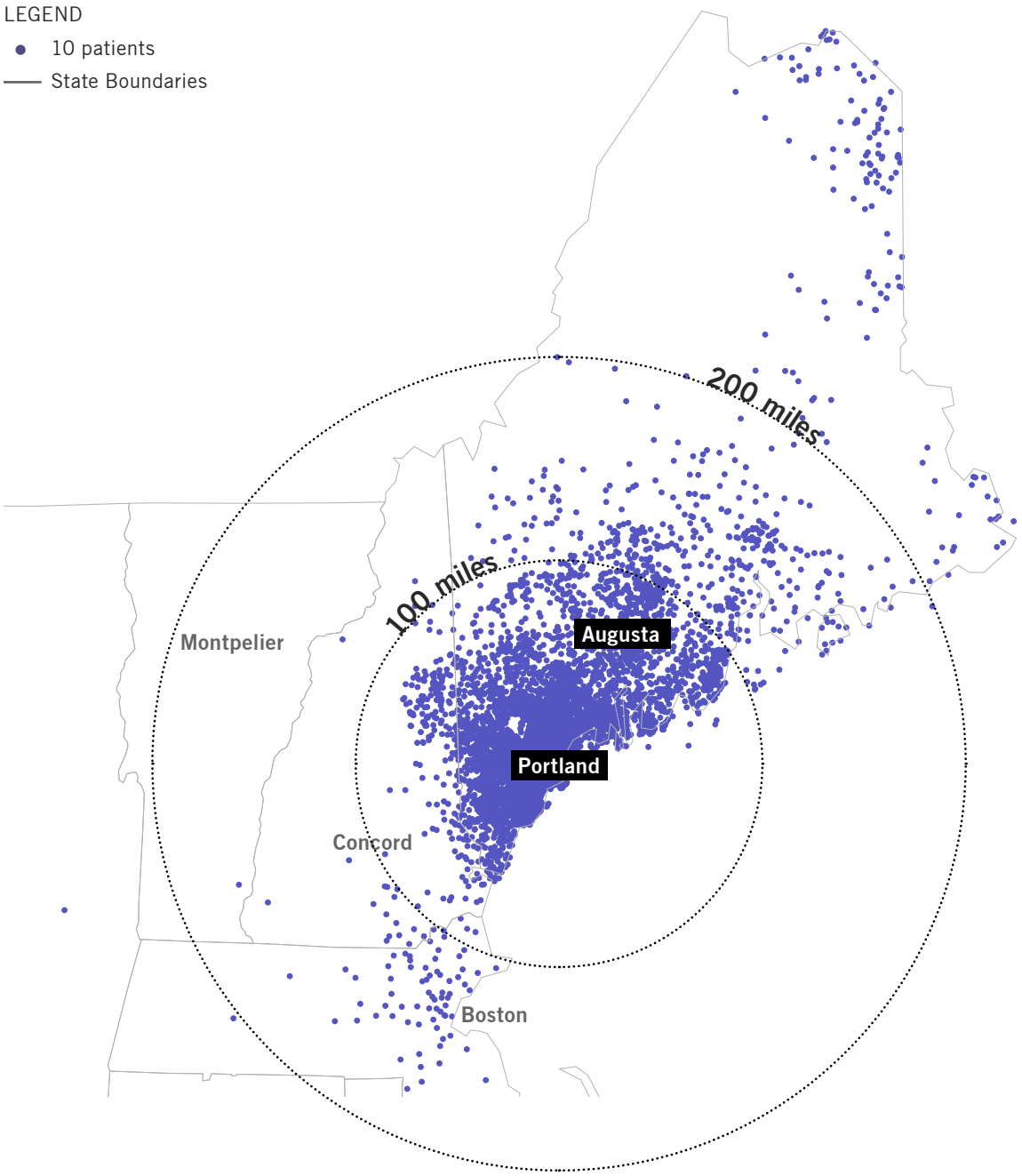


Fig.3.2 MMC Existing Circulation Routes and Access Points

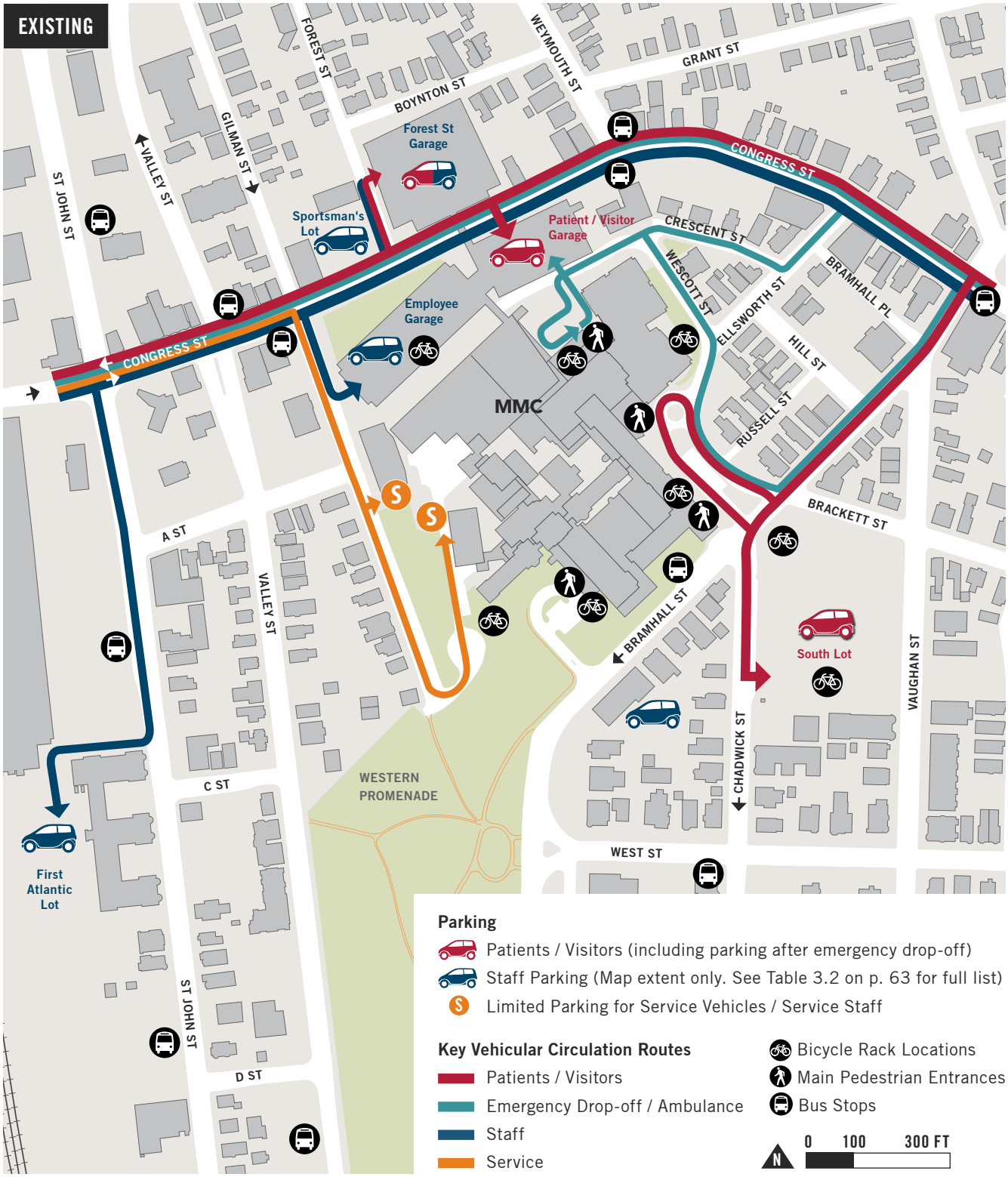
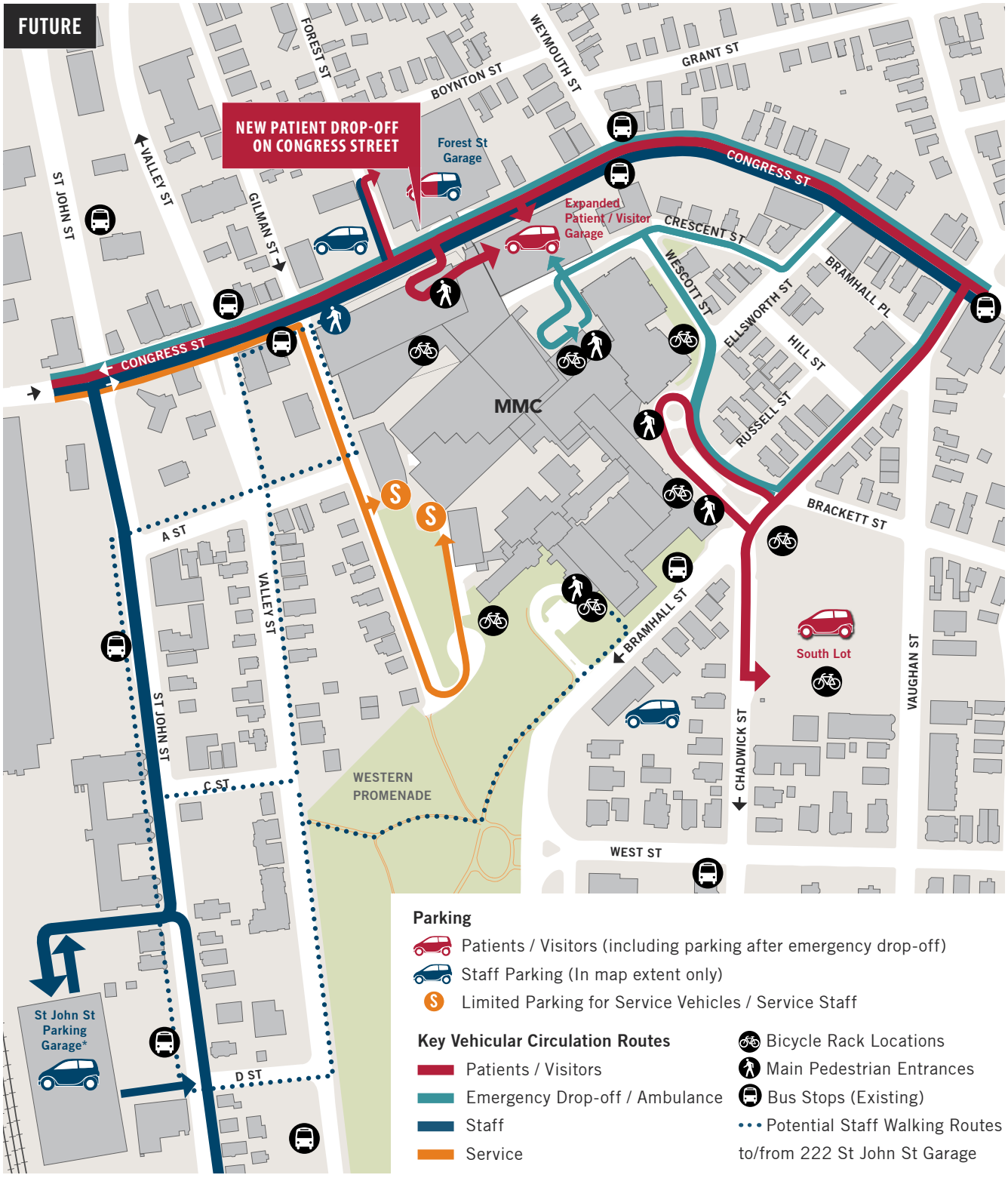


Fig.3.3 Transportation Plan (Future): Circulation Routes and Access Points



* NOTE: The exact location, footprint and access for St John St Garage to be determined during detailed design.

The safety evaluation considered crash data provided by MaineDOT for the period of 2014-2016, the most recent available at the time the analysis occurred. In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define a High Crash Location (HCL). Both criteria must be met in order for a location to be classified as an HCL:

1. A critical rate factor (CRF) of 1.00 or more for a three-year period. A CRF compares the actual crash rate to the rate for similar intersections in the state. A CRF of less than 1.00 indicates a rate of less than average, and:
2. A minimum of eight crashes over the same three-year period.

Based on the crash data provided by MaineDOT, the HCLs in the vicinity of the site are: the intersection of Congress St with Bramhall St and Deering Ave, the intersection of Congress St with Gilman St, the intersection of Park Ave with Valley St, Congress St from Forest St to Weymouth St, and St. John St from Congress St to just south of Park Ave.

PROPOSED MODIFICATIONS TO ACCESS AND CIRCULATION

Proposed New Entrance

MMC's short-term projects include a new entrance on Congress St to improve access and egress for patients and visitors. Today, most motorists arrive on campus via Congress St: they either park off Congress St in the Patient / Visitor Garage, or use Bramhall St to reach the emergency room or entrance on Charles St, which also allows access to the Patient / Visitor Garage on an upper floor.

It is anticipated that the new Congress St entrance will be used primarily by vehicles dropping off or picking up patients, shuttle buses, or short-term deliveries (like flowers, etc). The entrance will be designed to allow vehicles to either exit back onto Congress St or directly enter the adjacent Patient / Visitor Garage after passing through the drop-off zone without having to go back onto the public street. The Charles St entrance (at the East Tower) will remain open and continue to accommodate some defined patient demand. Changes to patient / visitor circulation and the impacts on Congress St traffic operations will be studied as part of the Traffic Movement Permit Application (TMP) process.

The new entrance on Congress St is expected to improve access to the campus while reducing vehicular traffic on neighborhood streets. Work is currently underway to identify design options for the new entrance and drop-off that minimizes impact on existing pedestrian, bicycle, transit and vehicular traffic along Congress St. The proposed site plan will be reviewed as part of the State's Traffic Movement Permit (TMP) Application during the City's Site Plan review process.

Proposed Employee Parking

As part of MMC's short-term projects, the existing Employee Garage will be demolished. MMC is collaborating with a third-party developer to build a 2,200 space parking garage at 222 St John St. All staff parking will be consolidated to this new location.

PROJECTED TRAFFIC IMPACT

As mentioned previously, the traffic impacts of the MMC Short-Term Projects will be studied comprehensively as part of the Maine Department of Transportation (MaineDOT) Transportation Movement Permit (TMP) application process delegated to the City of Portland.

Some of the traffic items reviewed as part of the TMP will include:

- Trip generation methodology.
- Trip distribution assumptions.
- Weekday morning and evening traffic operations/capacity analyses.
- Average and 95% queue analyses for key intersection approaches.
- Pedestrian and bicycle safety evaluations.
- Identification of potential mitigation to address identified deficiencies created or exacerbated by the proposed development.

A high-level analysis of the projected changes in traffic as a result of estimated growth in the City of Portland and MMC's short-term projects was completed. Traffic volumes in the vicinity of MMC's Bramhall campus are anticipated to increase by approximately 3.5% between 2016 and 2023, without any MMC development, due to background traffic growth throughout the City. This increase is based on an estimated growth of 0.5% per year and compares the 2016 traffic volumes to the 2023 Pre-development traffic volumes (with no MMC development).

If the MMC employees utilize the 222 St John St garage, then traffic volumes at the intersection of St John Street / Congress Street may increase by approximately 17% and traffic volumes at the intersection of Valley St / Congress St may decrease by approximately 5% during peak commuter hours between 2016 and 2023. This increase compares the 2016 (seasonally adjusted) predevelopment traffic volumes to the 2023 Postdevelopment traffic volumes (with MMC development). This change in traffic volumes is due to the additional garage traffic (i.e. MMC expansion), the relocation of the existing employee garage traffic from Gilman Street to St John Street, and the background City traffic growth.

In 2023, the development of the employee parking garage at 222 St John St may increase total traffic volumes at the intersection of St John St / Congress St by approximately 12% during the peak commuter hours and approximately 56% during the peak hours of MMC shift changes that primarily occur during non-peak commuter hours. This is the increase

between 2023 Predevelopment volumes (with no MMC development) and 2023 Postdevelopment volumes (with MMC development). This increase is due to the additional garage traffic and the relocation of existing employee garage traffic from Gilman to St. John. Although the percentage increase during the peak hour of MMC shift changes appears high, the traffic volumes during the non-commuter peak hours with additional MMC development are still lower than the volumes during the peak hours of commuter traffic without significant additional MMC development.

MMC's traffic volume is expected to decrease at other intersections near satellite parking locations as a result of consolidating parking at 222 St John St. Although traffic due to MMC is anticipated to decrease at intersections near the satellite parking lots, total traffic volumes at those intersections may not change significantly, since different users may still utilize the lots. However, regardless of traffic volumes, there will be less vehicle miles travelled on the roadway network, since MMC employees will no longer be driving around the streets seeking out the last remaining parking spaces.

PARKING

MMC offers its patients, visitors, physicians, and employees several options for parking. MMC currently controls approximately 2,877 total off-street parking spaces either via ownership or through leases with others that specifically serve the Bramhall Campus. Of the 2,877 spaces, 2,027 parking spaces are subscribed to staff and physicians. About 1,538 of these employee parking spaces are located on the Bramhall Campus..

In addition to their on-campus parking spaces, MMC controls an additional 489 spaces for employees in remote parking facilities that serve the Bramhall Campus. Off-site spaces that are used by employees require shuttle services to the Bramhall Campus by dedicated shuttle services. **Table 3.2** on the following page provides a summary of existing MMC parking facilities. MMC has continued to see demands on the existing supply intensify due to increased patient volumes and higher acuity patients (longer lengths of stay).

In order to assess MMC's existing and future parking demand, a nationally recognized consulting firm was hired that specializes in this work. Vanasse Hangen Brustlin, Inc. (VHB) began working with MMC in January 2017. VHB also has done work for the City of Portland.

EXISTING PARKING ANALYSIS

The existing parking garages and surface lots are not equipped to readily collect and compile entrance, exit, and occupancy data electronically. As a result, in order to collect baseline data,

Table 3.2 Existing Parking Spaces

		Patient / Visitor	Employee	Total at Facility	Ownership
ON-CAMPUS 850 patient / visitor 1,538 employee spaces	Employee Garage	0	1,274	1,274	Owned
	Patient / Visitor Garage	480	0	480	Owned
	South Lot	370	0	370	Owned
	887 Congress (Forest St Garage)*	0	178	178	Owned
	7 Bramhall St	0	26	26	*Leased*
	905 Congress St (Sportsman Lot)	0	60	60	*Leased*
OFF-CAMPUS 489 employee spaces	222 St John St (First Atlantic Lot)	0	283	283	*Leased*
	181 High St (Gateway Garage)	0	100	100	*Leased*
	993 Congress St (Classic Lot)	0	97	97	Owned
	321 Brackett St	0	9	9	*Leased*
	TOTAL PARKING SPACES	850 Patient / Visitor	2,027 Employee	2,877 Total	

* The Forest St Garage has an additional 222 spaces that are dedicated to medical office staff and patients.

detailed hourly parking occupancy counts were conducted on March 8, 2017 and March 9, 2017 by VHB. The goal of these parking counts was to collect temporal parking data at the Employee garage, the Patient / Visitor garage, and the South Lot to confirm parking surge (between daytime and evening staff shift changes) and overnight demand. Hourly counts were conducted from 5am to 12pm, 3pm to 8pm, and 10pm to 12am. This data have been compiled to quantify the existing conditions parking demand estimates.

Additional parking occupancy counts were conducted daily between April 24, 2017 and April 28, 2017 at 10am and 2pm by MMC. MMC parking was 93% occupied throughout the week.

Overall, existing parking demand conditions at MMC were quantified via a combination of distinct actions:

- Weekday occupancy parking counts were conducted to understand utilization at key points in time to assess peak occupancy, overnight occupancy, and intervals of weekday garage entries and exits. These counts were conducted in March and April 2017.
- Intermittent spot checks of parking utilization and access/egress were conducted from January through March 2017 by MMC and its consulting team.

- MMC Parking and Security staff and the City of Portland Parking Director provided input regarding their observations and experiences relating to the utilization of parking.

These counts, observations and input indicate that the parking system typically operates at or above capacity during weekday daytime.

CURRENT PARKING SHORTAGE

MMC's 850 patient/visitor parking spaces equates to +/- 1.33 parking spaces per bed. This is low when compared to other New England and national peers. Patient drive rate is consistently high among large academic medical centers regardless of location. Therefore it is appropriate and reasonable to compare MMC patient parking needs on a space per bed basis to highly urban, suburban, and rural settings. MMC would need about 340 additional patient/visitor parking spaces to achieve the midpoint parking space/bed ratio (approximately 1.87) of its peers.

MMC's 2,027 staff parking spaces equates to about 3.18 parking spaces per bed. This ratio is also low when compared to other peer institutions. When studying employee parking needs, it is important to compare institutions that would reside in similar contexts where driving behavior and auto mode shares would be similar.

During the analysis, MMC's consultant team attempted to identify comparable medical centers. A significantly similar comparison medical center does not exist due to the number of factors impacting parking. The medical centers that were determined to be somewhat similar and adequate comparisons had median parking ratios of 1.87 for patients/visitors and 4.38 for employees.

Under current conditions, MMC will require 150-200 additional on-campus parking spaces to alleviate current staff parking shortfalls that have been estimated via observations and data collection activities and eliminate on-street parking by MMC staff. To help existing demand pressures, MMC continues to pursue a number of strategies to address its constrained parking situation, including:

- The study of enhanced Transportation Demand Management (TDM) actions to reduce single-occupancy vehicle trips and parking demand,
- Moving employees to off-campus locations (both program and parking), and,
- Securing additional remote parking and serving that remote parking with convenient shuttle services for staff.

MMC's existing decentralized parking solution creates management challenges and is an employee dissatisfier. Management challenges include multiple shuttle routes that add to traffic congestion on Portland's streets and the high cost of servicing and operating multiple shuttles. MMC employees frequently share that the employee parking at the Bramhall Campus is unreliable. There are eight

parking locations available for MMC employees. When one location is full, employees have to search other locations for available parking which adds to traffic congestion on Portland's streets. On days when MMC is near or at capacity, finding a parking spot in a reasonable amount of time is a challenge.

PLANNING GOALS FOR PARKING

With regard to Parking, MMC's goal is to accomplish the following key objectives:

1. Support a predictable arrival experience for patients and visitors,
2. Where feasible, allow for segregation of MMC patients/visitors and staff parking,
3. Address neighborhood concerns of MMC staff occupying on-street parking spaces,
4. Provide a parking supply that is sufficient to support the Medical Center,
5. Rely upon an enhanced TDM program to help reduce vehicle trips and parking demands when reasonably feasible.

FUTURE DEMAND PROJECTIONS

Future patient, visitor, staff and physician parking needs were quantified based on an assessment of MMC's patient volume (inpatient and outpatient activity) and staff growth projections. The demand for patient care at MMC is growing as described under **"Projected Daily Census" on page 40**. MMC anticipates that the overall patient demand will grow by approximately 8 percent over the next ten years (or 0.75 percent per year). Similarly, employment at MMC is expected to grow by approximately 7 percent over the next ten years (or 0.7 percent per year). We expect patient and patient-related and employee parking demand will increase at similar rates. This demand will be offset by Transportation Demand Management methods described later in this chapter. These expected trends have been used to estimate the increased parking needs of the Hospital.

The following key points summarize MMC parking activity under current conditions, and provide the context for assessing and understanding the parking objectives that are proposed for the transportation plan:

- Under current conditions, the MMC parking system typically operates at or above capacity during weekday daytime hours.
- The hospital requires about 150-200 additional on-campus parking spaces to alleviate current 2017 staff parking shortfalls. These estimates are based on several iterations of counts, observations, and input from MMC, as described previously.
- When compared to other peer academic medical centers, MMC generally has a lower parking-to-licensed bed ratio both for its patients as well as its physicians and staff. There is not an industry standard method for comparing hospital parking supply. The number of patient beds was used as the common factor in this analysis because of its relative uniformity among academic medical centers.

PROPOSED MODIFICATIONS TO PARKING

MMC's short-term projects include:

1. Patient / Visitor Garage Addition: MMC will expand its existing 480-space Patient / Visitor Garage by three levels to accommodate an additional 225 spaces by 2019.

2. New St John St Garage: MMC will deconstruct the existing 1,274-space Employee Garage and will construct a replacement garage that will supply approximately 2,200 spaces for MMC. MMC intends to provide a reliable and complete parking solution for employees.

FUTURE PATIENT / VISITOR PARKING

Once the Patient / Visitor Garage Addition is completed, the patient parking supply will be adequate to meet the growing needs of the patients and visitors.

MMC's short-term projects will increase patient/visitor parking supply from 850 spaces to 1,075 spaces. As a ratio of parking spaces per bed, MMC's on-campus patient parking system will improve from an existing ratio of 1.33 (a rate that is low when compared to peers) to 1.68 (average to its peers).

FUTURE EMPLOYEE PARKING

In total, MMC estimates a need for 500-600 additional staff/physician parking spaces to accommodate future demands and resolve the existing parking shortage. The 2,200 employee parking spaces in the new St John St Garage are intended to accomplish the following:

- Accommodate expected staff growth,
- Provide for replacement parking to support demolition of the existing Employee Garage,
- Consolidate existing remote surface parking, and
- Reduce parking by staff on surrounding neighborhood streets.

This increase in employee parking supply will improve MMC's ratio of employee parking to patient beds from their existing ratio of 3.18, which is very low when compared to peer academic medical centers.

The proposed St John St Garage will consolidate the majority of MMC's employee parking which will improve employee satisfaction and minimize management challenges. A smaller and more reliable shuttle service will be available to MMC employees getting to and from the parking garage. In addition, the St John St location is 3 tenths of a mile from the Bramhall Campus and MMC will encourage walking.

ALTERNATIVE TRANSPORTATION

MMC supports and aims to increase the use of alternative transportation by its employees, patients and visitors through the implementation of its Transportation Demand Management (TDM) Plan outlined on page 74. Ongoing collaboration with the City of Portland, local and regional transit agencies, and neighborhood and advocacy organizations is planned to ensure the improvement of pedestrian, bicycle and transit infrastructure and networks serving the campus.

MMC solicited input from neighbors on the topics of vehicular, bicyclist and pedestrian safety around the campus at its January 12, 2017 Open House. Key findings from this meeting are summarized at the end of this section under the heading "Future Transportation Planning Considerations." MMC has shared the Open House results with the City of Portland and neighborhood representatives. MMC will continue working with neighbors, City staff, and elected officials to address vehicular, pedestrian and bicyclist safety concerns around its campus as part of its ongoing community engagement process (see page 130).

PUBLIC TRANSIT ACCESS

METRO provides bus service throughout the Greater Portland region and makes stops within walking distance to the MMC Bramhall campus. The campus is also served by the ZOOM Turnpike Express route operated by ShuttleBus–ZOOM.

Multiple METRO routes accessible from the campus provide connections to the nearby Portland Transportation Center (PTC) and the Downtown Hub, which are served by additional METRO and regional bus lines. The PTC also serves as the local connection to Amtrak's Downeaster service that runs along the coast between Boston and Brunswick. See **Fig.3.4** and **Table 3.3** on the following pages for an illustration of bus routes and bus stops within walking distance of the MMC campus. All buses serving the campus are equipped with bike racks to enable multi-modal commutes.

MMC supports mass transit commutes and provides financial incentives to employees choosing public transit as part of its Transportation Demand Management (TDM) program. MMC will provide enhanced incentives and work with METRO to improve transit access for all campus users as part of its future TDM Plan. See "Supporting Mass Transit Commutes" on page 78 for details.

Detailed design of each new development on campus will consider the location of nearby transit stops, and identify any necessary changes to locations to better serve transit users.

Fig.3.4 Map of Existing Transit Routes and Stops

MMC Main Pedestrian Entrance
Bicycle Rack Locations
Existing Bus Stops around Campus (see opposite page for transit route legend)

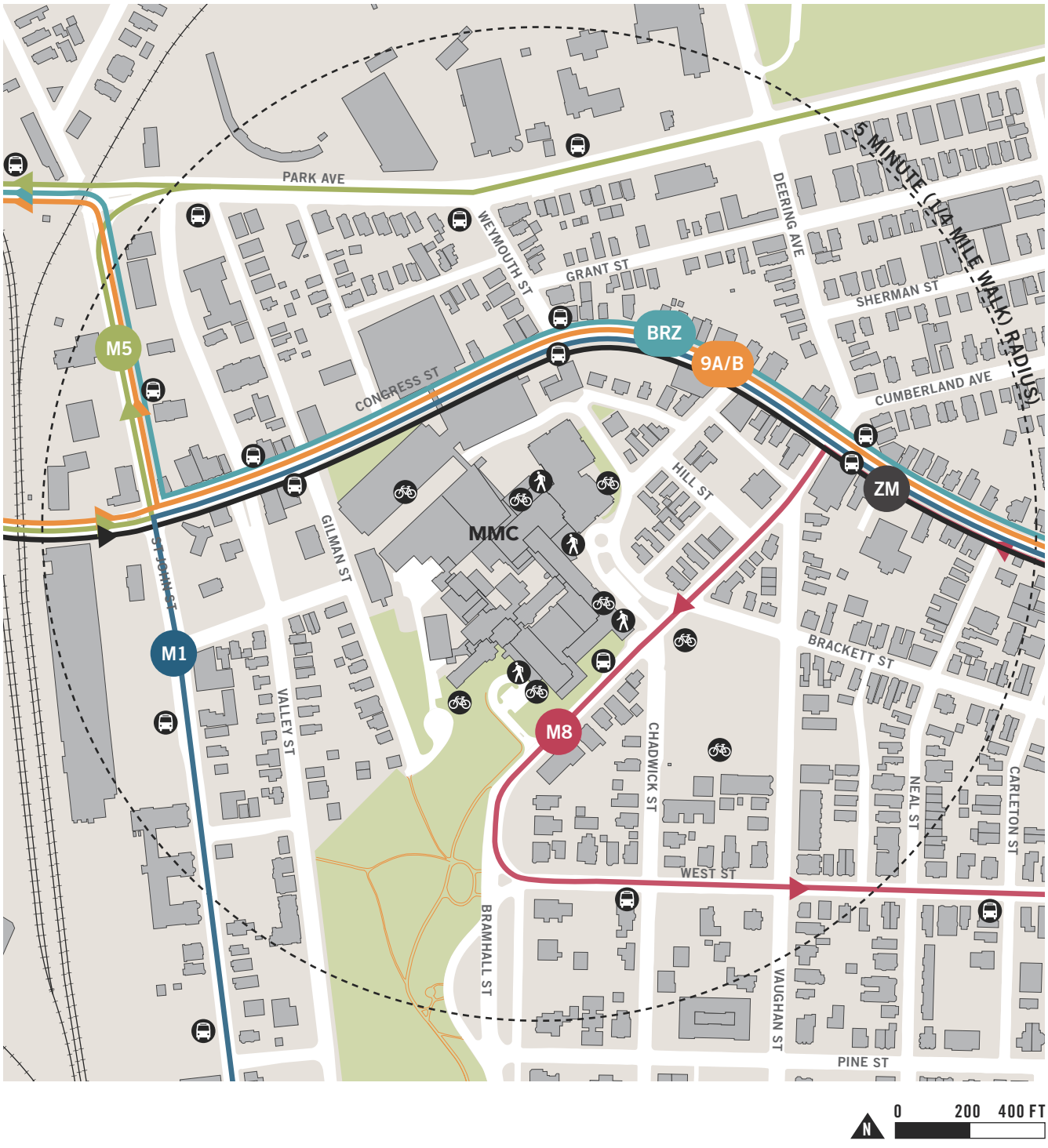


Table 3.3 Bus Routes Serving MMC Bramhall Campus

The following bus routes are accessible within a five minute walk of the MMC campus. See **Fig.3.4 on** opposite page for location of routes and bus stops.

M1 **M1 – CONGRESS STREET**
Connection to Portland Transportation Center (PTC), Downtown, Munjoy Hill and Eastern Promenade

M5 **M5 – JETPORT / MAINE MALL**
Connection to Downtown, Hannaford Plaza, Maine Mall and Portland Jetport

M8 **M8 – PENINSULA LOOP**
Connection to Downtown, Franklin Towers, Whole Foods Plaza and Hannaford Plaza

9A/B **M9A / 9B – NORTH DEERING VIA STEVENS AVENUE**
Connection to MMC Brighton campus, Highlands, Rosemont, and North Deering

BRZ **METRO BREEZ EXPRESS (BRZ)**
Connection to PTC, Downtown, Falmouth, Yarmouth, Freeport

ZM **ZOOM Turnpike Express (ZM)**
Connection to Biddeford and Saco

Rte #	Closest Stop	Times of Operation	Headways
M1	Congress St	5:35am to 11:10pm (M-F) 7:45am to 6:05pm (Sat) 8:10am-6:35pm (Sun)	Varies between every 30 minutes during daytime to every 45 minutes late evenings
M5	St John St	5:30am to 10:45pm (M-F) 6:05am to 10:45am (Sat) 7:55am to 6:40pm (Sun)	Varies between 25-35 minutes during weekdays (daytime) to every 40-45 minutes on weekend evenings
M8	Bramhall	6:40am to 6:00pm (M-F) 7:50am to 6:17 pm (Sat) 9:35am-4:17pm (Sun)	Varies between every 30-40 minutes during weekdays to every hour during weekends
M9A/9B	Congress	5:35am to 10:35pm (M-F) 7:35am to 10:30pm (Sat) 8:35am-4:35pm (Sun)	Varies between 10 minutes on weekday mornings to every 1 hours on weekends and evenings
BRZ	Congress	6:00am to 7:45pm (M-F) 8:20am to 6:10pm (Sat) No Sunday Service	Varies between 45 minutes on weekday mornings to every 2 hours on Saturdays
ZOOM	Bramhall and Congress	6:00am to 6:40pm (M-F) No Weekend Service	5 buses in the morning b/w 6am-8:17am 6 buses in the afternoon b/w 2:46pm-5:35pm

Fig.3.5 Heatmap Showing Popular Bicycle Routes in the Area, as Recorded by Strava App Users

less more

Source: Based on self-tracking app data mapped by Strava Labs (labs.strava.com/heatmap)

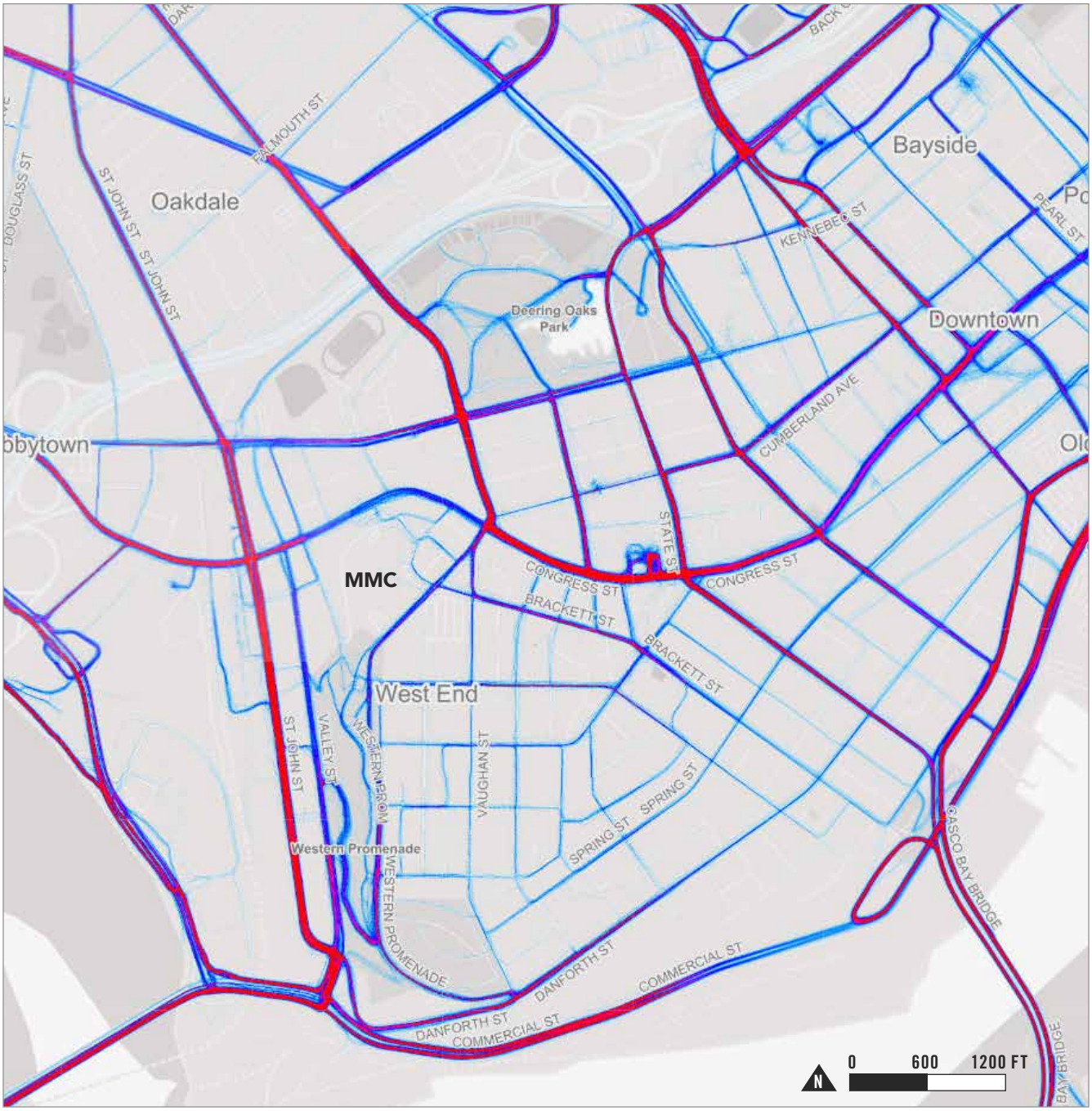


Fig.3.6 Portland Bikeway and Pedestrian Network *(Source: City of Portland, 2014)*

EXISTING FACILITIES

- Bicycle Lane
- Paved Shoulder
- Neighborhood Byway
- Shared Use Pathway
- Shared Lane, with Marking
- Shared Lane

PLANNED FACILITIES

- On Road Bikeway
- Neighborhood Byway
- Shared Use Pathway or Rail with Trail

BICYCLE ACCESS AND STORAGE

As shown in **Fig.3.5 on page 70**, bicycling is prevalent within the City of Portland, however, bike use at and around the MMC campus is generally lower than in other Portland locations. This could be a result of the severe grades in the Bramhall neighborhood, but also the lack of strong municipal bicycling infrastructure, including dedicated bike lanes, paths and sharrows.

MMC is committed to supporting bicycle access to the Bramhall campus by all users, including employees. In recent years, the hospital has invested in bicycle racks, showers, and lockers, and currently has the capacity to accommodate parking for up to 193 bicycles on campus (see **Fig.3.2 on page 58** for locations). MMC aims to continue support employees who bike to work as a part of its TDM plan (see "Supporting Bicycle Commutes" on page 79).

MMC is an advocate of the City of Portland's Bikeway Network Plan, which will provide bicycle infrastructure on campus adjacent streets with linkages to existing and planned shared use pathways (see **Fig.3.6 on page 71**).

Detailed design of each new development on campus will identify any necessary changes to bike infrastructure to better serve the needs of those arriving by bike.

PEDESTRIAN ACCESS AND CIRCULATION

Whether they arrive on campus by car, by bus or by bicycle, all campus users are pedestrians at some point in their journey to their MMC destination. Like other medical centers of its size, MMC provides elevated, covered, and temperature-controlled pedestrian walkways between its parking garages and key campus circulation corridors. This limits exposure to adverse weather conditions, facilitates wayfinding for patients / visitors, and minimizes on-street vehicle / pedestrian conflicts.

MMC also maintains its network of campus pathways and campus-adjacent public sidewalks to ensure safe pedestrian access to campus facilities (see **Fig.3.2 on page 58** for location of key pedestrian entrances).

MMC will complete a campus-wide ROW Plan at the time of its first site plan review that includes sidewalk materials to clarify the need for any variations from current city policies and how they would be integrated into the public realm. In order to improve slip resistance and ADA accessibility, MMC may request waivers from the city's sidewalk material policy under site plan review.

MMC aims to improve pedestrian access to campus with future building projects by orienting building entrances to public streets and providing active ground floor uses where possible. (See "Design Guidelines" on page 116 for details.). MMC will also work with the City and other stakeholders

including the St. John Valley Neiighborhood Association to identify potential improvement that could be implemented to pedestrian routes between the proposed St John Garage (see **Fig.2.7 on page 44**) and the core campus.

FUTURE TRANSPORTATION PLANNING CONSIDERATIONS

MMC continues to solicit input from its neighbors to identify transportation-related issues and possible improvements that should receive additional consideration during the planning and design of future projects by MMC and the City. Key issues identified in this process to date include the following:

- Chadwick Street: A portion of Chadwick Street is one-way. The conversion to two-way could reduce the amount of traffic going further into the West-end neighborhood and help slow vehicular speeds to levels that are safer for pedestrians and bicyclists.
- Chadwick Street at West Street: Neighbors have observed low compliance with stop-signs and two-way travel on one-way streets.
- Vaughan Street at Bramhall Street: This is a difficult intersection geometry for pedestrians, cyclists and vehicles.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

MMC has an active Transportation Demand Management (TDM) program that was one of the first in the state of Maine when launched in 2008. The program aims to reduce MMC's impact on peninsular traffic by subsidizing and marketing of alternative commute options including walking, bicycling, public transit, and rideshare. Known as "Get on Board!," this voluntary program has grown each year through increased enrollment.

In 2017, MMC engaged VHB, a consulting firm with expertise in this area, to update and enhance its TDM program and to inform its long-term plans for parking, in particular.

This section provides a summary of VHB's analysis of existing employee commuter behavior, and outlines proposed updates to the "Get on Board!" program that will be implemented in the near- and long-term to further reduce single-occupant vehicle (SOV) commutes by employees.

EMPLOYEE COMMUTES: 2017 BASELINE

As part of its efforts to monitor and enhance the "Get on Board!" program, MMC recently administered a voluntary transportation survey with its employees. The survey showed that 9% of employees use alternatives to SOV commutes (see **Fig.3.7 on page 75**). Based on the expert knowledge and experience of VHB, the high percentage of employees driving to work alone and parking near campus is not unexpected given the nature of the services provided, the dispersed geographic footprint of where MMC employees live, and the availability of viable transportation alternatives to driving. Detailed analysis of employee driving distance to work is illustrated in **Fig.3.8** and **Fig.3.9** on the following pages.

FUTURE TDM TARGETS

Based on a review of census data, employee travel origin and destination information, existing employee travel mode split, and transportation survey results, MMC believes it can further reduce the portion of employees driving alone to work, thus reducing trip making and resultant parking demands. An initial estimate is that an additional 1.5% of the daytime population could be shifted into alternative modes of accessing the campus. This represents approximately 65 fewer individuals driving alone to campus.

The reduction would be achieved through MMC's existing TDM initiatives, as well as new strategies that will be implemented over time. MMC will endeavor to increase its employees' overall use of alternative modes of travel beyond the target identified above through further enhancements or program expansions in the coming years and depending upon initiatives by the City, GPCOG, and others.

MMC's enhanced TDM Plan draws on national best practices and suggested examples from the City of Portland Planning Staff. City suggestions included evaluating the Downtown Parking Management

Fig.3.7 MMC Bramhall Campus Employees Commuting Mode Split (2017)

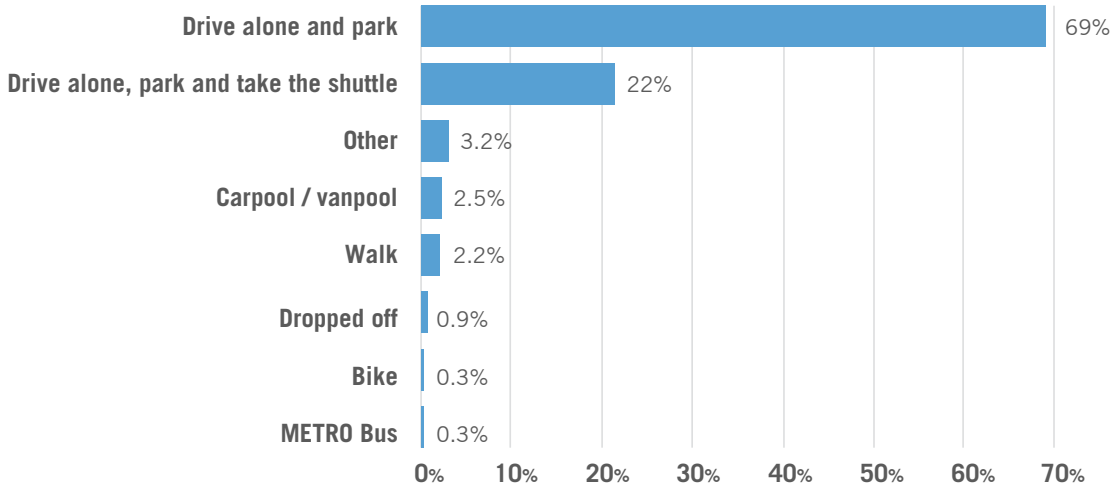


Fig.3.8 MMC Bramhall Campus Employees, Distance to Work by Type of Employee

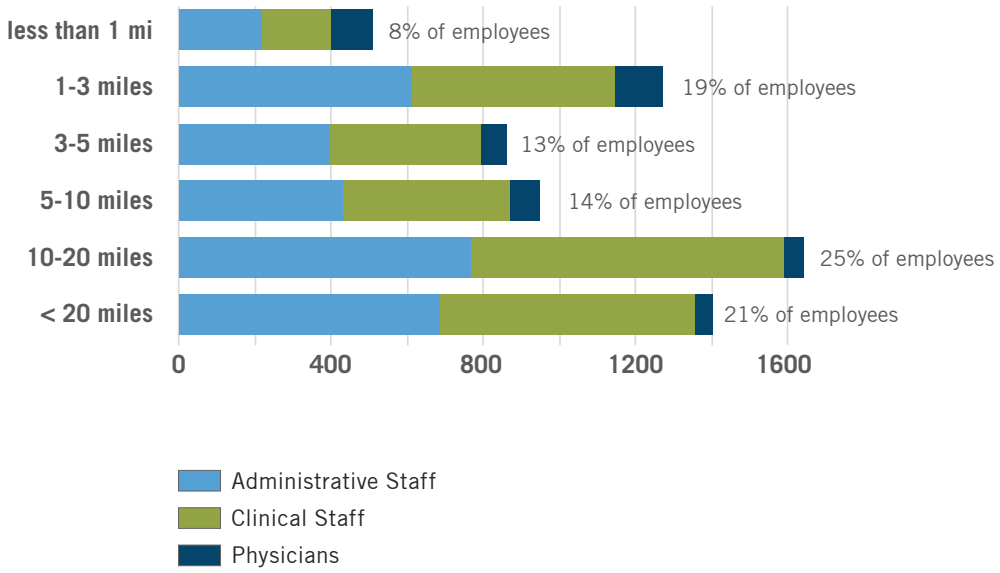
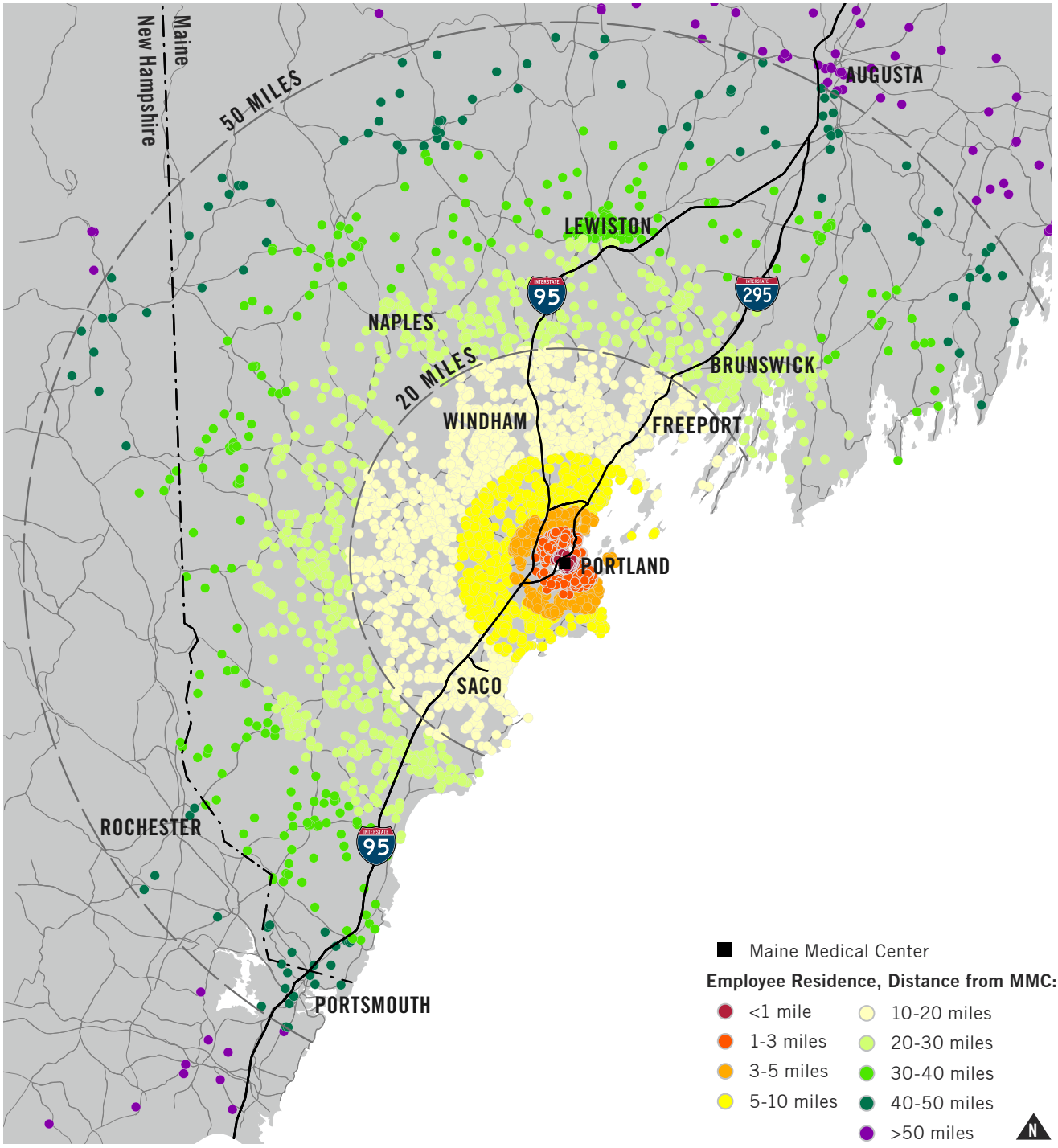


Fig.3.9 Map of MMC Bramhall Campus Employee Residences Illustrating Distance to Work and Travelsheds



Plan for Burlington, VT, an Institutional Parking Management Plan also for Burlington, VT, and a Transportation Demand Management Study for Downtown Syracuse, NY. Additionally, MMC also examined the commuting program instituted by Boston's Longwood Medical and Academic Area (LMA), known as CommuteWorks, and operated by MASCO, a consortium of hospitals, colleges and universities, and other related institutional uses. These programs were evaluated because of their efforts to manage SOV driving in a highly concentrated employment district.

Applicable Best Practices

- Collaboration among organizations in the area impacted
- Regular communication and education of alternative transportation benefits
- Pay for parking
- Complimentary support programs (i.e. guaranteed ride home, carpool)
- Regular monitoring of commute mode (i.e. surveys, automated data collection)

TDM PROGRAM COMPONENTS

Individual program elements and related incentives of MMC's TDM program are outlined below. These include continuation of existing initiatives, as well as the following new initiatives / enhancements that will be implemented starting in 2018:

- Data Collection
- "Get on Board!" Coordinator
- Increased Education of Employees about the "Get on Board!" Program
- Bi-Annual Transportation Survey
- Regional Connections Partnership
- Enhanced Transit Fare Discount / Partnership with METRO
- Enhanced Carpool/Vanpool Matching
- Active Transportation Incentives

MMC aims to achieve a 1.5 percent reduction in SOV commutes 5 years after the approval of the IDP. This target will be revised when a new baseline is established.

Data Collection

MMC will explore methods to improve data collection and implement a reasonable system to collect data on the transportation habits of employees and parking garage utilization.

"Get on Board!" Coordinator (New)

MMC will enlist the services of a "Get on Board!" Coordinator responsible for the implementation, operation and continuing sustainability of MMC's TDM. This individual will continually monitor the

program, its operations and future opportunities to reduce vehicle dependency by staff at MMC. The Coordinator will also be responsible for data collection and TDM updates as required.

Increased Education of Employees about the "Get on Board!" Program (New)

MMC will be enhancing the "Get on Board!" promotion and education process by periodically educating existing employees of the options and benefits available through the "Get on Board!" program. Additionally, newsletters will be distributed highlighting the environmental, health and other benefits of TDM.

Bi-Annual Transportation Survey (New)

MMC will conduct a Transportation Survey of its employees every 2 years to collect data about commuting mode split, barriers to TDM use and marketing effectiveness. Information from this survey will be included in the TDM plan updates.

Regional Connections Partnership (New)

MMC will seek to form partnerships with other major employers in the region, including the City of Portland, to foster a holistic approach to transportation demand management. The partnerships would enable the exchange of TDM-related information and experiences between institutions, and it would foster a community that is focused on promoting alternative transportation in the City of Portland.

Supporting Mass Transit Commutes (Enhanced)

MMC employees can purchase discounted bus tickets and Shuttle-Bus Zoom tickets conveniently in the cafeteria. MMC buys the tickets at the regular price and offers them to employees at the reduced prices listed in **Table 3.4** below. This is a clear demonstration of MMC's commitment to making "Get on Board!" work.

Table 3.4 MMC Current Transit Incentives

	MMC COST	EMPLOYEE COST
METRO (10 RIDES)	$13.50	$8
S. PORTLAND (10 RIDES)	$13.50	$8
ZOOM (10 RIDES)	$39	$29.60
ZOOM MONTHLY	$100	$84.50
ZOOM QUARTERLY	$260	$197.50

MMC will fully subsidize the cost of METRO bus tickets for employees who wish to use the bus for the foreseeable future so long as the cost of METRO bus tickets remains as illustrated in **Table 3.4**. If METRO bus ticket costs change, then MMC will evaluate utilization and work with METRO to find the best solution to support employees who wish to use the METRO. Subsidizing METRO tickets would provide employees with an additional financial incentive to use the transit system serving the MMC district.

METRO's existing routes and schedules cannot meet all of MMC's employees' transportation needs, however. Although the MMC campus is well served by bus transit (See **Fig.3.4 on page 68**), the limited hours of operation and the long headways

between runs do not provide a viable alternative to the car even for those employees who can walk to a bus stop from their residence. (See **Table 3.3 on page 69).**

MMC intends to explore a partnership with the Greater Portland Transit District (METRO) to identify strategies for increasing MMC ridership, such as service updates and/or pricing agreements. The formation of a partnership could be mutually beneficial, by providing METRO with feedback for increasing ridership while maximizing the usefulness of the transit system for MMC employees. As MMC formalizes its ties to other local institutions through a regional partnership, its collaboration with METRO could also extend to other employers.

Supporting Employee Carpools (Enhanced)

"Get on Board!'s" most successful initiative to date has been its carpooling program. Most of these connections are ad-hoc. MMC will promote increase participation by actively matching potential riders. Additionally, while Go Maine is the primary administrator of vanpools in the state, MMC will work to proactively identify and assist with the formation of vanpools.

The employee "Get on Board!" portal is linked to the GoMAINE Commuter Connections website, which is an alternative commuting program operated by MDOT. GoMAINE provides commuters with additional commuting resources and benefits that supplement those provided by MMC. These benefits include a carpool ride-matching program and a rewards program for participants.

Supporting Bicycle Commutes (Enhanced)

The MMC campus is located in close proximity to popular bicycle corridors, including St John and Congress Sts which connect riders to destinations across the City of Portland (see **Fig.3.5 on page 70**). MMC has worked diligently to support bicycle commuters. In 2008, MMC installed five strategically-located bike racks and ten bike lockers on their Bramhall Campus. Three new bicycle racks were added in the vicinity of the Main entrance and in the South Lot in 2016, bringing total storage capacity to 193 bicycles across campus (see **Fig.3.2 on page 58** for location of bicycle racks on campus). Bicycle commuters also have access to a shared toolshed with basic tools.

MMC will undertake an internal marketing program which offers fun and useful prizes for those participating in alternative modes of transportation. Making alternative transportation fun and a community-wide effort is likely to increase participation by some who might not otherwise engage in the process.

Pay for Parking

MMC will charge its employees no less than $3 per paycheck to utilize MMC parking. MMC employees are paid bi-weekly. MMC will evaluate employee parking fees in the mid-term.

Guaranteed Ride Home (GRH) Program

For those employees who regularly use alternative modes of transportation to and from its Bramhall Campus, MMC will guarantee a ride home in emergency situations.

UCar

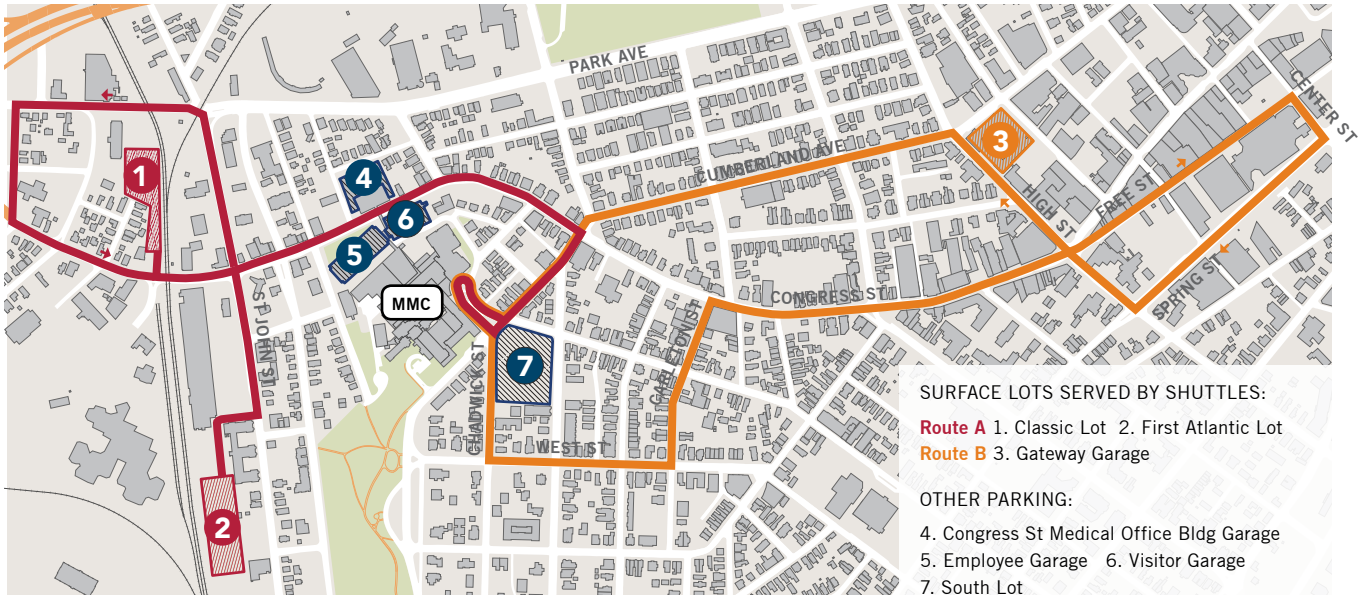
Working with UHaul and the City's Parking Department, MMC will continue to monitor the use of the UCar presently located in its Congress St parking garage. In the event an additional car is warranted, MMC will work with its partners in finding a suitable location on the main campus for the storage and use of the UCar.

MMC Employee Shuttles: Current Service

The MMC employee shuttle operates Monday-Friday from 6am to 11pm. The number of shuttles running to off-site parking locations at any given time varies from 1-5 shuttles depending on traffic volume. These off-site lots fill to capacity on a daily basis. The employee shuttle service has three distinct routes and schedules:

A. Service to and from the off-site 1st Atlantic and Classic parking lots runs from Monday through Friday from 6am to 11pm, in a continuous loop. The 1st Atlantic parking lot (222 St John St) is utilized first in the mornings. Once it nears capacity, service shifts to the Classic parking lot (993 Congress St). Return trips in the evenings service both lots.

Fig.3.10 Map of MMC Shuttle Routes A & B.



B. The Gateway shuttle moves employees between the MMC Bramhall campus, the Gateway office building / garage and the MaineHealth home office at 110 Free St. The shuttle leaves every 20 minutes from the south entrance Monday through Friday from 6am to 4pm. Transportation is provided on an "On Call" basis between 4pm and 11pm. This shuttle also provides a limited courtesy transportation service to patient families staying at the Ronald McDonald House (250 Brackett St.).

C. A courtesy shuttle runs between Brighton Medical Center (335 Brighton Ave) and MMC every 20 minutes from 6am to 4pm.

The shuttles provide a predictable alternative to employees commuting between the three sites while reducing vehicular traffic in and around campus.

MMC has instituted a shuttle service for contractors from the Classic Parking Lot (993 Congress St) to the hospital to reduce traffic and parking impact on the campus and surrounding neighborhoods. In 2015, MMC added a 20-space contractor lot on Forest St. Only essential contractor vehicles are permitted to park on campus: contractor parking passes are distributed by the Engineering Department on a case-by-case basis.

MMC Employee Shuttles: Future Routes

Once the St John St garage is complete and the majority of MMC employee parking is consolidated to that location, a new shuttle route will be established that reduces the amount of traffic around City streets and provides a reliable method of transportation for MMC employees. Future shuttle routes will be determined during the site plan review process.

CHAPTER FOUR

ENVIRONMENTAL AND INFRASTRUCTURE PLAN

Sustainable and resilient infrastructure is key to ensure safe and efficient operations of healthcare facilities in the 21st century. Maine Medical Center is seeking to advance its good stewardship of environmental and infrastructure resources through its Institutional Development Plan.

NATURAL RESOURCE PROTECTION

The Maine Medical Center Bramhall campus is located at a high point in the west end of the Portland peninsula. There are several locations where natural resources are significant:

- The Western Promenade, a culturally significant public park that is listed in the National Registry of Historic Places (NRHP'89, see **Fig.4.1)**;
- MMC-owned landscape along Bramhall St abutting the Western Promenade and serving as a foreground to the Maine General Building and original hospital structure;
- MMC, located in an urban setting, maintains small landscaped areas that provide visual respite from surrounding hard scape. These areas are well maintained, flowers watered and mulched and trees fertilized in order to preserve the pleasing aesthetics important to its neighbors, employees and patients; and,
- MMC-owned natural area along Gilman St. This steeply sloping zone contains natural vegetation consisting primarily of mature evergreen tree growth which serves as a natural buffer between the hospital and residences on Gilman St.

The Western Promenade, in particular, is a treasured resource for the public, including employees, patients and visitors to the MMC Bramhall Campus. It is a site from which to take in views of the countryside and the White Mountains. The Master Facility Plan utilizes vertical expansion and/or previously developed sites to minimize impact on natural resources and maintain existing campus open spaces. The plan does not encroach upon or negatively impact any of the natural resources listed above.

Fig.4.2 on page 85 illustrates the location of these natural resources in relation to the proposed short- and long-term projects.

Fig.4.1 MMC IOZ: Relationship to the Western Promenade

Fig.4.2 MMC Environmental Protection and Operations Plan

* NOTE: The exact location, footprint and height of St John St Garage to be determined during detailed design.

STORMWATER MANAGEMENT

The MMC Bramhall campus is located at a high point in the west end of the Portland peninsula. From the high point of the property along Bramhall St, runoff from the site drains west, north and east entering the to the City of Portland's separated storm drain system and combined sewer system. The campus terrain and location of high slopes that contribute to stormwater flows is illustrated on **Fig.4.3 on page 86**.

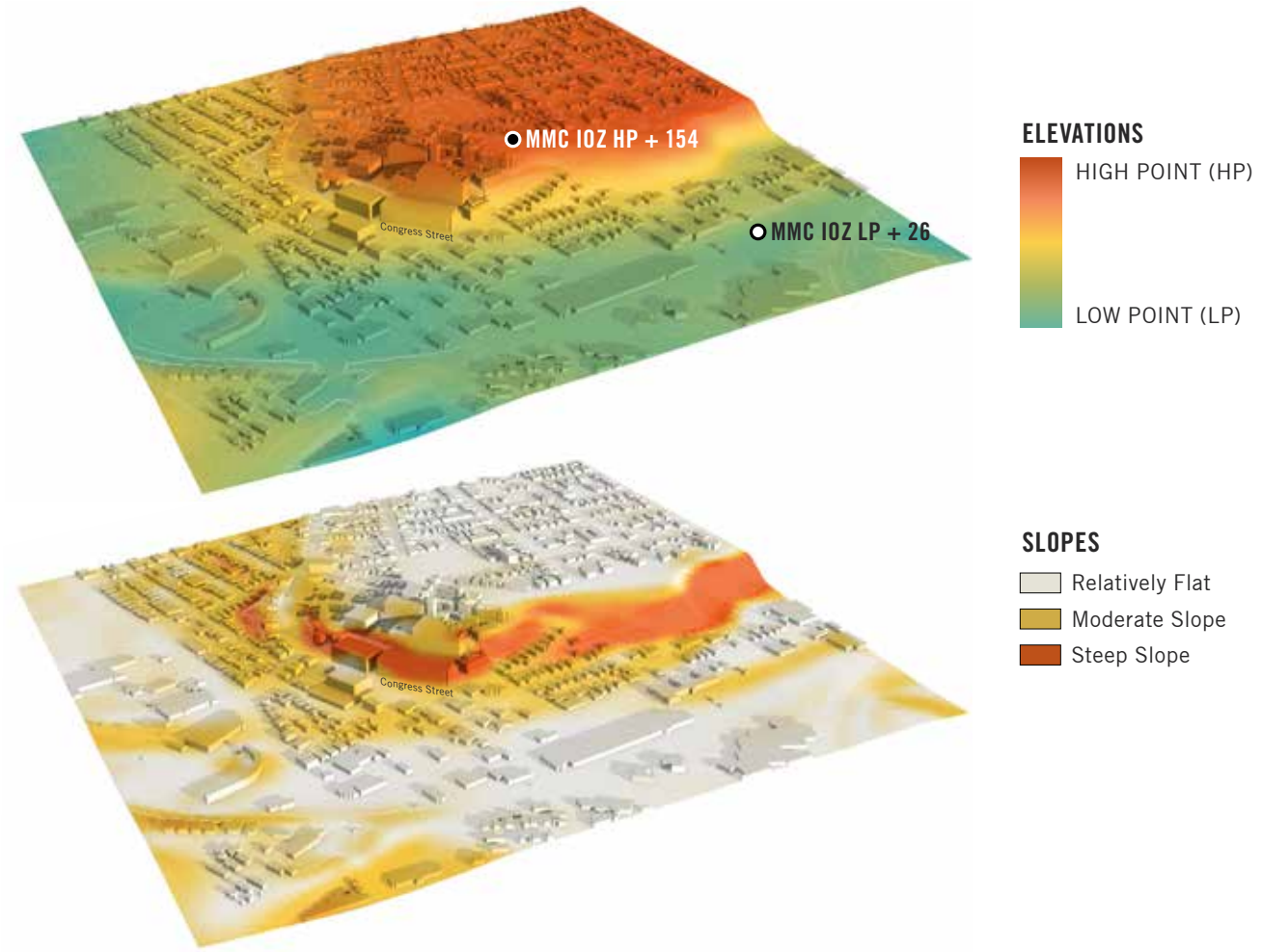
FEMA Floodplains

The campus is not located in a FEMA-designated flood zone. The 100-year flood zone boundary is located at the western edge of the Pan Am rail line and consists of flood-prone flats along the Fore River.

EXISTING STORMWATER INFRASTRUCTURE

In general, the campus redevelopment over the last 15 years has collected runoff from parking lots and new rooftops into a separated storm drainage

Fig.4.3 Diagrams Illustrating Elevation and Location of Steep Slopes around MMC Campus
(See **Fig.5.5 on page 106** for a map of existing elevations within the MMC IOZ boundary).



system, including storm drains in the public right of way. Where feasible, the on-site separated drainage system has been connected to a municipal separated storm drain. This includes the storm drains in A St constructed by the City in 2001 and Gilman St constructed by MMC in 2005.

2004 Improvements

The campus' stormwater conditions were most recently evaluated in a stormwater management report prepared by Sebago Technics, Inc. in 2004 as part of the Planning Board's review of the Bramhall campus expansion project, which included the construction of the Women and Infants Center, Emergency Department Expansion, Congress St Parking Garage and the Central Utility Plant. To meet stormwater treatment requirements for the expansion, MMC installed two Downstream Defender Stormwater treatment units to treat runoff from impervious areas on the site. The redevelopment separated and redirected stormwater runoff from approximately 6.3 acres of existing development from the combined sewers in Crescent St, Ellsworth St, and Congress St to the separated storm drain in A St. A 6' diameter unit was installed in the Congress St Parking Garage and a 10' diameter unit was installed in Gilman St.

Discharges into the City Combined Sewers

Other locations abutting the campus including Congress, Wescott, Charles, Bramhall, and Bracket Sts are only served by the City's combined sewers. At these locations, MMC's recent drainage construction terminates in a separated storm drain manholes connected to adjacent City combined sewer manholes to provide points of connections for future municipal separated storm drains.

Detailed information on MMC's stormwater discharges into the City's combined sewer and separated storm water infrastructure is outlined on **Fig.4.4 on page 88**.

FUTURE STORMWATER FLOWS

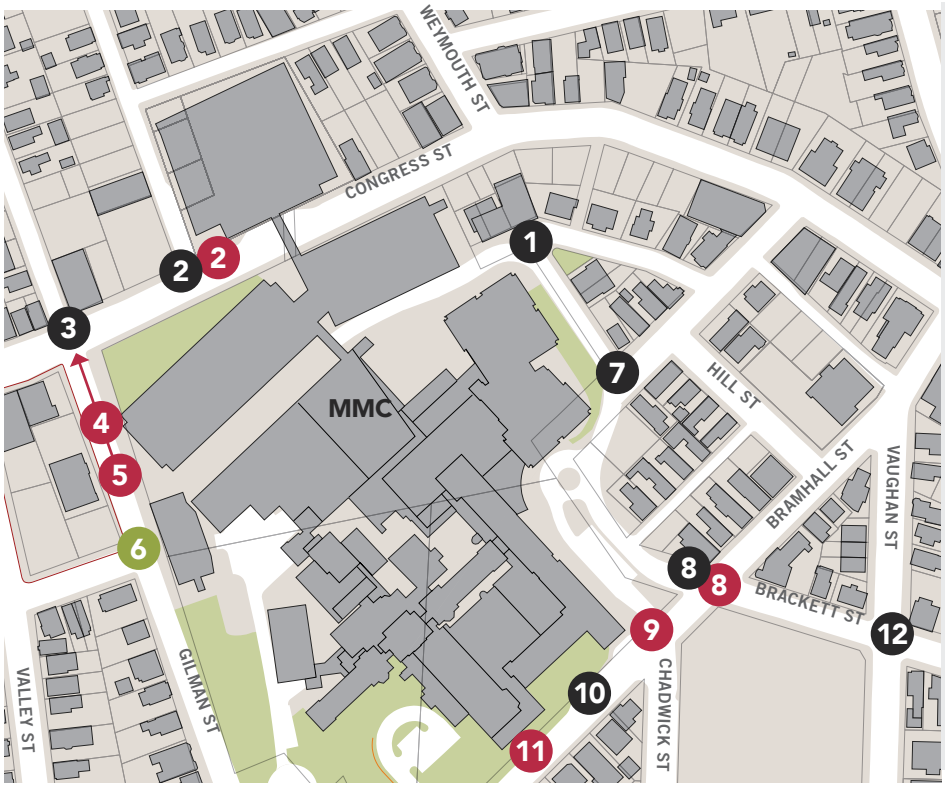
Any development or redevelopment of sites by MMC will be required to meet the City's stormwater management ordinance requirements and mitigate any increases in discharges to the extent practicable.

Projected Impacts of Proposed Development

A high level assessment of short- and long-term projects identified as part of MMC's Master Facility Plan shows no significant change to the amount of impervious surface or peak rate of run-off at the proposed project sites, as outlined below. A detailed discussion about the impacts of any future development will be part of site plan review.

- Proposed vertical additions to existing East Tower and Visitor Garage will not change the amount of impervious surface.
- Replacement of the Employee Garage with the proposed Congress St Development is not anticipated to increase impervious surfaces. The current design of the project site redevelopment includes an extensive green roof component and proposes

Fig.4.4 Existing Sewer Connection Points



Locations where MMC separated stormwater enters the City combined sewer system

Locations where MMC separated stormwater enters the City storm water system

Locations where MMC separated sanitary sewer enters the City combined sewer system

LOC.	MMC STORM WATER FLOWS	MMC SANITARY FLOWS
1	Runoff from the campus and storm drains constructed by MMC in Wescott St enters a combined sewer manhole at the intersection of Wescott St and Crescent St. The outfall of this system a 12" combined sewer that drains in a westerly direction along Crescent St, eventually draining to Park Ave via sewers in Ellsworth St, Congress St and Weymouth St.	N/A.
2 2	Separated runoff from the MMC parking garage enters the municipal combined sewer at the intersection of Congress St and Forest St. The sewer outlet from this manhole is an 18" reinforced concrete pipe that drains north in Forest St to Park Ave.	Sanitary sewer outfalls from the MMC parking garages enter the municipal combined sewer at the intersection of Congress and Forest St. The sewer outlet from this manhole is an 18" reinforced concrete pipe that drains north in Forest St to Park Ave. Areas tributary to this system include the Emergency Department, Women and Infants Center and Richards Wing.
3	Runoff from areas of the campus along Congress and Gilman St enter catch basins connected to the City's combined sewer system at the intersection of Gilman and Congress St. From this point the combined sewer drains north in Gilman St to Park Ave. Runoff in the roadway that bypasses the catch basins at the intersection runs west along Congress to St John St.	Sanitary sewer flows from #4 and #5 enter the City combined sewer at this location.

LOC.	MMC STORM WATER FLOWS	MMC SANITARY FLOWS
4	N/A.	The sanitary sewer serving the LL Bean Building, Annex B / Maine General Bldg, and the Engineering Services Building enters the City's 12" concrete sewer in Gilman St. From this point the sewer drains north in Gilman St to Congress St (#3) and continues to Park Ave.
5	N/A.	The sewer service from the Central Utility Building enters the 12" concrete City sewer in Gilman St, a short distance above Location 4.
6	Runoff at the intersection of Gilman St and A St at the upstream end of a separated storm drainage system constructed by the City of Portland in 2001 as part of the St John St sewer separation project. The storm drain was extended along A St, from its intersection with St John St to a drain manhole in Gilman St opposite the MMC Central Utility Plant. This storm drain was extended to the hospital property specifically for the purpose of providing a point of connection for separated stormwater runoff from the hospital. In 2005 MMC constructed drainage on campus to collect runoff from areas of the site including the existing emergency room parking area, LL. Bean Wing, and service areas abutting the Central Utility Plant to the A St storm drain. This project also extended the separated storm drain in Gilman St to the south, separating runoff in Gilman St and the Dana Center from the City's combined sewers.	N/A.
7	Runoff at the intersection of Ellsworth St and Wescott St. Separated storm drains constructed by MMC in 2005 connect to a combined sewer system manholes in Ellsworth St. The combined sewer drains in an east in Ellsworth St towards to Congress St.	N/A.
8 8	Separated storm drainage from the MMC parking lot enters the combined sewer in Charles St at its intersection with Bramhall St.	Sanitary sewer manhole in the intersection of Bramhall and Brackett Sts where sewer services from Pavilions A and C connect to the City sewer. The outfall of the manhole at this location is a 15" sewer that drains to the east in Bramhall St.
9	Runoff from small areas of the site along Bramhall St enters the combined sewer system at Location 8.	Sewer service from the south end of Pavilion A enters a City sewer manhole at the intersection of Bramhall and Chadwick St. From this location, the sewer continues east to Location 8.
10	Small areas along Bramhall St enter catch basins in the city right-of-way	N/A.
11	N/A.	Sewer manhole in Bramhall St where a sewer service from the Dana Center enters the City sewer in Bramhall St. From this location, the sewer continues east to Location 9.
12	Runoff at the intersection of Brackett St and Vaughan St where separated MMC storm drains in the Brackett St parking lot connects to the combined sewer draining southeast in Bracket St.	N/A.

removals of existing impervious area. The net impact of this design is expected to result in no increase in the peak rates of runoff from the site. It is expected that the primary post-development stormwater connection will be to the Forest St combined sewer at the intersection of Congress St and Forest Sts..

- 222 St John St is served by a separated stormwater drainage system that travels west under the railroad tracks and past the Cumberland County jail site and Fore River Parkway to discharge to the Fore River. The proposed new parking structure on this property is not anticipated to significantly change the amount of impervious surface or peak rate of run-off.

SANITARY FLOWS INTO CITY COMBINED SEWERS

Issues in areas of the City's stormwater, sewer drainage, and fire hydrant systems in the vicinity of MMC's campus have been identified by City officials but have not been quantified. MMC understands that the site plan review process for individual projects may include measures that minimize new impacts to the combined sewer system. The MMC campus discharges sanitary flows into the City of Portland's combined sewer system at approximately seven locations, as illustrated in **Fig.4.4 on page 88**. This information is provided to the best of MMC's knowledge after researching its own records and those of the City of Portland. Due to the age of the public sewer system and MMC's buildings, record plans of the existing sewer systems may be incomplete and additional currently unidentified connections may exist. We are unaware of capacity issues in the City's existing system at the connection points from the campus to the City sewer system located in the public right of way. Drainage studies completed for the 2004 Bramhall campus expansion and approved through the site plan process did not identify deficiencies at the connection points to the City system.

MMC anticipates increased use of city combined sewers for sanitary flows associated with its short- and long-term projects. The increased sewer flow loads and exact connection locations will be determined during the Site Plan review process as required by the City of Portland:

- The East Tower expansion is anticipated to increase sanitary flows in the combined sewer located at the intersection of Congress and Forest Sts, which connects to the Forest St combined sewer.
- The Congress St Development is anticipated to increase sanitary flows in the combined sewer located at the intersection of Congress and Forest Sts, which connects to the Forest St combined sewer. The Congress St Development may also include a sewer connection that increases sanitary flows into the combined sewer located at the intersection of Congress and Gilman Sts that ultimately discharges to the Gilman St combined sewer.

ENERGY CONSERVATION

CURRENT CONSUMPTION

Because MMC, of necessity, is such a large consumer of energy, it utilizes the services of an energy procurement broker, Competitive Energy Services, to provide it with strategic energy consulting services and management of energy procurement activities for electricity, natural gas, and oil in order to maximize efficiency and to ensure MMC achieves the most competitive pricing. MMC purchases its energy through a competitive bid-based energy procurement process.

In calendar year 2016, MMC consumed:

- 411 gallons of oil,
- 1,633,686 CCF of natural gas, and,
- 35,375,765 Kw-Hr of electricity.

CONSERVATION EFFORTS

Central Utility Plant (2008)

In 2008, MMC's 22 Bramhall St campus went live with its upgraded and centralized utility plant. The Central Utility Plant (CUP) was designed to provide better management of and more efficient results for energy consumption by the hospital. The plant produces steam, chilled water, and back-up power for the Bramhall campus. The peak tonnage of the plant is currently close to 2,400 tons per hour of chilled water.

Since 2008, MMC has experienced dramatic energy consumption decreases directly resulting from the state of the art utility plant. The CUP controls both electrical and gas utilization, and heating and chilling functionality, and will service the short-term modernization project under development at the Bramhall campus, with a minor upgrade to the existing systems. The CUP contains state-of-the-art dual natural gas /oil system allowing for switching between oil and gas depending upon price and availability.

Infrastructure Improvements

In addition to its conservation methods in the electric, oil and gas arena, MMC has also undertaken investment in infrastructure upgrades at its 22 Bramhall Campus to reduce building air changes and temperature set-points allowing for the monitoring and control of humidity and temperature during high demand use times. Upgrades in sequencing and timing of set points have achieved efficiencies of HVAC run times and energy demand.

Further, MMC has been investing in lighting and plumbing features that allow for reduced energy consumption. LED lights have been installed in its garages and in the public corridor within the Bean Building. Low flow plumbing fixtures with aerators are installed when replacements or renovations are required. These fixtures lower overall water consumption at the hospital.

Future MMC projects are expected to integrate with ongoing major utility initiatives impacting the area including Unitil's Natural Gas SURE project and the City's LED street light conversion program.

Table 5.1 Projected Electricity Demand

		Projected Net Energy Demand	Potential On-Site Energy Production (Rooftop PV)
East Tower Vertical Expansion	Utilizing new systems for efficiency	300 KW	--
Visitor Garage Vertical Expansion	Utilizing existing systems	350 KW	150 KW
Congress Street Development	Net demand with the deletion of the existing garage currently on site	1,700 KW	
St John St Garage	Stand-alone project not connected to core campus primary metered system	230 KW	500 KW
Central Utility Plant Expansion	Additional summer cooling demand	1,800 KW	
TOTAL ENERGY DEMAND		4,380 KW	650 KW

Green Buildings

The historic Maine General Hospital incorporated natural light and ventilation as an important part of the healing process. To continue this legacy, new campus buildings will take advantage of natural light, heat, and ventilation to improve building performance while also contributing positively to the healing qualities of patient and family spaces. Specific designs will aim to lower Energy Use Intensity (EUI) beyond the traditional code minimum baseline. Use of industry standards such as LEED will serve as a model for evaluating the sustainability of future MMC buildings.

PROJECTED ENERGY DEMANDS

Each project in the Master Facility Plan has specific needs and vary in their impacts. The proposed projects combined are anticipated to generate 5,400 KW of additional electricity demand (see **Table 5.1** above for details). MMC is currently working with Central Maine Power to identify capacity for the projected electricity loads.

The steam loads are met by MMC's CUP and will not impact city infrastructure. The CUP has the capacity needed to service MMC's short-term growth needs. The gas infrastructure has capacity to handle any increases to the current steam load.

OPERATIONAL SUSTAINABILITY

HAZARDOUS WASTE MANAGEMENT

MMC has a Hazardous Materials and Waste Plan supported by policies for the handling and disposal of hazardous waste, universal hazardous waste and biomedical waste.

Biomedical and Hazardous Waste

Biomedical waste sharps, biomedical waste, pathological waste (tissues, etc), and hazardous pharmaceutical and other chemical waste are collected by MMC Environmental Services or contractors, and stored at secure locations across campus prior to pick up, transfer, and ultimate disposal by contractors. DEA controlled substances are wasted at the point of generation (e.g. medication rooms), solidified, and collected by MMC Environmental Services at a secure holding room for pick-up, transfer and ultimate disposal by contracted vendor. All hazardous materials leave the campus through the loading docks (see **Fig.4.2**).

MMC's short-term projects are not expected to create significant increases waste volumes. No changes are currently planned to hazardous materials storage and transfer locations on campus.

Grease Discharge

MMC will be installing a grease trap system capable of separating grease from waste water as part of its short-term projects.

Soiled Linen

MMC has its own Linen Services department that is responsible for overseeing the processing of laundry for all of MMC and Maine Medical Partners (MPP) locations. The plant is located in Westbrook, and the linen is transported between these locations by MMC's Materials Management team.

SUSTAINABLE OPERATIONS

MMC expects to continue, and where possible, expand on the following sustainable operation strategies as part of its long-term plan.

Campus Recycling

MMC separates paper and cardboard out of the waste stream through on-campus recycling. MMC Kitchen and Café provide recycling for can and bottle returnables, and separate compos items from the waste stream. MMC has also switched to reusable needle boxes to reduce plastic waste. Expired medical equipment and devices are reprocessed by contractors.

Landscaping

MMC contracts with an outside landscaping company. In renewing its contract, MMC is requiring the use of organic pesticides and fertilizers for all planting and green space on campus.

Snow Removal

MMC contracts with an outside snow removal company. The environment requires the use of melting agents, but MMC has taken steps to minimize its use by installing heated sidewalks at the front entrance and South lot entrance as well as the Emergency Department entrance. MMC will continue to use replace calcium chloride instead of salt, when possible, to reduce environmental impact of snow removal.

NOISE IMPACT

MMC's Master Facility Plan aims to minimize noise and disturbance both for the benefit of its neighbors and its patients. Key to this is relocating the main campus entrance to Congress St. This will limit traffic and associated noise from moving up onto the hill. The relocation of the helipad will maintain current flight paths, which were designed to minimize neighborhood noise impacts by following the recommended approach to the hospital over the Congress St corridor as opposed to over dense residential areas. MMC will document the noise complaints it receives electronically and at its dedicated noise complaint phoneline at 207-662-6699, and review all such complaints with the neighborhood council as they arise.

MITIGATING IMPACT OF HELIPAD OPERATIONS

MMC's helipad is currently located on top of the Employee Garage, which is slated for deconstruction in the short-term per MMC's Master Facility Plan (MFP). The MFP calls for a new helipad to be built on top of the East Tower following its planned vertical expansion (see "Short-Term Projects" on page 44).

MMC is in the process of identifying preferred flight routes for the new helipad, to be approved by the City of Portland, that will minimize noise impact of helicopter flights on surrounding residential areas. Initially, such preferred flight routes shall be proposed to the Federal Aviation Administration (FAA) as shown on the flight map (see **Fig.4.5 on page 95**). At the initiative of either the City or MMC, the map of preferred flight routes may be amended from time to time by agreement between MMC and the City. MMC will notify all flight providers likely to use the Helicopter Landing Pad of such preferred routes, and shall take the following measures to ensure that such preferred routes are utilized whenever weather conditions, safety considerations and the best interests of the patient being transported permit, with the expectation that this will be the usual case.

MMC will instruct all providers which regularly use the Helicopter Landing Pad that pilots must file an exception report with the Air Medical Provider Administration of Lifeflight of Maine or its

Fig.4.5 Proposed Flight Routes for the new MMC Helipad

NOTE: Path #3 is new and will only be used under high wind conditions if required by the Federal Aviation Administration.

successor entity for operations modified for safety considerations or at the direct request of Approach Control at the Portland International Jetport. Logs of these exception reports will be made available to MMC and to the City upon request but no more frequently than annually.

When and if the Portland Jetport has the capacity to maintain and preserve data which specifically identifies flight routes actually taken by aircraft utilizing the Helicopter Landing Pad, the City shall consult such data to review compliance with this paragraph, and MMC, upon request of the City, shall be responsible for the cost of translating this data into usable form but not for the costs of the flight monitoring.

MMC will continue to engage providers of helicopter emergency medical transport who are accredited by the Commission on Accreditation of Medical Transport Systems (CAMTS) or its successor agency (unless special circumstances warrant a non-accredited provider, such as the Air National Guard, US Coast Guard and others), and who operate in compliance with the "Fly Neighborly Guide," third edition (and any subsequent revisions) prepared by the Helicopter Association International.

Helicopter landings on the Helipad shall be used for emergency patient care only, and on the rare occasion for emergency management training by federal or state management agencies or US military or government aircraft.

Compliance with Helistop Overlay Zone Regulations

Because the proposed helipad location is on the roof of an existing structure, the landing pad shall not be required to meet the setback requirements of Section 14-327(3), or the fencing requirements of Section 14-327(4) of the Helistop Overlay Zone.

MMC will continue to honor the following exception to the Helistop Overlay Zone included in the 2005 Conditional Rezoning Agreement (Order 172-04/05):

1. Equipment. In generating any specifications in connection with the negotiation of any contract or agreement with any provider of emergency medical transport by helicopter, MMC will specify that helicopters utilizing the Helicopter Landing Pad (with the exception of U.S. military or government aircraft) are relatively new turbine powered aircraft meeting requirements under ICAO Annex 16 Chapter 8 for in-flight noise levels and complying with FAA airworthiness standards, 14 CFR part 36.11 and 14 CPR 21 Sub-part D, or any amended or successor requirements or standards.

MMC shall conduct a noise study as part of the site plan process if any changes to the helipad are being proposed, and work to mitigate any potential noise impacts.

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CHAPTER FIVE

DESIGN

Maine Medical Center aims to continue its tradition of design excellence with its new campus projects. Future buildings will be designed to improve care delivery while also providing a new gateway to Portland on Congress St.

DESIGN DRIVERS

The campus transformation of Maine Medical Center (MMC) draws its inspiration from its site, history, programmatic needs and most importantly the desire to create a sense of place. Specifically, the Hospital will reflect its location within Portland and of Maine. Within this framework, the Hospital aims to preserve the historic character of the existing campus yet provide the opportunity for new identities to develop that represent the modern delivery of healthcare and the future of MMC.

Fig.5.1 MMC Campus: Key Design Drivers

COMMUNITY

Positive Patient, Family & Community Experience

ADAPTABILITY

Spatial and Programmatic Flexibility

HEALING

Spaces that Promote Healing

A NEW GATEWAY ON CONGRESS STREET

MMC key design drivers and interventions envisioned for the MMC balance the clinical needs of the hospital with the campus' place within the City of Portland. Included is a primary effort to improve the built environment of MMC's campus relationship with its urban context. This is achieved by focusing the new entrance towards Congress St to create an improved presence on the urban edge of the campus. This key intervention improves the visitor and patient experience from arrival to the City all the way to entering MMC buildings themselves. Providing a new entry on Congress St connects a campus entry directly to the existing and expanded visitor parking garage, simplifying the drop-off and parking sequence. This move creates a clear arrival sequence from drop-off, to parking, to movement through the MMC campus.

AN EFFICIENT, WELL-ORGANIZED CAMPUS

The inclusion of a new entry coupled with clear primary circulation along the ground level connects major interior programmatic functions with the site, further reinforcing the wayfinding and activating the building interior and exterior. Engaging with Congress St with a sensitivity to human scale and experience will be the focus of the transition between exterior to interior including transitions from urban to natural environments. This approach extends to vertical connections, both physical and visual, to mitigate the large grade changes that exist on campus and with the surrounding sites. These interventions will provide a positive patient

Fig.5.2 Artists' rendering of new Congress Street entrance, part of the proposed Congress Street Development (Note: Façade design is subject to change during detailed design.)

and visitor experience as well as improve the surrounding neighborhood.

DESIGN THAT SUPPORTS HEALING

The creation of healing environments is an essential element to the design within the IOZ boundary. This will be achieved through the incorporation of access to and views of nature and natural daylight, which are proven to improve positive patient outcomes within a healthcare environment. Proper location and use of glass and transparency provides connections to the exterior to improve patient, visitor and staff experience but also to further reinforce wayfinding, and activate and energize the streetscape.

A SUSTAINABLE AND RESILIENT CAMPUS

Hospitals are vital partners within the communities they serve. Due to this relationship, design modifications will further improve MMC's status as a resilient campus that provides both a responsive exterior environment and healing indoor environment. Buildings take advantage of natural light and air, coupled with the use highly efficient mechanical systems. These drivers will reduce the energy necessary to operate the buildings, further increasing resilience in the face of unanticipated events.

CONTEXTUAL LANDSCAPE FRAMEWORK

The long-term landscape framework for the MMC campus draws its inspiration from the landscape typologies of coastal Maine reconciled to the site's rich historical and urban context. The campus commands a high promontory adjacent to the historic Western Promenade, and extends down the hill to Portland's bustling main street, Congress. The landscape design will respond to this context with elements that provide transitions between the historic and pastoral to contemporary and urban.

The landscape design at the southern end of the campus is conceived as a visual extension of the Western Promenade's historic landscape design, while the new entrance on Congress St is thought to be a contemporary expression aligned with modern healthcare design. The new entrance on Congress St is contemplated to accommodate ADA-compliant access from the street along with stairs and a vehicular drop-off. The streetscape improvements along Congress St itself will rely on the existing City standards, providing continuity along the length of the street and completing the transition to the urban realm.

The intermediate landscape spaces may be located on the campus to provide the transition between these two primary expressions, with landscapes and outdoor spaces that include courtyards, viewing gardens and green roofs.

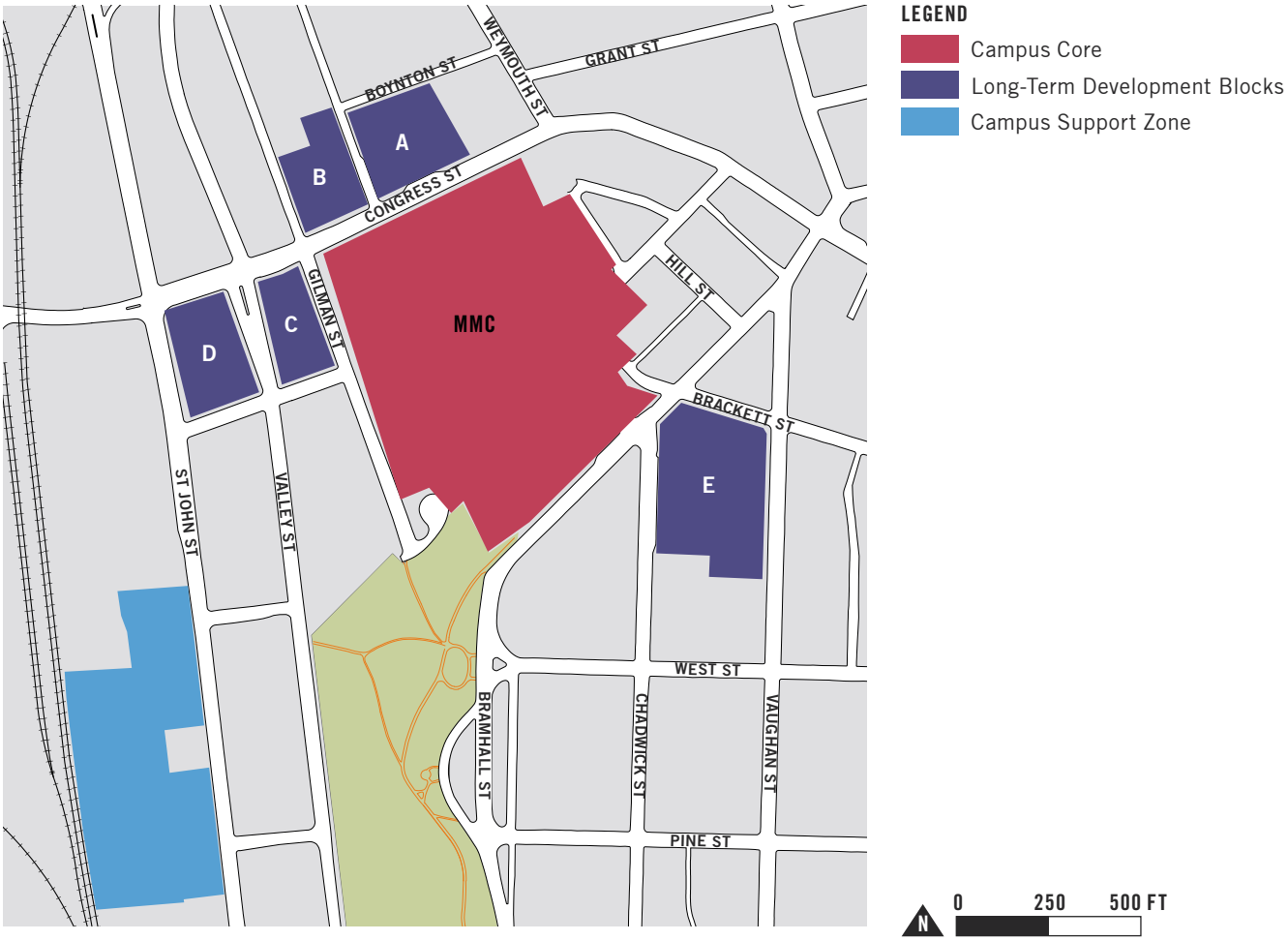
NEIGHBORHOOD INTEGRATION

Like many urban medical centers established in the 19th century, neighborhoods have grown up around MMC while the Medical Center has continued to grow. The historically synergistic relationship between MMC and surrounding neighborhoods, commercial corridors and parks is described in detail under "History" on page 10). The growth of MMC in the automobile era brought forward challenges related to traffic and parking that are common to medical centers located in urban settings. These issues continue to be at the forefront of MMC's ongoing dialogue with its neighbors and the City, and are addressed in the "Transportation Plan" section of this document (see page 53). Equally important to the relationship between MMC and its neighbors, however, is the integration of campus buildings, open spaces, and parking lots into the physical fabric of the neighborhoods through careful consideration of location, height / massing, use, and overall design.

As outlined in the introduction to this chapter, improving the interface between campus and community was an objective of the MMC Master Facility Plan. The new hospital building proposed in the short-term will transform MMC's frontage on Congress St, which was previously defined by parking structures only.

During the IDP process, the City of Portland encouraged MMC to look beyond its limited zoning boundary to identify areas for potential long-term growth. MMC has worked with abutting land owners

Fig.5.3 MMC IOZ Development Zones



and the City to identify key parcels contiguous with its core campus that can accommodate potential expansion of healthcare-related or supporting uses in the long-term (see **Fig.5.3**).

A majority of these are under-developed parcels on either side of Congress St—an area envisioned for transformation into a new gateway node in the City's Comprehensive Plan (see **Fig.1.8 on page 27).** Nearby but non-contiguous parcels along St John St were identified to accommodate additional supporting uses, and in particular, the potential for a future employee parking deck.

The following sections summarize MMC's methodology for identifying an appropriate height envelope for these future development zones that will ensure appropriate integration with and transition into adjoining neighborhoods.

DETERMINING MAXIMUM HEIGHTS: OVERVIEW OF METHODOLOGY

MMC has used a multi-part methodology to determine the appropriate height profile for potential future development within the IOZ boundary:

1. Project Definition. The Master Facility Plan has identified heights for short- and long-term projects that reflect MMC's campus modernization needs. These approximate heights, which are expected to be refined through detailed design, were taken as a starting point to determine maximum heights for the proposed building sites.

2. Urban Design Analysis. Heights for zones that are not identified for specific projects were determined using context-sensitive urban design best practices from urban hospital campuses and health districts around the US. These included:

    » Enabling larger and taller buildings within the campus core while providing height transitions to the scale of residential and historic neighborhoods along campus edges (see "Transitional Zones" **page 110**);

    » Testing future development blocks for a variety of uses appropriate for mixed-use health districts to identify heights that accommodate desired uses; and,

    » Using computer-generated shadow analysis of existing versus proposed height profiles to minimize potential shadow impacts of future development on adjoining public spaces and properties (see "Minimizing shadow impacts" **page 122** for details).

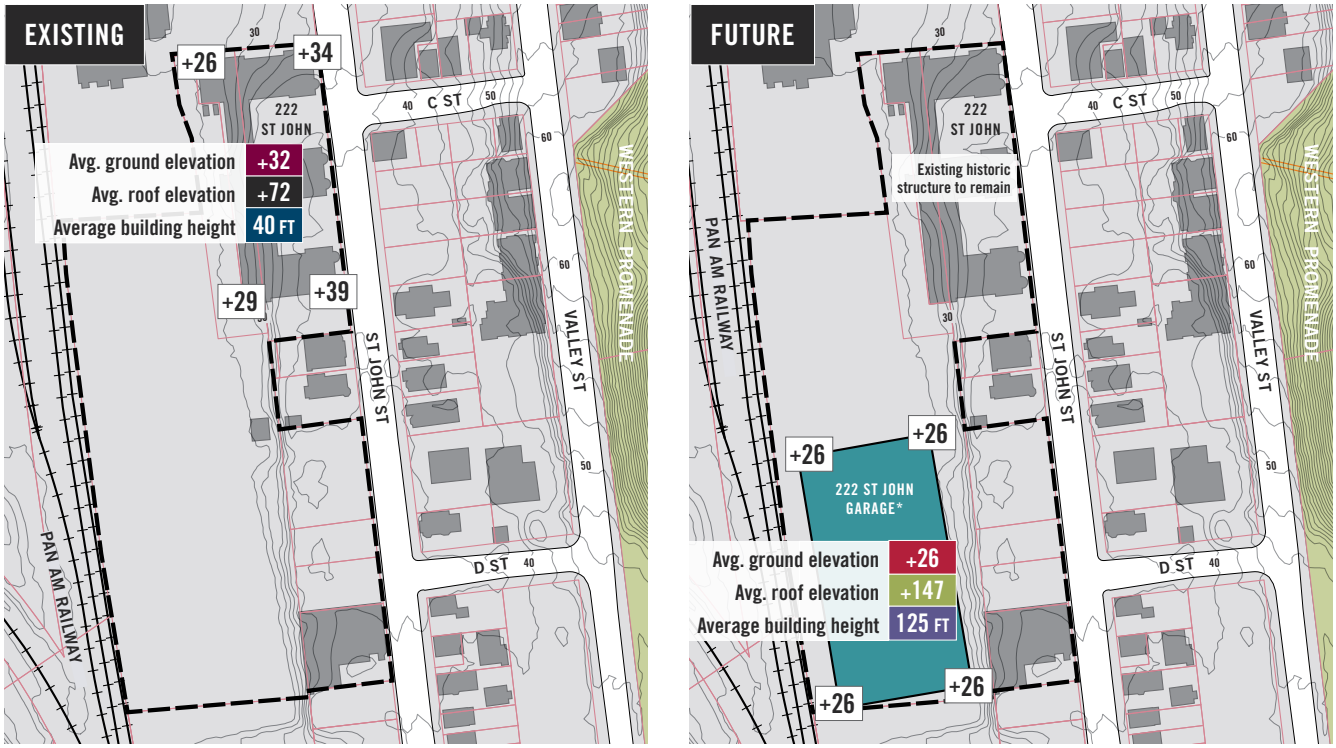
3. Slope Analysis. A 3D terrain model was used to optimize maximum heights based on the average grade of each building site and/or development zone within the IOZ.

4. Visioning. MMC has worked with the City of Portland planning staff to identify maximum and minimum heights and number of stories for new development along Congress St that can provide "gateway" experience that is called for in the City's Comprehensive Plan. The target heights have been identified as 75 feet (6 stories) maximum, and 3 stories minimum along Congress Street. (Note: Actual heights listed vary depending on the average slope within each block).

The resulting future height profiles, which are the basis of the maximum heights requested in the Regulatory Framework, are illustrated in **Fig.5.4** through **Fig.5.8,** along with the existing height profiles for ease of comparison.

The regulatory framework also identifies the maximum number of stories allowed within each

Fig.5.4 Existing and proposed future heights for long-term development parcels along St John Street

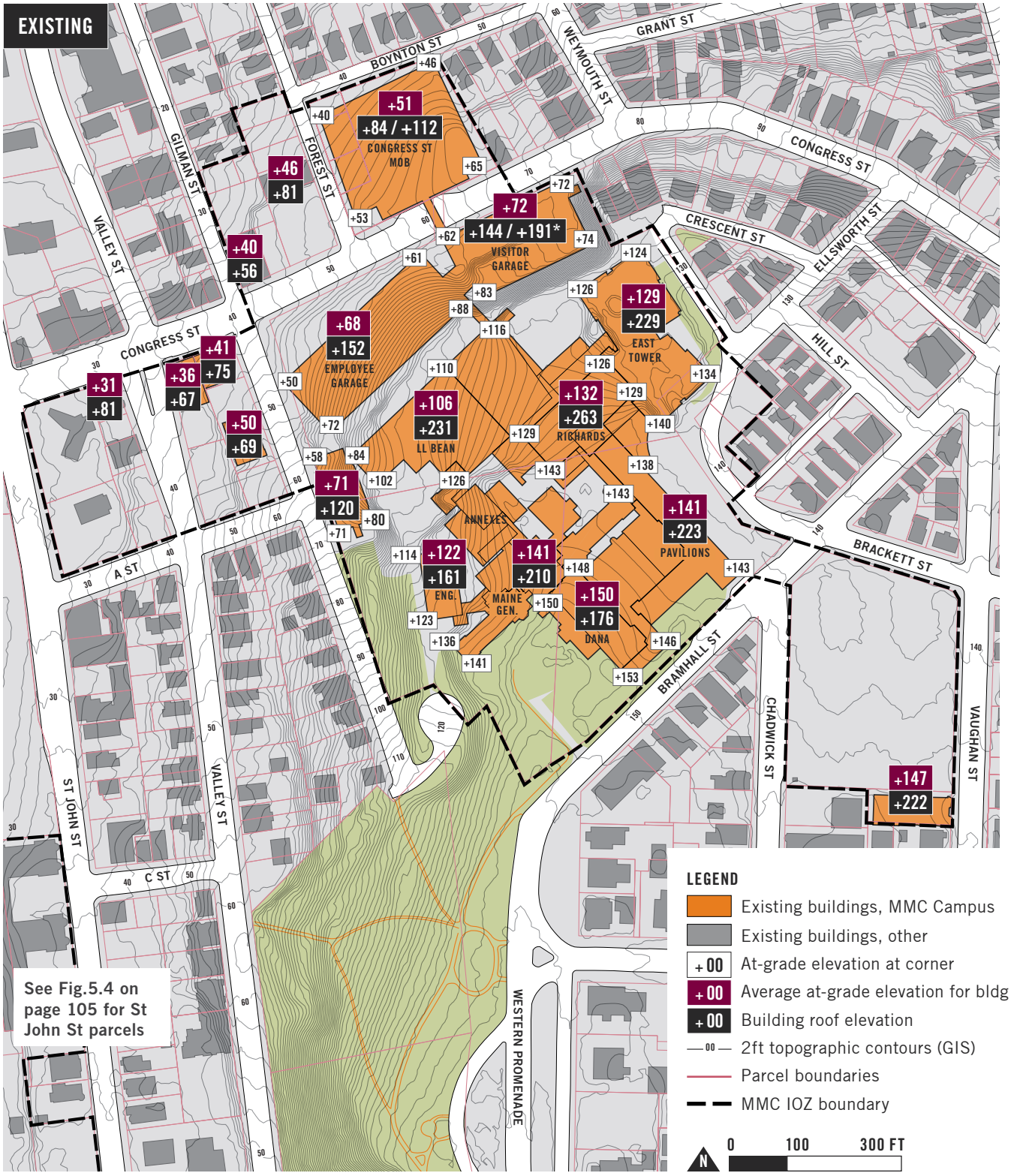


*** NOTE: The exact location, footprint and access to St John Garage to be determined during detailed design.**

height zone, which are based on a minimum floor-to-floor height of 10ft for allowed uses. Floor heights of actual buildings will vary widely based on program use, and can exceed 20ft for intensive healthcare uses.

A 3D rendering of the maximum height envelopes requested in the Regulatory Framework can be seen in **Fig.5.13 on page 114.**

Fig.5.5 Existing Structures within IOZ: At-Grade and Rooftop Elevations



* Height of existing elevator tower on the Visitor Garage, excluding mechanical room on top of tower.

Fig.5.6 MMC Long-Term Development Vision: At-Grade and Rooftop Elevations

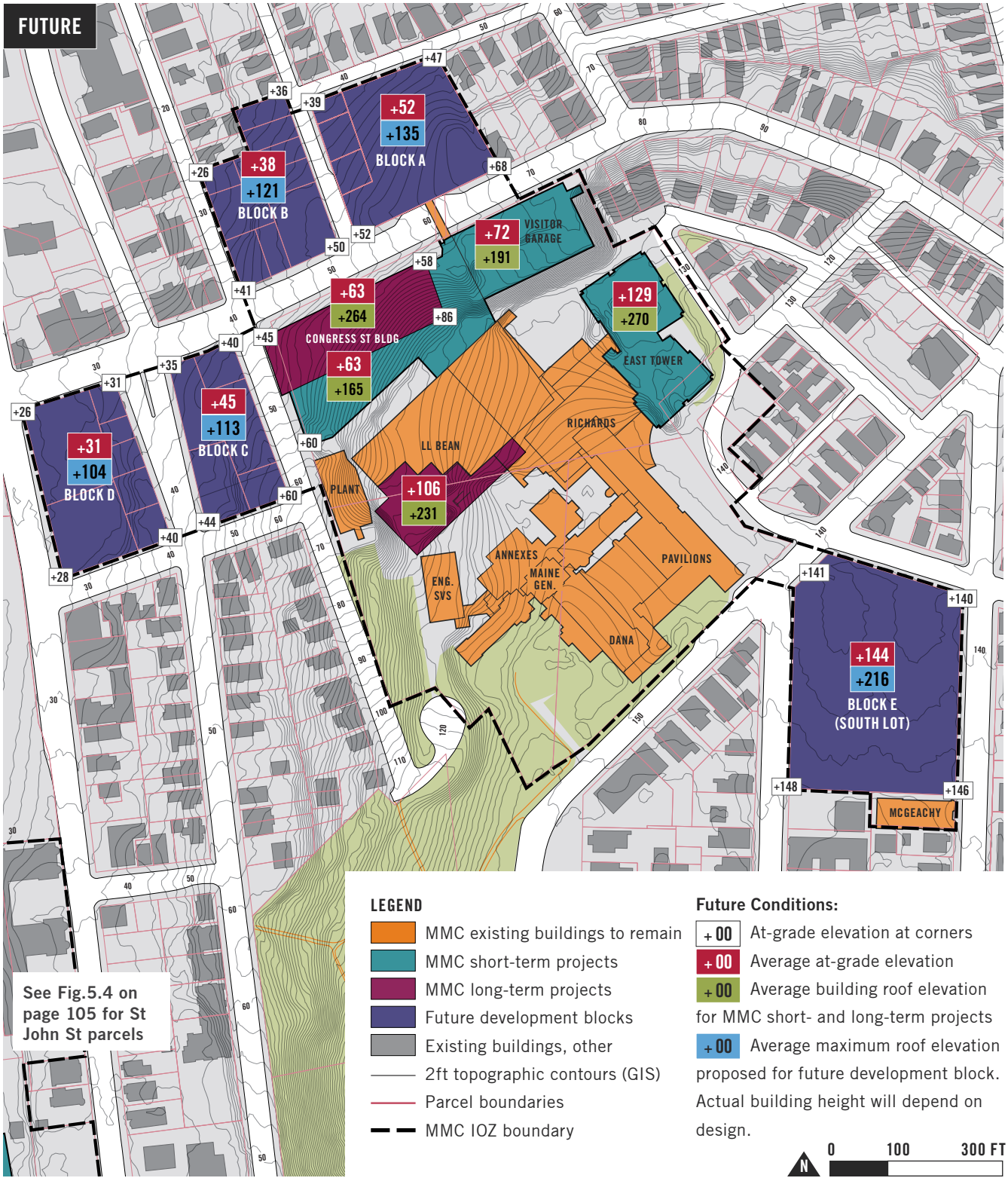
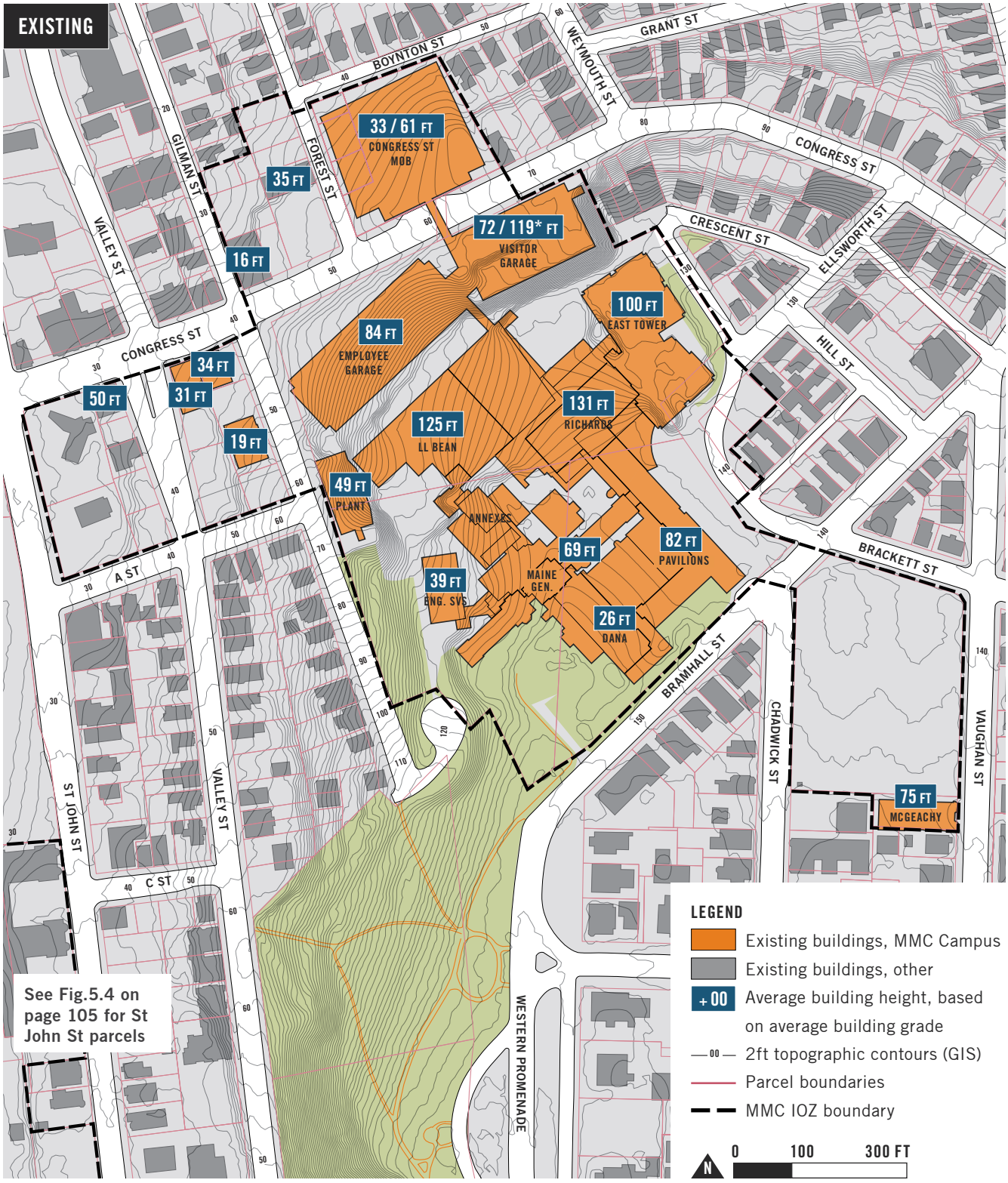
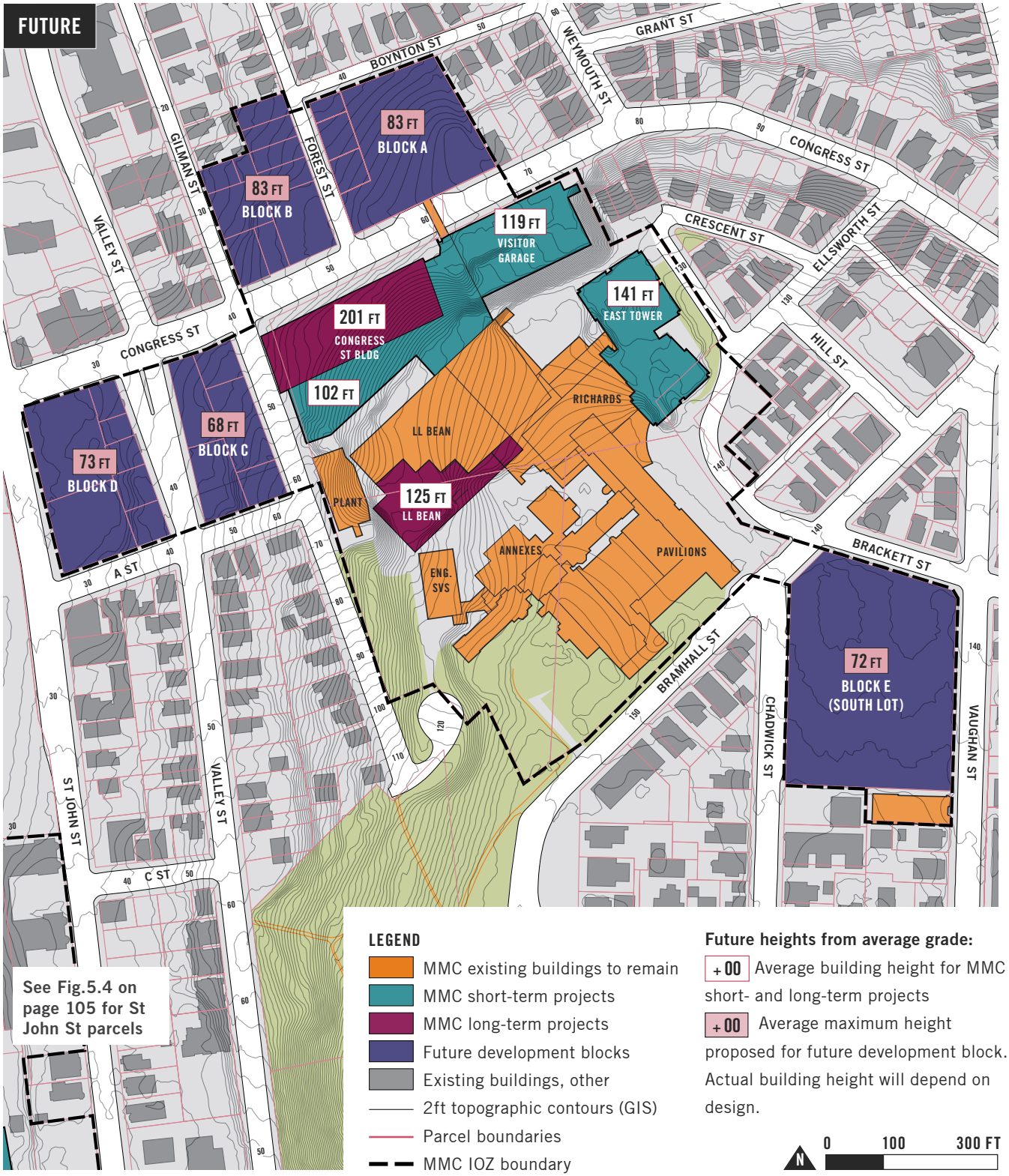


Fig.5.7 Existing Structures within IOZ: Average Building Heights at Average Grade



* Height of existing elevator tower on the Visitor Garage, excluding mechanical room on top of tower.

Fig.5.8 MMC Short- and Long-Term Projects: Average Building Heights at Average Grade



TRANSITIONAL ZONES

In accordance with urban design best practices, MMC has identified "transitional zones" along the edges of the IOZ boundary that abut residential zones where the height of new development can step down to better integrate with the character of local residential streets and neighborhoods. A diagram illustrating this concept is shown in **Fig.5.9** below**.** The location of specific transitional zones within the IOZ is illustrated in **Fig.5.10** on the following page.

Transition zones are designed to create a consistent scale of development on either side of a given public street. To achieve this goal, most transition zones dictate a height limit matching the maximum height allowed by the zone across the street. The specific depth of the transition zone where the height limit applies is typically determined by using the "transitional height plane" test whereby a 45˚ angle line is extended inward from the maximum height line. This test ensures that taller structures on the inner side of the parcel do not negatively impact views from the public street whose character is being preserved.

MMC has used this widely accepted practice to identify and set a 50-ft depth to transition zones illustrated in **Fig.5.10** and required as part of the Regulatory Framework. Diagrams illustrating the testing of key MMC IOZ transitional zones with the "transitional height plane" are included on the following pages.

Fig.5.9 Transition zones: concept diagram

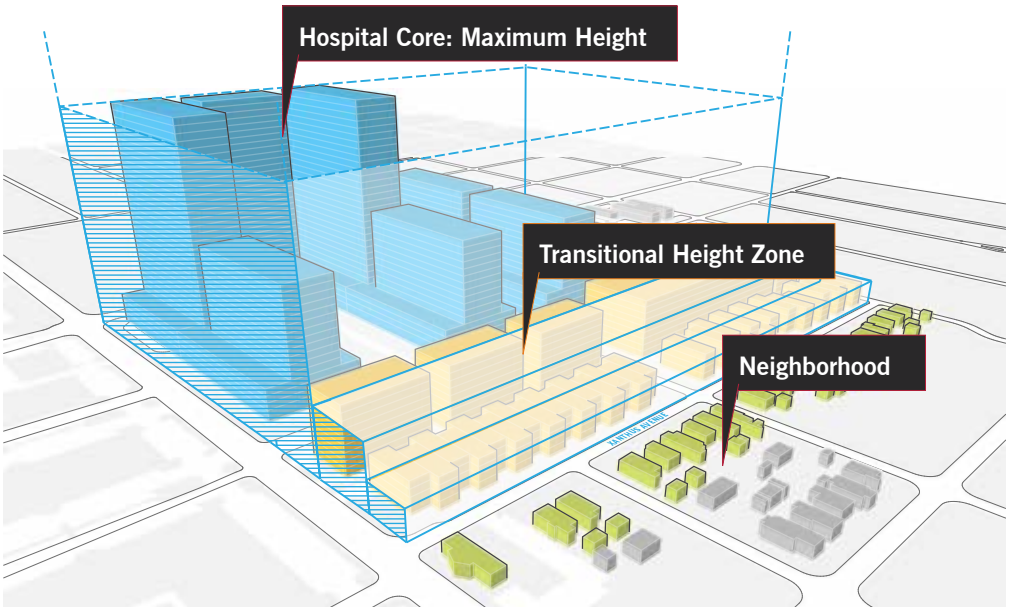


Fig.5.10 Map of proposed transitional zones within MMC IOZ

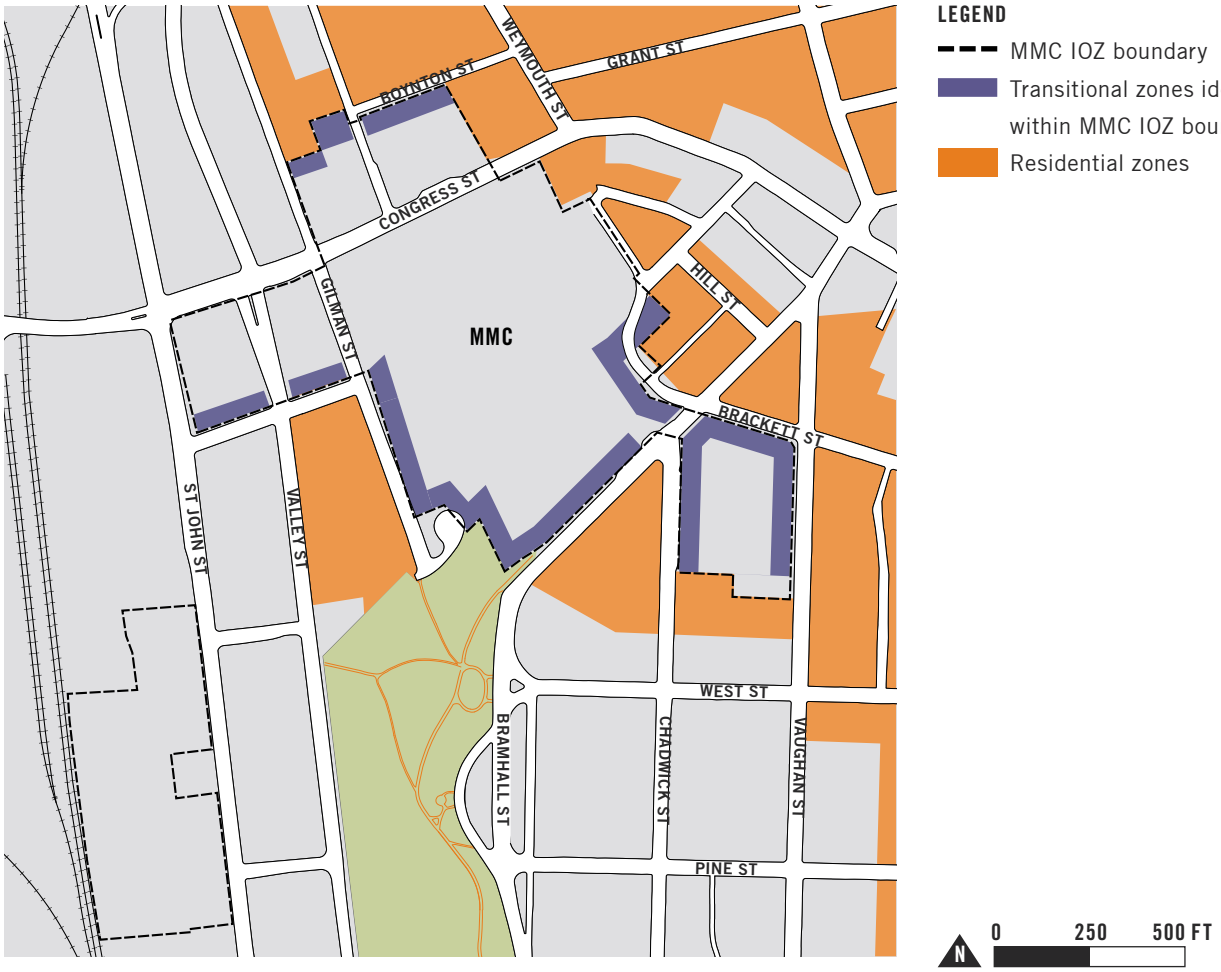
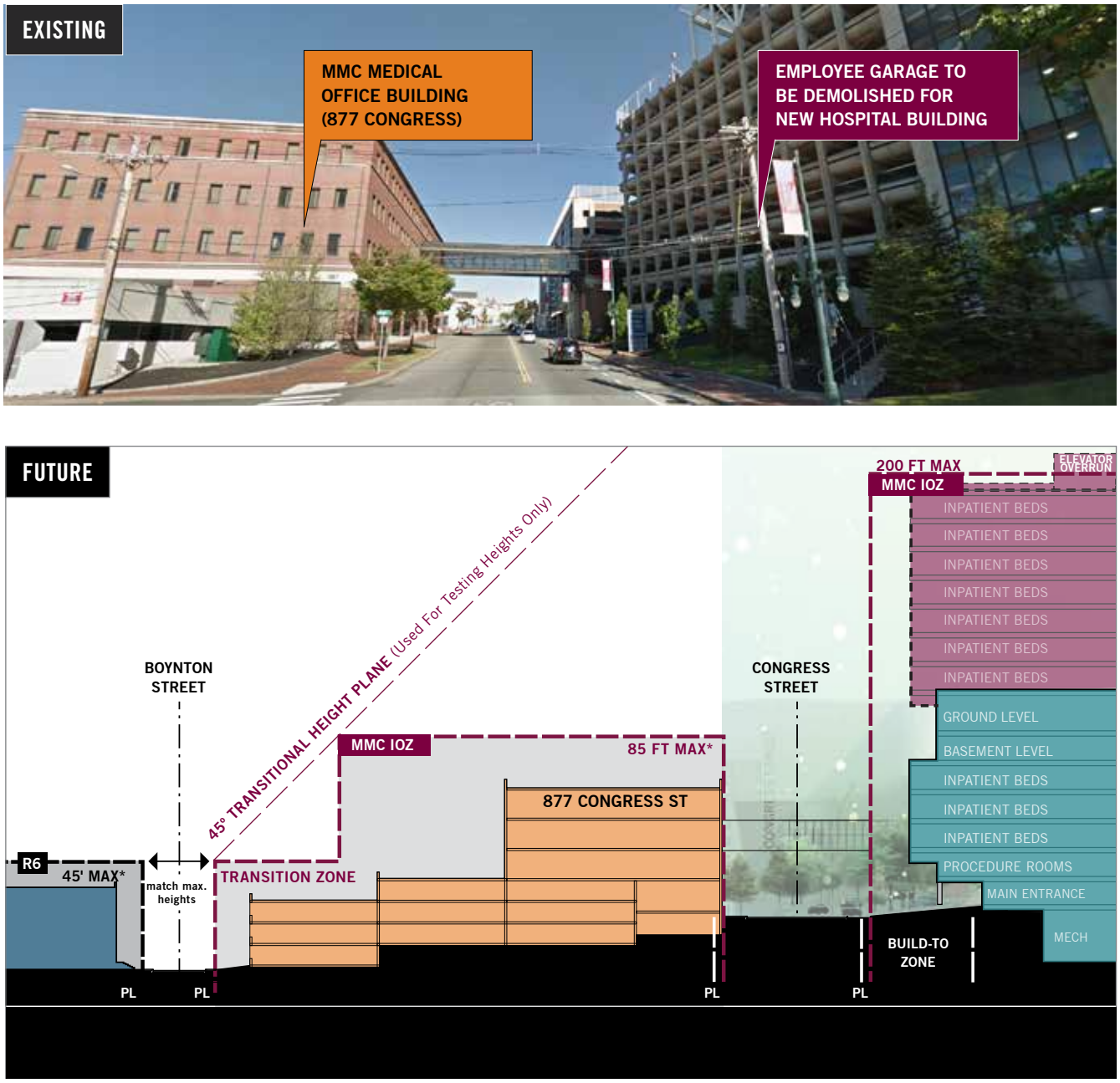
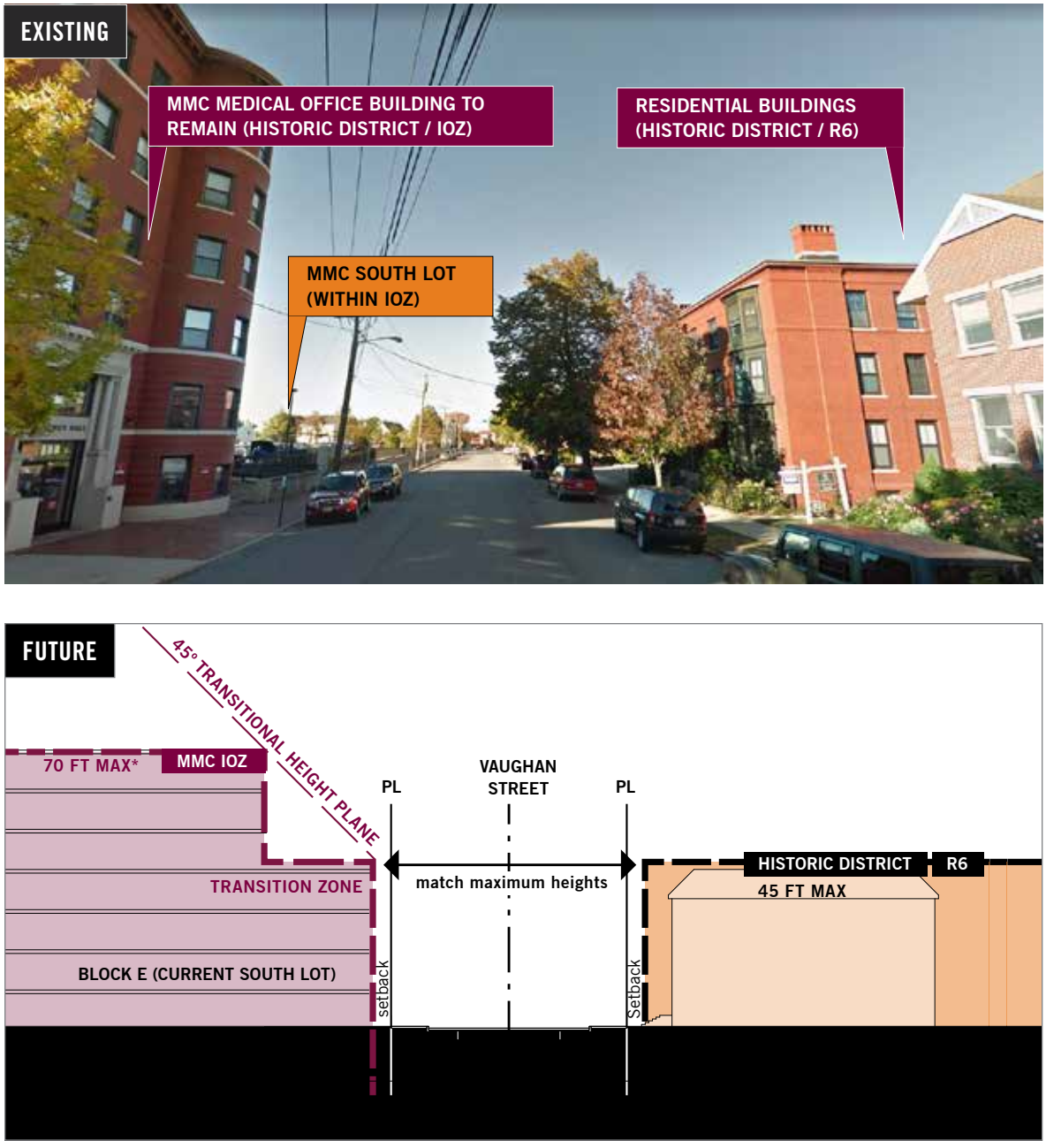


Fig.5.11 Cross-section illustrating height transition from MMC IOZ to Boynton St residential zone north of Congress St



* Average maximum height needed to provide a 75-ft tall structure along Congress St given changes in topography across this site. See "Determining Maximum Heights" on page 104 for details on methodology.

Fig.5.12 Cross-section illustrating height transition from future development Block E (South Lot) within the MMC IOZ to the West End Historic District on Vaughan Street

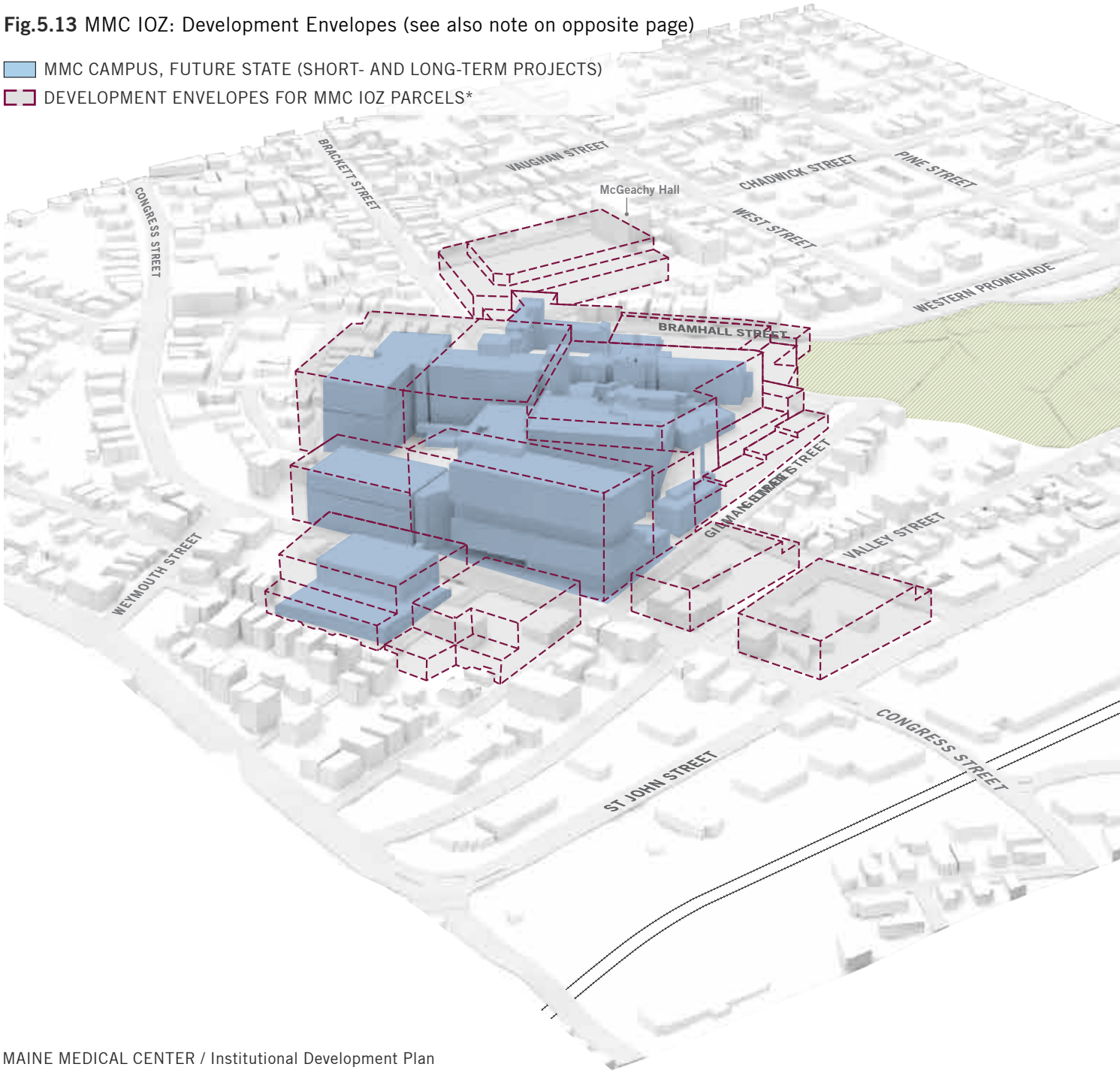


* Average maximum height needed to provide a 75-ft tall structure along Congress St given changes in topography across this site. See "Determining Maximum Heights" on page 104 for details on methodology.

LONG-TERM DEVELOPMENT ENVELOPES

While MMC's Master Facility Plan does not identify specific projects other than those listed on the previous pages (see Fig.2.7 on page 42), all parcels included within MMC's IOZ boundary are considered to be potential zones for redevelopment that supports the effective delivery of healthcare services by MMC to our community in the long-term. Towards this end, MMC has identified context-appropriate uses (see **Table 5.1** at right), development envelopes and design criteria for all IOZ parcels.

Fig.5.13 MMC IOZ: Development Envelopes (see also note on opposite page)



NOTE: **Fig.5.13** illustrates the maximum height envelopes listed in the MMC IOZ Regulatory Framework. Per the IOZ, the development envelopes only apply to properties that MMC holds right, title, or interest at the time of development. All future development within the IOZ boundary is subject to review for compliance with guidelines and requirements included in MMC's IDP, Regulatory Framework and City of Portland site plan review requirements.

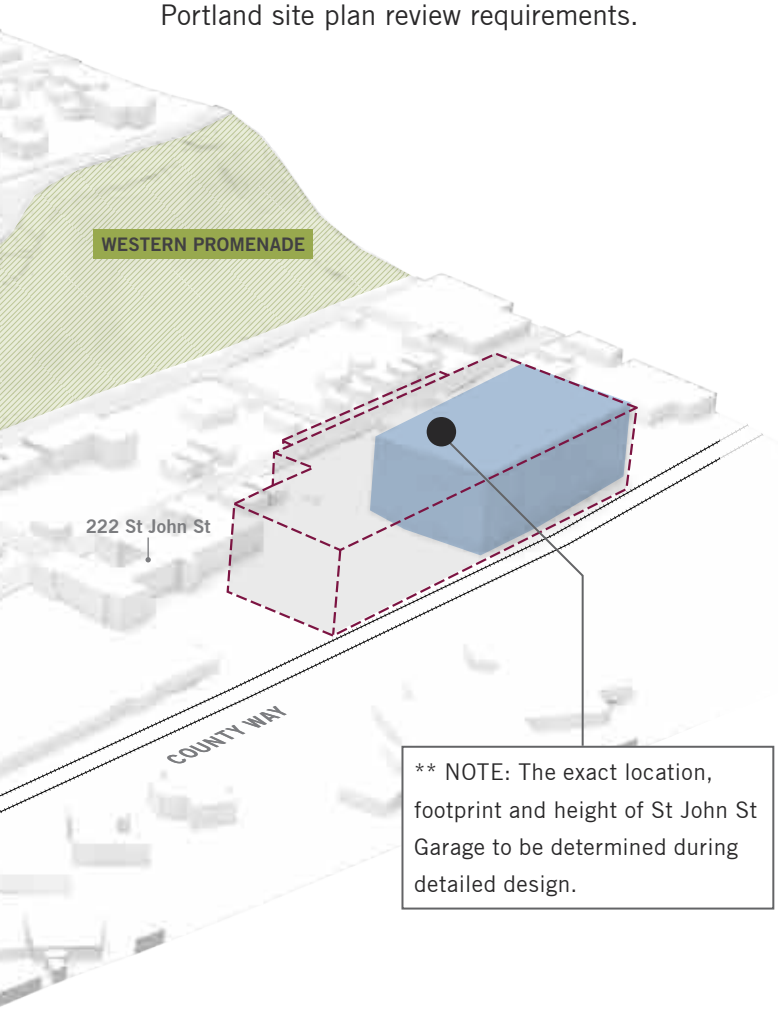


Table 5.1 MMC Potential Future Uses

MMC may locate the following uses within its IOZ boundary:

In addition to the uses permitted in the underlying zone, the following uses are permitted as a matter of right:

Healthcare facilities including but not limited to the following ancillary and/or supporting uses:

- **Hospital**
- **Medical Office / Clinic**
- **Laboratory Center / Services**
- **Research and Development (R&D) Laboratory or Facility**
- **Educational Facility / Conference Center**
- **Administrative / Business Office**
- **Accessory Service or Trade Uses**
- **Guest House**
- **Multi-family housing for healthcare staff and students**
- **Rehab / Skilled Nursing Facility**
- **Retail Facility**
- **Restaurant / Café**
- **Employee Service Amenities**
- **Day Care Center**
- **Fitness Center or Gymnasium**
- **Parking Lot**
- **Parking Garage**
- **Bicycle Storage**
- **Heliport**
- **Antenna Station**
- **Outdoor use areas, such as green areas, parks, gardens, art installations, and other active and passive non-commercial recreation spaces**

DESIGN GUIDELINES

MMC has collaborated with the City of Portland planning staff and sought input from its neighbors to create context-specific "Design Guidelines" for future development within the IOZ boundary. These Guidelines, which are outlined below, are informed by design best practices seen in Portland, and in and around urban hospitals across the US; from City staff recommendations; and from information presented by neighbors in the various public forums held by MMC. They are intended to assist future development in the IOZ to meet the goals and vision for the MMC campus and create context-sensitive buildings.

GENERAL GUIDELINES

MMC will follow these general guidelines for building design within the IOZ boundary:

1. New buildings will be designed to contribute to the campus vision and organizational goals identified in the Master Facility Plan and the Transportation Plan (see Chapters 2 and 3), and best practice design standards for healthcare.

2. The overall composition and experience of the campus will be considered for cohesive identity from approaches along Congress St and I-295.

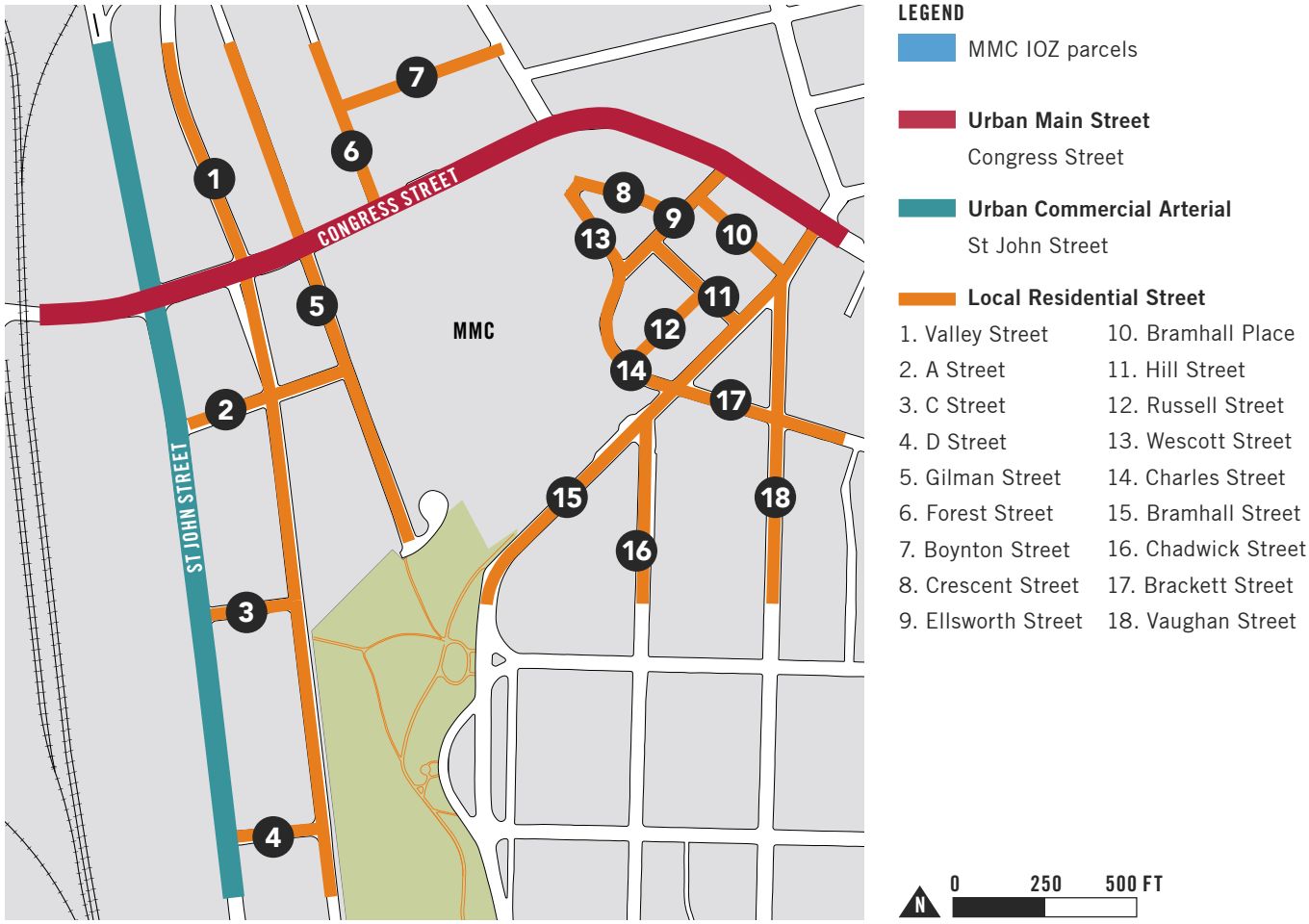
3. Building entrances will be oriented toward, located adjacent to, or accessible from, a sidewalk in a public right-of-way to create a pedestrian-oriented environment.

4. Buildings designs will relate to and be compatible with the existing, or—in areas of change—planned character of residential and commercial neighbors. Design elements and characteristics to consider include:
    - » Building placement and relationship to the street
    - » Overall massing and scale
    - » Roof forms
    - » Proportion, directional expression, and composition of facades
    - » Rhythm of solids to voids
    - » Rhythm and proportion of openings
    - » Rhythm of entries and projections
    - » Relationship of materials, texture, and color
5. Façade materials of buildings will be of high quality, and contribute to an attractive public realm.

6. The design process will consider long views of new buildings including roofs and associated structures to minimize visual impacts and provide visual interest. Rooftop appurtenances will be either screened from view or integrated into the building design, and will not be visible from adjacent streets, Western Promenade, or the Congress Street approach. (The helipad cannot be screened for safety reasons.)

7. Vibrant, contributing and sustainable active ground floors will be provided to add activity and a sense of place to the priority node

Fig.5.14 Typologies of Public Streets in and around MMC IOZ

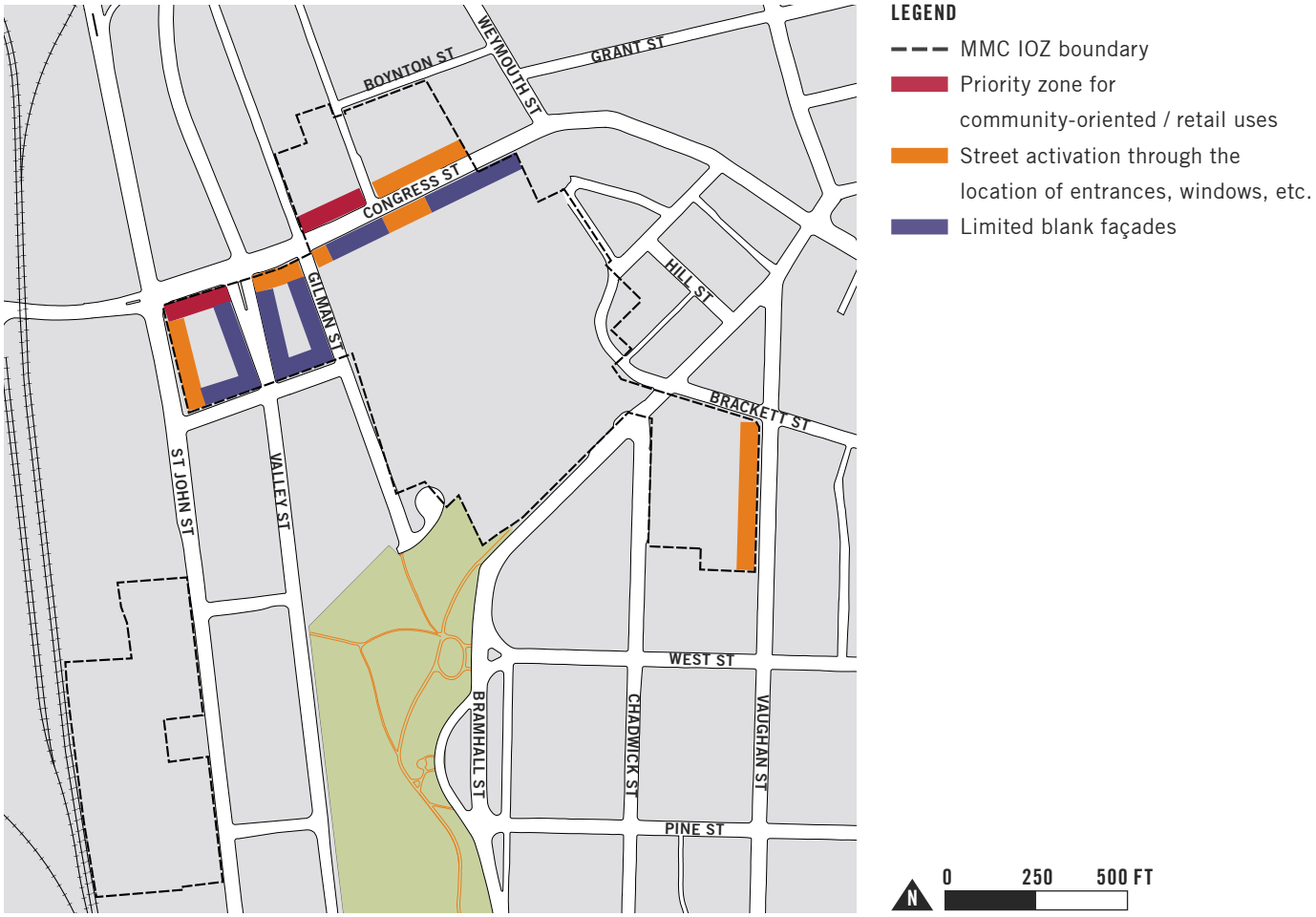


identified in the City's Comprehensive Plan. **Fig.5.15 on page 118** illustrates zones along Congress St deemed to be most suitable for community-oriented uses / retail.

8. In areas where the occurrence of limited blank façades along public right-of-ways are unavoidable due to changes in topography or building use requirements, the following strategies will be used to mitigate visual impact:
   - » providing elements of visual interest along any blank walls facing public streets, and,
   - » working with the City of Portland to ensure adequate lighting of public sidewalks to create a safe pedestrian experience.

Fig.5.15 on page 118 illustrates potential locations of blank walls within the IOZ boundary.

Fig.5.15 Frontage: Types of Activation



9. Any parking structure within the IOZ will:
   - » screen views of cars from public rights-of-way;
   - » provide elements of architectural interest on upper floors to contribute positively to long views and gateway approaches; and,
   - » for garage structures within 20' of the public right-of-way, meet street activation intent according to street type (see **Fig.5.15** above).

BUILDING RELATIONSHIP TO PUBLIC STREET

In walkable urban environments, buildings are designed with pedestrian scale and uses in mind. Buildings contribute to the public realm through the siting and design of street-facing façades, and of lower floors that engage with street-level activity.

A building's relationship to a public street should be informed by the typology of that street, which in turn is defined by the character of existing or planned development lining the street. MMC has identified three distinct typologies of streets within the MMC's IOZ boundary (see **Fig.5.14 on page 117)**. Design guidelines for future redevelopment along these street types are outlined below.

1. Urban Main Street (Congress Street)

Congress St is considered by many to be Portland's "main street". The winding street is defined by "zero-lot line" developments that border the sidewalk, and a series of civic monuments and squares distributed along its length. The IDP planning process has identified an opportunity to extend this "main street" feel from the emergent Bramhall Square (at Bramhall and Congress Sts) all the way to the railroad crossing where Congress St emerges from the influence of the I-295 interchange. MMC aims to contribute positively to the regeneration of Congress St in this area by ensuring orderly redevelopment of abutting IOZ parcels.

MMC buildings abutting Congress St will be designed to:

- provide urban-levels of density;
- create an urban street wall that provides a sense of enclosure to the public realm;
- have their primary orientation towards Congress St;
- activate the public sidewalk with building entrances, lobbies, etc.;
- to the extent possible, given programmatic needs, provide visual interest and ensure pedestrian safety with views into and out of the building along the public sidewalk;
- to the extent possible, given programmatic needs, provide space for community-oriented uses such as services or retail that can be shared between MMC users, neighbors and the broader Portland community; and,
- support the existence of neighborhood amenities such as restaurants and other retail uses providing services to local residents and employees both during the day and evening hours.

The topography and orientation of Congress St in this zone, however, poses significant challenges to achieving some of these design goals. The steady, steep climb of the street makes it impractical for large footprint buildings to align ground floor windows with the rising profile of the sidewalk (see

Fig.5.5 on page 106 for an analysis of building ground elevations). The east-west orientation of the street, combined with the more than 50-ft rise of Bramhall Hill south of Congress St, makes it challenging to provide an urban street wall that does not shade Congress St for most of the time (see shadow studies on page 124). To the extent possible, MMC buildings will utilize the general guidelines related to blank façades to mitigate these conditions (see page 117).

In addition to the guidelines listed above, buildings that have frontage on Congress St and that include parking components will activate portions of or place liner buildings along the ground floor facing Congress St. MMC has no plan to develop a stand-alone garage on Congress St as of the date of this IDP.

2. Urban Commercial Arterial (St John Street)

St John St is a significant arterial linking vehicular traffic between I-295 / Park Drive / Congress Street to the north, and Veterans Memorial Bridge / W Commercial Street to the south. The commercially-zoned street is flanked by a wide variety of uses that hint at its railroad-era origins (warehouses and workers' homes) as well as its current-day arterial use (strip centers and fast food restaurants). While it has some elements of a walkable street such as sidewalks and on-street parking, large stretches of the street prioritize the car with frequent curb-cuts, and street-facing parking lots.

MMC's IOZ boundary abuts St John Street between Congress and A Streets. MMC envisions this block to be redeveloped, in the long-term, in accordance with the Congress St design guidelines outlined on the previous pages. The new development will aim to provide architectural definition to the corner of Congress and St John Streets, and—to the extent possible—extend the character developed for the Congress St frontage along St John St.

3. Local Residential Street

The MMC IOZ boundary is crossed by and abuts a number of local streets that are lined with a wide variety of residential structures ranging from 3-4 story multi-family apartments on Boynton St to single-family mansions along the Western Promenade. During the IDP process, MMC has worked with the City of Portland planning staff, the Planning Board, and neighborhood representatives to identify a balanced approach to redevelopment along local streets that provides appropriate height transition from institutional to residential character. This approach is outlined in detail under "Transitional Zones" on page 110.

Fig.5.16 Photographs illustrating existing character of streets in and around the MMC IOZ

Urban Main Street (Congress Street)

Urban Commercial Arterial (St John Street)

Local Residential Street

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

MMC aims to create a safe environment for all in and around its campus. MMC will incorporate the following design strategies that have been demonstrated to deter crime:

- Providing a clean and aesthetically pleasing campus environment that is designed with vandal-resistant materials
- Providing clear and properly-sized signs in safe locations to ensure safe wayfinding
- Ensuring that paths from transit stops, bike storage areas, and parking areas to main pedestrian entrances are well-lit, with clear sight lines
- Designing street-level elevations to minimize potential hideouts
- To the extent possible, given clinical program demands, providing views in and out of building ground floors populated by users to serve as "eyes on the street"
- Generating foot traffic on public sidewalks with pedestrian entrances

MITIGATING IMPACTS THROUGH DESIGN

MMC is committed to addressing any perceived negative impacts that campus development may have on adjoining neighborhoods. This includes actions to mitigate impacts of daily campus operations, which are discussed under "Operational Sustainability" on page 93. A plan for mitigating construction impacts is outlined, along with a plan for continuous neighborhood input and engagement, in the "Neighborhood Engagement" chapter on page 128. This section summarizes strategies that may be used, as appropriate, to minimize negative impacts of proposed new development.

Minimizing Shadow Impacts

In order to understand the potential shadow impact of proposed campus projects on surrounding properties, MMC has prepared detailed shadow studies during the Master Facility Planning process (see **Fig.5.17** through **Fig.5.20** on the following pages). The overall building heights were kept to a minimum to minimize shadow impacts in areas such as Congress St where street alignment and topographic changes contribute to longer shadows. The proposed Congress St Development (see "Short-Term Projects on page 44) was pulled back from the street to the extent possible to minimize this impact, while also providing a more generous public sidewalk that supports pedestrian activity in front of this new gateway structure.

Context-Sensitive Lighting Design

The location and context of buildings are considered in the design of artificial lighting for new development. While a majority of this work is completed later during the design process and presented during Site Plan review, MMC has already incorporated some preliminary concepts related to lighting intensity into its Master Facility Plan. A key example is the concept design for the Congress St Development, which is intended to animate the Congress St frontage 24/7 with light emanating from its glazed circulation and waiting areas facing the street on the lower floors.

Mitigating Wind Impact

Upon final design of applicable site plans, MMC will consult with the City of Portland's Arborist to selectively determine the placement of trees or other landscape features on any new landscape areas to minimize any wind impacts created by the mass of new development.

Preserving and Enhancing Viewsheds

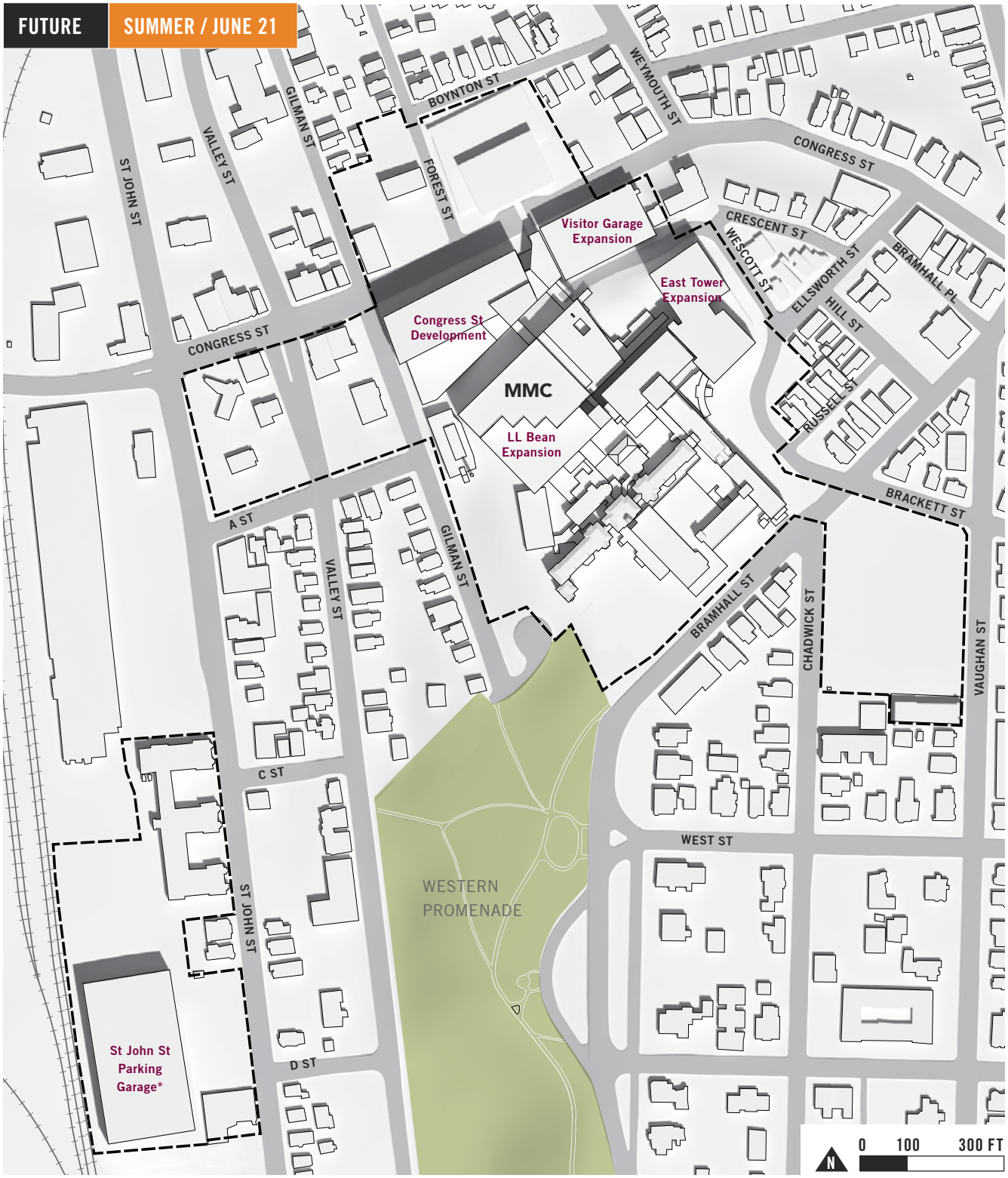
MMC understands the significance of historic and gateway viewsheds to the Portland community. The Maine General Hospital, a landmark civic building situated atop a hill, was designed to complement the sweeping views of the Fore River from the Western Promenade. Likewise, MMC will design new buildings along Congress St to provide an aesthetically pleasing gateway experience for all entering into the peninsula at this point.

MMC embraces the historic Western Promenade as a site from which to take in views of the countryside and the White Mountains, and a valuable open space amenity for campus users as well as for the broader community.

MMC has met with the Parks Department to review the potential impact of the proposed 222 St John St Garage to public views from the Western Promenade towards the White Mountains, and will work to mitigate potential impacts through design. MMC will also work to minimize potential impacts to the Maine Central Railroad Building as a designated historic landmark.

Fig.5.17 Computer-generated shadow study / Existing conditions on June 21, noon

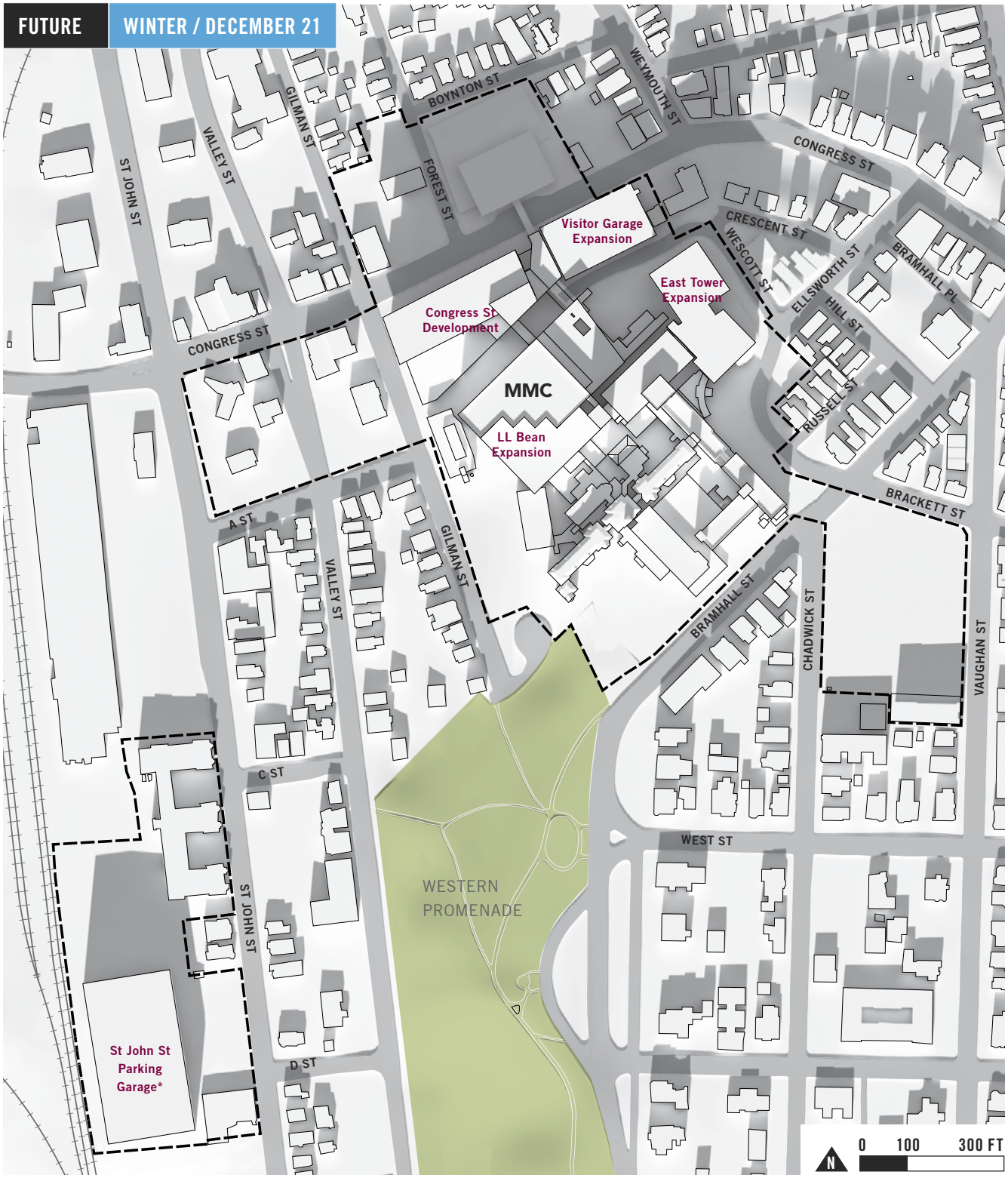
Fig.5.18 Computer-generated shadow study / Proposed long-term projects on June 21, noon



* NOTE: Exact garage location and footprint to be determined during detailed design.

Fig.5.19 Computer-generated shadow study / Existing conditions on December 21, noon

Fig.5.20 Computer-generated shadow study / Proposed long-term projects on December 21, noon



* NOTE: Exact garage location and footprint to be determined during detailed design.

CHAPTER SIX

NEIGHBORHOOD ENGAGEMENT

Maine Medical Center strives to be a good neighbor to surrounding communities. Ongoing dialogue and exchange of information and ideas is a core tenant of MMC's neighborhood engagement plan.

ONGOING COMMUNITY ENGAGEMENT

MMC's number one priority is superior patient care. In order to achieve this goal, it must address its employees' needs. However, MMC also recognizes that realizing its vision depends on its success as a corporate citizen and a neighbor.

MMC's main campus is situated at the intersection of several diverse residential and mixed-use neighborhoods. MMC considers itself a part of the West End, Western Promenade, Parkside, St John Valley, and Libbytown neighborhoods (see **Fig.1.5 on page 19**). MMC values its role in these neighborhoods and seeks to be a productive force in maintaining their health and quality of life. To this end, MMC endeavors to maintain an open dialogue with its neighbors, to quickly and fairly resolve disputes, and to ensure that its growth enhances its neighborhoods' vibrancy, economy, and livability. Building and maintaining trust is essential to successfully achieving these shared goals. MMC commits to building and maintaining trust not only by providing superior care to its neighbors and the larger community, but by clearly communicating and consistently engaging its neighbors on both the institution's core mission and neighborhood concerns.

It is important for MMC, its neighbors and the City to maintain the dialogue that has been established during the development of MMC's IDP. As a result, MMC proposes the following ongoing community engagement to ensure the surrounding neighbors are kept apprised of MMC's future development plans, and to understand any neighborhood issues related to the operations of the MMC campus, the following engagement process shall be established:

- On a quarterly basis, MMC's Chief Operating Officer shall host a group meeting comprised of the following members:
  - » the President or Chair (or a designee of the same) of the following Neighborhood Associations: St John Valley, Western Promenade, West End, Parkside, and Libbytown
  - » The Director of Planning at the City of Portland, and,
  - » The District 2 Portland City Councilor
- The group shall develop a Charter by which these quarterly meetings shall be conducted and minutes shall be made of each meeting. The Charter and the minutes shall be delivered to the City's Neighborhood and Island Liaison within 30 days of their adoption.
- In addition, the group shall annually complete a "checklist of actions" to be addressed by the group and the completed checklist shall also be filed with the City's Neighborhood and Island Liaison.

- To further an open dialogue, MMC will engage neighbors in more routine dialogue during major planning efforts. These meeting invitations shall also be extended to the Director of Planning at the City of Portland and to the District 2 Councilor.
- During construction, MMC shall provide contact information for a designated community liaison on its website for day-to-day inquiries and comments. Inquiries and comments shall be logged by MMC and responses shall be provided by MMC in a timely fashion.
- MMC shall also employ social media to make information about a pending project readily available to the public. This shall include a dedicated website page and a dedicated email address for residents to ask questions, provide suggestions or voice concerns.
- Finally, MMC will set up a text alert system to notify any subscriber of advance construction impacts which may be necessary during construction.

CONSTRUCTION MANAGEMENT PRINCIPLES

The following section provides an overview of the construction management principles that MMC has identified to minimize impacts from noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding buildings and communities. It is MMC's full intent to schedule and conduct operations in a manner that will minimize, to the extent feasible, the disturbance to the public in areas adjacent to the work and to occupants of buildings in the vicinity. MMC will adhere to the Construction Management Template requirements attached to the IDP as Appendix A.

COMMUNICATION INITIATIVES

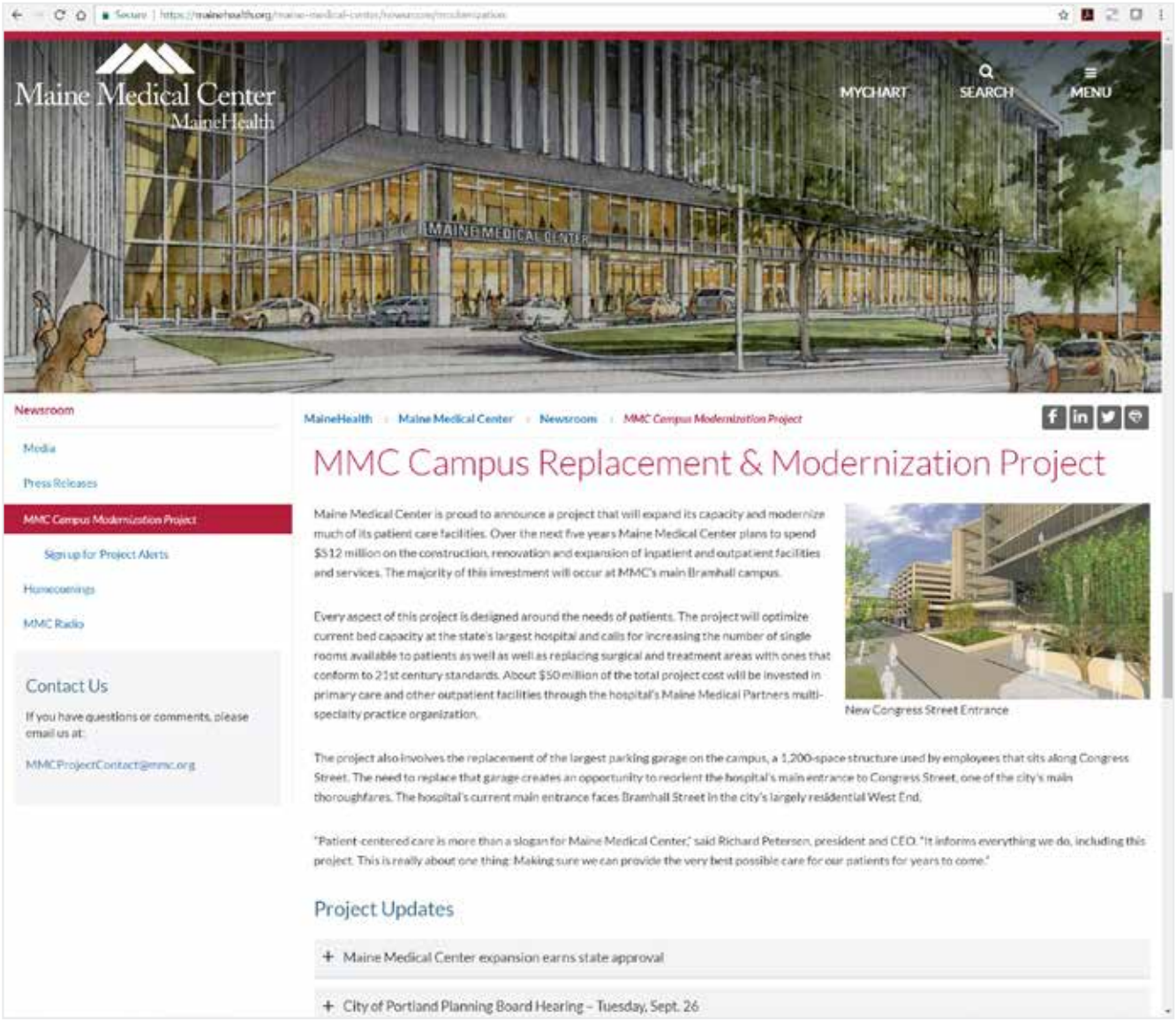
MMC will provide a method of communication between City of Portland, neighbors, and the construction team based on the anticipated impact of the construction project. For large construction projects, MMC will use its website, social media, and provide a dedicated email address to enable communication with its neighbors.

For short-term projects identified in the Master Facility Plan, MMC will implement a communication strategy using social media and texting to alert surrounding neighbors of activities that may cause disruption.

MMC has created a dedicated webpage on its website devoted to the short-term projects to inform the public of important information related to the Project (http://www.mmc.org/modernization).

Information and updates on the Project are regularly posted including project updates, neighborhood meeting minutes, Portland Planning Board information related to the project, news releases, fact sheets and frequently asked questions. As construction commences, important alerts regarding construction activity such as activities impacting roadways, potential creation of dust, vibration, or noise, etc. will also be posted. To the extent possible, MMC will provide two week advance notice of such activities.

Fig.6.1 Screenshot of MMC Website dedicated to the Project at http://www.mmc.org/modernization.



MMC has created a dedicated email address that allows members of the public to ask questions and provide information. These emails will be answered in a timely fashion by the people directly involved in the construction activities.

Information about the construction project will be proactively shared on a regular basis for the duration of the project.

CONSTRUCTION SCHEDULE

MMC will provide an estimated project schedule at the beginning of a construction project and provide regular updates through-out construction. The frequency of construction schedule updates will be determined by the project's estimated impact on the surrounding area.

CONSTRUCTION MANAGEMENT PLAN

Prior to construction, MMC will develop comprehensive Logistics and Safety Program. Maintaining normal campus operations and public safety, and minimizing impacts to areas surrounding the campus, will be the primary considerations in this process. MMC will utilize the City's Construction Management Plan template to develop a Construction Management Plan that will be submitted with a Site Plan application.

PROJECT WORK HOURS

Construction work hours will be predetermined before the start of any construction project and limited in order to minimize impact on the areas surrounding campus and to complete the project expediently.

PUBLIC SAFETY AND ACCESS

Pedestrian walkways and business access will be clearly marked and maintained through-out the construction period.

In general, secured fencing will be used to isolate construction areas from pedestrian traffic and Police Details will be provided, when necessary, to facilitate traffic flow. MMC will work to ensure the sidewalk protection minimizes impact to pedestrian and vehicular flow. The specific configuration of sidewalk protection and pedestrian access around the site will vary depending on the phase of the work being performed. Construction procedures will be designed to meet all OSHA safety standards for specific site construction activities. MMC will provide sufficient temporary site lighting to ensure the safety of all pedestrians accessing the sidewalks around the site, including lighting at all covered pedestrian walkways, until permanent street lights are installed. Residents will be able to contact MMC at a designated email posted prominently on the project website (see **Fig.6.1 on page 132**). MMC will also provide regular updates to the Fire Department regarding any detours necessitated by construction.

CONSTRUCTION NOISE IMPACTS

MMC is committed to mitigating construction noise impacts. Increased community sound levels, however, are an inherent consequence of construction activities. When these events are scheduled, advance notice will be provided.

CONSTRUCTION TRAFFIC AND PARKING IMPACTS

Construction Workers

For Short-Term Projects, the number of workers required during the construction will vary with an estimated average daily workforce of 150 during the peak of construction. Jobsite personnel shall park at an off-site parking area and will be shuttled to the construction site. MMC will work with the Construction Management Company to identify an off-site parking location and shuttle service. No personal vehicles will be allowed to park at the project construction site or in the adjacent residential streets. The construction company and its subcontractors shall encourage the use of public transportation by their workers, if available.

Truck Routes and Volumes

Truck routes shall be as far away as possible from residential and other sensitive uses.

MMC may install wayfinding signage at strategic locations identifying no travel zones for construction vehicles. Once at the site, all vehicles will be brought within the fence line and will make every attempt to avoid queueing on public roadways, unless during specific times, as addressed on the site logistics plans.

Construction Staging Areas

Construction staging areas shall be as far away as possible from residential and other sensitive uses.

CONSTRUCTION AIR QUALITY IMPACTS

To reduce emission of fugitive dust and minimize impacts on the local environment, MMC will adhere to a number of strictly enforced mitigation measures. These include the use of wetting agents to control and suppress dust; covering stock piles of soils and trucks transporting debris; managing construction practices to reduce unnecessary transfers of loose materials; periodic cleaning of streets and sidewalks; and, use of wheel wash stations.

IMPACT TO SURROUNDING BUILDINGS AND RESIDENCES

Foundation surveys of surroundings buildings and homes will be completed within a reasonable distance from the anticipated center of construction and in accordance with current regulations. The results of foundational surveys will be shared with the City of Portland and the property owner.

MMC COMMUNITY BENEFITS

MMC provides much to the City of Portland community including employing over 2,000 Portland Residents. These benefits are not only to our adjacent neighbors but also to the residents elsewhere in the City and the state of Maine.

SMOKING POLICY AND RELATED INITIATIVES

MMC, as a health care institution, understands that smoking is an addiction that has harmful effects—effects from directly inhaling nicotine, as well as the effects of second hand smoke. The effects are serious and can be life threatening. In order to advance its vision to make the people in Maine the healthiest in America, MMC, like other businesses in the City of Portland—including the City itself—has instituted a no smoking policy on its premises.

But the hospital also recognizes that addiction is difficult to overcome and the ability to quit smoking is often difficult. That is why MMC offers assistance to its employees, patients and visitors to quit smoking and to reduce and eliminate noxious fumes in the environment. MMC provides free smoking cessation classes to its employees. It offers free nicotine gum to visitors to the hospital in an effort to reduce the desire to smoke. MMC has conducted periodic "walk-abouts" in the neighborhood to talk with people about smoking and its health impacts.

Neighborhoods throughout the City all deal with unwanted smoke. MMC has heard the concerns of its neighbors relating to people walking on the public sidewalks in their neighborhoods while smoking.

Whether or not people smoking in MMC's adjacent neighborhoods are affiliated with the Hospital, MMC has taken significant measures to respond in a positive fashion to these concerns. MMC provides education about smoking and resources to assist in quitting (such as providing the hotline telephone number for the Center for Tobacco Independence). The Hospital has taken steps to alleviate the unsightliness of cigarette butts on public streets near its campus. As documented in its MMC Neighborhood Council Meeting minutes of June 23, 2016, MMC has purchased 30 "butt butlers" for use by the City in areas around the MMC main campus. In 2016, MMC and the neighbors collaboratively walked the neighborhood and identified areas for installation of the butt butlers.

At the request of the neighborhood representatives, MMC also modified its smoking policy as follows:

- Limits the distance from entrances within which individuals can smoke from 50 feet to 20 feet;
- Remove MMC Tobacco Free signs installed along the perimeter of the open "South Lot" (Bramhall, Chadwick, Vaughan, and Brackett Sts).
- Letter to employees sent by the MMC CEO and COO regarding these changes and the expectations for employees to abide by them
- MMC has hired a trash removal vendor to collect cigarette butts and trash in the areas surrounding the hospital. This vendor

provides such service between April 1 and first snow, on M, W, and F at 4–6 hours per day.

- MMC has a telephone line dedicated to the receipt of concerns from neighbors regarding MMC related events in their neighborhoods.

MMC is committed to its ongoing efforts to address this public health issue of tobacco use.

NEIGHBORHOOD GARDEN

The St John Valley Neighborhood (SJVNA) requested the use of property owned by MMC at 268-270 Valley St. In an effort to respond to the neighbors, MMC contacted the City for guidance on how it permitted use of public property for such community gardens. MMC fashioned an agreement with SJVNA which mimicked the Agreement used by the City for use of its land by gardening neighbors. As of June 2016 SJVNA was looking into procuring insurance of the same type required by the City.

NEIGHBORHOOD CLEAN UP DAYS

MMC has sponsored neighborhood clean-up days in the past in an effort to partner which its adjacent Neighborhood Associations to beautify the neighborhood. It has supplied lunch, trash bags, gloves and water for those participating.

SNOW BAN PARKING

MMC allows its neighbors the use of its parking garage at 887 Congress St on those days when the City calls a snow ban.

CITY-WIDE BENEFITS

MMC is actively involved in giving back to the City of Portland. The following initiatives provide some examples of the actions undertaken by MMC to give back to the community.

- MMC-Preble St Learning Collaborative: MMC nurse practitioners, primary care residents, medical students, and MMC Homeless Health Partners, have provided services to the most vulnerable underserved people in Portland, allowing them access to quality, barrier-free health care.
- Portland School Based Health Clinics were successful due to the partnership between MMC and Portland Public Health.
- Portland School Athletic Contributions: The Sports Medicine division at MMC's Family Medicine Center provides physical exams and training room support for area school teams, marathons and other sports events.
- MMC RN Health Fairs: MMC RN's routinely hold community health fairs on MMC's time to benefit vulnerable populations. Locations of health fairs include: the Preble St Teen Center, Boys and Girl's Club of Portland, and the Florence House, a permanent shelter for chronically homeless women. The events are frequently accompanied by a collection of supplies.

- Sagamore Village Health Center: MMC has provided staff and support at the Sagamore Health Resource Center, a community-based nurse managed clinic that provided public health, primary care and mental health services to residents. MMC collaboration with the USM School of Nursing and Portland Housing Authority in providing these services. In addition to staff and administrative support, MMC provided direct financial support to the Health Clinic.

- MMC Care Partners: A "safety net" program designed to provide care for those who cannot afford commercial insurance but are not eligible for government programs. CarePartners provides administrative support to help serve the target population, including comprehensive eligibility assessment, care management, and access to low cost or free pharmaceuticals.

- Virology Treatment Center: A resource to patients and physicians caring for patients with HIV / AIDS; it also provides education and conducts clinical trials, including many that otherwise would not be available in the community.

- International Clinic: Provides services and healthcare education to immigrants and refugees from around the world who have settled in Portland.

- Northern New England Poison Center: MMC is the home of the NNEPC. The NNEPC provides a 24x7 hotline and chat service to provide 24x7 consultation with healthcare professionals and the public regarding accidental pediatric or geriatric poisonings, therapeutic errors and adverse effects/ interactions, management of drug- or poison-related suicide attempts and substance abuse misadventures, environmental exposure, food poisoning and other toxic exposures. The Center also provides education for the public and healthcare professionals, including school nurses and law enforcement, assists with preparedness and toxic-surveillance for events including food or water contamination/ tampering, weapons of mass destruction, regional antidote management, and infectious disease.

- Sexual Assault Response Services of Maine (SARSSM): MMC, through its Emergency Department, teaches classes to support SARSSM. Emergency department members present at meetings and conferences in support of these services.

- The Maine Medical Center Research Institute (MMCRI) is the largest hospital-based biomedical research facility in northern New England. Many clinicians author scholarly work or participate in various studies and research activities, and the institute offers a summer

student program. Residents and community members participate in clinical trials to manage and treat diseases and medical conditions, which would otherwise not be available in the community.

- MMC Classroom Facilities at the MMC Dana Center are used by health care mission focused community groups for meetings and educational sessions. Local Chapters of Alcoholics Anonymous, Al-Anon, the National Alliance for the Mentally Ill and Take Off the Pounds Sensibly meet weekly at the Dana Center. HOPE Support Group, Making Strides against Breast Cancer, an Autism Parent Support Group, and Survivors of Suicide are some of the organizations that make use of MMC's facilities on a weekly basis throughout the year.
- MMC's Certified Nursing Assistant (CNA) Program: In affiliation with Portland Adult Education this program has graduated approximately 1,200 graduates to date. Offered 3 times a year at no charge to students, this state-approved 180-hour course incorporates experienced MMC nursing staff as faculty/ mentors within classroom presentations, skills labs, and supervised clinical experiences. Clinical nurses and others throughout MMC instruct and mentor these student team members, highlighting MMC's belief in CNAs as integral to the comfort, care, and outcomes of our patients and services. An average of 75 participants attend per session. Near the end of this eleven-week program, students take the state certification examination during the course at no cost to the student.
- Medical Explorers: Provides opportunity for High School students to experience a combination of lecture, experiential learning, and hand-on skills practice. MMC also offers summer internships and opportunities through the school year for High School students to meet, observe and interact with many disciplines in the medical profession.
- Doc for a Day: MMC provides students, chosen from underrepresented minority groups or educationally or economically disadvantaged backgrounds, an overview of what is involved in becoming a physician, and participate in hands on clinical activities in the simulation lab.
- Disaster Preparedness and Emergency Services: MMC is deeply involved in disaster planning at the local and State levels. It is one of three state Regional Resource Centers for Emergency Preparedness, and the hospital has a full-time Director of Emergency preparedness. Additionally, MMC is a member Southern Maine Regional Resource Center for Health Emergency Preparedness, which coordinates all Emergency Preparedness Activities of the Southern 4 Counties of Maine including: York, Cumberland, Sagadahoc and Lincoln. These Public Healthcare Emergency services include

Fig.6.2 Photographs from Community Benefit Events Supported by MMC

The Annual Maine Children's Cancer Program (MCCP) Walk

Tobacco Cessation Program

Park Clean-Up

services and support to other local Hospitals and Medical Centers, Laboratories, Clinics and Ambulatory Centers, Assisted Living and Long Term Care Facilities and Home Health Agencies in the greater Portland Community.

- Financial Support to Community Agencies: MMC supports financially and provides in kind services to various community agencies and sponsors events throughout the City, including the Heart Walk; American Cancer Society walk, Hospice of Southern Maine, Let's Go Program, Ronald McDonald House, March of Dimes and National Multiple Sclerosis Society. MMC and its employees participate in the United Way, which donations benefit numerous local agencies.

APPENDICES

Appendix A / Construction Management Plan Template

Appendix A: Construction Management Plan Template

DRAFT 7-31-2017 General Construction Management Plan Template

Construction Management Plan
General Template
[Applicant and Project Name]

Construction Management Plans shall depict the overall planning, coordination, and control of a construction site, including phases as applicable, from beginning to completion. The City's goal for a construction management plan is to support a safe construction site and protect the public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the city), and welfare during construction. In addition, the construction management plan shall minimize construction impacts in their duration and magnitude to the surrounding area and develop an effective communication process for resolving concerns and conflicts.

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories below.

A. Construction Management Principles
The following narrative provides an overview of the construction management principles that the [Applicant and Contractor] has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

B. Development Review of Construction Management Plan
[Applicant and Contractor] shall submit a construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. The plan minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process. The following details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits
Prior to scheduling a preconstruction meeting and the issuance of any city required permits, [Applicant and Contractor] shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.

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2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

[Applicant and Contractor] will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan shall provide for the following:

1. Contact Person and contact information for the [applicant and contractor] and who is available 24 hours
2. Construction Signage posted on the site with Contact Information for Contractor
3. Describe any additional communication strategies
4. All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing.
2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

F. Security & Public Safety

1. The Construction Management Plan will depict all proposed fencing or other barriers and access gates (with knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program. An overall construction of demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security

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- Installation of new fire protection systems as construction progresses
- Preservation of existing systems during demolition
- Organization and training of an on-site fire brigade
- Development of a pre-fire plan with the local fire department
- Rapid communication
- Consideration of special hazards resulting rom previous occupancies
- Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.
2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects that will occur along arterial and or collector streets are required to submit a satisfactory 'maintenance of traffic" (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

   Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for n the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic
   - Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
   - In extreme situations, flaggers may be required.

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- Police detail is required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or site 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

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I. Erosion Control and Preservation of Trees

1. The [contractor] shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. The [contractor] shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan (Exhibit) within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.
3. Delivery Truck Holding Areas Off-Site: In the event that adequate on-site area for holding of trucks is not available, an off-site marshalling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan.

K. Parking During Construction

1. Construction Parking: Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements shall be included in the construction management plan.
2. Parking: Where existing facilities are remaining in operation during construction, the construction management plan shall identify how the parking for employees and others shall be managed.
3. Truck Routes and Volumes: The Construction Management Plan shall address the designated truck routes and expected truck volumes.

L. Special Measures as Necessary

For construction work that will take place over a long period (e.g. 12 months or more), involve major demolition/ deep excavation/ piling and/or special construction techniques, or are located near sensitive uses (e.g. medical care facilities, schools), the Construction Management Plan should provide details and demonstrate that all appropriate special measures have been taken to avoid, minimize, or possibly compensate for potential impacts. This may include taking baseline measurements before construction, such as arranging to

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photograph the foundations of nearby properties upon consent of the owners, in order to assess any future impacts of vibration, noise, etc.

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July 24, 2018

Nell Donaldson, Senior Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: MMC Staff Parking Garage | 222 St. John Street | Level III Site Plan
Design Change

Dear Nell:

The purpose of this memorandum is to summaraze changes made within the attached revised design drawings since the initial Level III Site Plan Submission on June 22, 2018.

Drawing Sheet C-100 (Civil Site Layout)

- Additional garage entrance added at the southeast corner of the parking garage. This entrance will facilitate parking for users of 184 St. John Street (Fraternal Order of the Eagles). A total of 50 spaces within the parking garage have been designated for 184 St. John Street and will be sectioned off from Maine Medical Center Employee users internal to the building. Sidewalks added from the garage to the north and south side entrances of Eagles building.
- Reconfiguration of existing 184 St. John Street Parking lot; the existing parking lot is proposed to be reconstructed within its existing footprint. The reconstruction includes revised parking lot striping and the addition of a brick driveway apron in accordance with the City's standards.
- Addition of 6-foot high fence between 184 St. John Street and 190 St. John street entrances. The fence is intended for security purposes and to prevent pedestrians from crossing between driveways, and to provide additional security within the area.
- Reconfiguration of the transformer and generator pads. Equipment pad dimensions and locations have been updated to match current electrical drawings and code requirements for separation.
- Addition of bicycle parking at the garage lobby entrance. Based upon City of Portland comments and discussions, six additional bike racks have been added at the lobby entrance for users of the garage.
- Addition of brick driveway apron at garage entrance drive per City of Portland comments.
- Additional detailing of D Street design per City of Portland comments, as described in Response to Comment Letter. Awaiting final input from City for further revisions.
- Addition of fourth crosswalk at D street, St. John Street, Garage entrance intersection.

Drawing Sheet C-101 (Civil Site Layout)

- Addition of reinforced turf turn-around at the north entrance of the garage for access to pump station.

- Reconfiguration of the sidewalk to the north of 222 St. John Street. Per City of Portland comments the sidewalk has been reconfigured to be continuous in this location.

Drawing Sheet C-102 (Civil Grading & Drainage)

- Additional storm drain structures have been added to accommodate the new garage entrance from 184 St. John Street.
- Updated storm drain rim and invert elevations for storm drain along the western side of the garage.

Drawing Sheet C-103 (Civil Grading & Drainage)

- Reconfiguration of grading adjacent to the pedestrian walkway from the northeast corner of the garage to St. John Street. Grading has been revised along the northern edge of proposed stairs; narrow strip of stone armoring added immediately adjacent to stairs to provide stabilization and prevent erosion.
- Revised grading along Union Station Plaza entrance, proposed grades have been revised to match existing grades.

Drawing Sheet C-104 (Civil Utility)

- Relocation of fire hydrant to lower level northern entrance drive in response to fire department comments.
- Relocation of pump station and valve box.

Drawing Sheet C-201 (Civil Details)

- Addition of Oil Water Separator and Pump Station Details.

Drawing Sheet L1.0 (Landscape Plan)

- Revised planting plan behind 184 St. John Street.
- Revised planting along northern property line of 212/214 St. John Street.

Drawing Sheets PS1- PS6 (Garage Floor Plans)

- Revised garage layout to accommodate separate 184 St. John Street entrance and parking spaces.
- Relocated van accessible spaces to level G and reduce floor to floor level 1 and level 2.
- Design layout changes within travel lane.
- Adaptational travel lane dimensions.

Drawing Sheet G102 (Code Information Plan)

- Revised garage layout to accommodate separate 184 St. John Street entrance and parking spaces.

Drawing Sheets A101 and A102 (Building Elevations)

- Revised east façade to accommodate entrance for 184 St. John Street users (Eagles).
- Enlarged canopy over entrance area in response to City comments.
- Added windows at electrical / mechanical rooms in response to City comments.
- Reduced the floor to floor height of the first deck level (lower) by relocating van accessible spaces to level G; revision resulted in a reduction in the overall building height (revisions to elevation call outs)
- Removed the screening wall above the stair tower due to changes in mechanical equipment

Sincerely,

WOODARD & CURRAN

David Senus, PE
Project Manager

Winton Scott Architects
Portland, Maine
www.wintonscott.com

Route 295 View

Before

Winton Scott Architects
Portland, Maine
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Route 295 View

After

MMC St. John Street Parking Garage

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Veterans Bridge View

Before

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Veterans Bridge Close View

Before

Mercy
65

Winton Scott Architects
Portland, Maine

michael boucher landscape architects
Freeport, Maine

St. John Street View

Before

MMC St. John Street Parking Garage

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DO NOT ENTER
MAIN ENTRANCE
887
Employee
Parking
Garage

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Freeport, Maine

North View

Before

MMC St. John Street Parking Garage

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Portland, Maine

michael boucher landscape architects
Freeport, Maine

North View

After

MMC St. John Street Parking Garage

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A Street View

Before

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A Street View

After

MMC St. John Street Parking Garage

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Shopping Center View

Before

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Shopping Center View

After

MMC St. John Street Parking Garage

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View At 222 St. John

Before

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View At 222 St. John

After

MMC St. John Street Parking Garage

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View From South

Before

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View From South

After

MMC St. John Street Parking Garage

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Western Prom View

Before

MMC St. John Street Parking Garage

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Western Prom View

After

MMC St. John Street Parking Garage

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View From Edge of Promenade

Before

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View From Edge of Promenade

After

MMC St. John Street Parking Garage

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View From TB Reed Circle

Before

Winton Scott Architects
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View From TB Reed Circle

After

MMC St. John Street Parking Garage

MAINE MEDICAL CENTER – ST. JOHN STREET STAFF PARKING GARAGE

Level III Site Plan

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Maine Medical Center
June 2018

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1. APPLICATION FORM

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Via Electronic Submission

June 22, 2018

Helen Donaldson
Senior Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: Maine Medical Center
222 St. John Street Employee Parking Garage | Level III Final Site Plan Application

Dear Nell:

On behalf of Maine Medical Center (MMC), we are pleased to submit this Level III – Final Site Plan application along with supporting materials relating to a new, free-standing MMC employee parking garage at 222 St. John Street in Portland, Maine.

This submission package is intended to meet the City's submission requirements as outlined in the Level III Application procedures. The project site is located at 222 St. John Street adjacent to the Union Station Plaza and Fraternal Order of Eagles (184 St. John Street). The project involves the demolition of an existing surface parking lot at 222 St. John street currently utilized by MMC through a lease agreement and the construction of a new 2,400 space parking garage which will front toward St. John Street, and a 50-space surface parking lot north of the garage structure. MMC will purchase an existing surface parking lot currently owned and used by the Fraternal Order of Eagles at 184 St. John Street, and redevelop this lot to provide vehicle access to Levels 1 – 8 of the garage and a pedestrian entrance along St. John Street. Utilities, site features, landscaping, lighting, and stormwater management systems are included in the design documents.

The construction of the MMC garage at 222 St. John Street is identified in the Institutional Development Plan (IDP) that was prepared by MMC and approved by Portland City Council within the framework of the Institutional Overlay Zone (IOZ). Currently, employees use the Employee Garage on Congress Street with access from Gilman Street along with various other satellite lots including the 222 St. John Street surface parking lot. As part of MMCs identified short-term projects, the existing Employee Garage will be demolished and all staff parking will be consolidated to the new garage location at 222 St. John Street.

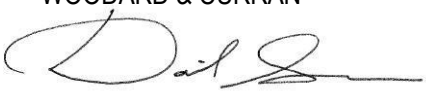
Work associated with the proposed parking garage will occur on portions of three separate properties consisting of 222 St. John Street (Cowcatcher LLC), the Fraternal Order of Eagles property at 184 St. John Street, and within an access easement from Union Station Plaza to Cowcatcher LLC. Seven separate lots are associated with these three properties which is further detailed in the table below.

Property	Lots/Parcels	Area	Building Area
222 St. John Street	064 A008, 064 A002, 075 A006, 075 A 007	4.9 acres	28,202
Fraternal Order of Eagles	068 D014, 068 D013, 068 D016	25,320 sf	0
Access Easement from Union Station Plaza to Cowcatcher LLC	N/A	11,057 sf	0

We look forward to working with your office on this project and would be glad to meet to discuss this application in greater detail. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

WOODARD & CURRAN



David Senus, PE
Project Manager

PN: 0231158.00

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Submit each Tab as one PDF file and bookmark the items as noted below

Please confirm by electronically checking the boxes to the left

Tab 1 – 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.

Submit each Tab as one PDF file and bookmark the items as noted below

Tab 2 - 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

Tab 3 - 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

Tab 4 - 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

Tab 5 - 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

Tab 6 - 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

Tab 7 - 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

☑ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

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

☑ Existing Conditions

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

☑ Proposed Site Plan

- Ground floor area, and grade elevations for all buildings

☑ Access, Circulation, and Parking

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

☑ Site Considerations

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

☑ **UTILITY PLAN** including:

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

☑ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☑ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☑ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☐ RECORDING PLAT, if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☑ ARCHITECTURAL PLANS & 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

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July 24, 2018

Nell Donaldson, Senior Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: MMC Staff Parking Garage | 222 St. John Street | Level III Site Plan
Response to Public Comments

Dear Nell:

Thank you for coordinating the review of the Maine Medical Center Parking Garage project located at 222 St. John Street. This letter provides a summation of our responses to the comments received from various reviewers as part of the Level III Site Plan process. We have repeated the original comment in italics below, and our response follows each.

Comment from John Peverada, City Parking Manager Dated June 27, 2018

With the size of the garage, will the two exit lanes onto St. John Street be sufficient to "empty" the garage in a reasonable amount of time? When they City boots MMC employees they say that they do not park in the existing garage because it takes too long to exit. Additionally, some employees who should currently be parking in the shuttle lot now say they don't because it takes too much time out of their day and they are not being paid while on the shuttle bus.

The hospital has staggered shifts, but there is concern that if this garage is not efficient, employees will park on the neighboring streets and the City will be chasing them around. Keeping in mind that St. John St only has one travel lane in each direction, there is concern that traffic may back up in the garage. MMC had discussed a second exit onto the Fore River Parkway, why is that not included in this plan?

Response:

The Gorrill Palmer traffic memo submitted to the City indicated a high level of service for the proposed entry/exit of the garage and the St John St intersection.

The entry and exit experience in the proposed employee garage will be different than the experience in the existing employee garage. The proposed garage's primary access point is from a signalized intersection on St John St - a commercial street. The existing garage's primary access point is from an unsignalized intersection on Gilman St – a residential street. In addition, much of the existing garage traffic desires a left turn onto Congress St from Gilman St – an unsignalized intersection.

A feasibility study of the options to connect the garage to the Fore River Parkway is included in the application.

Comment letter from City of Portland Fire Department Dated July 05, 2018

1. *The Street Address shall be marked on the structure with Arabic numerals, rather than spelled out.*

Response: Comment acknowledged, street address will be marked on structure with Arabic numerals, additional details will be provided during the building permit application process.

2. *A private fire hydrant will be required along the right side of the building, accessible from the lower parking lot.*

Response: A private hydrant has been proposed adjacent to the garage entrance accessible from the lower parking lot. Please refer to the attached revised design drawings for the updated hydrant location.

3. *Please indicate the location of the sprinkler system fire department connection.*

Response: No sprinklers are currently proposed within the garage; the garage will utilize a standpipe system. The location of standpipes and fire department connections are shown on the attached revised design drawings.

4. *There are sufficient public fire hydrants in the area, no additional public hydrants are required.*

Response: Acknowledged. As stated above, a private hydrant has been provided adjacent to the garage entrance accessible from the lower parking lot. Please refer to the attached revised design drawings for the updated hydrant location.

5. *Fire department access shall have an unobstructed vertical clearance of not less than 13 ft 6 in, to include the width of the St. John Street side access.*

Response: Comment acknowledged, unobstructed vertical clearance has been provided along the St. John Street access.

6. *The area in front of the building, St. John Street side must be capable of supporting 20 ton.*

Response: The proposed checker block has the capacity to support an HS-20 load rating. Please see the attached "Checker Block Technical Note Traffic Loading Calculation Example" provided by the manufacturer for documentation supporting the HS-20 loading capacity of the checkerboard pavers.

7. *The main entrance of the building must be the address for the building. The address for this building will be 190 St. John Street.*

Response: Comment acknowledged.

Comment letter from Wright-Pierce Comment Dated July 02, 2018

1. *Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)*
    a. *Basic Standard: Project Plans and Application should be provided to address erosion and sedimentation requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with MaineDEP Chapter 500, Appendix A, B, and C. The applicant has provided information that the project will be subject to the Basic Standard. The applicant has provided:*
        i. *An Erosion and Sedimentation Control Plan in Section 12 of the application.*
        ii. *Inspection and Maintenance information in Section 12 of the application.*

iii. *Erosion and Sedimentation Control Details and Notes on Sheet C-200.*

iv. *Location of Erosion and Sedimentation Control best practices were observed on the Demolition Plan.*

Response: Comment acknowledged.

The proposed project meets the Basic Standards

b. *General Standard: The applicant has provided information regarding the size and scope of the project indicating that the project is subject to the Redevelopment Standard within the City of Portland, which is more stringent than the Chapter 500 requirements for redevelopment. The City requirements indicate that greater than 50% of the proposed impervious surfaces must receive stormwater quality treatment pursuant to the MaineDEP Chapter 500 requirements. The applicant has provided information that 85% of the facility impervious surfaces are conveyed to a Jellyfish Filter, a proprietary unit from Contech. The applicant shall clarify the following and provide responses:*

i. *The HydroCAD Subcatchments report a total drainage area of 157,512 SF conveyed to the stormwater treatment unit. These values match values reported in Table 12-1, but differ slightly from the calculations provided on Section 12, Page 13. The correct tributary area and required treatment volume to the proprietary unit shall be confirmed by the applicant.*

Response: The proposed site design has been modified slightly since the prior submission which has impacted the above referenced area. Section 12 of the Level III Site plan Narrative has been revised and attached with this letter; please refer to this section for additional clarification.

ii. *The MaineDEP approval letter dated January 21, 2015 for the Jellyfish Filter require manufacturer approval for each design, as noted in item 7 of this letter (page 14 of Section 12). This letter shall be provided as part of the application.*

Response: A letter from Contech has been requested for design approval and will be forwarded for review upon receipt.

iii. *The applicant will be required to inspect, maintain, and report on the filter in accordance with Chapter 32 stormwater requirements. The applicant has provided inspection, maintenance, and housekeeping information in Section 12 of the application. A stormwater maintenance agreement is required for the stormwater treatment units.*

Response: A stormwater maintenance agreement will be provided to the City upon approval of the Level III Site Plan Application.

c. *Flooding Standard: The applicant has provided information indicating that the total amount of impervious surface at the facility is being decreased. For this and additional supporting information provided in the application, the applicant is not required to meet the Flooding Standard of Chapter 500.*

Response: Comment acknowledged.

2. *Connection to Existing System:*

a. *The existing facility currently discharges to an 18" private storm drain. The proposed condition includes retaining surface runoff in order to allow runoff from a 25-year, 24-hour rain event to pass an 18" pipe. Flows from the East Stormdrain are proposed to connect to the existing 30" pipe in St. John Street. The applicant shall provide the following:*

    i. *The applicant has indicated that the existing 18" pipe can convey 20.81 CFS at 95% capacity. A calculation was not provided in section 12 of the application, and this value was not observed in the HydroCAD output. The applicant shall provide a calculation for this flow rate. Once provided, this is anticipated to confirm that the project is in conformance with City of Portland Code of Ordinances section 14-526 (b) 3.a subsection ii regarding downstream private drainage.*

    Response: During review it was discovered that the 20.81 CFS previously reported at 95% capacity was misreported and did not account for the appropriate slope for Pipe 25. This calculation has been revised to reflect the proposed slope for Pipe 25, the revised 95% capacity conveyance is 9.31 CFS. Utilizing strictly the Manning's Equation for the single pipe, the proposed 18" pipe can adequately convey the 10-year storm without backflow within the system. It is important to note that the HydroCAD model utilizes dynamic routing which takes into account possible backflow within the system during larger storm events. Although the 25-year storm event generates flows in exceedance of the Manning's Equation calculations, the HydroCAD model shows that there is an excess of 1-foot of freeboard within DMH-2 during this storm event, and flood elevations are not exceeded at any upstream structures within the system.

    ii. *The applicant has indicated that conversations with the City have discussed the 30" stormdrain in St. John Street has capacity to receive additional flows from the project. The applicant shall provide written or e-mail confirmation from the Department of Public Works that this work is being completed in accordance with City of Portland Code of Ordinances section 14-526 (b) 3.a, subsection iii iv.*

    Response: Woodard & Curran has discussed discharging stormwater flow from the garage entrance to the 30" stormdrain located in St. John Street. Please see attached correspondence with the City of Portland Public Works Department.

3. *Proposed Drainage Design*

    a. *More information is needed to confirm that the pipe capacity and inlet capacity is adequate for each structure and pipe length.*

    Response: To provide a conservative assessment of inlet flows and pipe conveyance capacity, an analysis of the project's largest subcatchment area has been conducted including pipe and inlet capacities. Flows generated at CB-2 were evaluated using HydroCAD analysis for the subcatchment area, a flow of 1.15 cfs is generated durring the 25-year storm event. The Manning's Equation was utilized to determing the 95% capaicty for Pipe 2 and was calcuated to be 2.17 cfs. The proposed catch basin will utilize a standard 24 inch inlet grate with a capacity of 3.50 cfs.

All other subcatchemt areas are of a similar or smaller area and utilize the same or larger pipe sizes, and as such were not analzyed. Please refer to the attached calcuations for further clarification.

b. Additional data/detailing is needed to confirm that the R-Tank system and Jellyfish Filter are designed in consonance with the HydroCAD model.

Response: Pond 1P within the HydroCAD model utilizes information provided by both ACF Environmental and Contech. ACF Environmental provided a HydroCAD node for the R-Tank storage volume, and Contech Provided a HydroCAD node with the appropriate outlet information to ensure that flows routed to the Jellyfish Filter will meet the required cartridge flow rate design criteria.

c. CB21 on sheet C-103 calls out a 15" pipe out of the structure, but the existing pipe between CB21 and the existing CB is referenced as 18". Please confirm the existing pipe is indeed an 18" pipe.

Response: The correct pipe size has been updated, please refer to the attached revised design drawings for additional clarification.

d. Pipe 22 has 0.0% slope. Confirm this is the intended design or if the pipe should be sloped to the JellyFish Filter.

Response: Pipe 22 was designed with a 0.0% slope to the Jellyfish filter per Contech recommendations.

e. CB12 has 1.37 feet of drop between the in and out inverts. Confirms this is the intended design or if the standard 0.1-foot drop is more appropriate.

Response: Due to the large grade change from CB14 to CB11, a drop of 1.37-feet between inlet and outlet within CB12 was selected.

f. The areas presented in the Water Quality Volume for Jellyfish Filter System calculations do not match those presented in Table 12-1 (see comment 1.b.i of this response). Please remedy.

Response: Please refer to comment 1.b.i of this response letter, Water Quality Volumes have been revised and are further described within the attached revised Section 12 of the Level III Site plan Narrative.

g. The HydroCAD output files reference 24-hour design rainfall amount of 3.1", 4.6" and 5.8" for the 2-,10-, and 25-years events, respectively. Please provide the source of the rainfall amounts for review.

Response: Rainfall amounts were taken from Appendix H of Maine DEP Chapter 500 and selected from South East Cumberland County.

4. Capacity to Serve:

a. The applicant has sent Capacity to Serve Letters to Utilities. Responses to these letters are required parts of the application, and the applicant has indicated that they will be provided to the City as these letters are received.

Response: Woodard & Curran has contacted utilities regarding status of capacity to serve the proposed parking garage, which are being reviewed at this time. Capacity to serve letters will be forwarded upon receipt.

5. Parking Garage Drainage:

a. *Additional information is requested on where the floor drains from the parking garage convey surface flows. Please confirm that the surface flows from the parking garage's interior levels are conveyed into the oil/water separator on Sheet C-104, and then ultimately into the sanitary sewer. Please provide a detail for the oil/water separator or indicate which sheet this detail may be located on.*

Response: The open top deck of the parking garage drains into the stormwater detention system, all other floors below the top deck are conveyed towards the oil water separator shown on Sheet C-105 and detailed on Sheet C-201 of the attached revised design drawings.

6. *StormBasin Facility:*

a. *The StormBasin facility will provide a level of hydrocarbon removal, and removal of other pollutants from surfaces that convey surface drainage towards St. John Street. It is understood that this proprietary unit is currently not accepted as a stormwater treatment method under MaineDEP Chapter 500, but the applicant has provided information that Jellyfish Filter contains ample treatment volume to meet the City's Redevelopment Standard.*

Response: Comment acknowledged.

7. *Soils:*

a. *Web Soil Survey information was provided in Section 12 of the application. The information in the web soil survey was in consonance with the soil hydraulics ratings for the HydroCAD report.*

Response: Comment acknowledged.

b. *Section 15 of the application notes that soils were observed to have potential ash substances, and that urban infill may be likely due to the location of the project. The applicant has noted in section 15 that a soil management plan will be provided. Final site grading will be reviewed after this soil management plan is available.*

Response: Comment has been addressed, please refer to email from Wright Pierce dated July 16, 2018.

8. *Snow Storage:*

a. *The applicant has noted in Section 17 of the application that snow storage will be completed through means of removal and off-site storage. Snow melters will be located on the open-deck roof to the garage. It is understood that the exposed portion of the roof conveys flows to the Jellyfish Filter.*

Response: Comment acknowledged.

9. *Details have been provided confirming the following storm drain infrastructure items that are in conformance with the City Standard Details and Technical Manual:*

a. *Catch Basin detail (3' sump)*

b. *Manhole Frame, Cover*

c. *Catch Basin Frame Cover*

d. *Manhole, Manhole Steps*

e. *Casco Trap*

Response: Comment acknowledged.

10. *The following notes are provided for certain details:*

    a. *Sheet 17: St. John Street and D Street Intersection*

        i. *Catch Basin at intersection of D Street and St. John St. is located in a transition ramp next to flat curb. Applicant shall provide spot grades or detail confirming how this catch basin grate shall be constructed with the adjacent tipdown curbing, and within a bicycle lane.*

        Response: Notes have been added to the design drawings to confirm the intent of the catch basin grate modification. Please refer the to the attached design drawings for further clarification.

    b. *Sheet 17: Checker Block Concrete Grid Detail:*

        i. *Discussion from reviewers indicated concern over winter maintenance and proposed use of this material. From review of sheet C-106, it is apparent that the Checker Block system is anticipated to be used for fire access and maintenance access, and not for stormwater treatment. It is suggested that applicant confirm the use of this material and the entry curb is confirmed as acceptable with the City Fire Department. The applicant shall submit maintenance and housekeeping information on the Checker Block system to indicate how the system will be maintained in both the summer and snow/salt conditions.*

        Response: Additional maintenance information has been provided with this response to comment letter, please see attached maintenance requirements.

Comment letter from Planning Department Dated July 02, 2018

Zoning Analysis

1. *Proposed sign does not match others on campus per sign plan submitted in 2008. In the final submittal, provide an explanation as to why the design diverges from the sign plan.*

Response: A signage plan that updates all MMC signs will be submitted with the site plan application for the Congress St. hospital building.

2. *Continued concern re likely success of some TDM measures and data collection. Wait on hiring of TDM coordinator to finalize TDM plan.*

Response: Comment acknowledged. The TDM coordinator position was filled on Monday July 16th. The TDM coordinator is in the process of familiarizing himself with MMC's plan. MMC has plans to meet with City reviewers on Wednesday July 25th to review the TDM plan.

3. *Campus-wide Parking analysis in IDP, GP's memo, and TDM plan do not entirely match. GP's memo cites a projected deficit of 500-600 spaces. This figure does not appear in the IDP, and doesn't mesh with employee growth figures from the IDP (approximately 300 new employees by 2026?). A table with ratios and existing and projected demands would be helpful.*

Response: Page 66 of the IDP states "…MMC estimates a need for 500-600 additional staff/physician parking spaces to accommodate future demands and resolve the existing parking shortage." Page 65 of the IDP states "The hospital requires about 150-200 additional on-campus parking spaces to alleviate current 2017 staff parking shortfalls." GP's cited projected deficit of 500-

600 spaces includes the current deficit of 150-200 spaces. The projected deficit accounts for addressing the current parking deficit, new employees, and a reduction in parking demand through TDM measures.

4. *CMP should include some discussion of methods to mitigate impacts to 210 St. John, particularly given location of construction access. Also speak directly to concerns about loss of landscaping there.*

Response: Comment acknowledged. MMC and its design team are scheduled to meet with the property owner of 210 St John St for a site walk-through to develop a mitigation plan on July 26, 2018.

5. *Need construction easements on Union Station Plaza lot. These will be required prior to building permit.*

Response: A construction agreement will be obtained prior to requesting a building permit.

6. *Speak to timing of deliveries (i.e. June meeting, we discussed loading during off-peak hours).*

Response: construction of the garage will require careful planning and management of the daily occurrences within the site limits. The logistical plan that is currently outlined is intended to keep all construction staging, laydown and temporary storage within the project limits and secured by temporary fencing. With designated areas delegated to subcontractors the site will remain accessible by incoming trucks without causing a queuing affect outside of the fence. A secondary storage yard is anticipated near the project site to store precast material not accommodated on site. The usage of this area will help to better control and manage the truck traffic to and from the site during the day, as nighttime truck use is prohibited by Maine. Precast trailers will only transport loads between the staging yard and the job site outside of peak traffic hours as defined by Gorrill Palmer as 7:30am – 8:30am and 4:00pm – 5:00pm.

7. *Finalize plan for temporary parking for displaced employees.*

Response: The Eagles parking needs will need to be addressed and managed throughout construction. During the construction process, MMC will provide 37 parking accommodations for the members of the Eagles. Tenants of 222 St John St will receive temporary parking adjacent to the building and in a lot located across St. John St. MMC is committed to providing safe and proximate parking for these properties throughout the construction process.

8. *Clarify which three spaces are being taken on St. John Street during construction (figures conflict).*

Response: During Phase 1, the primary entrance for sitework, concrete and precast deliveries will be through a paved right-of-way at the existing Eagles parking lot. Trucks will then exit the job site through the North gate accessing St. John St via the Union Plaza parking lot. A flagger will be employed to assist in navigating precast loads off St. John to the project site.
Phase 2 will begin once the garage has been 50% erected. The access through the Eagles lot will become blocked by the building diverting all deliveries through the North gate via the Union Station Plaza ROW.
Three on street parking spaces will likely need to be closed to public use for the large trucks to gain access to the project site during Phase 1 & Phase 2. However, the location of these closed parking spaces will change with the phases.

By utilizing the secondary storage are for large deliveries, we can coordinate material deliveries to the site during non-peak hours of traffic or pedestrian presence. Large deliveries will queue at the storage yard located on Commercial St, until the appropriate time is determined to the bring the material to the project site for installation.

9. *Ped detour plan should include a temporary crosswalk at 210?*

Response: Included in the attached, updated CM Plan

10. *Provide more detail on how the public will be apprised of construction updates.*

Response: Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

1) Construction schedule updates
2) Material deliveries, including notice of any oversized loads that may impact public traffic
3) Requests for upcoming off-hours work including weekends and holidays
4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Additionally, MMC will provide updates via their project website. Inquiries about construction, logistics, schedule and safety will be specifically addressed on the website along with the contact information for individuals associated with each aspect of the project. Neighborhood outreach events will be scheduled at each major phase/milestone where changes to pedestrian or vehicular traffic patterns occur.

11. *Provide more information on how snow ban parking will be managed.*

Response: MMC will continue with established policies that allow for snow ban parking in its parking structures.

Site Plan Review

1. *Waiting on confirmation that MaineDOT agrees to the installation of traffic signal (GP was making initial contact)*

Response: Email response from Steve Landry of MaineDOT on July 9th, 2018 stated: "We would entertain the installation of the signal, only with you knowing it can't be turned on until you show it meets the signal warrants." We look forward to working with the City of Portland to work towards operationalizing the signal when the garage opens.

2. *Intersection Design:*

    a. *Further discussion on the design of bike lane pending- need to confirm best practice for avoiding southbound right turn/bike conflicts.*

    Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming.

    b. *See bike lane paint specs here: https://www.transpo.com/roads-highways/materials/pavement-marking-material/color-safe-bike-lanes*

    Response: Comment acknowledged

    c. *Include elevation of pedestrian connections through Western Promenade. There is evidence of desire lines off the formal path network. Could these be formalized? If so,*

lighting or additional safety measures (e.g. call boxes?) may be necessary. Any new lighting or paths would need to be approved by HP.

Response: An assessment of the Valley Street Trail has been conducted, additional comments from the City of Portland July 20, 2018 requested additional evaluation. A final Valley Street Assessment will be provided once complete.

3. *Technically, not required to provide a facility under site plan review, as the nearest pullout is less than a quarter of a mile north. However, there is an existing METRO stop in front of the Eagles lot. How will this stop be handled?*

   Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming.

Note that METRO is working to install a shelter facility on Congress at the north end of Union Station Plaza.

Response: Comment acknowledged.

4. *See notes on parking analysis above.*

Response: Comment acknowledged. See response above.

5. *Support partial waiver on bike parking. However, bike parking location (in off-corners of the ground level garage) should be reevaluated. Is there a more accessible location closer to the entrances?*

Response: Additional bike parking has been provided at the lobby entrance along St. John Street to address this comment and design comments. Please refer to the attached revised design drawings for locations.

In addition, MMC is currently assessing all of its bike parking facilities on the Bramhall Campus.

6. *Add notes to planting plan regarding treatment of 210 St. John buffer. It is our understanding that existing arborvitae in this area will be replaced if damaged during construction. This (or any alternative plan for this area) should be noted.*

Response: The mature arborvitae hedge along the property line boarding the south boundary of 210 St. John Street will be protected during construction. If damage to the plants occur, the plants will be replaced.

7. *Clarify which fence detail goes in which location.*

Response: Additional clarification notes have been added to the attached revised design drawings.

8. *Maybe more comments re viability of checkerboard pavers in utility access area.*

Response: Please see the attached "Checker Block Technical Note Traffic Loading Calculation Example" for documentation supporting the H-20 loading capacity of the checkerboard pavers.

9. *Provide screening for transformer and generator on front of building.*

Response: Area of transformer and generator will be naturally screened from the roadway via, mounded landscaping berms.

10. *Need street trees on D Street, as possible*

Response: Comment acknowledged. MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming.

11. *Continued concern re CPTED around site. Evaluate for additional opportunities for natural surveillance/ territorial reinforcement. Expand entrance? Bring security from with windows to grade level?*

Response: Windows have been added to the mechanical room on the first floor of the garage facing St John St, the canopy has been expanded, and bike racks have been added. See revised design drawings.

12. *Need capacity to serve letters*

Response: Woodard & Curran has contacted utilities regarding capacity to serve the proposed parking garage. Capacity to serve letters will be forwarded upon receipt.

13. *Revise dumpster enclosure to wood*

Response: It is our recommendation that the dumpster enclosure remain as previously proposed. Given the location and use of the site and surrounding areas, a black polyvinyl coated chain link fence with vertical privacy slats will provide a longer service life. A wood enclosure would be too easily damaged by truck traffic.

14. *Provide capacity to serve letters upon receipt.*

Response: Woodard & Curran has contacted utilities regarding capacity to serve the proposed parking garage. Capacity to serve letters will be forwarded upon receipt.

15. *Need waiver request for average illumination levels*

Response: The roof deck parking lot lighting has been intentionally limited to the center of the garage to minimize the visual impact from off-site. To meet IESNA safety standards for minimum illuminance of 0.5 footcandles the design solution results in a maximum illuminance level of 6.4 footcandles, and an average of 2.4 footcandles. We could have met the Portland standard if we had located lighting poles around the perimeter of the garage deck, but we did not feel that was appropriate.

Similarly, the north parking lot lighting poles have been kept to the center of the parking lot to avoid unacceptable levels of light trespass across the west property line which is immediately adjacent to the north parking lot boundary. To meet the IESNA safety standards for minimum illuminance of 0.5 footcandles the design solution results in an average of 1.9 footcandles.

Furthermore, the Portland lighting standards do not coincide with lighting IESNA recommendations for street intersections. The intersection of St. John Street and D Street, and the intersection of St. John Street and C Street require an average illuminance of at least 2.1 footcandles (based on a "collector" street and "local" street intersection with high pedestrian activity). Accordingly, the design solution for the St. John/D Street intersection results in an average of 2.2 footcandles, and the St. John/C Street intersection results in an average of 2.1 footcandles.

16. *Is there an opportunity to dim or turn off lights at night when use will be down?*

Response: The roof deck lighting will be controlled both by photocell and time/motion control. The photocell will allow the lights to operate only after dark. The time/motion control will restrict the

operation of the roof deck lighting by means of motion control in the hours after 10:00 pm until 5:00 am. The motion sensors will be located at the ramp leading up to the roof deck, as well as at the stairwells at the roof deck level.

Concern re visibility of rooftop lights from western prom. Can top deck be closed down at night and these lights be shutoff?

Response: MMC will install a timer and motion sensor system to the roof lighting system.

17. *As noted above, may need lighting within Western Prom. Further info on this pending evaluation noted above.*

Response: An assessment of the Valley Street Trail has been conducted, additional comments from the City of Portland July 20, 2018 requested additional evaluation. A final Valley Street Assessment will be provided once complete.

18. *Can material samples be provided for Planning Board*

Response: The design team is currently working on a palette of materials to share with the Planning Board and City Staff.

19. *Right Title and Interest*

    a. *Need Exhibit A of Eagles Purchase & Sale:*

    Response: See the attached, recorded deed for this property which should satisfy RTI.

    b. *Need evidence of rights to make improvements to 222. St. John and to Union Plaza lot*

    Response: Refer to Easements contained in Section 7 of the Site Plan Application, granting rights for improvements associated with access and drainage on Union Plaza land.

    c. *Need evidence of easement across Union Station Plaza for stormwater & access*

    Response: Refer to Easements contained in Section 7 of the Site Plan Application, granting rights for improvements associated with access and drainage on Union Plaza land.

    d. *Confirm that we have evidence of stormwater infrastructure easements with 222 St. John pursuant to lot split. Is there a figure showing this & the access easement?*

    Response: The two properties are managed by a common entity that has ownership of both parcels, and that has leased the properties to Maine Medical Center under a 50 year lease. The lease agreements for these properties are attached.

    e. *Need construction easements on Union Station Plaza lot. These will be required prior to building permit*

    Response: Right of entry / construction agreements will be established for the adjacent properties prior to the start of construction.

Comment letter from Jeremiah Bartlett, Traffic Systems Engineer Dated July 05, 2018

Sheet C-100

1. *Additional detail shall be provided for pavement markings providing direction for cyclists through the proposed signalized intersection at the garage entrance, which could include skip markings, green paint, and other components. The approved plan will coordinate with DPW on the appropriate marking materials for this location.*

Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming.

2. *The traffic signal proposed for the garage entrance, upon completion, shall be capable of bicycle and pedestrian detection.*

Response: Comment acknowledged, the signal will be capable of bicycle and pedestrian detection.

Sheet C-107

1. *The proposed sidewalk facility on the north side of D Street shall be placed as close to the right-of-way as possible and provide the maximum width without reducing the street to less than 36 feet in width.*

Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming on recommendations for layout of D Street.

2. *To adequately define the street and replace on-street parking being eliminated by the proposed intersection reconfiguration with St. John Street and the primary garage entrance, curbing should be placed on the south of D Street with existing driveways brought as close into conformance as possible. This would facility a future City sidewalk project in keeping with the original 1928 layout plans for D Street.*

Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming on recommendations for layout of D Street.

3. *The new crossing configuration of D Street, including islands and curb ramps shall consider either a payment upfront to facilitate the changes on a imminent MaineDOT paving project of Valley Street*

Response: Comment acknowledged. MMC has reached out to the project contact at MaineDOT, and is working to coordinate these improvements.

Comment letter from TYLIN International Traffic Dated July 05, 2018

1. *The parking garage has a number of spaces that do not meet the City's dimensional standards for size. The applicant should request a formal waiver with supporting documentation.*

Response: A waiver has been requested within the attached waiver request form.

2. *The garage plans should include dimensions for parking aisle widths.*

Response: Revised plans include additional dimensions.

3. *A traffic signal is proposed at the St. John street/D Street/Garage Driveway location. I support the installation of a traffic signal given vehicle volume conditions and anticipate pedestrian movements. I would note that the applicants responsible for the development of design plans and equipment specifications for review and approval by the City. All costs associated with the installation of the traffic signal is the responsibility of the applicant.*

Response: Comment acknowledged.

4. *The general layout of the St. John Street/D Street/ Garage Driveway intersection is generally acceptable. It should be noted that the City is currently reviewing bicycle facility*

recommendations and final direction will be provided in the future. Some initial comments are provided below:

a. The number of pavement marking arrows is excessive and should meet either City or MaineDOT Standards (they may be for traffic flow reasons). I would suggest the through lane arrows be eliminated on St. John Street.

Response: Pavement markings have been reduced, please see the attached revised design drawings for updated pavement markings.

b. A crosswalk on the St. John Street southerly approach shall be provided.

Response: An additional crosswalk has been added on the southerly approach on St. John Street. Please see the attached revised drawing set.

c. I continue to review the garage approach as it relates to providing a three-lane section with a reversible center lane and traffic control design elements.

Response: MMC needs clarification regarding the cause for continuing review.

5. *The applicant has provided a traffic evaluation and my initial comments are noted below:*

a. I have requested the Synchro traffic model for review.

Response: Synchro traffic models have been to City staff for review on July 6, 2018.

b. I have requested the traffic count data collection report for review.

Response: Traffic counts have been sent to City staff for review on July 6, 2018 and a copy of the email only has been attached within the comment response letter for reference.

c. I find the methods used to estimate traffic volumes associated with the garage to be reasonable. I would note that additional review is required. The evaluation notes that a broader review of the area transportation system and parking garage will occur during Phase 3 of MMC's expansion.

Response: Comment acknowledged.

d. From a vehicle capacity perspective, I would recommend a shared through/right shared lane configuration on the southbound St. John Street approach.

Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming.

e. Some of the intersection level of service conclusions seem better than actual field conditions. I would suggest the applicant field confirm intersection delays and queues.

Response: This comment was discussed in more detail with Mr. Errico on July 23, 2018. As discussed with Mr. Errico, the most significant perceived difference in level of service between the analysis and experience in the field is during the AM peak hour. The forecast AM peak hour of the garage occurs between 6:00-7:00 AM when the trip generation is forecast to be 1097 trip ends. Adjacent street traffic is minimal at this time of the morning. The garage is only expected to generate 556 trip ends (almost half) during the AM peak hour of the adjacent roadway network which occurs approximately between 7:30-8:30 AM. Since the garage peaks well before the adjacent street traffic, the levels of service are better than when commuter traffic creates congestion. In addition, specific to the intersection of St. John / Congress, there is currently an exclusive pedestrian phase that significantly decreases the capacity of the intersection when actuated by pedestrians. This exclusive pedestrian phase has previously

been identified by Gorrill Palmer to change to concurrent pedestrian phasing as part of the garage project, thus significantly improving the intersection level of service from existing conditions. It should be noted that the intersections in the immediate area will also be reevaluated in Phase 3 of the MMC expansion when a Traffic Movement Permit will be required.

6. *The applicant should provide information on the provisions of temporary parking conditions for both MMC and 222 St. John Street during construction activities.*

Response: MMC parkers will be relocated to the Gateway garage and shuttled to campus during the construction process. 222 St John St parkers will utilize the surface parking lot on the east side of St John St and portions of the rear surface parking lot.

7. *The sidewalk from St. John Street to the rear of 222 St. John Street should be ADA compliant and continuous.*

Response: The sidewalk in this location has been revised to provide a continuous sidewalk, while maintaining existing slopes adjacent to the existing entrance drive. Please refer to attached revised design drawings.

8. *The applicant should provide a parking analysis for the parking demand and supply conditions for 222 St. John Street.*

Response: A utilization analysis of parking behind 222 St John St is attached within this submission packet.

9. *I would suggest a crosswalk be provided across the 222 St. John Street driveway.*

Response: A crosswalk has been added in this location, please refer to the attached revised design drawings.

10. *The median refuge island on Valley Street needs to be a minimum width of 6-feet to meet ADA requirements. The ramp configuration on the west side should be revised to eliminate the flare condition. Warning sings may be required, and direction will be provided in the future.*

Response: Comment acknowledged, MMC will coordinate with the City of Portland and MaineDOT on final design details.

Comment letter from Bruce Hyman Transportation Program Manager Dated July 05, 2018

Site Layout and Materials Plan 1 (Sheet C-100)

1. *City Staff are reviewing various bikeway/roadway configuration, pavement marking and signage along the St. John Street frontage to provide the best bikeway given the high prevalence of right turns on the southbound St. John St. into the parking garage.*

Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming.

2. *The walkway along the driveway from the garage/Eagles building should provide a full usable width of 5' exclusive of the lighting poles/fixtures. The sidewalk should be widened or the poles moved out of the sidewalk.*

Response: The proposed sidewalk has been widened to provide a minimum of 5' width. Please refer to the attached revised design drawings.

3. *The sidewalk proposed along D St should have a wider effective/usable width given the likely location of the lighting poles within the sidewalk and the potential for moderate to high numbers of pedestrians using the sidewalk (6.5' is too narrow).*

Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming for the layout of D Street.

4. *Consideration should be given to curb the south side of D St as well to establish a standard width street of approximately 38' curb to curb to better organize its likely increased use and accommodate a future sidewalk.*

Response: The proposed D Street improvements have been revised to show a 36' curb to curb dimension as previously discussed with City Staff. Please refer to the attached revised design drawings. We anticipate additional changes to D Street based on comments received from the City on July 20th.

5. *The curb ramps at the NE and NW corners of the entrance/exit and D St may need to be reconfigured and may not be as large as shown (potentially reduce the length of flush curb and detectable warning panels).*

Response: The curb ramps in this location have been revised, please see the attached revised design drawings.

6. *Consideration should be given to provide a 4th crosswalk at the intersection with D St/ garage entrance-exit.*

Response: A fourth crosswalk has been added, please see the attached revised design drawings.

7. *It is unclear whether the plans for D St. account for the two driveways that currently exist today on the north side.*

Response: The two existing driveways have been accounted for within the D Street upgrades. Please see the attached revised design drawings.

8. *The curb ramp on the west side of Valley Street at D street may warrant a different configuration that does not use a flare- the proposed configuration is less traversable by those with disabilities.*

Response: MMC received additional comments from the City of Portland on July 20, 2018 stating that additional information is forthcoming.

9. *Valley Street will be under moratorium later this year it is paved via a MaineDOT project and the timing and impact of the construction of the proposed pedestrian crossing (ramp, refuge island) need to be considered.*

Response: Comment acknowledged. MMC has reached out to MaineDOT's project manager, as requested by the City, to coordinate project improvements.

10. *The pavement markings and labels for the reversible center lane for the garage exit/entrance are to be revised to be clearer.*

Response: Pavement markings and labels have been revised, please see attached revised design drawings.

11. *The driveway, as shown, does not conform to the Technical Manuals Sidewalk Material Policy- it is to be brick.*

Response: The driveway has been modified to show a brick apron, please refer to the attached design drawings. MMC continues to have concerns about the durability of a brick apron in this location.

Site Layout and Materials Plan 2 (Sheet C-101)

12. *A crosswalk across the Margarita's driveway should be provided.*

Response: A crosswalk has been added in this location, please see attached revised design drawings.

13. *A continuous sidewalk along the frontage of margarita's should be provided- there should be an expectation of some pedestrian use of that route to/from the 1st floor of the parking garage connecting to St. John St*

Response: The sidewalk in this location has been revised to provide a continuous sidewalk, while maintaining existing slopes adjacent to the existing entrance drive. Please refer to attached revised design drawings.

Sidewalk Improvement Plan (Sheet C-107)

14. *The network of pathways and lighting from Valley Street to the Western Prom should also be assessed for its adequacy to provide safe and direct connections to/from MMC and the parking garage to encourage walking*

Response: An assessment of the Valley Street Trail has been conducted, additional comments from the City of Portland July 20, 2018 requested additional evaluation. A final Valley Street Assessment will be provided once complete.

15. *A crosswalk across the driveway at 222/Margarita's is to be added.*

Response: A crosswalk has been added in this location, please see attached revised Design Drawings.

Civil Details (incl. Sheet C-202)

16. *The brick sidewalk detail is to be modified to state "2% cross slope (MAX." not (TYP).*

Response: The brick sidewalk detail has been revised, please see attached revised design drawings.

17. *Details are needed for detectable warning panels (cast iron) and Driveway (showing "2% cross slope (MAX.)").*

Response: The brick sidewalk detail has been revised, please see attached revised design drawings.

Comment letter from Caitlin Cameron, Urban Designer Dated July 02, 2018

1. *The one aspect of the current proposal that HP staff suggests be given further consideration is the color/tonal palette. The current proposal features a high level of contrast, which is visually striking, but also demanding. In staff's view, were the colors warmer in tone and "knocked down" in terms of contrast, the building would likely achieve a greater level of compatibility with its surrounding context.*

Response: The renderings emphasize the contrast between the actual material choices. Material samples will be provided.

2. *Staff recommend in order for the garage to be visually cohesive with the MMC campus and the surrounding context, the material color palette should be coordinated to include warm tones of the grey and white.*

Response: Material samples will be provided.

3. *Consider whether the high level of contrast is appropriate – though staff are supportive of the grey and white materials, the level of contrast may bring too much attention to the garage that otherwise is intending to be recessive.*

Response: Please refer to response above.

4. *Staff suggest more emphasis can be brought to both entrances – increase scale of entrances, canopies, lobby area, etc. to increase scale of these entrances in relationship with the scale of the building and the distance from the street.*

Response: MMC has added windows to the mechanical room on the first floor of the garage facing St John St, expanded the canopy facing St John St, and added bicycle storage in the lobby area. See revised plans.

5. *What is the material of the ramp roof? Is that depicted in the renderings?*

Response: The ramp roof will be precast concrete.

6. *There are some outstanding questions regarding the roof level design in relation to long views:*

    a. *Are the ramp and circulation tower roofs adequately depicted in the renderings? It is difficult to tell how visible these will be with the materials provided.*

    Response: Yes. They are very small and not visible from a distance.

    b. *Concern about the visibility of the roof lighting poles and light levels, especially the impact on the Western Promenade.*

    Response: The roof deck lighting poles have intentionally been limited to locations along the center of the roof deck to minimize their visual impacts as might otherwise be experienced if the lighting poles were located along the perimeter of the roof deck.

7. *The project proposes limited activity at the ground floors – the building use is garage only and is set back from the street. There is a garage entrance oriented to St. John and shuttle activity and an entrance facing the side surface parking.*

    a. *Consider ways of introducing more "eyes on the street" facing St. John Street whether that be more glass on the circulation tower, increasing the size of the entrance lobby, adding windows to the security/utility area of the façade (clerestory, 2nd level waiting lobby, etc.).*

Response: Windows have been added to the mechanical space facing St John St and the canopy has been enlarged. The proposed garage building will have full-time 24-hour 7-days-a-week security presence with security camera coverage of both the interior and exterior of the building. Bicycle racks have been added below the enlarged canopy to further activate the space.

8. *Staff request more information regarding the screening of cars. Screening methods include solid concrete spandrel wall with metal mesh railing on the ground floor. It is not clear whether the spandrel panels will conceal the headlights of cars. Will cars be screened from view on the top floor, from the Western Prom?*

Response: Yes, headlights will be screened by spandrel panels. Cars on the top floor of the garage will not be screened from the Western Prom. The elevation of the Western Prom is higher than the top floor elevation of the garage.

9. *Staff suggest the lobby entrance facing St. John Street could increase in size, include more fenestration, and/or include additional lighting.*

Response: Comment acknowledged. Windows have been added to the mechanical space on level 1 of the garage. See revised plans.

10. *Regarding "Eyes on the street" See Comment 8.*

Response: The proposed garage building will have full-time 24-hour 7-days-a-week security presence with security camera coverage of both the interior and exterior or the building.

11. *Rather than extend a wood fence to the street between the Railroad Building and the residential building, staff recommend using landscape.*

Response: A 4-foot fence along with landscaped screening will be provided between the Railroad Building and the residential building, please refer to attached revised design drawings.

12. *Clarify whether there is building lighting above ground level.*

Response: Along the western façade there are building lights that illuminate the emergency egress walkway. These lights are installed at 10'-0" above the finished grade of the walkway. At the garage entrances/exits at the eastern façade and at the northern façade there are lights installed at 20'-0" above the finished grade of the drive surfaces. Along the southern façade there are building security lights installed at 10'-0" above the finished grade. There also are lights installed under the ceiling of the entrance canopy at the eastern façade.

13. *Concern about light trespass on neighboring residential properties and level of light visible from the Western Promenade at night. More information is requested regarding the impact of site lighting from the long views, especially light trespass and visibility of the lighting on the upper stories and roof from the Western Promenade.*

Response: The roof lighting has been prepared to meet the lighting recommendations published by the Illuminating Engineering Society of North America (IESNA). The minimum recommended illuminance is 0.5 footcandles at the parking surface. The lighting design has been kept to a practical minimum to avoid excessive lighting levels. The designed minimum illuminance is 0.6 footcandles.

14. *Staff comment that the material color palette causes the building to stand out or be less recessive than desired. Therefore, the suggestion is that the grey and white materials should have a warm tone to be cohesive not only with the existing MMC campus but also the surrounding context.*

Response: The renderings emphasize the contrast between the actual material choices. Material samples will be provided. MMC is working to provide material samples for review.

15. *The rooftop design including light poles, ramp and circulation tower roofs, and any mechanicals should be accurately demonstrated in these renderings. It appears in the materials given that these rooftop appurtenances have minimal visual impact and are integrated into the design, but staff would like to clarify whether all these features have been included in the rendering images.*

Response: Yes, these features have minimal visual impact and were included on the renderings but may not be apparent from various vantage points due to scale of the objects relative to the building and/or eye elevation relative to the roof.

16. *Given the scale of the building and the set back from the street, the scale of the entrance lobby could increase to be more visible and provide a more "lively" space.*

Response: The proposed building entrance canopy has been extended along with the addition of bike racks, and windows in the mechanical room.

We look forward our next meeting with the Planning Board. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

WOODARD & CURRAN

David Senus, PE
Project Manager

Attachments

1. Design Change Letter
2. Checker Block Paver Documentation
3. City of Portland Department of Public Works Correspondence
4. Subcatchment Area Evaluation
5. Construction Management Plan
6. Right, Title, & Interest
7. Waiver Request Form
8. Traffic Correspondence July 06, 2018
9. 222 St. John Street Parking Assessment
10. Lighting Design Updates Letter
11. Section 12 of the Level III Site plan Narrative

2. APPLICATION FEES

A check for $5,250 for the required application fee has been provided to the Planning Department. The application fee includes:

- Level III Development – Over 300,000 sq. ft. - $5,000
- Stormwater Quality Review - $250

We understand that the Traffic Movement payment will be made under a separate phase, the Design Review will be billed as staff time and third-party review will be billed separately.

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DRIVE RESULTS

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August 24, 2018

Nell Donaldson, Senior Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: MMC Staff Parking Garage | 222 St. John Street | Level III Site Plan
Response to Public Comments 2

Dear Nell:

Thank you for coordinating the review of the Maine Medical Center Parking Garage project located at 222 St. John Street. This letter provides a summation of our responses to the comments received from various reviewers as part of the Level III Site Plan process. We have repeated the original comments in italics below, and our response follows each.

Comment letter from City of Portland Fire Department Dated August 3, 2018

1. *The only item that still is of concern is the location of the private hydrant. We'd like to have it moved further west, between the access road into the lower garage entrance and surface parking lot. The proposed location doesn't give us easy access for operations covering the majority of the building.*

Response: The enclosed plans depict a revised hydrant location as recommended by the Fire Department.

Comment letter from Wright-Pierce Dated August 06, 2018

1. *Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)*
    a. *General Standard: The applicant has provided information regarding the size and scope of the project indicating that the project is subject to the Redevelopment Standard within the City of Portland, which is more stringent than the Chapter 500 requirements for redevelopment. The following items have been reviewed:*
        i. *The HydroCAD Subcatchements and Table 12-1 have been updated to report a total drainage area of 160,921 square feet (SF) conveyed to the stormwater treatment unit, and the applicant has confirmed this value as the correct area. this value differs slightly from a preliminary calculation provided in Section 12, Attachment 3. However, the 160,921 SF area is still smaller than the maximum volume supported by the treatment system, and no additional action on this item is necessary unless this value changes.*

        Response: Comment acknowledged.

        ii. *The MaineDEP approval letter dated January 21, 2015 for the Jellyfish Filter require manufacturer approval for each design, as noted in item 7 of this letter (page 14 of Section 12, original submission). The applicant has noted this letter has been requested and will be forwarded upon receipt.*

Response: A letter has been requested from the manufacturer and will be forwarded upon receipt.

iii. *The applicant will be required to inspect, maintain, and report on the filter in accordance with Chapter 32 stormwater requirements. The applicant has indicated a strormwater maintenance agreement will be provided following Site Plan approval, therefore, this item may require a condition of approval.*

Response: Comment acknowledged.

2. *Connection to Existing System:*

   a. *The existing facility currently discharges to an 18" private storm drain. The proposed condition includes retaining surface runoff in order to allow runoff from a 25-year, 24-hour rain event to pass an 18" pipe. Flows from the East Stormdrain are proposed to connect to the existing 30" pipe in St. John Street.*

      i. *The applicant has provided revised calculations for pipe flows to the 18_inch private stormdrain, which are now in agreement with the HydroCAD model's dynamic flow modeling. Review of this information indicates the project is in conformance with the City of Portland Code of Ordinances section 14-526 (b) 3.a subsection ii regarding downstream private drainage and the proposed rate of stormwater leaving the site is less than the existing condition in this location. It is understood that the model is limited to conditions where 1) the R-Tank system is empty prior to the storm, 2) down-gradient pipe or tailwater conditions are not impacting flow, and 3) dynamic tailwater conditions allow for the outlet to exceed the Manning's Equation standard flow rate. Off-site and down slope impacts or saturated conditions may prevent the system from conveying a 25-year 24-hour design storm event.*

      Response: Comment acknowledged.

      ii. *As there is no existing connection from the property to the St. John Street stormdrain, any new connection results in a increase of flow. The applicant has provided correspondence from the City of Portland Public Works that the storm drain within St. John Street has capacity to accept the additional peak flow of 3 cubic feet per second (CFS) from a 25-year, 24-hour design storm event. Therefore, this connection in conformance with City of Portland Code of Ordinances section 14-523 (b) 3.a, subsection iii and IV, which refers to requirements for new connections and increase flow rates to City-owned infrastructure.*

      Response: Comment acknowledged.

3. *Proposed Drainage Design*

   a. *The applicant has provided data indicated the inlet capacities of proposed catch basin grates can adequately convey flows from the 25-year, 24-hour design storm even for the most limiting subcatchement. No further action on this item is necessary.*

   Response: Comment acknowledged.

   b. *The applicant has provided a statement confirming the HydroCAD Pond P-1 was developed in consonance with the information provided by the manufactures for the R-Tank units. Review of major items such as inverts, tank surface area, pond void*

ratios, and outlet elevations have confirmed that the HydroCAD model reflects the design. No further action on this item is necessary.

Response: Comment acknowledged.

c. *The applicant has confirmed the pipe exiting CB21 on sheet C-103 is an 18" pipe. No further action on this item is necessary.*

Response: Comment acknowledged.

d. *Pipe 22 has a 0.0% slope. The applicant has coordinated with the manufacture and confirmed this is typical of inlets to a JellyFish Filter. No further action on this item is necessary.*

Response: Comment acknowledged.

e. *CB12 has 1.37 feet of drop between the in and out inverts. The applicant has confirmed that this is intended due to large drop in grade.*

Response: Comment acknowledged.

f. *The HydroCAD output files reference 24-hour design rainfall amounts of 3.1", 4.6", and 5.8" for the 2-,10-, and 25-year events, respectively. The applicant has indicated these data are from Appendix H of MaineDEP's Chapter 500 for rainfall amounts. No further action is necessary.*

Response: Comment acknowledged.

4. *Capacity to Serve:*

   a. *The applicant has sent Capacity to Serve Letters to Utilities. Responses to these letters are required parts of the application, and the applicant has indicated that they will be provided to the City as these letters are received. A wastewater capacity review form has been provided by the Department of Public Works indicated down-slope sewers have the capacity o serve the proposed project. Any outstanding capacity to serve letters may become a Condition of Approval for Site Plan Approval.*

   Response: Please see attached Central Maine Power capacity to serve letter, additional, capacity to serve letters will be forwarded upon receipt.

5. *Parking Garage Drainage:*

   a. *The applicant has provided confirmation that the top deck of the parking lot garage conveys rain event flows to the stormwater detention system. The applicant has provided additional detailing of an oil/water separator and has indicated that interior parking surfaces not exposed to rain events will convey flows to this oil/water separator.*

   Response: Comment acknowledged.

6. *Site Grading:*

   a. *The applicant has confirmed site grading will not be affected by future information regarding soil management, as that information ill only be used by the contractor for their own management.*

   Response: Comment acknowledged.

   b. *Grading review identified that Pipe 14 between CB15-CB16 has a negative slope. Please revise or provide explanation.*

Response: The pipe slope and associated invert elevations have been modified in the attached, revised plans.

c. *Top of curb and Bottom of Curb information at CB-18 appears to be inverted. Please revise or provide explanation.*

Response: These elevations has been modified in the attached, revised plans.

d. *Much of the proposed stormdrain has between 4 feet and 3 feet of cover. Detail on C-202 indicates rigid insulation shall be provided in these locations. No further action is necessary*

Response: Comment acknowledged.

7. *Snow Storage:*

   a. *Catch Basin at intersection of D Street and St. John Street was previously located in a transition ramp next to flat curb. The applicant has provided additional notation to the plans to confirm the intent of the catch basin being located outside of the transition ramp, and with a granite inlet stone.*

   Response: Comment acknowledged.

Comment letter from Planning Department Dated July 02, 2018

Zoning Analysis

1. *Proposed sign does not match others on campus per the sign plan submitted in 2008. In the final submittal, provide an explination as to why the design diverges from the sign plan. Waiting on new draft sign plan to be uploaded to ePlan. Sign designis generally acceptable, just want to be sure that it si consistant with MMC's Plans for signs campus wide.*

Response: Please see attached signage plan.

2. *Will review TDM plan and provide final comments as soon as possible.*

Response: Comment acknowledged.

3. *Campus-wide Parking analysis in IDP, GP's memo, and TDM plan do not entirely match. GP's memo cites a projected deficit of 500-600 spaces. This figure does not appear in the IDP, and doesn't mesh with employee growth figures from the IDP (approximately 300 new employees by 2026?). A table would still be helpful if it is possible to pull one together. What we are interested in is clear documentation of existing supply and demand & future supply and demand and rations behind each.*

Response: Comment acknowledged.

4. *CMP should include some discussion on methods to mitigate impacts to 210 St. John, particularly given location of construction access. Also speak directly to concerns about loss of landscaping there. Will there be revisions based upon the conversations with the owners of 210 St. John.*

Response: During the process of construction great attention will be required to ensure that homes and places of business are not overly impacted by construction activities or traffic. While the logistics of the CMP does not require work associated with or access through the adjacent properties, certain measures will be taken to minimize the

potential for a disturbance. Erosion control, physical barriers, temporary shoring and staged material deliveries will be coordinated during construction.

Care will be given to the owners and users of 210 & 212 St. John St. The residences are the closest in proximity and will likely experience the greatest impact. Individual site meetings will be held with the owners of these properties to discuss their needs throughout construction. Consigli and MMC are committed to working through logistical challenges with the neighbors and providing adequate and reasonable measures to accommodate their requests.

The design team met with the owner of 210 St. John Street on July 26, 2018. We have revised our drawing based on this conversation. The owner does not want arborvitaes to be planted on his property as shown in previous plan. He would like to preserve and maintain the blue spruce on his property through construction. Should any plantings be damaged during construction, Maine Medical Center will work with the owner to replace plantings that are impacted during construction.

5. *Please note discussion regarding improvements to nearby Valley Street park space.*

Response: Comment acknowledged.

6. *Need construction easements on Union Station Plaza lot. These will be required prior to building permit. Construction easements will also be necessary on all sites where is proposed. This will be a condition of approval*

Response: Please refer to the excerpt language below taken from the leases between Maine Medical Center, Caste Cow, and Cowcatcher pertaining to improvements within the Caste Cow property. All other necessary easements or agreements with neighboring landowners will be obtained prior to requesting a building permit.

Caste Cow Lease

SECTION 5. TENANT'S CONSTRUCTION AND TERMINATION RIGHTS

(a) Construction of Building and Improvements. Tenant acknowledges and agrees that it shall construct the Building and Improvements on the Premises at no cost to Landlord and that landlord shall have no responsibility for securing entitlements on the Premises, the Common Driveways, or abutting property, or any site improvements on, above or below the surface of the Premises, the Common Driveways, any abutting property or any other property, including without limitation water, sewer, electrical and other utility lines, wires, pipes, conduits and the like or any related infrastructure (whether currently existing or installed in the future), and any improvements required by any Governmental Authorities in connection with Tenant's contemplated development or use of the Premises, or for the maintenance, repair, and replacement of any of the same.

SECTION 7. USE OF PREMISES

(a) Permitted Use. Tenant shall construct or cause to be constructed upon the Premises, a building for use and operation as a parking garage, with accessory uses needed to serve Tenant employees or for any other use allowed by zoning and approved by Landlord, such approval not to be unreasonably withheld, and based solely on whether Tenant's proposed construction would materially diminish the value of the Fee Estate (the "Permitted Use"). Any other use or change in use from the Permitted Use shall be prohibited.

Cowcatcher Lease

SECTION 3. TERM AND TITLE TO BUILDING AND IMPROVEMENTS

(d) Title to Building and Improvements. Beginning on the Rent Commencement Date, title to all newly constructed Improvements located in, on or at the Premises (but excluding the Premises, the Building and all currently existing Improvements, title of which shall remain vested in Landlord at all times) shall be vested in and remain in Tenant until the expiration of the Term or earlier termination of this Lease, or in the event of an eminent domain action involving all or any portion of the newly constructed Improvements (but only to the extent of the portion taken), at which time title shall automatically vest in Landlord free and clear of all interests of Tenant and without any payment therefor and Landlord's title thereto shall be unlimited except that, in the event of an eminent domain action involving only a portion of the newly constructed Improvements, title to the remaining newly constructed Improvements shall continue to be vested in and remain in Tenant until the expiration of the Term or earlier termination of this Lease. …

SECTION 5. TENANT'S TERMINATION RIGHTS

(a) Construction of New Improvements. Tenant acknowledges and agrees that it shall construct any new Improvements on the Premises at no cost to Landlord and that Landlord shall have no responsibility for securing entitlements on the Premises, the Common Driveways, or abutting property, or any site improvements on, above or below the surface of the Premises, the Common Driveways, any abutting property or any other property, including without limitation water, sewer, electrical and other utility lines, wires, pipes, conduits and the like or any related infrastructure (whether currently existing or installed in the future), and any improvements required by any Governmental Authorities in connection with Tenant's contemplated development or use of the Premises, or for the maintenance, repair, and replacement of any of the same.

7. *Finalize plan for temporary parking for displaced employees. Waiting on feedback from City's traffic engineer.*

Response: Comment acknowledged.

8. *Provide more information on how snow ban parking will be managed. Based on your response to neighborhood comments, there is a better understanding of where you are in the process of determining where neighborhood residents will be permitted to park during snow bans.*

Response: Comment acknowledged.

Site Plan Review

1. *Waiting on confirmation that MaineDOT agrees to the installation of traffic signal (GP was making initial contact). Further comments on this from City's traffic engineer should be forthcoming.*

Response: Comment acknowledged.

2. *Intersection Design:*
    a. *St. John Street*
        i. *See most recent concept from Bruce Hyman and note follow up comment sent on 8/1:*

1. *Design should include radius curb (10'R) for the outside and inside edge of the right turn pocket.*

   Response: The attached, revised plans reflect this edit.

2. *The exact sign placement needs some MUTCD guidance and placed in the sidewalk.*

   Response: The attached, revised plans reflect this edit.

3. *As I mentioned previously at the meeting on Monday, all bike lines next to motor vehicle lands are to be 6" lines (both solid and dashed)*

   Response: The attached, revised plans reflect this edit.

b. *D. Street*

   i. *Design should include 6' sidewalk and 4' esplanade (with street trees- 'Karpick' Red Maple or 'Browhall' Red Maple). Jeff Tarling has raised some questions about sidewalk plowing. He wrote: " knowing this route will likely be on the sidewalk plowing route in the future, the crosswalk, center island if there is one, and the Valley Street sidewalk should be constructed with the turning radii of our 'Trackless' sidewalk plow in mind" He is particularly concerned about the crosswalk landing on the east side of the Valley, where there is a stone retaining wall up against the back of sidewalk.*

      Response: Waiting for further direction from the City regarding the need for easements on private property.

c. *Please forward Western Prom assessment when complete.*

Response: Please see enclosed assessment memos.

d. *Please note Planning Board Concern regarding headlight glare and traffic relative to nearby residential properties opposite St. John Street.*

Response: At the Planning Board Workshop held on July 10, 2018, concern was expressed over the location of the primary garage driveway proposed across from D Street. Specifically concerns related to impacts to the two residential properties at the north and south corners of the D Street and St. John Street intersection resulting from additional vehicle maneuvers at this location, including noise, fumes, and headlights. For a variety of reasons, as discuss herein, we feel that concerns noted area addressed when considering the timing of vehicle trips to and from the site, and the existing site conditions.

<u>Driveway Location Considerations</u>

During the schematic design phase, the Maine Medical Center project team explored many options for the location of the primary garage driveway. The team looked at multiple locations along the Fraternal Order of Eagles frontage, along a 40' wide land area immediately south of the 222 St. John Street building, through the Union Station Plaza (Margaritas) driveway, and through the Ferguson Showroom and Plumbing Supply parking lot south of the site. In all cases, with the exception of the current proposal, the driveway did not create a 4-way intersection with a City block, and in most cases the driveway is in proximity to, yet off alignment with a nearby intersecting roadway on the opposite side of St. John Street (C Street or D Street). Also, in all cases the driveway is

located across from residential lot (s), including at the "Margaritas" entrance driveway to Union Station Plaza.

From the early planning stages for the garage, the initial traffic data indicated the potential for a signalized intersection at the primary garage entrance and modifications to the lane striping on St. John Street to allow for left and right turn maneuvers at the intersection. When exploring the various potential driveway locations, it was evident that a signalized intersection located off-alignment with a nearby intersecting City street would create significant impacts to the right of way and traffic movement through these zones. For instance, if a traffic light was situated at the "Margaritas" entrance driveway to Union Station Plaza, the signal and lane assignments would need to accommodate the C Street intersection, which is located 100' to the south, stretching the intersection and creating a large zone of 3 or more lanes in St. John Street. In mid-block areas, such as an entrance along the south wall of the historic building at 222 St. John Street, the intersection would be located immediately across from and in line with a residential property. In all potential driveway locations that were explored, an equal or greater number of on-street parking spaces would be lost relative to the current proposal.

The proposed location of the primary entrance to the garage is the best option for the adjacent roadway. It creates a four-way intersection with D Street, minimizes the impact to on-street parking, and minimizes the impact to the adjacent residential lots.

Traffic Impacts

The proposed garage will result in an increased volume of traffic on St. John Street and at the primary garage driveway location, as discussed in the Traffic Evaluation Memorandum prepared by Gorrill-Palmer. When considering the concern over headlight impacts on these residential properties from turning vehicles, it is important to note that the peak exiting volume from the garage occurs between 4:15PM and 5:15PM. During most of the year this peak exiting volume occurs during daylight hours. During the winter months headlights would be in use in these periods; however, the volume of traffic drops off sharply after the PM peak hour, with very little traffic exiting the garage past 7 PM. Although the additional volume of traffic will result in an increase in noise and exhaust in the area, this condition is relatively short in duration (not continuous) and is comparable to many intersections in urban, residential areas of the City. It should be noted that the completed project will not generate additional truck traffic in the area, which is typically a primary contributor to noise and exhaust concerns.

Existing Site Conditions at the Proposed Driveway Location

The proposed driveway is situated at the location of an existing driveway that serves a 50+ space surface parking lot for the Eagles. This driveway is utilized throughout the day, with more substantial usage on evenings and weekends. As such, there is a present-day condition of a low volume of vehicles entering and exiting in an existing driveway located opposite the D Street intersection.

The proposed driveway is located at approximately equal elevation to St. John Street without any significant slope or grade differential that would cause headlights to project up toward the windows of the adjacent properties or down toward the windows.

The residential property on the north side of the D Street intersection has some deciduous screening (bushes and trees) between the house and the street; the property to the south of the D Street intersection does not have vegetative screening between the house and the intersection. We do not believe that the additional traffic generated by this project warrants the need to increase screening at these locations.

e. *Please note that there may be additional comments forthcoming on the Fore River connection analysis. At the least, the analysis should note that a surface crossing is not precluded by the garage design.*

Response: Comment acknowledged.

f. *Also note there will be a condition of approval regarding the Eagles entrance.*

Response: Comment acknowledged.

3. *Please show METRO stop south of the garage entrance along the Eagles frontage.*

Response: The attached, revised plans reflect this edit.

4. *Need street trees on D Street, as possible. Waiting on comments from fire/arborist on pavers see above comments on D street.*

Response: Waiting for further direction from the City regarding the need for easements on private property.

5. *Need capacity to serve letters*

Response: Please see attached Central Maine Power capacity to serve letter, additional, capacity to serve letters will be forwarded upon receipt.

6. *Need waiver request for average illumination levels. Response is understood. A waiver will be recommended.*

Response: Comment acknowledged.

7. *Concern re visibility of rooftop lights from western prom. Can top deck be closed down at night and these lights be shutoff? Please upload night renderings to ePlan.*

Response: MMC will install a timer and motion sensor system to the roof lighting system, please see the attached night renderings.

8. *As noted above, may need lighting within Western Prom. Further info on this pending evaluation noted above. Assessment still outstanding.*

Response: Please see enclosed assessment memos.

9. *Verification that HVAC meets standards will be included as a condition, as requested.*

Response: Comment acknowledged.

10. *Can material samples be provided for Planning Board. Please provide final proposed materials to the Planning Division when they come in. We will want to look at these, including the lighter concrete, before they go to Planning Board.*

Response: Precast samples were delivered to City of Portland Planning Department on Thursday August 16.

11. *Right Title and Interest*

    a. *Need evidence of rights to make improvements to 222. St. John and to Union Plaza lot*

Response: Refer to Easements contained in Section 7 of the Site Plan Application, granting rights for improvements associated with access and drainage on Union Plaza land.

b. Confirm that we have evidence of stormwater infrastructure easements with 222 St. John pursuant to lot split. Is there a figure showing this & the access easement? Technically, Cowcatcher and Caste Cow are separate entities, so the drainage easement should exist (as the access easement does)

Response: The two properties are managed by a common entity that has ownership of both parcels, and that has leased the properties to Maine Medical Center under a 50 year lease. Easements for drainage and utilities will be drafted upon development of As-Built drawings to ensure the location of these features are properly memorialized.

c. Clarify terms around obligation to provide 'parking for up to 400 vehicles, either in the parking structure… or on the surface of said parcel until such time as said parking structure… is constructed' in the Caste Cow/ Cowcatcher deed

Response: The obligation to provide 400 spaces in the garage is a hold-over from an easement between Cowcatcher, LLC and Caste Cow, LLC. A copy of the easement language is attached.

12. To move forward as per 8/2 email between Dave Senus & the City of Portland/MDOT. Please note that the final overlay should be completed this summer, and that, during the period between mill and overlay, all area sidewalks should be ADA accessible.

Response: Comment acknowledged.

Comment letter from TYLIN International Traffic Dated August 14, 2018

1. The plans include aisle widths, and some do not comply with City standards. The applicant should request a formal waiver with supporting documentation.

Response: A waiver has been requested for aisle widths, please refer to the attached revised Waiver Request Form.

2. A traffic signal is proposed at the St. John street/D Street/Garage Driveway location. I support the installation of a traffic signal given vehicle volume conditions and anticipate pedestrian movements. I would note that the applicants responsible for the development of design plans and equipment specifications for review and approval by the City. All costs associated with the installation of the traffic signal the responsibility of the applicant. The applicant has acknowledged this comment. I would note that I continue to communicate with Steve Landry at MaineDOT regarding the timing of traffic signal activation, I support the activation of the traffic signal at garage opening given traffic data and engineering judgement regarding area conditions and minimizing local street parking. I would note that if MaineDOT requires traffic data collection prior to activation, the application shall collect data at the same time of garage opening, and periodically until sufficient data supporting traffic signal activation is obtained.

Response: Maine Medical Center will work with the City to advocate on behalf of activating the signal when the garage is open. If Maine DOT requires traffic data collection prior to activation, we propose the following schedule for data collection:

- *One month after garage is 100% open.*
- *One year after garage is 100% open.*
- *One month after the Congress Street Building is fully occupied and operational.*

- *One year after the Congress Street Building is fully occupied and operational.*
- *Every other year after the Congress Street Building is fully occupied and operational.*

3. *The general layout of the St. John Street/D Street/ Garage Driveway intersection is generally acceptable. It should be noted that the City is currently reviewing bicycle facility recommendations and final direction will be provided in the future. Some initial comments are provided below:*

    a. *The number of pavement marking arrows is excessive an should meet either City or MaineDOT Standards (they may be for traffic flow reasons). I would suggest the through land arrows be eliminated on St. John Street.*

    Response: Comment addressed on revised plans. The pavement arrows have been modified based upon discussion with Staff on August 16, 2018 meeting with the City of Portland.

    b. *I continue to review the garage approach as it relates to providing a three-lane section with a reversible center lane and traffic control design elements. Specific details on how the three-lane approach will be managed shall be provided. Specifically, how will the two egress lanes (and when needed) be signed for use. One of the egress lanes will become the right-turn lane onto southbound St. John Street and the other will become the shared through/left lane. Dynamic signage is suggested. For entry movements, the applicant should note how the lane drop (two to one lane) will work under peak morning volume time periods.*

    Response: The access to the parking garage will operate as a single ingress lane and separate left/through & right egress lanes under typical day to day conditions. The access gates will be designed to accommodate other lane configurations should they be needed in emergency situations only. Security is on-site 24 / 7 to direct traffic as needed under emergency situations that require something other than typical lane usage. On-site security will use dynamic signage to direct traffic. A dynamic signage system has not yet been selected.

4. *The applicant has provided a traffic evaluation and my initial comments are noted below:*

    a. *I have requested the Synchro traffic model for review, the requested files have been provided. I find the models to be reasonable but would note additional calibration may be requested during the TMP process during Phase 3 permitting.*

    Response: Comment acknowledged.

    b. *Some of the intersection level of service conclusions seem better than actual field conditions. I would suggest the applicant field confirm intersection delays and queues. During the TMP process, refinement of the model may be required. As noted in the applicant's response to comments, the pedestrian phasing at the Congress Street/St. John Street intersection is inefficient and a contributing factor to long vehicular delays and queues. In conjunction with this application, the traffic signal equipment shall be upgraded to allow for concurrent pedestrian phasing. Implementation shall take place with the disposition of the Congress/ Valley signal, prior to the opening of the garage.*

    Response: It is our understanding this comment is directed at the signalized intersection of Congress St. / St. John St. As identified in previous submittals to the City, the intersection operates at low levels of service with the current exclusive pedestrian

phasing as exists and observed today. Gorrill Palmer previously recommended changing the pedestrian phasing to concurrent to improve the level of service and presented those findings in the submitted traffic analysis. The two Congress Street intersections with St. John Street and with Valley Street operate as a single system. In order for the Congress Street / St. John Street intersection to be changed to concurrent phasing, the traffic signal at Congress St. / Valley Street would have to be removed or put on its own system. Signal warrant analysis by others indicated that the signal at Valley Street is not warranted and should be removed. It is our understanding from the City that they support this removal. Upon removing the signal, the Congress St. / St. John Street signal can be upgraded. This intersection will be further reviewed as part of Phase 3 of the MMC Congress Street hospital expansion Traffic Movement Permit application.

5. *The applicant has noted that the existing MMC vehicles parked at 222 St. John Street will be accommodated at the Gateway garage. The applicant shall provide documentation noting an adequate parking supply. The applicant conducted a study of existing parking demand at 222 St. John Street and determined through field observations that parking during construction can be accommodated in the Union Station Plaza Limited Partnership parking lot and the St. John Street east side parking lots. Based on the one day sample, it appears that demand can be accommodated. The applicant should note occupancy of 222 St. John Street during the survey day to confirm future parking demand can be accommodated*

Response: The referenced parking study was completed on a typical Tuesday in July (July 18th) at five different time periods throughout the day. Tuesdays are considered average days for traffic volume at 222 St. John Street. The results of the parking assessment indicate as noted, that the parking demand of 222 St. John Street uses can be accommodated on site during construction using existing surrounding parking areas.

6. *The applicant should provide a parking analysis for the parking demand and supply conditions for 222 St. John Street. This comment is intended to confirm the final parking condition for 222 St. John Street complies with City standards for parking supply, not during construction.*

Response: The future parking supply for 222 St John St is 337 parking spaces. There will be 245 parking spaces within the grade level of the garage. Additionally, there will be 52 surface parking spaces located to the North of the garage and the 40 surface parking spaces across St John St.

Future parking demand is not anticipated to change from todays documented demand. The uses within 222 St John St are anticipated to remain business offices with the exception of 12,000 square feet that will be allocated to MMC's use as a fitness center for employees. We anticipate that employees using the fitness center will park in the garage.

Construction Management Plan:

a. *Construction trucks time limits shall be extended to include both MMC and general traffic peak hours.*

Response: Precast trailers will only transport loads between the staging yard and the job site outside of peak traffic hours as defined as 7:00am – 9:00am and 4:00 pm – 6:00pm.

b. *The secondary storage yard shall be specifically identified.*

Response: A secondary storage yard is anticipated at Portland Yacht Services to store precast material not accommodated on site.

c. *The applicant should note how will the Eagles parking demand be accommodated during construction.*

Response: The existing Southern Eagles parking lot will remain in use throughout construction, with only a minor coordinated shut down to resurface and stripe the existing lot. Additionally, there is an agreement in place with the Eagles to provide a minimum of 37 parking spaces onsite during construction.

d. *All temporary crosswalks shall be ADA compliant.*

Response: Comment acknowledged.

e. *Construction Plans shall be provided for the roadway/signal work in St. John Street, D Street, and Valley Street.*

Response: The site subcontractor will develop a traffic phasing plan upon award. A detailed traffic control plan will be submitted prior to the work starting. Certain parameters will be maintained including at least (1) lane of through traffic, flaggers and visible barriers for vehicles. Inbound lanes will be maintained during morning commute times and outbound lanes will be maintained during afternoon commute times. Nighttime work hours may be considered to accommodate traffic.

7. *The applicant shall narrow the Eagles driveway width to match the aisle width.*

Response: Comment addressed on revised plans.

8. *The Eagles existing parking lot shall provide an aisle width dimension.*

Response: Comment addressed on revised plans.

9. *The applicant shall provide the grade of parking ramps within the garage.*

Response: Grade of speed ramp 13.5% maximum, with 7.0% transition ramps each end. Based on the standards we have used; the maximum recommended slope is 16%.

10. *To efficiently manage parking circulation, dynamic ITS signage noting parking available per level shall be provided.*

Response: Comment acknowledged.

11. *End island for parking spaces to remain in the Union Station Plaza Limited Partnership parking lot should be considered.*

Response: End islands for the parking for parking spaces to remain in Union Station Plaza Limited Partnership parking were considered within the design. However, Maine Medical Center does not have control of the property and has not proposed adding end islands within the parking lot. Additionally, the construction of end islands would result in the loss of parking spaces within the Unions Station Plaza Limited Partnership parking lot.

12. *The applicant should note when (and how will they be managed) movements to Level 1 from St. John Street be permitted.*

Response: Comment addressed on revised plans, a stop sign has been added.

13. *A STOP sign shall be installed at the egress from the 52-space parking lot.*

Response: Comment addressed on revised plans.

14. *The northern aisle width for the 52-space parking lot shall be dimensioned.*

Response: Comment addressed on revised plans. Additionally, it was determined that the aisle widths in this location exceeds the City standards of a 24' aisle width. A formal waiver has been requested within the attached Waiver Request Form.

15. *The applicant shall note who will park in the Union Station Limited Partnership parking lot and why not physically separate from the 52-space lot.*

Response: The existing parking within the Union Station Limited Partnership parking lot will remain unchanged as part of the garage construction and will not be utilized by occupants of 222 St. John Street.

16. *The applicant should provide information on how internal garage traffic circulation will generally work if a connection to Fore River Parkway is implemented in the future.*

Response: The internal circulation of the parking garage, inclusive of ramps between levels, is oriented toward traffic flow onto / off-from St. John Street. A future higher level (above the RR Tracks) connection to Fore River Parkway would introduce a conflict point within the circulation of the garage that would most likely decrease the overall efficiency of the garage and decrease the safety for the employees. If the access were to result in an at grade crossing any disruption to traffic flow, such as a train crossing, would generate significant queuing back into the garage and decrease efficiency, increase queuing, and decrease the safety for the employees.

17. *The applicant should note plans for expansion for electric vehicle charging to accommodate future demand.*

Response: Comment addressed on revised plans.

18. *Sufficient traffic analysis have been conducted to document acceptable operations at the St. John Street signalized entrance. The applicant should provide documentation/examples of 2,400+ space parking garages that have adequate internal traffic circulation capacity to empty efficiently during PM peak periods with one primary entrance and exit.*

Response: MMC has requested additional review from a third-party traffic reviewer which will be forwarded upon receipt.

19. *The applicant should note who will be permitted to park on the ground level and level 1.*

Response: Ground level parking will serve 222 St John St. Level 1 -8 parking will be allocated to Bramhall campus employees. In addition, 52 spaces on level 1 will be allocated to the Eagles.

Comments from City of Portland Regarding TDM Plan, Dated August 17, 2018

1. *Page 8: The plan talks about a shortage of 142 parking spaces, but the delta between total demand and supply, based on the numbers on page 7, is more. Please clarify.*

Response: This refers to the difference between *observed* demand (3,125) and *expected* demand (3,264). However, 142 is incorrect. It should say "139 parking spaces." Applicant revised TDM Plan to reflect this minor change.

2. *Page 8: "MMC's total parking deficit is estimated to be 800 parking spaces in 2017." Based on figures elsewhere, the existing deficit is more like 245. Can this discrepancy be explained?*

Response: This is an oversight. Applicant revised TDM Plan, removing reference to "800 parking spaces in 2017".

3. *Still waiting on bike parking inventory. As noted previously, the type of bicycle parking provided on the MMC campus, based upon images supplied in the TDM plan, is in some cases deficient per the Technical Manual to securely park bicycles and encourage bicycle commuting. (Some of the bicycle racks secure the front wheel only and do not provide the required two points of contact between the bicycle frame and bicycle rack.) In the revised TDM plan, include an inventory the type and number of bicycle parking spaces within the MMC campus at each location to ensure that, at a minimum, 1) the total number of racks that meet the parking standards equals the number required and 2) also meets the standard that bicycle racks are adequately distributed within the MMC Campus at main building entrances, also as required by the Technical Manual.*

Response: The applicant is conducting a bike parking inventory and has identified deficiencies with respect to the quantity and quality (type) of bike parking. The current distribution and accessibility of bike parking exceeds City standards. MMC will submit this documentation in August 2019 as part of the Congress Street site plan.

4. *We would continue to suggest identifying spaces on-campus for preferential carpool/vanpool parking (e.g. some spaces in the visitor garage or surface lots). Preferential spaces in the off-site employee garage are not likely to incentivize change in travel behavior in the way that preferential spaces on campus will.*

Response: The applicant would need to convert existing and/or proposed patient and visitor parking to preferred carpool/vanpool parking in order to achieve this outcome. This is not desirable at this time because it potentially limits healthcare access for patients and visitors.

5. *The parking cashout procedure continues to seem unnecessarily cumbersome (e.g. submitting a form, etc.). In the future, employees should have the opportunity to cashout in advance (i.e. receive cash up front in lieu of the parking pass).*

Response: As discussed in the latest TDM Plan (August 1, 2018), the applicant is evaluating ways to automate this process, including the use of commute management platforms that automatically link to payroll.

6. *Continue to suggest that subsidized METRO passes be distributed up front, rather than on a reimbursement basis (i.e. employees opt for either parking pass or METRO pass). Abuse is likely to be very low, and any additional paperwork/trip logging is likely to be a barrier.*

Response: Acknowledged. TDM Plan has been updated to say: *"MMC will explore ways in which employees can "purchase" transit passes up front, rather than on a reimbursement basis. This "payment-in-advance" option may be contingent on MMC's capacity to verify transit ridership (e.g. through electronic boarding data) in order to minimize abuse of this benefit. It also possible that electronic fare collection and/or commute management platforms (discussed in Data Collection section), if implemented, could allow staff to easily log trips, potentially helping verify transit usage."*

We would like to note some additional modifications to the revised drawing set that have occurred in addition to the modifications noted throughout the comment response:

- Garage foundation drains have been identified on Drawing Sheet C-102.
- Lobby Roof drain locations have been identified on Drawing Sheet C-102.

- An additional isolator row had been added within the R-Tank foot print, this will aid in the removal of accumulated sediments and long-term maintenance of the system. This has been identified on Drawing Sheets C-103 and detailed on Sheet C-204
- Sanitary sewer drains lines have been located exiting the building, and the oil water separator has been relocated. This has been identified on Drawing Sheet C-105
- The dumpster area located within the surface parking lot has been expanded. During review of the current waste management conditions it was noted that the dumpster area needed to be expanded. This has been identified on Drawing Sheet C-101 and detailed on Sheet C-203.

We look forward our next meeting with the Planning Board. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

WOODARD & CURRAN

David Senus, PE
Project Manager

DAS/cms

Attachments

1. CMP Ability to Serve Letter
2. Signage Plan
3. Valley Street Trail Assessment
4. Night Renderings
5. Right, Title & Interest
6. Waiver Request Form
7. Construction Management Plan

3. PROJECT DESCRIPTION

3.1 Introduction

Maine Medical Center (MMC) is located at the western gateway into the City of Portland and fronts along Congress Street. The entire 21.8 acre MMC campus abuts a number of different neighborhood associations, the St John Valley Neighborhood, Parkside, Libbytown, Western Promenade and West End.

In addition to the main campus, MMC currently utilizes an existing surface parking lot (also known as the First Atlantic Lot) for staff parking behind 222 St. John Street in Portland. The First Atlantic Lot provides 283 parking spaces through a lease agreement with East Brown Cow. The proposed project will include the reuse of the existing surface parking lot for construction of a free-standing parking garage at 222 St. John Street. The garage consists of a ground level plus eight tiers, providing a total of 2,400 parking spaces and an additional 52 spaces are provided in a surface parking lot located north of the garage structure. The attached Location Map shows the project location which is three tenths of a mile from the Bramhall Campus. MMC has a long-term lease agreement for the development and use of this parking garage. The new St. John Street garage is intended to do the following:

- Consolidate existing satellite parking for MMC staff,
- Provide for replacement parking to support demolition of the existing staff garage,
- Accommodate expected staff growth,
- Provide additional parking for the building at 222 St John St, and
- Reduce parking by staff on surrounding neighborhood streets.

It is the intention of MMC to provide a reliable and complete parking solution for staff. Right-Of-Way improvements are being proposed to promote walking and a shuttle service will provide continuous service for MMC staff between the St. John Street Garage and the Bramhall Campus.

3.2 Project Purpose and Need

Maine Medical Center has embarked on a master facility planning process to address clinical, building and parking needs. The entire MMC campus has grown in both size and complexity since it was built as Maine General Hospital in 1874. The growth has brought changes in both programmatic and infrastructure needs as it continues to serve patients and their families throughout the entire State of Maine and Northern New England. During the master facility planning process, MMC identified four key categories of need:

- Clinical
- Building
- Campus Reorganization
- Parking

The location of the proposed MMC garage at 222 St. John Street is identified in the Institutional Development Plan (IDP) that was prepared by MMC and approved by Portland City Council within the framework of the Institutional Overlay Zone (IOZ). With the IDP, the garage is identified as a short-term (0-5 years) project to help improve the efficiency of care delivery for MMC. Associated with the Institutional Development Plan (IDP) prepared by MMC is a Transportation Plan that will improve campus access, circulation and wayfinding for patients and visitors. Included in

the IDP Transportation Plan is a robust Transportation Demand Management (TDM) Plan. MMC is committed to meeting the unavoidable need for staff parking and to taking steps to reduce staff single-occupancy vehicles. Providing adequate parking for patients, families, staff and students at MMC is an essential part of providing a high-quality healthcare experience.

Currently, staff members use the staff garage on Congress Street with access from Gilman Street along with various other satellite lots outlined in the IDP Transportation Section. As part of MMCs short-term projects, the existing staff garage will be demolished and all staff parking will be consolidated to the new garage location at 222 St. John Street. In the IDP, it was documented that MMC's existing decentralized parking situation creates management challenges and is a significant dissatisfier for staff. Management challenges include multiple shuttle routes that add to traffic congestion on local streets and the high cost of servicing and operating multiple shuttles. In addition, MMC staff members have provided feedback that staff parking at the Bramhall Campus is unreliable. There are currently eight parking locations available for MMC staff. When one location is full, staff members must search other locations for available parking which adds to traffic congestion and on days when MMC is near or at capacity, finding a parking spot in a reasonable amount of time is a challenge.

As the healthcare industry continues to centralize tertiary services, MMC's staff population will continue to grow. The anticipated staff growth is well documented in MMC's IDP. As the staff population grows, parking demand will grow. The need for additional staff parking is also well documented in MMC's IDP. MMC is committed to managing this growth through its TDM program. Section 6.7 of this application expands on MMC's TDM program.

3.3 Existing Conditions

The Existing Conditions & Demolition Plan included in the drawings submitted with this application were prepared from field surveys by Owen Haskell, Inc. and depicts the existing conditions of the property located at 222 St. John Street (the Site). No portion of the development is within the 100-year flood plain; FEMA Flood Insurance Rate Map (FIRM) Panel 13 of 17, Community Panel Number 230051 0013 B effective July 17, 1986 has been attached for your reference. Also located at 222 St. John Street is a four-story professional office building that provides small and large office suites for tenants, as well as ground floor restaurant space. This building is known as the Maine Central Railroad General Office Building, an identified historic landmark with a slate roof, copper gutters and an E-shaped footprint. The parking garage and walkway are proposed within 100 feet of the Maine Central Railroad General Office Building and they have been designed to minimize impact to this building to the extent possible.

Work associated with the proposed parking garage will occur on three separate properties consisting of 222 St. John Street, the Eagles Lot at 184 St. John Street, and Union Station Plaza. The use of the Eagles parking lot will be through a land purchase between MMC and the Eagles. An access easement exists from Union Station Plaza to Cowcatcher LLC for the use of the Union Station Plaza property. This is further discussed in Section 7. Seven separate lots are associated with these three properties which is further detailed in the table below. The survey plan provided with the design drawings also includes this information.

Property	Lots/Parcels	Area	Building Area
222 St. John Street	064 A008, 064 A002, 075 A006, 075 A 007	4.9 acres	28,202
Fraternal Order of Eagles	068 D014, 068 D013, 068 D016	25,320 sf	0
Access Easement from Union Station Plaza to Cowcatcher LLC	N/A	11,057 sf	0

The overall project site is approximately 5 acres and generally flat from north to south, until it meets the back (or west side) of the 184 St. John Street property, where there is an approximate grade change of 10 feet. The existing parking lot that currently serves the Eagles is generally flat. No wetlands are present on the Site.

3.4 Proposed Development

The project involves the demolition of the existing surface parking lot at 222 St. John Street and the construction of a new 2,400 car staff parking garage fronting along St. John Street and a 52-space surface parking lot north of the garage structure. The current parking lot for the Eagles at 184 St. John Street will also be demolished and the space will be used for vehicle access to Levels 1 – 8 of the garage and pedestrian access from St. John Street.

Vehicle access will be served through a three-lane driveway from St. John Street. The driveway includes one entrance lane, one exit lane and one reversable lane that will vary as an entrance or exit depending on the time of day and needed level of service. The stair and elevator core, doorway vestibule and security office adjacent to the St. John Street entrance drive will be located on the eastern side of the parking garage to provide direct pedestrian access to Level 1. A traffic signal will be installed at the intersection of St. John Street and D Street to accommodate traffic from the primary garage entrance.

Additional access to the garage will be provided via a driveway on St John, referred to as the "Margaritas" entrance in the traffic management narratives due to its proximity to the Margaritas restaurant location at this corner. Staff traffic utilizing the Margarita's entrance will be specifically dedicated to the building at 222 St John St, and only have access to Grade Level and Level 1. Shuttle service will be provided on the internal ground level of the garage and the shuttle route will utilize access through the Margarita's entrance. Parking for shuttle busses that are not in use will be accommodated within the ground level of the garage. Surface parking will be provided in a surface lot behind 222 St. John Street to accommodate the office building needs. In addition, approximately 50 parking spaces to serve the Eagles facility will be provided in the MMC garage on Level 1. A sidewalk connection from the garage to the Eagles facility will be provided for safe pedestrian access.

Other project features include a retaining wall associated with the proposed walkway near 222 St. John Street and a raised speed table behind 222 St. John Street for vehicles entering and exiting. The lighting plan for the proposed project is designed to meet current City standards. Utilities, site features and stormwater management systems associated with the parking garage are also being proposed. A set of project design plans showing the proposed development is attached to this application. The set includes site, utility and grading and drainage plans, as well as architectural and landscaping plans. Information about site lighting is also included.

3.4.1 Site Design Approach

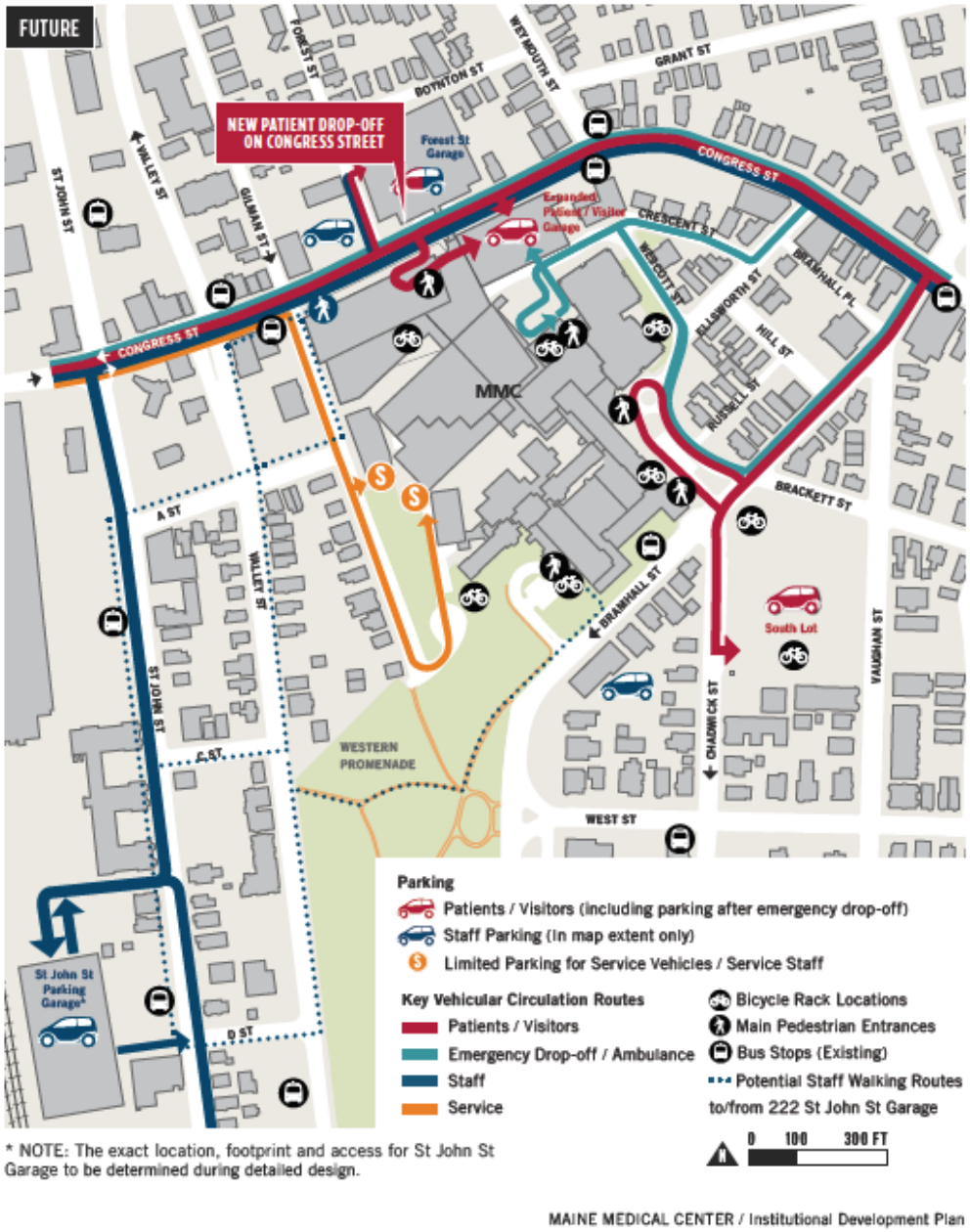
The site design approach for the MMC staff parking garage utilizes previously developed land totaling approximately 5-acres. The parking garage footprint is approximately 89,825 square feet (SF) and when combined with the lobby area, the footprint is 91,950 SF.

There will be approximately 2,400 parking spaces in the garage and those include compact, handicapped accessible and van accessible spaces and a 52-space surface parking lot north of the garage structure. There will also be 40 bicycle parking spaces within the garage and on the site. Vehicle access to the garage and movement along St. John Street will be supported by north and south travel lanes and left turn lanes which will serve north bound vehicles entering the parking garage and south bound vehicles turning onto D Street. A new traffic light will be installed at the intersection of D Street and St. John Street. New lane markings along St. John Street will be added to improve and manage the traffic flow in and out of the garage and two 5-foot bike lanes will be provided adjacent to the north and south travel lanes.

MMC has specified several routes of travel for pedestrians from the proposed St. John Street Parking Garage to MMC in their IDP (see **Figure 1**). As part of the proposed parking garage project, MMC will make improvements to ensure a safe pedestrian experience along portions of A Street, C Street, D Street, St. John Street, Valley Street, Congress Street and Gilman Street. Photos of the existing pedestrian experience and areas of improvement are attached to

Section 3. Improvements will be made in accordance with City of Portland initiatives, in consultation with the St. John Valley and Western Promenade Neighborhood Associations, and in response to further study of these pedestrian ways and their particular conditions. A survey of the boundaries of these rights of way will be required before specific streetscape improvement proposals are made.

Figure 1: Circulation Routes & Access Points



MAINE MEDICAL CENTER / Institutional Development Plan 59

Pedestrian safety and access improvements will include:

- New brick sidewalk along the front of the St. John Street pedestrian entrance and landscaped area,

- New crosswalk extending from the pedestrian entrance in front of the garage across St. John Street to D Street,
- New ADA curb ramps and crosswalk at the east end of D Street across Valley Street with an island at the midpoint for refuge,
- New brick sidewalk along the north side of D Street as depicted on Sidewalk Improvement Plan, Sheet C-107,
- New crosswalk extending across the east end of C Street as depicted on Sidewalk Improvement Plan, Sheet C-107,
- New brick sidewalk on the north side of A Street, from Valley Street to Gilman Street as depicted on Sidewalk Improvement Plan, Sheet C-107, and
- Other minor repairs to existing sidewalks as depicted on Sidewalk Improvement Plan, Sheet C-107 and as photo documented on the ROW Improvements summary attached to this Section.

The redevelopment work will result in a minimal reduction of impervious surface (approximately 14,506 sf).

3.4.2 Architectural Approach

The proposed staff parking garage for MMC staff parking has been designed by Winton Scott Architects with its relationship to the neighborhood as a primary consideration. The garage location is in a mixed-use area of St. John Street and this is reflected in the materials and elevation layouts for the project.

The parking garage use and building focus has been oriented toward the sidewalks and existing activity of St. John Street. Both primary access and building focus support an emphasis on the garage having a direct and engaging presence that also fosters pedestrian activity and walking routes from the parking garage to the main entrance of MMC. Efficient vehicle entry and exit points from the parking garage have been designed and incorporate the pedestrian movement activity. The prospect of the building from the street features a developed landscape which enhances the immediate environment.

The scale and proportion of the principal elevations of the garage have been given a hierarchical treatment, avoiding the repetitive nature of the basic building type. Along St. John Street, the principal façade of the garage features a base zone of white precast concrete spandrels with lightly-sandblasted faces which emphasize the street scale of the neighborhood. The upper tiers of the garage are constructed using charcoal colored precast concrete to continue and enhance the street level emphasis of the structure. Columns are also composed of charcoal colored precast concrete. On the south side of the St. John Street elevation, the bottom two tiers of spandrels relate to the low-rise buildings to the south. On the north side, a higher base of feature spandrels relates to a scale of City and institutional uses. The composition is deliberately varied, with an off-centered elevator core. The upper sides of each elevation feature light-catching perpendicular extruded aluminum fins, which create a softening of the mass of the structure. They also feature a horizontal precast concrete shelf cap above the top spandrels and fins along the elevations.

Materials in general will be high quality, long lasting and weather resistant, including:

- Structural Elements – Precast reinforced concrete
- Exposed Spandrels – Colored and textured precast concrete
- Window Framing – Clear anodized aluminum
- Window Glass – Clear insulating units

The Accessory Building associated with 222 St. John Street which will be removed during the project has a concrete foundation, brick exterior, metal stair pans and un-reinforced concrete block interior. The construction type was commonly found in low-rise buildings of the 1940s and 1950s and was not used when the main 222 St. John Street building was constructed.

Section 6.5 of this application explains how the proposed design aligns with the design guidelines identified in the IDP. Rendered views are included with this Section.

3.4.3 Landscaping Approach

The landscaping elements for the proposed MMC staff parking garage by Michael Boucher Landscape Architects offer the following considerations:

- **Native Low Maintenance Plantings** - Plantings proposed are low maintenance and predominately native. Street trees (six Princeton Elms) are planted on the property adjacent to the St. John Street sidewalk. The trees are an amenity to the public pedestrian way but are within a turfgrass zone rather than within the sidewalk paving which results in a healthier planting situation for these trees, and wider usable sidewalk space. Freeman Maples are sited along the north south façade and along the pedestrian way from the surface parking lot to St. John street. They will provide vibrant fall color along with good visibility beneath to ensure safety. At the northeast corner of the property, a new concrete planter contains a grid of four sculptural native Shad (serviceberry) with hayscented fern beneath. The planter and stair resolve the grade change between the upper and lower levels of the property.

- **Stabilization** - The slope between 210 and 212/214 St. John Street will be filled and retained, eliminating this steep and potentially unstable zone, and invasive species will be removed and replaced with turfgrass and Freeman Maples.

- **Screening** – A 6' wood fence is planned along the north south boundary of two neighboring properties (210 and 212/214 St. John Street) and the east/west boundary of 212/214 and the pedestrian way adjacent to 222 St. John Street, to provide safe visual screening and separation between the private properties and Maine Medical Center property. An existing arborvitae hedge along the east west boundary between 210 St. John and the Maine Medical Center property will be retained and extended with new plants to the west, and any arborvitaes damaged or removed during construction will be replanted.

- **Boundary** - Hedge maples are planned along the south façade of the parking garage at a spacing that visually demarks the property line for cars parking in the adjacent surface lot, but does not allow spaces for a person not to be seen amongst them.

- **Safety** - A security fence is indicated along the west façade, with a gate including panic hardware to ensure safety for the users on the ground level. Similarly, a fence is planned to prevent access to the north portion of the east façade.

- **Surface Parking** - Honey locusts with sweetfern beneath are planned for the landscaped islands in the north surface parking zone. These will be protected from snowplowing and salt by 7" curbs.

- **City of Portland Tree List** - All trees included in the plan are on the City of Portland Tree List.

- **Safe Pedestrian Access** - Pedestrians are led safely from the lobby of the parking garage to concrete pathways within the St. John Street entrance leading to two pedestrian routes identified in MMC's IDP. Pedestrians on the grade level are safely led via a concrete walk to an existing path to the 222 St. John Street Building, or, via a new concrete stair and new E/W walkway (in its former location) to St. John Street. An emergency egress exit on the southwest corner of the building leads to a paved egress path along the west façade.

- **Plaza & Lobby** - Turf and hardy native groundcover plantings in large scale geometric arrangements are planned for the three raised mounds in the planted zone to the east of the lobby. These plantings provide varied seasonal views for users in cars and along pathways. Adjacent to the garage entry and exit, a massing of summersweet shrubs and hayscented fern beneath are visible from car and pedestrian viewpoints. A sweetfern massing beneath a Freeman Maple at the corner of the lobby zone near the exit provides year-round interest while allowing visibility for merging traffic.

- **Eagles Building Façade** - The Eagles will continue to rent out their banquet hall at 184 St. John Street, with its main entrance on the north façade closest to the parking garage. A walkway is proposed from level one of the garage to this entrance, with subordinate access to the two less significant entrances to the east. Sweetfern plantings are planned nearest this entrance while taller bayberries screen the two eastern entrances. A loose mulitstemmed Shad (tree) is sited at the NE corner of the Eagles building anchoring the corner of St. John and the exit ramp.

3.5 Waiver Requests

The required Waiver Request Form is attached to Section 3. Waiver requests include:

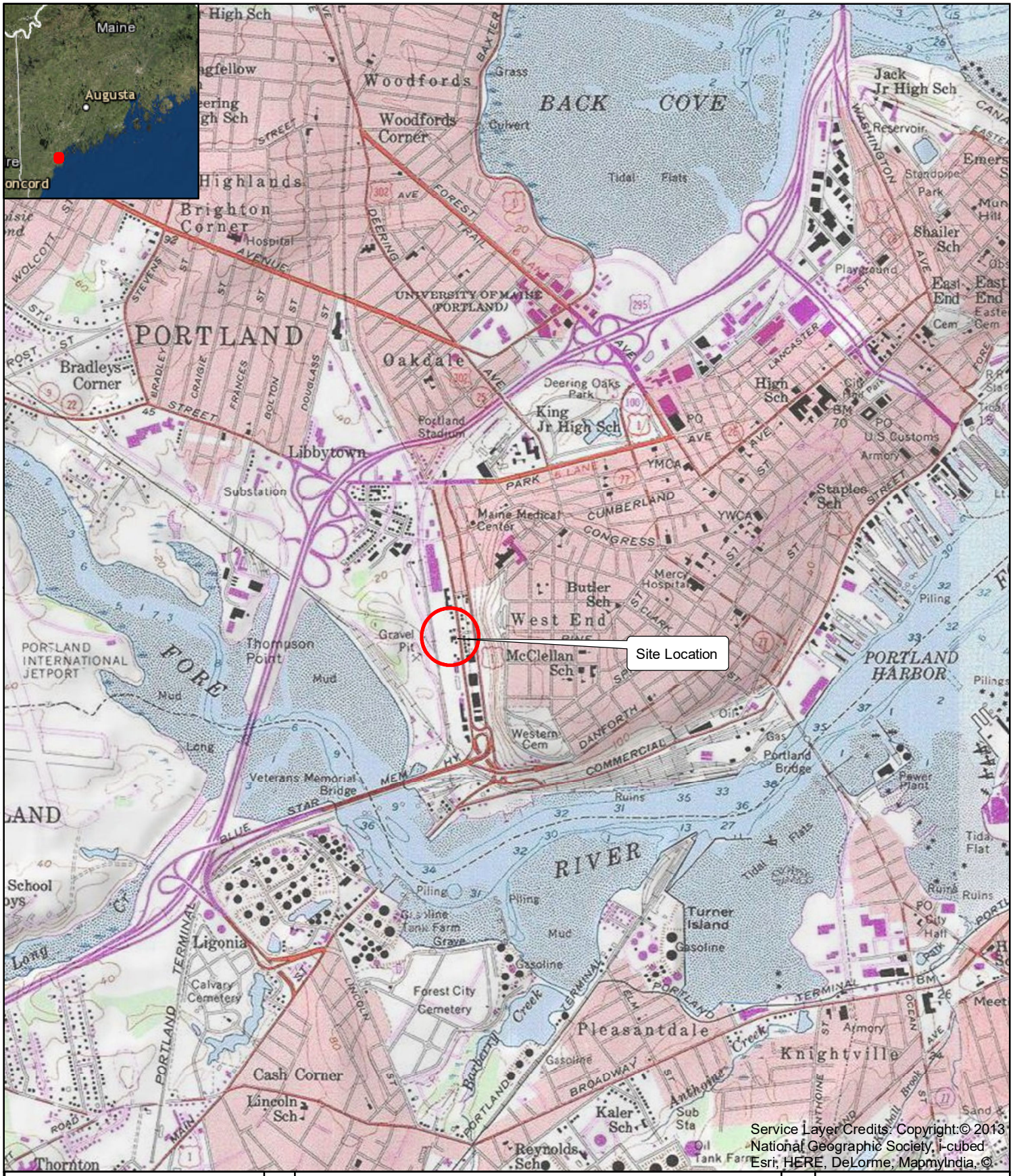
- **Bicycle Storage Spaces** - Currently, MMC has eight bike racks and ten bike lockers on its main campus for a total storage capacity of 193 bicycles. With the storage available on the main campus, we anticipate that this will be the primary destination for staff members using bicycles, and we do not anticipate as high a need for bicycle parking at the parking garage. The 222 St. John Street staff parking garage has designated a bike storage area with capacity for 40 bicycles. With this proposed bicycle parking, the total campus bicycle storage capacity will be 233 bicycles.

- **Drive Aisle Width** - Due to the proposed intersection improvements at the corner of D Street and St. John Street, the driveway is greater than the allowed 24 feet for a commercial use. A 30-foot driveway is proposed to accommodate the proposed layout of access lanes.

See the attached Waiver Request Form for more information.

3.6 Attachments

- Location Map
- FEMA FIRM
- Waiver Request Form (see separate attachment)
- Design Plans (Bound & Submitted Separately)
- Architectural Rendered Views (see separate attachment)
- Site Lighting Report (see separate attachment)
- Possible ROW Improvements



0 1,000 2,000 Feet

COMMERCIAL PROPERTY

222 ST. JOHN STREET
PORTLAND, ME

FIGURE 1 - SITE LOCATION MAP

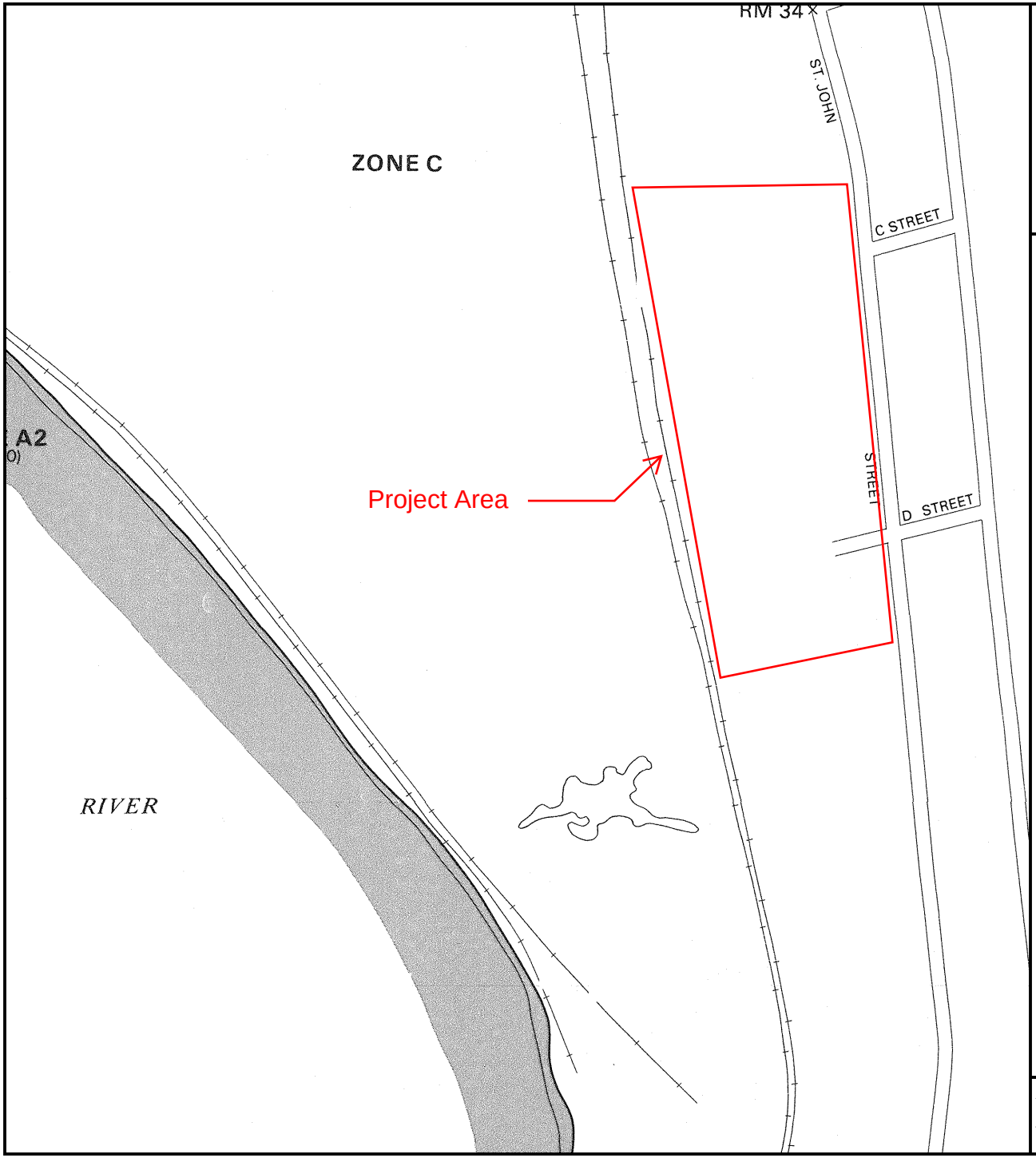
N

WOODARD &CURRAN

Project #: 0231158.00
Map Created: January 2018

Figure Exported: 1/26/2018 By: alebel Using: \\woodardcurran.net\shared\Projects\0231158.00 Maine Med Ctr - Parking Garage\wip\GIS\Project Files\Figure 1 Site Location.mxd

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:** ESRI, National Geographic



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

Photo 1 – Uneven settlement along sidewalk.

Photo 2 - Uneven settlement along sidewalk.

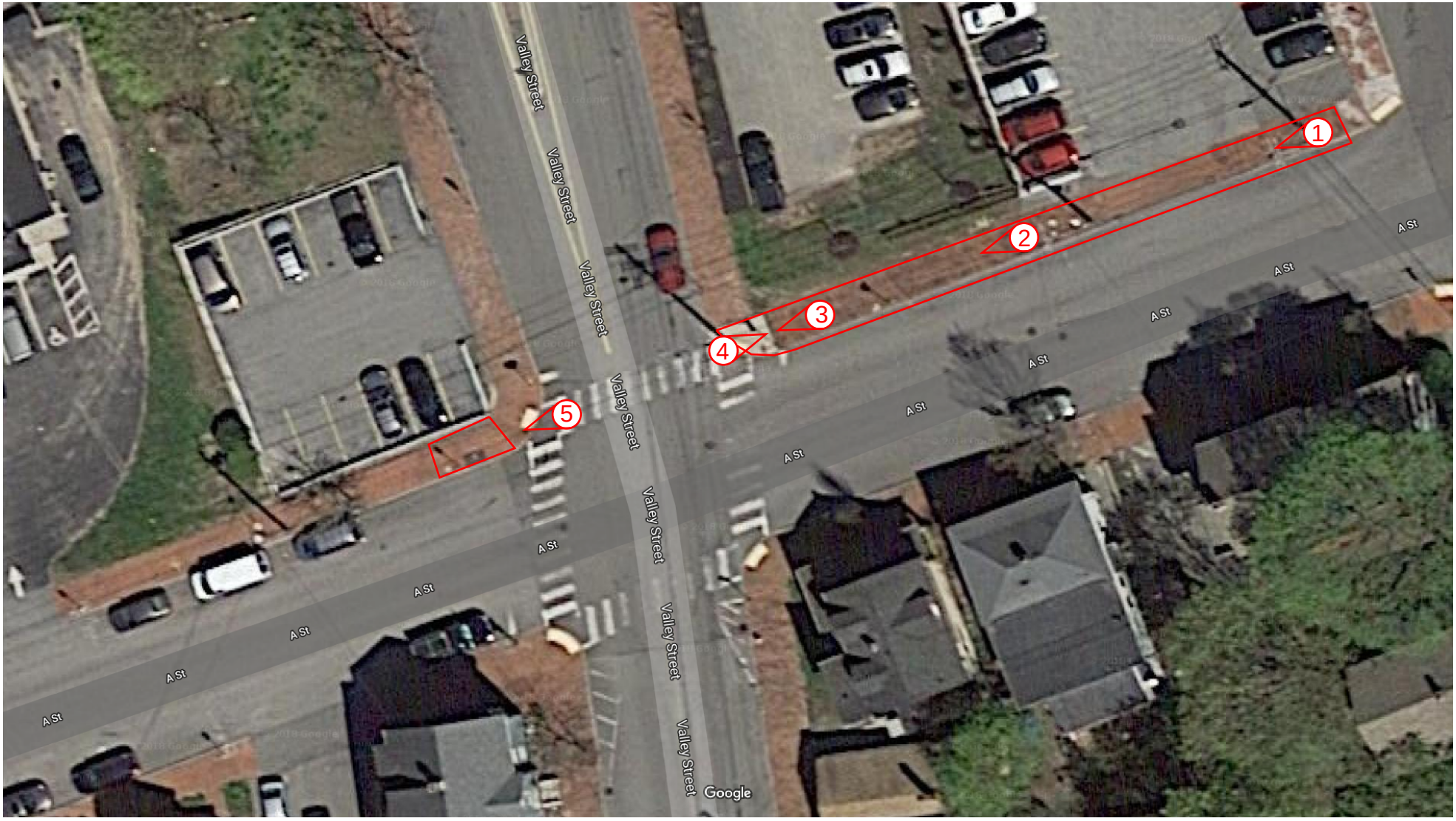
Photo 3 - Uneven settlement along sidewalk adjacent to ADA Ramp.

Photo 4 - Uneven settlement along sidewalk.

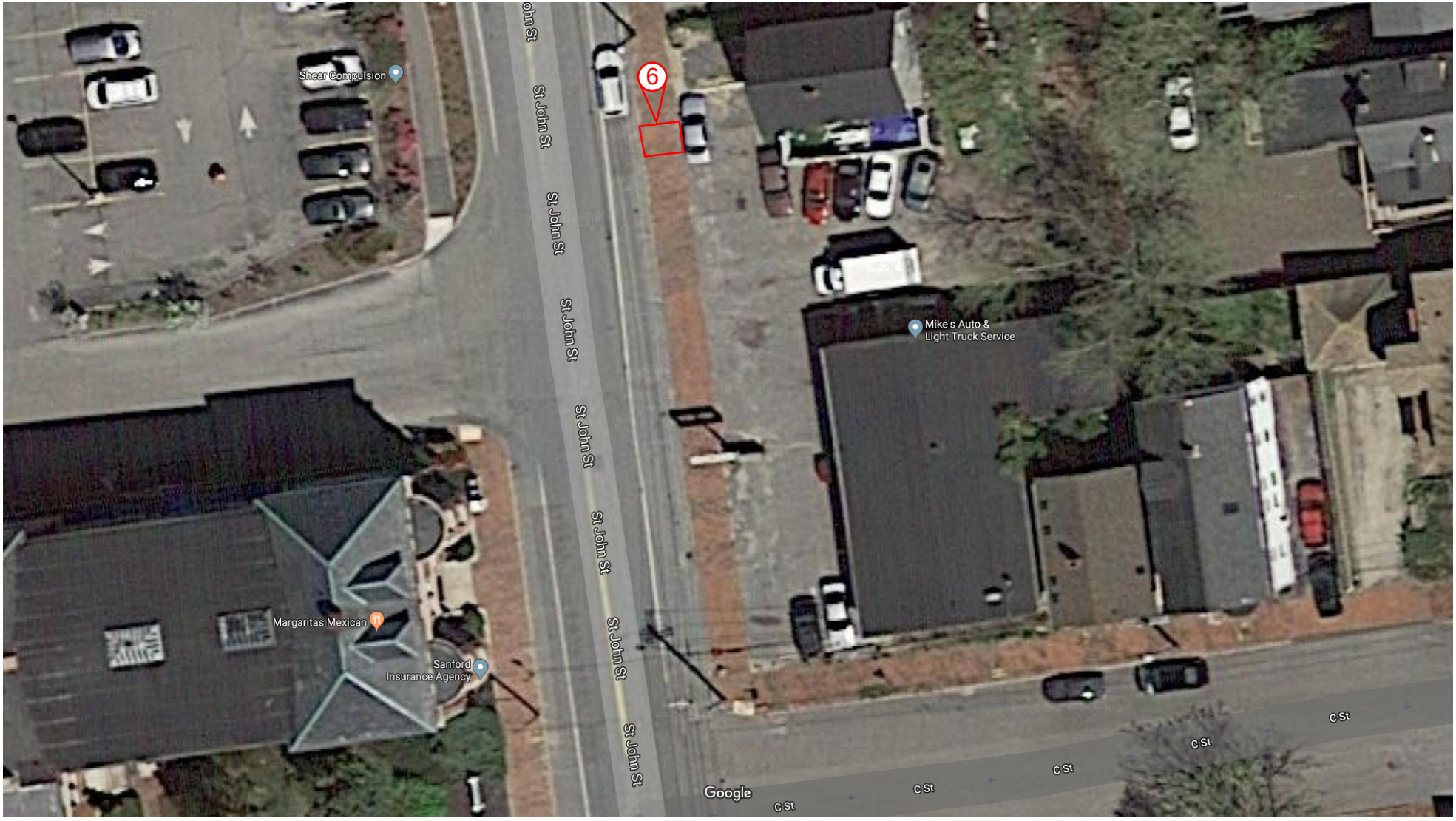
Photo 5 - Uneven settlement along sidewalk & unrepaired section from tree box removal.

Photo 6- Unrepaired sidewalk section from utility trenching.

Google Maps Gilman St



Google Maps Gilman St



Maine Medical Center
MaineHealth

centered around you

St. John Street Garage Site Plan Application Responses to Public Comments

August 2018

Introduction:

Maine Medical Center has received several written public comments from members of the neighborhoods surrounding the Bramhall campus and from members of the public. MMC considers these a reflection of the successful public review process and provides the answers below. Additional questions or requests for clarification are welcome.

The public comments and questions have been organized below by topic. Full copies of the public comments received as of the date of this letter are attached.

Congress St Detour:

Jenny MacKenzie (3/27/2018)

"I have concerns about the closing of Congress Street during [the] Phase I expansion of MMC and have the following suggestions -

- Traffic be alerted by flashing signage on 295, in the vicinity of Exit 4 or 5 that an alternate route should be sought (suggest taking Exit 4 or Exit 6).
- Traffic coming off the Veteran's Bridge should be directed towards St. John Street or Fore River Parkway (concern about increased traffic on Valley). Another flashing sign would be helpful here.
- Traffic coming in-town via outer Congress and Exit 5 should be diverted to Park Street via St. John Street. I would like to see "Local Traffic Only" signs at the corner of Valley/Congress and Gilman/Congress to prevent excessive traffic from filtering down Forest and Boynton Streets.
- Increased monitoring of on-street parking violations during Sea Dogs games.
- Suspension of the weekly overnight parking restrictions in the surrounding streets (St. John, Valley, A, C, D, Gilman, Boynton, Weymouth, Forest, Park, etc.)"

Response: The initial plan was to close Congress St for a period of 8 weeks in May and June. Congress St. was reopened in Mid-June of 2018, three weeks ahead of schedule.

Home Inspections:

Jenny MacKenzie (3/27/2018)

“I would like an update from MMC on the plans for baseline inspections of the home owner's and business foundation walls in the surrounding neighborhoods. I am especially concerned about the construction of the employee garage on St. John [street], the new entrance on Congress and demolition of the old garage which could adversely impact properties.”

> **Response:** Baseline inspections will be completed for properties immediately adjacent to significant project work of the St John Street garage and the Congress St clinical building.

St John St / Garage Intersection Design:

Emma Holder (6/7/2018)

“I'd like to follow up on the idea I presented about the St. John St. X D Street "complete streets" striping near the proposed MMC garage. If the bike lane can be striped to merge with through-traffic at that intersection, it will get the bikes out of the right turn lane and avoid possible "right hook" injuries while allowing for smoother flow of motorists into the facility from St John St.

Would it be possible to ask the MMC-folk for another street-striping proposal with this in mind? As someone who rides 100% of the time, I can guarantee that cyclists would prefer not to be edged to the side of the road into the way of turning traffic.

Please also consider a timed pedestrian walk light that gives pedestrians a 3-second head start before the traffic is allowed to move (as on St John X Park Ave. under the trestle - it works really well.)”

> **Response:** This suggestion is being considered. The City of Portland Planning Department engaged TY Lin, a traffic consultant, to identify best practices for bike/pedestrian/intersection design. MMC is awaiting a recommendation from the City.

On-Street Parking:

Laura Noddin (6/26/2018)

“I'm writing in regard to the recent proposal to build MMC's new parking garage on St John Street. I have been a resident at 205 St John Street for the last two years (and hoping to stay for a third), and myself and my roommates rely on having on-street parking. My apartment building is 3 units, with 3 people per unit. Removing 13 parking spots from in front of our building would be incredibly inconvenient - as there are many other apartment buildings in this vicinity as well. Not to mention that these spots are nearly always filled -- if you drive around looking for a spot (say, during street cleaning) you will clearly see that the adjacent roads are filled with bumper to bumper parking as well.

I also believe that having on street parking available here is better for our local businesses. Take for example the Sea Dogs - many families opt for parking on this street to avoid the hassle of traffic. If we remove these street parking spots, we are essentially cutting off this part of Portland (and it's local businesses) to the public. From what I know about our city's values - I do not at all believe this is the right choice.

Thank you for taking the time to read this, and I hope you carefully consider the cons before making a decision."

Beth Prosser (6/26/2018)

"Eliminating 13 parking spaces used by tenants, homeowners and businesses just isn't nice or neighborly. Unless I'm mistaken, it has not been reported in the newspaper that this new plan eliminates parking spaces and adds a street light at the D Street intersection with St. John Street.

I can appreciate Matt Wickenheiser's statement: "the goal is to consolidate parking into one spot, where employees can quickly and easily find a parking space, grab a shuttle and get to work." What about people who live and work directly across from this proposed private garage? What about landlords who have rentals and don't have off-street parking? Many of these people work late into the evening or early morning. Can they not easily find a parking space and go to work or home safely and easily?

I'm a landlord and own a business directly across the street. Employees park on St. John Street as do tenants and homeowners. Valley Street parking spots are usually always full and D Street is limited to 3 spaces on one side and 2-3 on the other side with limited one hour parking. With a proposed sidewalk and a street light at this intersection, parking may certainly become even more limited or possibly eliminated.

Jeff Sanders stated "This new plan meets the needs of our employees and addresses our neighbors' concerns." Taking away these parking spots do not mesh with this neighborhood as part of Portland's "institutional overlay zone." How will he meet MMC's neighbors' concerns by taking away much needed street parking?

It seems to me that for MMC's 2,450 spaced proposed parking garage, current street parking should not be eliminated. Will MMC give up 13 first floor spots in their garage in exchange for the ones they want to take away from the city residents in this neighborhood?"

Deborah Heald (6/26/2018)

"Last night MMC held a neighborhood meeting at MMC's Dana Center to share the plans for the new Employee Parking Garage on St. John St.

This was the first time property owners adjacent to and near the D Street and St. John Street intersection learned of the addition of a traffic light there and the elimination of 13 on-street parking spaces (northbound side of St. John just before and after where D Street intersects with St. John).

When property owners asked about the 13 parking space eliminations, MMC, and others said they assessed/studied that area of the neighborhood and concluded that the elimination of the on-street parking would not have any negative impact.

As it turns out, this assumption by MMC and others, is incorrect. It does have a negative impact. Property owners have asked MMC to revisit this concern and to work with them to find a way or ways to remediate the impact of this decrease in on-street parking in front of their properties."

Dana Flexon (6/27/2018)

"I am writing to you to express my concern over Maine Med's proposed plan for a new 2,450-space parking garage to be built on Saint John Street in Portland. I currently reside on Saint John Street with my husband and 18 month old. Street parking is currently extremely limited. With the construction of the new garage, there will be a loss of at least thirteen parking places. Does the city have plans to replace the parking spots with safe and convenient spaces for the residents? I totally understand the need for safe and convenient parking for Maine Med employees but as a resident, I also need safe and convenient parking. What are the plans?"

Gregory Durgin (6/28/2018)

"I have recently learned that there are plans to eliminate 13 street parking spaces on St. John St as a part of the Maine Medical Center employee parking garage construction. Many of these spaces are currently used by myself and other residents of Portland as a part of daily life, and their loss would be a massive one. As I'm sure you are aware, parking within Portland particularly during the winter, is difficult enough with the scant spaces that exist and further removing parking is not going to help this issue for locals. Eliminating these parking spaces is also damaging to local business as it limits accessibility to those businesses. This is, for obvious reasons, undesirable.

I hope that if the parking garage proposal is approved, it can go forward without eliminating these crucial parking spaces. As residents of Portland, we also require parking and if no other alternative is afforded it will cause undue hardship and difficulty. Please take into consideration the needs of the residents and businesses of Portland that are not Maine Medical Center."

Dan Chase (7/16/2018)

"In the afterglow of the Planning Board workshop, I am concerned that the loss of on-street parking spaces on St. John St. is not considered a serious issue.

I find it ironic that this project is being driven by MMC's parking needs, and the other participants in the plan, the Railroad Building and the Eagles Club, are having their parking needs addressed, but the parking needs of the neighborhood at ground zero are just being blown off. They get their brand new parking while we get our existing parking taken away.

On the stretch of St. John St. from D Street to the Railroad Building parking lot, a distance of 200 ft., there are seven residential buildings, comprising 17 units of housing and one professional office, and Alan Auto Volvo Service. These buildings have existed in their current usage for a long time, since long before modern building codes, parking requirements, zoning rules, planning boards, and planning departments, but always in harmony with the amount of parking and traffic on St. John St. Now that harmony is to be destroyed. These buildings have always relied on having a certain amount of on-street parking to function.

I also find it ironic that the City of Portland considers housing such an important issue that building owners are fined $50,000 if they do something to their own property that results in the loss of a housing

unit, and the City seems happy enough to accept our property taxes (something which MMC and the Eagles Club don't pay, I can't help but mention), but apparently feels no obligation to support the building owners in return.

Not long ago, the City approved the remodeling of 212-214 St. John St. from a two unit residential building into a four unit. But 212-214 does not even have a curb cut or driveway, let alone parking for four units. How could the City approve this remodeling unless the assumption was that the units would utilize on-street parking? And now the City is proposing to take that parking away?

With all the planning, architectural, engineering, landscaping, construction, financing, management, and other professional firepower involved in this project, I realize I don't know all the issues involved. However, I do agree with the comment made at the workshop (the speaker took the thought right out of my own head, actually) that it doesn't seem to make sense to make allowances for bicycling to the new garage. Anyone who bicycles will just go straight to the hospital to avoid walking or waiting for a shuttle. My suggestion is to minimize the bicycle lanes and use the roadway width saved to keep the on-street parking. However, if this suggestion is unsatisfactory, I'm sure all the professionals involved can come up with another way to keep the on-street parking."

Deborah Heald (7/27/2018)

"It seemed to me that there was an assumption on either the city's part and/or MMC's part that the loss of those 13 spaces on St John would be "recovered" up on Valley Street once MMC employees who park there started using the new garage. This would be great if MMC could ensure that employees would not park on Valley. But how do you enforce this? Is there a plan being worked on to help those most impacted by this loss of parking?"

> **Response:** MMC employees utilize on-street parking in the St John Valley neighborhood. With construction of the new garage and the new supply of safe, convenient and accessible parking it will bring, we expect these employees to park in the garage in the future, making additional on-street parking available.
>
> MMC's right-of-way improvement plan includes new curbs and a sidewalk on D St. Existing on-street parking on D St is undefined. New curbs and sidewalks will define on-street parking and likely increase the number of spaces available to the neighborhood and visitors.
>
> A neighborhood parking permit system exists in the neighborhood. MMC encourages members of the neighborhood to explore ways to implement the program with the City of Portland to reduce non-resident parking. MMC would support this system as it would further encourage MMC employees to use the new garage, rather than park in the neighborhood.

Eagles Walking Path:

Zach Barowitz (7/10/2018)

"I noticed on one of the renderings of the front of the proposed MMC garage that there is a large open grassy space to the right of the driveway but only a narrow strip of paved sidewalk on the left side (when facing the garage). I'd like to see those spaces evened out a little bit, a wider sidewalk with a row

of trees on the side would make a great difference. The sidewalk as rendered does not look pleasant for pedestrians."

Zach Barowitz (7/11/2018)

"When I brought up the possibility and efficacy of a wider sidewalk today at the meeting it was met with general perplexity. Yet undeterred here are a few sketches to demonstrate the idea as well as a work around so that the driveway will still like up with D Street (are a lot of people expected to use D Street)."

> **Response:** The pathway along the driveway referenced in this comment will only be used by the Eagles Club members and their patrons.
>
> The alignment of the driveway with D St was identified as an important component of the intersection design by the City of Portland plan reviewers. As such, the garage design team has made efforts to align the driveway with D St and with structural elements of the garage. The suggested changes would create an offset between the driveway and D St and require relocation of the entire building.

Design (Scale of the Building):

Dan & Pat Chase (7/18/2018)

"Beside the potential loss of on-street parking, I have other concerns about the parking garage project. The before and after architectural projections of how the building will look from various locations don't ring true to me. It's such a huge building, but the projections show it as hardly visible. In some cases, the building is shown as obscured by trees which happen to be in the way from that location. Trees are hardly permanent shielding, and don't even have their leaves for half the year to begin with.

Lots of sunlight, views of the Fore River estuary behind Veterans Bridge, and open skies to the west for nice sunsets have been some of the benefits of living in our little neighborhood. These will all be impacted by construction of the garage. I'd like request that before and after sun/shadow studies of the building be completed. I think these might give a more accurate idea of its size and effects. I'd also like to request architectural projections done from the top floor back corner of the Railroad Building looking toward the Fore River estuary."

Dan & Pat Chase (7/19/2018)

"I think further discussion of the renderings would also be helpful. I see from the site plan that the elevation of the parking lot is around El. 26. The building is to be just under 100 ft. tall, putting the top of the building somewhere around El. 125. Also from the site plan, the elevation of the yard at 210 St. John St. is around El. 42 and the building is about 33 ft. tall, putting the ridge of the roof at around elevation 75. This means that the parking garage exceeds the height of the top of 210 St. John St. roof by 50 ft. – five stories! I don't know the height of the Railroad Building, but say it's 50 ft. This means the top of the Railroad Building is around El. 90 and parking garage exceeds it by 35 ft. – approximately as if 210 St. John St. were put on top of the Railroad Building. I just don't think the renderings reflect how high the garage is proposed to be."

Response: The photomontage views of the parking garage were developed using a multi-step process using the base model, City of Portland .dwg files, and Google Earth. This commonly used and accepted process results in a good representation of the relative sight lines. The views that have been presented were specifically requested to coordinate with current and future MMC projects, to understand how the building's design integrates with the context of existing buildings, and to provide a realistic perspective of the building once it is built.

The building was designed to fit within the building envelope defined in the Institutional Overlay Zone (See attachment 1, Section 4, Map 4.1 of the IDP). Removing street trees from all views would not change the perspective of the garage and its relationship to the surrounding buildings.

Shadow Studies:

Dan & Pat Chase (7/19/2018)

"I looked at the shadow studies in the Institutional Development Plan and notice that the location and size of the garage is now changed. I realize MMC was limited to static images in the printed document, but a static image does not convey the changes in sunlight and shadow through different day lengths, sun angles, seasons, etc. I would like to see continuous motion studies of full days on all four solstice dates at least."

Response: The garage design was not complete when the IDP was finalized. The dimensions of the building used in the shadow study are different than what is proposed. There is a footnote in the IDP Fig 5.18 and 5.20 that states "Note: exact garage locations and footprint to be determined during detailed design." See attachment 2 for updated shadow studies.

Transportation Demand Management:

Karen Snyder (7/20/2018)

"There [were] concerns from Planning Board members regarding the fact there is no clear TDM plan for this garage to hold 2,400 parking spaces. One of the Planners (Nell) said something to the affect, that it would basically be okay to continue and once a TDM person is hired by MMC at that time there will be clarification. That is not suffice to approve a development without getting commitment and clarification of concerns over the TDM. That is like putting the cart before the horse." …

"1) Clarification of the TDM Plan that MMC will use with this new garage on St. Johns street."

Response: MMC recently hired a full-time, highly experienced TDM coordinator – the only one in the City employed by a non-governmental organization to our knowledge. MMC will submit a level III site plan application for the Congress Building in the fall of 2018. TDM is anticipated to be a large part of that discussion.

Snow Ban Parking:

Karen Snyder (7/20/2018)

"2) Commitment from MMC that the neighborhood can use the garage during snow bans. Note: When asked this specific question, there was lack of clarification and evasiveness."

> **Response:** As stated at the workshop, MMC's policy allowing snow ban parking for the public in its parking garages will continue. MMC is exploring ways to improve access to this neighborhood benefit. For example, in the July newsletter sent to all neighborhood representatives, MMC requested feedback regarding MMC's proposed parking garage and asked specific questions about utilization, frequency of use, and preferred location in the future.

Bicycle Parking:

Karen Snyder (7/20/2018)

"3) There [were] concerns of the neighborhood that MMC taking 13 parking spaces on St. John St for bike stations. These bike stations should NOT replace neighborhood parking but should instead be moved into the large green turn expanse field between side walk and the garage. So, instead of maintaining a turf field, a part of it should be replaced with these biking stations so that crucial parking for the neighborhood is NOT taken away. Even Planning Board member, Maggie Stanley, indicated that as a cyclist, the bike parking should be near the hospital and not at the garage."

> **Response:** There are no bike parking stations proposed street-side that will reduce the amount of on-street vehicle parking.

Construction:

Deborah Heald (7/27/2018)

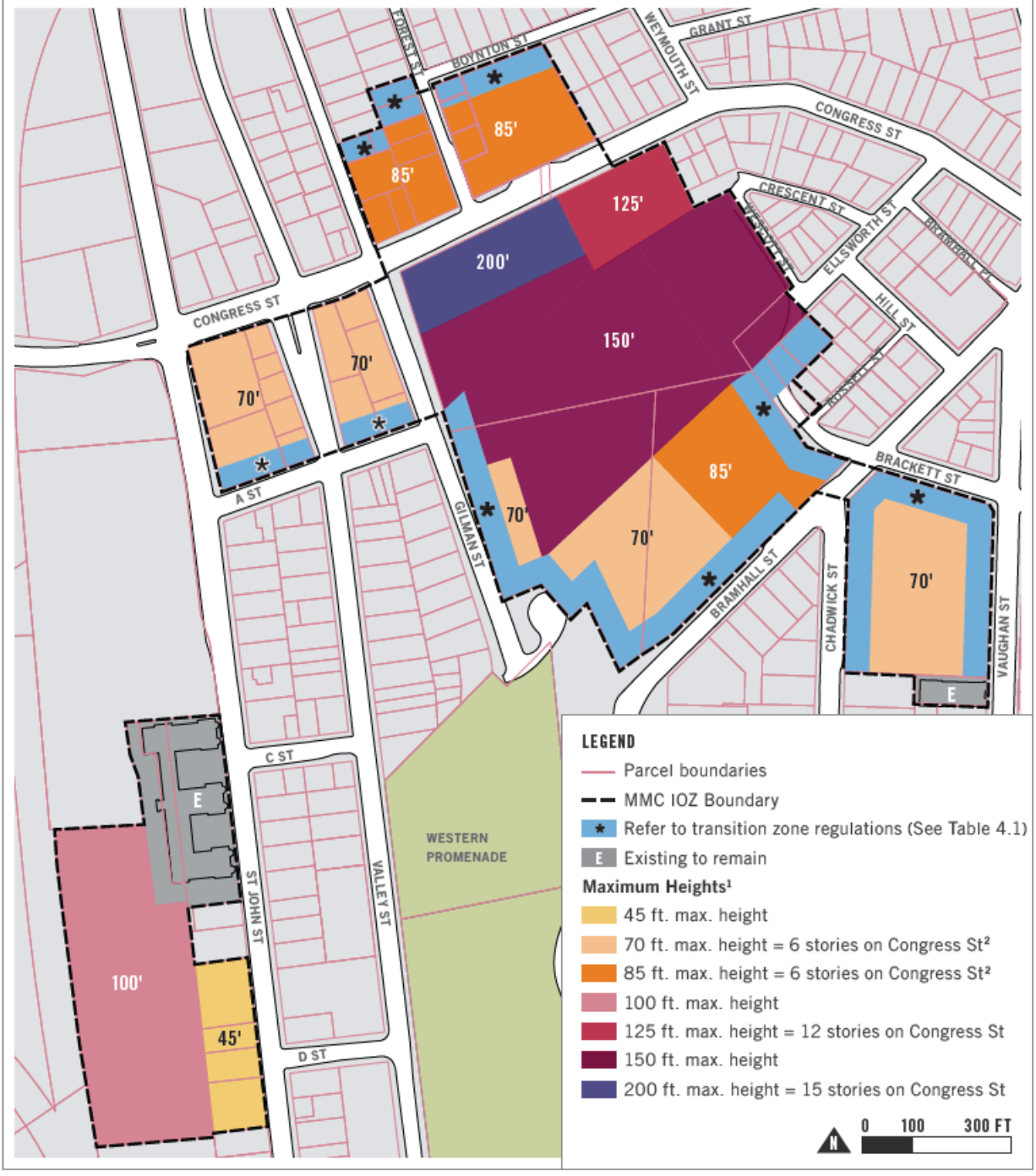
Because MMC ran out of time at the Planning Board Workshop on July 10th to present info on the construction phase of their project, I have some questions and concerns about how all that construction traffic will impact not only those of us who live within close proximity of the temporary entrance to the site, but also the flow of traffic in general on the street. Most of my concerns are with noise, construction vehicles gearing up and down while turning into and leaving the construction site, traffic back ups, etc. I realize that we can't eliminate the traffic and noise, but what has MMC planned to help mitigate these concerns as much as possible during the construction phase?

> **Response**: Construction of the garage will require careful planning and management of the daily occurrences within the site limits. The logistical plan that is currently outlined is intended to keep all construction staging, laydown and temporary storage within the project limits and secured by temporary fencing. With designated areas delegated to subcontractors the site will remain accessible by incoming trucks without causing a queuing affect outside of the fence. A

secondary storage yard is anticipated near the project site to store precast material not accommodated on site. The usage of this area will help to better control and manage the truck traffic to and from the site during the day, as nighttime truck use is prohibited by State of Maine. Precast trailers will only transport loads between the staging yard and the job site outside of peak traffic hours as defined by Gorrill Palmer as 7:30am – 8:30am and 4:00pm – 5:00pm.

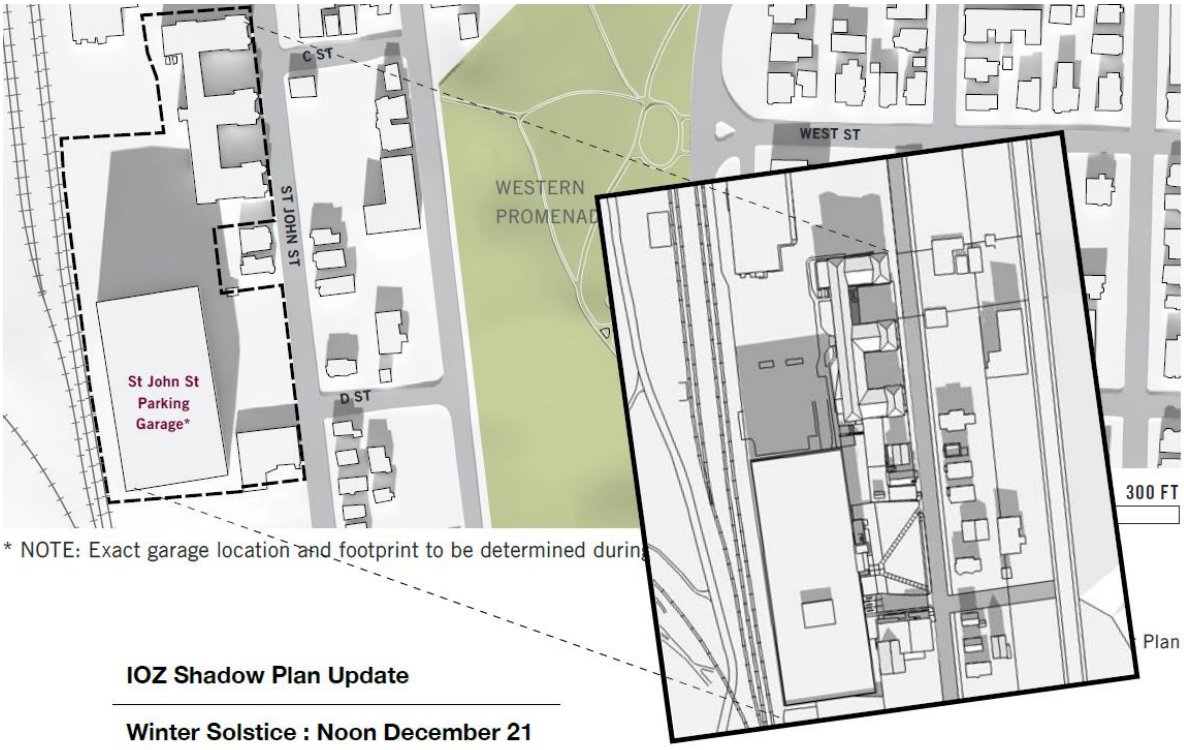
Attachment 1: Map 4.1 from MMC Institutional Overlay Zone.

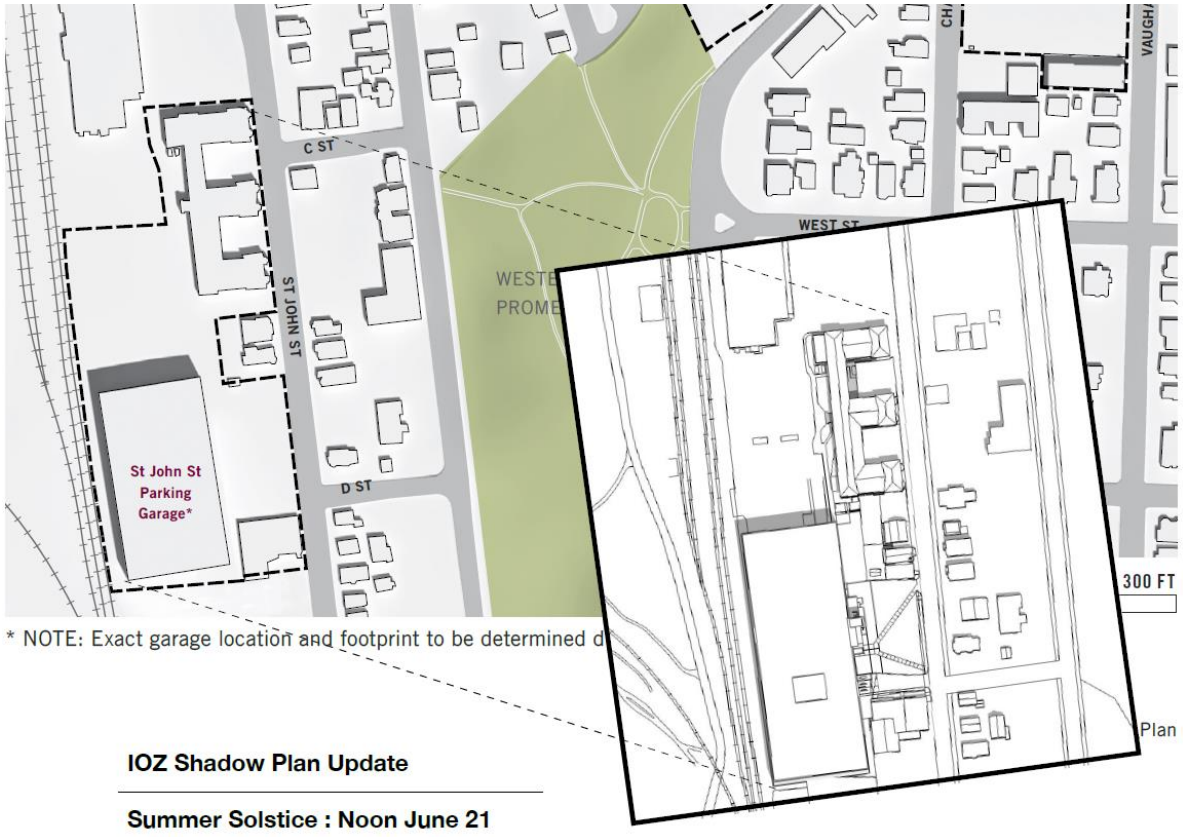
MAP 4.1 Max. Building Heights

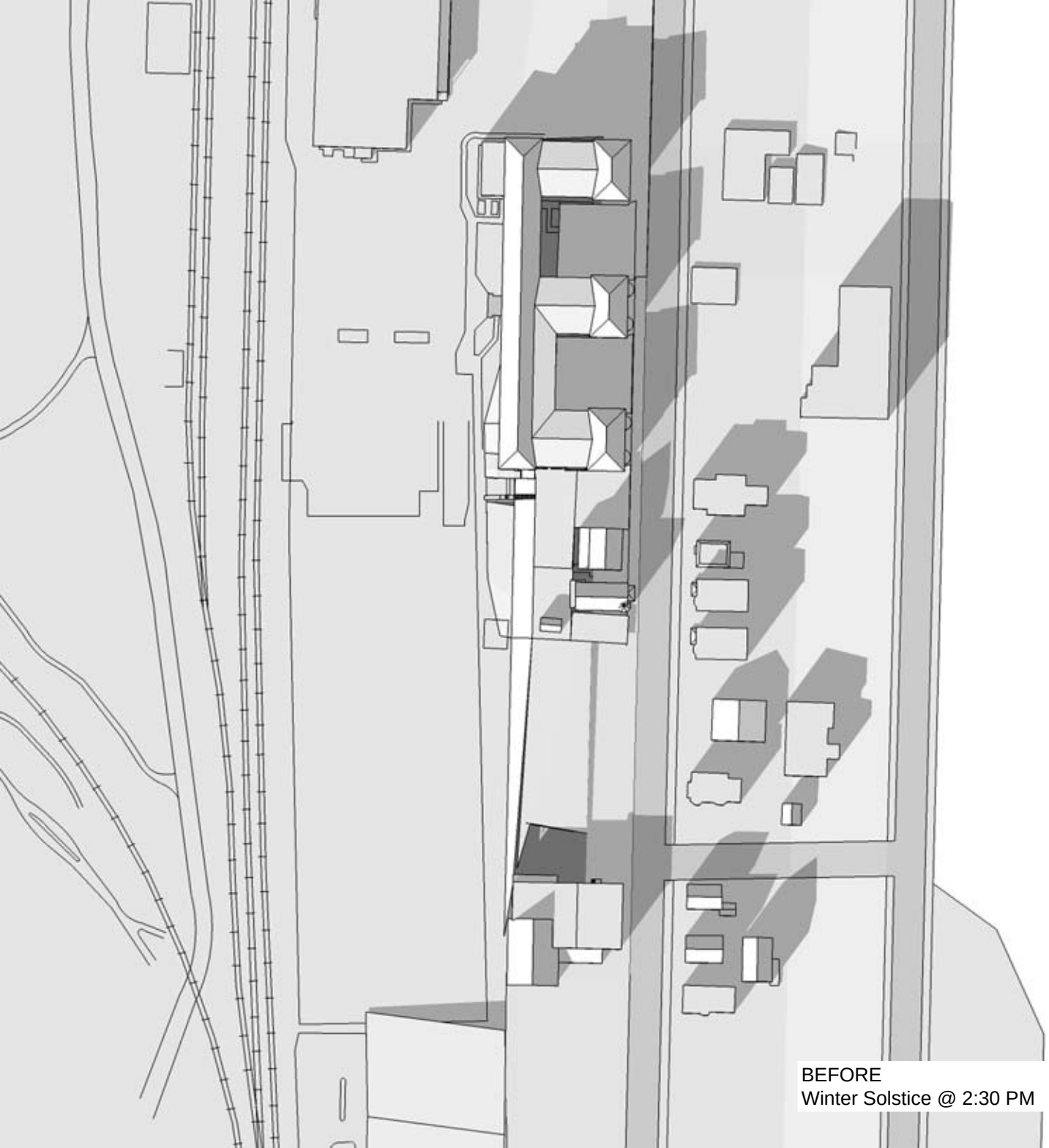


Notes: 1. Minimum building heights also apply. Refer to Table 4.1.
2. For buildings with residential use above the ground floor, the following height maximums apply: 70 ft. maximum height = 7 stories, and 85 ft. maximum height = 8 stories.

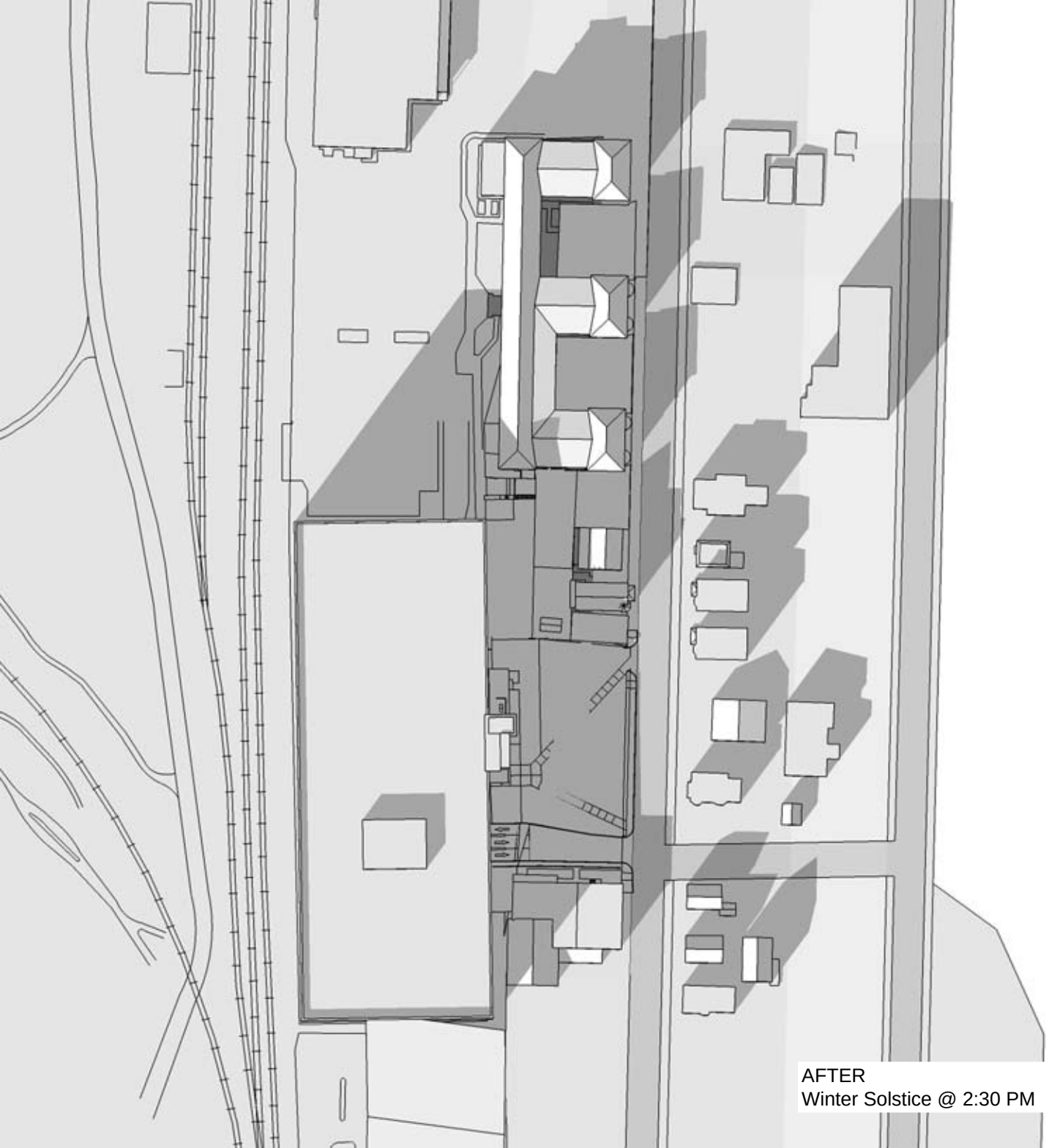
Attachment 2: Updated Shadow Studies







BEFORE
Winter Solstice @ 2:30 PM



AFTER
Winter Solstice @ 2:30 PM

4. EVIDENCE OF RIGHT, TITLE AND INTEREST

MMC has formalized property right and interest from East Brown Cow and associated holdings as well as The Fraternal Order of Eagles, respectively..

Cowcatcher LLC is splitting the 211,576 square foot existing lot associated with 222 St. John Street into two lots Cast Cow (131,351 square feet) and Cowcatcher (80,225 square feet). MMC has entered into a lease agreement with Cast Cow LLC for a land lease to construct the parking garage.

MMC has signed a purchase and sale agreement with the Fraternal Order of Eagles to purchase an approximately 25,000 square foot lot that is currently used for surface parking north of the Eagles building.

Documentation referencing MMC's Right, Title and Interest in these properties has been attached to this Section.

4.1 Attachments

- Right, Title, & Interest Documents

MAINE REAL ESTATE TAX-Paid

1001840031199 QUITCLAIM DEED WITH COVENANT
(Statutory Short Form)

KNOW ALL PERSONS BY THESE PRESENTS that the **Fraternal Order of Eagles, Aerie No. 565 a/k/a Casco Aerie No. 565, Fraternal Order of Eagles,** a Maine non-profit corporation with a mailing address of 184 St. John Street, Portland, ME 04102, for consideration paid, grants to **Maine Medical Center,** a Maine non-profit corporation with a mailing address of 22 Bramhall Street, Portland, ME 04102, with quitclaim covenant, the land in the City of Portland, County of Cumberland and State of Maine, as described on **Exhibit A** attached hereto and made a part hereof.

For source of title, reference is made to the following deeds recorded in the Cumberland County Registry of Deeds: (1) warranty deed from Charles E. Stickney and Anita C. Stickney, dated May 25, 1990 and recorded in Book 9214, Page 114; (2) quit claim deed without covenant from Charles E. Stickney and Anita C. Stickney, dated May 25, 1990 and recorded in Book 9214, Page 116; (3) quit claim deed without covenant from Daniel W. Hourihan, Trustee of the St. John Street Realty Trust, dated May 25, 1990 and recorded in Book 9214, Page 117; and (4) warranty deed from Dana A. Williams and Barbara H. Williams, dated July 28, 1995 and recorded in Book 12032, Page 41.

Meaning and intending to convey a portion of the property conveyed to the grantor by the above-referenced deeds.

Witness my/our hand(s) and seal(s) this 27th date of June, 2018.

FRATERNAL ORDER OF EAGLES, AERIE NO. 565

Witness

By: Shawn Babine
Its: President

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. June 27, 2018

Then personally appeared the above-named Shawn Babine, President of the Fraternal Order of Eagles, Aerie No. 565, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the Fraternal Order of Eagles, Aerie No. 565.

Before me,

Notary Public/Attorney at Law

Printed Name Patrick Thanton, Esq.
Maine Bar No. 9211

DOC :30578 BK:34951 PG:232
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
06/28/2018, 09:36:30A
Register of Deeds Nancy A. Lane E-RECORDED

EXHIBIT A

A certain lot or parcel of land situated on the westerly side of St. John Street in the City of Portland, County of Cumberland and State of Maine described as follows:

Beginning at a point on the westerly sideline of St. John Street, said point being 159.50 feet from the northeasterly corner of land now or formerly of Factors Financial FRC, Inc. as described in deed Book 17781, Page 288, on a course of N 07°36'17" W;

Thence, S 82°23'43" W along remaining land of the Fraternal Order of Eagles Aerie No. 565 a distance of 106.90 feet to land now or formerly of Cowcatcher, LLC as described in deed Book 26330, Page 105;

Thence, N 07°05'02" W along land of said Cowcatcher, LLC 232.51 feet to land now or formerly of Patricia P. Chase as described in deed Book 9635 Page 132;

Thence, N 82°23'43" E along land of said Chase 104.79 feet to the westerly sideline of said St. John Street;

Thence, S 07°36'17" E along the westerly sideline of said St. John Street 232.50 feet to the point of beginning. Containing 24,609 square feet, more or less.

The above described parcel of land is shown on "Proposed Lot Division Plan 184 St. John Street, Portland, Maine made for Maine Medical Center" dated June 14, 2018 by Owen Haskell, Inc.

MEMORANDUM OF CONTRACT FOR SALE AND PURCHASE OF PROPERTY

This is a Memorandum of that unrecorded Contract for Sale and Purchase of Property ("Contract"), dated 6/7/18, between the Fraternal Order of Eagles #565, (hereinafter referred to as "Seller"), and Maine Medical Center, (hereinafter referred to as "Buyer") concerning the real property ("Property") described in Exhibit "A" attached hereto and made a part hereof by reference.

For good and valuable consideration, Seller has agreed to sell and Buyer has agreed to buy, the Property upon the terms and conditions set forth in the Contract.

This Memorandum is not a complete summary of the Contract. Provisions of this Memorandum shall not be used in interpreting the Contract. In the event of conflict between this Memorandum and the Contract, the Contract shall control.

This memorandum shall not be recorded.

IN WITNESS WHEREOF, the parties have executed this Memorandum on June 7, 2018.

SELLER: ~~FRATERNAL ORDER OF~~ EAGLES #565

BY: Patrick Thornton

ITS: Attorney

STATE OF MAINE
CUMBERLAND COUNTY

June 7, 2018

Personally appeared the above-named Patrick Thornton, duly authorized attorney ~~of~~ for the Fraternal Order of Eagles #565, and acknowledged the forgoing to be his free act and deed in that capacity and the free act and deed of the FOE #565.

Before me,

Sally Steinhagen

Notary Public/ Attorney at Law

Print Name: Sally Steinhagen

SALLY A. STEINHAGEN
Notary Public State of Maine
My Commission Expires May 3, 2020

[PURCHASER SIGNATURE PAGE TO FOLLOW]

PURCHASER: MAINE MEDICAL CENTER

BY: Lugene A. Inzana

ITS: LUGENE A. INZANA
CFO

STATE OF MAINE
CUMBERLAND COUNTY

June 7, 2018

Personally appeared the above-named Lugene Inzana, Sr VP and Chief Financial Officer of Maine Medical Center, and acknowledged the forgoing to be his free act and deed in that capacity and the free act and deed of the Maine Medical Center.

Sharon A. Hopwood
Notary

SHARON A. HOPWOOD
NOTARY PUBLIC
State of Maine
My Commission Expires
August 16, 2022

(2)

SHORT FORM QUITCLAIM DEED WITHOUT COVENANT

DLN # **1001840024222**

COWCATCHER LLC, a Maine limited liability company with a place of business in Portland, Maine ("Grantor"), FOR CONSIDERATION PAID, grants to **CASTE COW LLC**, a Maine limited liability company with a mailing address of 100 Commercial Street, Portland, Maine 04101 ("Grantee"), 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 a portion of the premises conveyed to the Grantor by Trustee's Deed from Craig G. Coffin, as successor to Daniel W. Hourihan, Trustee of the St. John Realty Trust dated September 10, 2008 and recorded in the Cumberland County Registry of Deeds in Book 26330, Page 105, and by Release Deed and Easement Deed, both from Union Station Limited Partnership dated January 12, 2009 and recorded in said Registry of Deeds in Book 26601, Pages 314 and 316 respectively.

IN WITNESS WHEREOF, Cowcatcher LLC has caused this instrument to be executed by J. Tim Soley, Manager of East Brown Cow Holdings II LLC, the Sole Member of Cowcatcher LLC thereunto duly authorized, this 4th day of April, 2018.

WITNESS:

Name: William M. Welch

COWCATCHER LLC

By: East Brown Cow Holdings II LLC
Its Sole Member

By: _____
J. Tim Soley
Its Manager

State of Maine
County of Cumberland, ss.

April 4, 2018

Personally appeared before me the above named J. Tim Soley, Manager of East Brown Cow Holdings II LLC, the Sole Member of Cowcatcher LLC, as aforesaid, and acknowledged the above instrument to be his free act and deed in his said capacity and the free act and deed of said Cowcatcher LLC.

Before me,

Name: William M. Welch
~~Notary Public~~ / Attorney at Law

EXHIBIT A

A certain lot or parcel of land with the buildings and improvements thereon, situated on the westerly side of Saint John Street, in the City of Portland, County of Cumberland and State of Maine more particularly described as follows:

Beginning at a point on the westerly sideline of St. John Street said point being the northeasterly corner of land now or formerly of Tim Q. Ly as described in deed book 17799 page 58;
Thence, S 82°23'43" W along land of said Ly 94.00 feet;

Thence, S 07°36'17" E along land of said Ly 49.99 feet to land now or formerly of Patricia P. Chase as described in deed book 9635, page 132;

Thence, S 82°23'43" W along land of said Chase 10.17 feet;

Thence, S 07°05'02" E along land of said Chase and land now or formerly of Fraternal Order of Eagles AERIE No. 565 as described in deed book 9214, page 114 a distance of 459.94 feet to land now or formerly Factors Financial FRC, Inc. as described in deed book 1778, page 288;

Thence, S 82°23'43" W along land of said Factors Financial FRC, Inc. 214.99 feet to land now or formerly of Portland Terminal Co.;

Thence, N 11°02'22" W along land of said Portland Terminal Co. 218.83 feet;

Thence, continuing along land of said Portland Terminal Co. northeasterly along a curve to the right having a radius of 5710.00 feet, an arc length of 323.02 feet, chord bearing of N 09°25'07" W and chord length of 322.998 feet to remaining land of Cowcatcher LLC;

Thence, N 80°00'00" E along remaining land of Cowcatcher LLC 207.13 feet;

Thence, N 82°23'43" E along remaining land of Cowcatcher LLC 139.73 feet to the westerly sideline of said St. John Street;

Thence, S 07°36'17" E along the westerly sideline of said St. John Street 40.00 feet to land of said Ly and the point of beginning containing 3.02 acres more or less. Being a portion of the property described in deed book 26330, page 105

Bearings are based on Maine State Plane Coordinates as provided by the City of Portland

The above described parcel of land is a portion of the property shown on "Boundary and Topographic Survey at 217, 218-238, 221 and 225 St. John Street, Portland, Maine made for Cowcatcher LLC" dated Nov. 16, 2016 by Owen Haskell, Inc.

This conveyance is made together with the benefit of a non-exclusive easement for pedestrian and motor vehicle ingress and egress to/from the above described parcel over the portion of Grantor's retained land more fully described below (the "Easement Area"). This easement shall be appurtenant to and benefit the above described parcel and the same shall run with the land. The Easement Area is more particularly bounded and described as follows:

Commencing at a point on the westerly sideline of St. John Street said point being the northeasterly corner of land now or formerly of Tim Q. Ly as described in deed book 17799 page 58;

Thence, N 07°36'17" W along the westerly sideline of said St. John Street 40.00 feet;

Thence, S 82°23'43" W along the remaining land of Cowcatcher LLC 139.73 feet;

Thence, S 80°00'00" W along the remaining land of Cowcatcher LLC 24.10 feet to the Point of Beginning;

Thence, from said Point of Beginning S 80°00'00" W along the remaining land of Cowcatcher LLC 26.00 feet;

Thence, N 09°36'17" W across the remaining land of Cowcatcher LLC 125.08 feet to land now or formerly of Union Station Plaza Limited Partnership as described in deed book 6813, page 250;

Thence, N 82°23'43" E along land of said Union Station Plaza Limited Partnership 26.02 feet;

Thence, S 09°36'17" E across the remaining land of Cowcatcher LLC 123.99 feet to the point of beginning containing 3,238 square feet more or less.

Bearings are based on Maine State Plane Coordinates as provided by The City of Portland.

This conveyance is also made together with the benefit of, and subject to the rights of Grantor and others, which are expressly reserved hereby, and the terms and conditions of, that certain easement granted by Fraternal Order of Eagles AERIE No. 565 to Daniel W. Hourihan as Trustee of the St. John Street Realty Trust by Easement Deed dated May 25, 1990 and recorded in the Cumberland County Registry of Deeds in Book 9214, Page 118.

This conveyance is also made together with the benefit of, and subject to the rights of Grantor, Union Station Limited Partnership and others, which are expressly reserved hereby, and the terms and conditions, of that certain easement granted by said Union Station Limited Partnership to Grantor by Easement Deed dated January 12, 2009 and recorded in the Cumberland County Registry of Deeds in Book 26601, Page 316.

This conveyance is also made together with the benefit of, and subject to the rights of Grantor, Union

Station Limited Partnership and others, which are expressly reserved hereby, and the terms and conditions, of that certain easement granted by Grantor to said Union Station Limited Partnership by Easement Deed dated January 12, 2009 and recorded in the Cumberland County Registry of Deeds in Book 26601, Page 321.

This conveyance is also made subject to an easement hereby reserved by Grantor for the benefit of and appurtenant to the portion of Grantor's retained land lying westerly of St. John Street, as described in that certain Trustee's Deed from Craig G. Coffin, as successor to Daniel W. Hourihan, Trustee of the St. John Realty Trust dated September 10, 2008 and recorded in the Cumberland County Registry of Deeds in Book 26330, Page 105, and in that certain Release Deed and that certain Easement Deed, both from Union Station Limited Partnership dated January 12, 2009 and recorded in said Registry of Deeds in Book 26601, Pages 314 and 316 respectively, for parking up to **400** vehicles, either in the parking structure contemplated to be constructed on the parcel conveyed hereby, or on the surface of said parcel until such time as said parking structure or other structure is constructed, together with the right of vehicular ingress and egress across the parcel conveyed hereby, from St. John Street directly and Grantor's retained land to and from such parking areas, whether located on the surface or within a parking structure, on the following terms and conditions:

1. The parking spaces shall be located as designated by Grantee.

2. Grantor shall have no right to exercise said ingress and egress rights or use any of said parking spaces so long as the ground lessee (or its successors or assigns) of Grantee (or its successors or assigns) for the entire property conveyed hereby, shall also be the lessee of Grantor for the entirety of Grantor's retained land.

3. Grantee shall have the right to use all such parking spaces for itself or its tenants or subtenants until such time as Grantor elects to use the same upon at least **30** days prior written notice to Grantee or its successors or assigns, and to Grantee's ground lessee (if applicable).

4. In the event Grantor elects to use any such parking spaces, Grantor agrees to reimburse Grantee at a zero triple net rate (i.e. the operating costs allocated to each such space, excluding capital expenses), monthly upon presentation of invoices for the same.

The Easement reserved herein is perpetual and shall inure to the benefit of and be binding upon the successors and assigns of the parties hereto and shall burden the property conveyed hereby to Grantee and shall benefit and be appurtenant to the retained land of Grantor as described above and shall be construed as a real covenant running with the land enforceable by the parties at law and in equity.

Received
Recorded Register of Deeds
Apr 04,2018 11:34:08A
Cumberland County
Nancy A. Lane

MEMORANDUM OF LEASE

LANDLORD:	CASTE COW LLC, a Maine limited liability company with a mailing address of 100 Commercial Street Portland, Maine 04101.
TENANT:	MAINE MEDICAL CENTER, a Maine nonprofit corporation with a mailing address of 22 Bramhall Street, Portland, Maine 04102.
DESCRIPTION:	Premises in Portland, Maine and described in a deed recorded in the Cumberland County Registry of Deeds in Book 34754 Page 65.
DATE OF LEASE:	April 4, 2018
TERM:	**50 years** from the Commencement Date specified in the Lease. The parties shall record a Commencement Date certificate.
OPTION TO RENEW:	**Two** successive **25 year** options.
PURCHASE RIGHT:	Tenant's right to purchase is described in the Lease.

DATED: April 4, 2018

CASTE COW LLC

By: J. Tim Soley, Manager

STATE OF MAINE
Cumberland County

April 4, 2018

Personally appeared the above-named J. Tim Soley, Manager of Caste Cow LLC, and acknowledged the foregoing to be his free act and deed in that capacity and the free act and deed of the limited liability company.

Before me,

Notary Public/Attorney at Law
Print Name: William M. Welch, Esq

[TENANT SIGNATURE PAGE FOLLOWS]

TENANT SIGNATURE PAGE

Dated: April 4, 2018

MAINE MEDICAL CENTER

Richard W. Petersen
President & Chief Executive Officer

STATE OF MAINE
Cumberland County

April 4, 2018

Personally appeared the above-named Richard W. Petersen, President & Chief Executive Officer of Maine Medical Center, and acknowledged the foregoing to be his free act and deed in that capacity and the free act and deed of the corporation.

Before me,

~~Notary Public~~/Attorney at Law
Print Name: Benjamin Gunn

Received
Recorded Register of Deeds
Apr 04,2018 11:36:25A
Cumberland County
Nancy A. Lane

MEMORANDUM OF LEASE

LANDLORD:	COWCATCHER LLC, a Maine limited liability company with a mailing address of 100 Commercial Street Portland, Maine 04101.
TENANT:	MAINE MEDICAL CENTER, a Maine nonprofit corporation with a mailing address of 22 Bramhall Street, Portland, Maine 04102.
DESCRIPTION:	Premises located at 222 St. John Street, Portland, Maine and described in deeds recorded in the Cumberland County Registry of Deeds in Book 26330, Page 105, Book 26601, Page 314, and Book 26601, Page 316, but excluding a parcel described in a deed of near or even date from Landlord to Caste Cow LLC and an approximately .34 acre parcel of land located on the easterly side of St John Street identified as Portland Tax Assessor Lots 064-F002, 064-F003 and 064-F004.
DATE OF LEASE:	April 4, 2018
TERM:	**50 years** from the Commencement Date specified in the Lease. The parties shall record a Commencement Date certificate.
OPTION TO RENEW:	**Two** successive **25 year** options.
PURCHASE RIGHT:	Tenant's right to purchase is described in the Lease.

DATED: April 4, 2018

COWCATCHER LLC

By: J. Tim Soley, Manager

STATE OF MAINE
Cumberland County

April 4, 2018

Personally appeared the above-named J. Tim Soley, Manager of Cowcatcher LLC, and acknowledged the foregoing to be his free act and deed in that capacity and the free act and deed of the limited liability company.

Before me,

Notary Public/Attorney at Law
Print Name: William M. Wetch

[TENANT SIGNATURE PAGE FOLLOWS]

TENANT SIGNATURE PAGE

Dated: April 4, 2018

MAINE MEDICAL CENTER

Richard W. Petersen
President & Chief Executive Officer

STATE OF MAINE
Cumberland County

April 4, 2018

Personally appeared the above-named Richard W. Petersen, President & Chief Executive Officer of Maine Medical Center, and acknowledged the foregoing to be his free act and deed in that capacity and the free act and deed of the corporation.

Before me,

Notary Public/Attorney at Law
Print Name: Benjamin Lunal

Received
Recorded Register of Deeds
Apr 04,2018 11:38:19A
Cumberland County
Nancy A. Lane

5. EVIDENCE OF STATE AND/OR FEDERAL APPROVALS

In addition to the City's Level III Site Plan Review, the proposed project requires the following permits:

- Maine Construction General Permit (MCGP) from Maine Department of Environmental Protection prior to construction
- Federal Aviation Administration (FAA) Aeronautical Study for Determination of Hazard
    - Crane Height
    - Final Completed Building Height
- MaineDEP Stormwater Permit (reviewed under City's delegated review authority)

Permit approvals will be submitted to the City upon receipt.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-ANE-4324-OE

Issued Date: 08/02/2018

Dennis Morelli
Maine Medical Center
22 Bramhall Street
Portland, ME 04102

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building Employee Parking Garage
Location:	Portland, ME
Latitude:	43-38-56.03N NAD 83
Longitude:	70-16-47.61W
Heights:	27 feet site elevation (SE)
	108 feet above ground level (AGL)
	135 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 1.

This determination expires on 02/02/2020 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

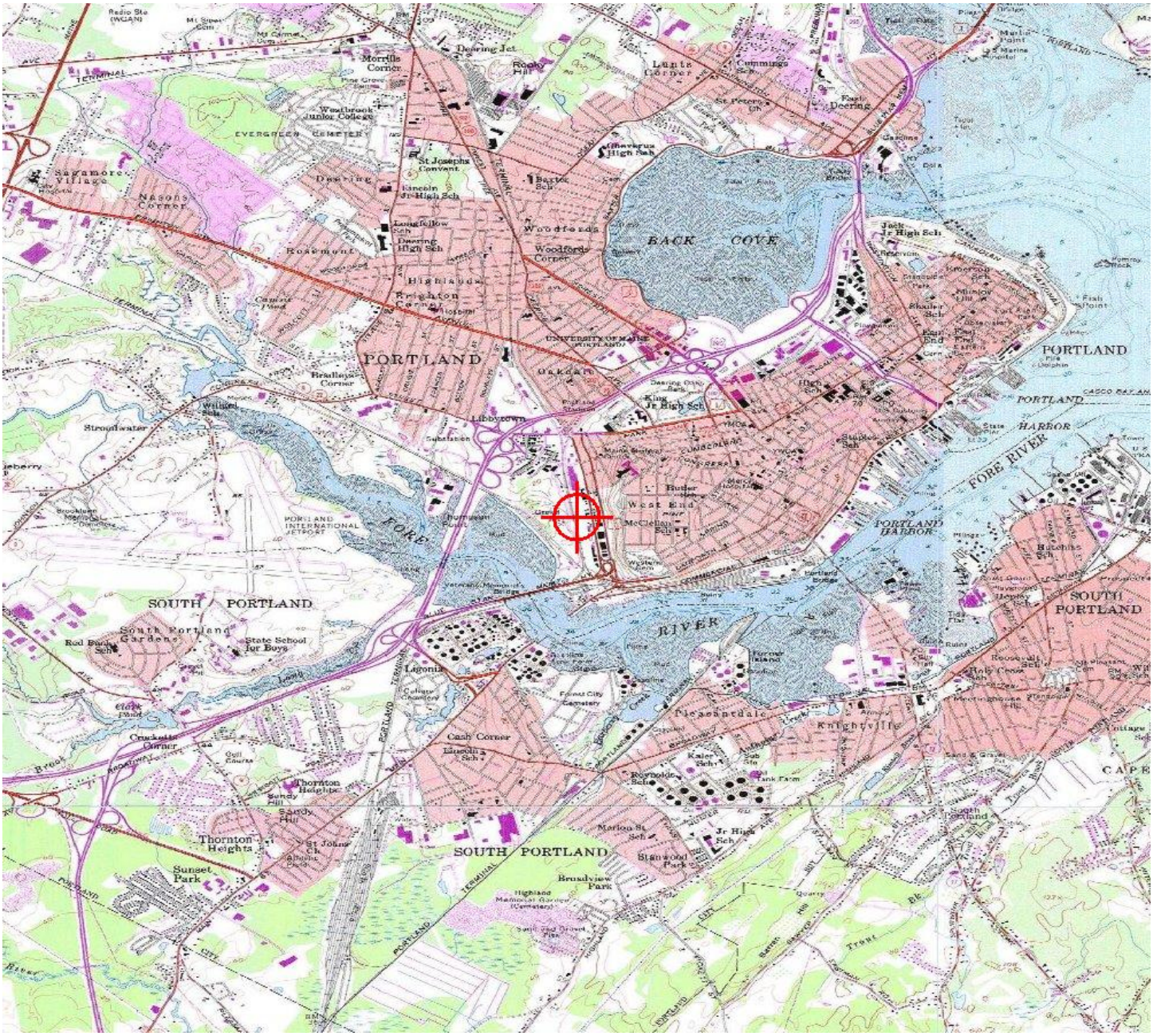
If we can be of further assistance, please contact our office at (202) 267-4525, or david.maddox@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-ANE-4324-OE.

Signature Control No: 370042203-371910062 (DNE)
David Maddox
Specialist

Attachment(s)
Case Description
Map(s)

New 8-story parking garage built on existing flat parking lot

TOPO Map for ASN 2018-ANE-4324-OE



NOTICE OF INTENT TO COMPLY WITH MAINE CONSTRUCTION GENERAL PERMIT

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

Name of Applicant (Owner):	Maine Medical Center	**Applicant Mailing Address:**	22 Bramhall Street		
Town/City:	Portland	**State:**	ME	**Zip Code:**	04102
Daytime phone: (with area code)	207-558-3704	**Email if available:**	dsenus@woodardcurran.com	**Name of Agent:**	Dave Senus
Project Location: (Town/City):	Portland	**UTM Northing: (if known)**		**UTM Easting: (if known)**	
Map #:	See below	**Lot #:**	See below	**Size of disturbed area proposed:**	4.84 Acres
Creating a common plan of development or sale?	**Yes**	**No** X	**Part of a larger project?**	**Yes**	**No** X
Name of waterbody(ies) to which the disturbed area drains, or name municipality if drains to an MS4:	Fore River				
Does site drain to an Impaired Waterbody (C)? If so, give name:	Fore River				
Detailed directions to site, including address if available:	222 St. John Street Portland, Maine 04103				
Description of project and its purpose:					

The project involves the demolition of the existing surface parking lot at 222 St. John Street and the construction of a new 2,400 car staff parking garage fronting along St. John Street and a 52-space surface parking lot north of the garage structure. The current parking lot for the Eagles at 184 St. John Street will also be demolished and the space will be used for vehicle access to Levels 1 – 8 of the garage and pedestrian access from St. John Street. The project has been reviewed under delegated authority with the City of Portland.
Tax Map/ Lot Number Information: 075/A006, 074/A007, 064/A002, 064/A008, 068/D014, 068/D013, 068/D016, 068/D001 and 068/D003

I am filing notice of my intent to carry out work which meets the requirements of the Construction General Permit (effective 3/10/03). I have a copy of the Construction General Permit. I have read and will comply with all of the standards. I have attached all the required submittals. *Notification forms cannot be accepted without the necessary attachments.*

☒ ALL: A check (non-refundable) made payable to: "Treasurer, State of Maine." **See DEP fee schedule for correct fee**. You must know # of acres being permitted to determine the fee**.**

☒ ALL: A U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.

☒ ALL: Drawing of the proposed activity (site plan).

☒ ALL: An ESC plan.

❑ IF this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.

N/A ❑ IF any construction activity will occur in essential habitat, attach written approval from the Dept. of Inland Fisheries & Wildlife.

I authorize staff of the Departments of Environmental Protection to access the project site for the purpose of determining compliance with the general permit. I also understand that ***this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.***

Signature of Applicant:		**Date:**	09/07/2018

Keep the bottom copy as a record of permit. Send the form with attachments via certified mail to the Maine Dept. of Environmental Protection **at the appropriate regional office.** The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Check with DEP Staff to determine the expiration date on this permit . **Work carried out in violation of any standard is subject to enforcement action.**

OFFICE USE ONLY	Ck.#		Staff	Staff	
NOI #	FP	Date	Acc. Date	Def. Date	After Photos

6. ASSESSMENT OF ZONING

The proposed project is in alignment with the approved Maine Medical Center IDP and IOZ Regulatory Framework. The St. John Street Parking Garage is listed as a near-term project in the IDP. This project satisfies the MMC parking needs as outlined in the approved IDP Transportation Plan. As outlined in the approved IDP, the goals of this project are to provide for replacement parking to support demolition of the existing staff garage, to consolidate existing remote surface parking, to reduce parking by staff on surrounding neighborhood streets, and to accommodate expected staff growth. MMC desires to provide a reliable and complete parking solution for staff, and the proposed parking garage will meet this goal.

Compliance with the IOZ Regulatory Framework specified in the City of Portland Land Use Code (Chapter 14) and the MMC IDP is described in the following sections.

6.1 Applicability (14-282 (a))

The proposed development is within the boundaries of the MMC Institutional Overlay Zone (IOZ) specified in the IDP; therefore, the IOZ standards apply to this project.

6.2 Updates and Amendments (14-282 (b))

The proposed parking garage design is consistent with the MMC IDP approved by the Portland City Council in October 2017. No updates or amendments are proposed to the IDP as a part of this project.

6.3 Uses (14-282 (c))

Parking garages are listed as a use permitted by right within the IOZ.

6.4 Dimensional Requirements (14-282 (d))

The proposed free-standing garage will consist of approximately 2,400 parking spaces across nine levels, consisting of an at-grade level plus eight tiers, to meet parking demand and consolidation efforts as mentioned in the approved IDP. As discussed in the IDP, MMC used a multi-part methodology to determine the appropriate height profile for potential future development within the IOZ boundary, including project definition, urban design analysis, slope analysis and visioning.

- **Building Height.** The maximum height identified in the IOZ Regulatory Framework is 100 feet for the western portion of the project area including the existing MMC parking lot, and maximum height of 45 feet for the eastern portion abutting St. John Street.
    - The proposed parking garage is located within the 100-foot zone. The average building height of the proposed garage is 96.25 feet, considering an average proposed ground elevation of +28.25 MSL at the building edge and average roof elevation at the speed ramp high roof of 124.5 MSL.
- **Building Length.** The maximum length of the proposed parking garage is specified as 500 feet as measured roughly parallel to St John St in the IOZ standards.
    - The proposed length of the structure is approximately 482.5 feet.
- **Building Setbacks.** A minimum building setback of five feet is specified in three locations along the eastern border of the site, as shown on the Minimum Setbacks Map in the IOZ.

- The proposed building is located over five feet from property boundaries in these locations.

- **Transition Zone.** As identified on the Maximum Building Heights Figure in the IOZ, there are no transition zones associated with the project area.

6.5 Design (14-282 (e))

The IOZ Regulatory Framework specifies that new buildings shall adhere to the Design Guidelines set forth in Chapter 5 of the IDP and the site plans standards of the City of Portland. Compliance with City Site Plan Standards is discussed in Section 17 of this report. Consistency with the approved IDP Chapter 5 general guidelines for building design within the IOZ boundary is discussed below.

- **Contribution to Campus Vision and Organizational Goals.** The proposed project is in alignment with the Master Facility Plan and the Transportation Plan described in Chapters 2 and 3 of the IDP, by consolidating and expanding staff parking.

- **Cohesion With the Campus.** The overall composition and experience of the parking garage was considered for cohesive identity from approaches along various viewpoints. Renderings have been prepared and are included within Section 3.

- **Building Entrance.** The building entrance has been oriented toward the St. John Street sidewalk to help support the existing pedestrian-oriented, mixed use environment.

- **Incorporating Building Character into Design.** The scale and proportion of the principal elevations of the garage have been given a hierarchical treatment, avoiding the repetitive nature of the basic building type. Along St. John Street, the principal façade of the garage features a base zone of textured precast concrete spandrels with textured faces which impart detail and scale relating features. On the south side of this elevation, the bottom two tiers of spandrels relate to the low-rise buildings to the south. On the north side, a higher base of feature spandrels relates to a scale of City and institutional uses. The composition is deliberately varied, with an off-centered elevator core. The west side of the building, with no massing relief, is activated with a resolving feature of a feature infill bay. The upper sides of both east and west feature light-catching perpendicular extruded aluminum fins, which create a softening of the mass of the structure. They also feature a horizontal precast concrete shelf cap along the full length of the elevation. The northeast and southwest corners of the structure, which contain egress stairs, present solid elements which demarcate them as features and also emphasize the openness of the adjacent tiers.

- **Building Façade.** Materials in general will be high quality, long lasting and weather resistant, including:
  - Structural Elements – Precast reinforced concrete
  - Exposed Spandrels – Colored and textured precast concrete
  - Window Framing – Clear anodized aluminum
  - Window Glass – Clear insulating units

- **Preserving Viewsheds**. MMC has considered the potential impact on public views from the Western Promenade towards the White Mountains. There is very little visual impact along the Western Promenade from the proposed garage. The roof of the proposed garage will be visible in the largely tree-screened view zone south of the White Mountain viewshed.

- **Priority Node.** The design focuses on supporting the pedestrian, mixed use environment of St. John Street. The landscape plan includes pedestrian access directly to paved walks connecting to pedestrian routes indicated in the IDP.

- **Pedestrian Safety.** MMC plans to enhance aesthetic value and implement crime prevention strategies along pedestrian routes from the garage to the main campus. The following strategies are outlined in the approved IDP:

    - Providing elements of visual interest along any blank walls facing public streets;
    - Ensuring that paths from transit stops, bike storage areas, and parking areas to main pedestrian entrances are well-lit, with clear sight lines;
    - Providing clear and properly-sized signs in safe locations to ensure safe wayfinding; and
    - Designing street-level elevations to minimize potential hideouts.

    The following considerations have been made for the proposed parking garage:

    - The south façade has trees located to mark the edge, with spacing allowing clear views between them offering nowhere to hide.
    - The west façade is inert material for egress, enclosed by a security fence, also offering nowhere to hide.
    - The north façade faces a surface parking area.
    - The east façade includes the lobby and plantings/lighting/pathways that are well lit with plantings specifically designed to allow high visibility.
    - The east façade zone between the Eagles building and parking garage is crushed stone and blocked from access from both sides with plantings.
    - The east façade between the lobby and northeast corner is well lit from the building with adjacent canopy trees that allow views beneath them. This zone is also enclosed by a security fence.
    - The pedestrian access from surface parking to St. John street includes a new stair with handrail, a resurfaced pedestrian path, a privacy fence at the property line between this zone and the neighbors at 212/214 St. John, and high branching deciduous trees with turfgrass beneath, allowing nowhere to hide.

- **Parking Structures.** The proposed parking garage screens views of cars from the public rights-of-way to the extent possible. The proposed garage is not located within 20 feet of the public right of way, so street activation intent does not apply. The plan for the proposed garage does remove a surface parking lot that was formerly within the view of the public right of way (Eagles Lot). Although the parking garage itself is not 20' within a public way, the proposed landscape plan activates the street with street trees along the St. John Street sidewalk and walkways directing parking garage users to pedestrian routes indicated in the IDP.

6.6 Signs (14-282 (f))

Signage for the parking garage will consist of a free-standing sign within the St. John Street entrance area. The plaza sign was coordinated with the overall landscaping design and context. Signage details and specs have been included as an attachment to Section 6. Any additional signage desired by MMC will be put forth in a future request.

6.7 Transportation (14-282 (g))

The MMC Transportation Demand Management (TDM) Plan is discussed in the approved IDP (IDP page 74). As outlined in the IDP, MMC has considered its transportation needs holistically, factoring into its future development alternative means of transportation (IDP page 25). Since 2009, MMC has implemented a Transportation Demand Management (TDM) plan called "Get on Board!" MMC is updating that plan and considering enhancements to encourage more walking, cycling, and public transportation by its staff. According to the Transportation Plan in the IDP, the project area is 0.3 miles from the Bramhall Campus and MMC will encourage walking (IDP page 66).

A parking demand analysis was conducted as part of the Transportation Plan in the IDP to determine parking needs based on supply and demand, and trip reduction efforts outlined in the TDM Plan. The analysis revealed an existing staff parking shortage of 150 to 200 spaces, with the MMC parking system typically operating at or above capacity during weekday daytime hours (IDP page 65). Approximately 500 to 600 additional staff parking spaces are required to meet projected demand based on expected staff growth. The proposed project was identified as a solution to the shortage. MMC intends to deconstruct the existing 1,274-space staff garage and construct the proposed St. John Street replacement garage that will supply approximately 2,477 spaces for MMC.

Once the St John St garage is complete and the majority of MMC staff parking is consolidated to that location, a new shuttle route will be established that reduces the amount of traffic around City streets and provides a reliable method of transportation for MMC staff. According to the IDP, consolidation of staff parking will improve staff satisfaction and minimize management challenges associated with eight satellite parking lots (IDP page 66).

Within the TDM, there are several parking and other strategies to manage the growth of staff parking demand. Those strategies are outlined in the TDM plan attached to **Section 10**.

6.8 Environment (14-282 (h))

The proposed development incorporates features that are designed to integrate with the surrounding context, including open space and pedestrian networks and infrastructure. See Landscaping approach description in Section 3.

6.9 Mitigation Measures (14-282 (i))

MMC will mitigate site plan impacts to off-premise infrastructure in a manner proportionate to those impacts. Mitigation measures proposed for project impacts include right of way improvements and improving pedestrian ways. Right of way improvement details, an off-site lighting improvement plan and an off-site sidewalk improvement plan has been included with the full design plan set in Section 3.

6.10 Neighborhood Integration and Neighborhood Engagement (14-282 (j))

In addition to the required neighborhood meeting as required by the Level III Site Plan process, MMC does the following in terms of neighborhood integration and neighborhood engagement:

- Monthly and as needed meetings with representatives of each of the neighborhood associations abutting the Bramhall Campus and Libbytown where MMC provides lunch;
- Targeted outreach to local businesses and residents;
- Open meetings where businesses and residents are invited to ask questions about the project and provide feedback;

- Provide mitigation measures (such as parking) to anyone directly impacted by temporary street parking closures or traffic detours;
- A webpage where all project information is available; and
- A project alert notification system where people can be updated via email or text of project updates.

6.11 Construction Management (14-282 (k))

A Construction Management Plan (CMP) that conforms to all IOZ requirements is provided in **Section 9** of this report. The CMP includes a construction schedule, and strategies for managing communication, noise, air quality, traffic, and parking impacts associated with the construction.

6.12 Other Requirements (14-282 (l))

- **Helipad**. This standard does not apply to the proposed project.
- **Snow Ban Parking**. In accordance with the IOZ Regulatory Framework, MMC will make parking available to neighbors within the parking garage for a set timeframe during designated snow ban parking events.
- **Healthy Communities**. This standard does not apply to the proposed project.

6.13 Attachments

- Signage Specifications

ZONING ANALYSIS Relevant Zone(s) Maine Medical Center IOZ

All Projects:

	Required	Proposed
Lot Size	IOZ Framework	5.27 acres
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	N/A	40 feet
Front Yard Minimum	0	0
Front Yard Maximum	N/A	0
Rear Yard	See Map	0
Yard Right	See Map	0 or 5 feet
Yard Left	See Map	0 or 5 feet
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	N/A	N/A
Minimum Lot Coverage	N/A	N/A
Maximum Height	See Map	96.25 ft avg.
Open Space	N/A	N/A
Maximum Impervious Area	N/A	176,076 sf or 4.0
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	Est. in SP Review	2,452
Loading Bays	N/A	N/A
Other 1	N/A	N/A
Other 2	N/A	N/A
Other 3	N/A	N/A

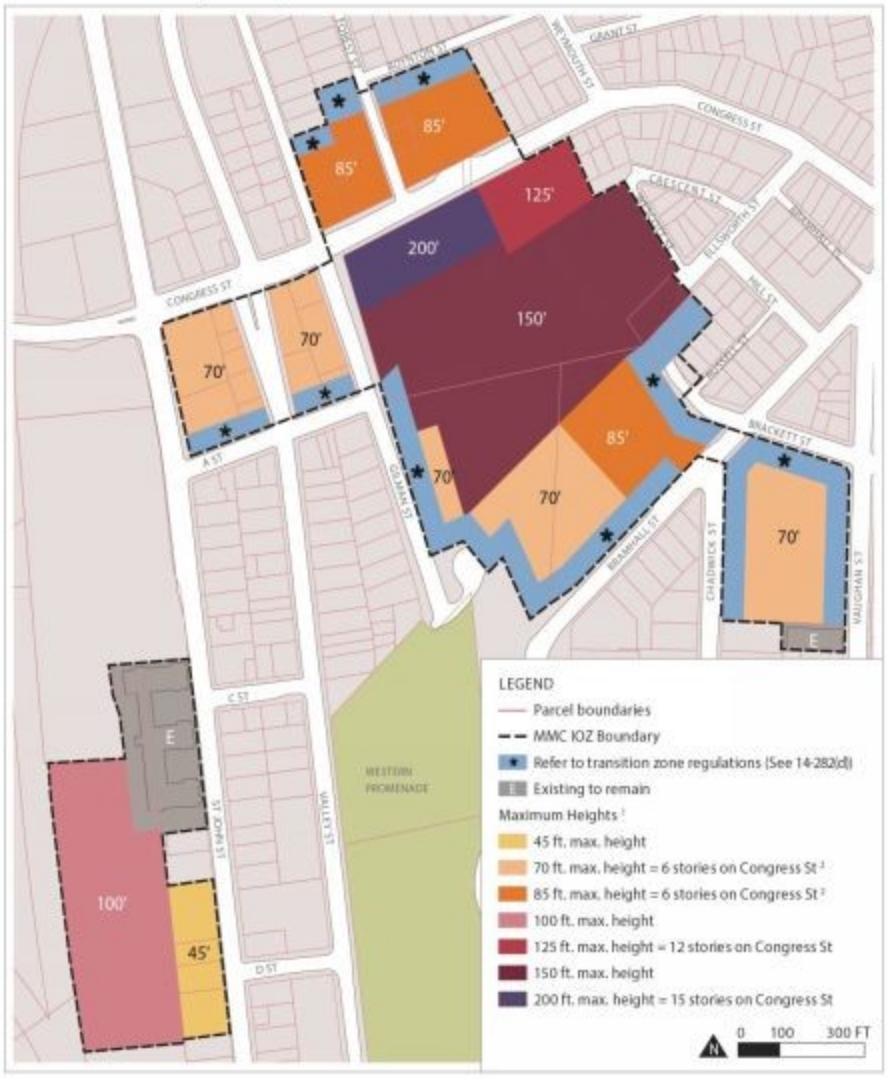
Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	N/A	N/A
Minimum Lot Area per Dwelling	N/A	N/A
Maximum # Units per Building	N/A	N/A
Maximum Building Length	N/A	N/A
Maximum Accessory Building Length	N/A	N/A
Minimum Setbacks	N/A	N/A
Minimum Building Separation	N/A	N/A
Minimum Open Space	N/A	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):			

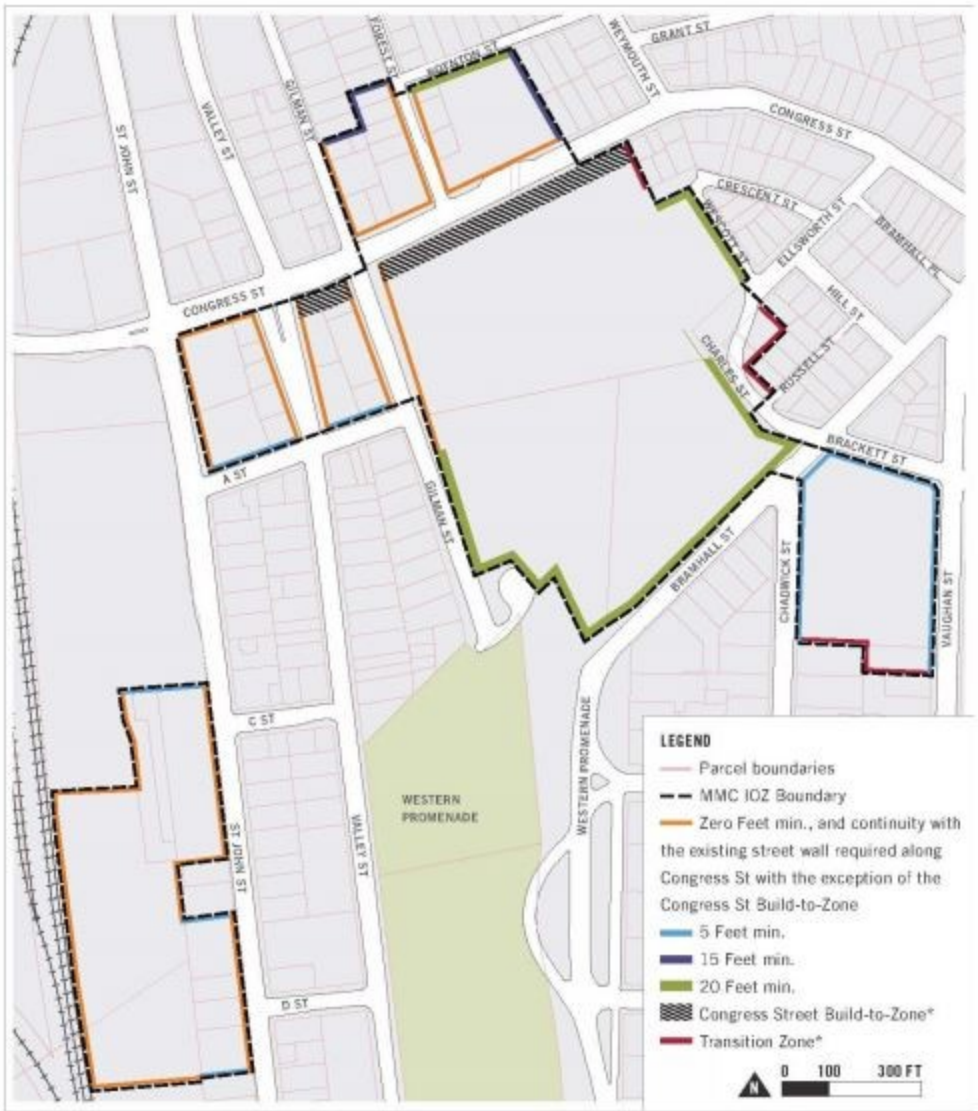
Maximum Building Heights



Notes: 1. Minimum building heights also apply. Refer to 14-282(d).

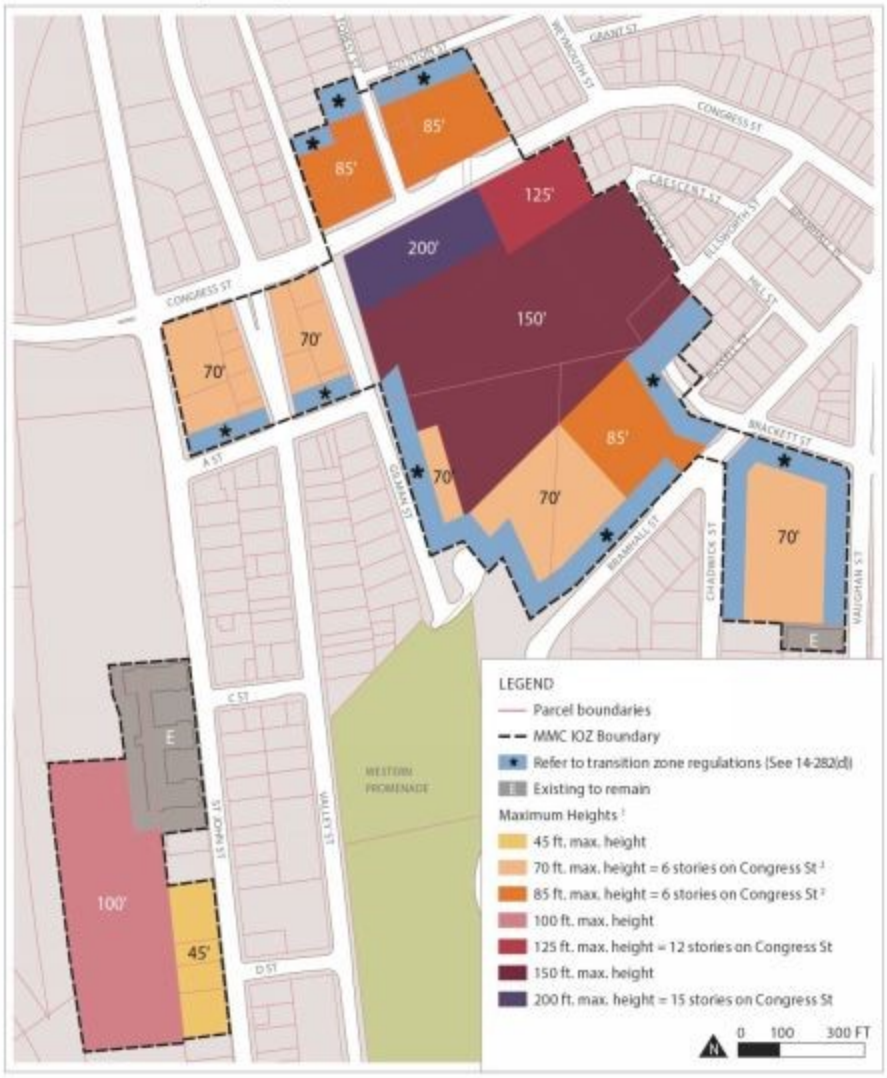
2. For buildings with residential use above the ground floor, the following height maximums apply: 70 ft. maximum height = 7 stories, and 85 ft. maximum height = 8 stories.

Minimum Setbacks



* **Note:** See Table 4.1 Dimensional Requirements.

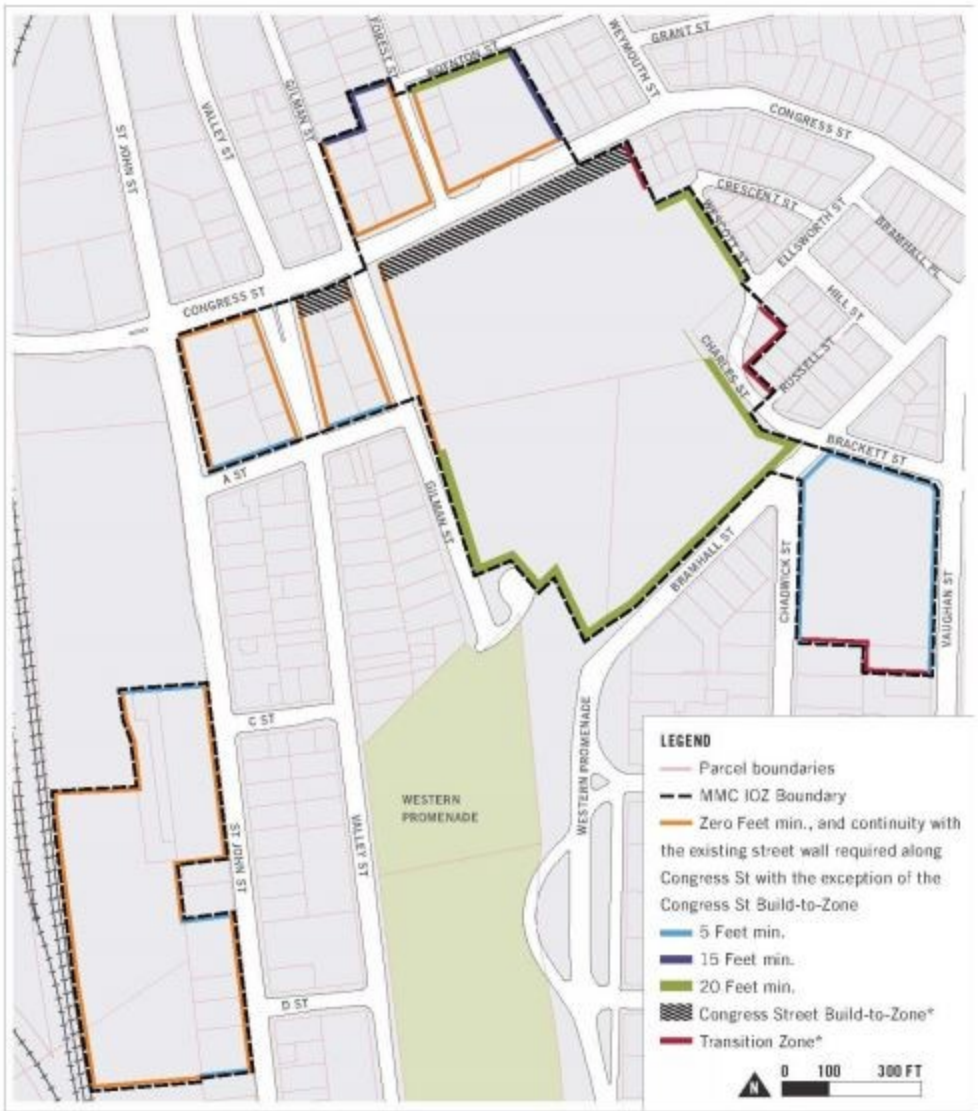
Maximum Building Heights



Notes: 1. Minimum building heights also apply. Refer to 14-282(d).

2. For buildings with residential use above the ground floor, the following height maximums apply: 70 ft. maximum height = 7 stories, and 85 ft. maximum height = 8 stories.

Minimum Setbacks



* **Note:** See Table 4.1 Dimensional Requirements.

Maine Medical Center
Bramhall Campus Environmental Graphics & Wayfinding Program

Preliminary Pricing Set
Schematic Design
6.22.18

Leverage

Project 1

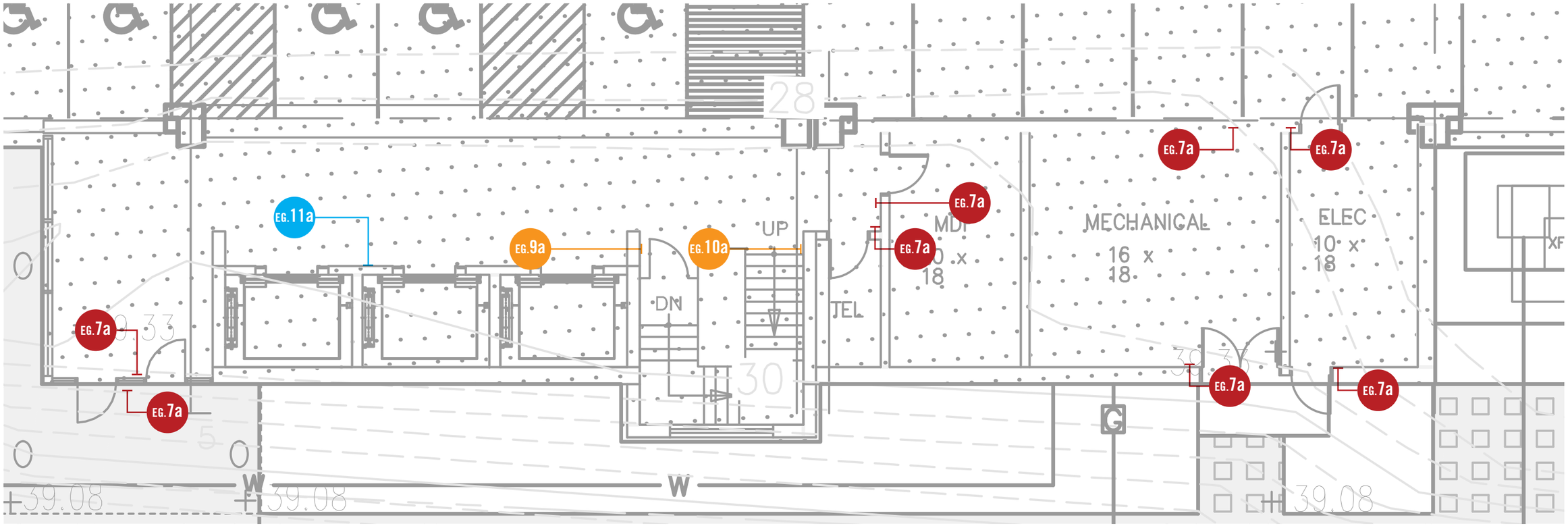
New Main Medical Center Parking Garage

Leverage/

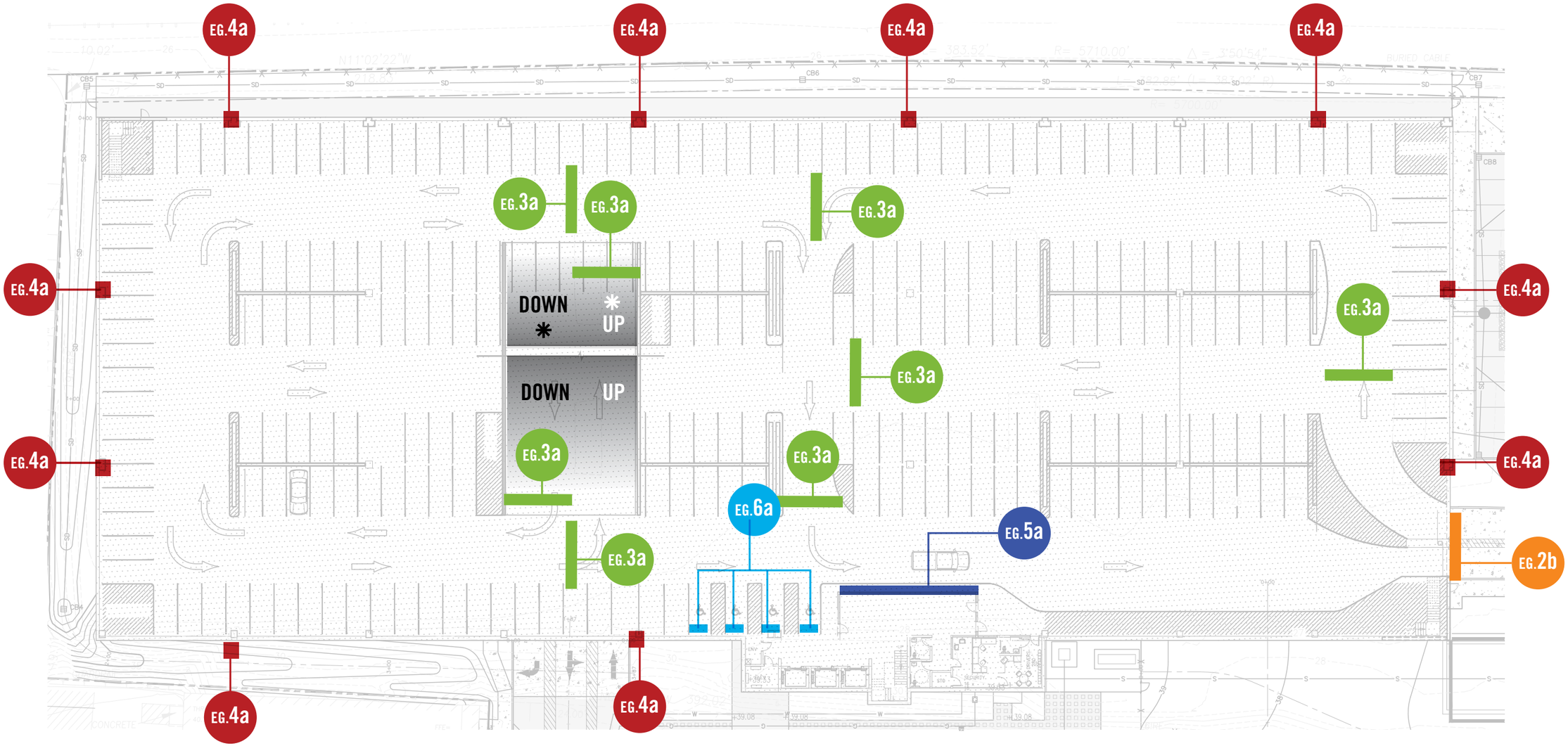
Preliminary Sign Location Plans

Preliminary Sign Location Plan (Level 1)

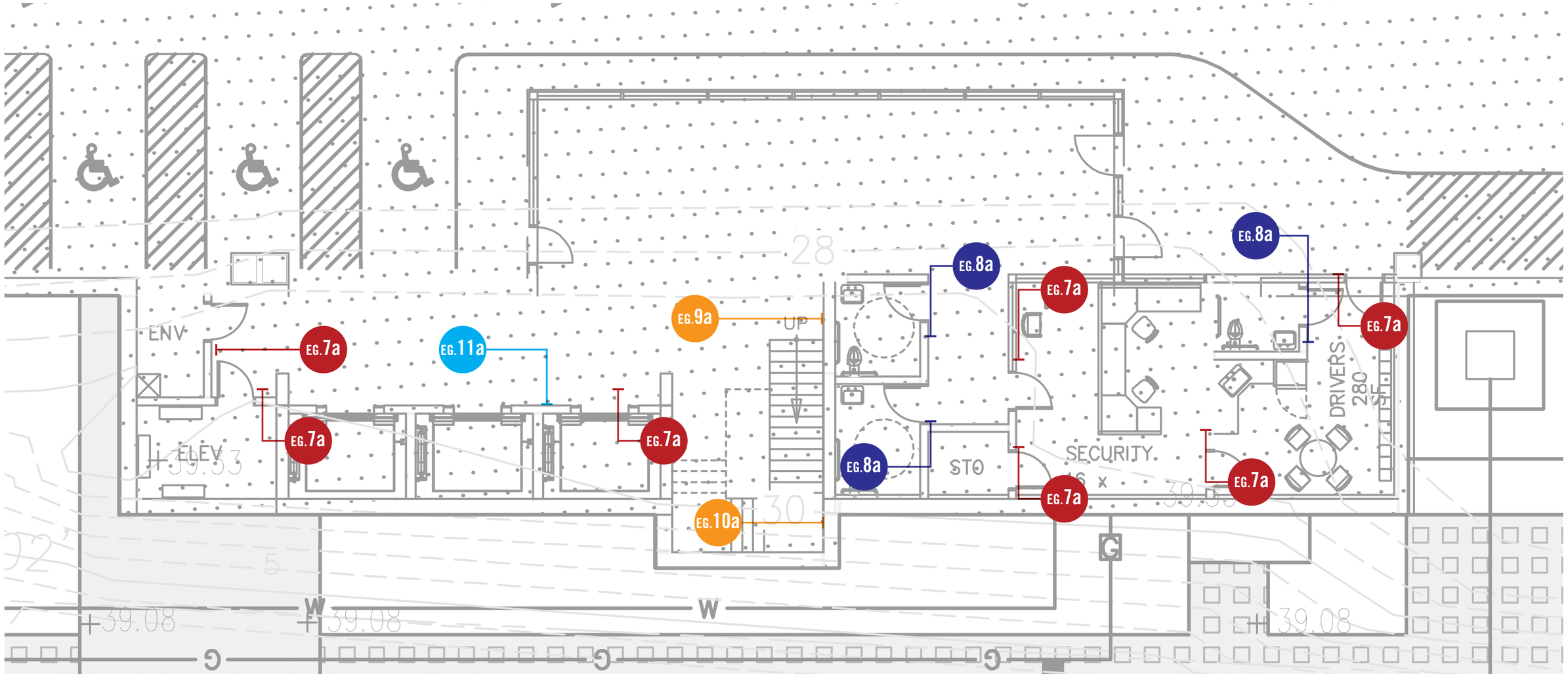
Preliminary Sign Location Plan (Level 1 Detail)



Preliminary Sign Location Plan (Levels 2-7)

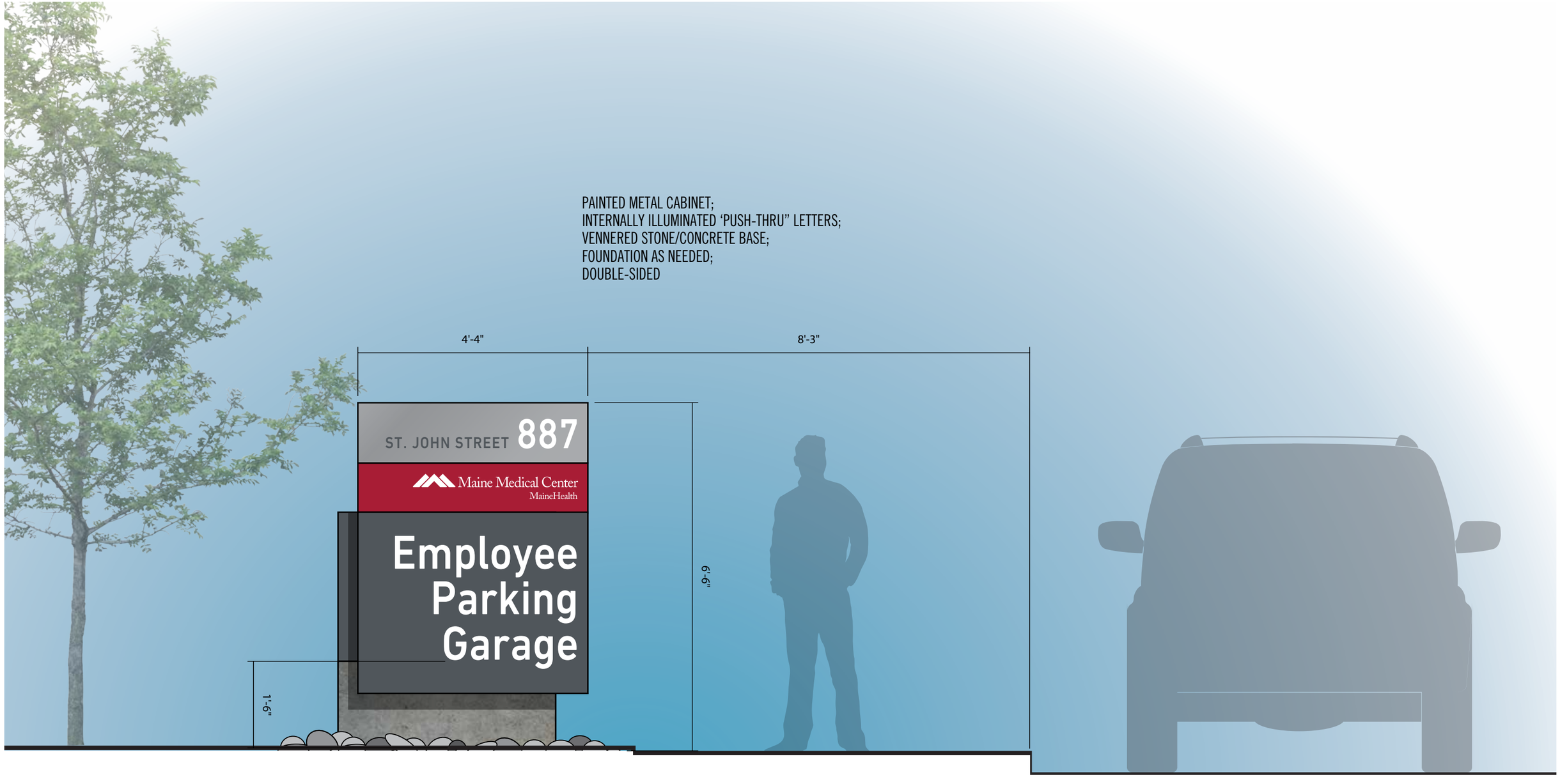


Preliminary Sign Location Plan (Levels 2-7 Detail)

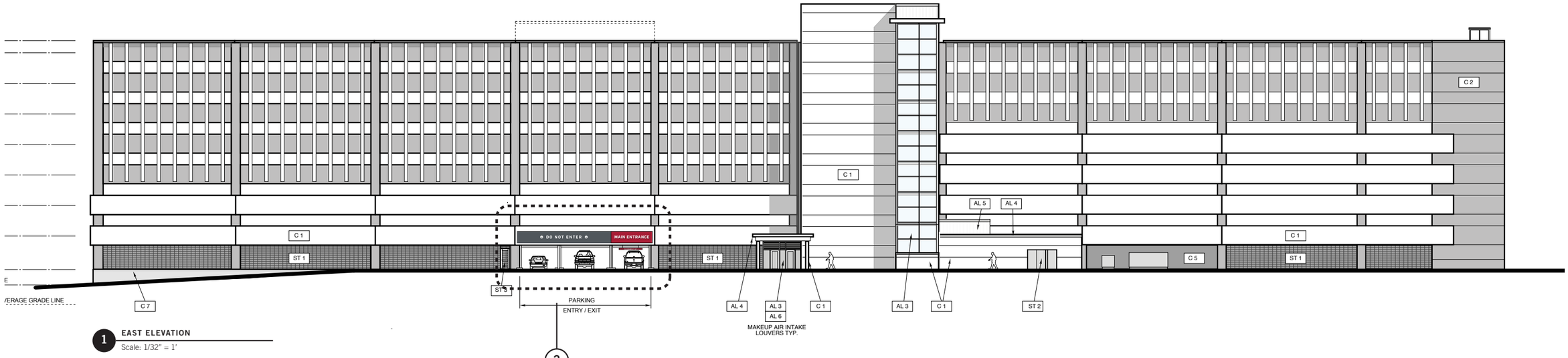


Sign Type Drawings

EG.1a Monument Sign



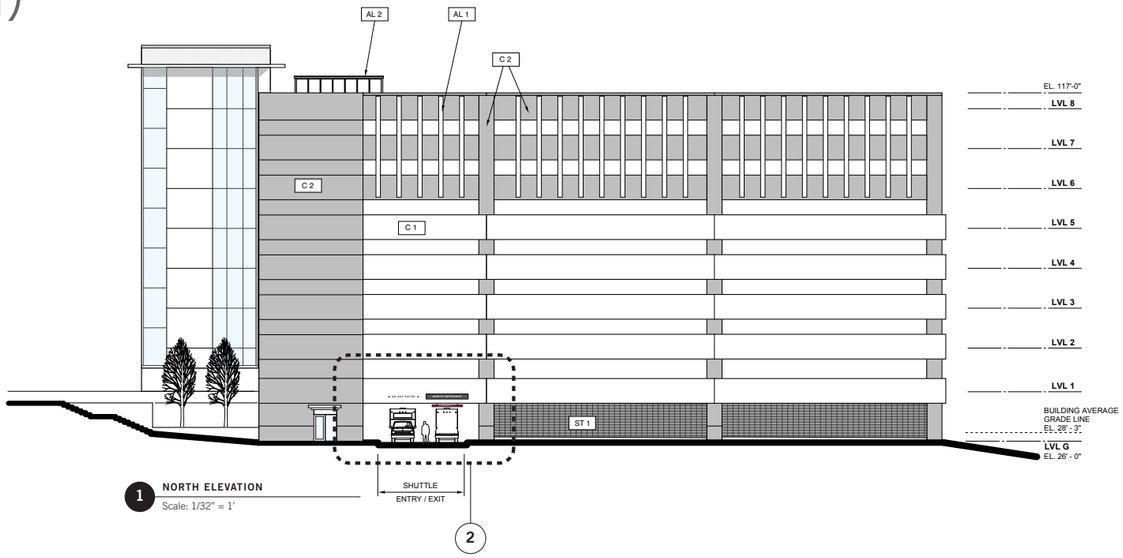
EG.2a Garage IDs (East Elevation)



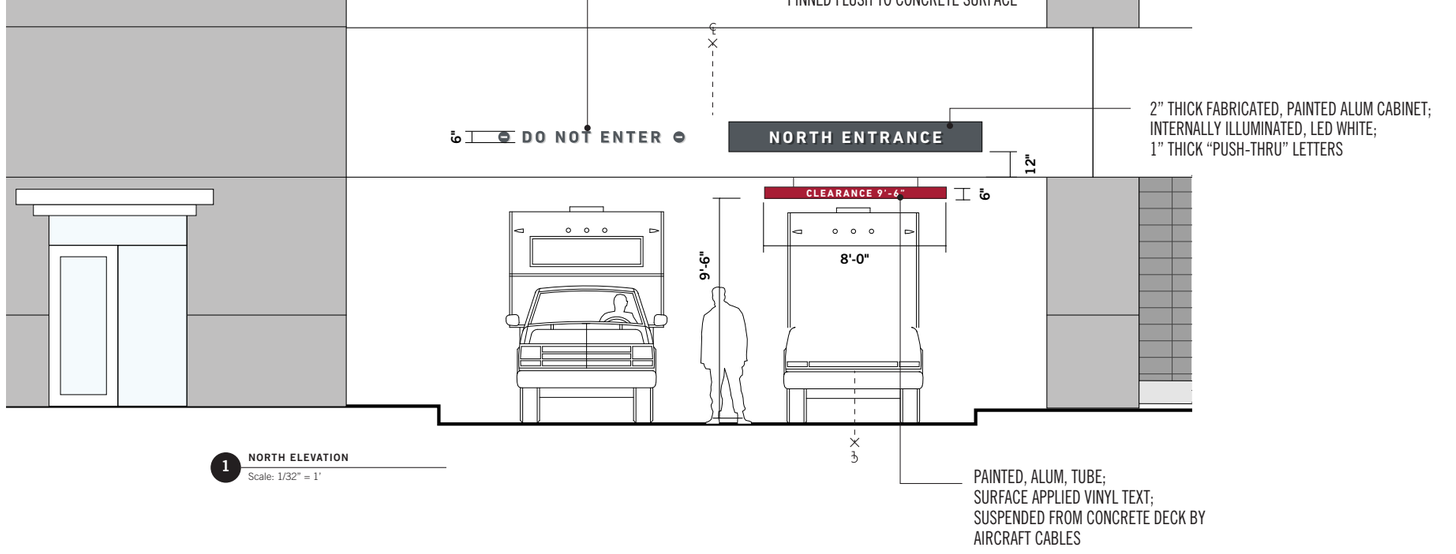
1 **EAST ELEVATION**
Scale: 1/32" = 1'

2 **SIGN TYPE F6: ENTRY SIGN**
Scale: 3/16" = 1'

EG.2b Garage IDs (North Elevation)

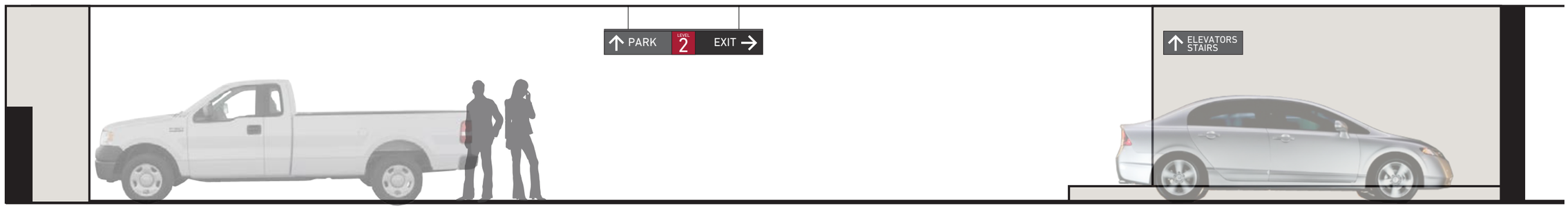


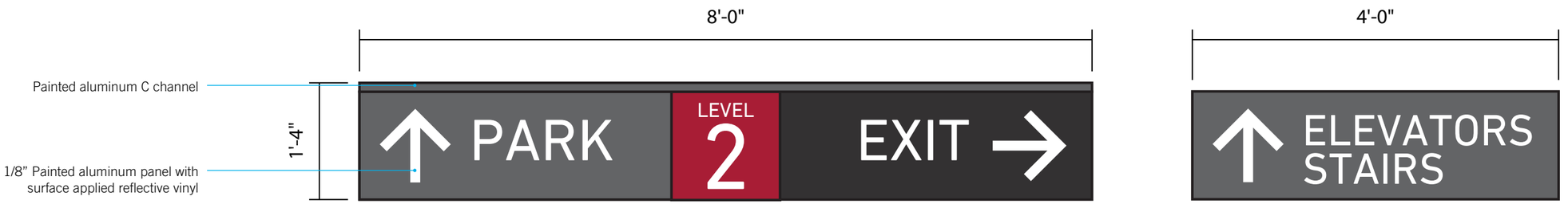
1 **NORTH ELEVATION**
Scale: 1/32" = 1'



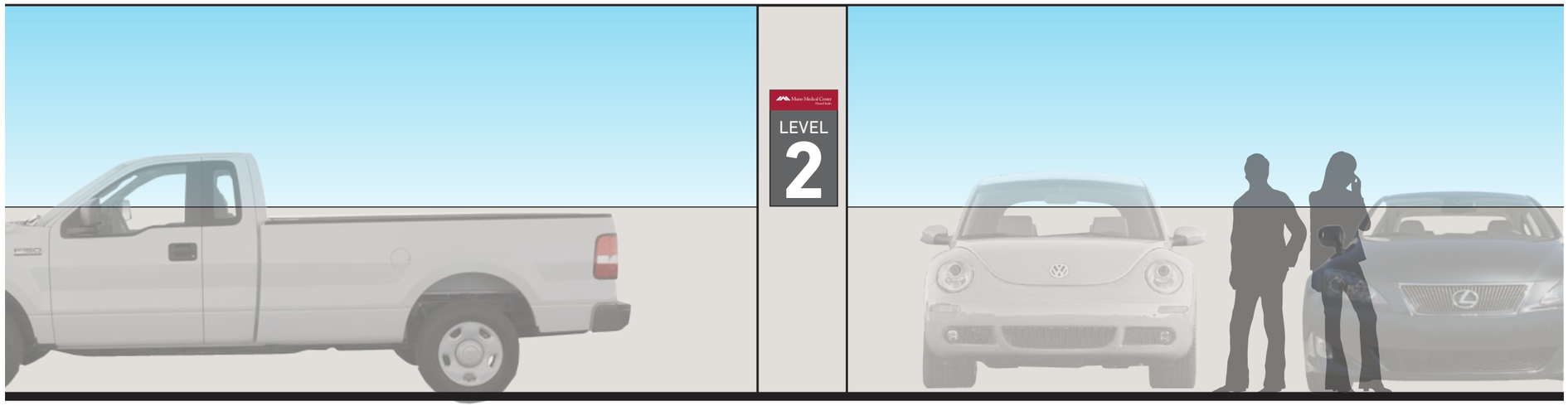
1 **NORTH ELEVATION**
Scale: 1/32" = 1'

EG.3a Garage IDs (North Elevation)





EG.4a Column ID

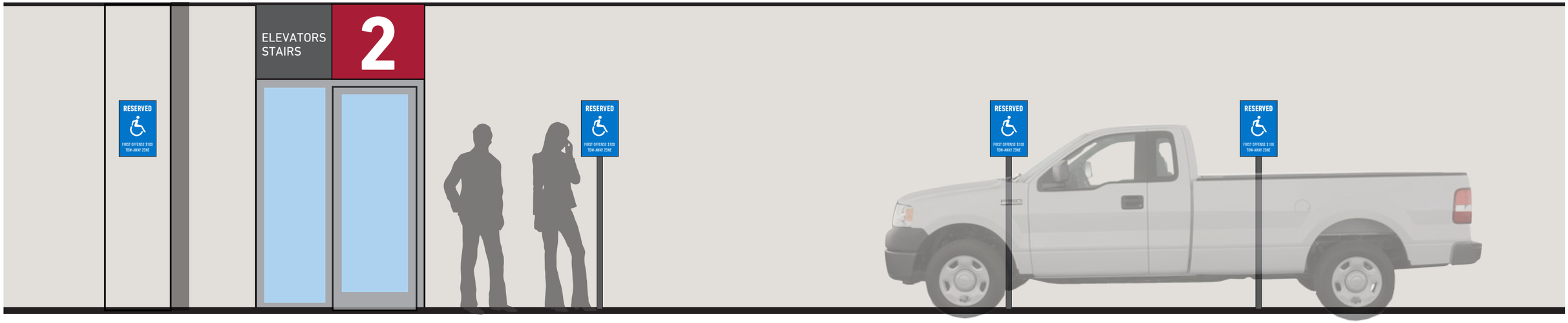


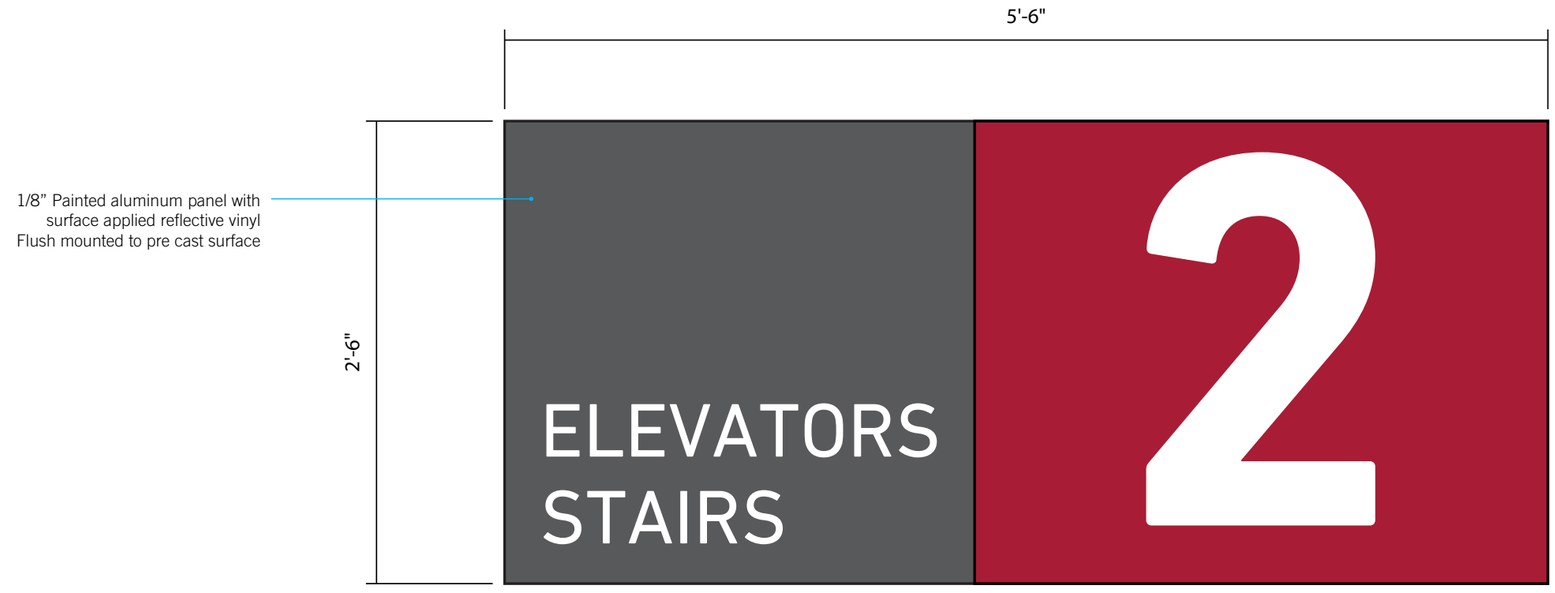
1'-8"

1/8" Painted aluminum panel with surface applied reflective vinyl Flush mounted to pre cast surface

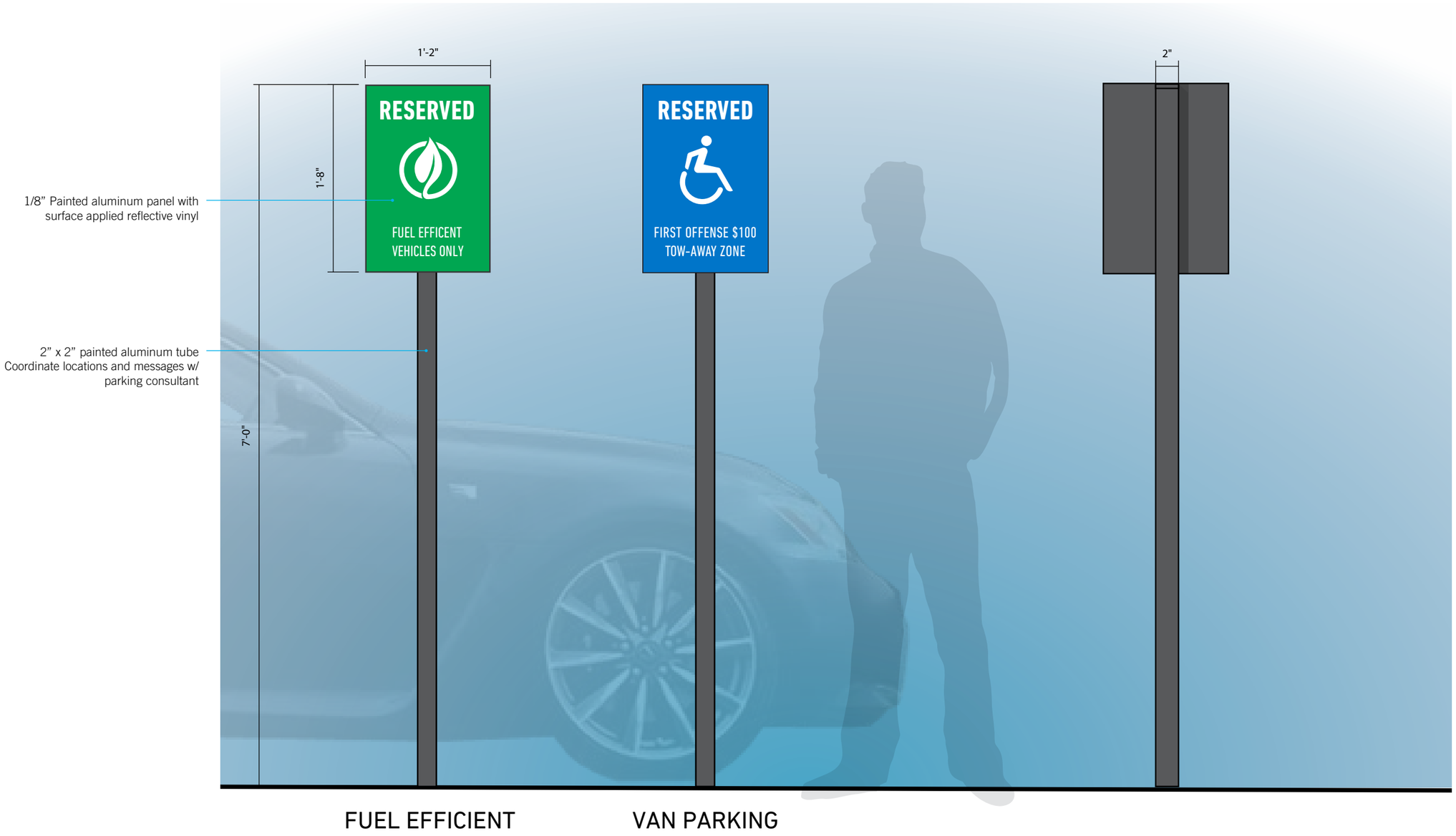
3'-0"

EG.5a Elevator Lobby IDs

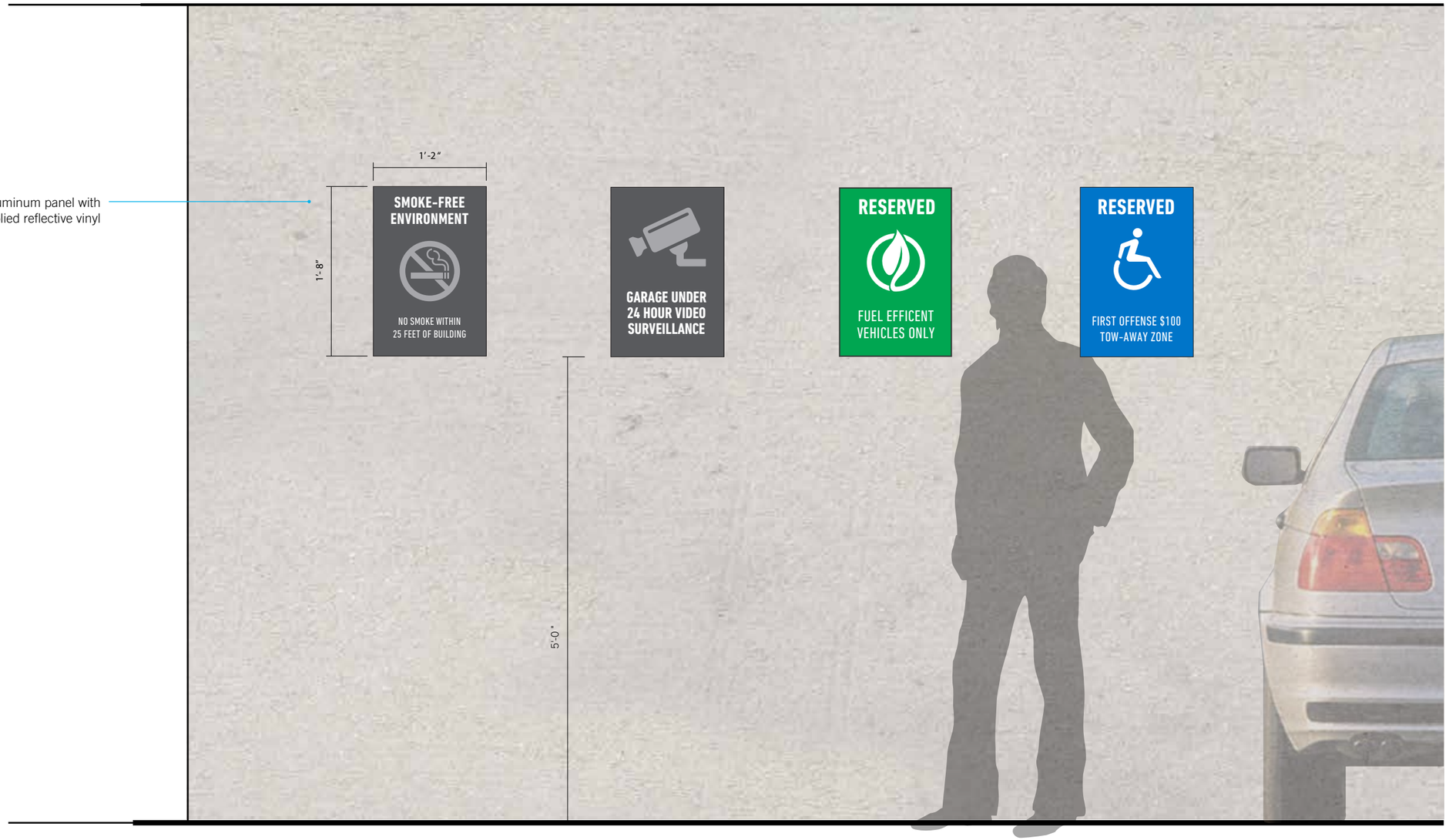




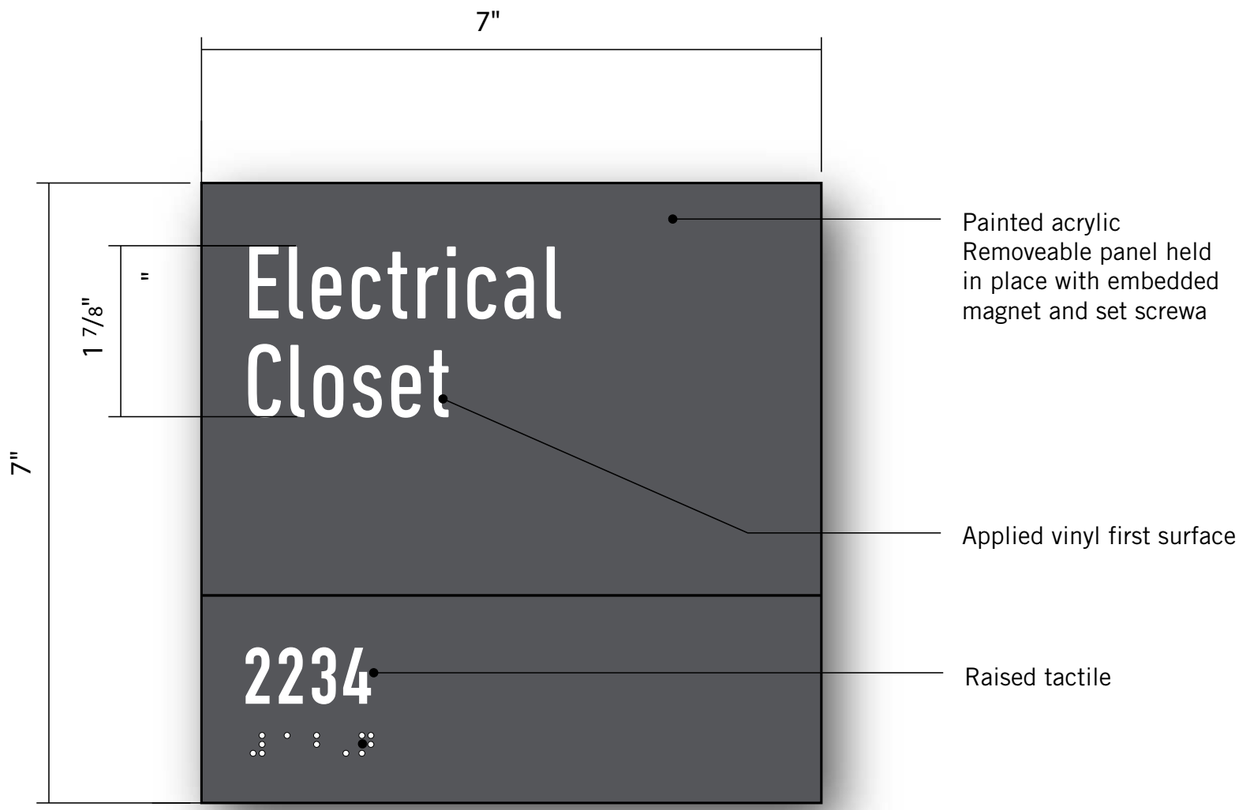
EG.6a DOT Posts

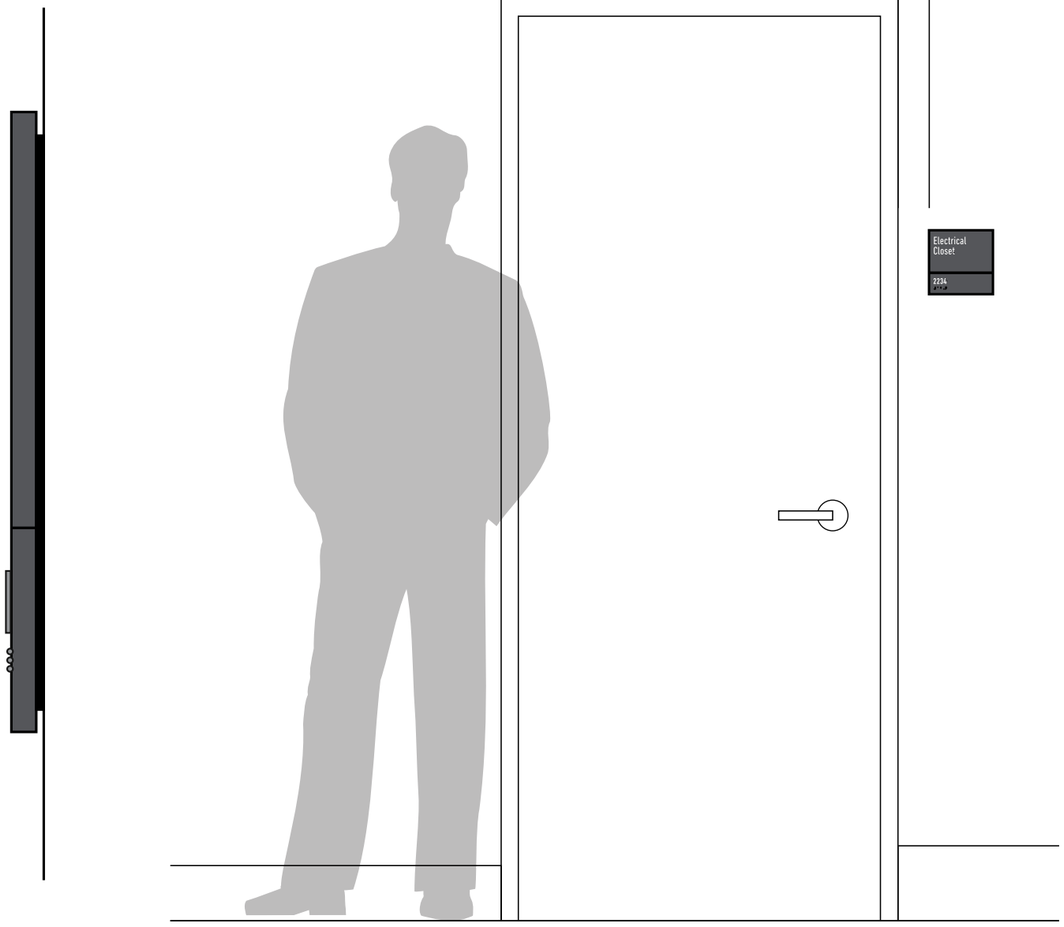


EG.6b DOT Plaques

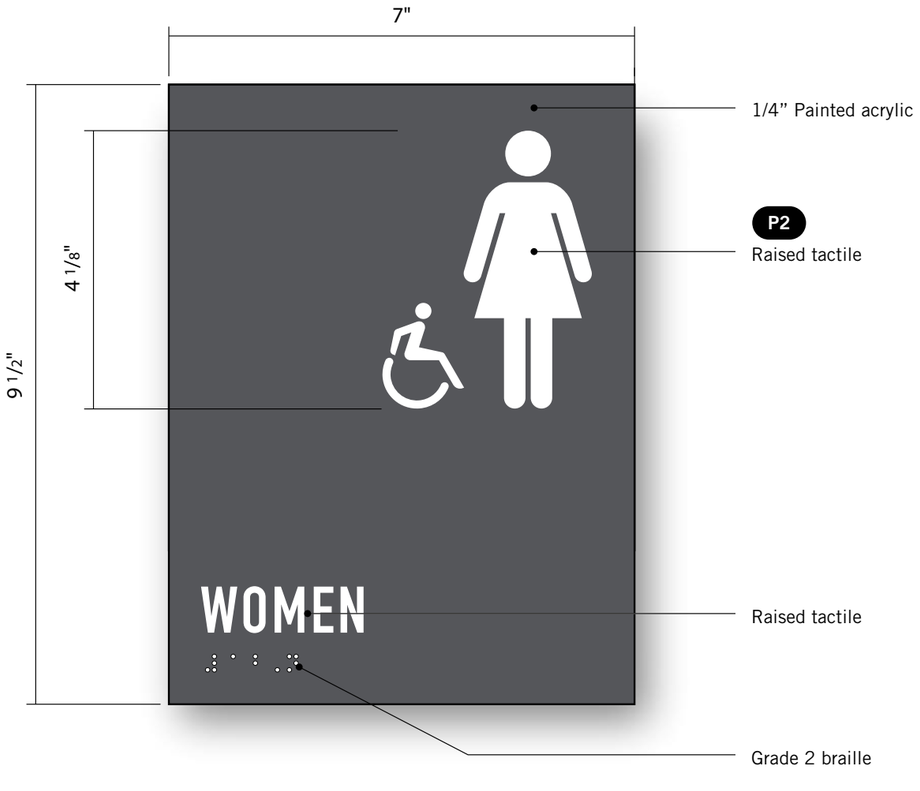


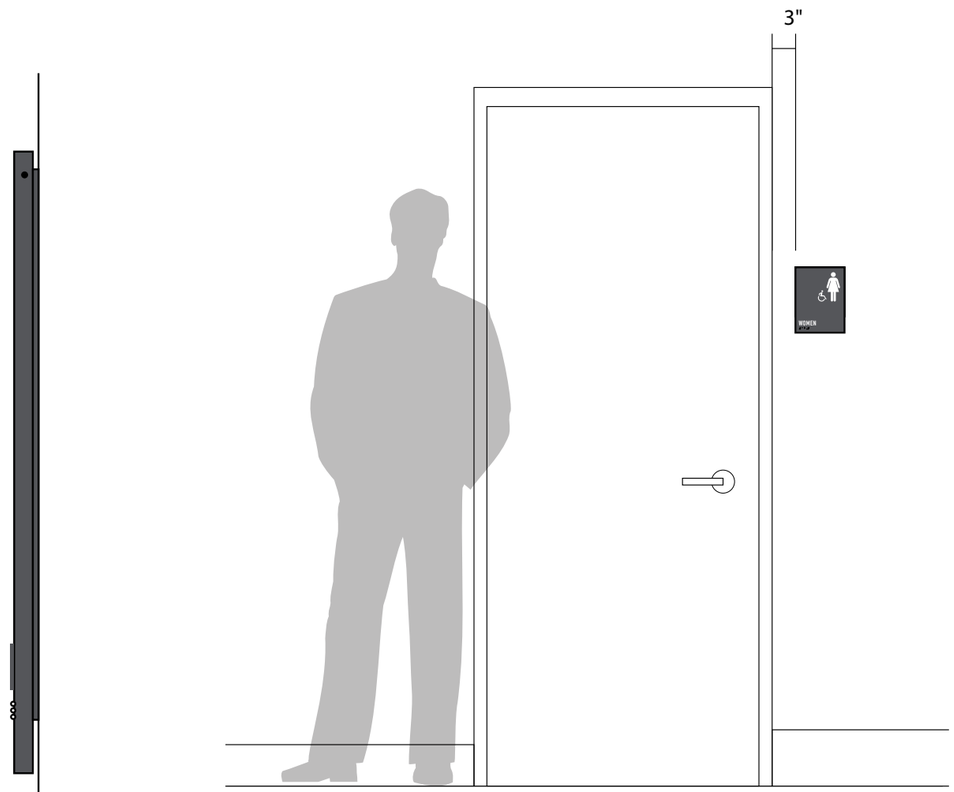
EG.7a Room IDs



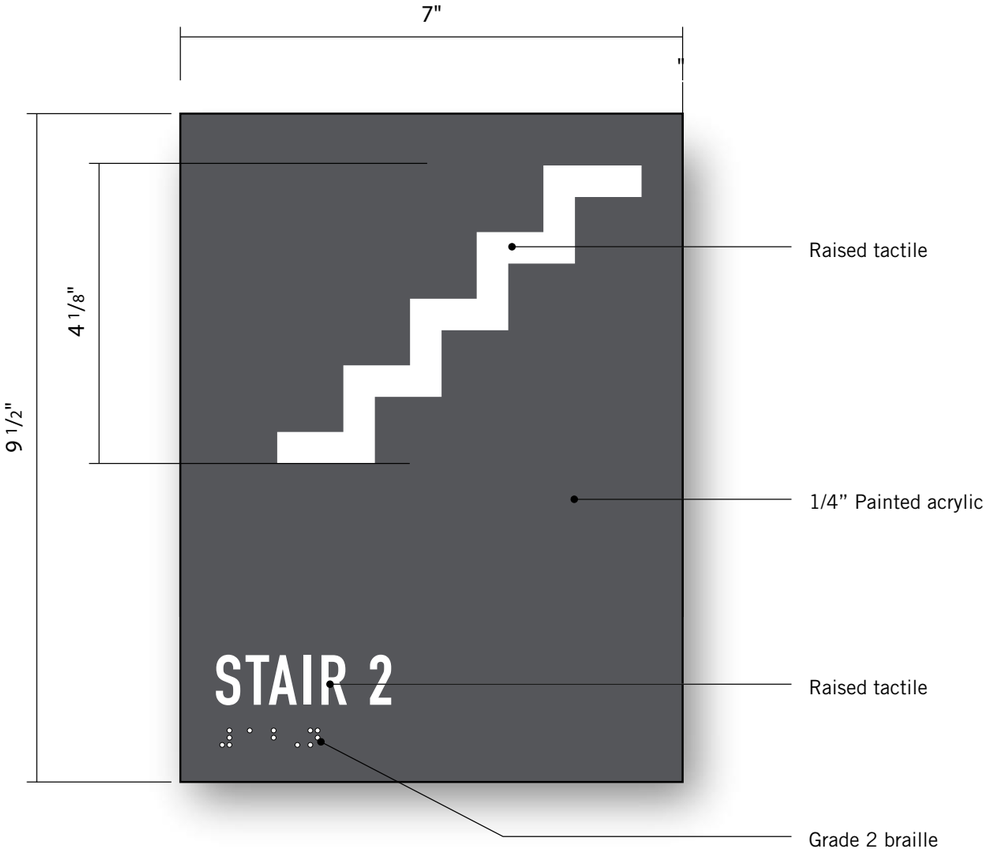


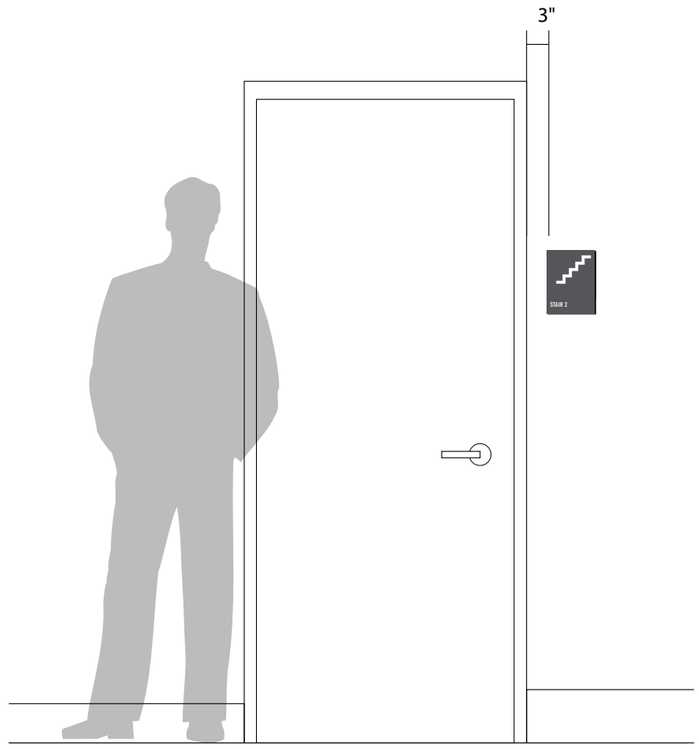
EG.8a Restroom IDs



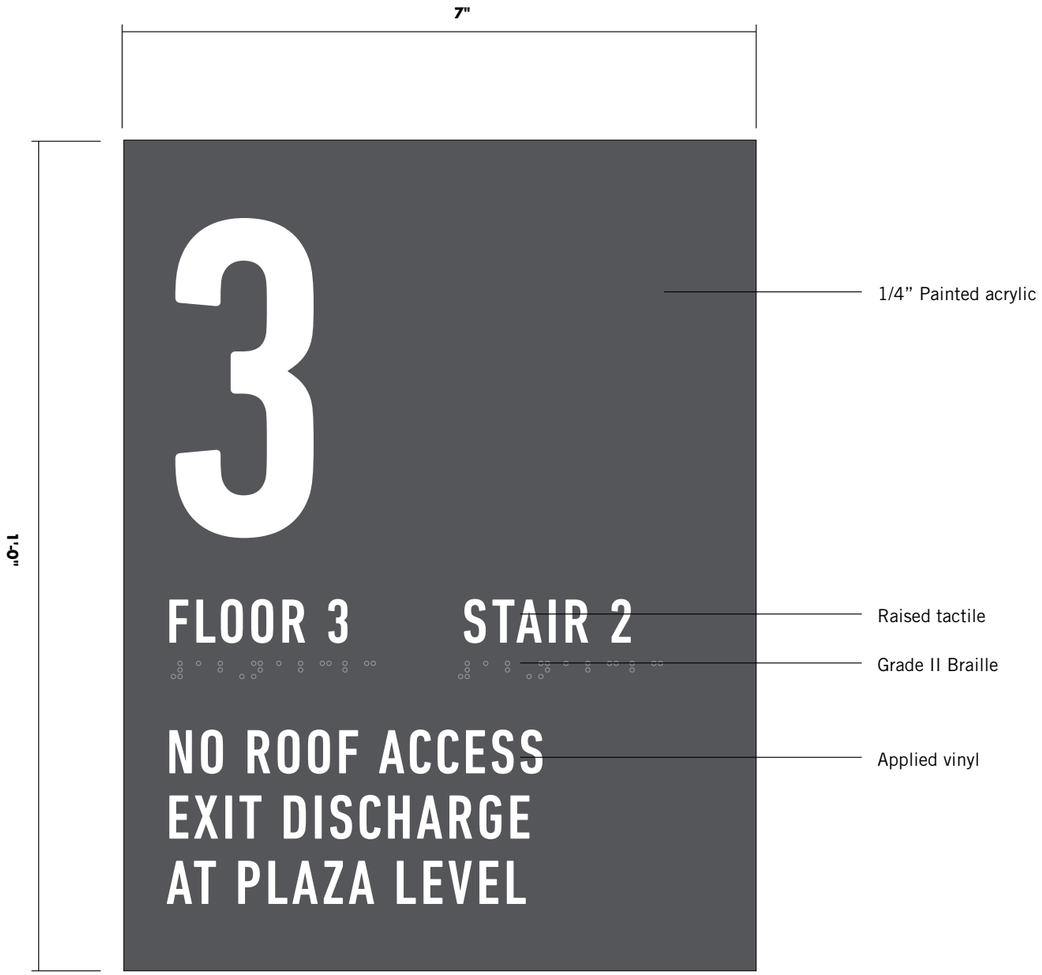


EG.9a Stairwell ID

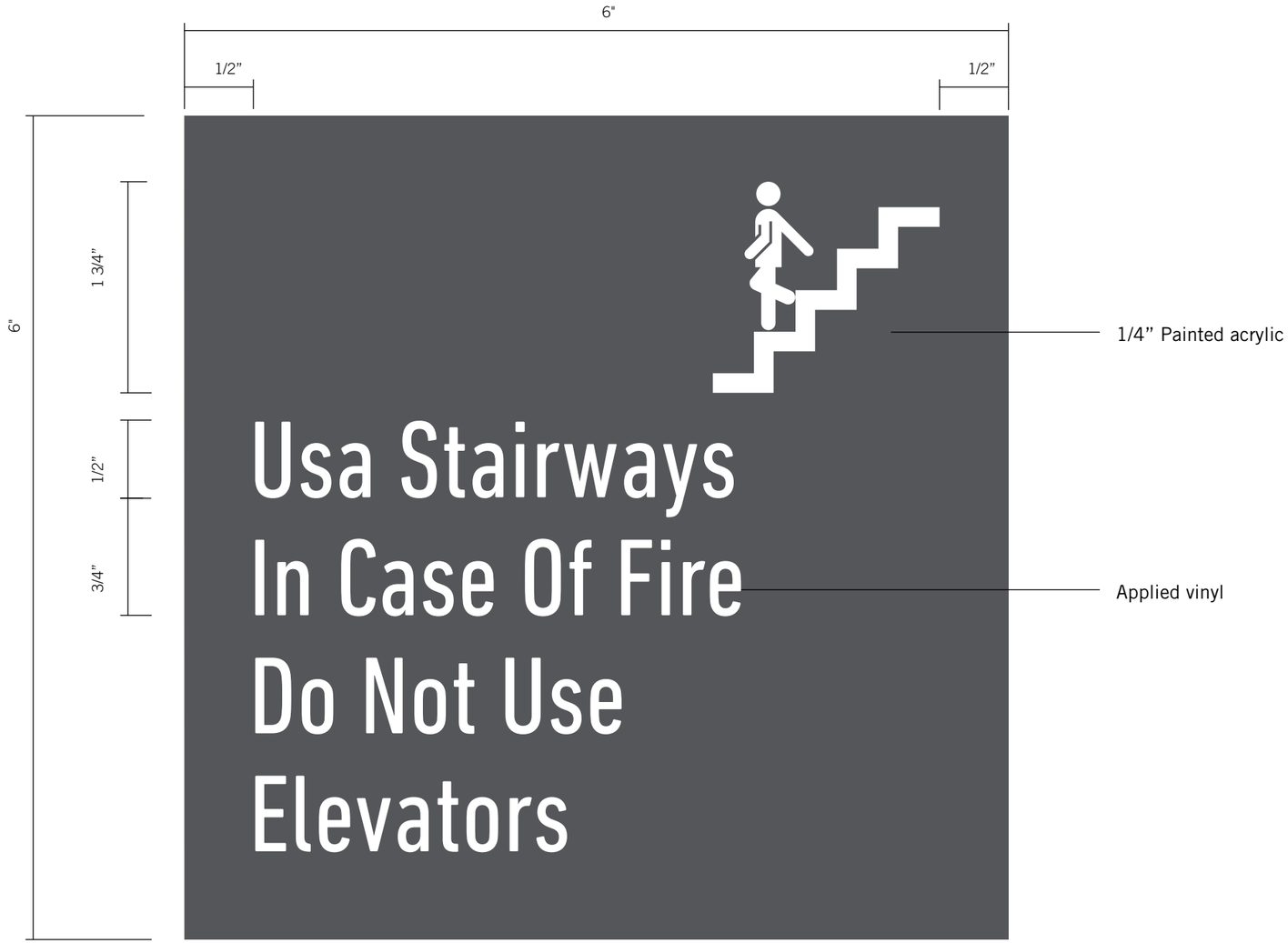




EG.10a Stair Egress



EG.11a Elevator Egress



7. EASEMENTS AND OTHER BURDENS

The Boundary Survey is included as an attachment to Section 19.

The following existing easements or other burdens have been identified:

- The survey shows the location of the existing access easement provided by the owner of the Union Station Plaza Property to Cowcatcher, LLC, the owner of the 221 St. John Street property. A small access easement also exists from Cowcatcher, LLC to Union Station Plaza. These two easements together provide for shared access for both properties to the existing parking lots. The existing access easements will be maintained to allow for continued shared access to the parking garage and parking lots.

- A twenty-foot drainage easement across Union Station Plaza was established between Union Station Limited Partnership and Maine Medical Center in May 2018. A copy of this easement is attached. Stormwater from the existing Cowcatcher, LLC parking lot currently discharges to a stormdrain system on the Union Station Plaza property. As noted later in this report, stormwater will continue to discharge to this location, and the stormdrain system has been inspected to ensure that it can adequately continue to handle stormwater flow, which will be reduced by the proposed stormwater management system.

- There was an existing easement from the Eagles lot (184 St. John Street) to 222 St. John Street for access. Under the proposed parking garage design, this easement would not be necessary since the Eagles lot has been purchased by Maine Medical Center.

7.1 Attachments

- Union Station Plaza Drainage Easement
- Union Station Plaza Access Easement

2

EASEMENT DEED

UNION STATION LIMITED PARTNERSHIP, a limited partnership organized under the laws of the State of Maine, whose mailing address is 12 Brook St., Wellesley, Massachusetts 02482 ("**Grantor**"), for consideration paid, grants to **COWCATCHER LLC**, a Maine limited liability company, whose mailing address is 100 Commercial Street, Portland, Maine 04101, its successors and assigns (collectively, the "**Grantee**"), forever, a non-exclusive easement for ingress and egress by foot, motor vehicle and equipment, and including the right to grade and pave the same and to locate, install, construct, maintain, repair and replace utility pipes, lines, wires, structures and appurtenances thereto, in, on, under and over the following described parcel of land more fully described below (the "**Easement Area**"). The easement shall be appurtenant to and run with and benefit Grantee's land described in that certain deed from Craig G. Coffin as successor to Daniel W. Hourihan, Trustee of the St. John Street Realty Trust under Declaration of Trust, dated December 17, 1985, which is dated September 10, 2008, and recorded in the Cumberland County Registry of Deeds ("**Registry of Deeds**") in Book 26330, Page 105 ("**Grantee's Property**"). The easement shall run with and burden the property described in a deed from Union Station Plaza Associates to Union Station Limited Partnership, dated June 26, 1992, and recorded in the Registry of Deeds in Book 10144, Page 23 ("**Grantor's Property**"). The Easement Area is more particularly bounded and described as follows:

A certain parcel of land situated on the westerly side of Saint John Street in the City of Portland, County of Cumberland, State of Maine bounded and described as follows:

Beginning at the northeasterly corner of land now or formerly of Cowcatcher, LLC,

Thence S 82° 18'40" W along land of said Cowcatcher 178.44 feet;

Thence S 07° 41' 20" E along land of said Cowcatcher 63.45 feet;

Thence S 22° 08' 20" E along land of said Cowcatcher 41.30 feet;

Thence S 07° 41' 20" E along land of said Cowcatcher 110.00 feet;

Thence S 82° 18' 40" W along land of said Cowcatcher 26.00 feet;

Thence N 07° 41' 20" W across land of Union Station Plaza, Inc. 238.44 feet;

Thence N 82° 18' 40" E across land of said Union Station Plaza, Inc. 15.69 feet;

Thence N 07° 41' 20" W across land of said Union Station Plaza, Inc. 7.00 feet;

Thence N 82° 18' 40" E across land of said Union Station Plaza, Inc. 125.43 feet;

Thence N 71° 37' 42" E across land of said Union Station Plaza, Inc. 53.95 feet to the westerly sideline of St. John Street;

Thence S 07° 41' 20" E along the westerly sideline of St. John Street 42.00 feet to the point of beginning, containing 11,057 +/- square feet.

Reference is made to a survey by Owen Haskell, Inc. Job #2008-100 P for further description of the above described easement.

[Balance of page intentionally left blank. Signature page follows.]

IN WITNESS WHEREOF, the undersigned has caused this instrument to be executed under seal by its duly authorized representative as of this 12th day of January 2009.

WITNESS

UNION STATION LIMITED PARTNERSHIP
By: Union Management Corp., a Maine corporation
Its General Partner

By: J. Robert Connor
J. Robert Connor
Its President

STATE OF MASSACHUSETTS
COUNTY OF NORFOLK. JAN 12, 2009

Then personally appeared before me the above-named J. Robert Connor in his capacity as President of Union Management Corp., General Partner of Union Station Limited Partnership, 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 Partnership.

Notary Public/Attorney-at-Law
Print Name: Karen S. Somers
My commission expires:

SEAL

KAREN S. SOMERS
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
February 15, 2013

Received
Recorded Register of Deeds
Feb 04,2009 10:48:44A
Cumberland County
Pamela E. Lovley

1361744.2

EASEMENT DEED

UNION STATION LIMITED PARTNERSHIP, a limited partnership organized under the laws of the State of Maine, whose mailing address is 12 Brook St., Wellesley, Massachusetts 02482 **("Grantor"),** for consideration paid, grants to **MAINE MEDICAL CENTER,** a Maine nonprofit corporation, whose mailing address is 22 Bramhall Street, Portland, Maine 04102, its successors and assigns (collectively, the **"Grantee"),** forever, a non-exclusive easement, twenty (20) feet in width centered more or less on the existing underground storm drain line described below more fully, to reconstruct, operate, maintain, inspect and repair or replace a drainage system and related improvements ("**Facilities**"), together with the right of ingress and egress thereto, upon, under, and across the parcel of land (the **"Easement Area").** The Easement shall be appurtenant to and run with and benefit Grantee's land described in that certain deed from Craig G. Coffin as successor to Daniel W. Hourihan, Trustee of the St. John Street Realty Trust under Declaration of Trust, dated December 17, 1985, which is dated September 10, 2008, and recorded in the Cumberland County Registry of Deeds **("Registry of Deeds")** in Book 26330, Page 105 **("Grantee's Property").** The easement shall run with and burden the property described in a deed from Union Station Plaza Associates to Union Station Limited Partnership, dated June26, 1992, and recorded in the Registry of Deeds in Book 10144, Page 23 **("Grantor's Property").** The Easement Area is more particularly bounded and described as follows:

A certain underground storm drain line situated on the westerly side of St. John Street in the City of Portland, County of Cumberland, and State of Maine, further described as follows:

Commencing on the easterly line of a Portland Terminal Company railroad corridor at the common corner of land now or formerly of Cowcatcher, LLC (deed book 26330 page 105) and land now or formerly of Union Station Plaza Limited Partnership (deed book 6813 page 250);

Thence, N82°23'43"E along common line of said Cowcatcher, LLC and said Union Station Plaza Limited Partnership 88.33 feet, more or less, to an underground

storm drain line and the point of beginning;

Thence, from said point of beginning, the following courses and distances through land of the Grantor and along the centerline of said underground storm drain:

N09°01'09"W a distance of 37.88 feet;

N42°56'14"W a distance of 88.02 feet;

S85°42'45"W a distance of 35.72 feet to a point at land of said Portland Terminal Company, being N07°10'39"W a distance of 111.75 feet, more or less, from the point of commencement.

Grantee understands that **Grantor**, or its successors or assigns, may, from time to time in the future, require that the herein described Easement, or some part thereof, be relocated in order to accommodate the development or redevelopment of the **Grantor's Property** which is burdened by such Easement, or by some part thereof. **Grantee**, for itself and for its successors and assigns, agrees that it shall, if requested to do so by the **Grantor**, or by the **Grantor's** successors or assigns, permit the **Grantor**, or its successors or assigns, to relocate said Easement, or part thereof, provided (i) that the proposed relocation does not degrade the operational efficiencies of the **Facilities** to be relocated, or degrade the access to the **Facilities** by the **Grantee** for maintenance, repair, or reconstruction, and (ii) that the **Grantor** or its successors or assigns, pays the cost of said relocation (the costs of the relocation being the actual cost of relocation) and, (iii) that the **Grantor**, or its successors or assigns, grants unto the **Grantee** a replacement easement (which replacement easement shall be a perpetual and unencumbered easement in substantially the same form and content as this document) for the herein Easement, or part thereof, so relocated. At such time as the herein described Easement, or part thereof, is relocated pursuant hereto, **Grantee**, or its successors or assigns, shall vacate and release the herein described.

IN WITNESS WHEREOF, the undersigned has caused this instrument to be executed under seal by its duly authorized representative as of this 9th day of May, 2018.

WITNESS

UNION STATION LIMITED PARTNERSHIP
By: Union Management Corp., a Maine corporation
Its General Partner

J. Robert Connor
Its President

STATE OF MASSACHUSETTS
COUNTY OF NORFOLK

May 9, 2018

Then personally appeared before me the above-named J. Robert Connor in his capacity as President of Union Management Corp., General Partner of Union Station Limited Partnership, 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 Partnership.

Courtney Stepien
Notary Public/ Attorney At Law

Print name: Courtney Stepien
My Commission Expires: 2/15/19

SEAL

COURTNEY STEPIEN
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
February 15, 2019

Received
Recorded Register of Deeds
May 16,2018 02:28:55P
Cumberland County
Nancy A. Lane

8. EVIDENCE OF FINANCIAL & TECHNICAL CAPACITY

8.1 Financial Capacity

Attached to this Section is a summary from MMC demonstrating that the organization has the financial capacity to support the proposed project.

8.2 Technical Capacity

Becker Structural Engineers is the lead designer for the proposed parking garage. Winton Scott Architects is the architect for the project and Woodard & Curran is the civil engineering firm completing the site design and permitting. Becker Structural Engineers, Woodard & Curran and Winton Scott Architects all have significant experience completing similar types of development projects in Maine, and specifically in Portland.

Resumes or additional company information for Woodard & Curran, other consultants referenced within this application, or key personnel involved in preparing this application can be provided upon request.

The design team includes the following professionals:

- Owners Project Manager – Colliers, Boston, MA
- Structural Engineer – Becker Structural Engineers, Portland, ME
- Civil Engineer & Permitting – Woodard & Curran, Portland, ME
- Architect – Winton Scott Architects, Portland, ME
- Landscape Architect – MBLA, Freeport, ME
- Construction Contractor – Consigli, Portland, ME
- Traffic Engineer – Gorrill Palmer, Portland, ME
- Traffic Engineer – VHB, Portland, ME
- Surveyor – Owen Haskell, Portland, ME
- Geotechnical Engineer – SW Cole, Portland, ME
- Mechanical/Plumbing – Ripcord, Portland, ME
- Electrical – Bartlett Design, Bath, ME

8.3 Attachments

- Financial Capacity Summary

MAINE MEDICAL CENTER LEVEL III SITE PLAN APPLICATION

Employee Parking Garage | 222 St. John Street, Portland, Maine

Section 8 | Evidence of Financial & Technical Capacity

The exact proportions of funding sources are yet to be determined. MMC's financial capacity to establish and operate the project

The health care landscape has been in a state of change, particularly since the signing of the Affordable Care Act (ACA). Given the recent changes in the executive and legislative branches of the federal government and continued references to "repealing" the ACA, it is nearly impossible to anticipate the scope of future changes. Maine Medical Center's strategic financial plan assumes continued market basket increases at or near 3% annually. Additionally, the strategic financial plan assumes the following:

- Little or no increase in Medicare or Medicaid payments
- Stable payer mix
- No expansion to the Medicaid program
- Achievement of operational efficiencies based on analyses of national benchmark data
- Stable utilization of hospital services
- Continuation of provider-based billing at existing locations
- Stable levels of bad debt and charity care

Minor changes in the law or regulatory environment impacting these assumptions will likely not jeopardize the overall strategic financial plan. Substantive changes, however, will need to be monitored closely to ensure support of the project.

MMC is fully licensed and accredited, and has been providing services of this scale and scope for years.

Through multiple building projects throughout the history of the organization, MMC has demonstrated its ability to develop new and renovated facilities that meet all licensure and accreditation requirements.

The proposed project's program, and design, developed by a team of health care architects and engineers, and hospital physicians and staff, are in conformance with Guidelines for Design and Construction of Health Care Facilities, 2006 Edition, Facilities Guidelines Institute, (American Institute of Architects, Washington, DC, 2006) as required by the State of Maine Department of Health and Human Services' Division of Licensing and Regulatory Services. In addition, the guidelines for Design and Construction of Health Care Facilities, 2014 Edition, Facilities Guidelines Institute, (American Institute of Architects, Washington, DC, 2014) were also used in the proposed project's design.

9. CONSTRUCTION MANAGEMENT PLAN

The MMC St. John Street parking garage project is anticipated to be approximately 15 months in duration, beginning in September 2018 and reaching substantial completion in December 2019. The following is the anticipated sequence of construction for major aspects of the development:

- Site mobilization and ground improvements
- Erection of precast garage (generally constructed south to north)
- Garage Interior Fit-Out
- Stair Tower Fit-Out
- Construction of St. Johns Street improvements (utility connections, sidewalks, traffic lights, paving and markings)
- Surface Parking Improvements (including stormwater management system)
- Testing & Punchlist

The CMP for the proposed development is in alignment with the template CMP provided in the approved IDP. Please refer to the attached CMP as prepared by Consigli. MMC recognizes that the CMP is an important aspect of the site plan, and desires to work with the City to provide the best plan for the project, surrounding neighborhood and City.

9.1 Attachments

- Construction Management Plan

August 23, 2018

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Maine Medical Center
MaineHealth

St. John Street Parking Garage
Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Colliers International

Construction Manager: Consigli Construction

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Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of building the St. John Street Parking Garage. Maine Medical Center and Consigli Construction will strive for a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan we will refer to specific examples of potential construction practices, traffic control scenarios, neighboring building considerations and public safety; as well as measures in which these items will be managed throughout the project to accommodate the community as much as possible. While we will take the necessary precautions to meet City and State requirements for traffic, noise, dust, vibration, etc., this project will be disruptive to adjacent properties compared to the current condition. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for Maine Medical Center.

Consigli Construction has been commissioned to construct a new 8 story, 2,450 space garage on the West side of St. John St. The garage is approximately 800,000 sf that will be primarily built out of precast concrete.

Consigli has extensively planned the project's schedule, site logistics and safety protocols that will be thoroughly covered in this report with graphics and narratives. This CM plan will continually be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to MMC, their employees and the City of Portland by means of communication, teamwork and stewardship.

Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will manage and enforce the proposed CMP with all associated subcontractors and material vendors.

Dave Thomas – Project Executive
207-650-8665, dthomas@consigli.com

Travis Kirby – Project Manager
207-272-6980, tkirby@consigli.com

Larry Chouinard – General Superintendent
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Site Communication

With the proximity to occupied buildings, community outreach and communication will be imperative throughout construction to keep the public informed of the expected turbulences caused by the project. Site signage will be prominently displayed to show pedestrian access around the site and any updates to the proposed CMP.

Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

1) Construction schedule updates
2) Material deliveries, including notice of any oversized loads that may impact public traffic
3) Requests for upcoming off-hours work including weekends and holidays
4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Additionally, MMC will provide updates via their project website. Inquiries about construction, logistics, schedule and safety will be specifically addressed on the website along as the contact information for individuals associated with each aspect of the project. Neighborhood outreach events will be scheduled at each major phase/milestone where changes to pedestrian or vehicular traffic patterns occur.

Construction Schedule

Project Work Hours

Construction work hours will be in accordance with section 17-18.

The project site is located within zoning group B2 – Business Community but is within 500 feet of buildings used for residential purposes. As such, work hours will be limited to Monday – Friday 7:00am – 6:00pm. Should work extend into Saturdays, the use of heavy equipment will be kept within the time constraints of 8:00am – 4:00pm.

Project Schedule/Logistics

The project is anticipated to begin in September 2018 will be partially turned over to MMC in December 2019. The work to complete will include completion of the garage fit-out from grid lines 9-12 along with landscaping items to be completed during the 2020 Spring planting season. Refer to the Overall Construction Sequence on page 10. Final occupancy of the building is expected the first quarter of 2020.

Regarding scheduled work to take place within public streets and sidewalks, this work will comply with Section 25-129 – Noise, dust and debris. The installation and connections to public utilities, traffic lane reconfigurations, and sidewalk construction will require work to be executed within St. John St. and D St. This work will be scheduled and planned with the City of Portland prior to the execution. All logistical concerns will be addressed with the City prior to starting the work. This work is tentatively scheduled to occur during the late summer of 2019. Temporary barricades, ramps and signage will be required during the installation to control pedestrian/vehicle movements around the work.

Material Storage and Laydown Area

The construction of the garage will require careful planning and management of the daily occurrences within the site limits. The logistical plan that is currently outlined is intended to keep all construction staging, laydown and temporary storage within the project limits and secured by temporary fencing. With designated areas delegated to subcontractors the site will remain accessible by incoming trucks without causing a queuing affect outside of the fence. A secondary storage yard is anticipated at Portland Yacht Services to store precast material not accommodated on site. The usage of this area will help to better control and manage the truck traffic to and from the site during the day, as nighttime truck use is prohibited by Maine. Precast trailers will only transport loads between the staging yard and the job site outside of peak traffic hours as defined as 7:00am – 9:00am and 4:00pm – 6:00pm.

Material Deliveries

The construction of the parking garage will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place prior to the start of construction. Refer to the Truck Routing Plan on page 11. Truck access during construction will be broken up into two separate phases requiring different logistical needs to be addressed.

1. During Phase 1, the primary entrance for sitework, concrete and precast deliveries will be through a paved right-of-way at the existing Eagles parking lot. Trucks will then exit the job site through the North gate accessing St. John St via the Union Plaza parking lot. A flagger will be employed to assist in navigating precast loads off St. John to the project site.
2. Phase 2 will begin once the garage has been 50% erected. The access through the Eagles lot will become blocked by the building diverting all deliveries through the North gate via the Union Station Plaza ROW.
3. Three on street parking spaces will likely need to be closed to public use for the large trucks to gain access to the project site during Phase 1 & Phase 2. However, the location of these closed parking spaces will change with the phases. Please see the logistics plans on page 12 & 13 for more information.
4. By utilizing the secondary storage, at Portland Yacht Services, are for large deliveries, we can coordinate material deliveries to the site during non-peak hours of traffic or pedestrian presence. Large deliveries will stop off at the storage yard located on Commercial St, until the appropriate time is determined to the bring the material to the project site for installation.

Contractor/Public Parking

At the peak of construction activity, it is anticipated that up to 100 people will be on site working various trades associated with the building. The current constraints of the project site do not allow for parking of subcontractors within the project limits. As such, contractor parking will be delegated to off site areas. Contractors will not be allowed to park on any residential street within the St. John neighborhood. Any violators will be fined or asked to leave the project depending on the frequency of the violations. Consigli is currently exploring options to acquire off site parking for the subcontractors that would not impact the neighboring community.

The Eagles parking needs will need to be addressed and managed throughout construction. During the construction process, MMC will provide and maintain 37 parking accommodations for the members of the Eagles in addition to the existing spaces located on the South side of the building. Tenants of 222 St John St will receive temporary parking adjacent to the building and in a lot located across St. John St. MMC is committed to providing safe and proximate parking for these properties throughout the construction process.

Fire Protection for Construction Activities

The 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced on this project by utilizing best management practices to mitigate the fire risks associated with the construction of the parking garage. Consigli and its subcontractors will execute the following measures to provide a safe and secure work place:

1) PFD Fire Command Center: This centralized location will hold all current project information and will act as the first responders meeting point to obtain the most up to date information of construction. The following documents will be found at this location:
    a. Hot Work Permits: To be filled out daily by any person performing work that will generate a spark or create a potential fire risk on the job site. The permits are to be completed and approved by Consigli prior to work starting.
    b. Updated Construction Schedule
    c. Updated Construction Logistics Plan
    d. Pre-Incident Fire Plan

2) On Site Fuel Storage: Different flammable liquids will be required throughout construction. A free standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed but under no circumstances be allowed to be parked or stored on site for any extended period.

3) Means of Egress: The parking garage will be permanently equipped with (3) 2-way stair assemblies for means of egress. During construction it is the intent to install the stair located in the Southwest corner first to provide emergency egress throughout construction. These stairs will be identified with temporary signage throughout construction indicating the floor level and exit path direction

4) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure that no materials or tools are left out over night that could pose a hazard to the building. Daily safety walks by the Construction Superintendent will be utilized to ensure that all working floors are equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency. Trash chutes and material hoists may be utilized to safely and efficiently remove all debris from the project.

5) On-site Security: The project site will be secured everyday by means of a temporary, post driven construction fence and scrim. Lockable gates will be located at (2) locations for site access.

6) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devices as well as strategically positioned air horns. Upon evacuation of the building all project personnel will report to the muster point location where the Construction Manager and all subcontractor foremen will perform accountability checks. The General Contractor field staff will then be dispatched to all project entry points and the PFD Command Center. Upon arrival of the first responders to the PFD Command Center the General Contractor will provide an accountability and incident briefing.

Public Safety

The construction of the new MMC Parking Garage will be near pedestrian right of ways and will interact with public traffic throughout the duration of the project. Material deliveries, the use of cranes, lifts and other heavy machinery all have the potential to impact typical public activity. As a member of the Portland community, Consigli will strive to limit, mitigate and avoid these potential impacts as much as possible by means of controlling noise, on site dust, vibrations and traffic. By educating and informing the neighborhoods to the construction activities taking place we will aim to build to a project that produces the minimal of impacts to the St. John Street community.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following section 17-18 of the City of Portland Code of Ordinances. This project site is located within 500 feet of buildings classified as residential. As such, the project hours will be limited the 7:00am – 6:00pm, Monday – Friday. Should any weekend or holiday work be required the use of heavy machinery will not commence before 8:00am. When this work is required, no less than 2-week advanced notice will be provided to MMC and the neighboring communities.

Work related to the pile foundation will likely be the loudest activity experienced during construction. Consigli has anticipated fast-tracking this work by utilizing (2) pile driving crews to reduce the duration of the sensory burden on the neighboring community. This work will take place from November 2018 – January 2019. Recently, many local projects have utilized the pile foundation to much success around Portland. The new WEX building on Commercial St. and the Hyatt in the Old Port both utilized piles in their foundation.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a major priority for the project team to ensure safety not only for the neighboring communities but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following the State of Maine Department of Environmental Protection erosion control Best Management Practices:

1) Erosion controlled construction entrances
2) Tarped dump trucks leaving the site with soil/debris
3) On-going sidewalk and street cleaning activities
4) The installation of temporary, compacted roads within the job site
5) Using wetting agents to control dust

6) Covering stock piles when material is to be piled for long periods of time
7) Smoking will not be allowed on the job site

Vibration Monitoring

Some of the construction practices required for this project will result in ground vibration waves that may transmit to nearby buildings. Prior to any potential vibration causing activities taking place a pre-construction survey will be conducted to review and document existing conditions. The survey will encompass all properties abutting the proposed project site to include the following addresses:

- 222 St. John St (Office Bldg.)
- 210 St. John St (Residence)
- 212 St. John St (Residence)
- 160 St John St (Sid Harvey's)
- 172 St. John St (Ferguson)
- 184 St. John St (Eagles Bldg.)

- Vibration monitoring will also be conducted adjacent the railroad immediately west of the project site limit.

Pavement removal, vibratory compaction and pile driving will be employed on this project and will be monitored by a third-party monitoring company. A pre-construction meeting will be planned with abutting property owners to discuss geological conditions, construction specifications and methods of installation that create vibration.

Traffic Control

Throughout the construction process St. John St will experience increased traffic due to construction activities. Material deliveries, contractor access and public utility integration will be encountered and mitigated through coordinated logistics plans (starting on page 11), on site safety personnel, way-finding signage and well-organized traffic control devices. MMC & Consigli will strive to inform and direct the neighborhood to the activities taking place in public areas as they progress through completion. Beginning in July 2019, construction activities within St. John St will include public utility connections, traffic control installations and sidewalk improvements. All traffic management and phasing plans affecting vehicles will be submitted to the City for approval prior to commencement of the work.

The main entrance point to the construction project will be through the East gate located within the existing Eagles parking lot. To navigate precast concrete deliveries to the project site a flagger will be stationed at St. John St. to usher the trucks into the right of way. Trucks and trailers will exit the project site through the North gate and re-enter traffic via the right of way through the Union Plaza parking lot. Due to the large turn radius of some of these trucks, it will be necessary to temporarily close parking spaces

within the tenant lot as well as spaces located on St. John St. Please reference the trucking plan, on page 10, for more information.

Proximity to Neighboring Residences and Businesses

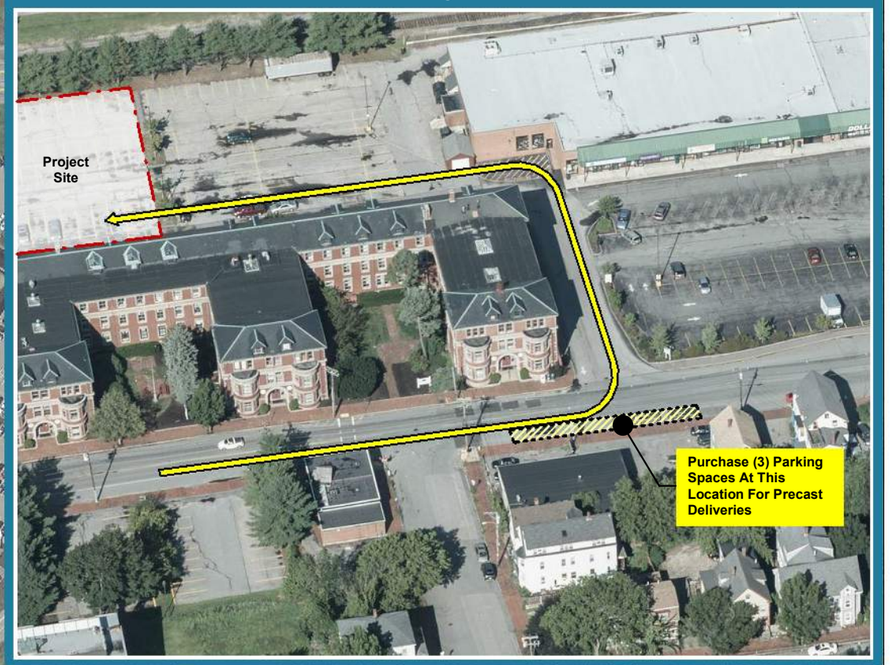
During the process of construction great attention will be required to ensure that homes and places of business are not overly impacted by construction activities or traffic. While the logistics of the CMP does not require work associated with or access through the adjacent properties, certain measures will be taken to minimize the potential for a disturbance. Erosion control, physical barriers, temporary shoring and staged material deliveries will be coordinated during construction.

Care will be given to the owners and users of 210 & 212 St. John St. The residences are the closest in proximity and will likely experience the greatest impact. Individual site meetings will be held with the owners of these properties to discuss their needs throughout construction. Consigli and MMC are committed to working through logistical challenges with the neighbors and providing adequate and reasonable measures to accommodate their requests.

Anticipated Construction Traffic Per Day

	2018				2019												2020					
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Earthwork/Ground Improvements	(9)	(20)	(25)	(25)	(25)	(25)				(5)	(7)	(7)	(10)							(5)	(5)	(5)
Structural Precast Erection							(20)	(20)	(20)	(20)	(10)	(5)										
Garage Fit-out													(15)	(15)	(13)	(10)	(6)					

Bird's Eye View



From I-295 Exit 4 Casco Bay Dr

Veterans Memorial Pathway

ALT 1

Ogdensburg St

Access To Project Site Via St. Johns' Street

St. John's Street

Project Site

Purchase (3) Parking Spaces At This Location For Precast Deliveries

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Maine Medical Center

St. John Street Garage
Truck Route

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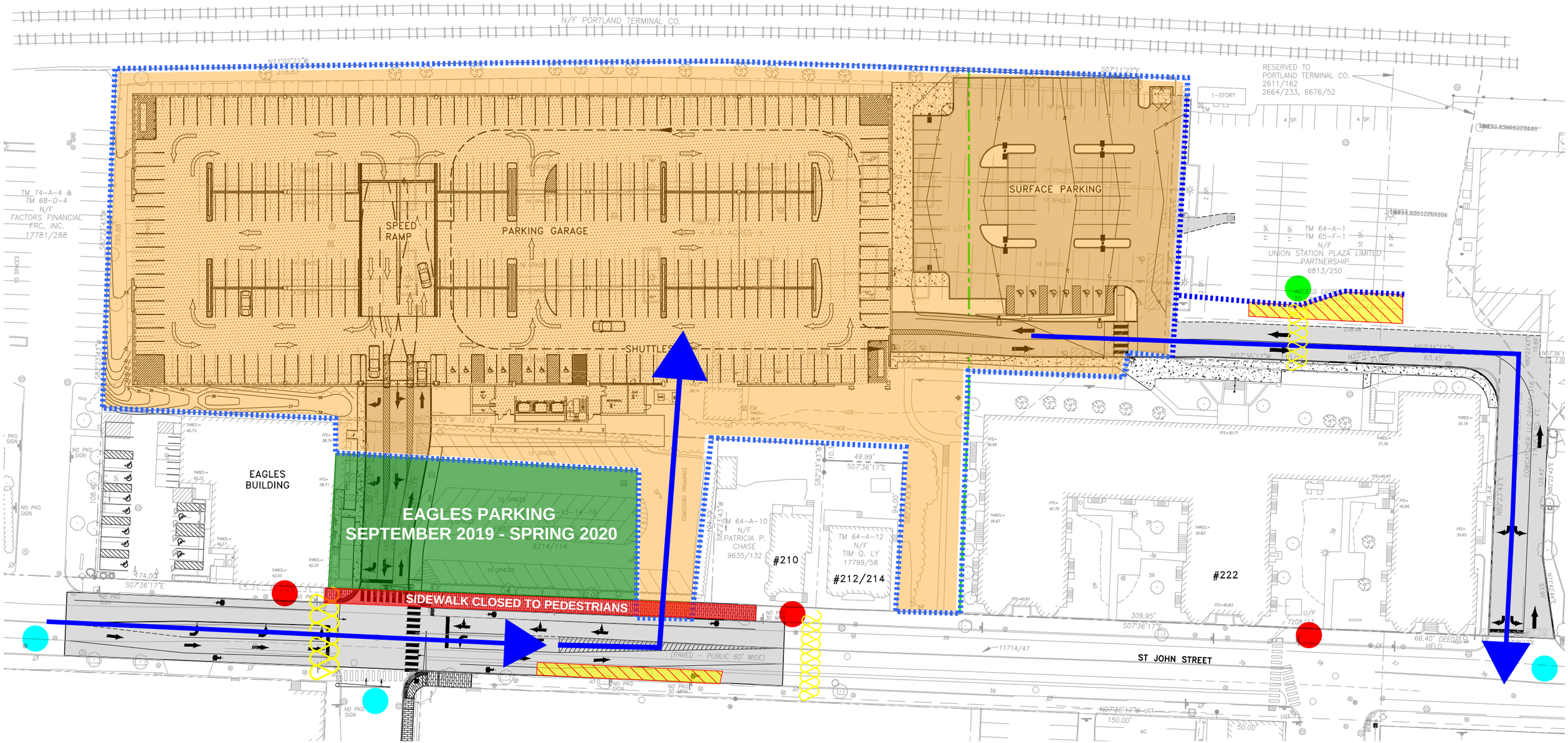
PHASE 1 LOGISTICS PLAN
SEPTEMBER 2018 - SUMMER 2019



TEMPORARY CROSSWALK

CROSSWALK SIGNAGE AND TRUCK CROSSING SENSOR

SIDEWALK CLOSURE SIGNAGE

CONSTRUCTION TRAFFIC AHEAD SIGNAGE

PARKING SPACES PROCURED FOR CONSTRUCTION

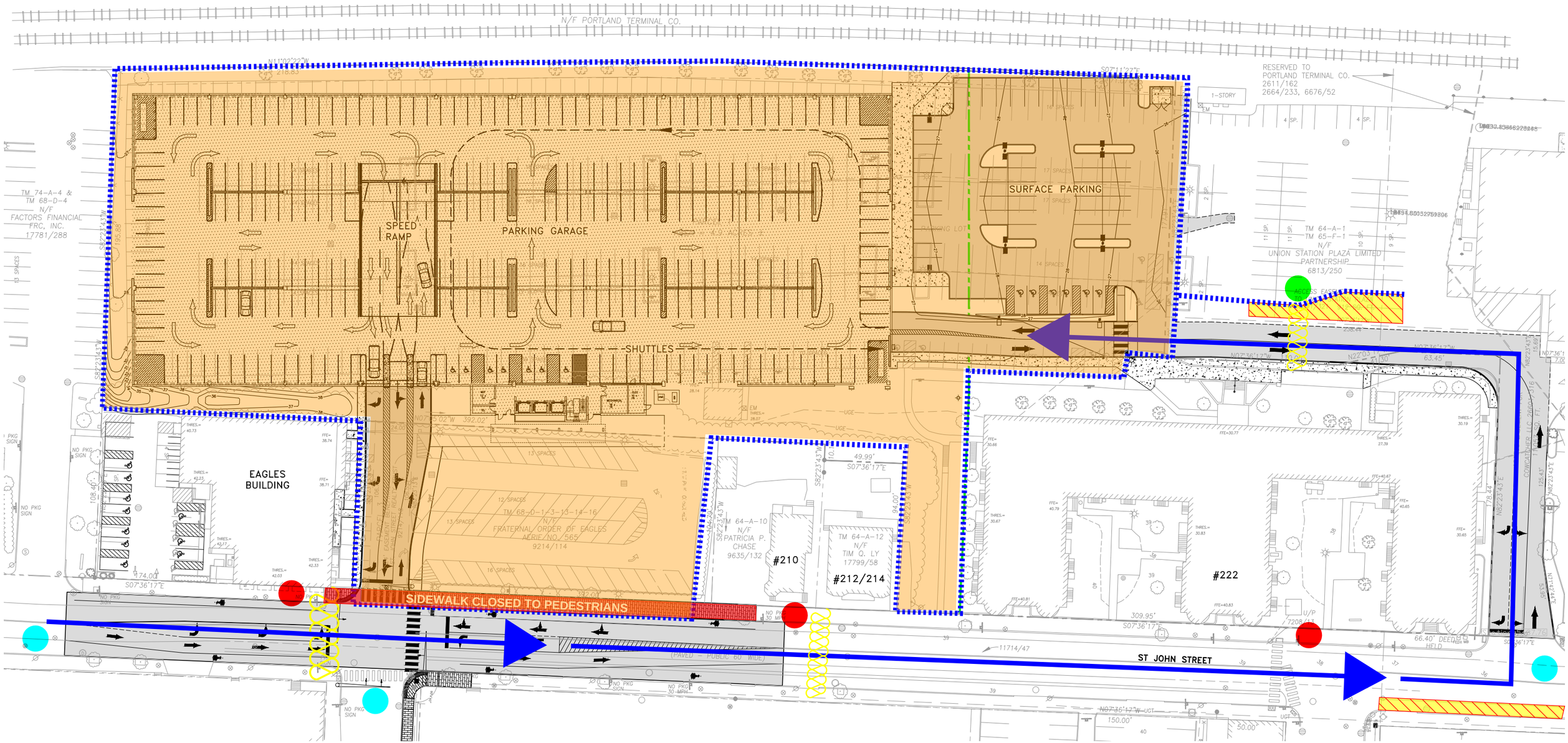
SIDEWALKS CLOSED DURING CONSTRUCTION

PROJECT SITE

CONSTRUCTION VEHICLE TRAFFIC

CONSIGLI

PHASE 2 LOGISTICS PLAN
SUMMER 2019 - DECEMBER 2019



TEMPORARY CROSSWALK

CROSSWALK SIGNAGE AND TRUCK CROSSING SENSOR

SIDEWALK CLOSURE SIGNAGE

CONSTRUCTION TRAFFIC AHEAD SIGNAGE

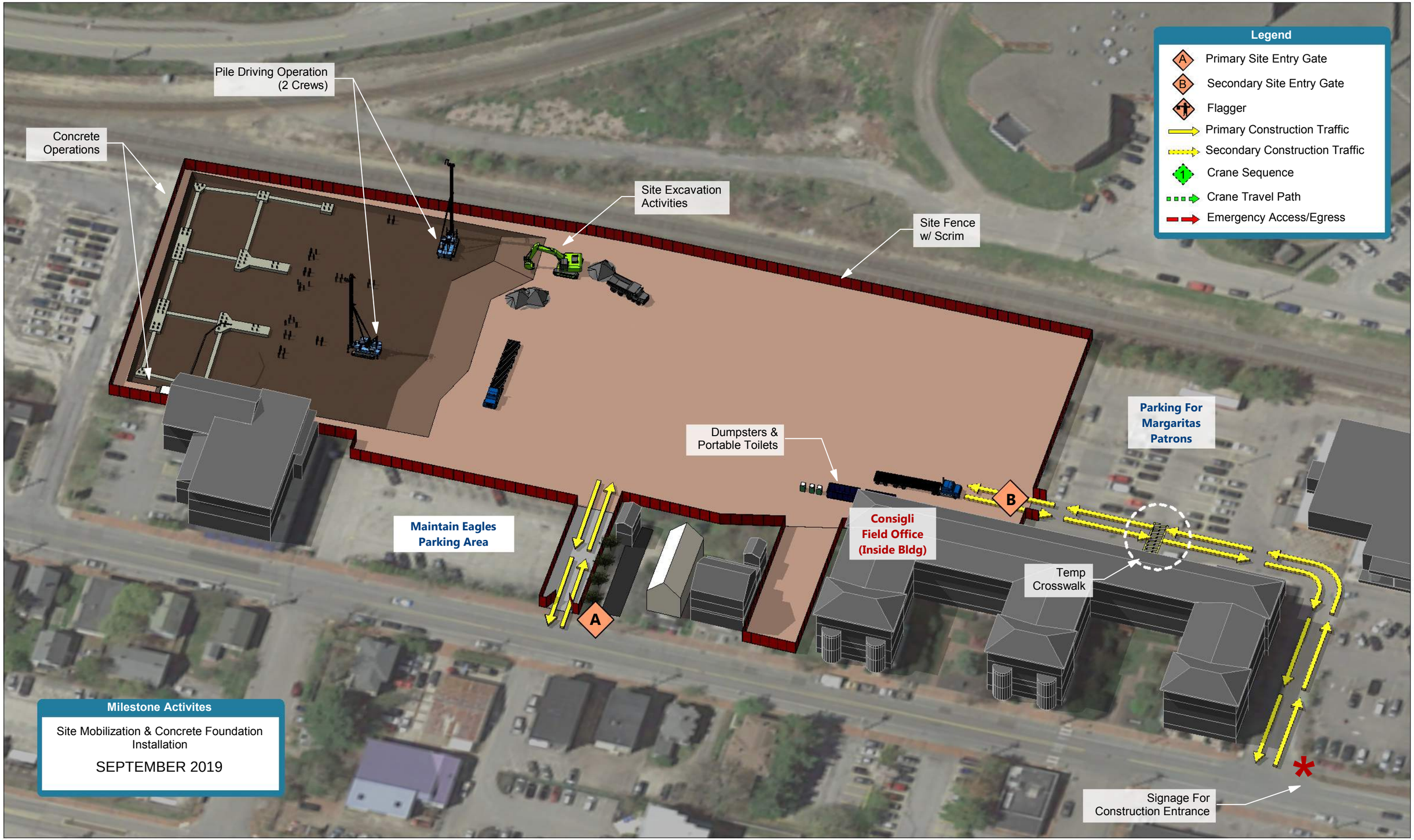
PARKING SPACES PROCURED FOR CONSTRUCTION

SIDEWALKS CLOSED DURING CONSTRUCTION

PROJECT SITE

CONSTRUCTION VEHICLE TRAFFIC

CONSIGLI



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Maine Medical Center

St. John Street Garage
Site Logistics Plan - Site Mobilization & Foundations

CONSIGLI Est. 1905

Proposed Crane Set-up Locations For Precast Erection (Col Lines 1 - 6)

Trucking Route For Precast Supply

Site Fence w/ Scrim

Precast Staging Area

Parking For Margaritas Patrons

(6) Parking Spaces To Be Closed Off For Delivery Access

Maintain Eagles Parking Area

Dumpsters & Portable Toilets

Consigli Field Office (Inside Bldg)

Temp Crosswalk

Flagger to Guide Precast Trucks to Site

Flagger to Guide Precast Trucks to Site

Signage For Construction Entrance

Legend

- A — Primary Site Entry Gate
- B — Secondary Site Entry Gate
- Flagger
- Primary Construction Traffic
- Secondary Construction Traffic
- 1 — Crane Sequence
- Crane Travel Path
- Emergency Access/Egress

Milestone Activites

Erect & Detail Precast Garage
Southwest & Southeast Quadrants

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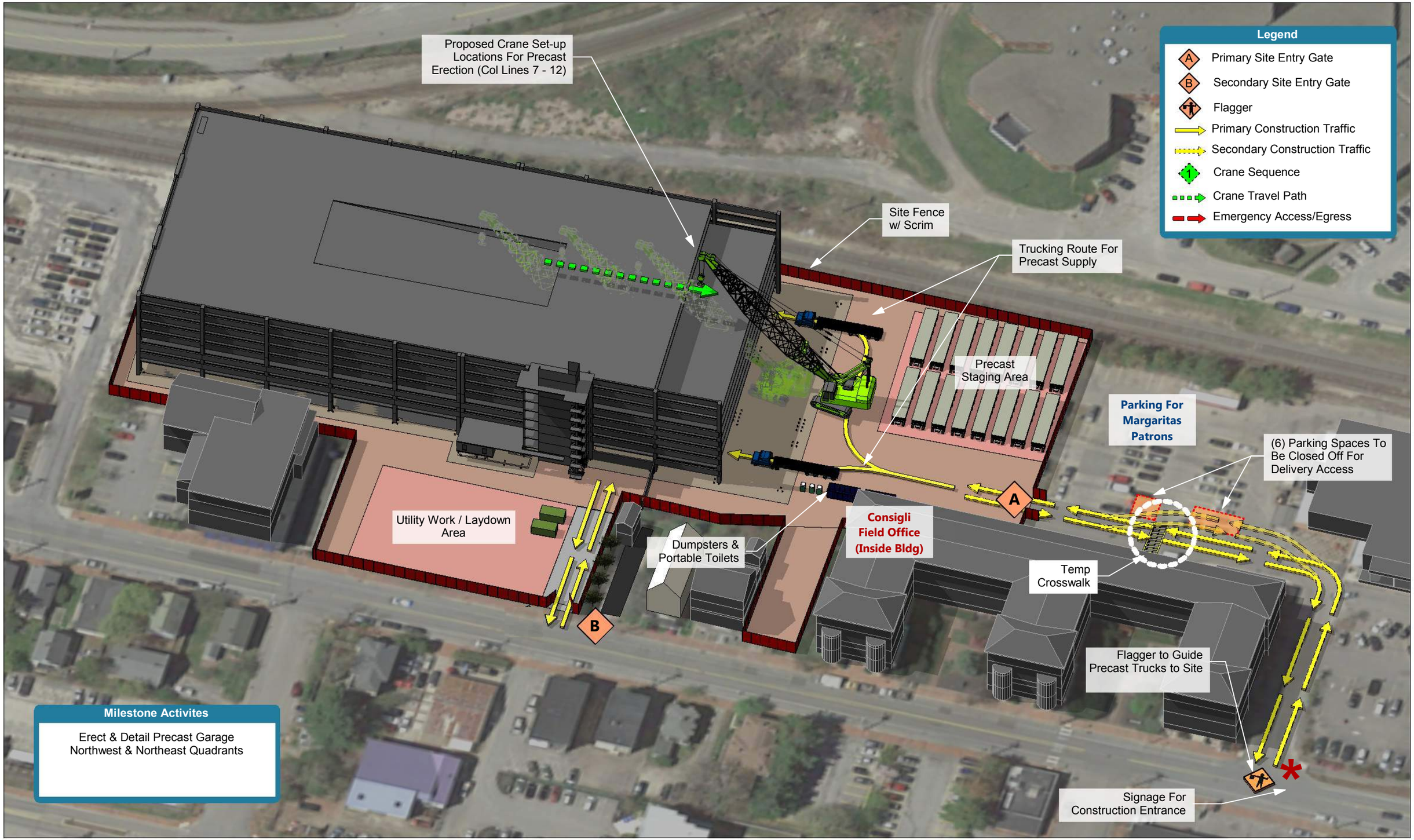
Maine Medical Center

St. John Street Garage
Site Logistics Plan - Precast Erection (Column Lines 1-6)

CONSIGLI Est. 1905



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Maine Medical Center

St. John Street Garage
Site Logistics Plan - Precast Erection (Column Lines 7-12)

CONSIGLI Est. 1905

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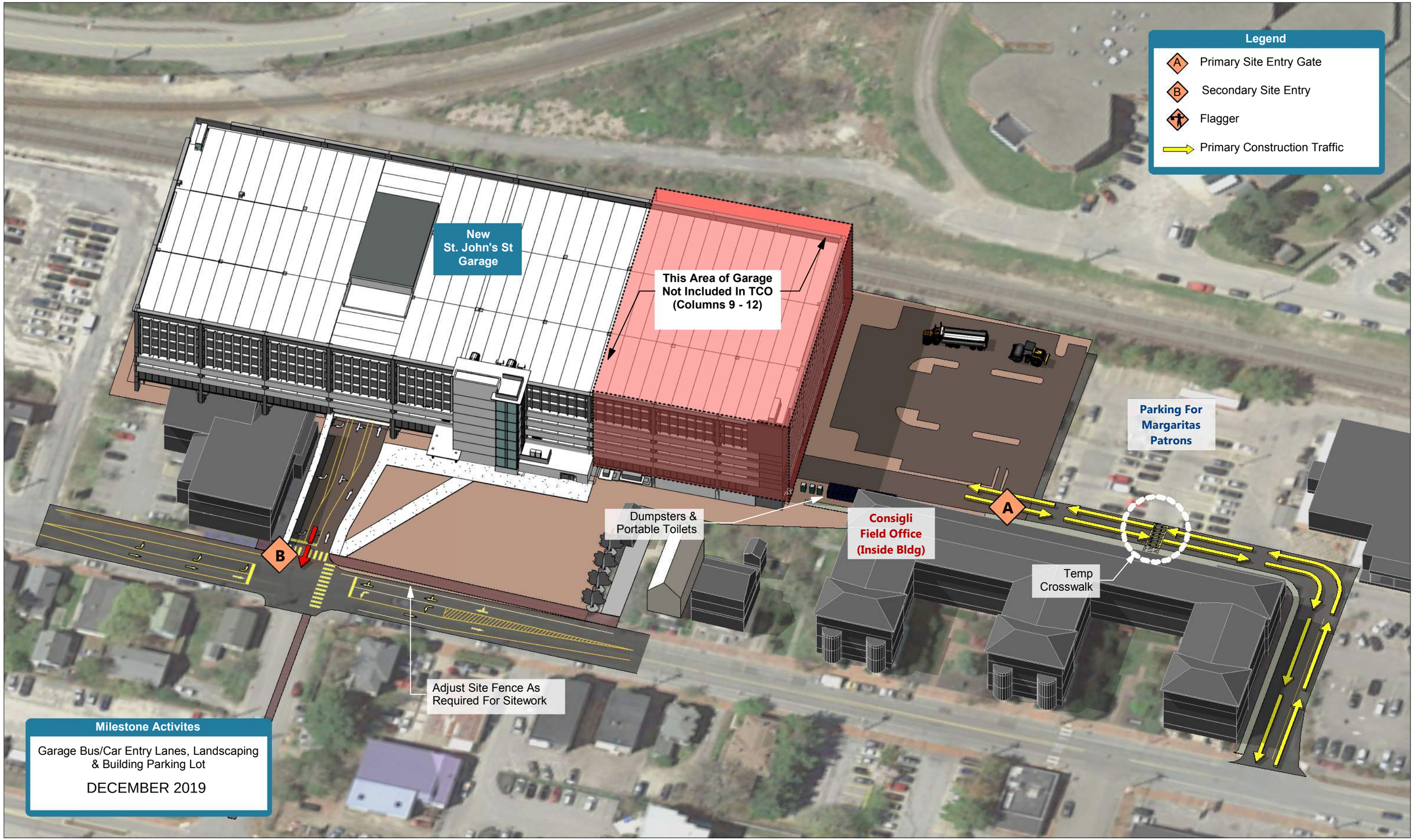
Maine Medical Center

St. John Street Garage
Site Logistics Plan - Architectural Facade & Core Finishes

CONSIGLI Est. 1905



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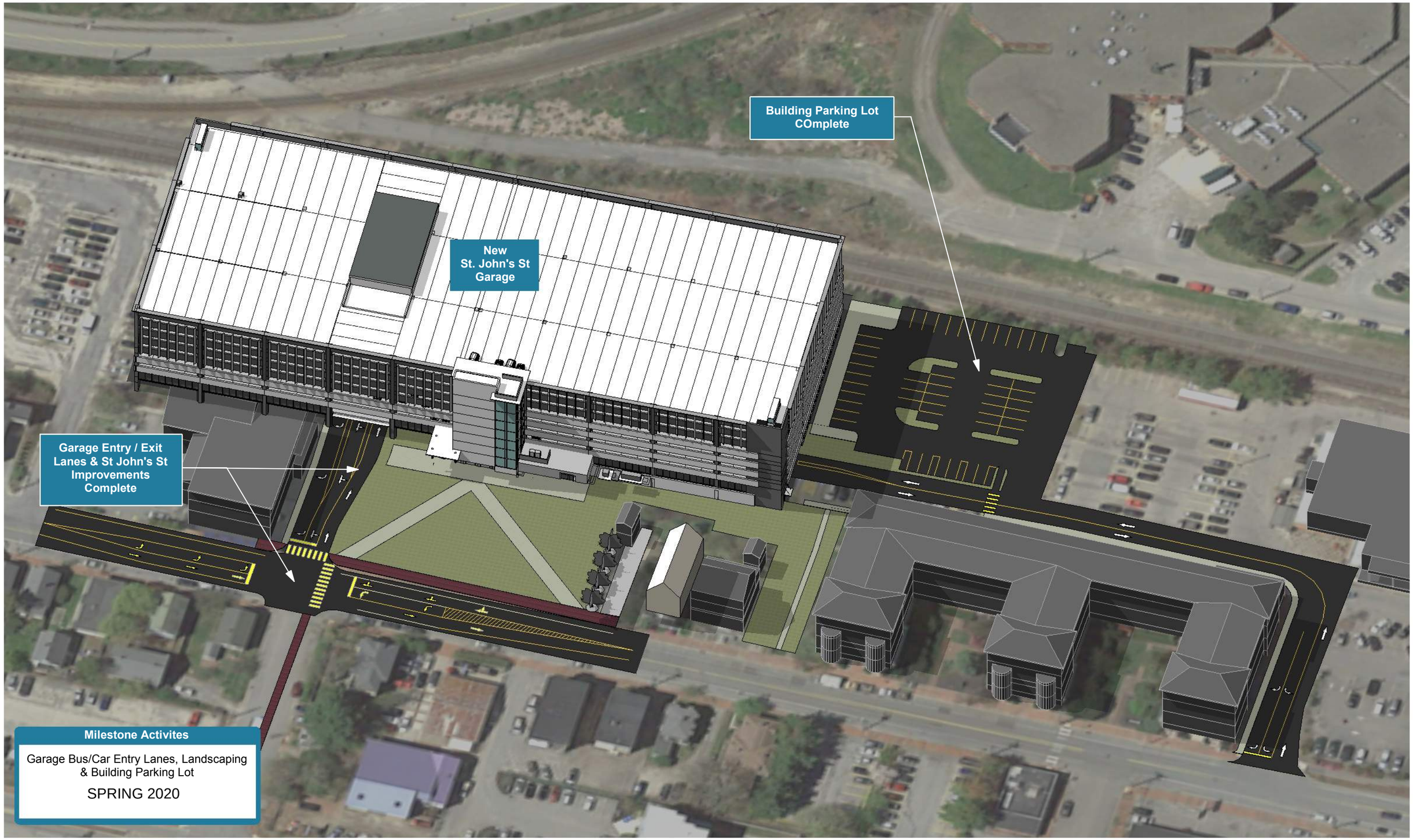
Maine Medical Center

St. John Street Garage
Site Logistics Plan - Temporary Certificate of Occupancy

CONSIGLI Est. 1905



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Maine Medical Center

St. John Street Garage
Site Logistics Plan - Certificate of Occupancy

CONSIGLI Est. 1905

10. TRAFFIC AND PARKING ANALYSES

Gorrill Palmer prepared the attached Traffic and Parking Analysis and has forecasted trip generation for the proposed garage and evaluated the operation of the entrances and exits onto St. John Street.

The ground level of the parking garage and surface lot will accommodate parking needs associated with the businesses at 222 St. John Street after construction. MMC is arranging for other nearby accommodations during construction. Provision of snow ban parking in the garage will be further discussed between MMC and the City of Portland.

The MMC Transportation Demand Management (TDM) Plan is discussed in the approved IDP (IDP page 74). Within the TDM, there are several parking and other strategies to manage the growth of staff parking demand. The current TDM is attached to this Section.

MMC has developed proposed shuttle routes once the staff parking garage is complete. Figures showing the inbound and outbound shuttle routes are attached to this Section.

At the request of the City and based on traffic routing options, MMC analyzed a potential connection from the staff parking garage to the Fore River Parkway. A feasibility analysis was prepared and is attached to this Section.

10.1 Attachments

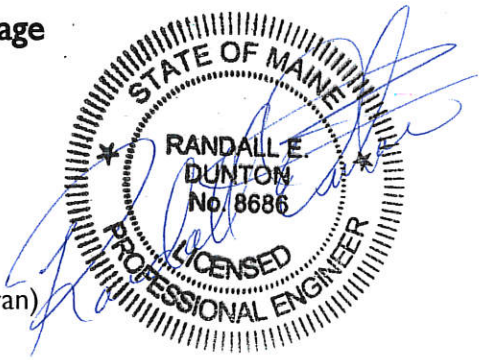
- Traffic Evaluation
- Transportation Demand Management Plan
- MMC Staff Parking Garage Shuttle Route Figures (Inbound & Outbound)
- Feasibility Analysis | Connecting the St. John Garage to Fore River Parkway

GORRILL PALMER

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

Traffic Evaluation
Maine Medical Center – St. John Street Garage
Portland, Maine

JN 2866.01



Date: June 19, 2018
Subject: Traffic Evaluation
St. John Street Garage – Portland, Maine
To: Alexander Green (MMC), Dave Senus (Woodard & Curran)
From: Randy Dunton / Emily Tynes, Gorrill Palmer

Introduction

Gorrill Palmer (GP) has prepared this traffic evaluation for the proposed 222 St. John Street garage to be located off St. John Street in Portland, Maine. This project is Phase 2 of 3 phases. The first phase of an East Tower overbuild and Visitor Garage overbuild are currently under construction. Phase 3 includes an expansion to the hospital to be located off Congress Street and will require a MaineDOT Traffic Movement Permit (administered by the City), as well as a more extensive and wide ranging traffic impact study that incorporate the findings of this evaluation. The garage is proposed to provide approximately 2,400 parking spaces, with an adjacent surface lot containing approximately 52 parking spaces. It should be noted that of the 2,452 spaces, 150 spaces will be allocated to tenants of 222 St. John Street, who operate during typical business hours (approximately 8:00 AM to 5:00 PM), and not on the offset shifts like the majority of Maine Medical Center employees. Also included in the garage on the first deck are 50 spaces reserved for the Eagles. GP has forecast trip generation for the proposed garage and evaluated the operation of the adjacent roadway network. The following is a summary of the methodology and results of the evaluation.

Trip Generation

The proposed garage and adjacent surface lot are anticipated to accommodate the following:

- Gilman Garage: 1,274 spaces
- Sportsman Lot: 60 spaces
- 222 St. John Street Lot: 283 spaces
- Gateway Garage: 100 spaces
- Classic Lot: 97 spaces
- 321 Brackett Street Lot: 9 spaces

- Reserved Eagles 50 spaces
- MMC Employee On-Street Parking: 200 spaces (estimated)

Total Parking Spaces = 2,073

The 200 on-street parking spaces are an approximate number of spaces intended to include vehicles that may currently park on neighborhood streets. The 50 parking spaces reserved for the Eagles are not expected to occur on a regular and frequent basis, or coincide with the peaks of MMC. However, to be conservative, for the purposes of completing this evaluation, they have been considered as MMC employee spaces with the same traffic patterns.

The Institutional Development Plan (IDP) identifies a current total of 2,027 employee parking spaces both on and off campus. The existing employee spaces that are not included in the garage spaces identified above are located in the 7 Bramhall Street lot (26 spaces). This lot is proposed to remain where it is because it serves specific programs at that location.

A parking demand analysis was conducted as part of the Transportation Plan in the IDP to determine parking needs based on supply and demand, and trip reduction efforts outlined in the TDM Plan. The analysis revealed an existing employee parking shortage of 150 to 200 spaces, with the MMC parking system typically operating at or above capacity during weekday daytime hours (IDP page 65). Approximately 500 to 600 additional employee parking spaces are required to meet projected demand based on expected staff growth. The proposed project was identified to address the shortage.

Existing Parking Area Traffic Volumes

Traffic counts were completed at the existing Gilman Garage access as follows:

- Accurate Counts - November 2, 2017 from 5:00AM to 9:00PM (16 hours) – The counts indicate that the peak hours of traffic entering and exiting the garage occurred from 6:45AM to 7:45AM with 448 trip ends, and 6:00PM to 7:00PM with 326 trip ends.
- GP – January 18, 2018 from 6:30AM to 8:00AM and 5:45PM to 7:15PM - The times were chosen based on the peak hours determined in the November 2, 2017 counts. The counts completed by GP confirmed the original findings from the November 2, 2017 counts.

Traffic counts were also completed at the existing 222 St. John Street surface parking as follows:

- GP - January 18, 2018 from 6:15AM to 7:45AM and from 3:30PM to 5:00PM
- GP - January 23, 2018 from 5:45PM to 7:15PM

The 222 St. John Street parking lot peak hours occurred from 6:15AM to 7:15AM and 3:30PM to 4:30PM. The entering and exiting traffic for each 15 minute period at the 222 St. John Street is shown on the attached "St. John Street Parking Garage Trip Generation" table.

The Gilman Employee Parking Garage and 222 St. John Street surface lot represent approximately 85% of the MMC employee spaces anticipated to be accommodated by the proposed St. John Street garage. As such, it is anticipated that when combined they will represent the majority of the traffic patterns that can be expected at the new garage. To represent the traffic patterns of the remaining 15% of the satellite lots as well as the on-street parking spaces, the traffic patterns were assumed to be similar to the 222 St. John Street satellite lot. The trip generation for each 15 minute period for each satellite parking area has been estimated based on the trip generation at the 222 St. John Street parking lot and is shown on the attached "St. John Street Parking Garage Trip Generation" table.

Proposed Parking Garage Trip Generation

Since the employees that currently park in the Gilman garage will be shifted to the new garage, they will have to take a shuttle in the future rather than have direct access to the hospital as they do currently. Because of this shift, we would expect those employees to arrive approximately 15 minutes earlier than they typically would and that they would end up leaving the new garage approximately 15 minutes later. Therefore, the counted volumes for the Gilman Garage were adjusted by 15 minutes to estimate the traffic that would be experienced when the spaces are relocated to 222 St. John Street. The adjusted Gilman Garage volumes are shown on the attached "St. John Street Parking Garage Trip Generation" table.

The total trip generation for the proposed St. John Street garage is based on adding the existing or estimated trip generation of each 15 minute period for each parking location to identify the overall AM & PM peak hours. Then, a ratio of the proposed number of parking spaces (2,452) to the existing combined number of parking spaces to forecast the trip generation for the proposed garage.

Based on the combined volumes for the parking areas and the proportional increase in number of parking spaces, the AM peak hour of the proposed garage is estimated to occur from 6:00AM to 7:00AM with **1,097** trip ends, and the PM peak hour of the garage is estimated to occur 4:15PM to 5:15PM with **571** trip ends. A trip end is a trip into or out of the site, thus a round trip is equal to two trip ends. The AM peak hour of the garage is estimated to occur significantly outside of the adjacent street (St. John Street) peak hours for the AM condition which occurs from 7:30AM to 8:30AM and closer to the PM peak hour of the adjacent street which occurs from 4:00PM to 5:00PM. It should be noted that the Traffic Impact Study for Phase 3 will take a broader look at the overall adjacent roadway network peak hours versus the peak hours of the garage.

Trip Distribution and Assignment

The garage is proposed to be accessed directly via a full movement driveway directly onto St. John Street as well as indirectly via the Margarita's driveway. During peak hours of the garage, the garage will be set up such that the ground level and first deck will be accessed via the Margarita's driveway and decks 2-8 will be accessed directly via the St. John Street access. All of the 222 St. John Street employees, the 50 Eagles spaces, and some of the MMC Campus employees will use the ground level and first deck parking spaces with decks 2 – 8 used by MMC Campus employees only. All employee shuttles throughout the day (enter and exit) will access the garage via the Margarita's access. Unused shuttles during non-peak times of the day are expected to be parked on the ground level.

The trip distribution (enter vs. exit) for the proposed St. John Street garage has been based on the counts completed at the existing 222 St. John Street surface lot and the Gilman Garage. Based on the counts, the following trip distribution is anticipated for the proposed 222 St. John Street garage:

- AM Peak Hour: 98% entering, 2% exiting
- PM Peak Hour: 14% entering, 86% exiting

The regional trip assignment has been based on the VHB travelshed completed for the IDP. For localized assignment, it is based on GP's review of the area as well as numerous discussions with the City of Portland staff and traffic consultant. The trip assignment is shown on the attached Figure 4.

Please note that the existing turning movement counts indicate that some traffic uses the existing Union Station access from Congress Street to the site. For the purposes of this assessment, to be conservative, it has been assumed that this cut-through will not be available and that traffic has been reassigned to the adjacent street. The attached Figure 6 shows the estimated MMC traffic using the Margarita's driveway, and Figure 7 shows the reassignment of the cut-through traffic (not including MMC traffic).

Shuttle Trip Generation / Assignment

As discussed above, MMC will be upgrading their current shuttle service to accommodate the new garage. In addition to employee traffic, shuttles will be used to transport employees between the parking garage and the hospital. There are proposed to be 13 shuttles during the peak hours, each with an approximate 15 minute headway. Based on this information, one shuttle can make approximately four trips to and from the proposed garage during a one hour period. With 13 shuttles, approximately 52 round (52 enter and 52 exit) trips are anticipated at the site during the peak hour. As identified previously, all entering and exiting shuttles will use the Margarita's

access. These 104 trips have been added to the employee trips. To be conservative, it has been assumed that the shuttles will turn right into the Margarita's access and left out of the Margarita's access.

2022 Predevelopment Volumes

GP completed turning movement counts at the intersection of St. John Street with the Margarita's Driveway on May 17, 18, and 19, 2017 from 6:00AM to 8:00AM, 7:45AM to 9:00AM, 5:00PM to 8:00PM, and 3:00PM to 5:00PM. Those volumes were used as the base raw volumes for St. John Street and for Margaritas during the forecast garage peak hours of 6:00AM to 7:00AM and 4:15PM to 5:15PM.

Additional turning movement counts were completed by Accurate Counts at the following intersections from 6:00AM to 9:00AM and 2:00PM to 8:00 PM on the specified dates:

- St John Street / Valley Street: November 8, 2017
- Valley Street / Commercial Street: November 2, 2017
- Congress Street / St. John Street: November 2, 2017

Turning movement counts were also completed by Gorrill Palmer at the following intersections:

- St. John Street / D Street: May 30, 2018, 6:00AM – 9:00AM and 3:00PM – 6:00PM
- Congress Street / Valley Street: December 13, 2016, 7:00AM – 9:00AM and 3:00PM – 6:00PM

The results of all counts are shown on the attached Figure 2.

Seasonal Adjustment

Traffic volumes that are not collected during peak summer months are typically seasonally adjusted to estimate traffic volumes that may be experienced during the peak summer months. Since the traffic counts were not collected during the peak summer months, the raw volumes shown on Figure 2 have been seasonally adjusted based on the weekly group mean factors published by MaineDOT. The following summarizes the adjustment at each intersection:

- Valley Street / Commercial Street: 7.0%
- St. John Street / Valley Street: 8.1%
- D Street / St. John Street: 1.2%
- Margaritas / St. John Street: 2.3%
- Congress Street / St. John Street: 7.0%
- Valley Street / Congress Street: 12.8%

Annual Growth

In addition to the seasonal adjustment, the adjacent roadway volumes were also increased by an annual growth rate to forecast the traffic that may be experienced during the build out year of the project. An annual growth rate of 0.5% per year (approved by the City and consistent with other studies in the area) has been applied to the seasonally adjusted volumes to yield the 2022 Predevelopment traffic volumes shown on the attached Figure 3. It should be noted that the employee growth rate in the IDP is forecast to be approximately 0.63% per year, which is very similar to the growth rate approved by the City for overall on-street traffic and used on other studies in the area.

2022 Postdevelopment Volumes

The 2022 Predevelopment traffic volumes shown on Figure 3 were combined with the employee and shuttle trip assignments shown on Figures 4 and 5. Then, the traffic volumes on the Existing Employee Garage Trip Assignment on Figure 6, the Existing MMC 222 St. John Street Traffic on Figure 7, and the Existing Cut-Through Traffic on Figure 8 were subtracted from the combined trip assignment to yield the 2022 Postdevelopment traffic volumes shown on Figure 9.

Signal Warrant

A signal warrant was completed for the proposed garage access using the Manual on Uniform Traffic Control Devices (MUTCD) Signal Warrant 3, Peak Hour (attached). The warrant was completed using the 2022 Postdevelopment traffic volumes on Figure 9. Based on the warrant, a signal for the garage access opposite D Street is not warranted during the AM peak hour and is marginal during the PM peak hour. During the AM peak hour, the majority of the garage traffic is entering (98%), and very little (2%) is exiting, which does not meet the warrant. During the PM peak hour of the garage, if the traffic volumes on the adjacent street increase by approximately 150 vehicles, a signal would be warranted at the intersection. It should be noted that this evaluation assumes that the shuttles turn left out of the Margarita's access. If the shuttles are shifted to turn right out of the Margarita's access then turn left onto D Street, the traffic volumes on the adjacent street would need to increase by approximately 100 vehicles for a signal to be warranted at the garage access during the PM peak hour. Additionally, a signal would improve pedestrian connectivity in the vicinity of the garage and improve the safety of pedestrian crossings on St. John Street. It is our recommendation that a signal be installed at the garage access opposite D Street.

Capacity Analysis

Based on discussions with the City, the study area intersections for this evaluation include the following. Please note that Phase 3, the MMC Congress Street expansion, will require a Traffic

Movement Permit (TMP) and full traffic impact study which will include not only these intersections, but others as well.

- Valley / Congress (Signalized)
- Congress / St. John (Signalized)
- Margaritas / St. John (Unsignalized)
- D Street / Garage / St. John (Signalized)
- Valley / St. John (Signalized)
- Commercial / Valley (Signalized)

Capacity analysis was completed for the study area intersections using Synchro/SimTraffic computer analysis software. Levels of service are similar to the academic ranking system where an 'A' is good with little control delay and an 'F' represents poor traffic conditions. If the level of service falls below a 'D', an evaluation should be made to determine if mitigation is warranted. The following tables summarize the relationship between level of service and control delay per vehicle for unsignalized and signalized intersections.

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Less than 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Less than 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

The capacity analysis was completed for the proposed St. John Street garage access as shown on the concept plan submitted with the overall application. This includes signalization of the St. John Street / garage access with associated restriping of St. John Street and restriping of the Margaritas exit for separate left and right lanes. This also assumes that the shuttles will turn left out of the Margaritas exit. The St. John Street southbound approach was reviewed for two separate

scenarios, one as shown on the site plan, and one that included a southbound right turn lane which is shown in the table in ( ). The results are based on the average of five SimTraffic runs. The following table summarizes the results of the capacity analysis. Detailed results are attached.

Level of Service Summary

Approach	Level of Service	
	2022 AM Garage Peak Hour	2022 PM Garage Peak Hour
Valley / Congress (S)		
Congress EB	A	A
Congress WB	C	B
Valley NB	B	C
Overall	**B**	**B**
Congress / St. John (S)		
Congress EB	C	C
Congress WB	C	C
St. John NB	B	C
St. John SB	C	C
Overall	**C**	**C**
Margaritas / St. John (U)		
Margaritas EB	F	C
St. John NB	C	A
St. John SB	A	A
D St / Garage / St. John (S)		
Garage EB / (with St. John SB Right)	C (B)	A (A)
D WB / (with St. John SB Right)	A (A)	A (A)
St. John NB / (with St. John SB Right)	B (A)	A (A)
St. John SB / (with St. John SB Right)	A (A)	B (B)
Overall / (with St. John SB Right)	**A (A)**	**A (A)**
Valley / St. John (S)		
St. John EB	A	B
St. John WB	B	C
Valley NB	A	B
Valley SB	A	B
Overall	**A**	**B**
Commercial / Valley (S)		
Fore River Pkwy EB	A	B
Commercial WB	B	C
Valley SB	A	B
Overall	**A**	**B**

(U) = Unsignalized, (S) = Signalized

As shown in the table, the study area intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours of the garage. The garage access on St. John Street is forecast to operate at very good levels of service during the AM and PM peak hours of the garage. The Margarita's driveway on St. John Street is forecast to operate at a low level of service during the AM peak hour of the garage, due to the high volume of southbound traffic on St. John Street. It should be noted that if the shuttles turn right out of the Margarita's exit, the level of service is forecast to increase to a 'C' during the AM peak hour of the garage. Additional shuttle traffic is not forecast to significantly impact the St. John Street southbound approach at the garage access.

The construction of a right turn lane on St. John Street southbound at the proposed garage access opposite D Street is forecast to improve the level of service of the St. John Street northbound approach and the garage eastbound approach from a 'B' to an 'A' and a 'C' to a 'B', respectively, during the AM peak hour of the garage. The southbound right turn lane was included in initial intersection designs, but was removed per the request of the City of Portland to improve pedestrian accommodations.

Queue Analysis

For this evaluation, GP completed a queue analysis for key movements at the two accesses to the garage using the same Synchro/SimTraffic computer analysis software as that used to complete the capacity analysis. Queue analysis involves comparing the 95th percentile queue lengths, rounded up to the nearest five feet, to the available storage lengths. The results are based on the average of five SimTraffic runs. Please note that similar to the Capacity Analysis, the Queue Analysis evaluated two scenarios for the southbound St. John Street approach; with and without a right turn lane for traffic turning into the garage. The following table summarizes the results of the queue analysis for the key movements. Detailed results are attached.

Queue Analysis Summary

Approach	Available Storage Length (ft)	95th Percentile Queue Lengths (ft)	
		AM Garage Peak Hour	PM Garage Peak Hour
Garage Access / St. John St.			
Garage Exit EB LT	120 (to garage)	45	125
Garage Exit EB R	120 (to garage)	25	75
D St WB LR		35	45
St. John NB L	100	115	30
St. John NB TR		40	90
St. John SB L	75	60	45
St. John SB TR		225	180
St. John SB T		120	180
St. John SB R	150	150	75

Approach	Available Storage Length (ft)	95th Percentile Queue Lengths (ft)	
		AM Garage Peak Hour	PM Garage Peak Hour
Margaritas / St. John St.			
Exit EB L		110	115
Exit EB R	150	15	60
St. John NB LT		135	65
St. John SB TR		25	10

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound
L=Left, T=Through, R=Right

As shown in the table, the proposed storage lengths are forecast to accommodate the anticipated 95th percentile queue lengths, with the exception of the St. John Street northbound left turn lane into the garage during the AM peak hour of the garage. The 95th percentile queue length is forecast to exceed the available storage length by approximately 15 feet, which is less than one vehicle, assuming a vehicle and the associated space between vehicles is 25 feet.

Additionally, if the shuttles turn right out of the Margarita's exit then left onto D Street, the queue lengths of the garage access are forecast to be improved. It is anticipated that the St. John Street southbound left turn lane would need to be increased from 75 feet to 100 feet to accommodate the additional shuttle traffic.

The addition of the St. John Street southbound right turn lane into the garage access opposite D Street is forecast to improve the queue lengths during the AM but is not forecast to significantly impact the queue lengths during the PM peak hour. The right turn lane was removed from the intersection per the request of the City to improve pedestrian accommodations.

Pedestrian Accommodations

Currently the nearest crosswalks across St. John Street are located at the intersection with C Street approximately 600 feet to the north and at the METRO station approximately 600 feet to the south. To better accommodate employees who wish to walk between the garage and work, or for pedestrians in the neighborhood, the proposed off-site mitigation along St. John Street includes a crosswalk across St. John Street on the northerly side of the garage access, as shown on the attached plan from Woodard & Curran. This crosswalk is proposed to include new ADA ramps and have pedestrian signal heads and push buttons so that they can cross with the traffic signal. In addition, MMC is reviewing available crosswalks & sidewalks, as well as street lighting between the garage and the hospital to ensure pedestrians have a designated route. See full site plan application for additional crosswalk & sidewalk locations as well as lighting upgrades.

Bicycle Accommodations

The City has recently restriped St. John Street along the site frontage to include a northbound and southbound bicycle lane. Consistent with the City's desire to provide a bicycle lane through this corridor, MMC is proposing to maintain a bicycle lane as well in each direction on St. John Street. See full Site Plan application submittal for a striping plan along the site frontage.

Conclusions

The following is a summary of the conclusions:

1. The proposed parking garage is the second phase of a three phase process. This evaluation will be incorporated into the larger more extensive traffic impact study to be submitted during phase three of the MMC expansion.

2. The proposed parking garage will accommodate six existing MMC parking areas as well as 200 on-street parking spaces (assumed) in the general neighborhood around the hospital and 50 parking spaces for the Eagles. This accounts for approximately 2,073 parking spaces. The proposed parking garage is planned to provide approximately 2,400 parking spaces in the garage and 52 parking spaces in a surface lot adjacent to the garage.

3. This project aligns with the parking demand information in the IDP.

4. The peak hours of the proposed St. John Street garage are forecast to be 6:00AM to 7:00AM and 4:15PM to 5:15PM. The peak hours of the garage are estimated to occur outside of the adjacent street (St. John Street) peak hours, which occur from 7:30AM to 8:30AM and 4:00PM to 5:00PM.

5. The employee trip generation for the proposed garage is forecast to be **1,097 AM** and **571 PM** peak hour trip ends, based on the parking demand of 2,452 spaces.

6. MMC is expected to expand their existing shuttle service to 13 shuttles during the peak hours, with a reduced level during non-peak hours. This would add approximately 104 (52 enter and 52 exit) trip ends to the Margaritas access. To be conservative, it has been assumed that the shuttles will turn right into the Margaritas access and left out of the Margaritas access.

7. Based on the MUTCD Signal Warrant 3, Peak Hour, a signal is marginal at the proposed garage access opposite D Street on St. John Street based on the 2022 Postdevelopment PM peak hour of the garage traffic volumes. If the adjacent street traffic increases by 150 vehicles during the PM peak hour of the garage, then a signal would be warranted at the

intersection. It should be noted that if the shuttles turn right out of Margaritas (instead of left) the adjacent street would need to increase by 100 vehicles to warrant a signal. A traffic signal would improve pedestrian connectivity and safety. A traffic signal at the garage access is recommended.

8. Based on the results of the capacity analysis, the study area intersections are forecast to operate at overall acceptable levels of service during both the AM and PM peak hours of the garage. The results indicate that addition of a southbound right turn lane on St. John Street at the garage access opposite D Street will slightly improve the operation of the northbound and eastbound approaches during the AM peak hour of the garage, but overall will not have a significant impact on the intersection. It should be noted that if the shuttles are directed to turn right out of the Margarita's access, the level of service of the Margarita's access is forecast to improve from an 'F' to a 'C'.

9. Based on the results of the queue analysis, the queues at the two accesses to the garage are forecast to be accommodated by the available storage lengths, with the exception of the St. John Street northbound left turn lane into the garage, which is forecast to exceed the storage length by less than one vehicle. The results indicate that addition of a southbound right turn lane on St. John Street at the garage access opposite D Street may improve the queue lengths of the southbound approach during the AM peak hour of the garage, but will not significantly impact the queue lengths during the PM peak hour of the garage. It should be noted that if the shuttles turn right out of the Margarita's access then left onto D Street, the queue lengths for the Margarita's access are forecast to improve. The St. John Street southbound left turn lane is anticipated to need to be increased from 75 feet to 100 feet to accommodate the additional shuttle traffic.

10. The proposed off-site mitigation includes signalization of the garage access onto St. John Street and striping the exit from Margaritas as separate left and right movements.

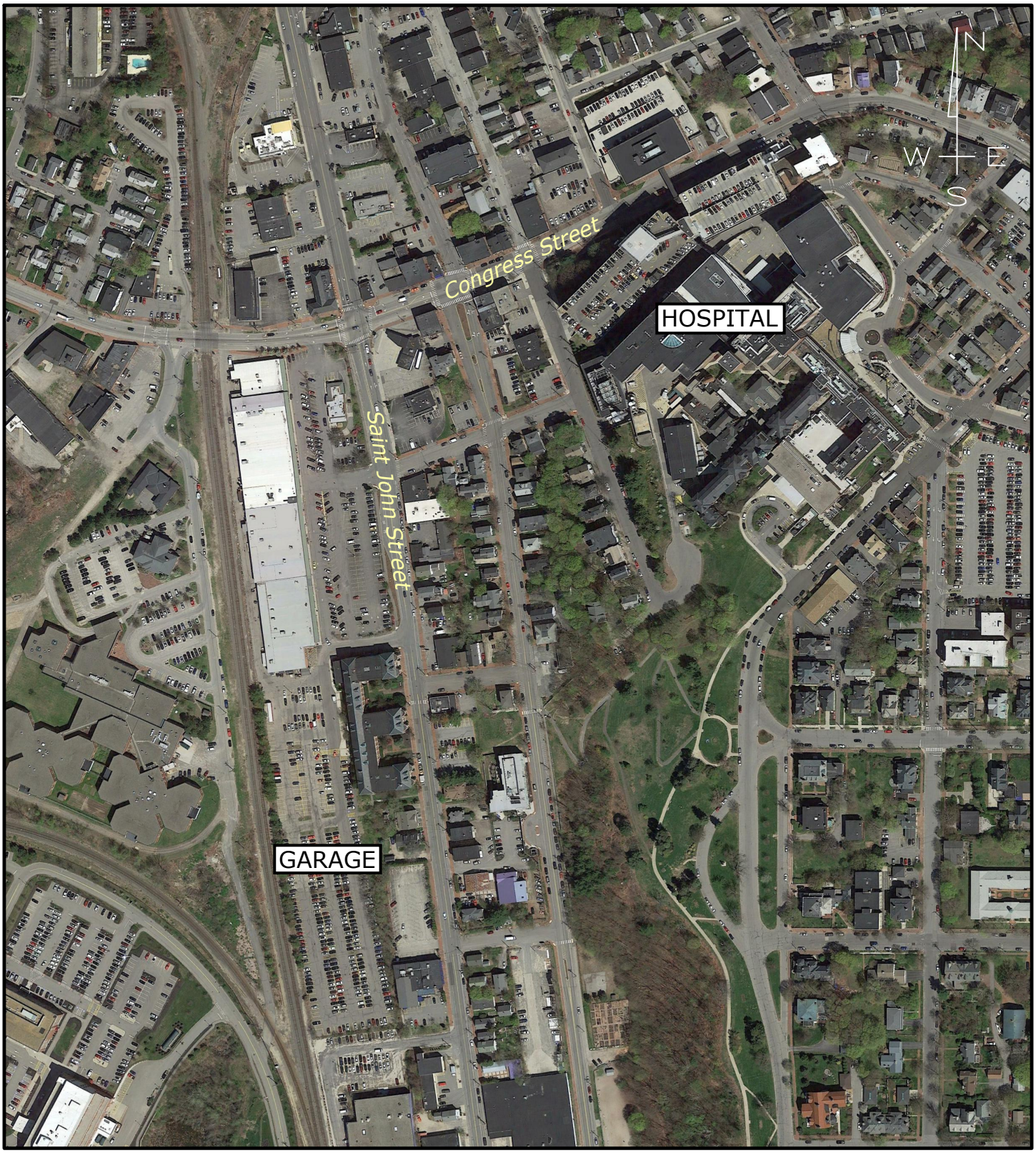
    A crosswalk across St. John Street is proposed on the northerly side of the St. John Street / D Street intersection. This will include ADA accommodations for the crossing as well pedestrian signal heads and push buttons.

    To accommodate bicyclists, the currently proposed off-site mitigation plan is maintaining a bicycle lane in both the northbound and southbound directions.

11. Based on this evaluation, it is our opinion that with the proposed mitigation identified herein, the proposed garage traffic can be accommodated on the adjacent roadway network.

Location Map

Figure No. 1



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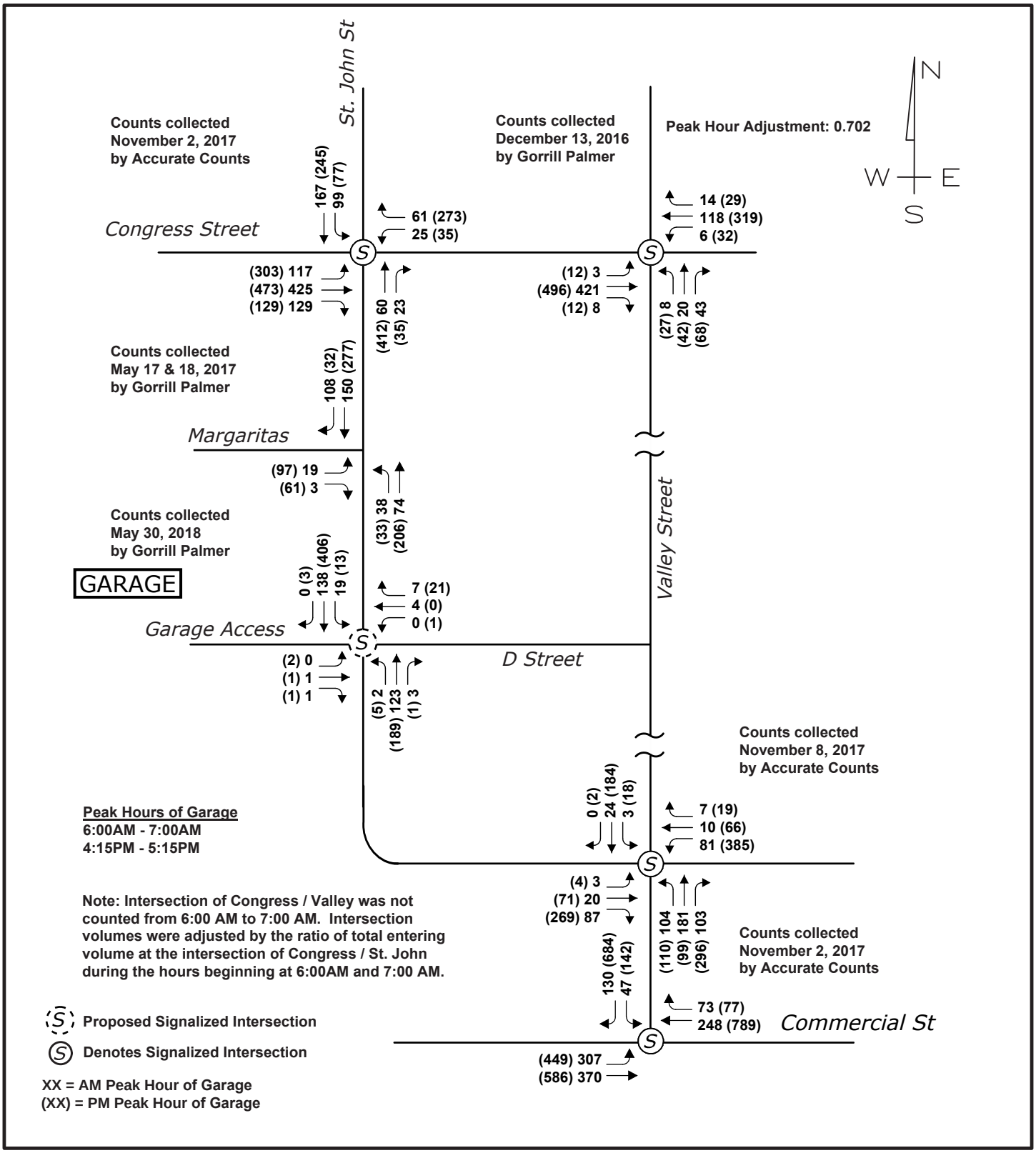
Raw Volumes

Figure No. 2



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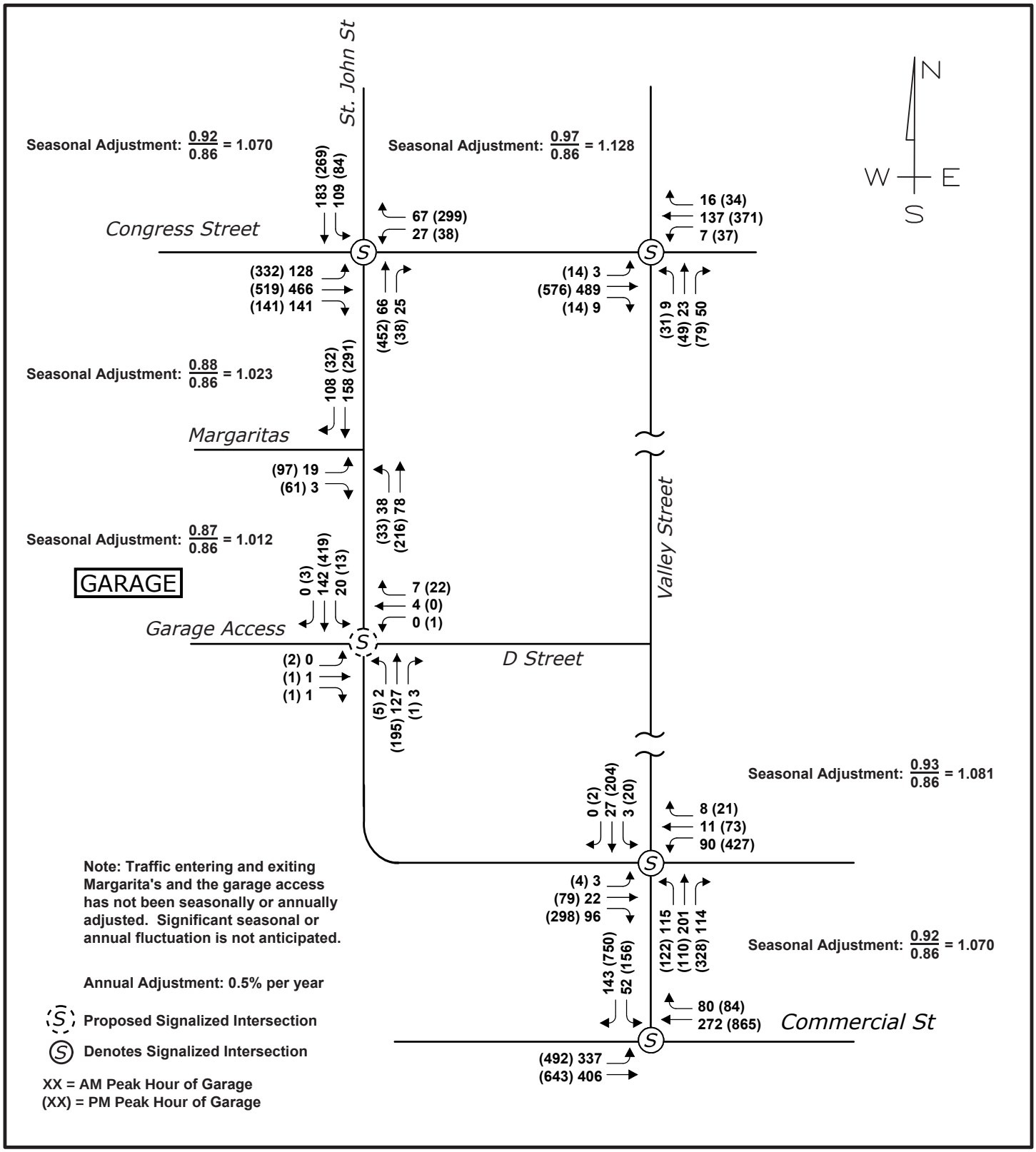
2022 Predevelopment DHV

Figure No. 3



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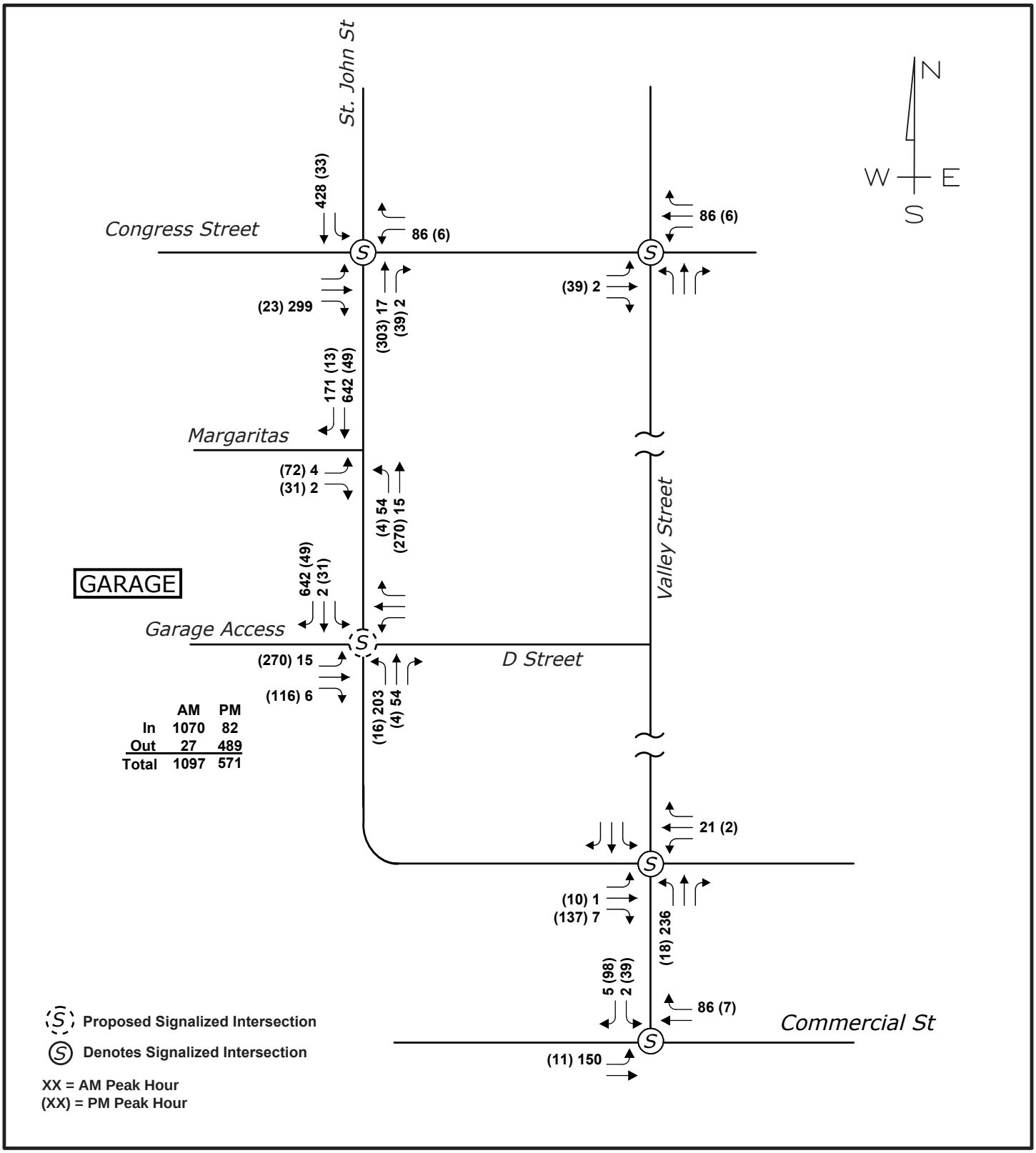
Trip Assignment

Figure No. 4



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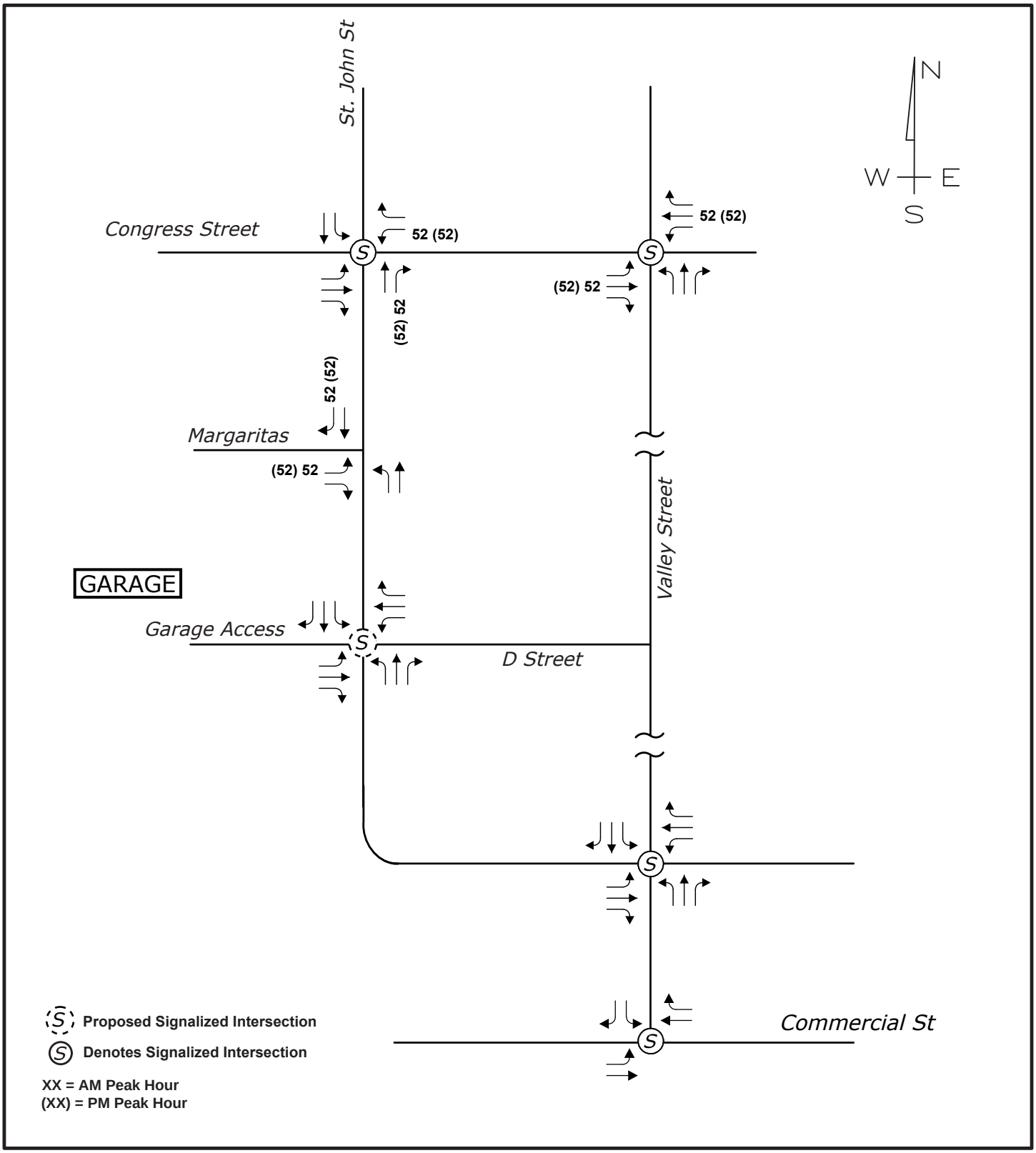
Shuttle Assignment

Figure No. 5



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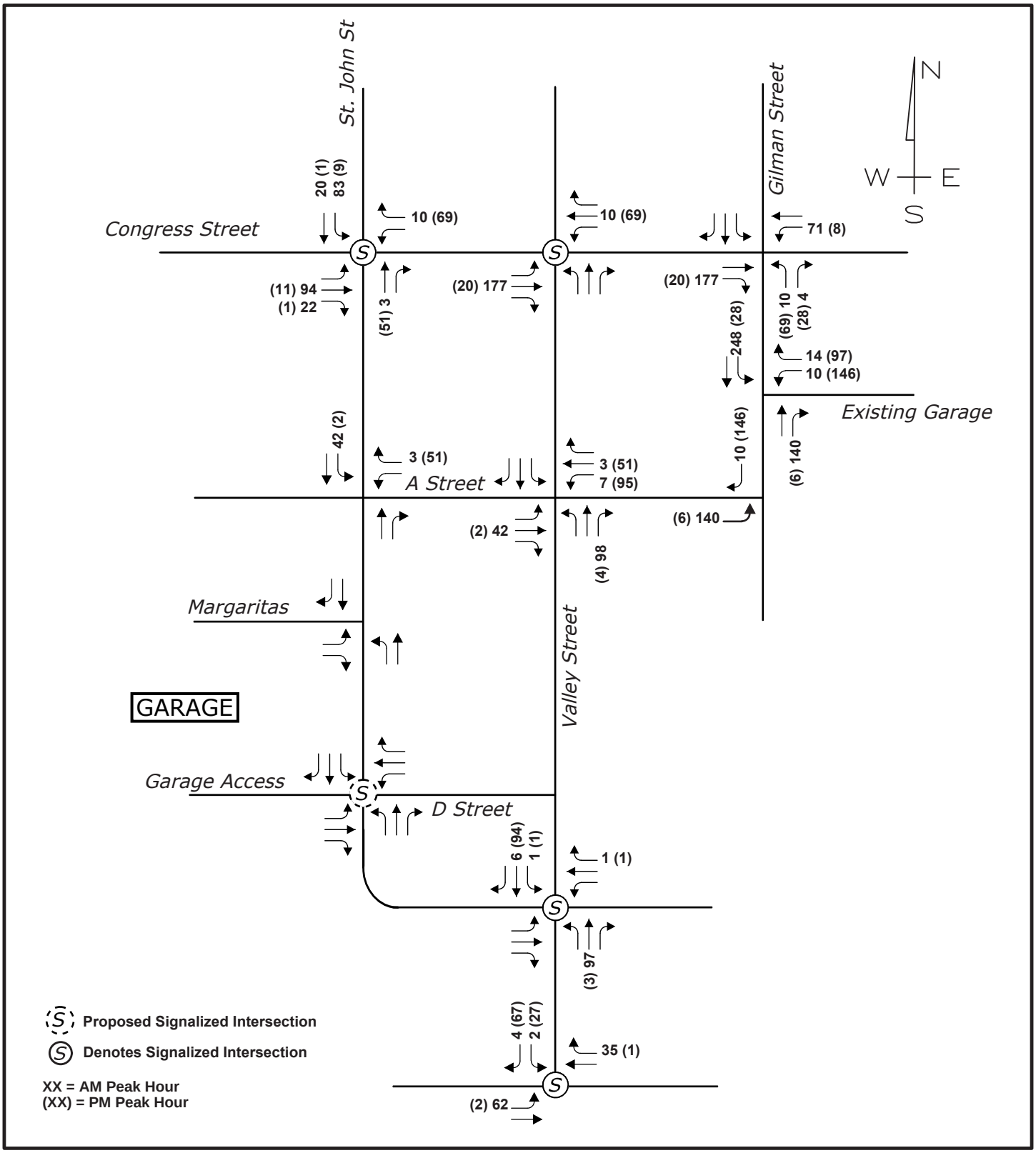
Existing Garage Employee Trip Assignment

Figure No. 6



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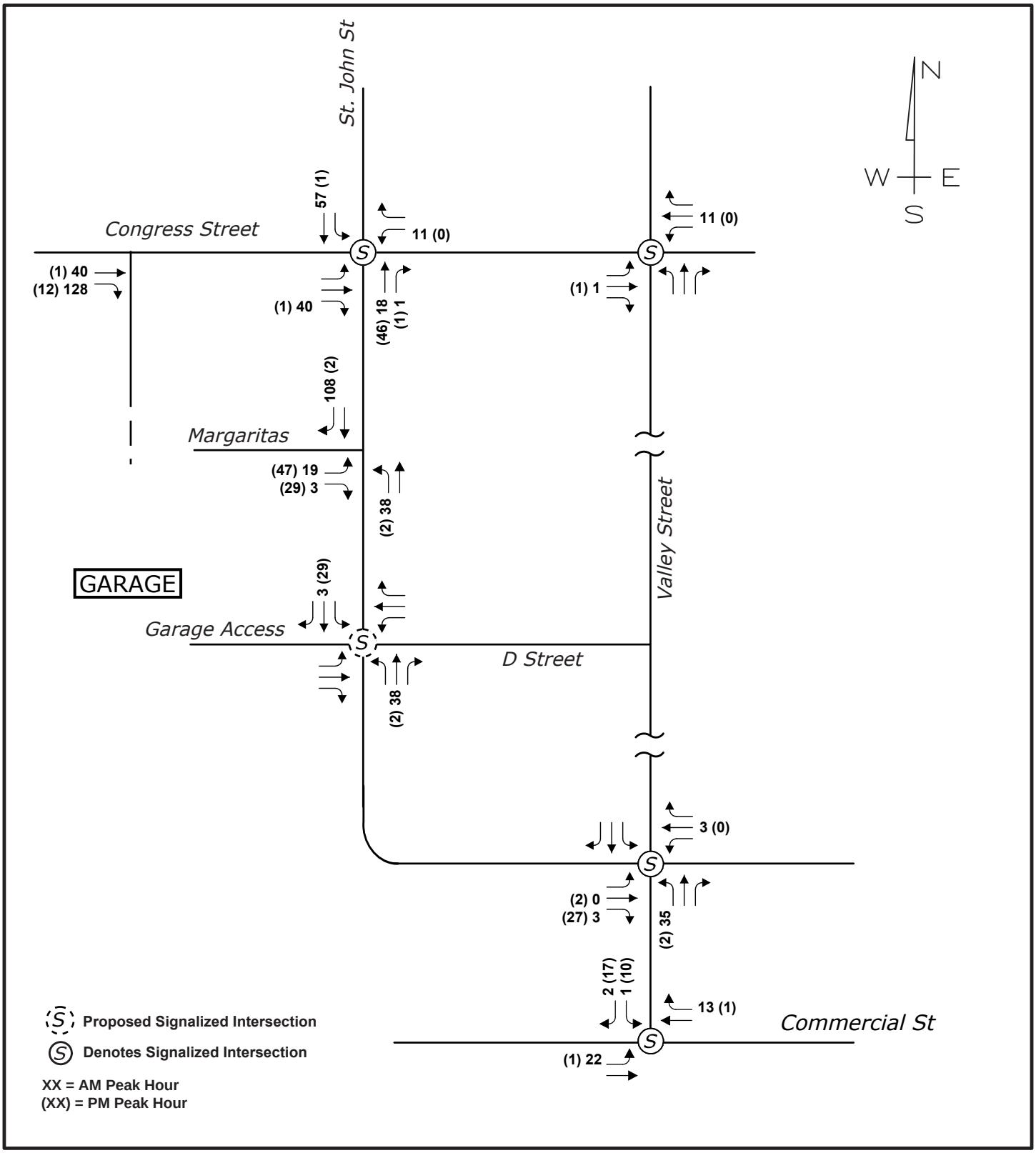
222 St. John Existing MMC Traffic

Figure No. 7



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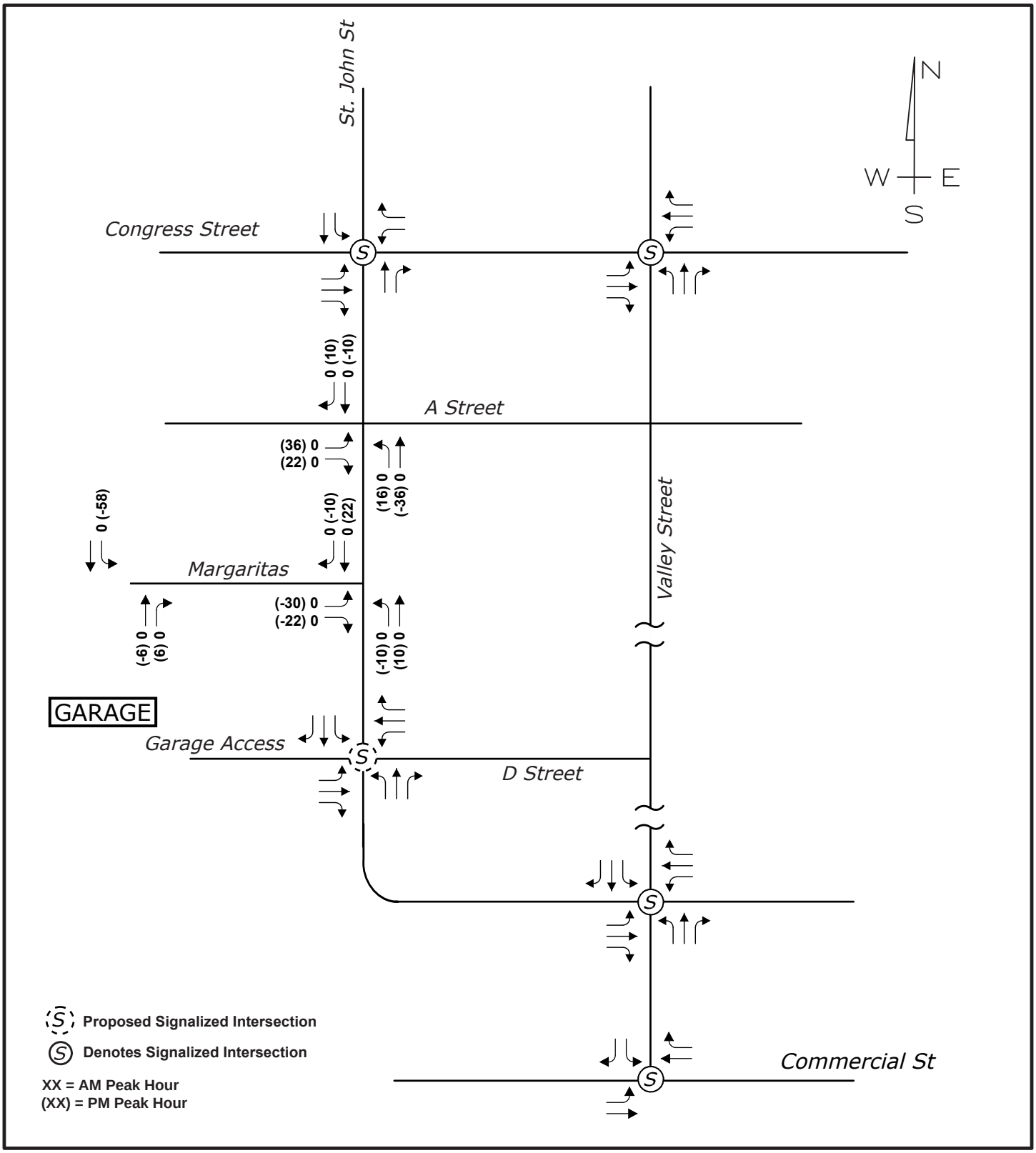
222 St. John Existing Cut-Through (non-MMC) Figure No. 8



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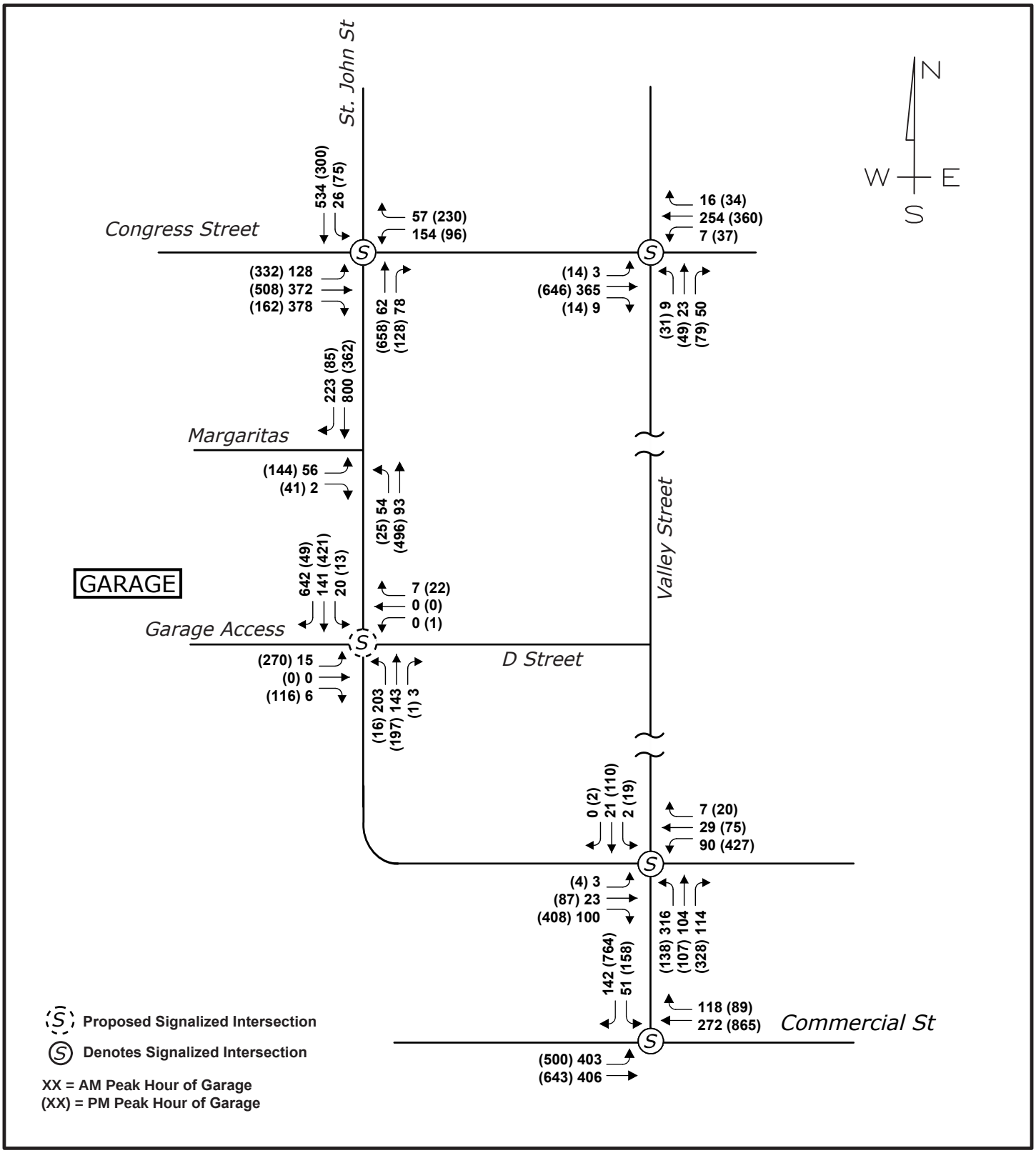
2022 Postdevelopment DHV

Figure No. 9



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St. John Street Parking Garage Trip Generation

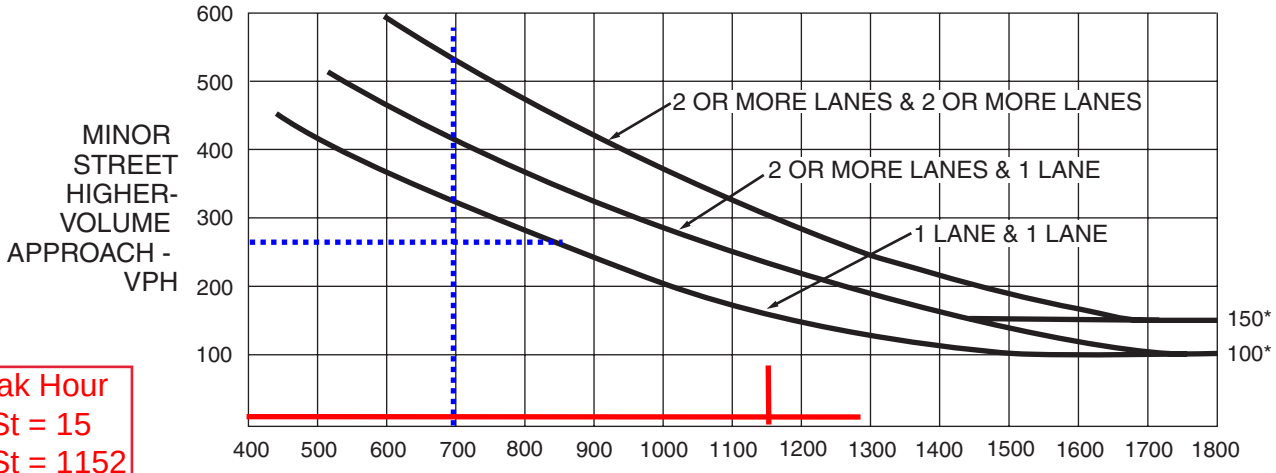
June 6, 2018
JN 2866.01

Parking Area	St. John St Lot		Sportsman Lot		Gateway Garage		Classic Lot		321 Brackett Lot		On-Street Spaces		Gilman Garage -Shifted		All Parking Areas			Existing Parking Hourly Volumes			Proposed Parking Hourly Volumes		
Count Date	1/18/2018		Estimated		Estimated		Estimated		Estimated		Estimated		11/2/2017					Total Spaces: 1923			Total Spaces: 2452		
Number of Spaces	283 Spaces		60 Spaces		100 Spaces		97 Spaces		9 Spaces		100 Spaces		1274 Spaces		1923 Spaces								
	Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting	Total	Hourly Vol.	%In	%Out	Hourly Vol.	Entering	Exiting
6:00 AM	23	0	5	0	8	0	8	0	1	0	8	0	89	1	142	1	143	**860**	98%	2%	**1097**	1070	27
6:15 AM	45	0	10	0	16	0	15	0	1	0	16	0	113	8	216	8	224	838	97%	3%	1069	1036	33
6:30 AM	85	1	18	0	30	0	29	0	3	0	30	0	118	6	313	7	320	791	95%	5%	1009	955	54
6:45 AM	51	1	11	0	18	0	17	0	2	0	18	0	51	4	168	5	173	637	83%	17%	812	673	139
7:00 AM	26	0	6	0	9	0	9	0	1	0	9	0	55	6	115	6	121	578	69%	31%	737	510	227
7:15 AM	41	0	9	0	14	0	14	0	1	0	14	0	60	24	153	24	177	551	59%	41%	703	412	291
7:30 AM	12	7	3	1	4	2	4	2	0	0	4	2	65	60	92	74	166	436	44%	56%	556	246	310
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	40	74	40	74	114						
8:00 AM	2	2	0	0	1	1	1	1	0	0	1	1	33	51	38	56	94						
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	23	39	23	39	62						
3:15 PM	1	8	0	2	0	3	0	3	0	0	0	3	12	38	13	57	70	357	12%	88%	455	56	399
3:30 PM	2	27	0	6	1	10	1	9	0	1	1	10	9	36	14	99	113	411	11%	89%	524	60	464
3:45 PM	1	15	0	3	0	5	0	5	0	0	0	5	6	60	7	93	100	399	13%	87%	509	64	445
4:00 PM	1	12	0	3	0	4	0	4	0	0	0	4	9	37	10	64	74	407	15%	85%	519	77	442
4:15 PM	3	22	1	5	1	8	1	8	0	1	1	8	9	56	16	108	124	**448**	14%	86%	**571**	82	489
4:30 PM	2	14	0	3	1	5	1	5	0	0	1	5	12	52	17	84	101	427	15%	85%	544	82	462
4:45 PM	6	9	1	2	2	3	2	3	0	0	2	3	4	71	17	91	108	410	17%	83%	523	88	435
5:00 PM	2	18	0	4	1	6	1	6	0	1	1	6	9	60	14	101	115	384	21%	79%	490	101	389
5:15 PM	3	12	1	3	1	4	1	4	0	0	1	4	9	60	16	87	103	351	33%	67%	448	147	301
5:30 PM	5	5	1	1	2	2	2	2	0	0	2	2	10	50	22	62	84	375	47%	53%	478	227	251
5:45 PM	2	5	0	1	1	2	1	2	0	0	1	2	22	43	27	55	82	381	54%	46%	486	264	222
6:00 PM	0	4	0	1	0	1	0	1	0	0	0	1	50	24	50	32	82	354	56%	44%	451	251	200
6:15 PM	1	1	0	0	0	0	0	0	0	0	0	0	78	47	79	48	127	308	50%	50%	393	197	197
6:30 PM	1	7	0	1	0	2	0	2	0	0	0	2	50	25	51	39	90						
6:45 PM	2	4	0	1	1	1	1	1	0	0	1	1	12	30	17	38	55						
7:00 PM	0	2	0	0	0	1	0	1	0	0	0	1	7	24	7	29	36						

Indicates peak hour volumes

Proposed Garage Access Signal Warrant
2022 Postdevelopment DHV

Figure 4C-3. Warrant 3, Peak Hour



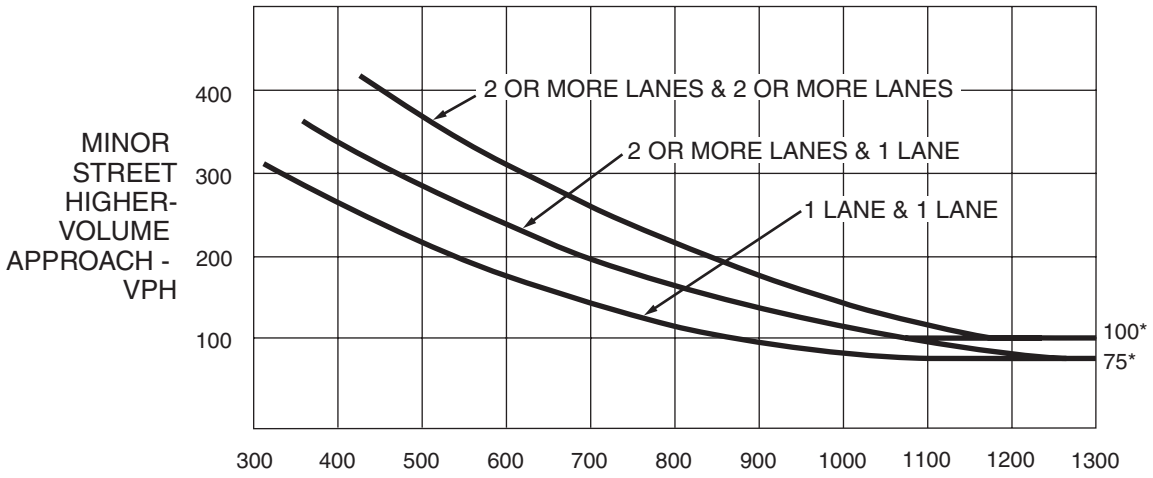
AM Peak Hour
Minor St = 15
Major St = 1152

PM Peak Hour
Minor St = 270
Major St = 697

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3258	3246	3256	3237	3232	3246
Vehs Exited	3251	3243	3251	3218	3225	3238
Starting Vehs	85	98	72	76	67	77
Ending Vehs	92	101	77	95	74	84
Denied Entry Before	1	0	1	0	0	0
Denied Entry After	2	0	1	0	0	0
Travel Distance (mi)	1590	1598	1587	1563	1569	1581
Travel Time (hr)	86.8	93.3	89.1	85.5	87.3	88.4
Total Delay (hr)	26.0	32.2	28.5	25.9	27.4	28.0
Total Stops	3347	3578	3478	3291	3443	3428
Fuel Used (gal)	62.0	64.3	62.5	61.5	62.0	62.4

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3258	3246	3256	3237	3232	3246
Vehs Exited	3251	3243	3251	3218	3225	3238
Starting Vehs	85	98	72	76	67	77
Ending Vehs	92	101	77	95	74	84
Denied Entry Before	1	0	1	0	0	0
Denied Entry After	2	0	1	0	0	0
Travel Distance (mi)	1590	1598	1587	1563	1569	1581
Travel Time (hr)	86.8	93.3	89.1	85.5	87.3	88.4
Total Delay (hr)	26.0	32.2	28.5	25.9	27.4	28.0
Total Stops	3347	3578	3478	3291	3443	3428
Fuel Used (gal)	62.0	64.3	62.5	61.5	62.0	62.4

1: St. John Street & Margaritas Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.3	0.0	0.0	0.0
Total Del/Veh (s)	58.0	15.7	4.7	8.5
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

3: St. John Street & Garage Access/D St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.2	0.1	0.0	0.0	0.0
Total Del/Veh (s)	20.6	7.0	10.9	9.3	9.9
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

5: Valley & St. John Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	2.9	0.0	3.0	0.5
Total Del/Veh (s)	6.4	10.1	6.6	5.2	7.0
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

7: St. John Street & Congress Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.8	1.0	0.0	0.2	0.6
Total Del/Veh (s)	21.7	34.4	10.9	24.9	23.7
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

13: Fore River Pkwy & Valley Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	1.6	1.2	0.0	1.3
Total Del/Veh (s)	6.8	11.4	6.7	8.0
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

16: Congress Street & Valley Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.2	0.1	0.1
Total Del/Veh (s)	4.3	23.2	13.1	11.3
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	29.3
Denied Entry Before	0
Denied Entry After	0

Intersection: 1: St. John Street & Margaritas

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	132	23	155	40
Average Queue (ft)	48	2	56	5
95th Queue (ft)	107	14	131	24
Link Distance (ft)	228		678	670
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		
Storage Blk Time (%)	2			
Queuing Penalty (veh)	0			

Intersection: 3: St. John Street & Garage Access/D St

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	53	31	35	121	81	99	280
Average Queue (ft)	14	5	9	67	6	14	122
95th Queue (ft)	43	23	32	113	38	56	225
Link Distance (ft)	470		195		1603		678
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		120		100		75	
Storage Blk Time (%)				2			11
Queuing Penalty (veh)				3			2

Intersection: 5: Valley & St. John Street

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	LT	TR
Maximum Queue (ft)	50	65	85	55	155	94	29	33
Average Queue (ft)	14	32	38	15	65	22	3	7
95th Queue (ft)	41	57	68	43	128	63	17	27
Link Distance (ft)	1603			536	264	264	594	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	335					265
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 7: St. John Street & Congress Street

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	R	T	TR	L	T
Maximum Queue (ft)	136	338	302	104	209	51	78	51	348
Average Queue (ft)	58	166	136	89	94	14	22	20	197
95th Queue (ft)	117	276	242	118	217	39	54	49	312
Link Distance (ft)	1620	1620			188	670		1418	1418
Upstream Blk Time (%)					8				
Queuing Penalty (veh)					22				
Storage Bay Dist (ft)			290	80			175		
Storage Blk Time (%)		1	0	33	0				
Queuing Penalty (veh)		2	0	19	0				

Intersection: 13: Fore River Pkwy & Valley

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	135	121	79	79	138	93	90	71	54	64
Average Queue (ft)	75	53	36	32	74	27	33	27	25	24
95th Queue (ft)	121	94	70	67	119	68	67	60	48	49
Link Distance (ft)			724	724	662	662		264	264	264
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	430	430					415			
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 16: Congress Street & Valley

Movement	EB	EB	WB	WB	NB	NB
Directions Served	L	TR	L	TR	LT	R
Maximum Queue (ft)	19	159	26	243	69	58
Average Queue (ft)	1	54	3	105	22	24
95th Queue (ft)	7	124	17	207	56	52
Link Distance (ft)		188	839	839	494	494
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)	50					
Storage Blk Time (%)		8				
Queuing Penalty (veh)		0				

Network Summary

Network wide Queuing Penalty: 49

Intersection: 3: St. John Street & Garage Access/D St

Phase	2	4	5	6	8
Movement(s) Served	NBTL	EBTL	NBL	SBTL	WBTL
Maximum Green (s)	45.0	5.0	6.5	34.0	5.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	60.8	5.3	6.1	25.3	5.3
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	48	83	31	9	83
Cycles @ Minimum (%)	0	17	13	0	17
Cycles Maxed Out (%)	24	17	40	38	17
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Valley & St. John Street

Phase	2	3	4	6	8
Movement(s) Served	NBTL	WBL	EBTL	SBTL	WBT
Maximum Green (s)	19.0	8.0	18.0	19.0	31.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	11.7	6.7	7.1	11.7	9.5
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	18	62	57	18	33
Cycles @ Minimum (%)	4	0	9	4	6
Cycles Maxed Out (%)	14	10	0	14	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 7: St. John Street & Congress Street

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBL	SBL	NBT	WBL	EBTL	EBL	SBT
Maximum Green (s)	12.5	15.5	3.7	25.5	5.5	22.5	4.5	26.0
Minimum Green (s)	8.0	8.0	3.0	8.0	5.0	8.0	1.0	5.0
Recall	None	C-Min	None	None	None	C-Min	None	None
Avg. Green (s)	10.1	25.3	8.5	26.4	5.8	28.6	0.0	31.2
g/C Ratio	-0.01	NA	-0.01	-0.01	-0.01	NA	-0.01	NA
Cycles Skipped (%)	26	0	55	5	14	0	100	0
Cycles @ Minimum (%)	34	0	0	0	23	0	0	0
Cycles Maxed Out (%)	8	100	36	35	50	100	0	36
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA
Number of Complete Cycles : 0

Intersection: 13: Fore River Pkwy & Valley

Phase	4	6	7	8
Movement(s) Served	EBT	SBL	EBL	WBT
Maximum Green (s)	37.0	13.0	17.0	15.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	None	None	None
Avg. Green (s)	27.3	8.2	11.5	9.8
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	20	34	12	23
Cycles @ Minimum (%)	0	10	0	0
Cycles Maxed Out (%)	16	8	17	10
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): NA
Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3295	3227	3296	3238	3235	3258
Vehs Exited	3287	3227	3285	3237	3225	3254
Starting Vehs	86	96	71	86	67	76
Ending Vehs	94	96	82	87	77	84
Denied Entry Before	1	0	1	0	0	0
Denied Entry After	2	1	0	0	0	0
Travel Distance (mi)	1625	1606	1622	1604	1586	1609
Travel Time (hr)	89.3	94.9	88.7	88.4	87.4	89.7
Total Delay (hr)	27.0	33.4	26.7	27.1	26.9	28.2
Total Stops	3427	3546	3513	3388	3353	3447
Fuel Used (gal)	63.6	64.7	63.6	63.7	62.4	63.6

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3295	3227	3296	3238	3235	3258
Vehs Exited	3287	3227	3285	3237	3225	3254
Starting Vehs	86	96	71	86	67	76
Ending Vehs	94	96	82	87	77	84
Denied Entry Before	1	0	1	0	0	0
Denied Entry After	2	1	0	0	0	0
Travel Distance (mi)	1625	1606	1622	1604	1586	1609
Travel Time (hr)	89.3	94.9	88.7	88.4	87.4	89.7
Total Delay (hr)	27.0	33.4	26.7	27.1	26.9	28.2
Total Stops	3427	3546	3513	3388	3353	3447
Fuel Used (gal)	63.6	64.7	63.6	63.7	62.4	63.6

1: St. John Street & Margaritas Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.0	0.0
Total Del/Veh (s)	73.4	21.1	4.7	9.7
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

3: St. John Street & Garage Access/D St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	18.0	5.8	8.8	7.1	7.8
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

5: Valley & St. John Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	2.9	0.0	2.7	0.5
Total Del/Veh (s)	5.5	9.4	6.5	5.0	6.7
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

7: St. John Street & Congress Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.8	0.6	0.0	0.2	0.5
Total Del/Veh (s)	21.8	34.9	11.8	25.0	24.0
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

13: Fore River Pkwy & Valley Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	1.6	1.1	0.0	1.3
Total Del/Veh (s)	7.1	11.3	7.4	8.3
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

16: Congress Street & Valley Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.2	0.1	0.1
Total Del/Veh (s)	4.3	25.7	14.0	12.2
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	29.5
Denied Entry Before	0
Denied Entry After	0

Intersection: 1: St. John Street & Margaritas

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	149	28	182	44
Average Queue (ft)	53	3	65	5
95th Queue (ft)	126	17	151	26
Link Distance (ft)	228		678	670
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		150		
Storage Blk Time (%)	3			
Queuing Penalty (veh)	0			

Intersection: 3: St. John Street & Garage Access/D St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	48	22	35	118	85	30	213	168
Average Queue (ft)	12	3	10	61	8	7	37	87
95th Queue (ft)	37	15	33	105	42	27	117	149
Link Distance (ft)	459		195		1603		678	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120		100		75		150
Storage Blk Time (%)				1			0	1
Queuing Penalty (veh)				2			2	1

Intersection: 5: Valley & St. John Street

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	LT	TR
Maximum Queue (ft)	46	70	92	56	161	91	32	29
Average Queue (ft)	12	34	38	16	72	21	3	6
95th Queue (ft)	37	61	73	44	137	59	17	25
Link Distance (ft)	1603			536	264	264	594	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	335					265
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 7: St. John Street & Congress Street

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	R	T	TR	L	T
Maximum Queue (ft)	179	338	310	104	210	46	76	97	356
Average Queue (ft)	60	165	132	89	97	13	24	21	199
95th Queue (ft)	124	276	241	119	222	36	57	64	323
Link Distance (ft)	1767	1767			188	670		1418	1418
Upstream Blk Time (%)					10				
Queuing Penalty (veh)					25				
Storage Bay Dist (ft)			290	80			175		
Storage Blk Time (%)		1	0	33	0				
Queuing Penalty (veh)		3	0	19	0				

Intersection: 13: Fore River Pkwy & Valley

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	150	120	98	69	174	104	70	72	53	78
Average Queue (ft)	78	53	37	31	79	29	32	28	25	26
95th Queue (ft)	128	93	79	64	137	79	60	59	46	54
Link Distance (ft)			724	724	662	662		264	264	264
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	430	430					415			
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 16: Congress Street & Valley

Movement	EB	EB	WB	WB	NB	NB
Directions Served	L	TR	L	TR	LT	R
Maximum Queue (ft)	24	167	26	267	72	66
Average Queue (ft)	1	52	3	117	22	23
95th Queue (ft)	12	129	17	237	56	55
Link Distance (ft)		188	839	839	494	494
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)	50					
Storage Blk Time (%)		9				
Queuing Penalty (veh)		0				

Network Summary

Network wide Queuing Penalty: 54

Intersection: 3: St. John Street & Garage Access/D St

Phase	2	4	5	6	8
Movement(s) Served	NBTL	EBTL	NBL	SBTL	WBTL
Maximum Green (s)	45.0	5.0	6.5	34.0	5.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	39.8	5.2	6.2	19.3	5.2
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	38	84	43	10	84
Cycles @ Minimum (%)	0	16	13	2	16
Cycles Maxed Out (%)	19	16	33	18	16
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Valley & St. John Street

Phase	2	3	4	6	8
Movement(s) Served	NBTL	WBL	EBTL	SBTL	WBT
Maximum Green (s)	19.0	8.0	18.0	19.0	31.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	11.5	6.8	7.2	11.5	9.6
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	17	64	57	17	35
Cycles @ Minimum (%)	4	0	9	4	5
Cycles Maxed Out (%)	11	10	0	11	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 7: St. John Street & Congress Street

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBL	SBL	NBT	WBL	EBTL	EBL	SBT
Maximum Green (s)	12.5	15.5	3.7	25.5	5.5	22.5	4.5	26.0
Minimum Green (s)	8.0	8.0	3.0	8.0	5.0	8.0	1.0	5.0
Recall	None	C-Min	None	None	None	C-Min	None	None
Avg. Green (s)	10.0	24.9	9.4	27.0	5.8	28.9	0.0	31.4
g/C Ratio	-0.01	NA	-0.01	-0.01	-0.01	NA	-0.01	NA
Cycles Skipped (%)	24	0	55	7	18	0	100	0
Cycles @ Minimum (%)	36	0	0	0	20	0	0	0
Cycles Maxed Out (%)	10	100	36	35	55	100	0	39
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA
Number of Complete Cycles : 0

Intersection: 13: Fore River Pkwy & Valley

Phase	4	6	7	8
Movement(s) Served	EBT	SBL	EBL	WBT
Maximum Green (s)	37.0	13.0	17.0	15.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	None	None	None
Avg. Green (s)	27.0	7.8	11.4	10.0
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	19	33	13	22
Cycles @ Minimum (%)	0	12	0	0
Cycles Maxed Out (%)	15	7	17	11
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): NA
Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	5487	5508	5577	5489	5534	5520
Vehs Exited	5460	5467	5548	5471	5496	5489
Starting Vehs	143	118	134	151	123	132
Ending Vehs	170	159	163	169	161	162
Denied Entry Before	2	4	2	0	1	0
Denied Entry After	4	5	1	2	1	2
Travel Distance (mi)	2802	2784	2836	2826	2811	2812
Travel Time (hr)	160.3	159.6	165.1	163.9	161.7	162.1
Total Delay (hr)	56.4	56.3	59.7	59.2	57.3	57.8
Total Stops	6743	6836	7014	6970	6851	6880
Fuel Used (gal)	109.9	110.4	111.8	110.9	110.8	110.8

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	5487	5508	5577	5489	5534	5520
Vehs Exited	5460	5467	5548	5471	5496	5489
Starting Vehs	143	118	134	151	123	132
Ending Vehs	170	159	163	169	161	162
Denied Entry Before	2	4	2	0	1	0
Denied Entry After	4	5	1	2	1	2
Travel Distance (mi)	2802	2784	2836	2826	2811	2812
Travel Time (hr)	160.3	159.6	165.1	163.9	161.7	162.1
Total Delay (hr)	56.4	56.3	59.7	59.2	57.3	57.8
Total Stops	6743	6836	7014	6970	6851	6880
Fuel Used (gal)	109.9	110.4	111.8	110.9	110.8	110.8

1: St. John Street & Margaritas Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	1.1	0.0	0.0	0.2
Total Del/Veh (s)	15.8	2.1	2.2	4.3
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

3: St. John Street & Garage Access/D St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.5	0.1	0.0	0.1	0.6
Total Del/Veh (s)	10.0	3.6	8.8	10.3	9.8
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

5: Valley & St. John Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.0	0.0	2.9	1.1
Total Del/Veh (s)	13.0	20.1	13.5	16.9	15.5
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	1	0	0	1

7: St. John Street & Congress Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.3	0.2	0.3
Total Del/Veh (s)	33.4	23.2	22.5	22.1	26.9
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

13: Fore River Pkwy & Valley Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	1.1	0.5	0.0	0.6
Total Del/Veh (s)	19.4	27.0	13.2	20.0
Denied Entry Before	0	0	0	0
Denied Entry After	1	0	0	1

16: Congress Street & Valley Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.3	0.2	0.1
Total Del/Veh (s)	7.4	18.3	24.7	13.1
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	35.9
Denied Entry Before	0
Denied Entry After	2

Intersection: 1: St. John Street & Margaritas

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	141	77	101	19
Average Queue (ft)	61	27	16	1
95th Queue (ft)	111	57	65	9
Link Distance (ft)	601		678	670
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		
Storage Blk Time (%)	1	0		
Queuing Penalty (veh)	0	0		

Intersection: 3: St. John Street & Garage Access/D St

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	153	92	50	37	107	85	214
Average Queue (ft)	77	38	14	9	42	11	107
95th Queue (ft)	125	71	41	29	89	45	178
Link Distance (ft)	470		195		1603		678
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150		100		75	
Storage Blk Time (%)	0				0		12
Queuing Penalty (veh)	0				0		2

Intersection: 5: Valley & St. John Street

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	LT	TR
Maximum Queue (ft)	217	135	291	129	129	220	72	81
Average Queue (ft)	61	96	164	26	58	103	24	35
95th Queue (ft)	149	142	254	86	108	191	60	69
Link Distance (ft)	1603			536	264	264	594	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	335					265
Storage Blk Time (%)	0	4	0					
Queuing Penalty (veh)	0	4	0					

Intersection: 7: St. John Street & Congress Street

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	R	T	TR	L	T
Maximum Queue (ft)	342	595	315	105	201	286	200	116	193
Average Queue (ft)	161	291	128	75	117	147	134	51	99
95th Queue (ft)	276	504	331	124	193	240	206	98	168
Link Distance (ft)	1783	1783			188	670		1418	1418
Upstream Blk Time (%)					1				
Queuing Penalty (veh)					5				
Storage Bay Dist (ft)			290	80			175		
Storage Blk Time (%)		13	0	10	15	2	2		
Queuing Penalty (veh)		22	0	23	14	11	6		

Intersection: 13: Fore River Pkwy & Valley

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	300	342	200	180	369	331	65	154	146	167
Average Queue (ft)	98	184	69	63	227	182	27	70	91	97
95th Queue (ft)	238	310	160	142	323	277	56	122	135	149
Link Distance (ft)			1329	1329	662	662		264	264	264
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	430	430					415			
Storage Blk Time (%)	0	1	0							
Queuing Penalty (veh)	0	2	1							

Intersection: 16: Congress Street & Valley

Movement	EB	EB	WB	WB	NB	NB
Directions Served	L	TR	L	TR	LT	R
Maximum Queue (ft)	64	206	68	273	123	81
Average Queue (ft)	8	126	20	129	57	34
95th Queue (ft)	36	210	53	228	109	63
Link Distance (ft)		188	839	839	494	494
Upstream Blk Time (%)		1				
Queuing Penalty (veh)		6				
Storage Bay Dist (ft)	50					
Storage Blk Time (%)	0	21				
Queuing Penalty (veh)	0	3				

Network Summary

Network wide Queuing Penalty: 100

Intersection: 3: St. John Street & Garage Access/D St

Phase	2	4	5	6	8
Movement(s) Served	NBTL	EBTL	NBL	SBTL	WBTL
Maximum Green (s)	31.0	19.0	5.5	21.0	19.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	14.4	10.8	6.5	13.6	10.8
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	7	12	93	8	12
Cycles @ Minimum (%)	2	3	0	2	3
Cycles Maxed Out (%)	2	10	6	20	10
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Valley & St. John Street

Phase	2	3	4	6	8
Movement(s) Served	NBTL	WBL	EBTL	SBTL	WBT
Maximum Green (s)	18.0	19.0	18.0	18.0	42.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	14.1	16.5	13.2	14.1	34.7
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	9	3	9	9	6
Cycles @ Minimum (%)	0	0	2	0	0
Cycles Maxed Out (%)	35	55	29	35	22
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 7: St. John Street & Congress Street

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBL	SBL	NBT	WBL	EBTL	EBL	SBT
Maximum Green (s)	11.5	15.5	3.7	26.5	4.5	22.5	4.5	27.0
Minimum Green (s)	8.0	8.0	3.0	8.0	4.5	8.0	1.0	5.0
Recall	None	C-Min	None	None	None	C-Min	None	None
Avg. Green (s)	12.7	16.1	4.1	26.5	4.6	26.1	4.8	34.9
g/C Ratio	-0.01	NA	-0.01	NA	-0.01	NA	-0.01	NA
Cycles Skipped (%)	2	0	16	0	20	0	93	0
Cycles @ Minimum (%)	4	2	0	0	80	0	0	0
Cycles Maxed Out (%)	78	100	80	66	80	100	7	66
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 13: Fore River Pkwy & Valley

Phase	4	6	7	8
Movement(s) Served	EBT	SBL	EBL	WBT
Maximum Green (s)	44.0	16.0	18.0	21.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	None	None	None
Avg. Green (s)	43.3	15.3	17.2	21.1
g/C Ratio	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	71	79	75	92
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	5567	5589	5637	5499	5533	5568
Vehs Exited	5530	5554	5609	5471	5484	5529
Starting Vehs	132	139	140	149	115	134
Ending Vehs	169	174	168	177	164	170
Denied Entry Before	2	1	1	1	0	0
Denied Entry After	1	1	0	2	1	0
Travel Distance (mi)	2854	2850	2884	2806	2803	2840
Travel Time (hr)	179.1	162.4	168.7	163.6	160.0	166.8
Total Delay (hr)	73.0	56.3	61.5	59.7	56.0	61.3
Total Stops	7525	6739	7126	6949	6707	7008
Fuel Used (gal)	116.0	111.9	113.5	110.6	109.7	112.4

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	5567	5589	5637	5499	5533	5568
Vehs Exited	5530	5554	5609	5471	5484	5529
Starting Vehs	132	139	140	149	115	134
Ending Vehs	169	174	168	177	164	170
Denied Entry Before	2	1	1	1	0	0
Denied Entry After	1	1	0	2	1	0
Travel Distance (mi)	2854	2850	2884	2806	2803	2840
Travel Time (hr)	179.1	162.4	168.7	163.6	160.0	166.8
Total Delay (hr)	73.0	56.3	61.5	59.7	56.0	61.3
Total Stops	7525	6739	7126	6949	6707	7008
Fuel Used (gal)	116.0	111.9	113.5	110.6	109.7	112.4

1: St. John Street & Margaritas Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	1.1	0.0	0.0	0.2
Total Del/Veh (s)	17.1	2.4	2.2	4.6
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

3: St. John Street & Garage Access/D St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.5	0.1	0.0	0.2	0.6
Total Del/Veh (s)	9.3	3.6	8.8	10.1	9.4
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

5: Valley & St. John Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.0	0.0	2.9	1.1
Total Del/Veh (s)	14.0	25.4	15.5	17.4	18.1
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

7: St. John Street & Congress Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.3	0.2	0.3
Total Del/Veh (s)	31.1	23.2	22.8	23.3	26.2
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

13: Fore River Pkwy & Valley Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	1.1	0.5	0.0	0.6
Total Del/Veh (s)	27.0	25.7	12.9	22.3
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

16: Congress Street & Valley Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.3	0.1	0.1
Total Del/Veh (s)	7.5	18.5	24.6	13.2
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	37.8
Denied Entry Before	0
Denied Entry After	0

Intersection: 1: St. John Street & Margaritas

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	158	83	122	11
Average Queue (ft)	64	25	19	0
95th Queue (ft)	118	58	84	6
Link Distance (ft)	601		678	670
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		
Storage Blk Time (%)	2	0		
Queuing Penalty (veh)	1	0		

Intersection: 3: St. John Street & Garage Access/D St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	161	124	39	33	143	58	225	145
Average Queue (ft)	73	30	12	9	47	11	104	21
95th Queue (ft)	127	72	37	29	101	45	178	71
Link Distance (ft)	483		195		1604		678	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150		100		75		150
Storage Blk Time (%)	0	0			1		11	0
Queuing Penalty (veh)	0	0			0		7	0

Intersection: 5: Valley & St. John Street

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	LT	TR
Maximum Queue (ft)	234	135	338	338	149	217	74	88
Average Queue (ft)	58	97	182	48	63	111	25	40
95th Queue (ft)	141	147	304	231	121	207	58	74
Link Distance (ft)	1604			536	264	264	594	
Upstream Blk Time (%)				0		0		
Queuing Penalty (veh)				0		0		
Storage Bay Dist (ft)		110	335					265
Storage Blk Time (%)	0	6	3					
Queuing Penalty (veh)	1	5	3					

Intersection: 7: St. John Street & Congress Street

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	R	T	TR	L	T
Maximum Queue (ft)	353	515	315	105	205	314	200	134	233
Average Queue (ft)	166	271	107	76	112	150	136	50	100
95th Queue (ft)	299	461	290	126	196	240	204	103	177
Link Distance (ft)	1767	1767			188	670		1418	1418
Upstream Blk Time (%)					2				
Queuing Penalty (veh)					7				
Storage Bay Dist (ft)			290	80			175		
Storage Blk Time (%)		9	0	12	14	2	1		
Queuing Penalty (veh)		15	0	27	13	11	4		

Intersection: 13: Fore River Pkwy & Valley

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	316	342	310	287	326	308	78	141	162	191
Average Queue (ft)	164	228	127	99	214	174	25	73	91	99
95th Queue (ft)	402	435	405	307	297	265	59	124	141	156
Link Distance (ft)			1329	1329	662	662		264	264	264
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	430	430					415			
Storage Blk Time (%)	1	6	0			0				
Queuing Penalty (veh)	3	18	2			0				

Intersection: 16: Congress Street & Valley

Movement	EB	EB	WB	WB	NB	NB
Directions Served	L	TR	L	TR	LT	R
Maximum Queue (ft)	44	206	83	299	150	71
Average Queue (ft)	6	122	22	132	59	34
95th Queue (ft)	26	218	59	242	113	57
Link Distance (ft)		188	839	839	494	494
Upstream Blk Time (%)		1				
Queuing Penalty (veh)		7				
Storage Bay Dist (ft)	50					
Storage Blk Time (%)		21				
Queuing Penalty (veh)		3				

Network Summary

Network wide Queuing Penalty: 129

Intersection: 3: St. John Street & Garage Access/D St

Phase	2	4	5	6	8
Movement(s) Served	NBTL	EBTL	NBL	SBTL	WBTL
Maximum Green (s)	31.0	19.0	5.5	21.0	19.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	13.8	11.2	6.0	13.1	11.2
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	8	12	93	9	12
Cycles @ Minimum (%)	3	4	0	2	4
Cycles Maxed Out (%)	2	14	5	15	14
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Valley & St. John Street

Phase	2	3	4	6	8
Movement(s) Served	NBTL	WBL	EBTL	SBTL	WBT
Maximum Green (s)	18.0	19.0	18.0	18.0	42.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None
Avg. Green (s)	14.4	16.9	13.7	14.4	34.3
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	3	3	10	3	3
Cycles @ Minimum (%)	0	0	0	0	0
Cycles Maxed Out (%)	43	60	35	43	25
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 7: St. John Street & Congress Street

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBL	SBL	NBT	WBL	EBTL	EBL	SBT
Maximum Green (s)	11.5	15.5	3.7	26.5	4.5	22.5	4.5	27.0
Minimum Green (s)	8.0	8.0	3.0	8.0	4.5	8.0	1.0	5.0
Recall	None	C-Min	None	None	None	C-Min	None	None
Avg. Green (s)	12.4	16.3	4.0	26.4	4.6	25.8	5.4	34.9
g/C Ratio	-0.01	NA	-0.01	NA	-0.01	NA	-0.01	NA
Cycles Skipped (%)	2	0	14	0	18	0	93	0
Cycles @ Minimum (%)	4	0	0	0	82	0	0	0
Cycles Maxed Out (%)	76	100	84	70	80	100	7	70
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 13: Fore River Pkwy & Valley

Phase	4	6	7	8
Movement(s) Served	EBT	SBL	EBL	WBT
Maximum Green (s)	44.0	16.0	18.0	21.0
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	None	None	None	None
Avg. Green (s)	43.0	15.4	17.3	21.0
g/C Ratio	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	73	83	81	92
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Figure 1 – MMC Employee Parking Garage | Inbound Shuttle Routes, June 22, 2018
Garage to Hospital

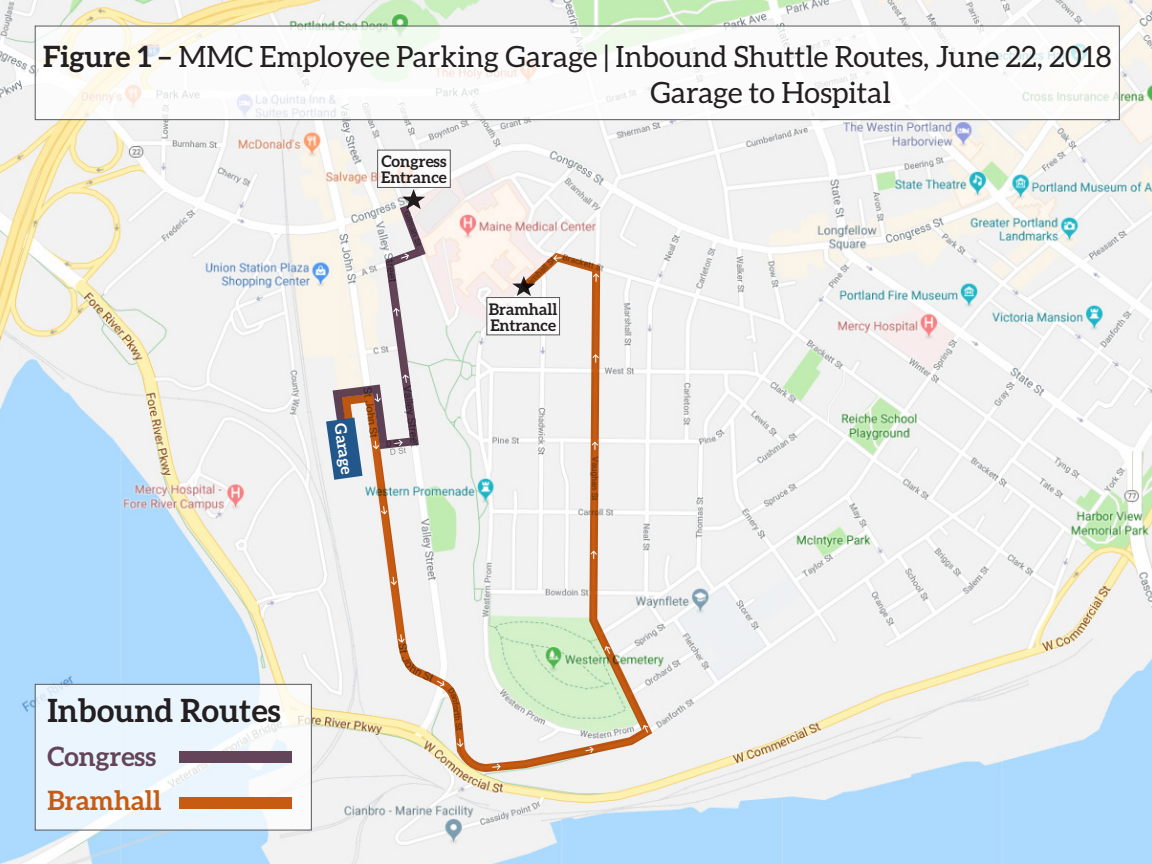


Figure 2 – MMC Employee Parking Garage | Outbound Shuttle Routes, June 22, 2018
Hospital to Garage

Maine Medical Center
MaineHealth

Feasibility Analysis

Connecting the St John Garage to Fore River Parkway

June 22, 2018

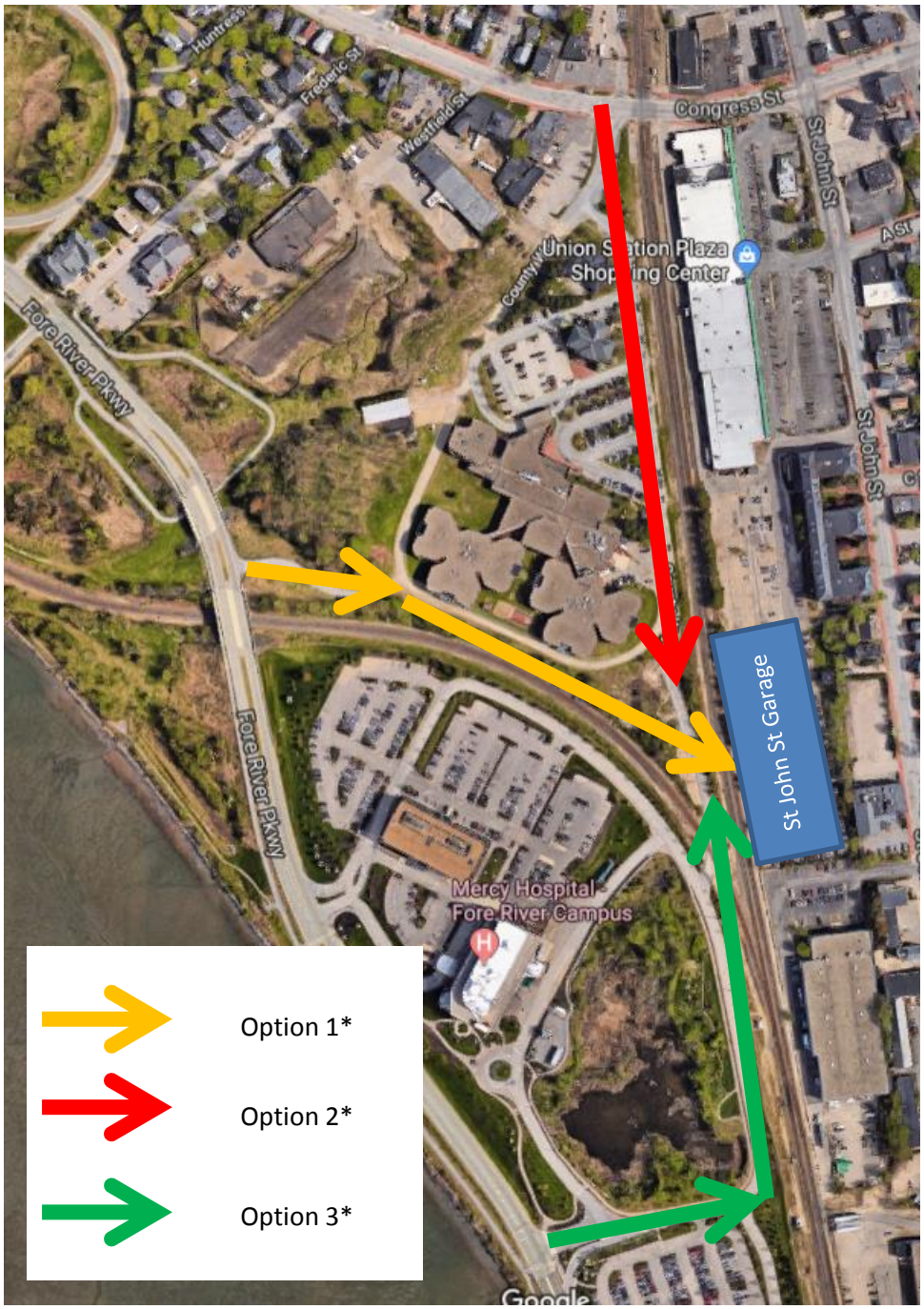
(Revised August 1, 2018)

Executive Summary

Maine Medical Center is proposing to locate a 2,450 space parking garage on St John St near 222 St John St – the old railroad administration building. The primary access point to the proposed garage is on St John St near the intersection of St John St and D St. A secondary access point to the proposed garage is on St John St at the north end of the building located at 222 St John St.

The purpose of this document is to explore future access possibilities to the proposed St John garage from Fore River Parkway. This document analyzes the feasibility of such an access route and the pros and cons of access options identified by the City of Portland.

The options identified by the City of Portland are illustrated in the image below.



*Option 4 is a variation of the options shown above.
Source: Good Earth; City Of Portland

As described in detail below, none of the options are feasible within the anticipated construction schedule proposed by MMC in its Site Plan application.

Objectives:

The objectives of a connection between the St John garage and the Fore River Pkwy include:

1. Utilize existing infrastructure, easements, and rights of way to the extent possible.
2. Decrease vehicular traffic on Congress St.
3. Increase vehicular traffic on Fore River Pkwy.

Assumptions:

Assumptions made in this analysis include:

1. A rail crossing is required.
2. The slope of proposed ramps will be within industry standards for safe vehicular travel.
3. Any access option will meet applicable City of Portland technical standards.

Key Factors:

Key factors considered in this analysis include:

1. Existing and required easements.
2. Length of time required for all stakeholders to align around proposed design of access route. Stakeholders include rail operator, property owners and abutters, neighborhood associations, City of Portland and MMC.
3. Cost of ramps and infrastructure.
4. Minimum clearance over the rail is 23’-0” resulting in a bridge deck level of approximately 27’-0” above adjacent grade.
5. Vehicular access into the garage can be accommodated along the West elevation of the garage at grade and level 2.
6. The parking decks are predominately flat and there are opportunities to re-route internal traffic to accommodate additional access points.
7. Additional garage access will reduce the number of parking spaces available within the garage.
8. Ramping is designed to provide the most efficient vertical circulation from the St. John St. access. We will not be able to modify the ramps in the future, only the traffic patterns to accommodate an additional access point. This could lower the level of service in the garage.

Option Summary

The following table provides a snapshot assessment of each option considering the objectives and three key factors. A significant cost and time to implement is assumed with each option. Costs would include the roadway and ramps associated with the rail crossing. Time for stakeholders to agree and approve a design is anticipated to exceed 18 months.

	Option 1: Access behind the Jail	Option 2: County Way	Option 3: Mercy Circle Drive	Option 4: Surface Crossing
Cost				
Time to Implement				
Vehicle Safety				
Utilization of existing infrastructure / easments				
Decrease vehicular traffic on Congress St				Depends on Access Route
Increase vehicular traffic on Fore River Pkwy				Depends on Access Route

Option 2 and Option 3, whether bridge or surface crossing, would provide an opportunity to create a pedestrian route to Fore River Parkway from the St John garage.

Option 1: Access Behind the Jail

Constructing a bridge crossing that spans two-railroad tracks and a new roadway alongside and south of the jail provides access from the Fore River Parkway to the garage at a new intersection between two existing bridges on the parkway. While this option provides direct, fully segregated access for garage traffic between the parkway and the garage, there is insufficient room between the jail building and the spur track right-of-way (approximately 40' from building to right-of-way, estimated). The space is too narrow to accommodate a two-lane roadway, walkway, drainage, and infrastructure such as a retaining wall, while still providing a reasonable buffer from the jail building. Other complicating factors in this option include the limited room / limited sight lines at the proposed intersection location on Fore River Parkway, as this intersection would be located between two width-limited bridge structures. This option would require purchase of land or easements from various property owners and negotiating a railroad bridge crossing with the railway.

This option is not feasible due to the limited width of land between the railroad and the jail.

Option 2: County Way

Constructing a bridge crossing that spans two-railroad tracks and reconstructing two roadway sections alongside and east / north of the jail (Ogdensburg Street to County Way) provides access from Congress Street to the garage. This option relies on sharing municipal roadways that are currently fully dedicated to serving the needs of the Cumberland County jail; analysis would be needed on whether additional traffic has adverse impacts on the jail operations and emergency response vehicles. This option does not decrease traffic on Congress St or increase traffic on Fore River Pkwy. County Way and Congress St is an unsignalized intersection; signalizing this intersection is complicated due to the proximity of the intersection to the rail crossing. Individuals seeking entrance to I-295 would have a circuitous route given the one-way on Congress St. Traffic that leaves the garage over the railroad tracks would need to cross those same tracks at an existing surface crossing on Congress Street. This option would require negotiating a railroad bridge crossing from the railway and coordination with the County jail, including possible easements.

This option does not meet two of the objectives of decreasing vehicular traffic on Congress Street while increasing utilization of the Fore River Parkway and is therefore not considered to be a viable option for further consideration.

Option 3: Mercy Circle Drive

Constructing a long bridge across three-railroad tracks and the Mercy hospital roadway provides access from the Fore River Parkway to the garage by way of the existing Mercy Hospital roadway system. This option maximizes the use of existing, built infrastructure on the Mercy Hospital campus, including the existing signalized intersection on the Fore River Parkway. The ramp system that provides access between the Mercy Hospital roadway and the garage bridge would likely require filling of wetland areas and impacts to the previously developed Mercy Hospital Master Plan submitted to the City prior to the Fore River Campus construction. This option would require purchase of land or easements from various property owners, including Mercy Hospital, and negotiating a railroad bridge crossing with the railway.

This option meets the objectives of utilizing existing infrastructure, easements, and rights of way to the extent possible; decreasing vehicular traffic on Congress Street; and, increasing utilization of the Fore River Parkway. However, this option negatively impacts the development possibilities on the Mercy Hospital Fore River Campus.

Option 4: Surface Crossing

Use of a surface rail crossing is a potential that was explored early in this feasibility analysis. A surface rail crossing is not the recommended solution for accessing the garage from the Fore River Parkway. Section 8A.05 of the Manual on Uniform Traffic Control Devices (MUTCD) states:

> *"Because grade crossings are a potential source of crashes and congestion, agencies should conduct engineering studies to determine the cost and benefits of eliminating these crossings."*

This suggests that existing surface crossings should be evaluated for elimination and suggests new surface crossings should be avoided.

Of the three options considered above, Option 3 is most worthy of further consideration. A surface crossing utilizing the Mercy Circle drive would intersect three rail lines: two parallel lines and one spur line. This would require a very long surface crossing with a space in the center (between the main rail lines and the spur line) where vehicles could get stranded. In addition, the turn onto/off of the Mercy connector roadway is immediately adjacent to the surface crossing across the spur line, leaving an awkward alignment when approaching the crossing and potentially leading to blocked through-traffic on the Mercy roadway as arriving vehicles wait for the gate/signal at the garage entry crossing.

Safety concerns relate to specific scenarios in which cars would be inadvertently stopped on the tracks or crossing the tracks without proper sight lines. With three rail lines at one crossing, a stopped train located adjacent to the crossing on any one track results in a restricted sight line and may result in drivers assuming that the signal is caused by the stopped train, when another approaching trail is visibly blocked by the adjacent stopped trail. Any issues for a vehicle entering the garage in the AM peak (i.e. - garage gate issue, ez-pass system issue, stalled vehicle, accident) will result in trailing cars being temporarily stopped across the tracks.

A surface crossing adjacent to the St John St garage would create queuing of traffic either back into the garage or back onto the street should a train coincide with the AM or PM peak hours of the garage. Additional queuing would degrade the user satisfaction and may result in lower utilization of the garage.

For these reasons, a surface crossing is not recommended.

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DRAWN BY: BGM
CHECKED BY: DAS
ALTERNATE FIGURES.dwg

ACCESS BEHIND JAIL

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MM ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 2018
SCALE: 1" = 60'
SHEET: 1 OF 3

OPT. 1

24x36 SHEET
1:1

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DRAWN BY: SKM	ALTERNATE FIGURES.dwg	

COUNTY WAY

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MM ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUN E 2018
SCALE: 1" = 60'
SHEET: 2 OF 3

OPT. 2

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MERCY CIRCLE DRIVE

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MM ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 2018
SCALE: 1" = 60'
SHEET: 3 OF 3

OPT. 3

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GORRILL PALMER

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

Parking Inventory & Occupancy Assessment
222 St. John Street
Portland, Maine

Date: July 18, 2018
Subject: Parking Inventory & Occupancy Assessment
222 St. John Street, Portland, Maine
To: Al Green, MMC
From: Randy Dunton, Gorrill Palmer

The following is a parking inventory & occupancy assessment for parking areas associated with 222 St. John Street, Portland, Maine. The parking lots included in this study have been labeled A-E and are shown on the attached plan. The parking occupancy counts for the five areas were completed on Tuesday, July 18, 2018 at 9:00 AM, 11:00 AM, 2:00 PM, 4:00 PM, and 7:00 PM. A full inventory of parking spaces by category was previously completed and used in this assessment. A summary of the parking occupancy and inventory results is described in more detail as follows:

Daily Parking Occupancy Distribution:

The attached spreadsheet summarizes the results of the assessment and provides the following for each of the areas for each time period throughout the day:

- Occupied Spaces
- Number of total spaces
- Parking Rate expressed in percent of spaces occupied
- Unoccupied Spaces

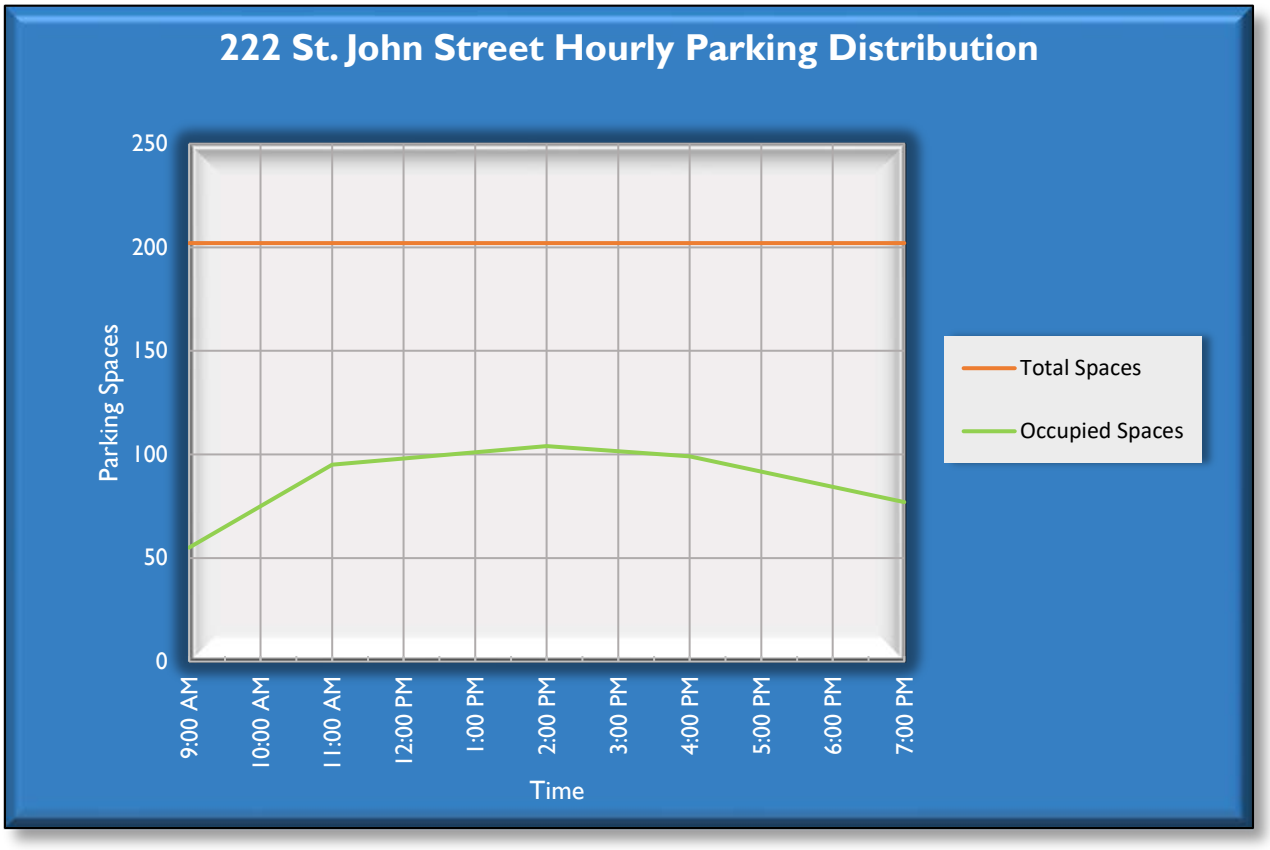
The spreadsheet highlights both the individual peak parking demand times as well as the overall peak parking demand for each parking area. As highlighted in the spreadsheet, the overall peak parking demand occurred at 2:00 PM with a 51.5% occupancy.

Typically, when parking area demand reaches approximately 85%, it is reaching practical capacity. This means that drivers are starting to drive up and down aisles seeking the last remaining available spaces, and then may require significant walking to get to their destination.

Overall, the parking areas are well below capacity for standard parking spaces or handicap accessible spaces. Areas 'D' and 'E', the two areas on the other side of St. John Street, appear to be the most utilized during the business day, while area 'A' nearest Margaritas is the busiest after business hours, as would be expected. This off set of peak parking demands could be an opportunity for shared parking.

Area C contains three parking spaces which are reserved for a separate building labeled "Building X" on the signs. All three reserved spaces were occupied during the 9:00 AM and 11:00 AM counts, so additional reserved parking spaces may be required to accommodate the parking for this building.

The following graph shows the parking demand distribution throughout the day for the five parking areas combined.

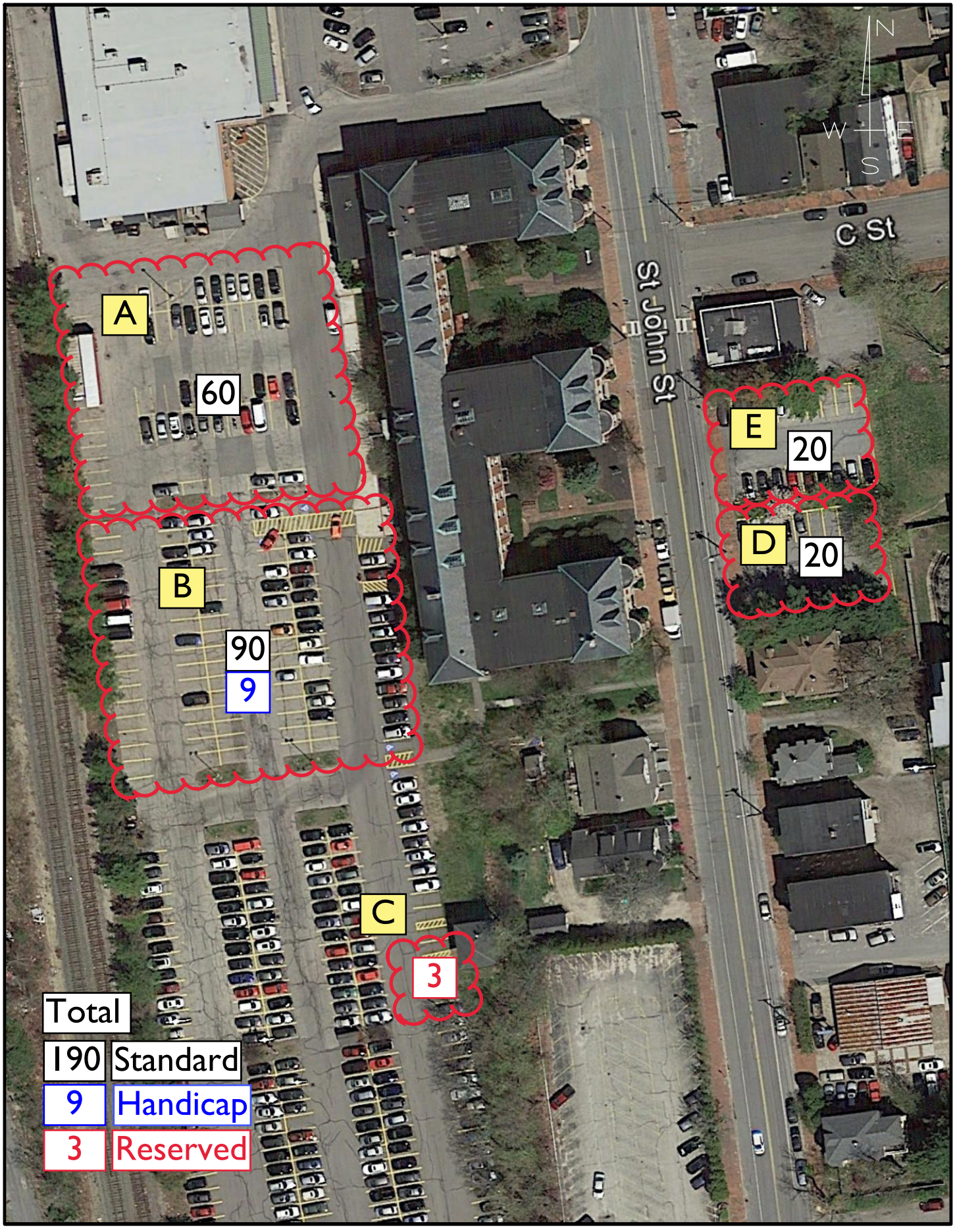


As the graph shows, the peak parking demand occurs at approximately 2 PM but is still well below capacity.

Conclusion:

Based on this assessment, it appears that the observed parking areas are well below capacity for standard parking spaces and handicap accessible spaces. The parking areas on the opposite side of St. John Street are nearest to reaching capacity during business hours while the area nearest Margaritas is the highest after business hours. Area C contains three parking spaces which are reserved for a separate building labeled "Building X" on the signs. All three reserved spaces were occupied during the 9:00 AM and 11:00 AM counts, so additional reserved parking spaces may be required to accommodate the parking for this building.

222 St. John Street Parking Assessment



Tuesday, July 17, 2018

222 St. John Street Parking Study

		Count Time				
		9:00 AM	**11:00 AM**	**2:00 PM**	**4:00 PM**	**7:00 PM**
A	Occupied Standard Spaces	5	16	19	25	45
	Standard Spaces	60	60	60	60	60
	Standard Parking Rate	8.3%	26.7%	31.7%	41.7%	75.0%
	Unoccupied Standard Spaces	55	44	41	35	15
B	Occupied Standard Spaces	26	47	50	51	15
	Standard Spaces	90	90	90	90	90
	Standard Parking Rate	28.9%	52.2%	55.6%	56.7%	16.7%
	Unoccupied Standard Spaces	64	43	40	39	75
	Occupied Handicap Spaces	2	2	3	2	1
	Handicap Spaces	9	9	9	9	9
	Handcap Parking Rate	22.2%	22.2%	33.3%	22.2%	11.1%
	Unoccupied Handicap Spaces	7	7	6	7	8
C	Occupied Reserved Spaces	3	3	2	1	1
	Reserved Spaces	3	3	3	3	3
	Reserved Parking Rate	100.0%	100.0%	66.7%	33.3%	33.3%
	Unoccupied Reserved Spaces	0	0	1	2	2
D	Occupied Standard Spaces	8	12	14	6	6
	Standard Spaces	20	20	20	20	20
	Standard Parking Rate	40.0%	60.0%	70.0%	30.0%	30.0%
	Unoccupied Standard Spaces	12	8	6	14	14
E	Occupied Standard Spaces	11	15	16	14	9
	Standard Spaces	20	20	20	20	20
	Standard Parking Rate	55.0%	75.0%	80.0%	70.0%	45.0%
	Unoccupied Standard Spaces	9	5	4	6	11
Total	**Occupied Spaces**	**55**	**95**	**104**	**99**	**77**
	Spaces	**202**	**202**	**202**	**202**	**202**
	Parking Rate	**27.2%**	**47.0%**	**51.5%**	**49.0%**	**38.1%**
	Unoccupied Spaces	**147**	**107**	**98**	**103**	**125**

Maine Medical Center
MaineHealth

centered around you

Get on Board!

Maine Medical Center

Transportation Demand Management Program
August 22, 2018

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Introduction

Purpose

The purpose of Maine Medical Center's Transportation Demand Management program, Get on Board, is to reduce the amount of single-occupancy vehicles by enabling and promoting alternative modes of transportation to and from MMC's Bramhall Campus for MMC employees.

Maine Medical Center

Maine Medical Center is a complete health care resource for the people of greater Portland, the entire state of Maine, and northern New England.

Incorporated in 1868, Maine Medical Center is the state's largest medical center, licensed for 637 beds and employing more than 8,000 people – with approximately 2,000 of those employees residing in the City of Portland. Maine Medical Center's unique role as both a community hospital and a referral center requires an unparalleled depth and breadth of services, including the state's only medical school, through a partnership with Tufts University School of Medicine, and a world-class biomedical research center, the Maine Medical Center Research Institute.

Our care model includes the state's largest multispecialty medical group, Maine Medical Partners. Maine Medical Partners provides a wide range of primary, specialty, and subspecialty care delivered through a network of more than 40 locations throughout greater Portland and the southern Maine region.

Maine Medical Center is the flagship hospital of MaineHealth, a 12-member health system touching central, southern, and western Maine and eastern New Hampshire. The collaboration of MaineHealth's members allows greater availability to community health improvement programs, access to clinical trials and research, and shared electronic medical records.

The strength of the health system, anchored by Maine Medical Center, enables its members to invest in shared programs and services that improve the quality of care while reducing costs whenever possible. As a nonprofit institution, Maine Medical Center has provided more than $200 million annually in community benefits, delivering care to those who need it, regardless of their ability to pay.

MISSION, VISION AND VALUES

Maine Medical Center is dedicated to maintaining and improving the health of the communities it serves by:

- Caring for its community
- Educating tomorrow's caregivers
- Researching new ways to provide care

It proudly carries its unique responsibility as Maine's leader in patient care, education and research. MMC is dedicated to the traditions and ideals of not-for-profit healthcare. It provides care to all who seek it.

MMC's efforts to execute its Mission are aimed at achieving a simple, yet powerful Vision: "Working together so our communities are the healthiest in America."

MMC is guided by a set of Values, helping to meet and exceed the expectations of those it is privileged to serve. MMC's Values:

- Patient-Centered
- Integrity
- Ownership
- Excellence
- Respect
- Innovation

MMC Facility Planning

Maine Medical Center recently announced a project that will expand and modernize much of its patient care facilities. Over the next five years Maine Medical Center plans to spend $512 million on the construction, renovation and expansion of inpatient and outpatient facilities and services. The majority of this investment will occur at MMC's main Bramhall campus.

Every aspect of this project is designed around the needs of patients. The project will optimize current bed capacity at, Maine Medical Center, the state's largest hospital and calls for increasing the number of single rooms available to patients as well as replacing surgical and treatment areas with ones that adhere to 21st century standards. In addition, patient rooms will be universal meaning that each rooms can meet the needs of patients at any point during their stay whether they require critical care or acute care services. About $50 million of the total project cost will be invested in outpatient facilities through the hospital's multi-specialty medical group organization - Maine Medical Partners.

The project also involves the replacement of the largest parking garage on campus, a 1,200-space structure used by employees that sits along Congress Street. The need to replace that garage creates an opportunity to reorient the hospital's main entrance to Congress Street, one of the city's main thoroughfares. The hospital's current main entrance faces Bramhall Street in the city's largely residential West End.

The project is organized into three separate site plan descriptions:

- Site Plan #1:
    - Two floor addition to the East Tower housing 64 private universal rooms.
    - Relocation of the helipad which is currently on the employee garage to the top of the East Tower. Patients arriving via the helipad will have a direct vertical connection via elevator to MMC's Emergency Department and trauma services on the first floor of the East Tower.
    - Three floor addition to the visitor garage on Congress St.
- Site Plan #2:
    - New employee parking garage on St John St that will include over 2,400 parking spaces. The location of the new garage is roughly a quarter mile from the main campus and employees will be encouraged to walk during nice weather.

- Site Plan #3:
    - Removal of the current employee parking garage on Congress St.
    - Construction of a new hospital tower with 64 private universal rooms, 19 procedure rooms, and space for an additional 32 private universal rooms. This building will also include a new hospital entrance and drop-off area with direct connection to the visitor garage.

The project is expected to be completed in the Fall of 2022.

Commitment to TDM

MMC has a long-standing history of promoting health outside of and within its organization. The medical center developed a Transportation Demand Management (TDM) program in 2008, becoming one of the first in Maine to publish such a plan.

In 2008, MMC became one of the first in Maine to develop an independent TDM program.

Known as "Get on Board!," the program supports alternative commuting options such as carpool, public transportation, bicycling, and walking. MMC also engages in an extensive campaign to educate employees about the benefits of alternative modes of transportation and the Get on Board! program. Total enrollment in Get on Board continues to increase year after year.

Over the years, MMC has added elements to strengthen the program's offerings. In 2015, for example, MMC installed additional bicycle parking in its South Parking Lot to enhance cycling access to the main areas of the campus.

The following Plan documents MMC's current TDM efforts, planned program enhancements, as well as new TDM programs. The Plan is intended to serve as a living document. Monitoring reports will be submitted annually to the City's Planning Department.

While MMC encourages sustainable commuting practices across its organization, this TDM Plan applies to MMC's main campus in the west end of Portland, ME, where the majority of MMC's staff is located. Presently, the main campus has approximately 4,400 employed individuals on any given week day. Maine Medical Center employs more than 8,000 people throughout Southern Maine, roughly 6,000 of MMC employees work at the Bramhall Campus.

Contributors to this Plan

MMC would like to thank the City of Portland, the West End, Western Promenade, Libbytown, St John Valley, and Parkside neighborhoods, and Vanasse Hangen Brustlin, Inc. (VHB) for contributing to this Transportation Demand Management Plan.

MMC engaged VHB to assist in the creation of this plan. VHB is a national consulting firm specializing in transportation engineering and a leader in the development and management of Transportation Demand Management plans.

Context

Land Use

CURRENT

MMC's Bramhall campus is located at a high point in the west end of the Portland peninsula that is renowned for the Western Promenade—an 18-acre park and national historic landmark designed by the Olmsted Brothers, among others. The campus abuts the Western Promenade in a dense urban setting that serves, in many ways, as a transitional zone between areas with diverse character, land uses, and demographics.

The campus, which serves the entire state of Maine as well as eastern New Hampshire, is located within less than a mile's distance of I-295, which links Portland to destinations across New England. To the north, the campus fronts on Congress St —Portland's main thoroughfare that extends along the spine of the peninsula to Portland's downtown and beyond. The MMC campus is located at the western gateway into the City.

FUTURE

The area surrounding MMC is identified in the City's Comprehensive Plan as an area with transformational potential. MMC's TDM plan aligns with this future vision. As part of the project, MMC will add a new entrance to Congress Street and envisions providing active ground floor uses in new buildings. This change will heighten the level of pedestrian activity on Congress Street, and serve to promote the corridor.

Parking

CURRENT SUPPLY

MMC offers its patients, visitors, physicians, and employees several options for parking. MMC currently controls approximately 2,877 total off-street parking spaces either via ownership or through leases with others that specifically serve the Bramhall Campus. Of the 2,877 spaces, 850 spaces are available for public use by patients and visitors, and 2,027 parking spaces are subscribed to staff and physicians.

TABLE 1: Existing Parking Spaces

		Patient / Visitor	Employee	Total at Facility	Ownership
ON-CAMPUS	Employee Garage	0	1,274	1,274	Owned
850 patient / visitor	Patient / Visitor Garage	480	0	480	Owned
1,538 employee spaces	South Lot	370	0	370	Owned
	887 Congress (Forest St Garage)*	0	178	178	Owned
	7 Bramhall St	0	26	26	*Leased*
	905 Congress St (Sportsman Lot)	0	60	60	*Leased*
OFF-CAMPUS	222 St John St (First Atlantic Lot)	0	283	283	*Leased*
489 employee spaces	181 High St (Gateway Garage)	0	100	100	*Leased*
	993 Congress St (Classic Lot)	0	97	97	Owned
	321 Brackett St	0	9	9	*Leased*
	TOTAL PARKING SPACES	850 Patient / Visitor	2,027 Employee	2,877 Total	

* The Forest St Garage has an additional 222 spaces that are dedicated to medical office staff and patients.

PARKING DEMAND

MMC has continued to witness intensifying demands on the existing parking supply due to increased patient volumes and higher acuity patients with longer lengths of stay. Under current conditions, MMC's staff parking system typically operates at capacity during the weekday daytime hours. When off-site, remote staff parking facilities reach capacity, staff is directed to park on-campus in the Congress Visitor Garage. Some staff members independently choose to park nearby utilizing neighborhood on-street parking, although this is discouraged by MMC.

Patients, visitors, and staff at MMC often comment on the lack of adequate and predictable parking. MMC parking facilities do not have integrated technologies to accurately report parking utilization. Therefore, current demand was estimated using a combination of observed data and comparisons to facilities similar to MMC's Bramhall Campus.

Observations:

On behalf of MMC, VHB conducted on-site parking usage observations in January and March 2017. These months were ideal for parking observations because of the poor weather resulting in increased parking utilization. VHB collected parking count data during peak hours, which included late afternoon, evening, and overnight occupancy and turnover. Parking observations were completed during weekdays when MMC typically sees its biggest parking challenges – Tuesday – Friday. Historically, the highest patient volumes at MMC are on Thursdays and Fridays according to the MMC team responsible for managing parking. High patient volumes coincide with higher volumes of staff. The counts indicate that the parking system typically operates at or above capacity during weekday daytime hours. During the observations, it was difficult for VHB to differentiate staff from patients and visitors. Therefore, a total demand estimate is provided.

The observed data reveals that parking demand at the Bramhall campus among patients, visitors, physicians, and staff total roughly 3,125. MMC parking facilities have capacity of 2,877. The observed

parking demand is almost 110% of supply. The observed parking demand is 4.4% below the expected parking demand (3,264) for a suburban hospital of MMC's size, according to Institute of Transportation Engineers (ITE) parking demand projections.[1] The difference equates to a shortage of 139 parking spaces.

In addition to VHB's observations, the MMC staff responsible for managing parking has estimated the employee parking deficit to be between 200 and 300 spaces.

Comparison to Peer Group:

VHB compared MMC's parking ratio per licensed bed to other hospitals in New England and nationally. MMC's 850 patient/visitor parking spaces equate to 1.33 parking spaces per bed which is low compared to peers. The midpoint patient and visitor parking space/licensed bed ratio among MMC peers is 1.87. It is important to note that based on a review of peer institutions, MMC would need to increase its patient/visitor allocation by 341 spaces, or 40%, to achieve a similar beds-to-spaces ratio as its peers. MMC's 2,027 staff parking spaces equate to 3.18 parking spaces per bed which is also low when compared to other peer institutions. The midpoint employee parking space/licensed bed ratio among MMC peers is 4.38. MMC has 637 licensed beds.

When compared to peers, MMC has a shortage of 341 patient and visitor parking spaces and 763 staff parking spaces.

$$\begin{aligned} &MMC\ Licensed\ Beds\ (637) * \ Comparison\ Group\ Patient\ \&\ Visitor\ Parking\ Space\ per\ Bed\ (1.87) \\ &\quad = Peer\ Equivalent\ Patient\ \&\ Visitor\ Parking\ Spaces\ (1{,}191) \\ &\quad - MMC\ Patient\ \&\ Visitor\ Parking\ Space\ (850) \\ &\quad = \boldsymbol{Patient\ \&\ Visitor\ Parking\ Space\ Deficit\ at\ MMC\ (341)} \end{aligned}$$

$$\begin{aligned} &MMC\ Licensed\ Beds\ (637) * \ Peer\ Group\ Staff\ Parking\ Spaces\ per\ Bed\ (4.38) \\ &\quad = \ Peer\ Group\ Equivalent\ Staff\ Parking\ Spaces\ (2{,}790) \\ &\quad - MMC\ Staff\ Parking\ Spaces\ (2{,}027) = \boldsymbol{Staff\ Parking\ Space\ Deficit\ at\ MMC\ (763)} \end{aligned}$$

Current Demand:

MMC used the observed and peer group data to determine the estimated parking demand.

Based on data available, the estimated current MMC parking demand exceeds patient and visitor supply by approximately 25 parking spaces and exceeds employee parking supply by approximately 220 parking spaces. Therefore, the estimated parking demand in 2017 is:

2017 Estimated Parking Demand
- 875 for patient and visitor parking ($875 = Current\ Patient\ Visitor\ Parking\ Supply\ (850) + 25$)
- 2,250 for employees ($2{,}250 = \ Current\ Employee\ Parking\ Supply\ (2{,}027) + 220$)
- 3,125 total estimated parking demand

The current parking demand for MMC's Bramhall campus is approximately 3,125 parking spaces.

MMC feels that the appropriate metric to measure parking utilization is parking demand per Bramhall campus employee. This metric is ideal because the number of employees will change over time. Other

[1] This approach is consistent with the City of Portland's Technical Manual, which recommends using ITE for parking demand projections. https://www.portlandmaine.gov/2148/TDM-Parking

metrics such as parking space per bed or parking space per square foot would not accurately account for all factors impacting parking demand on campus. This metric allows for changes in both factors – the number of employees and parking demand. In addition, this metric focuses on MMC employees who are the target population of this transportation demand management plan.

MMC's Bramhall campus has roughly 6,000 employees as of 2017. Therefore the current employee parking demand per Bramhall campus employee is 0.375.

$$\frac{Estimated\ Employee\ Parking\ Demand\ (2{,}250)}{MMC\ Bramhall\ Employees\ (6{,}000)} = Employee\ Parking\ per\ Bramhall\ Employee\ (0.375)$$

FUTURE

Looking towards the future, MMC will undertake a project to modernize its Bramhall campus. The project is detailed above and is anticipated to increase patient/visitor and employee parking demand. This demand will be offset by TDM methods described later in this document, along with expansions in its campus parking capacity.

Data Collection

Currently, MMC has a limited transportation mode data collection system. MMC recognizes the need for an improved system. MMC employs a large number of individuals and tracking their commute behaviors will require a system that relies on automatic data collection wherever possible. MMC is exploring options to improve data collection, such as a card reading system, similar to EZ-PASS, in new parking buildings.

In addition, MMC is exploring various commute management platforms to better understand, manage, and influence employee commute behavior. The commute platforms can help raise awareness for alternative transportation choices, engage (and possibly reward) employees, and provide the data and tools to make informed transportation decisions. Many of the platforms also enable employees to participate in commuting challenges with colleagues (e.g. most cycling trips).

MMC has contacted several commute management companies that are used by employers to explore how commuting platforms can enhance MMC's data collection efforts while potentially rewarding its employees. One Seattle-based commute management provider is currently used by organizations, like Seattle Children's Hospital, Delta Dental of Washington, Boeing, and the Bill and Melinda Gates Foundation. Another provider is located in Santa Monica and is used by companies and institutions, such as Google, Patagonia, the University of Maryland, and MIT. Both platforms are mobile and desktop-friendly and allow employees to easily track their daily commutes, while giving employers the ability to manage commuting programs, data, resources, and rewards in one centralized system. These platforms, among others, will be explored as MMC looks to improve its data collection capabilities.

FIGURE 1: Commute Management Platforms

Commute management platforms offer enhanced opportunities to understand employee commuting behavior and potentially incentivize and reward staff who commute by alternative modes of transportation. Many of these platforms are mobile-friendly and offer easy ways in which to track personal commutes.

Source: Luum

Transit

MMC's main campus is located in a section of the City that is served by the Greater Portland Transit system (METRO), which has multiple routes that stop within walking distance of the Medical Center. The campus is also served by the ZOOM turnpike Express route operated by ShuttleBus-ZOOM.

The METRO routes accessible from the Bramhall Campus have varying service spans with buses generally arriving every 30 to 60 minutes. They provide connections to the nearby Portland Transportation Center (PTC) and the Downtown Hub, which are served by additional METRO and regional bus lines. The PTC also serves as the local connection to Amtrak's Downeaster service that runs along the coast between Boston and Brunswick. The closest bus shelter to the hospital is along Bramhall Street, between the Dana Health Education Center and the South Entrance. This stop is served by METRO Route #8, which provides connections to other parts of the peninsula. There are two other nearby bus stops on the corners of Congress St and Gilman St and Congress St and Weymouth St. These bus stops are served by routes #9, #1, METRO's express service BREEZ, and the ZOOM turnpike express. For the most up to date METRO stops and routes, go to www.gpmetrobus.com.

FIGURE 2: Map of Existing Transit Routes and Stops

Bicycle and Pedestrian Infrastructure

MMC understands that all campus users walk at some point to arrive at their MMC destination. To enhance pedestrian accessibility, MMC maintains its network of campus pathways and public sidewalks adjacent to campus. Similar to other medical centers of its size, MMC provides elevated, covered, and temperature-controlled walkways between its parking garages and key campus circulation corridors.

The bike facility network surrounding MMC's campus is fragmented and lacks bicycle infrastructure as illustrated in Figure 7 below. In addition, the hilly nature of the Western Promenade impacts bicycling and walking in this area.

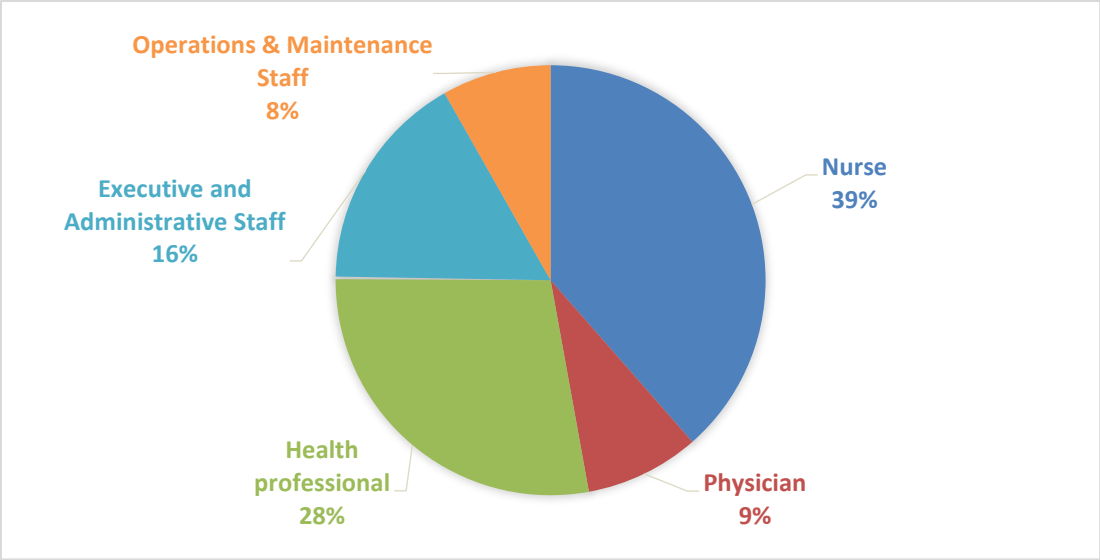
Current Travel Behavior

As part of its efforts to monitor and enhance the Get on Board program, MMC recently conducted a survey of its employees to understand how they commute, any barriers to using alternative transportation, and their interest in other TDM initiatives. The Medical Center also analyzed employee residence data using geospatial analysis tools to better understand employee commuting patterns. The findings from the survey and analysis are summarized below.

Commuting Survey

Approximately 1,600 MMC employees participated in the voluntary survey, administered in February 2017 – nearly a 40% response rate. Approximately 81% of the respondents work at the Bramhall campus. The respondents included a diverse spectrum of employees including operations and maintenance staff, students, executive and administrative staff, health professionals, nurses, and physicians. Figure 3 illustrates the various roles held by the survey participants.

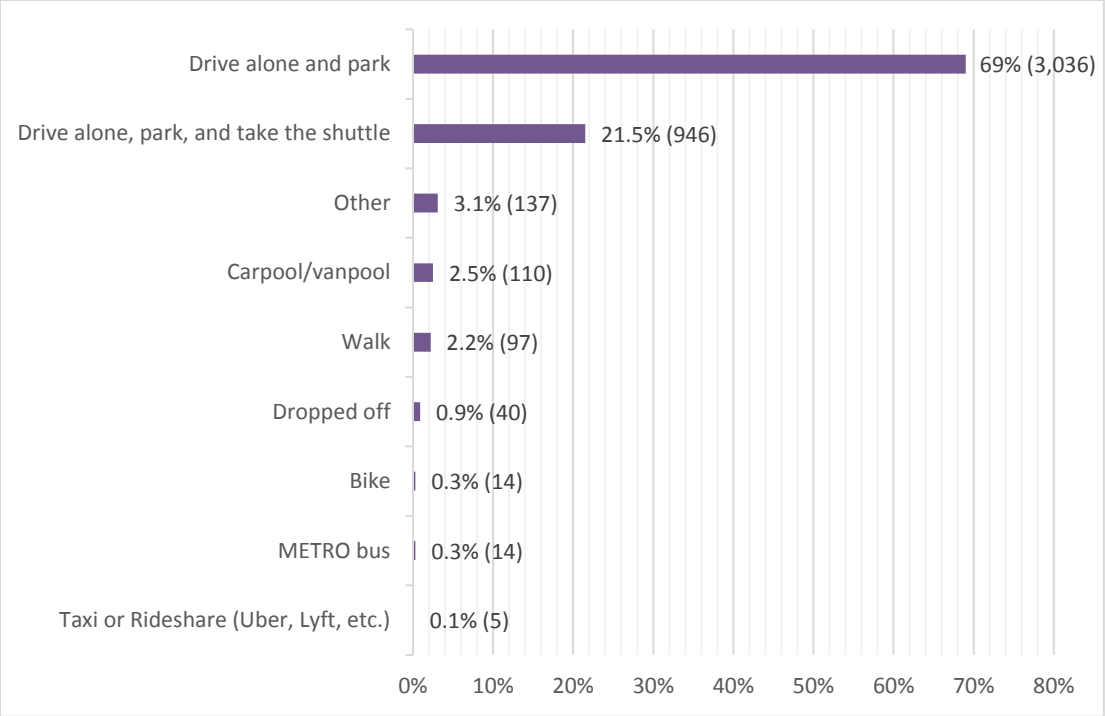
FIGURE 3: Survey Respondents by Hospital Affiliation



The survey found that the majority of employees drive to campus. Among alternative modes, carpooling was the most used mode of travel, followed closely by walking. Figure 4 illustrates the commuting modes of MMC employees.

FIGURE 4: Estimated Employee Travel Mode To and From MMC on an Average Workday

(4,400 estimated employees on campus per average weekday)



The survey also revealed that among Get on Board enrollees who participate in the program, carpooling benefits were the most used benefits, followed by biking benefits and transit benefits.

As the Get on Board program evolves, MMC intends to administer a commuting survey once every two years to track travel trends and to gauge the effectiveness of specific initiatives. The information collected will enable MMC to develop informed, data-based enhancements to Get on Board, providing a greater prospect for program success.

Geospatial Analysis

MMC analyzed the residence locations of its employees to understand employee commuting patterns. The analysis showed that approximately 27% of employees live within a 3-mile radius and approximately 73% of employees live beyond a three mile radius of MMC (See, Figures 5 and 6). Three miles is generally considered a reasonable biking distance by industry standards.

FIGURE 5: MMC Bramhall Campus Employees, Distance to Work by Type of Employee

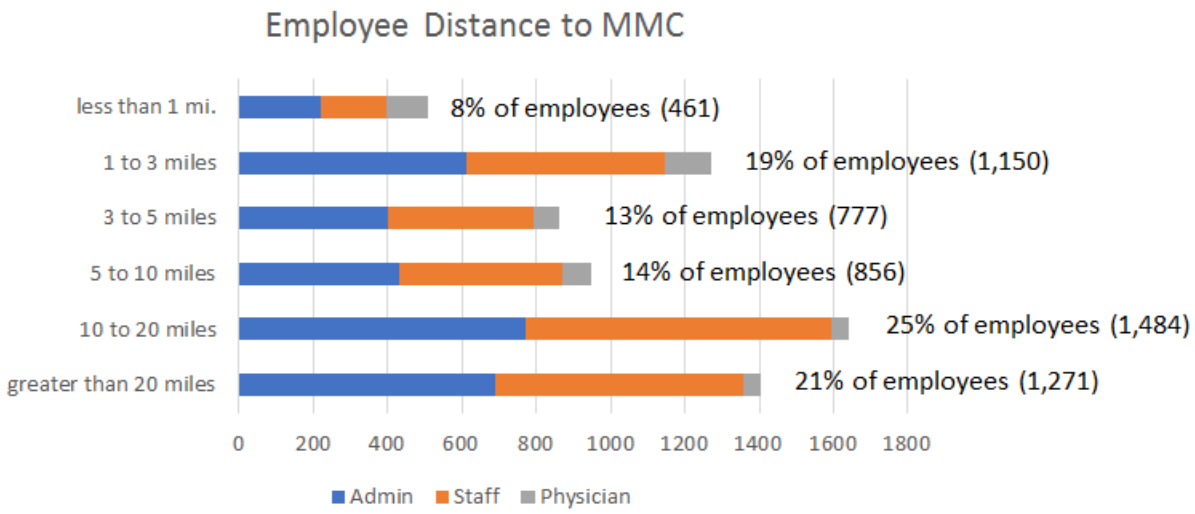
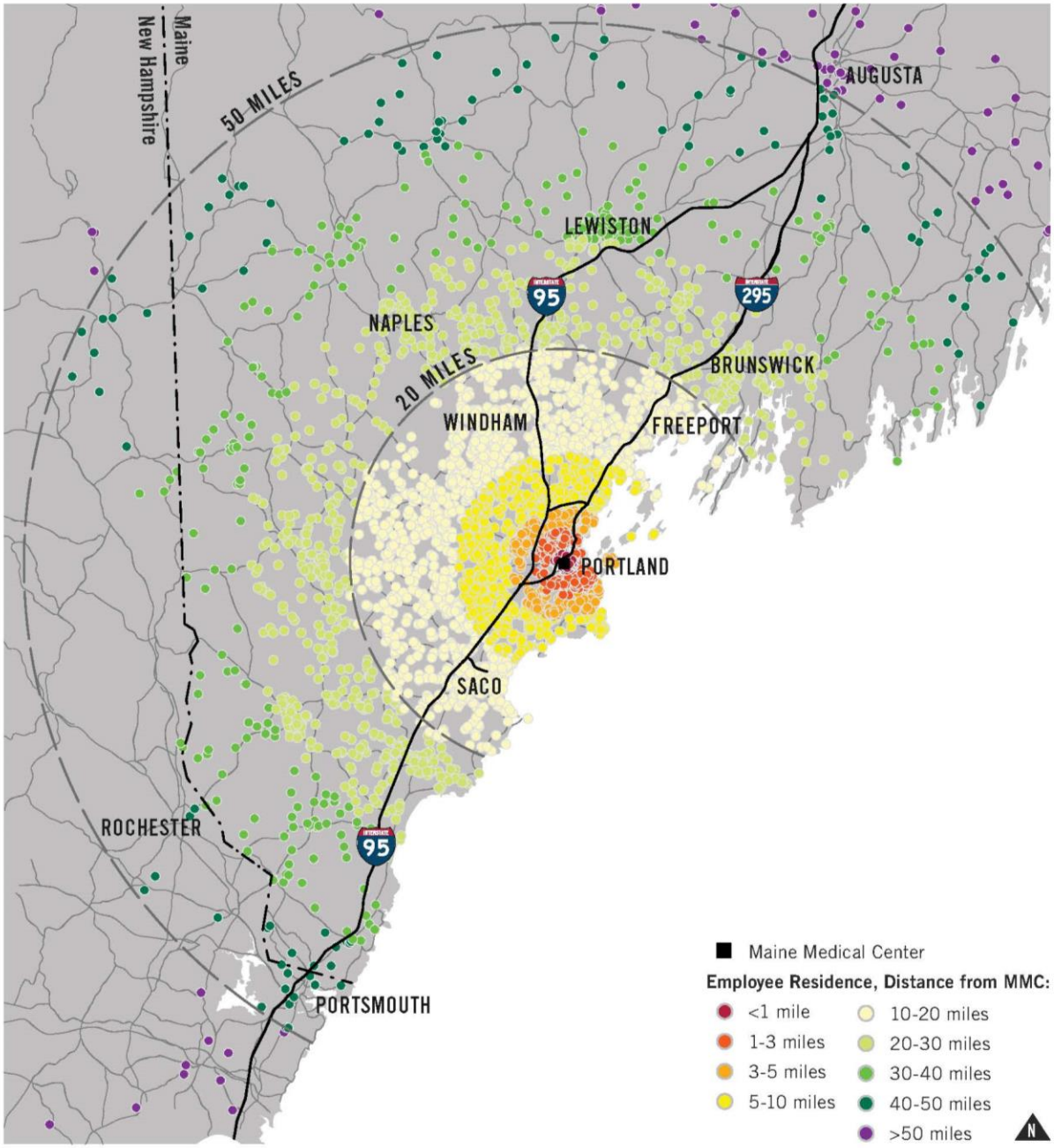


FIGURE 6: Map of MMC Bramhall Campus Employee Residences Illustrating Distance to Work and Travelsheds



Program Goals

The goal of the program is to reduce employee use of single-occupancy vehicles as they commute to work at MMC's Bramhall Campus. At this time, MMC has determined the best way to measure a reduction in employee single-occupancy vehicles is to monitor employee parking demand per employee.

$$Employee\ Parking\ Demand\ Per\ Employee\ = \frac{Estimated\ Employee\ Parking\ Demand}{Bramhall\ Campus\ Employees}$$

As the program grows and evolves and as data collection improves, new goals and metrics may be identified. MMC will also continue to conduct surveys as a way to measure the share of employees who commute by alternative modes of transportation.

VHB conducted a study to determine the existing parking demand for employees (refer to the Context section of this document). VHB's observations and peer group comparison will serve as the baseline for future reduction targets.

Peak parking demand at the Bramhall campus is 4.4% below the expected parking demand for a suburban hospital of MMC's size.

The Get on Board program aims to reduce single-occupancy vehicles on MMC's Bramhall campus through effective TDM measures. These measures include a parking "cash out" program, discounted transit fares, premium parking for carpoolers, and bicycle parking and facilities, among others. Additional details about the program elements are described in the next section. MMC believes the program has had a positive impact on employee travel behavior and has contributed to reduced parking demand over the years.

Based on a review of federal census data, employee travel origin and destination information, existing employee travel mode split, and transportation survey results, MMC believes it can further reduce the portion of employees driving alone to work, thus reducing trip making and resultant parking demands. An initial estimate is that an additional 65 individuals who currently drive to MMC could be shifted into alternative modes of accessing the campus over 5 years. This represents an additional 2% reduction from the ITE parking demand projections.

In consultation with the City, MMC has established the following aggressive short-term, mid-term, and long-term trip reduction goals. These targets are applied to the 2017 baseline identified in the Context section of this document.

	2017 Baseline	Short-Term (0-2 years)	Mid-Term (2-5 years)	Long-Term (5+ years)
Targeted Reduction		2%	4%	5%
Employee Parking Demand Per Employee	0.375	0.367	0.360	0.356

MMC hopes these targets will be achieved through the strategies outlined below. It will endeavor to reduce the number beyond the target identified above through further enhancements or program expansions in the coming years. MMC will continue to monitor parking demand and needs at the Bramhall campus, and re-evaluate its program goals after the initial five year period as needed.

TDM Strategies

Current Get on Board Program Elements

Get on Board is advanced through a range of incentives and the provision of services to support alternative modes. The individual program elements are described below.

Active Transportation

The MMC campus is located in close proximity to existing and planned routes in the City of Portland's growing bicycle and pedestrian network as shown in Figure 7. MMC offers a variety of bike facilities to make bicycle commuters feel welcome and safe. In 2008, MMC installed five (5) strategically-located bike racks and ten (10) bike lockers on its main campus. Three (3) new bicycle racks were added in the vicinity of the Bramhall entrance and in the South Lot in 2016, bringing total storage capacity to 193 bicycles across campus. MMC will conduct a bike rack inventory in July/August 2018 to evaluate the location, condition, and model (or style) of existing bike racks. This assessment will ensure that the racks meet the City's standards regarding the quantity, quality, and distribution of bike parking across the Bramhall campus. MMC understands the city's strong preference for inverted u-racks and bike hitch (or post and ring) racks.

Bicycle and other active transportation commuters also have access to showers facilities across campus, including at Environmental Services, Engineering, the 5th floor of the Maine General Building, and at 229 Vaughan Street.

Beyond on-campus facilities, MMC is an advocate of the City of Portland's Bikeway Network Plan, which will provide bicycle infrastructure on streets adjacent to campus to connect bicyclists with existing and shared use paths.

The City of Portland's latest Comprehensive Plan proposes transforming the streets surrounding MMC into "neighborhood byways", whose design treatments help reduce vehicle speeds and create a safer environment for active transportation users. Neighborhood byway design could encourage walking and biking for employees who live within a reasonable distance of the hospital. MMC also supports ongoing collaboration with the City of Portland, local and regional transit agencies, and neighborhood and advocacy organizations to explore opportunities to improve pedestrian, bicycle, and transit infrastructure and networks serving the Bramhall Campus. The City of Portland has plans to expand the bike lanes illustrated in Figure 7 and add neighborhood byways.

FIGURE 7: Portland Bikeway and Pedestrian Network

Source: City of Portland

In the winter months, some employees choose to leverage their wintertime hobbies, like cross-country skiing, to get to work.

Public Transportation

Under Get on Board (GOB), employees can purchase discounted bus tickets and Shuttle-Bus Zoom tickets conveniently on campus. This is a clear demonstration of MMC's commitment to making the TDM Plan work for its employees and for the City of Portland. Table 2 lists the MMC's current Greater Portland METRO Bus and Shuttle-Bus Zoom discounts provided through "Get on Board!". Note: MMC is dedicated to providing a 100% METRO discount in the short term (as discussed in the recommended Program Enhancements section).

TABLE 2: MMC Transit Discounts

	Regular Price	MMC Sale Price	% Discount
METRO	$13.50	$8.00	40%
S. Portland	$13.50	$8.00	40%
Zoom 10 Ride	$39.00	$29.60	25%
Zoom Monthly	$100.00	$84.50	15%
Zoom Quarterly	$260.00	$197.50	25%

The *Portland Peninsula Transit Study* [2]established several strategies for improving the utilization of transit in Portland. These strategies involved expanding the transit service to development areas, creating more direct connections, and increasing service frequency to compete with drive-alone commute times. The *Portland Transportation Hub Link Feasibility Study*[3] also proposed a route alignment along Congress Street that would increase transit frequency near the hospital. These improvements, if implemented, would highly benefit MMC's campus population in light of the distance that most employees reside from MMC and the fluctuating nature of employees' schedules.

In addition, an MMC representative was recently appointed to the PACTS/GPCOG Transit Committee. MMC is excited to participate in this dynamic group and looks forward to exploring ways in which to improve transit accessibility, connectivity, and reliability in the Greater Portland region.

Carpool

Carpooling is the most popular component of the Get on Board program. Over half of program participants at the main campus take advantage of this benefit. Currently, employees participating in a carpool are given access to preferred parking in an area of the Employee Garage that connects directly to the Main Lobby on the ground floor of the hospital. MMC is planning to relocate its employee parking garage to St. John St. Appropriate incentives that encourage participation in the carpool program have not been fully identified. However, until other incentives are identified, carpool participants will have preferred parking in the St. John St. employee garage.

[2] Portland Transit Committee. *Portland Peninsula Transit Study* (2009), Retrieved from: https://www.portlandmaine.gov/DocumentCenter/Home/View/3383.

[3] Portland Area Comprehensive Transportation System (PACTS). *Portland "Hub Link" Feasibility Study* (2015), Retrieved from: http://www.portlandmaine.gov/DocumentCenter/View/14793 .

Parking Cash Out

Presently, MMC operates a "parking cash out" program that offers employees monetary payments in lieu of a parking space. Program participants submit a form every three months that certifies their use of alternative transportation during the week to commute to work. Upon receipt of a certification, MMC issues the employee a payment equal to the cost of parking at MMC's employee garage. MMC will explore opportunities to help automate this process. For example, commute management platforms (discussed in Data Collection section of the Plan) could allow employees to easily track and manage their daily commutes, potentially reducing the need to submit paperwork.

MMC Shuttles

MMC operates employee shuttle services between the Bramhall campus and off-site parking locations Mondays-Fridays, 6:00 am to 11:00 pm. The shuttles include:

- MMC and off-site parking lots at 222 St. John Street and 995 Congress Street (Monday – Friday, 6:00 AM to 11:00 PM)
- MMC Bramhall campus and the 110 Free Street Office Building (Monday-Friday, 6:00 AM to 4:00 PM, every 20 minutes)
- MMC Bramhall and Brighton Medical Center (335 Brighton Avenue) (Monday-Friday, 6:00 AM to 4:00 PM)

MMC also provides shuttle service for contractors from the parking lot at 993 Congress Street to the hospital. The shuttles provide a predictable alternative to employees commuting between the three sites and serves to reduce vehicular traffic in and around MMC.

Scooters and Motorcycles

The campus provides a designated parking space for scooters and motorcycles on the first floor of the employee parking garage.

UCar

MMC currently dedicates a space in its Congress Street parking garage for a carshare vehicle, as part of the city-wide carshare program called U Car Share. The program allows members to borrow a car by the hour, providing employees who bike, walk, or ride transit to work with additional mobility for off-site meetings. Between mid-March and October of 2016, the UCar program had 96 reservations for a total of 4,105 miles.

Electric Vehicle (EV) Charging

Electric vehicle (EV) charging stations can encourage motorists to commute by electric vehicles, thereby reducing carbon emissions. MMC offers free charging stations for staff and visitors.

TDM and GoMAINE website

The current employee GOB portal is linked to the GoMAINE Commuter Connections website, which is an alternative commuting program operated by MaineDOT. GoMAINE provides commuters with additional commuting resources and benefits that supplement those provided by MMC. These benefits include a carpool ride-matching program and a rewards program for participants.

Pay for Parking

MMC charges its employees no less than $3 per paycheck to utilize MMC parking. MMC employees are paid bi-weekly. Therefore, the annual employee parking cost is $78.

$$\$3\ per\ paycheck\ \times 26\ pay\ periods\ =\ \$78$$

Enhanced Get on Board Program Elements

Program enhancements, discussed below, are anticipated to occur within 1-3 years.

Active Transportation

As part of the modernization of Bramhall, MMC will orient entrances to public streets and provide active ground floor uses where possible to encourage pedestrian activity.

MMC will continue to offer bike storage, bike repair tools, and on-site shower and locker facilities to commuters who choose to bicycle to work.

MMC will also continue its parking cash out program to incentivize current bicyclists. To support "interested but cautious" bicyclists, MMC will seek out local bicycling support organizations to host educational safety seminars and/or adult bicycling skills classes at least once per year on the Bramhall Campus. MMC will also promote rewards programs, such as GO MAINE and Bicycle Benefits, to further motivate increased bicycle commuting.

MMC is exploring additional active transportation incentives through commuter challenges, like a Bike Month Challenge (discussed in Education and Marketing section) with corporate-sponsored giveways, like gift cards to local businesses.

MMC will also consider purchasing Bicycle Benefits memberships for bicycle commuters. The memberships cost $5 (one-time fee) and include a helmet sticker, which provides discounts to dozens of local businesses in the Portland region.

MMC understands that Portland Bike Share, a non-profit organization with a goal to establish a bike share system in the City of Portland, plans to launch a bike share pilot in 2018. MMC has contacted the Executive Director of the North American Bikeshare Association regarding bike share opportunities and has conducted preliminary research on private bike share systems, which, if implemented, could help connect employees at MMC and MaineHealth, located on Free Street.

MMC also recognizes the importance of safe and accessible infrastructure to active transportation. The presence of infrastructure can provide the sense of safety and security that cautious bicyclists seek to spur a change in travel behavior. Additionally, as active modes become more widespread throughout the City of Portland, the visibility of pedestrians and bicyclists in the community can encourage greater participation among MMC employees. MMC supports the City of Portland in its work to improve public rights-of-way and expand its active transportation network.

The City of Portland has proposed a bike lane on Congress St. and a Neighborhood Byway on Bramhall St., both of which are adjacent to MMC's Bramhall campus. These improvements, among others, can help address gaps in the community's active transportation network and could help encourage more MMC employees to bike, walk, skate, and ski to work.

Carpooling/Vanpooling

Given the success of its carpooling program, MMC will continue to provide carpoolers with premium parking in the new employee parking garage. Similar to bicyclists, pedestrians, and transit riders, carpoolers will also continue to be eligible for parking "cash out" benefits. To facilitate the formation of carpools and vanpools, MMC will promote GOMAINE's carpool matching program to facilitate carpool matching.

MMC Shuttle

Once the new employee parking garage is constructed, MMC will redesign its shuttle route system to serve employees parking at the new site. The new parking garage will consolidate previously dispersed parking options for MMC employees. MMC anticipates the new route will reduce traffic congestion into and around the campus area.

UCar

Working with UHaul and the City's Parking Department, MMC will continue to monitor the use of the UCar vehicle presently located in its Congress Street parking garage. In the event an additional car is warranted, MMC will work with its partners in finding a suitable location on the main campus for the storage and use of the additional UCar.

Enhanced Transit Subsidies

To further incentivize transit use, MMC will fully cover the cost of METRO bus tickets (100% subsidy) for employees who elect to use transit as their primary mode of commuting to the campus. If METRO ticket costs change, MMC will address program participation rates and work with METRO to find the best solution to support employees who wish to ride METRO. The type and amount of subsidy will depend upon ongoing discussions with METRO to enhance partnerships (see below).

METRO's electronic fare deployment, scheduled for 2019, represents an opportune time for MMC to launch this enhanced subsidy program. MMC will explore ways in which employees can "purchase" transit passes up front, rather than on a reimbursement basis. This "payment-in-advance" option may be contingent on MMC's capacity to verify transit ridership (e.g. through electronic boarding data) in order to minimize abuse of this benefit. It also possible that electronic fare collection and/or commute management platforms (discussed in Data Collection section), if implemented, could allow staff to easily log trips, potentially helping verify transit usage.

New Program Elements

In addition to enhancements to the initiatives described above, MMC intends to initiate complementary elements to ensure the program's continued success. The strategies are prioritized based on their implementation timeframe.

Short-Term (1-5 years)

The following actions MMC will pursue immediately (some are already underway) with the intention that all programs are fully operational within the 3-year time horizon.

Get on Board! Coordinator

MMC has hired a designated resource who will work to reduce employee single-occupancy vehicles on the Bramhall campus through the implementation, facilitation, and continuing sustainability of Get on Board. The coordinator will track the progress of the TDM program, oversee operations, and identify future opportunities to reduce single-occupancy vehicles on MMC's Bramhall campus by employees. The Coordinator is responsible for program evaluation, data collection, and TDM program updates as required.

Way 2 GO MAINE

In October 2017, MMC participated in GOMAINE's Way 2 GO MAINE program for the first time. Way 2 GO MAINE is a 3-week business to business commuter challenge where employees log commute trips and earn prizes. In the first year participating, MMC ranked 2nd for large companies participating with 1,094 trips logged.

MMC will participate in the Way 2 GO MAINE challenge in the future.

Guaranteed Ride Home (GRH) Program

MMC will implement a Guaranteed Ride Home program to ensure that employees who regularly commute using alternative modes will have transportation in emergency situations.

Pay for Parking

MMC will evaluate employee parking fees in the mid-term. In evaluating future price, MMC will consider the prevailing market price for parking in the surrounding area at the time of implementation, as well as best practices in setting affordable parking prices in the region.

Improving Data Collection Capabilities

MMC will improve its data collection capabilities as described below.

Long-Term Actions (5+ years)

MMC recognizes that the following program elements require partnerships with outside partners and agencies and, as such, will take longer to achieve. MMC has already laid the groundwork for all of these elements and will continue to pursue them in the coming years.

Regional Connections Partnership

Through its TDM Coordinator, MMC will seek to form partnerships with other major employers in the city, including the City itself, to foster a holistic approach to travel management. The partnerships would enable the exchange of TDM-related information and experiences between institutions, and it would foster a community that is focused on promoting alternative transportation in the City of Portland. Such collaborations would afford the opportunity to think regionally and help guide both employer provided or sponsored benefits as well as critical external resources such as METRO transit, sidewalks, and bicycle infrastructure. Opportunities to improve existing transit infrastructure would be a focus of any regional connections partnership.

Supporting Public Transportation

MMC intends to explore a partnership with the METRO to identify strategies for increasing MMC ridership, such as service updates and/or pricing agreements. Service updates could include changes in existing routes, new routes, or alternative route schedules. The formation of a partnership could be mutually beneficial, by providing METRO with feedback for increasing ridership while maximizing the usefulness of the transit system for MMC employees. As MMC formalizes its ties to other local institutions through a regional partnership, its collaboration with METRO could also extend to other employers.

Education and Marketing Strategies

MMC has a number of approaches to raise awareness about the benefits of alternative transportation and opportunities for participating in the Get on Board program. These strategies are integrated into various aspects of the organization's engagement with employees to reinforce the importance of TDM. The new TDM Coordinator provides MMC with an unprecedented opportunity to help educate and inform employees about the hospital's TDM programs.

Sharing TDM Program Information

Information about the Get on Board program is available to all MMC employees via the MMC intranet. MMC's intranet is a place where employees routinely go for information. The Get on Board page provides information about all of MMC's TDM programs as well as links to the GOMAINE.org webpage. MMC is committed to reorganizing information on its intranet site within the first six months following the hiring of the TDM Coordinator.

MMC will develop and deliver information about the Get on Board program using communications best practices that are refined throughout the program's lifespan. Communication methods that are effective will be further refined while elements that are less effective will be reevaluated. Some examples of communication methods include:

- Introducing the program to new employees at orientation: MMC currently shares information about the Get on Board program with new employees during orientation and understands that this information can be overlooked amidst all of the materials that are provided to new employees. MMC will transform its existing TDM orientation brochure into a more graphical, eye-catching pamphlet or postcard. MMC will also consider incorporating a brief TDM presentation at orientation.
- Social media: MMC will use social media as an effective tool to communicate with employees about the Get on Board program.
- Get on Board Booths: To supplement information available on the Get on Board intranet site, MMC will explore opportunities to setup Get On Board booths to help market the program and potentially offer free giveaways, like bike lights or helmets. The booth could be installed and staffed at a high visibility location, such as the hospital's South entrance or outside the future employee parking garage.
- Leveraging Existing MMC Programs: The TDM Coordinator will explore possibilities to leverage (and learn from) other MMC employee programs, such as "Work on Wellness" and Moment to Shine. Work on Wellness (WOW!) allows employees to earn rewards for participating in various health and wellbeing programs, while Moment to Shine allows employees to recognize and reward colleagues for exemplary performance. Moment to Shine, available on the MMC intranet and on iPhone and Android apps, also allows "shining" employees to redeem their rewards through a user-friendly shopping portal. While it is important that the MMC employee programs maintain their autonomy, there could be opportunities for Get on Board to utilize some of the same features, like the rewards portal.
- Branding: There may also be opportunities to rebrand the Get on Board program as MMC looks to add new life to the program.

Get on Board Fair/Seminars

MMC will explore offering educational sessions about the importance of TDM and specific TDM methods such as walking, biking, or riding the bus. Educational sessions will rely on the expertise of local organizations specializing in alternative modes of transportation.

Get on Board Blitz

October is National Rideshare month and the same month of GOMAINE's Way 2 GOMAINE business to business challenge. In the future, MMC will explore ways to increase marketing of the Get on Board program during the month of October, potentially leveraging social media and internal communications vehicles, such as electronic newsletters.

Commuter Challenges

MMC will explore internal commuter challenges, such as a bicycle commuter challenge in the month of May, which has been nationally designated as "Bike Month" by the League of American Bicyclists. As discussed in the Data Collection section, commute management platforms could help MMC manage these friendly competitions and allow participants to log commutes and view leaderboards. MMC will contact businesses regarding potential sponsorships for the monthly commuter challenges.

Comprehensive Data and Goal Monitoring

MMC understands from its prior experience with TDM initiatives that achieving change is an iterative process that involves tracking the effectiveness of its programming and making mid-term adjustments if necessary to improve program effectiveness. MMC will collect and analyze data on a regular basis to monitor progress towards its TDM targets. The data would be collected through a range of instruments and will be used to make annual comparisons and to identify trends, and areas for growth. MMC will submit monitoring reports that include a summary of the data monitoring results, comparisons of the data to trip reduction targets, and adjustments to programs as needed.

Parking Utilization Data

MMC is exploring options to improve data collection in the new employee parking garage. The most likely option utilizes EZ-Pass technology to automatically collect information about the vehicles in the garage.

In addition, MMC plans to install a parking guidance system in the new employee garage, as well as a controlled-access parking system in the visitor parking garages. Together, these systems will allow MMC to monitor occupancy in each garage and to collect data regarding who uses the parking facilities and the temporal fluctuations in parking demand across various periods of time. These systems will provide quantifiable information to assist in determining future utilization of MMC's parking facilities. MMC will utilize this parking usage data to assess its parking arrangement twice every year.

MMC has received feedback about inappropriate use of its parking garages. MMC hopes to reduce the misuse of its garages in the future by implementing these monitoring and controlling systems.

Employee Surveys

MMC conducted an employee travel survey in 2017 to understand employee commuter preferences and intends to administer the survey once every two years going forward. The survey is administered electronically using a survey platform and produces data that MMC (or a third party) can use to identify changes and progress from one period to the next. The surveys seek information about the following topics to gauge the effectiveness of initiatives:

- TDM program participation rates
- Individual program effectiveness
- Barriers to TDM use
- Changes in commuting preferences
- Marketing effectiveness

Employee Surveys

As discussed earlier, MMC is also exploring contracts with various commute management platforms to help encourage, track, and incentivize alternative commutes. These platforms can provide robust data related to commuting patterns, trends, and changes.

Reporting Frequency

MMC will submit annual monitoring reports that will include a summary of progress toward targets established in the TDM Plan.

Conclusion

The purpose of Maine Medical Center's Transportation Demand Management program, Get on Board, is to reduce the amount of employee single-occupancy vehicles at MMC's Bramhall Campus by enabling and promoting alternative modes of transportation to and from MMC's Bramhall Campus for MMC employees. The program has aggressive short- and long-term goals. While the program's success partially relies on a cultural shift away from personal vehicles, Maine Medical Center is committed to exploring and identifying the most impactful TDM strategies to reduce single-occupancy vehicle travel and encourage alternative commuting choices.

11. SIGNIFICANT NATURAL FEATURES

The existing Site is fully developed and there are no known areas of significant natural features, including unusual natural areas, rare or endangered botanical features, areas of significant wildlife habitats, or wetland areas associated with the site or surrounding property.

We have included the official species list for the site, as provided by the U.S. Fish & Wildlife Service. This list identifies the Northern Long-eared Bat as a threatened species, but no critical habitat is identified on the project site. The Northern Long-eared Bat is identified as threatened throughout the State of Maine. The project is located in an existing urban, developed area and no trees meeting the criteria for bat habitat are proposed to be impacted by the project.

Other publicly available data indicates that the project is not located in any significant plant or animal habitat, on any identified conservation land, or in wetlands. Figures documenting this are attached.

11.1 Attachments

- Official Species List
- Plant and Animal Habitat Map
- Conservation Land Map
- National Wetlands Inventory Map

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To:
Consultation Code: 05E1ME00-2018-SLI-0307
Event Code: 05E1ME00-2018-E-00635
Project Name: Maine Med St John St Garage

January 26, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2018-SLI-0307

Event Code: 05E1ME00-2018-E-00635

Project Name: Maine Med St John St Garage

Project Type: DEVELOPMENT

Project Description: Parking Structure

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.65010848741777N70.2795895413019W

Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. 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.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Conserved Land and Undeveloped Habitat

Welcome Layers Legend

Conserved Lands

The State of Maine's conserved lands database includes lands in federal, state, and nonprofit ownership. Some privately owned conservation lands may not be represented. For the most accurate and current information about land ownership, consult with the local assessor and/or other local land management agencies. If public access potential to any of the properties displayed here is uncertain, landowners should be contacted first to determine if permission is necessary.

Ownership Types (transparent layers)

Federal: National parks, forests, and wildlife refuges.

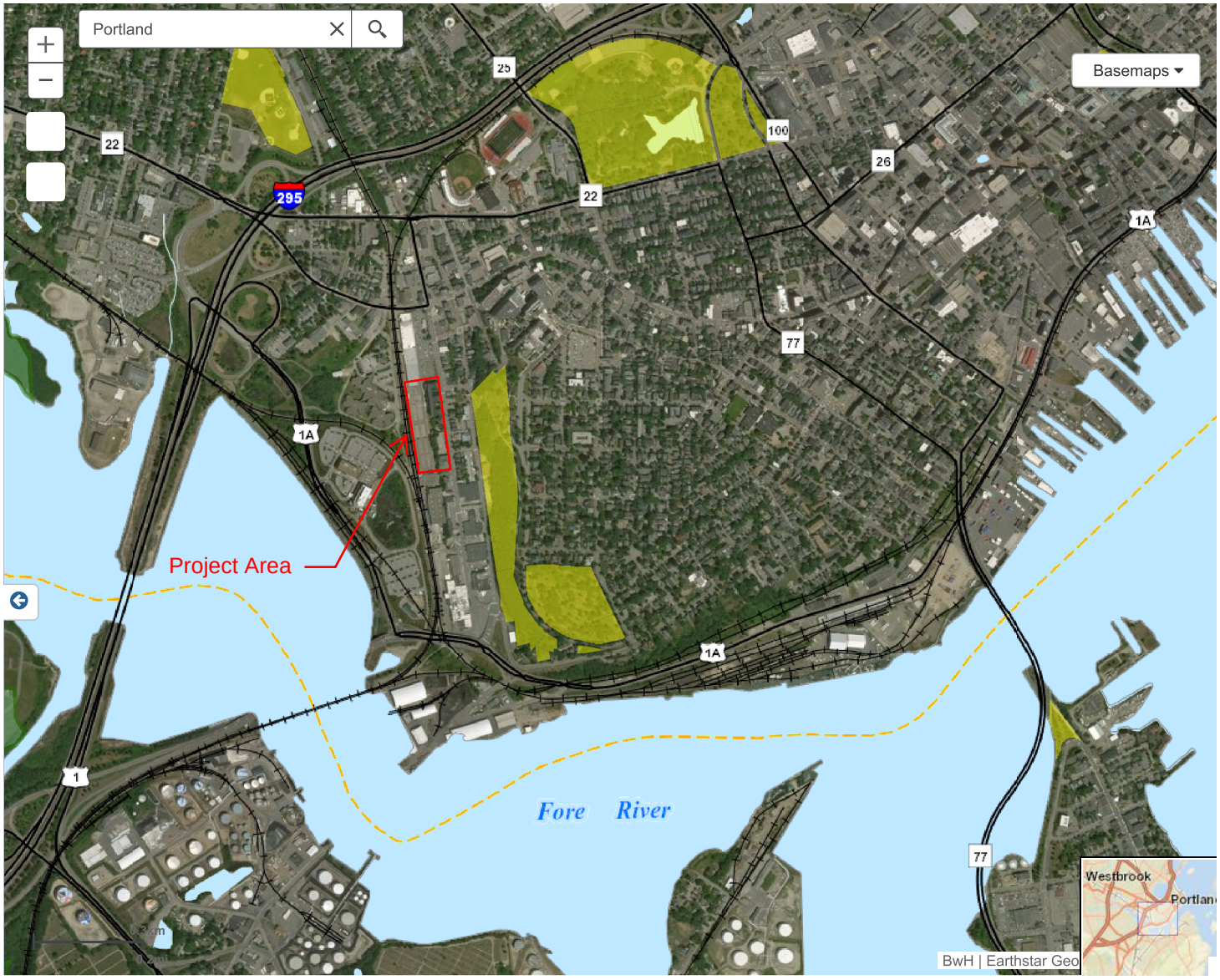
State: Wildlife Management Areas and other properties managed by the Department of Inland Fisheries and Wildlife, state parks, and parcels managed by the Bureau of Parks & Lands.

Municipal: Town parks, water district properties, community forests, etc.

Private Conservation: Properties owned and managed by private (usually nonprofit) organizations such as The Nature Conservancy, Maine Coast Heritage Trust; Trust for Public Land, and local land trusts.

Easement: Voluntary legal agreements that allow landowners to realize economic benefit by permanently restricting the amount and type of future development and other uses on all or part of their property as they continue to own and use it.

Focus Areas of Statewide Ecological Significance

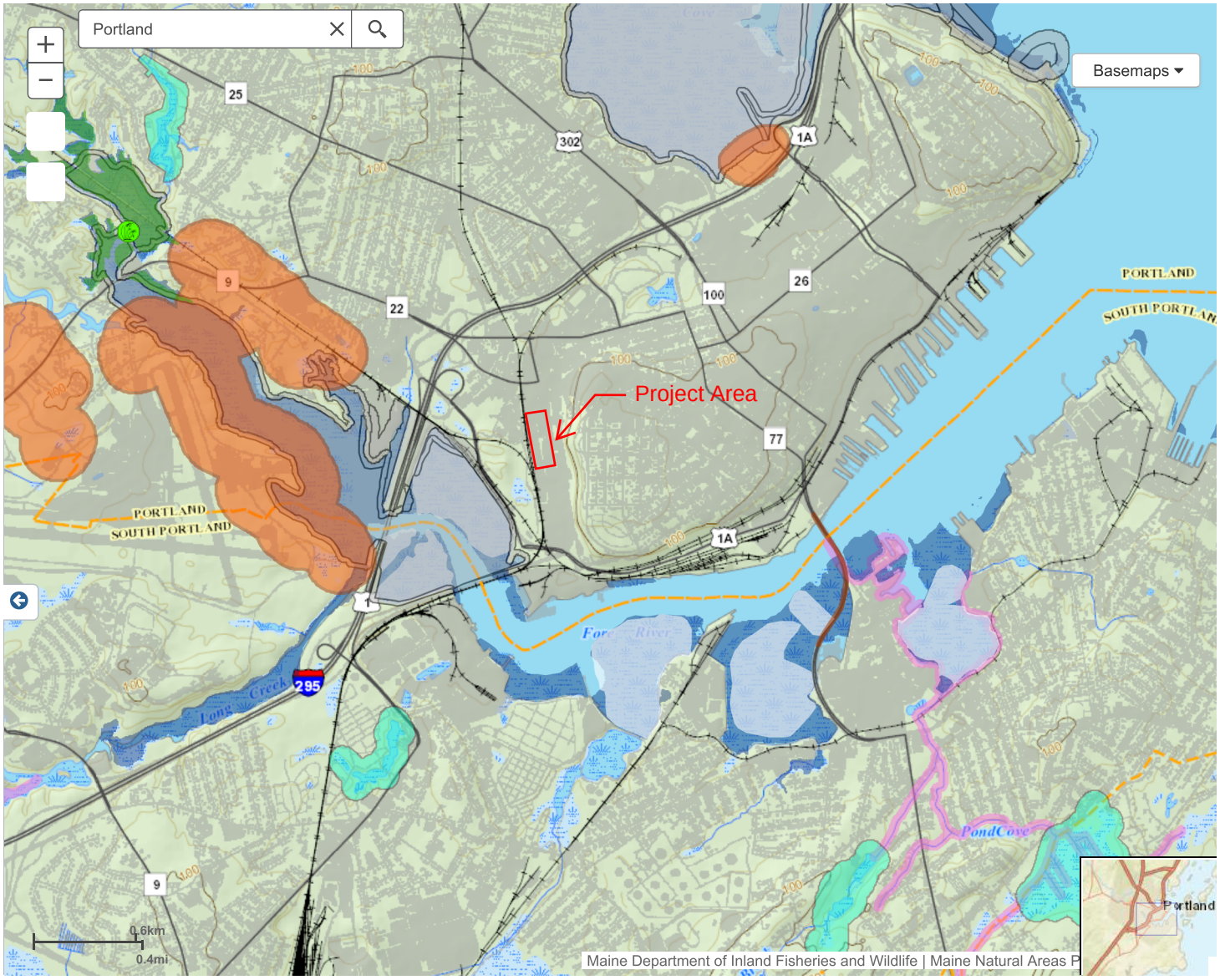


Plant and Animal Habitats

Welcome | Layers | Legend

Legend:

- State Listed Animal Habitats
- Deer Wintering Areas
- Inland Wading Bird and Waterfowl Habitat
- Tidal Wading Bird and Waterfowl Habitat
- Essential Plover and Tern Habitat
- Shorebird Habitat
- Seabird Nesting Islands
- Significant Vernal Pools
- Rare Plant Locations
- Natural Communities
- Shellfish Beds
- Endangered Fish Species
- Wild Brook Trout Habitat
- Atlantic Salmon Spawning Habitat
- Atlantic Salmon Rearing Habitat



U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands Map

January 29, 2018

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

12. STORMWATER MANAGEMENT PLAN & CALCULATIONS

The MMC staff parking garage project site consists of portions of the 222 St. John Street (Cowcatcher), 184 St. John Street (Eagles), and the Union Station Plaza property through an access easement. Within the stormwater design, these properties have been combined and evaluated as a single project site. Applicable regulations that govern stormwater management on this site include Section 5 of the City of Portland Technical Manual, Chapter 32 of the City of Portland Code of Ordinances, and the Maine Stormwater Best Management Practices (BMP) Manual. Under Section 5 of the City Technical Manual, the project is subject to the Redevelopment Standards and is required to adhere to the General Standards of the Maine Department of Environmental Protection Chapter 500 Stormwater Regulations.

The project will disturb greater than one acre of land; will result in a decrease of approximately 14,506 square feet (SF) of impervious area; and will result in the redevelopment of a non-roof impervious area greater than 5,000 SF. The project will therefore be required to meet the Basic Standards for erosion & sedimentation control, and the General Standards for treatment of redeveloped area. The project is not required to meet the Flooding Standard, as there is no new impervious surface proposed, however the project has been designed to minimize the impact of project flows on the surrounding stormdrain system. A small portion of the project area on the 184 St. John Street property will be connected to the existing separated stormdrain in St. John Street, east of the site. Drainage was not previously connected in this direction. The remainder of the post-development flows for the redeveloped site will be managed to reduce the flow to the existing downstream stormwater collection system west of the site. Adequate provisions have been made to collect, treat, and detain the required amount of stormwater runoff generated from the site. The following sections describe the design methodology and the proposed means of compliance with these standards.

12.1 Stormwater Modeling Methodology

Stormwater modeling was completed using the HydroCAD 10.0 Stormwater Modeling System by Applied Microcomputer Systems, which uses TR-20 runoff calculations methodology. The HydroCAD output for both the pre- and post-development models are attached to this section. The Chapter 500 Stormwater regulations define standard rainfall amounts for the 2-year, 10-year, and 25-year, 24-hour storm events; a Type III rainfall distribution was applied to the storm events.

Subcatchment drainage areas were delineated based on topographical information. 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. The calculation of CN is based on TR-55 methodology. The HSG for the site was taken from the USDA Natural Resources Conservation Service Web Soil Survey, a copy of the survey map is attached; the Site consists of HSG Type A (representative of the most permeable soils) within the 184 St. John Street property and unclassifiable soils within the current 222 St. John Street Parking lot. The unclassifiable soils have been modeled as HSG Type D, the HSG representing the least permeable soil condition. The area of each land cover type was delineated using ground cover information from existing condition survey and GIS sources, and HydroCAD computed the final CN for each subcatchment based on the area-weighted average.

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 Tc for each subcatchment drainage area was computed within HydroCAD using TR-55 methodology as the sum of the travel times for each consecutive flow segments along the longest hydraulic flow path. The longest hydraulic flow path was delineated utilizing contour data and partitioned into segments based on flow types, land cover, and slopes. The primary types of flow consist of sheet flow, shallow concentrated flow, and channel flow. A minimum Tc of six minutes was utilized for all subcatchments.

12.2 Pre- and Post-Development Site Conditions

For the purpose of this stormwater analysis, the model has been limited to the project area, which includes portions of the following properties:

- 222 St. John Street Property parking lot (Cowcatcher LLC);
- 184 St. John Street Property parking lot (Fraternal Order of Eagles); and
- A portion of the Union Station Plaza Parcel parking lot (Union Station Plaza Limited Partnership).

Areas proposed to be redeveloped as part of the design have been included within stormwater calculations described below. Two stormwater study points have been defined, an existing 30-inch stormdrain in St. John Street to the east of the site and an existing 18-inch stormdrain crossing the railroad tracks to the west of the site.

12.2.1 Pre-Development

Currently, stormwater runoff generated from the existing parking lot collects via catch basins into a closed storm drain system installed within the parking lots. The parking lot area is primarily flat and allows for additional relief along the western property line adjacent to the neighboring railroad tracks. The project area connects to a stormdrain system that continues through the main parking lot for 222 St. John Street and Union Station Plaza. These existing 18-inch diameter stormdrain pipes convey stormwater runoff from the site, to the west under the railroad tracks into the City of Portland's separated stormwater system that crosses Ogdensburg Street / County Way into the County Jail property.

Stormwater runoff generated from existing southern parking lot located on the 184 St. John Street Property, collects via a single catch basin and connects to the existing stormdrain located within St. John Street.

Existing drainage patterns and site features are shown on the Pre-Development Drainage Plan provided in this section. For the purposes of our analysis, we have used the existing 18-inch stormdrain system as the pre-development study point. A closed circuit television (CCTV) inspection of a portion of the downstream stormdrain system was completed by the applicant, and the results of that inspection show that the existing 18-inch concrete pipe is in good condition.

12.2.2 Post-Development

The proposed redevelopment will consist of the construction of a new free-standing parking garage, entrance driveways, a surface parking lot, walkways, landscaping and associated stormwater management systems. Proposed work will primarily consist of the redevelopment of existing paved parking lot areas. Drainage from the project area will discharge to two locations. The majority of the redeveloped area will continue to discharge via direct pipe connection into the exiting 18-inch stormdrain that discharges to the west under the railroad tracks into the City's stormwater infrastructure. The redeveloped area along St. John Street, including an access driveway and associated landscaping, will be redirected to the existing stormwater drainage utilities within St. John Street. Proposed drainage patterns and features are shown on the Post-Development Stormwater figure provided in this section.

12.2.2.1 West Stormdrain

Stormwater runoff from the majority of the project site will be intercepted by a closed stormwater system that connects to a proprietary subsurface stormwater treatment system which will store and treat stormwater runoff generated from the following areas:

- Top deck of the parking garage and lobby structure roof, discharged to the system via internal garage plumbing;

- Crushed stone planting area which extends along the southern and western faces of the parking garage; and
- Northern surface parking lot, an adjacent grade level entrance driveway, and associated landscaping.

Details of the proposed treatment and storage are provided in the discussions of the General and Flooding Standards that follow in this report.

12.2.2.2 East Stormdrain

Stormwater runoff from the redeveloped area along St. John Street will be intercepted by a closed stormwater system that connects to a proprietary stormwater treatment system which will be installed within a new catch basin in the proposed entrance drive. The existing condition in this area is a parking lot that connects to the stormdrain to the west. This project proposes to instead direct stormwater from this area to the east into the existing 30-inch separated stormdrain in St. John Street. This is a small part of the overall project site, and the flow from this area will not be significant (see the Flooding Standard discussion below). Discussions with Brad Roland from the City of Portland Department of Public Works have indicated that the St. John Street stormdrain should have adequate capacity for the proposed connection.

The existing parking lot located to the south of the Fraternal Order of the Eagles building is proposed to be redeveloped. Stormwater runoff in this area will remain the same as previously described and will discharge into the existing stormdrain within St. John Street.

12.3 Basic Standards (Soil Erosion and Sedimentation Control)

These standards address erosion and sedimentation control, inspection and maintenance, and good housekeeping practices. The application includes erosion and sediment control plans, details, and notes. These notes cover good housekeeping practices. The Erosion and Sedimentation Control Plan for the proposed project is provided below. Additional erosion and sedimentation controls are located within the construction management plan and detail the sequence of the management practice installation.

12.3.1 Erosion and Sedimentation Control Plan

The overall goal of the Soil Erosion and Sedimentation 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 upslope runoff from flowing through the construction site;
- Installation and maintenance of sedimentation barriers adjacent to downhill areas of the perimeter of the project site;
- Installation and maintenance of construction entrances at the travelled interface between stabilized and non-stabilized portions of the project site;
- Controls for fugitive dust, debris, and other materials;
- Permanent seeding or mulching applied as soon as areas are at final grades; and
- Inspection of all in-place measures after every significant rainfall until permanent measures are in place.

Structural measures for erosion and sedimentation control will be installed where shown on the Demolition Plan, which is included in the drawings attached to Section 3 of this Report; details for the proposed measures are also included in

the drawings. Erosion and sedimentation control measures will be implemented in accordance with the "Maine Erosion and Sedimentation Handbook for Construction: Best Management Practices" and will be installed prior to earth disturbing activities. Temporary measures will be removed after the areas are permanently stabilized.

Permanent erosion control measures will include surface ground cover, including vegetation, pavement, crushed stone, and rip rap. Areas of concentrated flow will be protected from erosion by establishing vegetation and riprap. All measures will be maintained in effective operating condition. The Contractor will be responsible for implementing and maintaining all erosion and sediment control measures and will use the attached inspection report form or equivalent.

Due to the size of the site, the project will be required to conform with the Maine Construction General Permit. A Notice of Intent to Comply will be filed for the project prior to the start of construction, and will be provided to the City upon filing.

12.4 General Standard (Water Quality)

The City of Portland Technical Manual requires that all projects, not subject to the requirements of an existing Site Law or Stormwater Management Law Permit, that include redevelopment of non-roof impervious area greater than 5,000 square feet, and are subject to the City of Portland Review, provide stormwater quality treatment in accordance with the General Standard for no less than 50% of the redeveloped non-roof impervious area.

No new developed area will be created as part of this project, as the Site is already entirely developed. A majority of the site will be disturbed. The project will result in a net decrease of approximately 14,506 SF of impervious area. The project will result in approximately 146,887 square feet of redeveloped non-roof impervious area; it should be noted that the garage top deck is not considered "roof" under this analysis and is therefore counted toward the redeveloped area requiring treatment. The redevelopment standard requires 50% of this redevelopment area to be treated, requiring that a minimum 73,444 square feet of area be treated for this project.

A Jellyfish Filter with below-grade R-Tanks for water quality volume storage has been selected as the primary water quality treatment BMP for the Site. This system will provide treatment for the west stormdrain area (as described earlier under post-development site conditions). Alternative methods were considered, such as an underdrained subsurface sand filter, but were not selected due to elevation constraints associated with discharging to the existing stormdrain system located on the Union Station Plaza property. Above-grade storage systems, like underdrained soil filters and rain gardens, were also ruled out as there is limited available space on the Site.

Adequate provisions have been made to collect stormwater runoff from the project area via a series of catch basins and inlets, which drain to an underground R-Tank storage system designed to store the Water Quality Volume prior to treatment by the Jellyfish Filter. The proposed R-Tank System and Jellyfish Filter are proposed to be installed below-grade in the surface parking lot to the north of the parking garage and will collect, store and treat stormwater runoff generated from the post-development areas described above in Section 12.1.1.2.

The Jellyfish Filter is a proprietary system, which has been reviewed and approved for use by the MaineDEP; a copy of the approval letter is attached in this section. The proposed Jellyfish Filter has been sized to meet the MaineDEP approval standards to treat a minimum Water Quality Volume of 1-inch runoff from impervious areas and 0.4-inch runoff from pervious areas. Please see attached calculations demonstrating that the filter has been adequately sized to treat the required Water Quality Volume.

The Jellyfish Filter will be installed to provide treatment of greater than the minimum required area. The entire area of the site that is tributary to the proposed treatment system is approximately 157,512 square feet. Of this area, 125,012 square feet is redeveloped, non-roof impervious surface which exceeds the 73,444 square feet required for 50% treatment of the redeveloped impervious area.

A second treatment system is proposed for the east stormdrain area, which ties into St. John Street. This StormBasin catch basin filter will be installed within the redeveloped garage entrance along St. John Street. While the StormBasin filter is not an approved Maine DEP proprietary treatment option, the proposed stormdrain will aid in removal of pollutants generated within the highly trafficked entrance, providing treatment beyond the total amount required by the City's standards.

Table 12-1 outlines the areas as described, demonstrating conformance with the City of Portland Redevelopment Standards.

Table 12-1: Stormwater Treatment Area Breakdown

	Area (SF)	Area(AC)
Total Project Area:	235,937	5.42
Proposed Disturbed Area:	210662	4.84
Total Impervious Surface Area:		
Existing:	196,461	4.51
Proposed:	182,485	4.19
Reduction:	(13,976)	0.32
Redeveloped Non-Roof Impervious Area:		
Total (includes top floor of garage):	153,295	3.52
Required Treatment Area (50%):	76,648	1.76
Provided Treatment Area:		
Jellyfish Filter & R-tanks		
Total Area Treated:	160,921	3.69
Total Redeveloped Non-Roof Impervious Area Treated:	**126,626**	**2.906**
Percentage of Redeveloped Non-Roof Impervious Area Treated:	**83%**	
StormBasin Catch Basin Filter		
Total Area Treated:	**10,000**	**0.75**
Total Redeveloped Non-Roof Impervious Area Treated:	**4,743**	**0.21**
Percentage of Redeveloped Non-Roof Impervious Area Treated:	**3.2%**	
Total Percentage of Redeveloped Non-Roof Impervious Area Treated by Both Systems:	**86.2%**	

12.5 Flooding Standard (Water Quantity)

In accordance with the City of Portland's Redevelopment Standards, the adherence to the Flooding Standard is not required for the site, as there is no new impervoius or new developed surface proposed. However, based upon good engineering practices, and current site constraints, the stormwater management system has been evaluated for the

24-hour, Type III storm event of the 2-,10-, and 25-year frequencies to ensure that peak flows from the Post-Development design of the site do not result in a negative impact on their tributary drainage systems.

The existing parking lot currently discharges to a stormdrain system that runs through the Union Station Plaza property and underneath the railroad tracks, connecting to an existing City-owned stormdrain system on Ogdensburg Street and County Way at the County Jail property located west of the project site. Examination of existing conditions on the site shows that the existing 18-inch stormdrain piping is not sized to adequately to handle current flows, and anecdotal evidence notes that ponding does occur in the parking lot during larger storm events. CCTV inspection of the existing pipe has shown that the existing RCP pipe is in good condition.

The intent of our design is to manage stormwater such that the post-development peak flows are reduced to flow rates that can be accommodated within the existing 18-inch stormdrain pipe west of the site. This is accomplished by increasing the size of the R-tank storage system. Based upon proposed conditions, the 18-inch pipe is able to convey 9.31 cfs of flow at 95% of its full capacity based upon the Manning's Equation. Reviewing the peak flow calculations for this study point (see **Table 12-2**), the pipe capacity is exceeded in the existing conditions during all storm events. With no additional storage the existing conditions flood the parking lot. The proposed stormwater system will provide adequate storage such that flows from the project site will be reduced to a rate this below the 18-inch pipe's capacity during all evaluated storm events, including the 25-year storm event. Although, utilizing strictly the Manning's Equation for a single pipe the proposed exceed the capacity of a 18-inch pipe, the provided HydroCAD model utilizes dynamic routing which takes into account possible backflow into the storage system during larger storm events. The HydroCAD model for Post-Development shows that there is an excess of 1-foot of freeboard within the manhole in which the system connects (DMH-2).

The small portion of the site that will newly connect to the St. John Street stormdrain to the east of the site will result in flow to the 30-inch separated stormdrain system, where stormwater does not currently exist. The City has indicated that this increase can be handled by the existing infrastructure.

Adequate provisions have been made to collect and discharge stormwater generated from the developed area of the Site. The HydroCAD reports for both Pre-and Post-Development Conditions are attached to this Section. The tables below provides a summary of the peak runoff rates for the 24-hour, 2-year, 10-year, and 25-year Type III storm events.

Table 12-2: Summary of Peak Runoff Rates to Study Point 1 – 18-inch Stormdrain

	PEAK RUNOFF RATE (CFS)		
	2-YEAR STORM	10-YEAR STORM	25-YEAR STORM
Pre-Development (Existing) Site	11.20	21.56	27.70
Post-Development Site	4.49	11.83	18.94
Difference	**-6.71**	**-9.73**	**-8.76**

Table 12-3: Summary of Peak Runoff Rates to Study Point 2 – 30-inch St. John Street Stormdrain

	PEAK RUNOFF RATE (CFS)		
	2-YEAR STORM	10-YEAR STORM	25-YEAR STORM
Pre-Development (Existing) Site	0.41	0.62	0.78
Post-Development Site	1.50	2.70	3.70
Difference	**+1.09**	**+2.08**	**+2.92**

Table 12-4: Summary of Peak Runoff Rates Overall Project Site

	PEAK RUNOFF RATE (CFS)		
	2-YEAR STORM	10-YEAR STORM	25-YEAR STORM
Pre-Developed (Existing) Site	11.31	22.18	28.48
Post-Development	5.99	14.53	22.64
Difference	**-5.32**	**-7.65**	**-5.84**

As the Site's peak runoff rate has been reduced, the proposed development is not anticipated to result in adverse effects, including flooding and erosion to abutting and downstream properties. All on-site piping has been designed to accommodate the 25-year storm event without resulting in flooding onto adjacent properties.

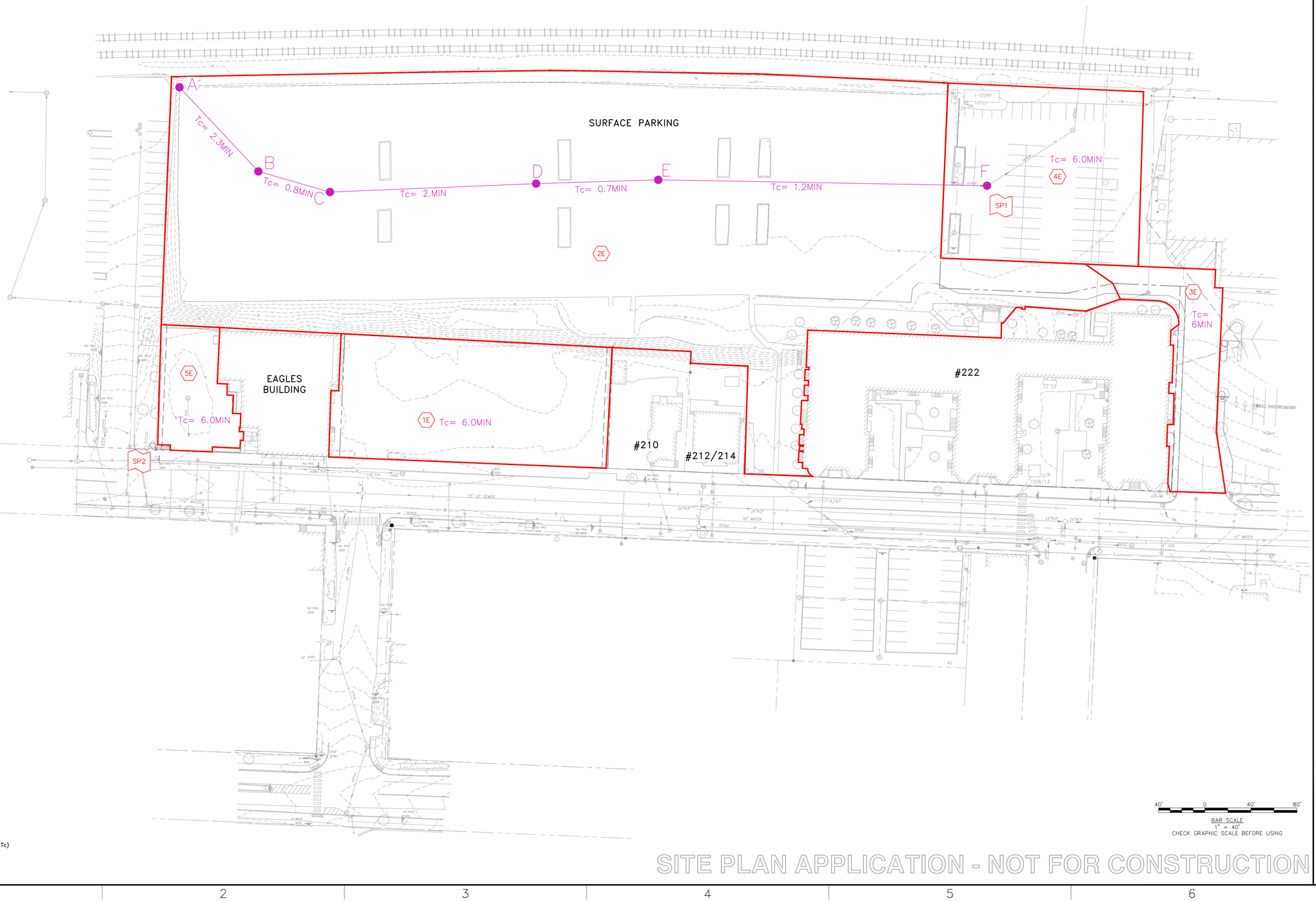
12.6 Inspection and Maintenance of Stormwater Systems

General inspection and maintenance during and after construction must take place in accordance with the requirements outlined in Chapter 500, Stormwater Management, Appendix B, Inspection and Maintenance and Stormwater Management, Maine Department of Environmental Protection Publication No. DEPLW0738. During construction, the contractor will be responsible for inspection and maintaining the Site. Upon completion, the property owner will be responsible for implementing the maintenance and inspection requirements for the stormwater management system associated with the new development. The responsible party will ensure that stormwater management facilities are properly maintained and inspected in accordance with the Stormwater Inspection and Maintenance Plan provided in this section.

12.7 Attachments

- Stormwater Erosion & Sedimentation Control Inspection Report Form
- USDA Natural Resources Conservation Service Web Soil Survey HSG Map
- Jellyfish Filter Sizing Calculations
- MaineDEP Jellyfish Filter approval letter
- Pre-Development Stormwater Figure

- Post-Development Stormwater Figure
- Pre-Development HydroCAD Report
- Post-Development HydroCAD Report
- Inspection and Maintenance Plan
- Jellyfish Filter Maintenance Guide
- BMP Maintenance Log
- StormBasin Maintenance Guide



STORMWATER LEGEND

- 1X — SUBCATCHMENT AREAS
- SP1 — STUDY POINT
- TIME OF CONCENTRATION (Tc) FLOW LINE
- LIMIT OF DRAINAGE AREA

40' 0 40' 80'

BAR SCALE
1" = 40'
CHECK GRAPHIC SCALE BEFORE USING

SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

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REV	DESCRIPTION	DATE
DRAWN BY: BCM	DESIGNED BY: CMS	CHECKED BY: DAS

0231158 C100-101 SW 7.24.dwg

PRE DEVELOPMENT STORMWATER FIGURE

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1" = 40'
SHEET: 1 OF 2

PRE

\\woodardcurran.net\shared\Projects\0231158.00 Maine Med Ctr – Parking Garage\wip\Drawings\Redesign Phase\0231158 C100-101 SW 7.24.18.dwg, Jul 24, 2018 – 11:31am

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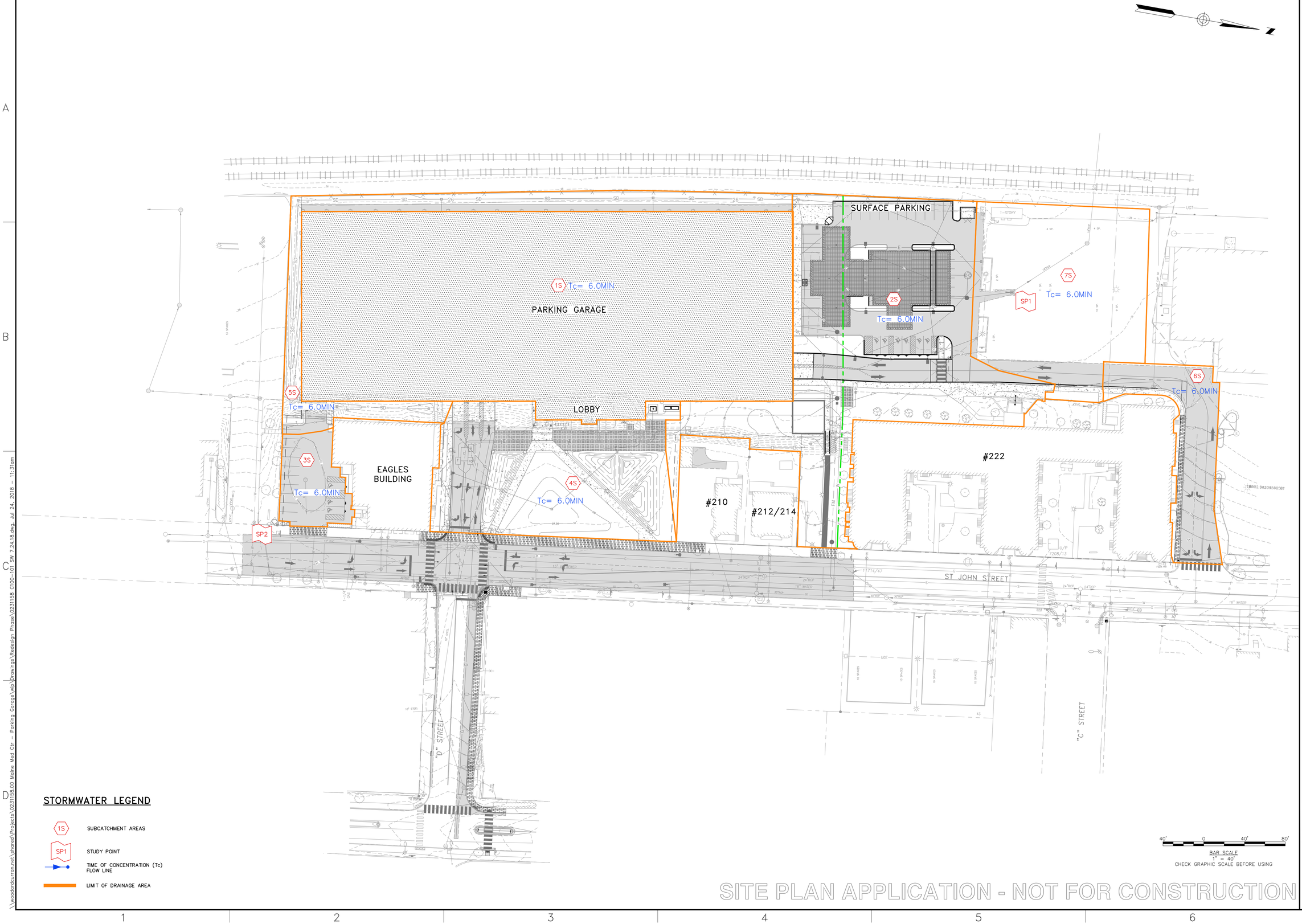
24x36 SHEET
1:1



STORMWATER LEGEND

- 1S — SUBCATCHMENT AREAS
- SP1 — STUDY POINT
- TIME OF CONCENTRATION (Tc) FLOW LINE
- LIMIT OF DRAINAGE AREA

BAR SCALE
1" = 40'
CHECK GRAPHIC SCALE BEFORE USING

SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

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REV	DESCRIPTION	DATE
DESIGNED BY: CMS	CHECKED BY: DAS	0231158 C100-101 SW 7.24.dwg
DRAWN BY: BCM		

POST DEVELOPMENT STORMWATER FIGURE

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1" = 40'
SHEET: 2 OF 2

POST

WOODARD &CURRAN
41 HUTCHINS DRIVE
PORTLAND, MAINE 04102
TEL. (207) 774-2112
FAX (207) 774-6635

CLIENT MAINE MEDICAL CENTER
PROJECT 222 St. John Street Garage
DESIGNED BY CMS DATE 7-23-18
CHECKED BY _____ DATE _____
PROJECT NO. 0231158 SHEET NO. 1 OF 1

Water Quality Volume for Jellyfish Filter System

WQV = (1"-Impervious Area) + (0.4" · Pervious Area)

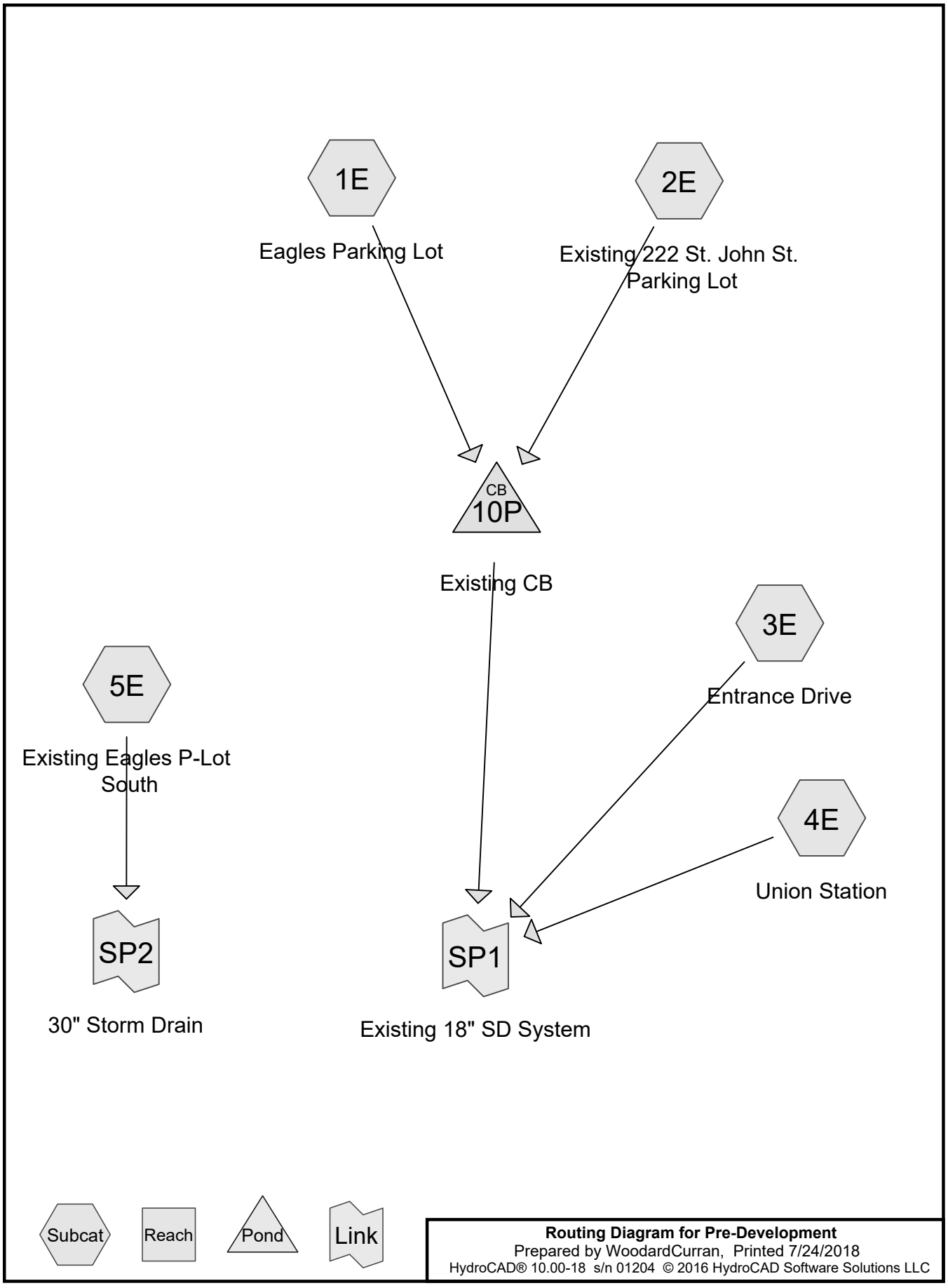
→ Impervious Area = 128,333 (Includes Lobby Roof)
→ Pervious Area = 31,480

= (1"/12"/ft · 128,333 SF) + (0.4 1"/12"/ft · 31,480 SF)

= 10,694.42 CF + 1,049.33 CF

= 11,743 CF Required

☆ WQV Provided = 11,832 CF > 11,743 CF



Routing Diagram for Pre-Development
Prepared by WoodardCurran, Printed 7/24/2018
HydroCAD® 10.00-18 s/n 01204 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
35,714	98	(3E, 4E)
18,343	79	50-75% Grass cover, Fair, HSG C (2E)
3,718	70	Brush, Fair, HSG C (1E)
129,899	98	Paved parking, HSG B (2E)
20,184	76	Woods/grass comb., Fair, HSG C (2E)
6,150	98	existing P-lot (5E)
21,798	98	parking lot (1E)
235,806	**94**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
129,899	HSG B	2E
42,245	HSG C	1E, 2E
0	HSG D	
63,662	Other	1E, 3E, 4E, 5E
235,806		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	0	0	0	35,714	35,714		
0	0	18,343	0	0	18,343	50-75% Grass cover, Fair	
0	0	3,718	0	0	3,718	Brush, Fair	
0	129,899	0	0	0	129,899	Paved parking	
0	0	20,184	0	0	20,184	Woods/grass comb., Fair	
0	0	0	0	6,150	6,150	existing P-lot	
0	0	0	0	21,798	21,798	parking lot	
0	**129,899**	**42,245**	**0**	**63,662**	**235,806**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2E	0.00	0.00	179.0	0.0009	0.012	12.0	0.0	0.0
2	2E	0.00	0.00	105.0	0.0029	0.012	12.0	0.0	0.0
3	2E	0.00	0.00	285.0	0.0047	0.012	15.0	0.0	0.0
4	10P	20.50	19.15	281.0	0.0048	0.011	18.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1E: Eagles Parking Lot Runoff Area=25,516 sf 85.43% Impervious Runoff Depth>2.31"
Tc=6.0 min CN=94 Runoff=1.58 cfs 4,917 cf

Subcatchment2E: Existing 222 St. John Runoff Area=168,426 sf 77.13% Impervious Runoff Depth>2.22"
Flow Length=734' Tc=7.0 min CN=93 Runoff=9.85 cfs 31,138 cf

Subcatchment3E: Entrance Drive Runoff Area=9,847 sf 100.00% Impervious Runoff Depth>2.68"
Tc=6.0 min CN=98 Runoff=0.66 cfs 2,201 cf

Subcatchment4E: Union Station Runoff Area=25,867 sf 100.00% Impervious Runoff Depth>2.68"
Tc=6.0 min CN=98 Runoff=1.74 cfs 5,781 cf

Subcatchment5E: Existing Eagles P-Lot Runoff Area=6,150 sf 100.00% Impervious Runoff Depth>2.68"
Tc=6.0 min CN=98 Runoff=0.41 cfs 1,374 cf

Pond 10P: Existing CB Peak Elev=24.27' Inflow=11.42 cfs 36,055 cf
18.0" Round Culvert n=0.011 L=281.0' S=0.0048 '/' Outflow=11.42 cfs 36,055 cf

Link SP1: Existing 18" SD System Inflow=13.81 cfs 44,037 cf
Primary=13.81 cfs 44,037 cf

Link SP2: 30" Storm Drain Inflow=0.41 cfs 1,374 cf
Primary=0.41 cfs 1,374 cf

Total Runoff Area = 235,806 sf Runoff Volume = 45,411 cf Average Runoff Depth = 2.31"
17.92% Pervious = 42,245 sf 82.08% Impervious = 193,561 sf

Summary for Subcatchment 1E: Eagles Parking Lot

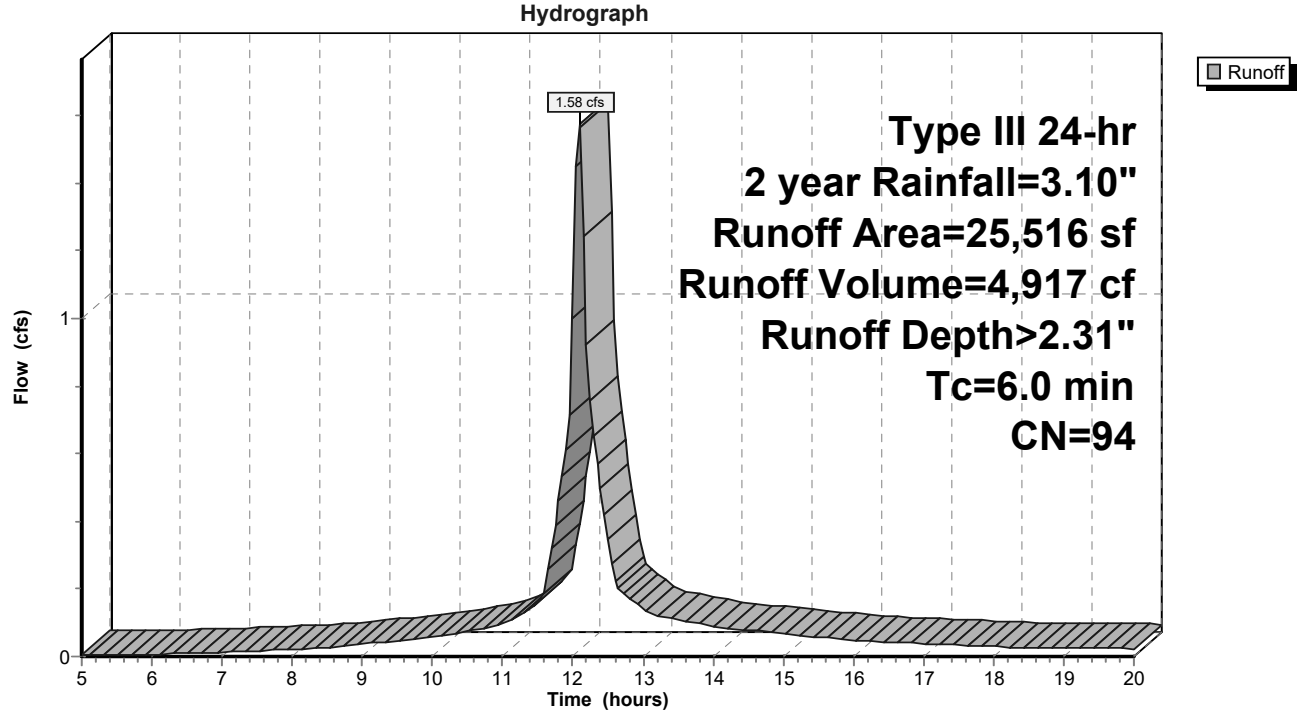
Runoff = 1.58 cfs @ 12.09 hrs, Volume= 4,917 cf, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
	3,718	70	Brush, Fair, HSG C
*	21,798	98	parking lot
	25,516	94	Weighted Average
	3,718		14.57% Pervious Area
	21,798		85.43% Impervious Area

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

Subcatchment 1E: Eagles Parking Lot



Summary for Subcatchment 2E: Existing 222 St. John St. Parking Lot

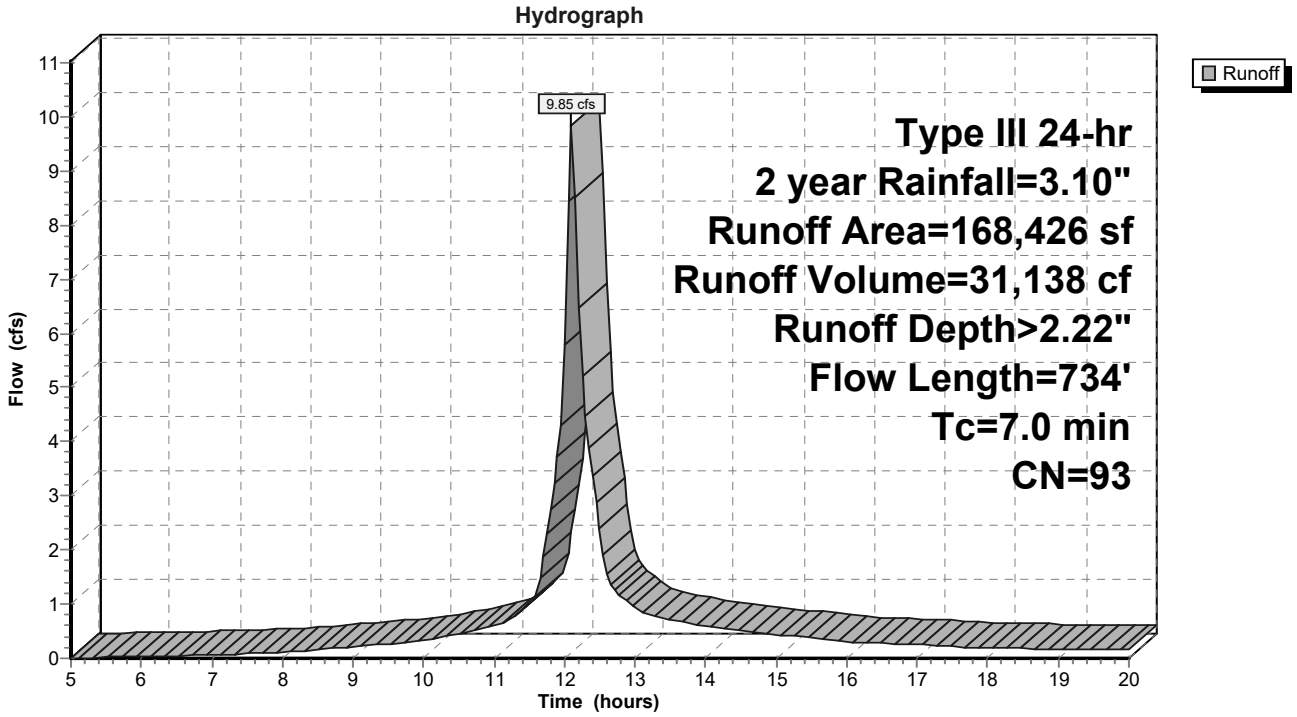
Runoff = 9.85 cfs @ 12.10 hrs, Volume= 31,138 cf, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 year Rainfall=3.10"

Area (sf)	CN	Description
129,899	98	Paved parking, HSG B
18,343	79	50-75% Grass cover, Fair, HSG C
20,184	76	Woods/grass comb., Fair, HSG C
168,426	93	Weighted Average
38,527		22.87% Pervious Area
129,899		77.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	100	0.0044	0.74		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.8	65	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	179	0.0009	1.47	1.16	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.7	105	0.0029	2.65	2.08	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
1.2	285	0.0047	3.91	4.80	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
7.0	734	Total			

Subcatchment 2E: Existing 222 St. John St. Parking Lot



Summary for Subcatchment 3E: Entrance Drive

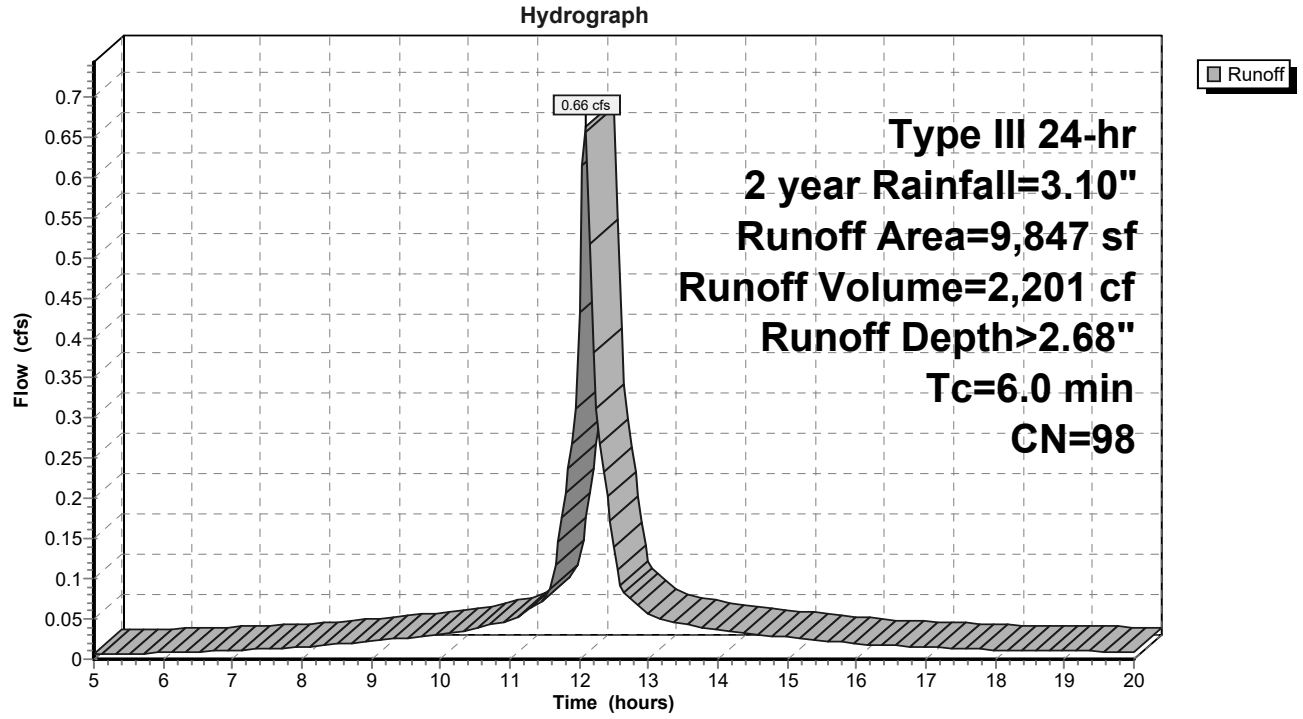
Runoff = 0.66 cfs @ 12.09 hrs, Volume= 2,201 cf, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	9,847	98	
	9,847		100.00% Impervious Area

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

Subcatchment 3E: Entrance Drive



Summary for Subcatchment 4E: Union Station

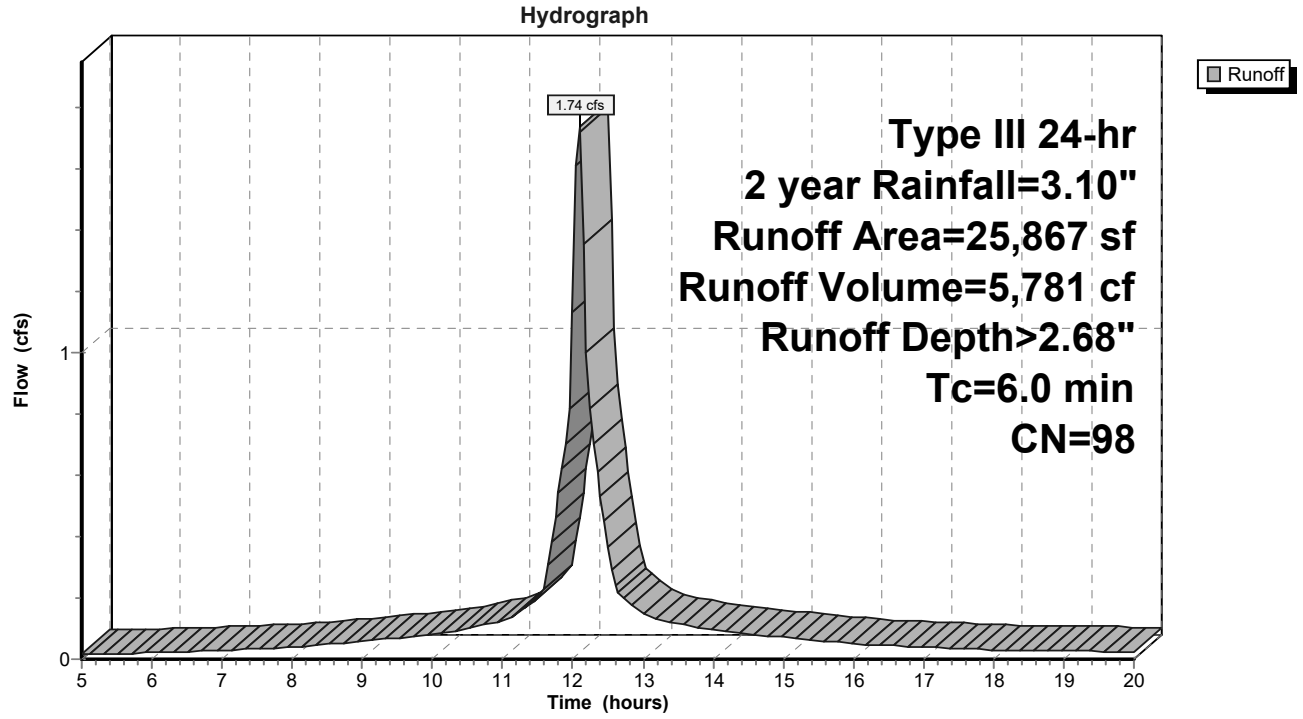
Runoff = 1.74 cfs @ 12.09 hrs, Volume= 5,781 cf, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	25,867	98	
	25,867		100.00% Impervious Area

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

Subcatchment 4E: Union Station



Summary for Subcatchment 5E: Existing Eagles P-Lot South

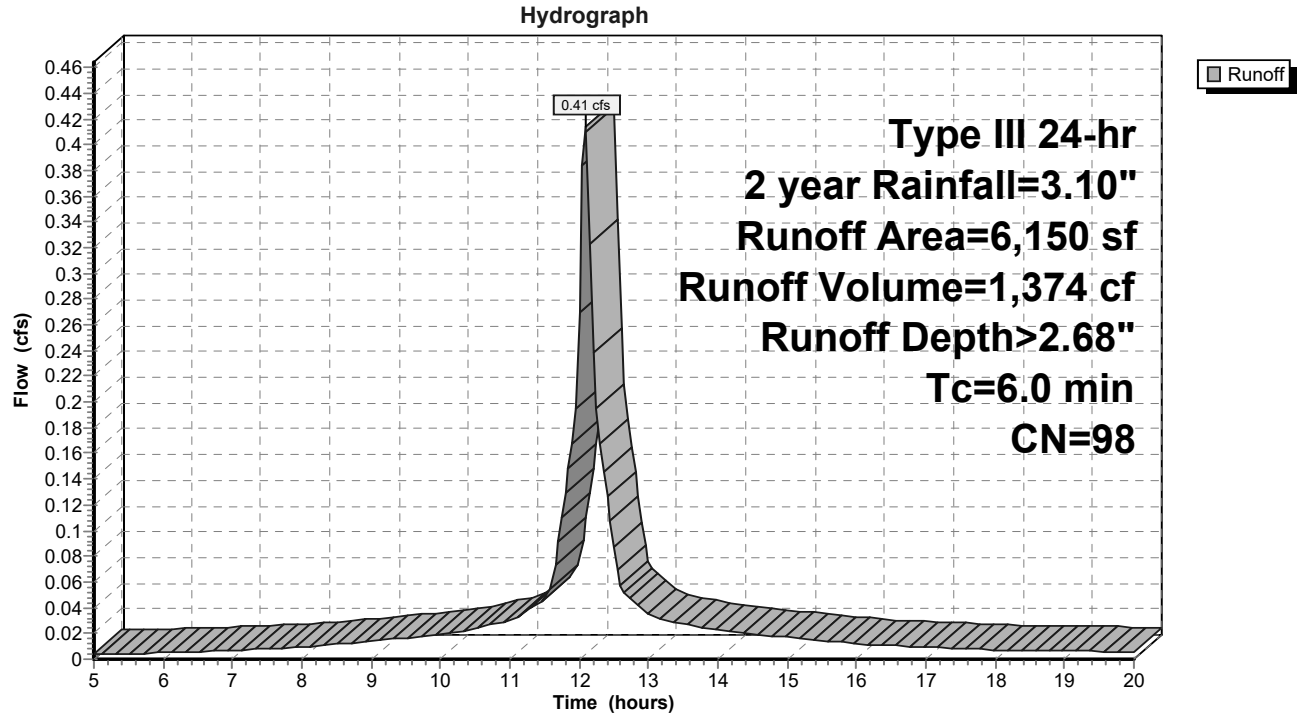
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 1,374 cf, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	6,150	98	existing P-lot
	6,150		100.00% Impervious Area

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

Subcatchment 5E: Existing Eagles P-Lot South



Summary for Pond 10P: Existing CB

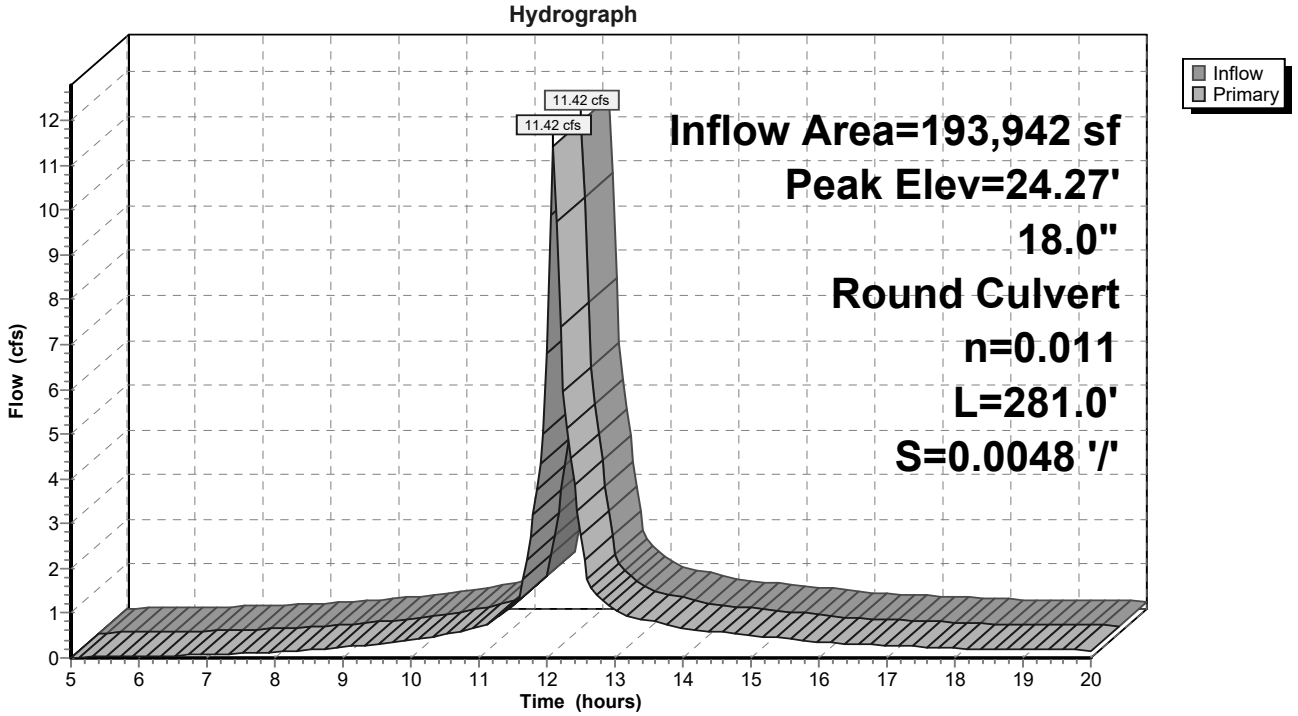
Inflow Area = 193,942 sf, 78.22% Impervious, Inflow Depth > 2.23" for 2 year event
Inflow = 11.42 cfs @ 12.10 hrs, Volume= 36,055 cf
Outflow = 11.42 cfs @ 12.10 hrs, Volume= 36,055 cf, Atten= 0%, Lag= 0.0 min
Primary = 11.42 cfs @ 12.10 hrs, Volume= 36,055 cf

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.27' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	20.50'	**18.0" Round Culvert** L= 281.0' Ke= 0.900 Inlet / Outlet Invert= 20.50' / 19.15' S= 0.0048 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.77 sf

Primary OutFlow Max=11.38 cfs @ 12.10 hrs HW=24.25' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 11.38 cfs @ 6.44 fps)

Pond 10P: Existing CB

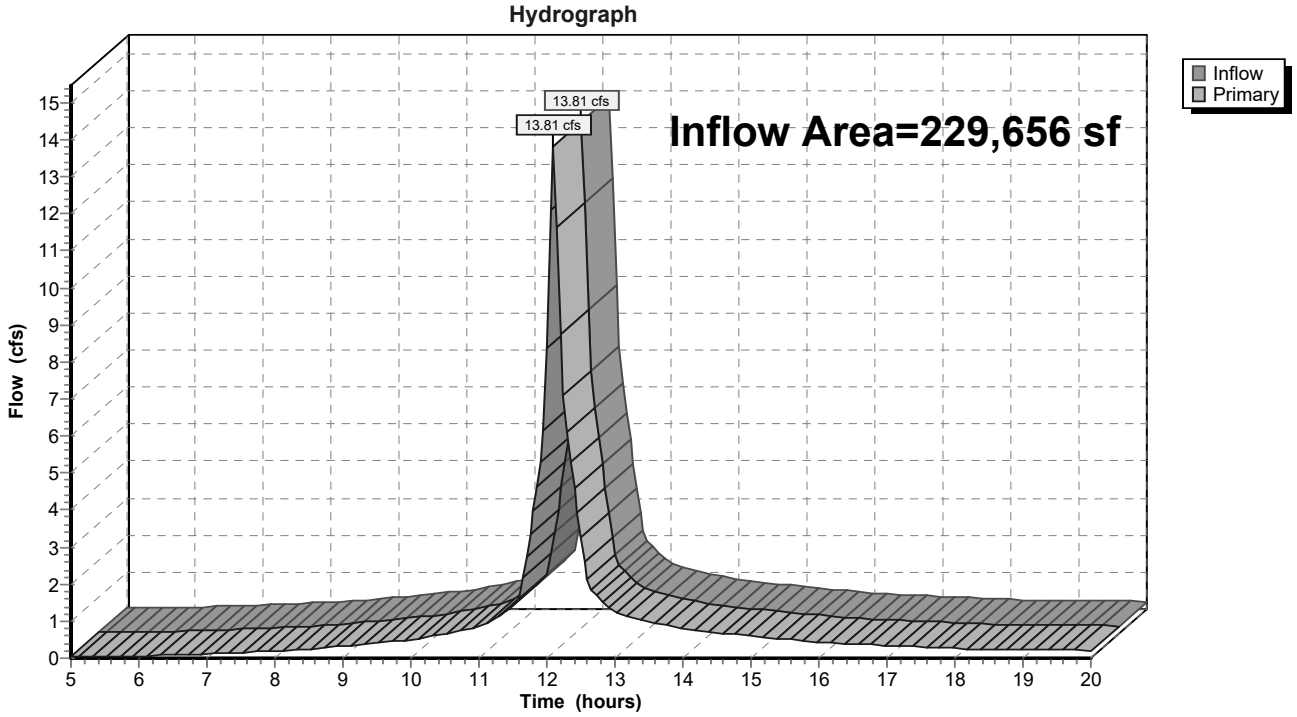


Summary for Link SP1: Existing 18" SD System

Inflow Area = 229,656 sf, 81.61% Impervious, Inflow Depth > 2.30" for 2 year event
Inflow = 13.81 cfs @ 12.10 hrs, Volume= 44,037 cf
Primary = 13.81 cfs @ 12.10 hrs, Volume= 44,037 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Existing 18" SD System

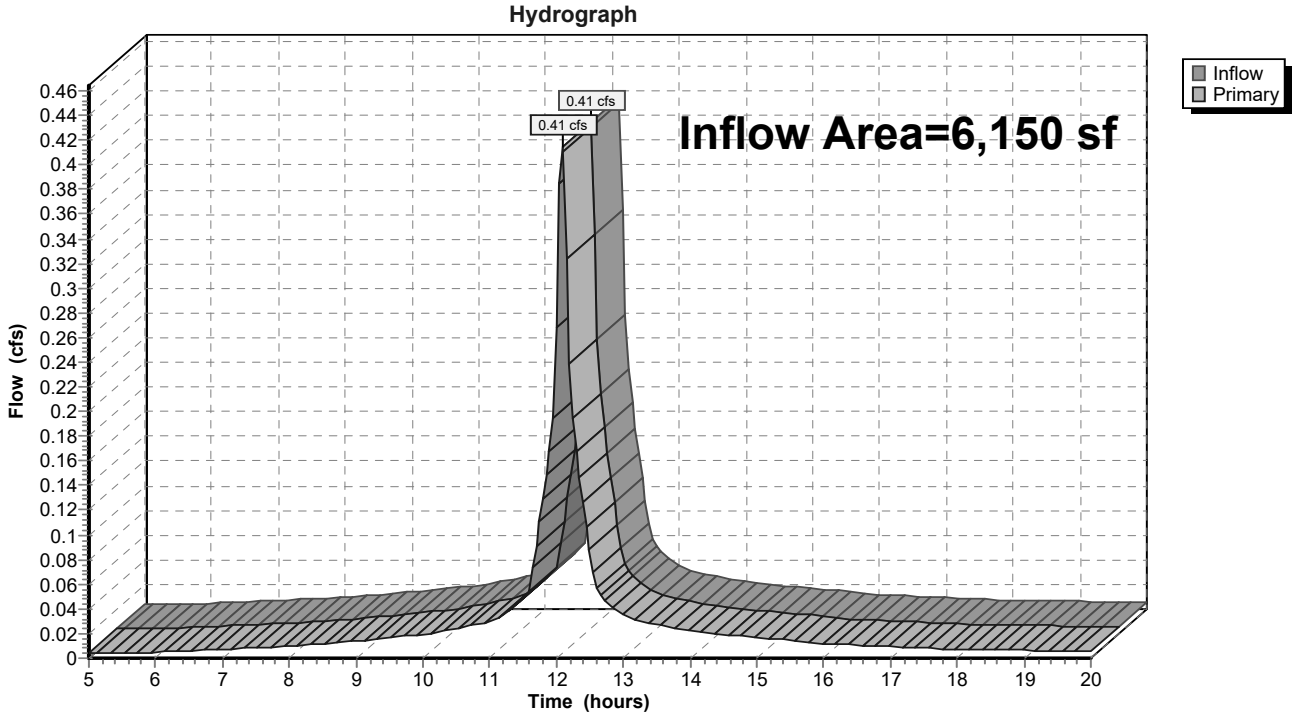


Summary for Link SP2: 30" Storm Drain

Inflow Area = 6,150 sf,100.00% Impervious, Inflow Depth > 2.68" for 2 year event
Inflow = 0.41 cfs @ 12.09 hrs, Volume= 1,374 cf
Primary = 0.41 cfs @ 12.09 hrs, Volume= 1,374 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: 30" Storm Drain



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1E: Eagles Parking Lot Runoff Area=25,516 sf 85.43% Impervious Runoff Depth>3.69"
Tc=6.0 min CN=94 Runoff=2.45 cfs 7,856 cf

Subcatchment2E: Existing 222 St. John Runoff Area=168,426 sf 77.13% Impervious Runoff Depth>3.60"
Flow Length=734' Tc=7.0 min CN=93 Runoff=15.54 cfs 50,460 cf

Subcatchment3E: Entrance Drive Runoff Area=9,847 sf 100.00% Impervious Runoff Depth>4.05"
Tc=6.0 min CN=98 Runoff=0.99 cfs 3,327 cf

Subcatchment4E: Union Station Runoff Area=25,867 sf 100.00% Impervious Runoff Depth>4.05"
Tc=6.0 min CN=98 Runoff=2.61 cfs 8,739 cf

Subcatchment5E: Existing Eagles P-Lot Runoff Area=6,150 sf 100.00% Impervious Runoff Depth>4.05"
Tc=6.0 min CN=98 Runoff=0.62 cfs 2,078 cf

Pond 10P: Existing CB Peak Elev=29.62' Inflow=17.98 cfs 58,316 cf
18.0" Round Culvert n=0.011 L=281.0' S=0.0048 '/' Outflow=17.98 cfs 58,316 cf

Link SP1: Existing 18" SD System Inflow=21.56 cfs 70,381 cf
Primary=21.56 cfs 70,381 cf

Link SP2: 30" Storm Drain Inflow=0.62 cfs 2,078 cf
Primary=0.62 cfs 2,078 cf

Total Runoff Area = 235,806 sf Runoff Volume = 72,459 cf Average Runoff Depth = 3.69"
17.92% Pervious = 42,245 sf 82.08% Impervious = 193,561 sf

Summary for Subcatchment 1E: Eagles Parking Lot

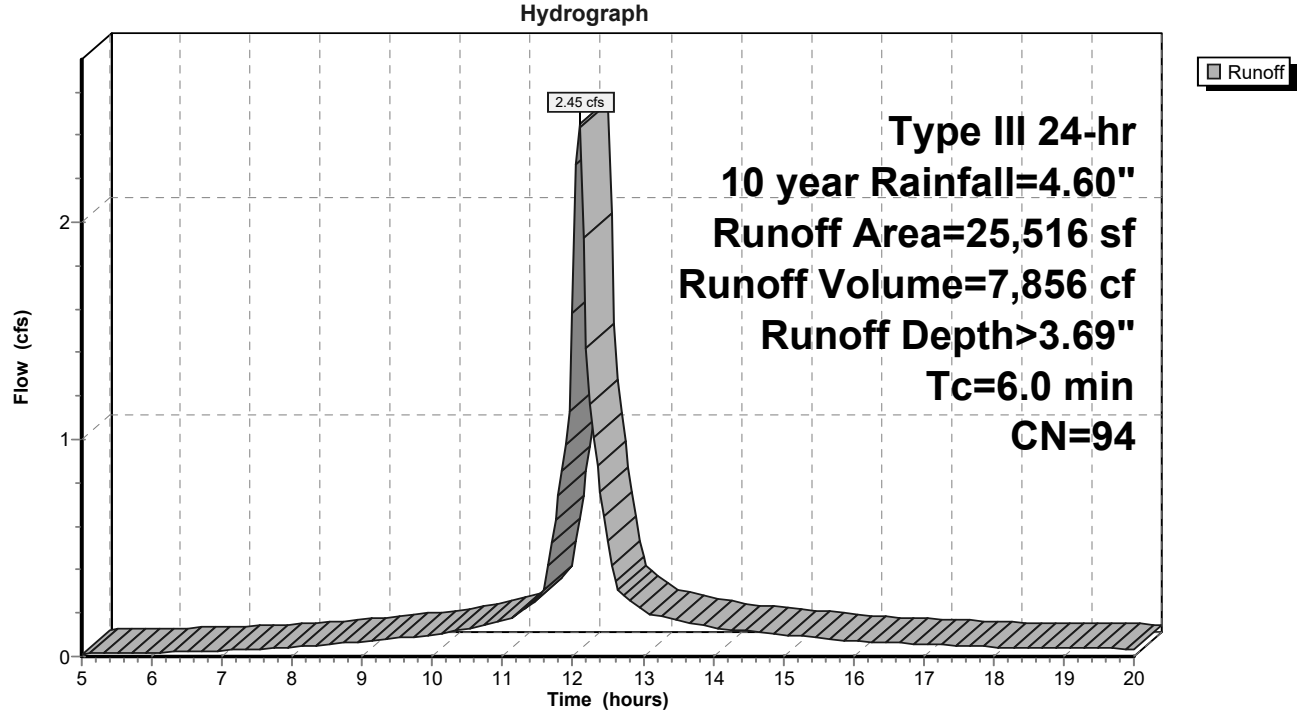
Runoff = 2.45 cfs @ 12.09 hrs, Volume= 7,856 cf, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
	3,718	70	Brush, Fair, HSG C
*	21,798	98	parking lot
	25,516	94	Weighted Average
	3,718		14.57% Pervious Area
	21,798		85.43% Impervious Area

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

Subcatchment 1E: Eagles Parking Lot



Summary for Subcatchment 2E: Existing 222 St. John St. Parking Lot

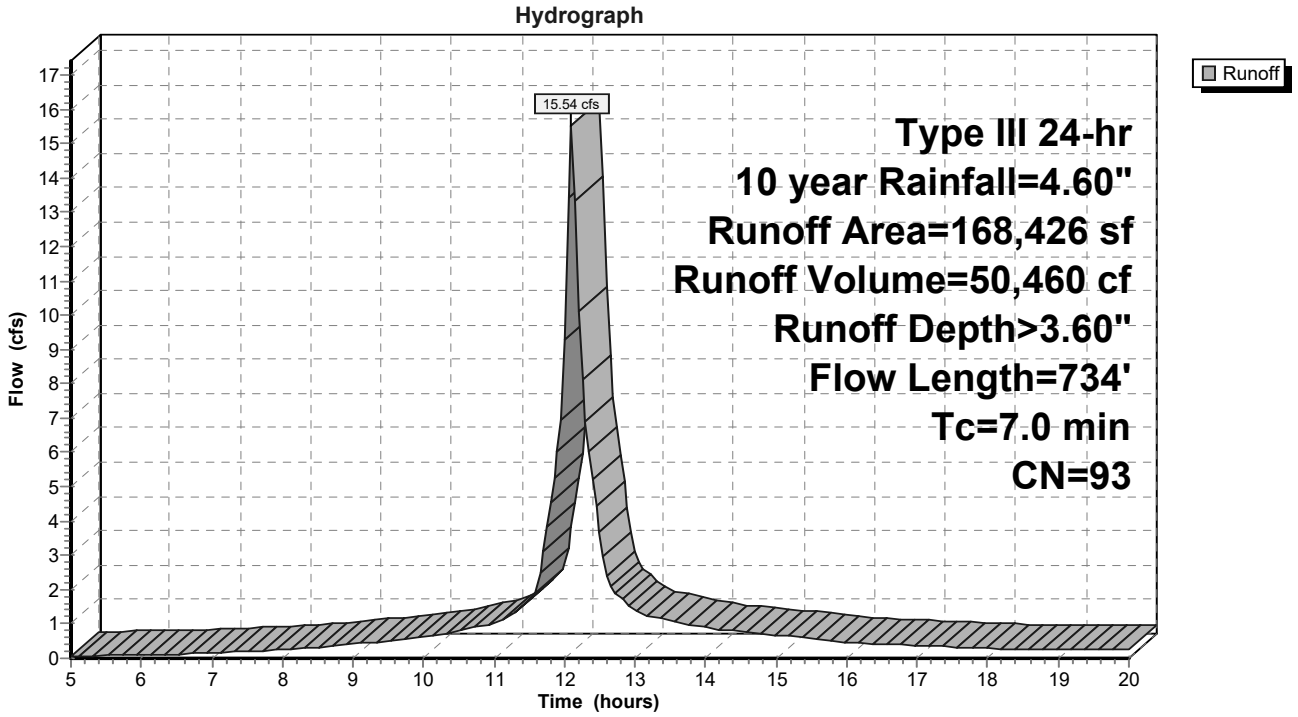
Runoff = 15.54 cfs @ 12.10 hrs, Volume= 50,460 cf, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 year Rainfall=4.60"

Area (sf)	CN	Description
129,899	98	Paved parking, HSG B
18,343	79	50-75% Grass cover, Fair, HSG C
20,184	76	Woods/grass comb., Fair, HSG C
168,426	93	Weighted Average
38,527		22.87% Pervious Area
129,899		77.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	100	0.0044	0.74		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.8	65	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	179	0.0009	1.47	1.16	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.7	105	0.0029	2.65	2.08	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
1.2	285	0.0047	3.91	4.80	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
7.0	734	Total			

Subcatchment 2E: Existing 222 St. John St. Parking Lot



Summary for Subcatchment 3E: Entrance Drive

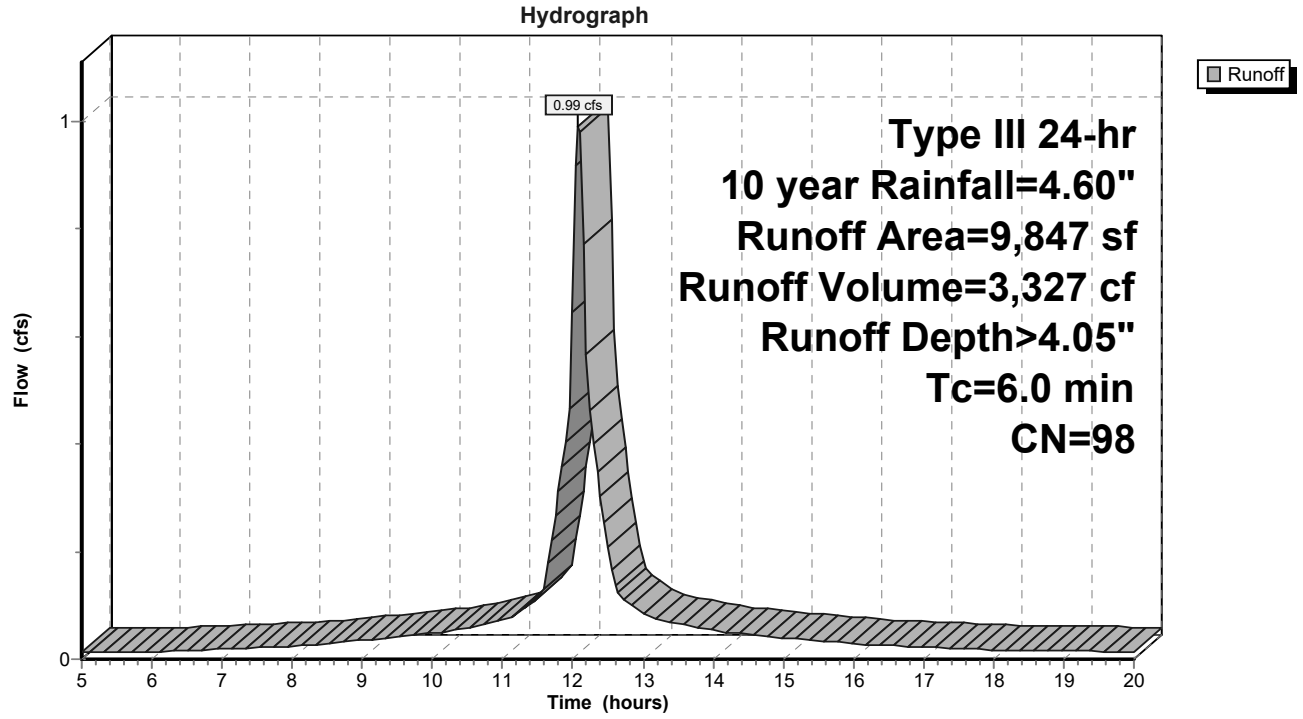
Runoff = 0.99 cfs @ 12.09 hrs, Volume= 3,327 cf, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	9,847	98	
	9,847		100.00% Impervious Area

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

Subcatchment 3E: Entrance Drive



Summary for Subcatchment 4E: Union Station

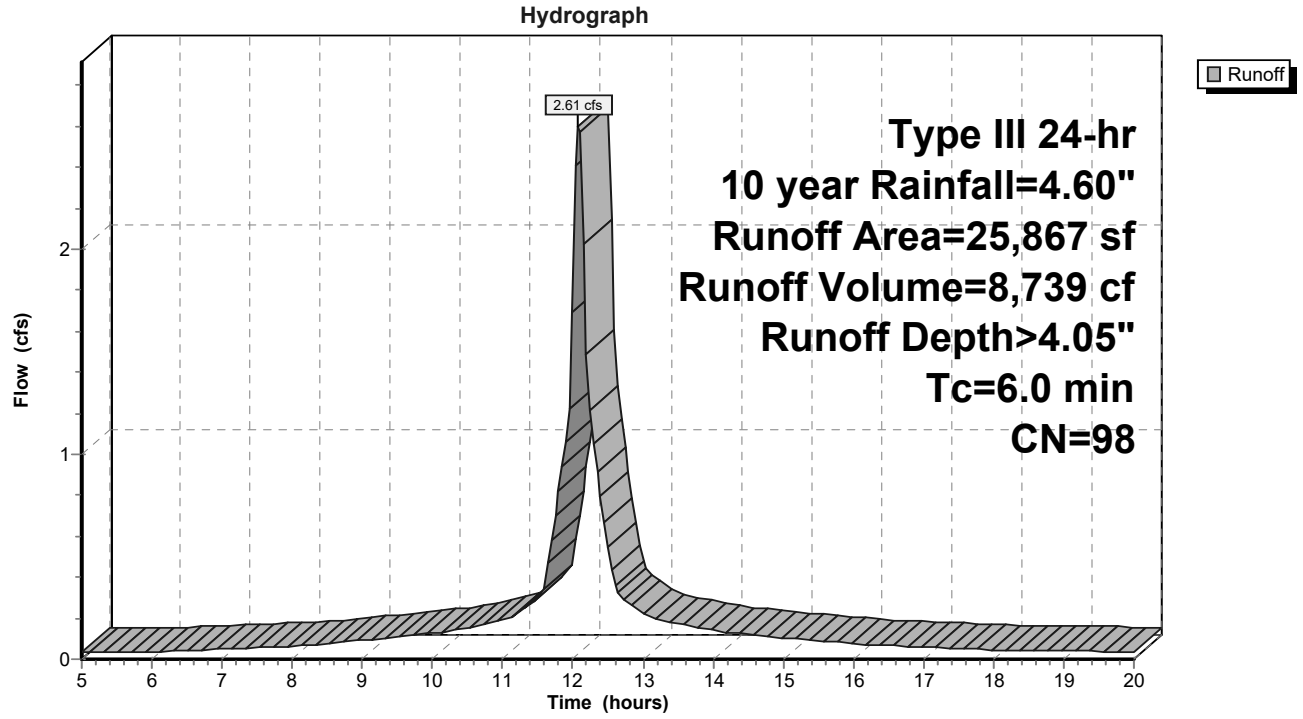
Runoff = 2.61 cfs @ 12.09 hrs, Volume= 8,739 cf, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	25,867	98	
	25,867		100.00% Impervious Area

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

Subcatchment 4E: Union Station



Summary for Subcatchment 5E: Existing Eagles P-Lot South

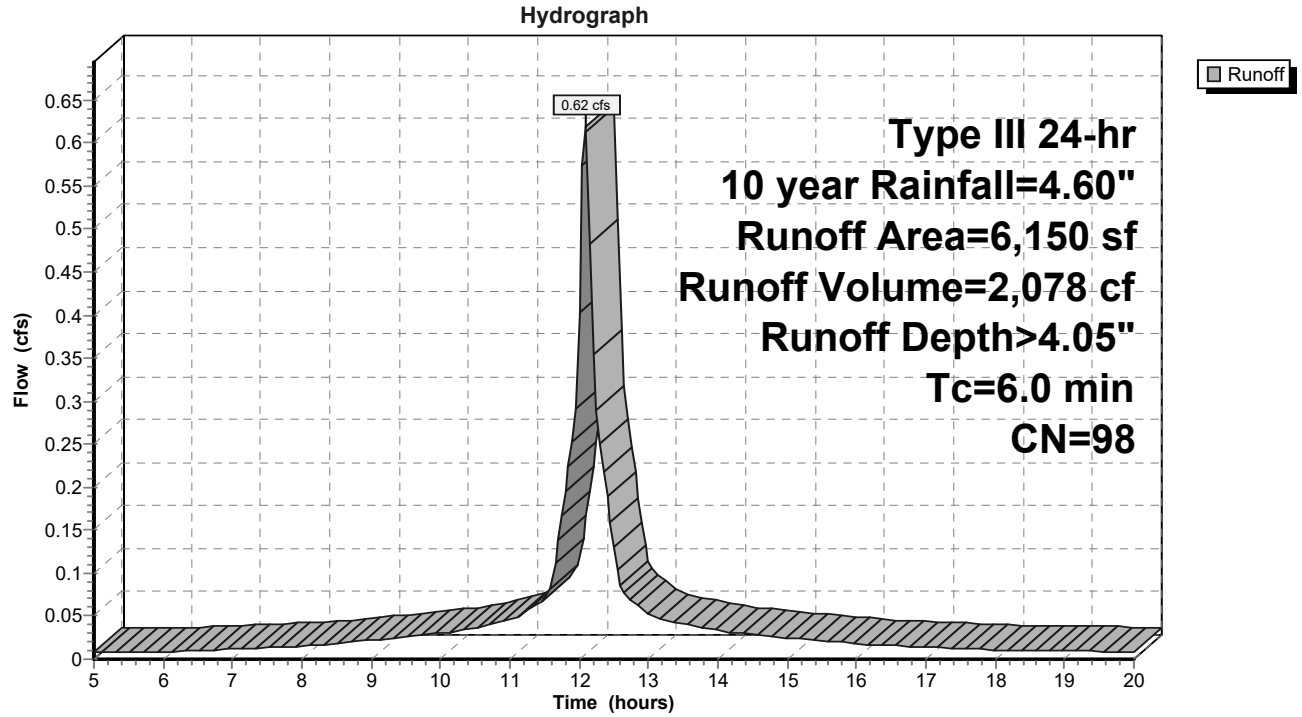
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 2,078 cf, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	6,150	98	existing P-lot
	6,150		100.00% Impervious Area

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

Subcatchment 5E: Existing Eagles P-Lot South



Summary for Pond 10P: Existing CB

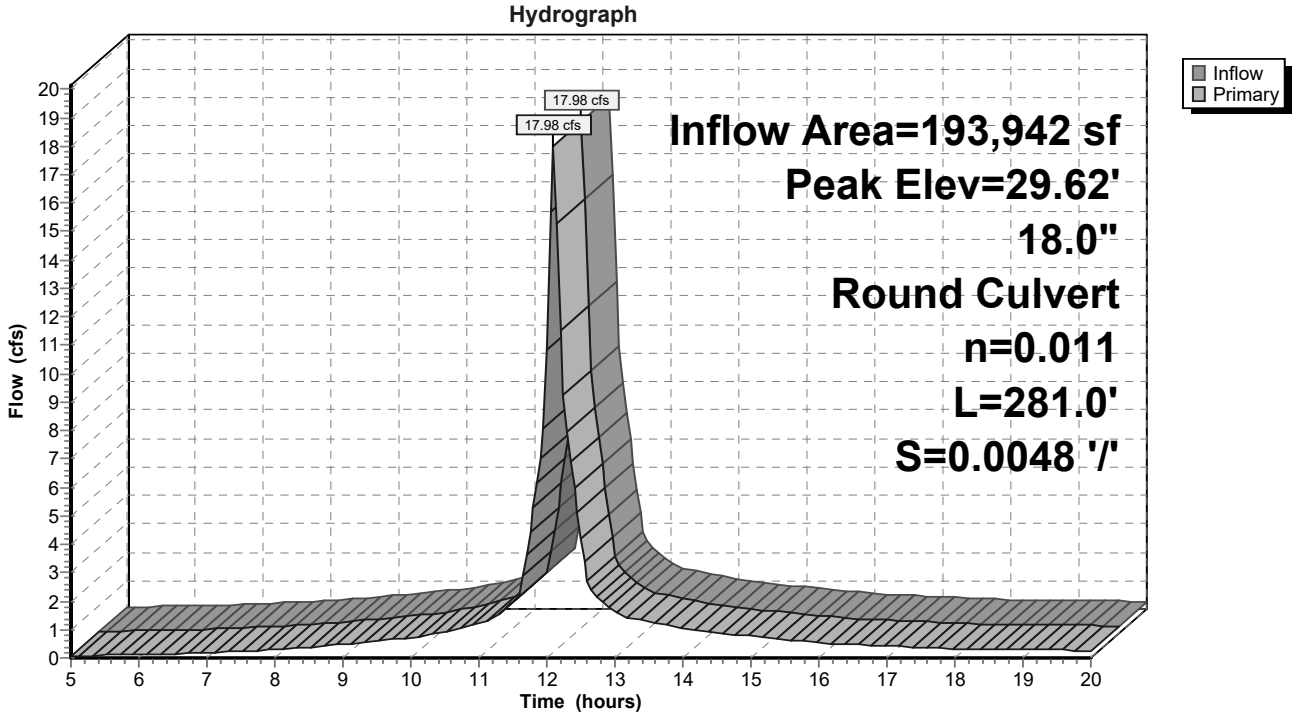
Inflow Area = 193,942 sf, 78.22% Impervious, Inflow Depth > 3.61" for 10 year event
Inflow = 17.98 cfs @ 12.10 hrs, Volume= 58,316 cf
Outflow = 17.98 cfs @ 12.10 hrs, Volume= 58,316 cf, Atten= 0%, Lag= 0.0 min
Primary = 17.98 cfs @ 12.10 hrs, Volume= 58,316 cf

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 29.62' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	20.50'	**18.0" Round Culvert** L= 281.0' Ke= 0.900 Inlet / Outlet Invert= 20.50' / 19.15' S= 0.0048 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.77 sf

Primary OutFlow Max=17.89 cfs @ 12.10 hrs HW=29.53' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 17.89 cfs @ 10.12 fps)

Pond 10P: Existing CB

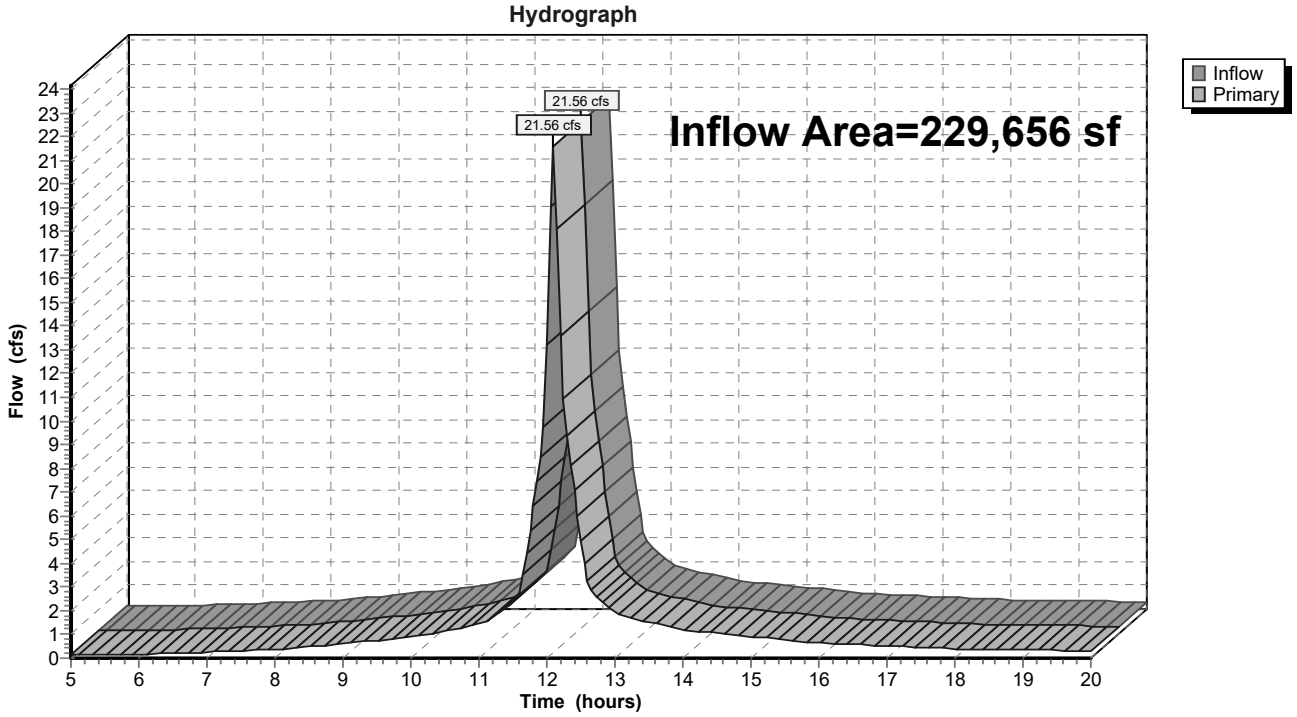


Summary for Link SP1: Existing 18" SD System

Inflow Area = 229,656 sf, 81.61% Impervious, Inflow Depth > 3.68" for 10 year event
Inflow = 21.56 cfs @ 12.10 hrs, Volume= 70,381 cf
Primary = 21.56 cfs @ 12.10 hrs, Volume= 70,381 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Existing 18" SD System

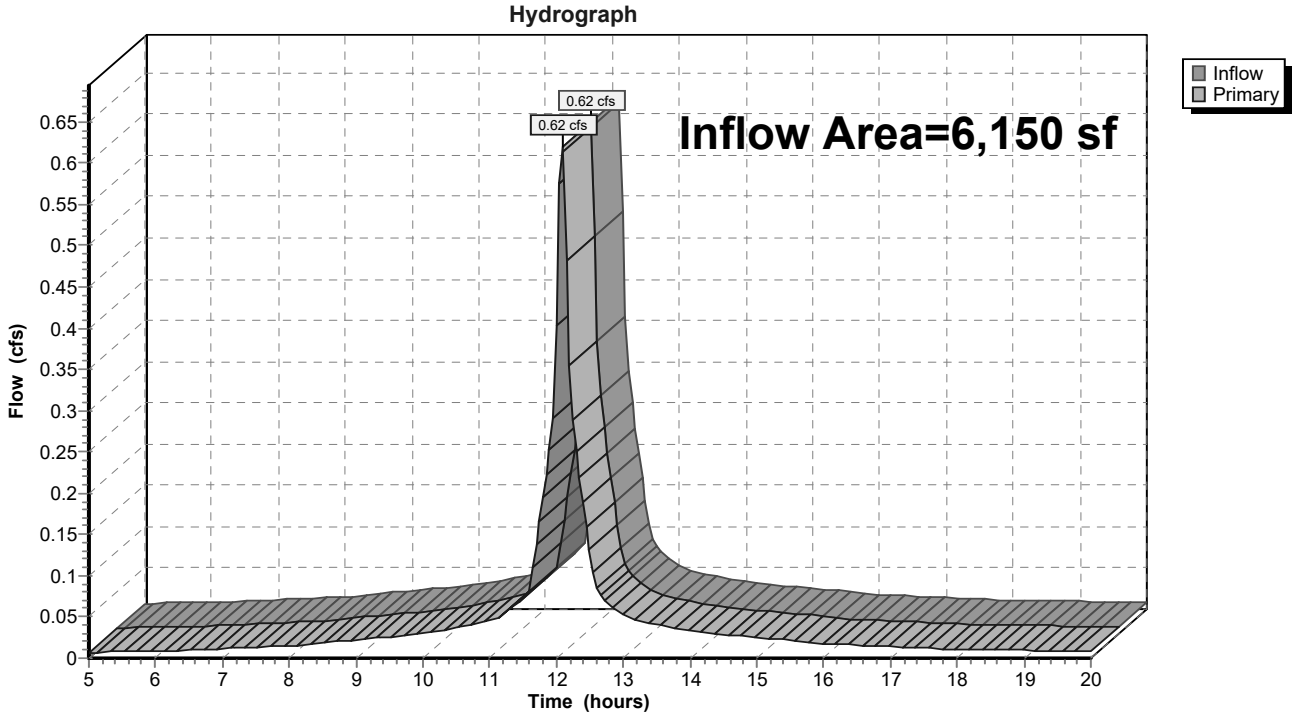


Summary for Link SP2: 30" Storm Drain

Inflow Area = 6,150 sf,100.00% Impervious, Inflow Depth > 4.05" for 10 year event
Inflow = 0.62 cfs @ 12.09 hrs, Volume= 2,078 cf
Primary = 0.62 cfs @ 12.09 hrs, Volume= 2,078 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: 30" Storm Drain



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1E: Eagles Parking Lot Runoff Area=25,516 sf 85.43% Impervious Runoff Depth>4.80"
Tc=6.0 min CN=94 Runoff=3.15 cfs 10,212 cf

Subcatchment2E: Existing 222 St. John Runoff Area=168,426 sf 77.13% Impervious Runoff Depth>4.70"
Flow Length=734' Tc=7.0 min CN=93 Runoff=20.05 cfs 66,005 cf

Subcatchment3E: Entrance Drive Runoff Area=9,847 sf 100.00% Impervious Runoff Depth>5.15"
Tc=6.0 min CN=98 Runoff=1.25 cfs 4,224 cf

Subcatchment4E: Union Station Runoff Area=25,867 sf 100.00% Impervious Runoff Depth>5.15"
Tc=6.0 min CN=98 Runoff=3.29 cfs 11,095 cf

Subcatchment5E: Existing Eagles P-Lot Runoff Area=6,150 sf 100.00% Impervious Runoff Depth>5.15"
Tc=6.0 min CN=98 Runoff=0.78 cfs 2,638 cf

Pond 10P: Existing CB Peak Elev=35.55' Inflow=23.18 cfs 76,217 cf
18.0" Round Culvert n=0.011 L=281.0' S=0.0048 '/' Outflow=23.18 cfs 76,217 cf

Link SP1: Existing 18" SD System Inflow=27.70 cfs 91,536 cf
Primary=27.70 cfs 91,536 cf

Link SP2: 30" Storm Drain Inflow=0.78 cfs 2,638 cf
Primary=0.78 cfs 2,638 cf

Total Runoff Area = 235,806 sf Runoff Volume = 94,174 cf Average Runoff Depth = 4.79"
17.92% Pervious = 42,245 sf 82.08% Impervious = 193,561 sf

Summary for Subcatchment 1E: Eagles Parking Lot

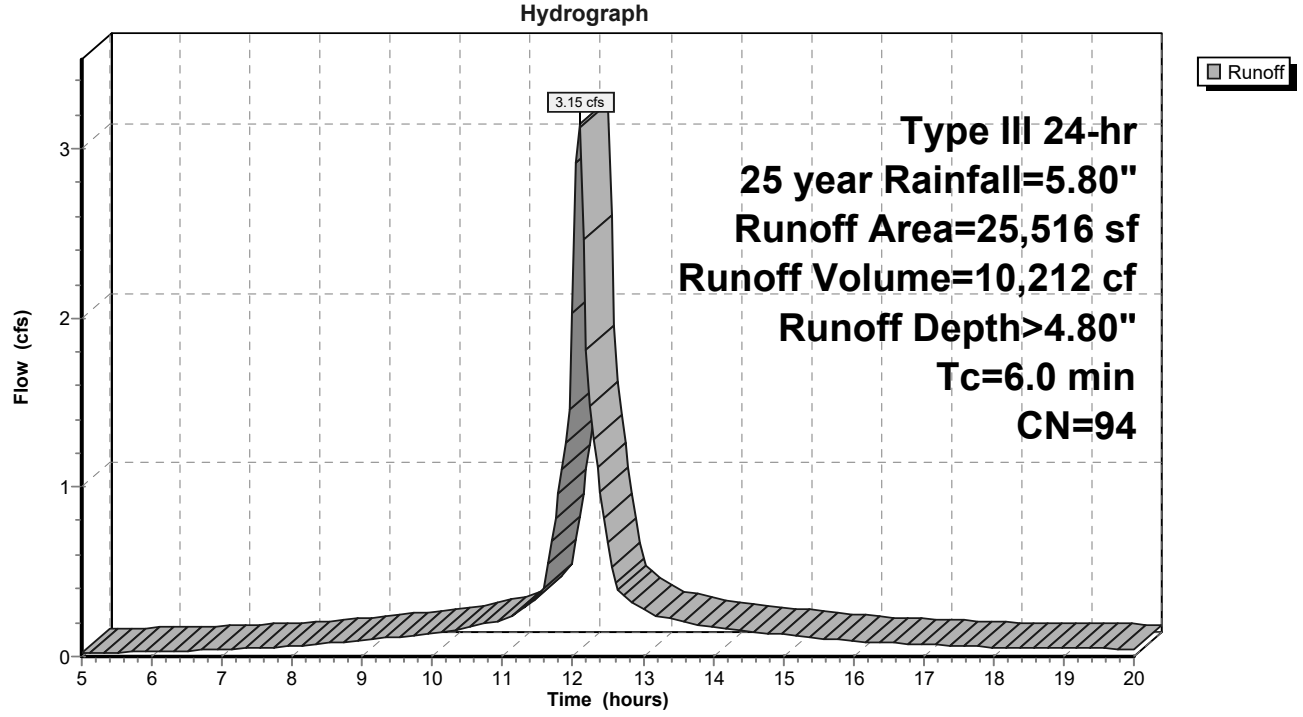
Runoff = 3.15 cfs @ 12.09 hrs, Volume= 10,212 cf, Depth> 4.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
	3,718	70	Brush, Fair, HSG C
*	21,798	98	parking lot
	25,516	94	Weighted Average
	3,718		14.57% Pervious Area
	21,798		85.43% Impervious Area

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

Subcatchment 1E: Eagles Parking Lot



Summary for Subcatchment 2E: Existing 222 St. John St. Parking Lot

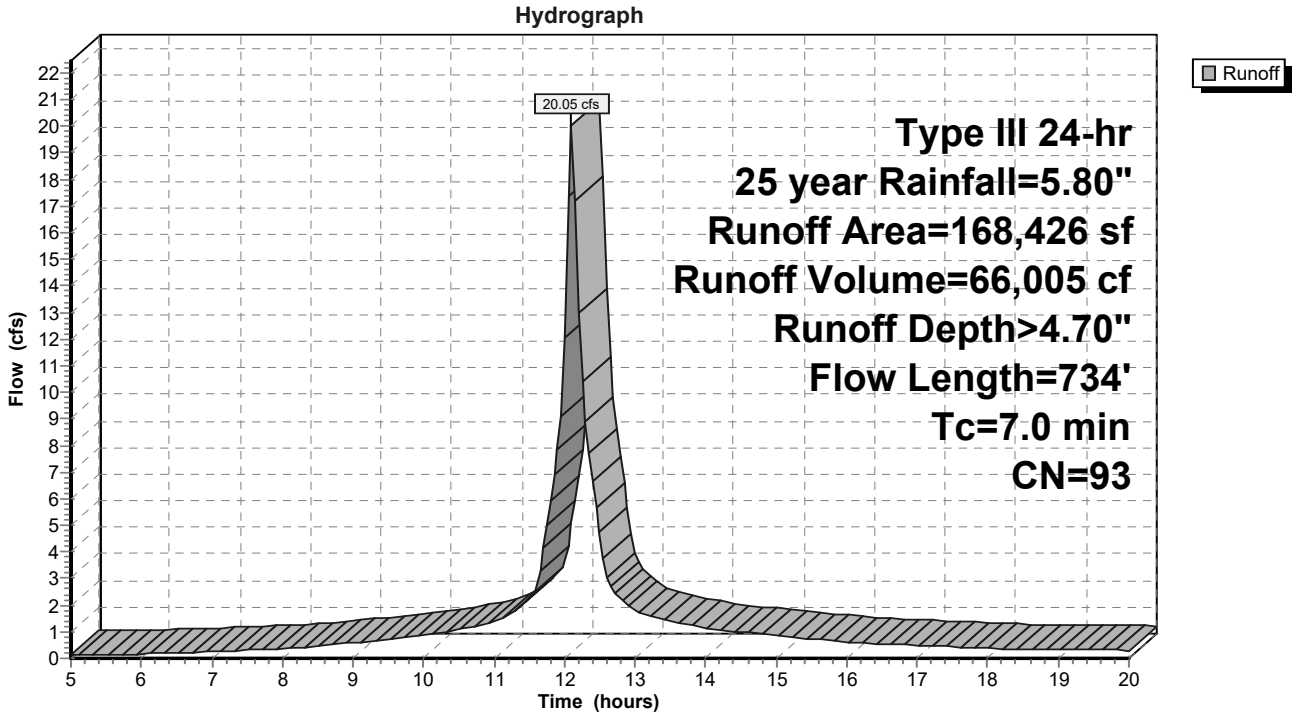
Runoff = 20.05 cfs @ 12.10 hrs, Volume= 66,005 cf, Depth> 4.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 year Rainfall=5.80"

Area (sf)	CN	Description
129,899	98	Paved parking, HSG B
18,343	79	50-75% Grass cover, Fair, HSG C
20,184	76	Woods/grass comb., Fair, HSG C
168,426	93	Weighted Average
38,527		22.87% Pervious Area
129,899		77.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	100	0.0044	0.74		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.8	65	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	179	0.0009	1.47	1.16	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.7	105	0.0029	2.65	2.08	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
1.2	285	0.0047	3.91	4.80	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
7.0	734	Total			

Subcatchment 2E: Existing 222 St. John St. Parking Lot



Summary for Subcatchment 3E: Entrance Drive

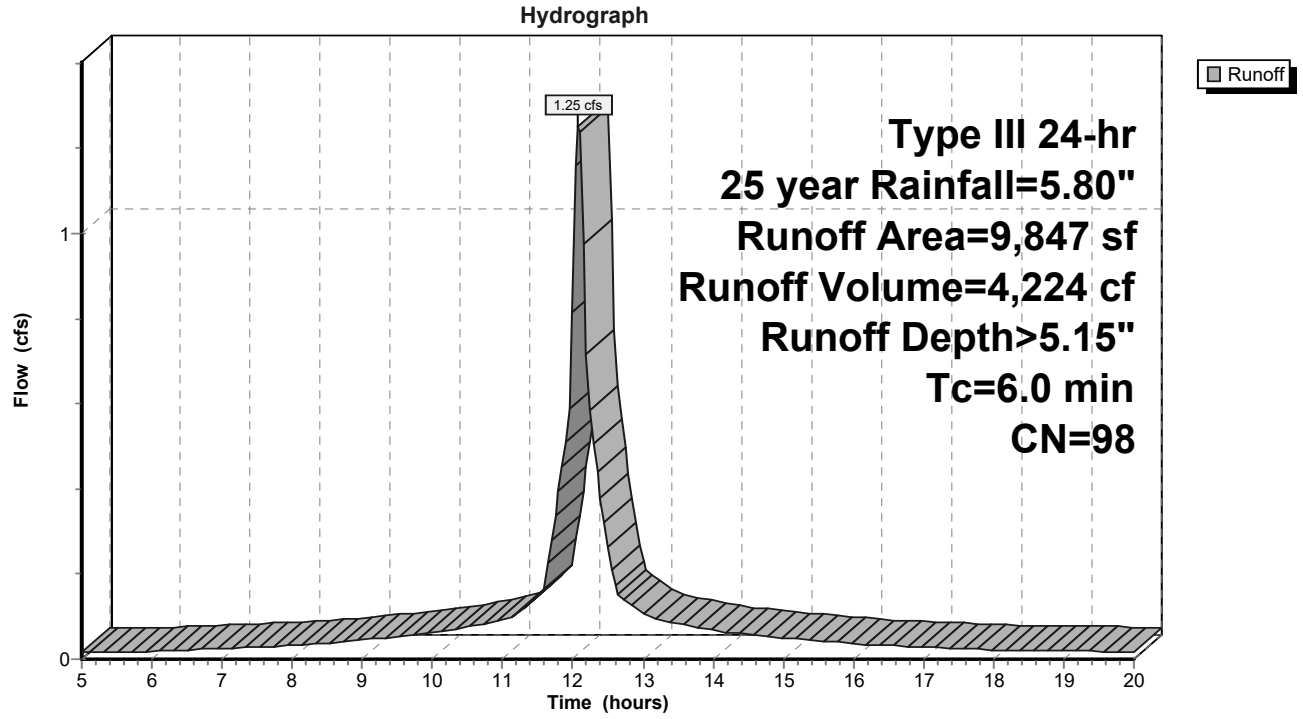
Runoff = 1.25 cfs @ 12.09 hrs, Volume= 4,224 cf, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	9,847	98	
	9,847		100.00% Impervious Area

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

Subcatchment 3E: Entrance Drive



Summary for Subcatchment 4E: Union Station

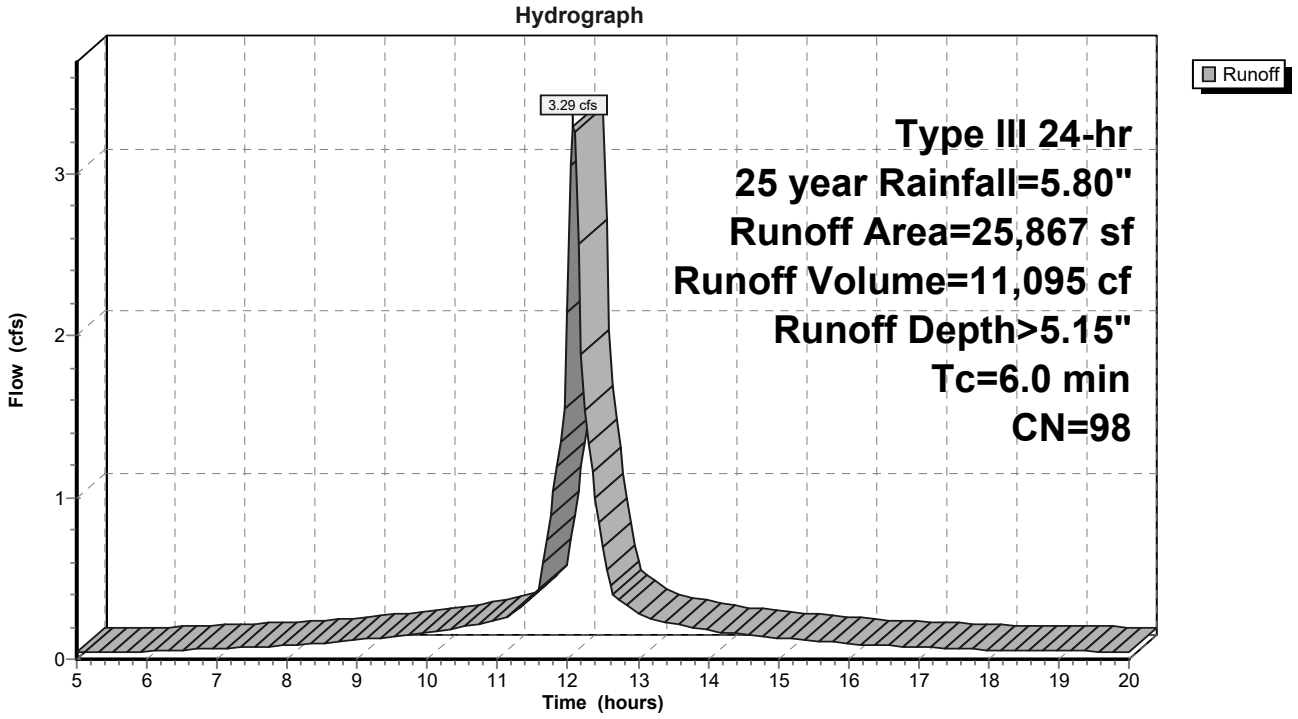
Runoff = 3.29 cfs @ 12.09 hrs, Volume= 11,095 cf, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	25,867	98	
	25,867		100.00% Impervious Area

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

Subcatchment 4E: Union Station



Summary for Subcatchment 5E: Existing Eagles P-Lot South

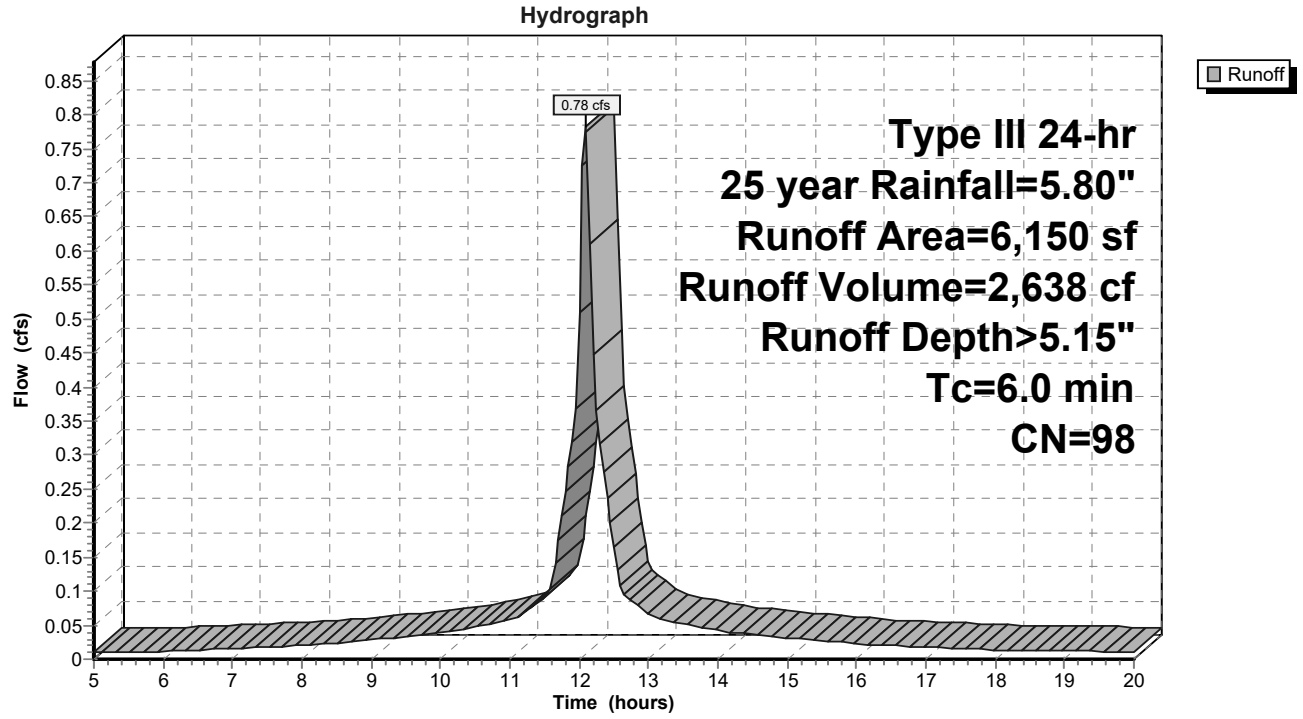
Runoff = 0.78 cfs @ 12.09 hrs, Volume= 2,638 cf, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	6,150	98	existing P-lot
	6,150		100.00% Impervious Area

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

Subcatchment 5E: Existing Eagles P-Lot South



Summary for Pond 10P: Existing CB

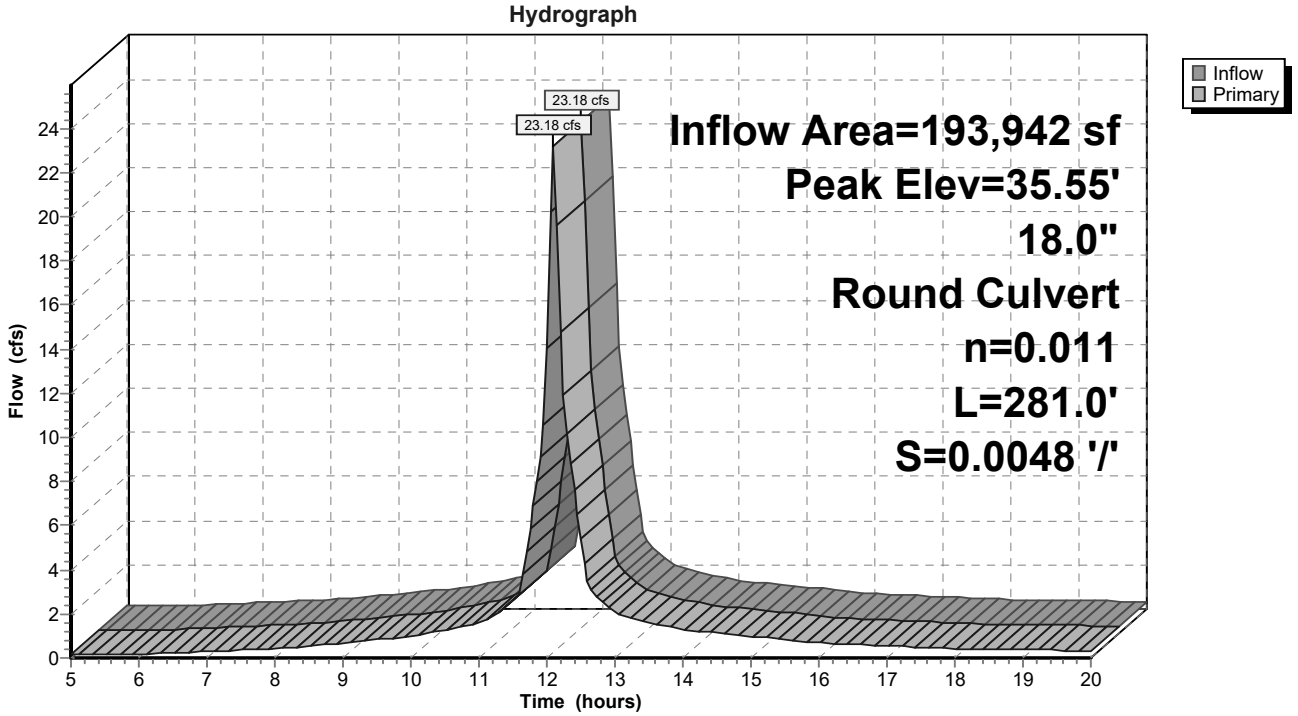
Inflow Area = 193,942 sf, 78.22% Impervious, Inflow Depth > 4.72" for 25 year event
Inflow = 23.18 cfs @ 12.10 hrs, Volume= 76,217 cf
Outflow = 23.18 cfs @ 12.10 hrs, Volume= 76,217 cf, Atten= 0%, Lag= 0.0 min
Primary = 23.18 cfs @ 12.10 hrs, Volume= 76,217 cf

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 35.55' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	20.50'	**18.0" Round Culvert** L= 281.0' Ke= 0.900 Inlet / Outlet Invert= 20.50' / 19.15' S= 0.0048 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.77 sf

Primary OutFlow Max=23.04 cfs @ 12.10 hrs HW=35.37' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 23.04 cfs @ 13.04 fps)

Pond 10P: Existing CB

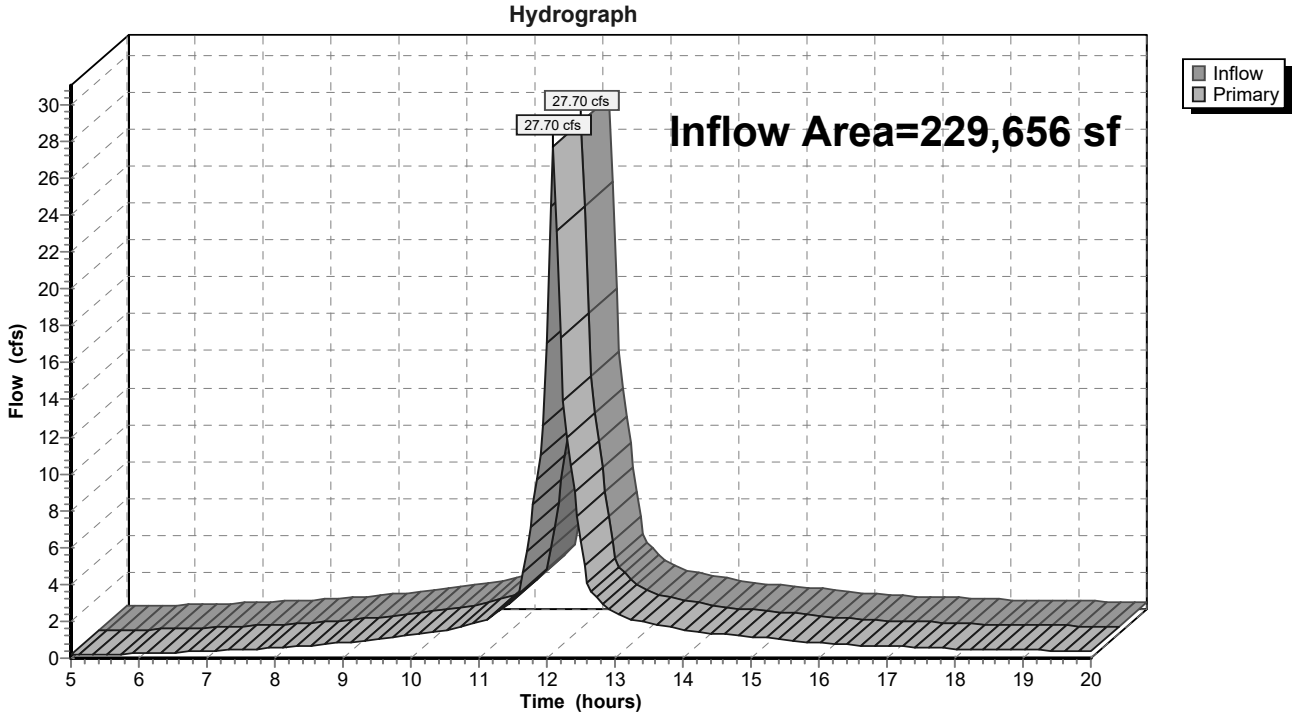


Summary for Link SP1: Existing 18" SD System

Inflow Area = 229,656 sf, 81.61% Impervious, Inflow Depth > 4.78" for 25 year event
Inflow = 27.70 cfs @ 12.10 hrs, Volume= 91,536 cf
Primary = 27.70 cfs @ 12.10 hrs, Volume= 91,536 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Existing 18" SD System

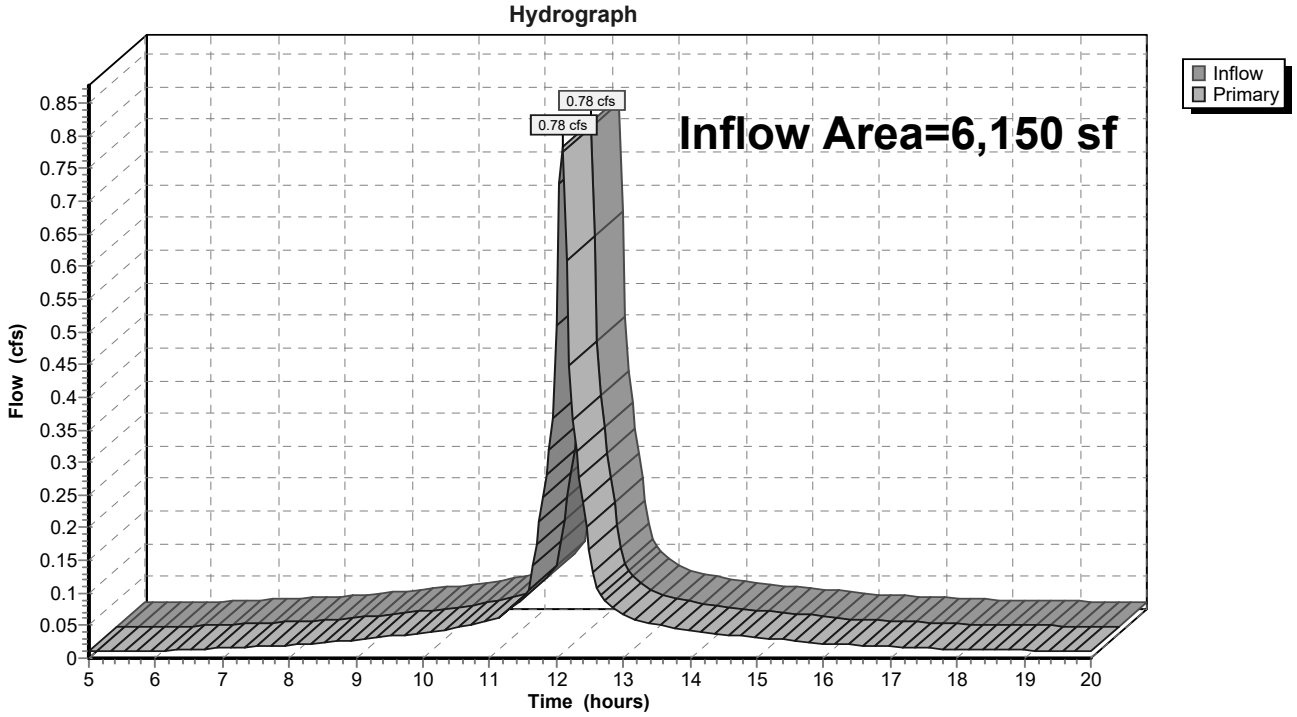


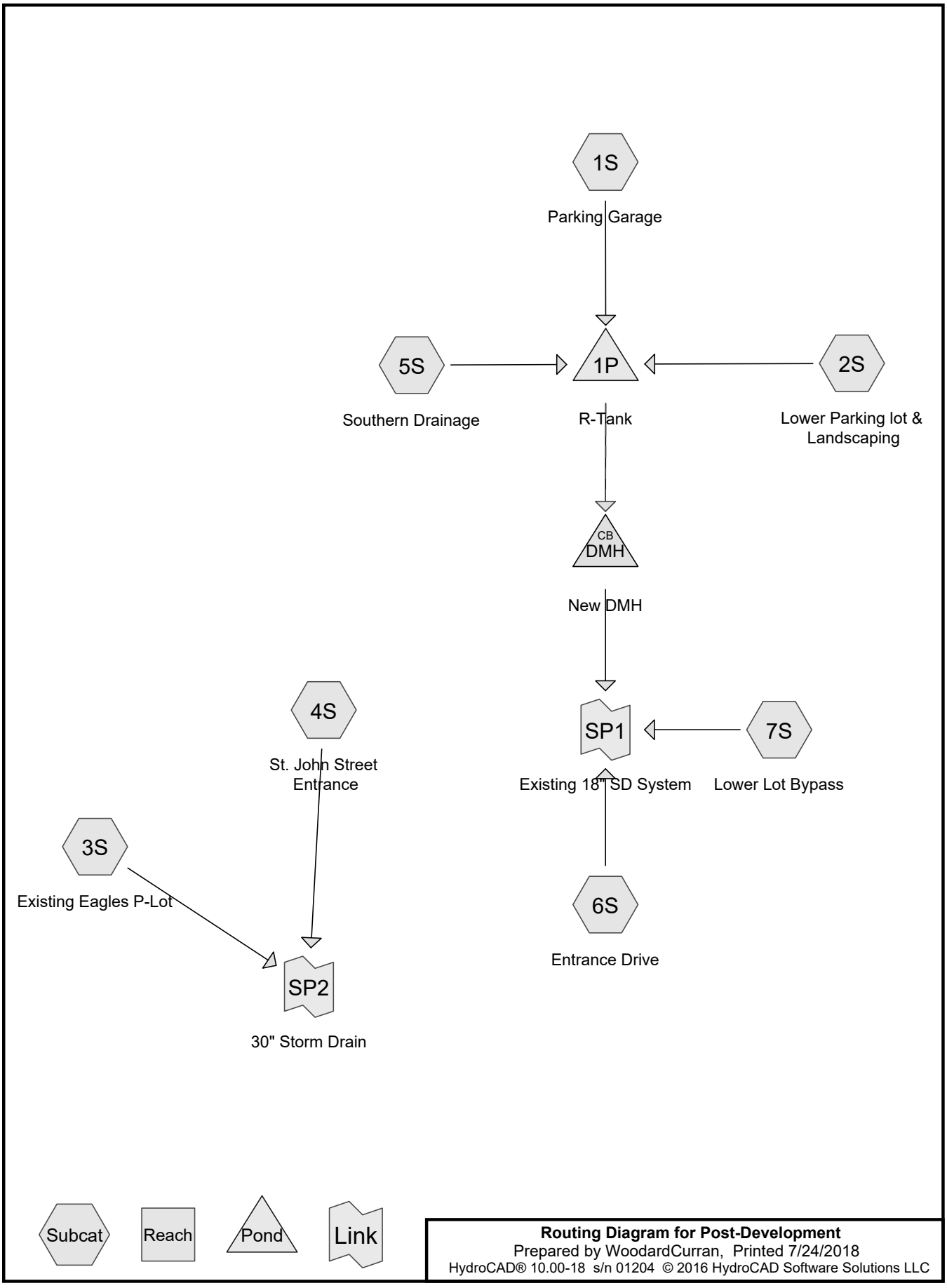
Summary for Link SP2: 30" Storm Drain

Inflow Area = 6,150 sf,100.00% Impervious, Inflow Depth > 5.15" for 25 year event
Inflow = 0.78 cfs @ 12.09 hrs, Volume= 2,638 cf
Primary = 0.78 cfs @ 12.09 hrs, Volume= 2,638 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: 30" Storm Drain





Routing Diagram for Post-Development
Prepared by WoodardCurran, Printed 7/24/2018
HydroCAD® 10.00-18 s/n 01204 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
513	84	50-75% Grass cover, Fair, HSG D (6S)
20,799	74	>75% Grass cover, Good, HSG C (4S)
20,397	80	>75% Grass cover, Good, HSG D (2S)
11,050	89	Crushed Stone (5S)
591	98	Eagles lot p-lot (5S)
28,534	98	Entrance Drive & Walks (7S)
9,891	98	Entrance Road (6S)
483	79	Landscaped area (7S)
9,319	98	New entrane drive and walks (4S)
32,944	98	Paved Parking Lot (2S)
89,825	98	Paved parking, HSG B (1S)
2,186	98	Roofs, HSG B (1S)
3,715	98	Sidewalk (5S)
213	89	eagles lot stone (5S)
5,477	98	existing P-lot (3S)
235,937	**94**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
92,011	HSG B	1S
20,799	HSG C	4S
20,910	HSG D	2S, 6S
102,217	Other	2S, 3S, 4S, 5S, 6S, 7S
235,937		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	0	513	0	513	50-75% Grass cover, Fair
0	0	20,799	20,397	0	41,196	>75% Grass cover, Good
0	0	0	0	11,050	11,050	Crushed Stone
0	0	0	0	591	591	Eagles lot p-lot
0	0	0	0	28,534	28,534	Entrance Drive & Walks
0	0	0	0	9,891	9,891	Entrance Road
0	0	0	0	483	483	Landscaped area
0	0	0	0	9,319	9,319	New entrane drive and walks
0	0	0	0	32,944	32,944	Paved Parking Lot
0	89,825	0	0	0	89,825	Paved parking
0	2,186	0	0	0	2,186	Roofs
0	0	0	0	3,715	3,715	Sidewalk
0	0	0	0	213	213	eagles lot stone
0	0	0	0	5,477	5,477	existing P-lot
0	**92,011**	**20,799**	**20,910**	**102,217**	**235,937**	**TOTAL AREA**

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	19.58	19.58	15.0	0.0000	0.012	15.0	0.0	0.0
2	1P	21.13	21.00	15.0	0.0087	0.012	15.0	0.0	0.0
3	DMH	19.25	19.15	40.0	0.0025	0.013	18.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Parking Garage Runoff Area=92,011 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=6.35 cfs 21,990 cf

Subcatchment2S: Lower Parking lot & Runoff Area=53,341 sf 61.76% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=91 Runoff=3.06 cfs 9,622 cf

Subcatchment3S: Existing Eagles P-Lot Runoff Area=5,477 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.38 cfs 1,309 cf

Subcatchment4S: St. John Street Entrance Runoff Area=30,118 sf 30.94% Impervious Runoff Depth=1.39"
Tc=6.0 min CN=81 Runoff=1.12 cfs 3,491 cf

Subcatchment5S: Southern Drainage Runoff Area=15,569 sf 27.66% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=91 Runoff=0.89 cfs 2,808 cf

Subcatchment6S: Entrance Drive Runoff Area=10,404 sf 95.07% Impervious Runoff Depth=2.76"
Tc=5.0 min CN=97 Runoff=0.73 cfs 2,391 cf

Subcatchment7S: Lower Lot Bypass Runoff Area=29,017 sf 98.34% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=2.00 cfs 6,935 cf

Pond 1P: R-Tank Peak Elev=21.87' Storage=17,455 cf Inflow=10.31 cfs 34,420 cf
Primary=0.03 cfs 4,370 cf Secondary=3.48 cfs 20,406 cf Outflow=3.51 cfs 24,776 cf

Pond DMH: New DMH Peak Elev=20.45' Inflow=3.51 cfs 24,776 cf
18.0" Round Culvert n=0.013 L=40.0' S=0.0025 '/' Outflow=3.51 cfs 24,776 cf

Link SP1: Existing 18" SD System Inflow=4.49 cfs 34,102 cf
Primary=4.49 cfs 34,102 cf

Link SP2: 30" Storm Drain Inflow=1.50 cfs 4,800 cf
Primary=1.50 cfs 4,800 cf

Total Runoff Area = 235,937 sf Runoff Volume = 48,545 cf Average Runoff Depth = 2.47"
22.66% Pervious = 53,455 sf 77.34% Impervious = 182,482 sf

Summary for Subcatchment 1S: Parking Garage

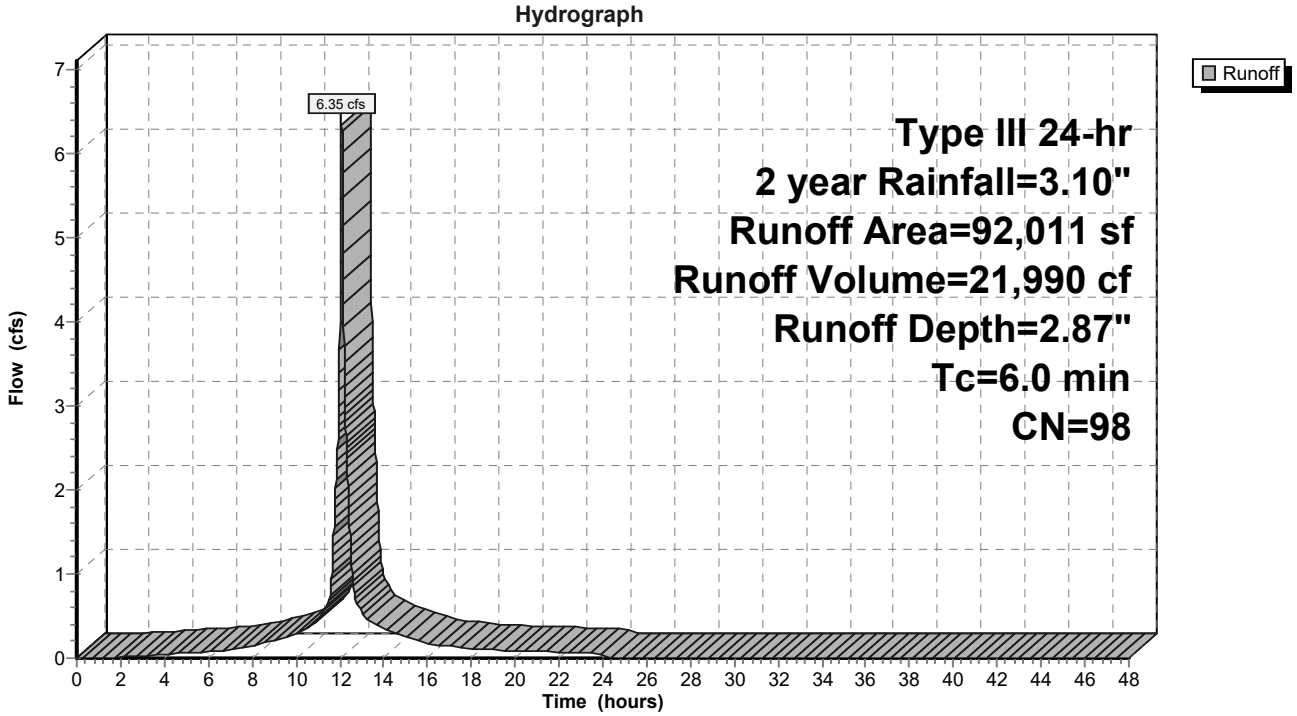
Runoff = 6.35 cfs @ 12.08 hrs, Volume= 21,990 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.10"

Area (sf)	CN	Description
89,825	98	Paved parking, HSG B
2,186	98	Roofs, HSG B
92,011	98	Weighted Average
92,011		100.00% Impervious Area

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

Subcatchment 1S: Parking Garage



Summary for Subcatchment 2S: Lower Parking lot & Landscaping

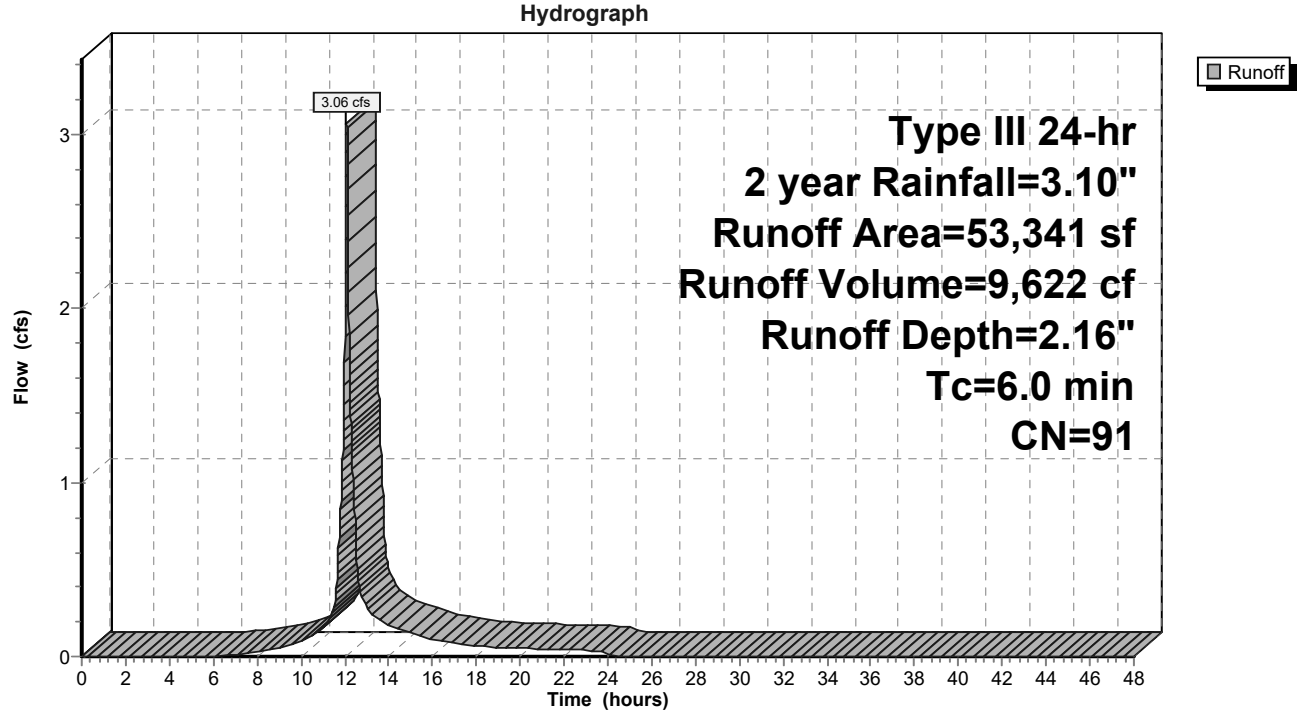
Runoff = 3.06 cfs @ 12.09 hrs, Volume= 9,622 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	32,944	98	Paved Parking Lot
	20,397	80	>75% Grass cover, Good, HSG D
	53,341	91	Weighted Average
	20,397		38.24% Pervious Area
	32,944		61.76% Impervious Area

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

Subcatchment 2S: Lower Parking lot & Landscaping



Summary for Subcatchment 3S: Existing Eagles P-Lot

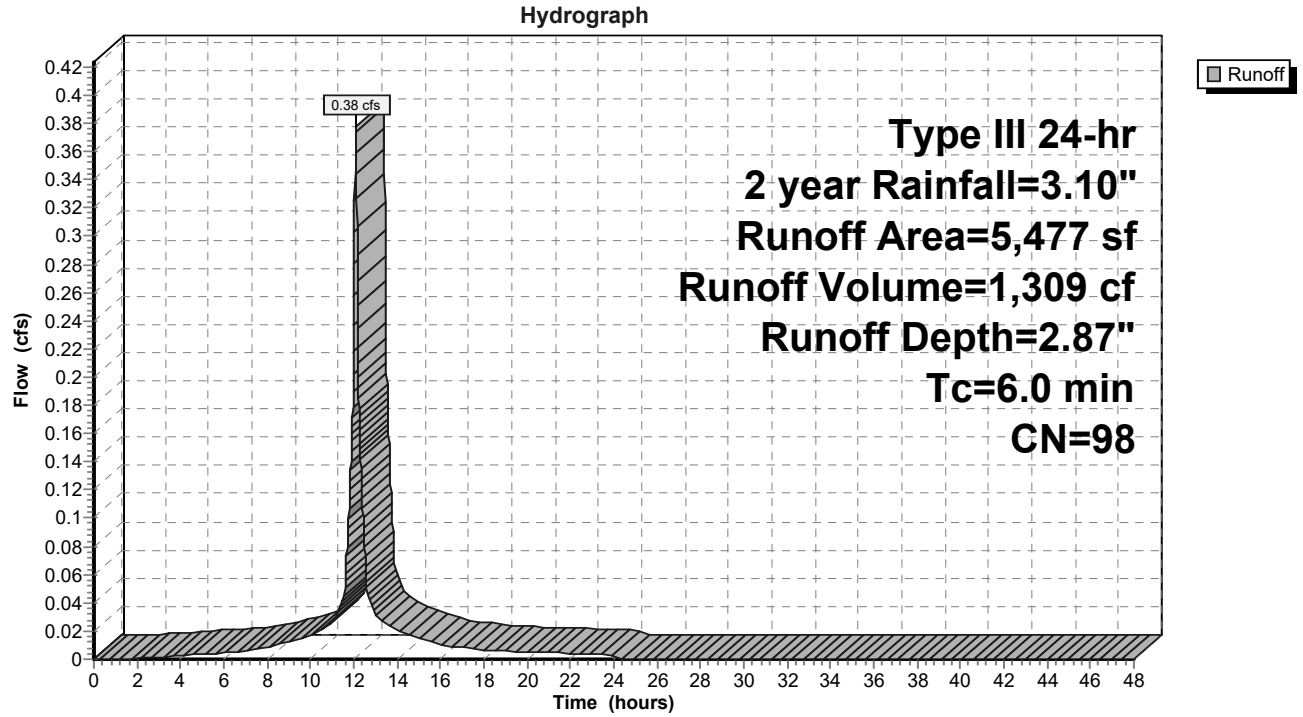
Runoff = 0.38 cfs @ 12.08 hrs, Volume= 1,309 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	5,477	98	existing P-lot
	5,477		100.00% Impervious Area

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

Subcatchment 3S: Existing Eagles P-Lot



Summary for Subcatchment 4S: St. John Street Entrance

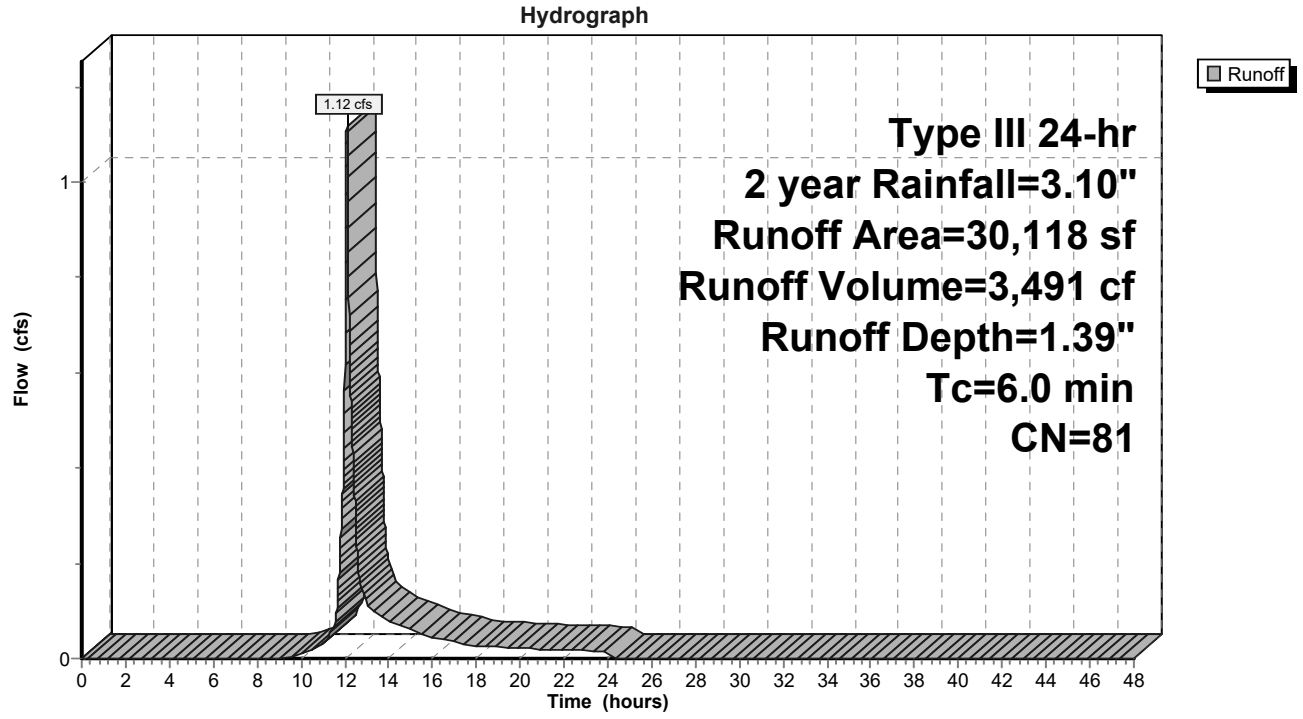
Runoff = 1.12 cfs @ 12.09 hrs, Volume= 3,491 cf, Depth= 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	9,319	98	New entrane drive and walks
	20,799	74	>75% Grass cover, Good, HSG C
	30,118	81	Weighted Average
	20,799		69.06% Pervious Area
	9,319		30.94% Impervious Area

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

Subcatchment 4S: St. John Street Entrance



Summary for Subcatchment 5S: Southern Drainage

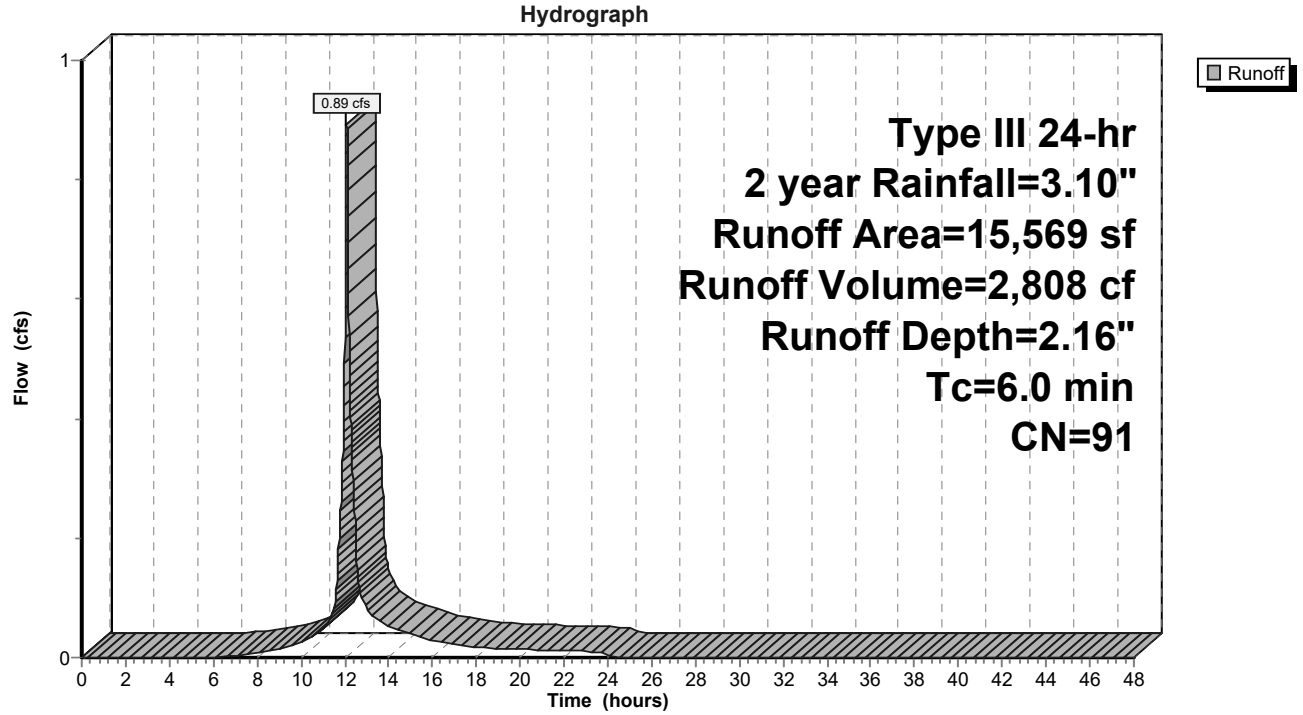
Runoff = 0.89 cfs @ 12.09 hrs, Volume= 2,808 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	11,050	89	Crushed Stone
*	3,715	98	Sidewalk
*	591	98	Eagles lot p-lot
*	213	89	eagles lot stone
	15,569	91	Weighted Average
	11,263		72.34% Pervious Area
	4,306		27.66% Impervious Area

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

Subcatchment 5S: Southern Drainage



Summary for Subcatchment 6S: Entrance Drive

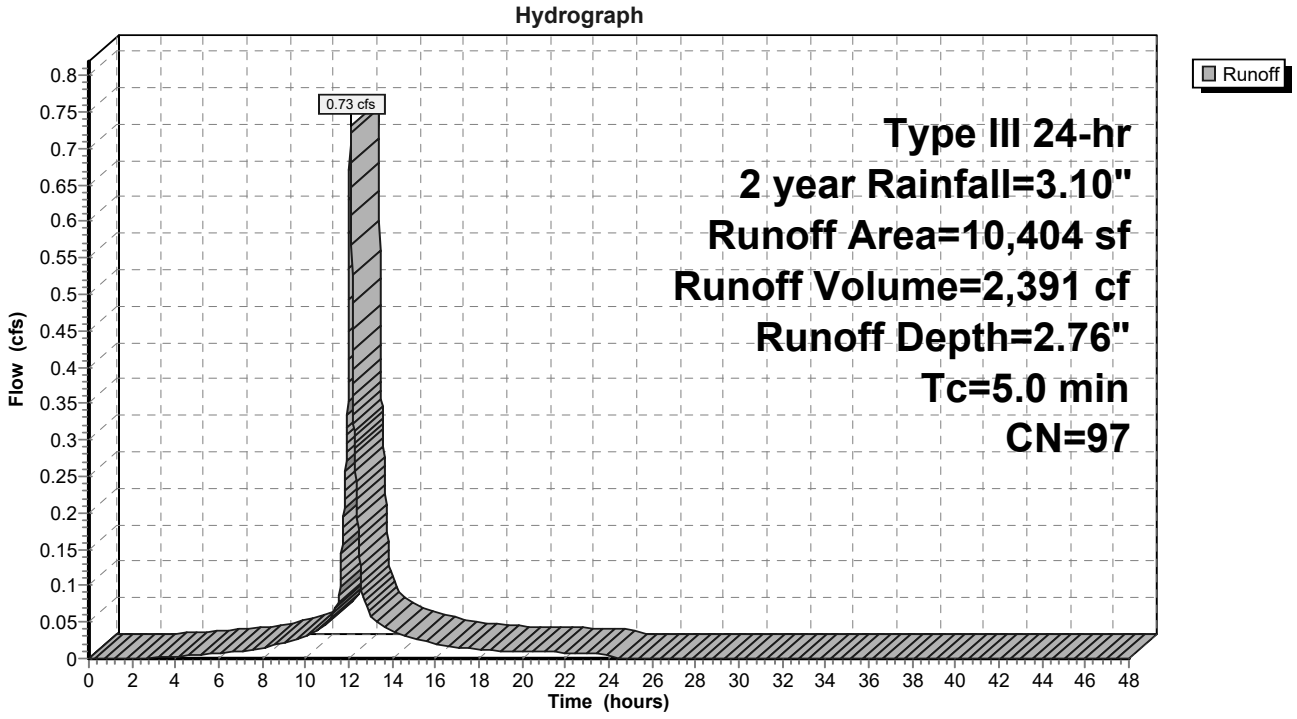
Runoff = 0.73 cfs @ 12.07 hrs, Volume= 2,391 cf, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	9,891	98	Entrance Road
	513	84	50-75% Grass cover, Fair, HSG D
	10,404	97	Weighted Average
	513		4.93% Pervious Area
	9,891		95.07% Impervious Area

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

Subcatchment 6S: Entrance Drive



Summary for Subcatchment 7S: Lower Lot Bypass

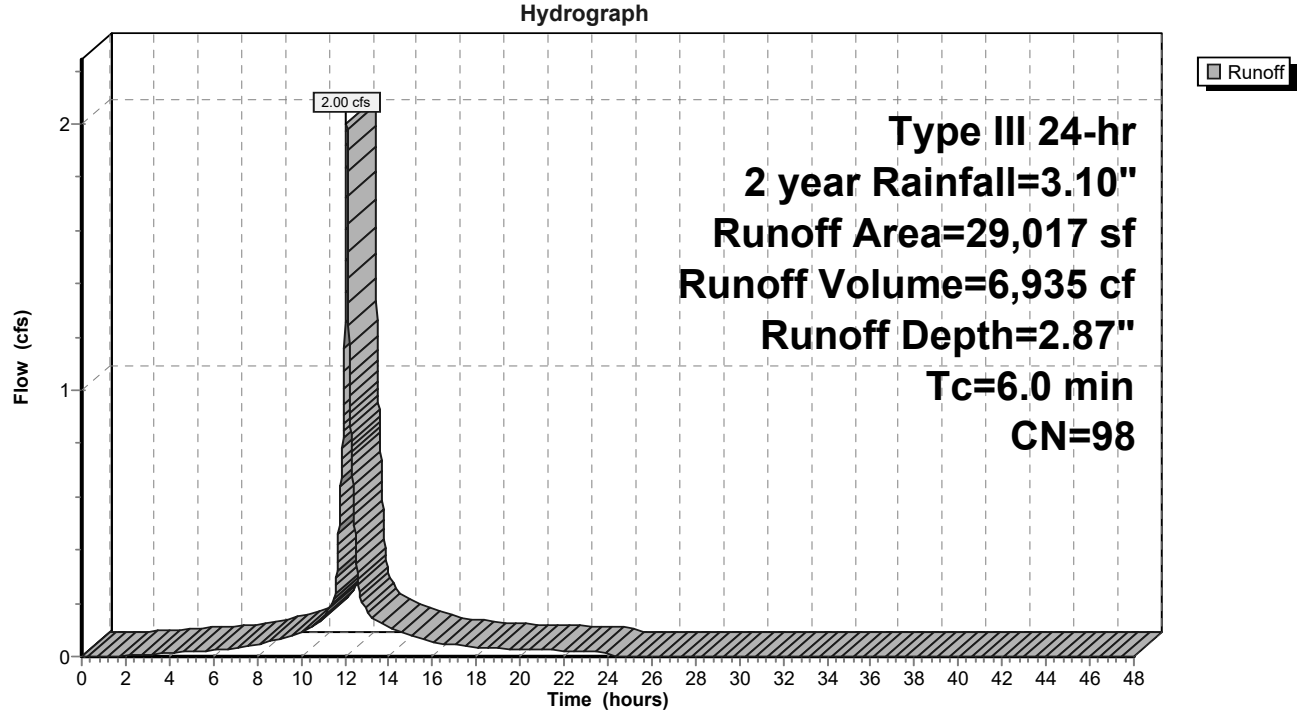
Runoff = 2.00 cfs @ 12.08 hrs, Volume= 6,935 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.10"

	Area (sf)	CN	Description
*	28,534	98	Entrance Drive & Walks
*	483	79	Landscaped area
	29,017	98	Weighted Average
	483		1.66% Pervious Area
	28,534		98.34% Impervious Area

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

Subcatchment 7S: Lower Lot Bypass



Summary for Pond 1P: R-Tank

Inflow Area = 160,921 sf, 80.33% Impervious, Inflow Depth = 2.57" for 2 year event
Inflow = 10.31 cfs @ 12.08 hrs, Volume= 34,420 cf
Outflow = 3.51 cfs @ 12.36 hrs, Volume= 24,776 cf, Atten= 66%, Lag= 16.7 min
Primary = 0.03 cfs @ 15.87 hrs, Volume= 4,370 cf
Secondary = 3.48 cfs @ 12.36 hrs, Volume= 20,406 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 21.87' @ 12.36 hrs Surf.Area= 8,682 sf Storage= 17,455 cf

Plug-Flow detention time= 344.8 min calculated for 24,776 cf (72% of inflow)
Center-of-Mass det. time= 253.8 min (1,027.7 - 773.9)

Volume	Invert	Avail.Storage	Storage Description
#1	19.58'	4,733 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 33,165 cf Overall - 21,333 cf Embedded = 11,832 cf x 40.0% Voids
#2	19.58'	20,267 cf	**R-Tank Modules (Prismatic)** Listed below (Recalc) Inside #1 21,333 cf Overall x 95.0% Voids
		24,999 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.58	8,682	0	0
23.40	8,682	33,165	33,165

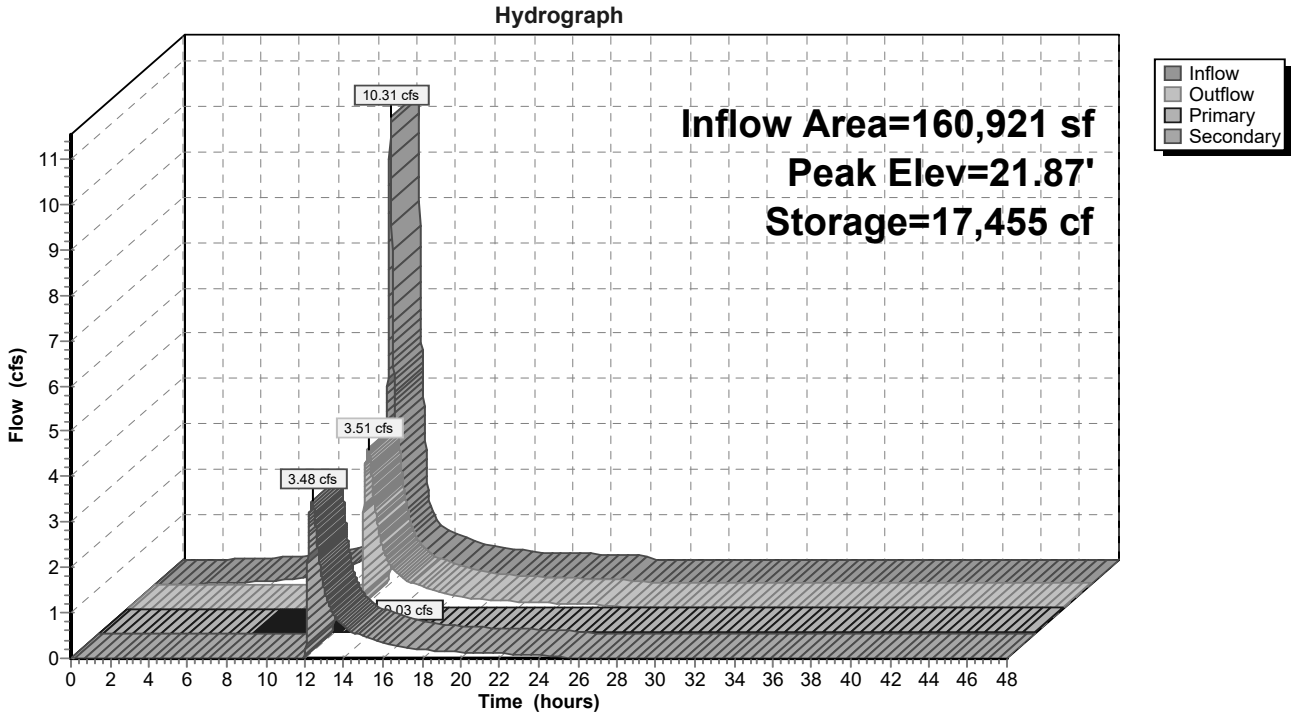
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.58	7,565	0	0
22.40	7,565	21,333	21,333

Device	Routing	Invert	Outlet Devices
#1	Primary	19.58'	**15.0" Round Culvert** L= 15.0' Ke= 0.500 Inlet / Outlet Invert= 19.58' / 19.58' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	19.58'	**1.0" Vert. Orifice/Grate** C= 0.600
#3	Device 2	19.75'	**1.7" Vert. Orifice/Grate** C= 0.600
#4	Secondary	21.13'	**15.0" Round Culvert X 2.00** L= 15.0' Ke= 0.500 Inlet / Outlet Invert= 21.13' / 21.00' S= 0.0087 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.03 cfs @ 15.87 hrs HW=21.34' TW=19.62' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 0.03 cfs of 5.25 cfs potential flow)
↑└**2=Orifice/Grate** (Orifice Controls 0.03 cfs @ 6.31 fps)
↑└**3=Orifice/Grate** (Passes 0.03 cfs of 0.09 cfs potential flow)

Secondary OutFlow Max=3.48 cfs @ 12.36 hrs HW=21.87' TW=20.45' (Dynamic Tailwater)
↑└**4=Culvert** (Barrel Controls 3.48 cfs @ 3.32 fps)

Pond 1P: R-Tank



Summary for Pond DMH: New DMH

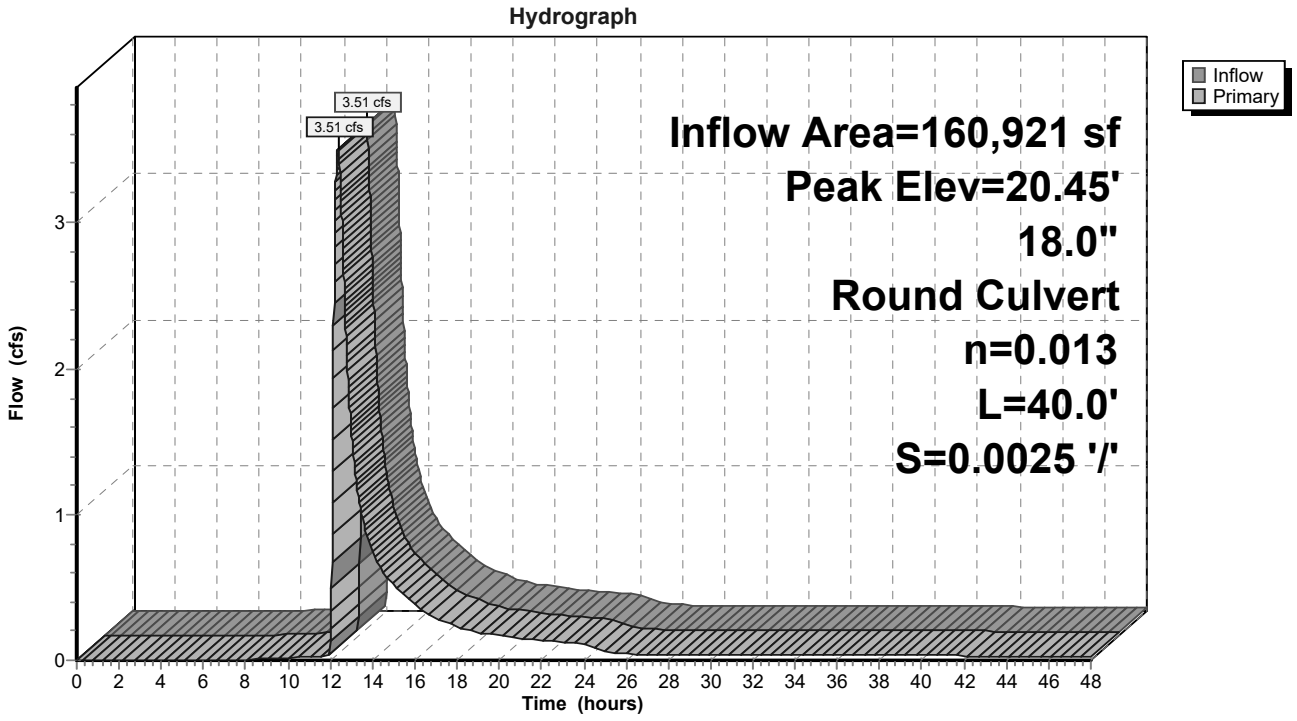
Inflow Area = 160,921 sf, 80.33% Impervious, Inflow Depth > 1.85" for 2 year event
Inflow = 3.51 cfs @ 12.36 hrs, Volume= 24,776 cf
Outflow = 3.51 cfs @ 12.36 hrs, Volume= 24,776 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.51 cfs @ 12.36 hrs, Volume= 24,776 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 20.45' @ 12.36 hrs
Flood Elev= 26.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.25'	**18.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.25' / 19.15' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.51 cfs @ 12.36 hrs HW=20.45' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 3.51 cfs @ 3.18 fps)

Pond DMH: New DMH

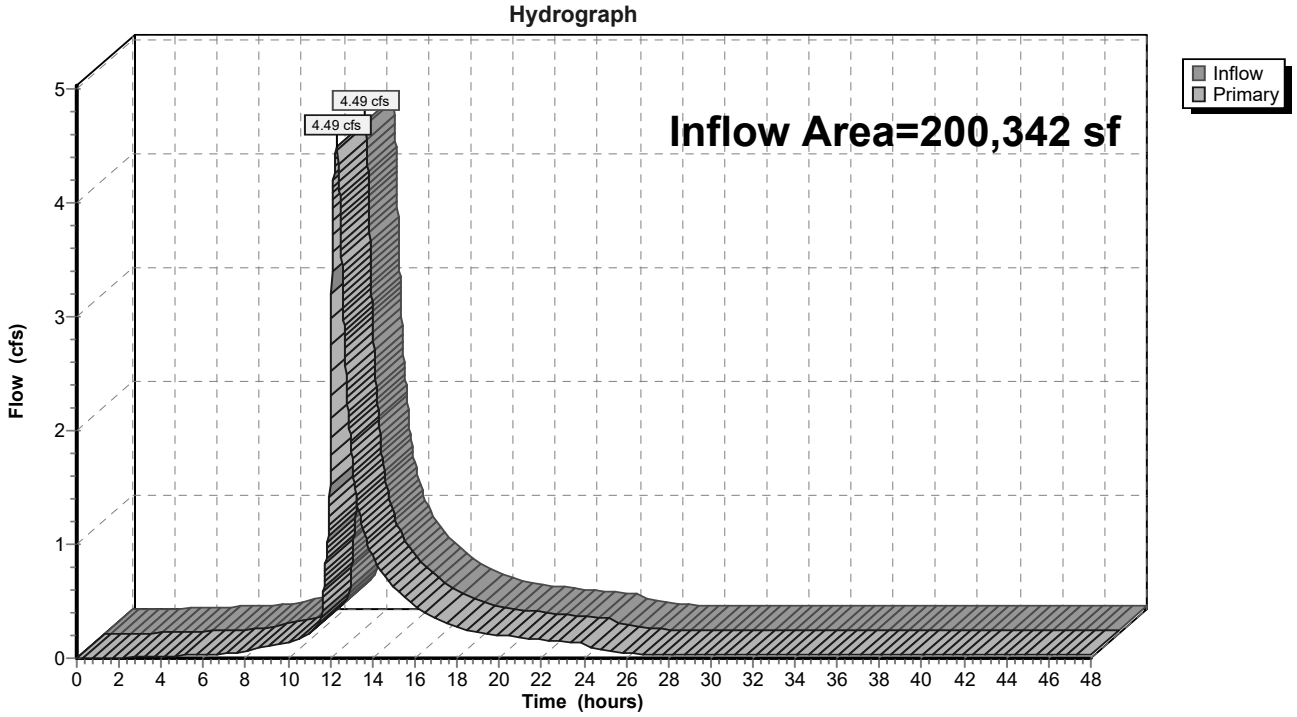


Summary for Link SP1: Existing 18" SD System

Inflow Area = 200,342 sf, 83.70% Impervious, Inflow Depth > 2.04" for 2 year event
Inflow = 4.49 cfs @ 12.30 hrs, Volume= 34,102 cf
Primary = 4.49 cfs @ 12.30 hrs, Volume= 34,102 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link SP1: Existing 18" SD System

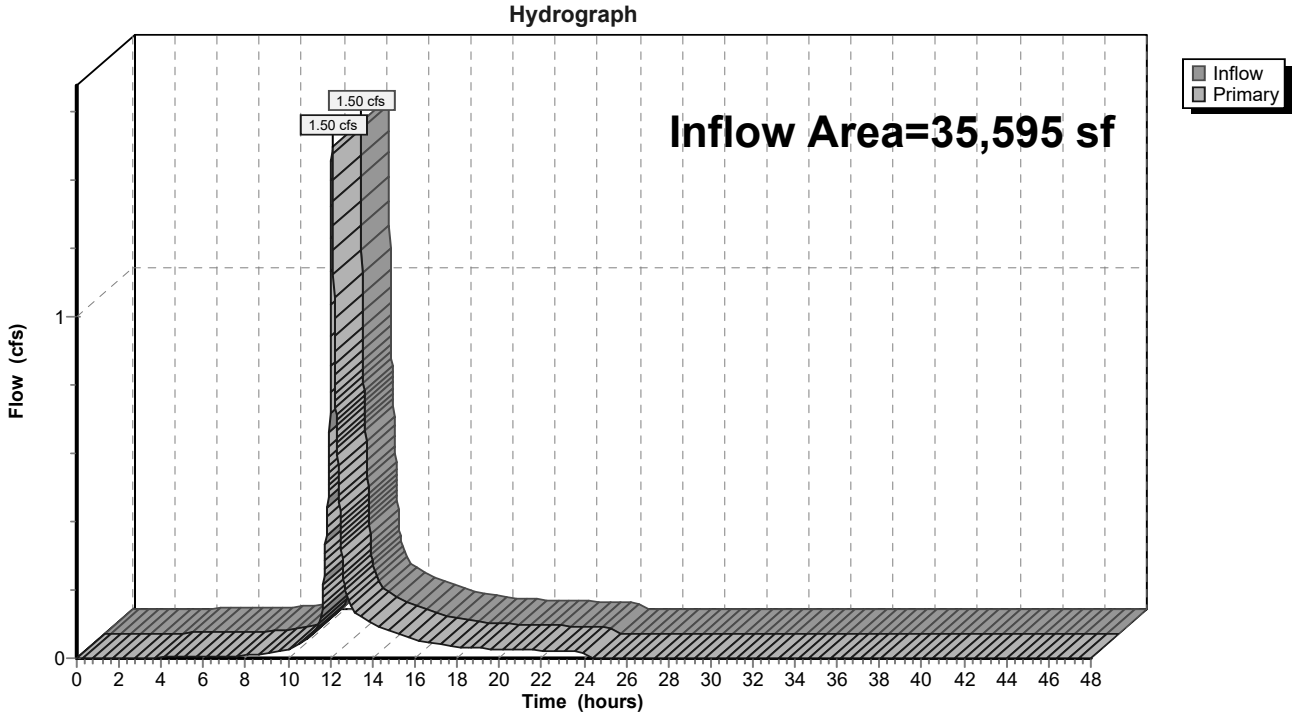


Summary for Link SP2: 30" Storm Drain

Inflow Area = 35,595 sf, 41.57% Impervious, Inflow Depth = 1.62" for 2 year event
Inflow = 1.50 cfs @ 12.09 hrs, Volume= 4,800 cf
Primary = 1.50 cfs @ 12.09 hrs, Volume= 4,800 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link SP2: 30" Storm Drain



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Parking Garage Runoff Area=92,011 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=9.50 cfs 33,460 cf

Subcatchment2S: Lower Parking lot & Runoff Area=53,341 sf 61.76% Impervious Runoff Depth=3.59"
Tc=6.0 min CN=91 Runoff=4.97 cfs 15,978 cf

Subcatchment3S: Existing Eagles P-Lot Runoff Area=5,477 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.57 cfs 1,992 cf

Subcatchment4S: St. John Street Entrance Runoff Area=30,118 sf 30.94% Impervious Runoff Depth=2.63"
Tc=6.0 min CN=81 Runoff=2.14 cfs 6,613 cf

Subcatchment5S: Southern Drainage Runoff Area=15,569 sf 27.66% Impervious Runoff Depth=3.59"
Tc=6.0 min CN=91 Runoff=1.45 cfs 4,664 cf

Subcatchment6S: Entrance Drive Runoff Area=10,404 sf 95.07% Impervious Runoff Depth=4.25"
Tc=5.0 min CN=97 Runoff=1.10 cfs 3,684 cf

Subcatchment7S: Lower Lot Bypass Runoff Area=29,017 sf 98.34% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=2.99 cfs 10,552 cf

Pond 1P: R-Tank Peak Elev=22.53' Storage=21,974 cf Inflow=15.91 cfs 54,102 cf
Primary=0.03 cfs 4,534 cf Secondary=9.26 cfs 39,879 cf Outflow=9.28 cfs 44,413 cf

Pond DMH: New DMH Peak Elev=21.91' Inflow=9.28 cfs 44,413 cf
18.0" Round Culvert n=0.013 L=40.0' S=0.0025 '/' Outflow=9.28 cfs 44,413 cf

Link SP1: Existing 18" SD System Inflow=11.83 cfs 58,649 cf
Primary=11.83 cfs 58,649 cf

Link SP2: 30" Storm Drain Inflow=2.70 cfs 8,605 cf
Primary=2.70 cfs 8,605 cf

Total Runoff Area = 235,937 sf Runoff Volume = 76,942 cf Average Runoff Depth = 3.91"
22.66% Pervious = 53,455 sf 77.34% Impervious = 182,482 sf

Summary for Subcatchment 1S: Parking Garage

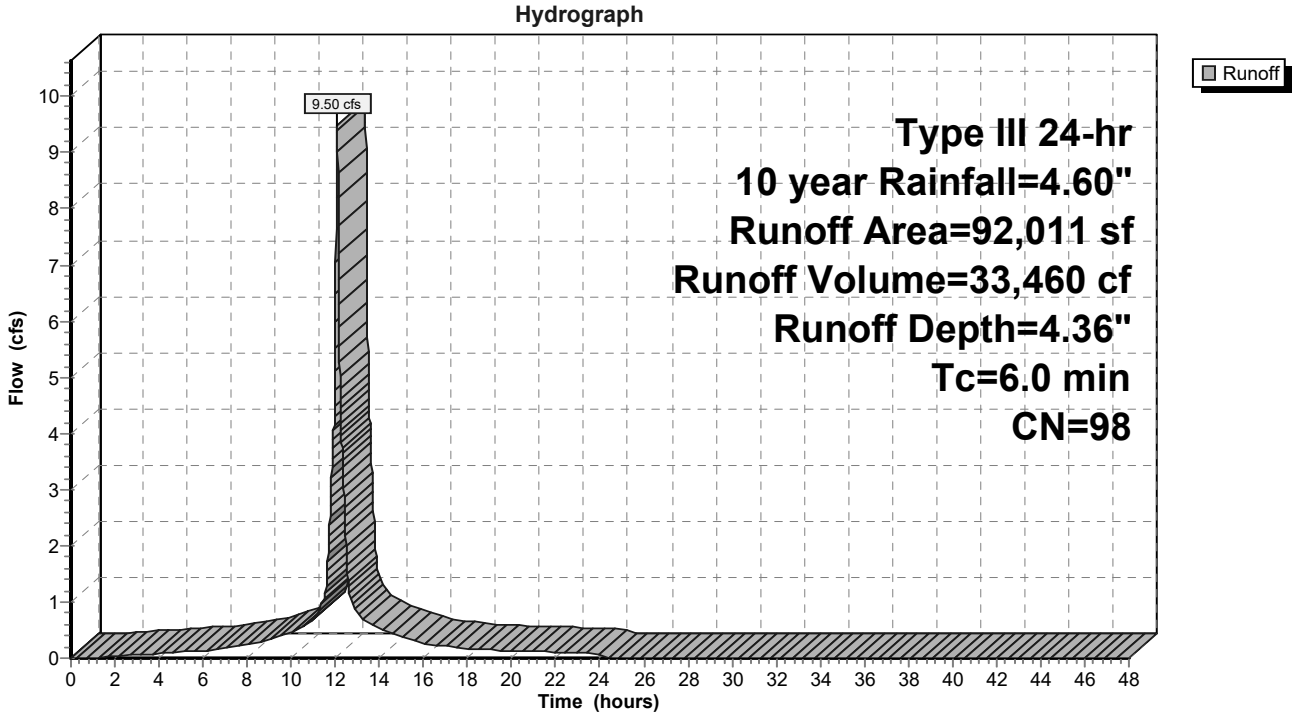
Runoff = 9.50 cfs @ 12.08 hrs, Volume= 33,460 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.60"

Area (sf)	CN	Description
89,825	98	Paved parking, HSG B
2,186	98	Roofs, HSG B
92,011	98	Weighted Average
92,011		100.00% Impervious Area

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

Subcatchment 1S: Parking Garage



Summary for Subcatchment 2S: Lower Parking lot & Landscaping

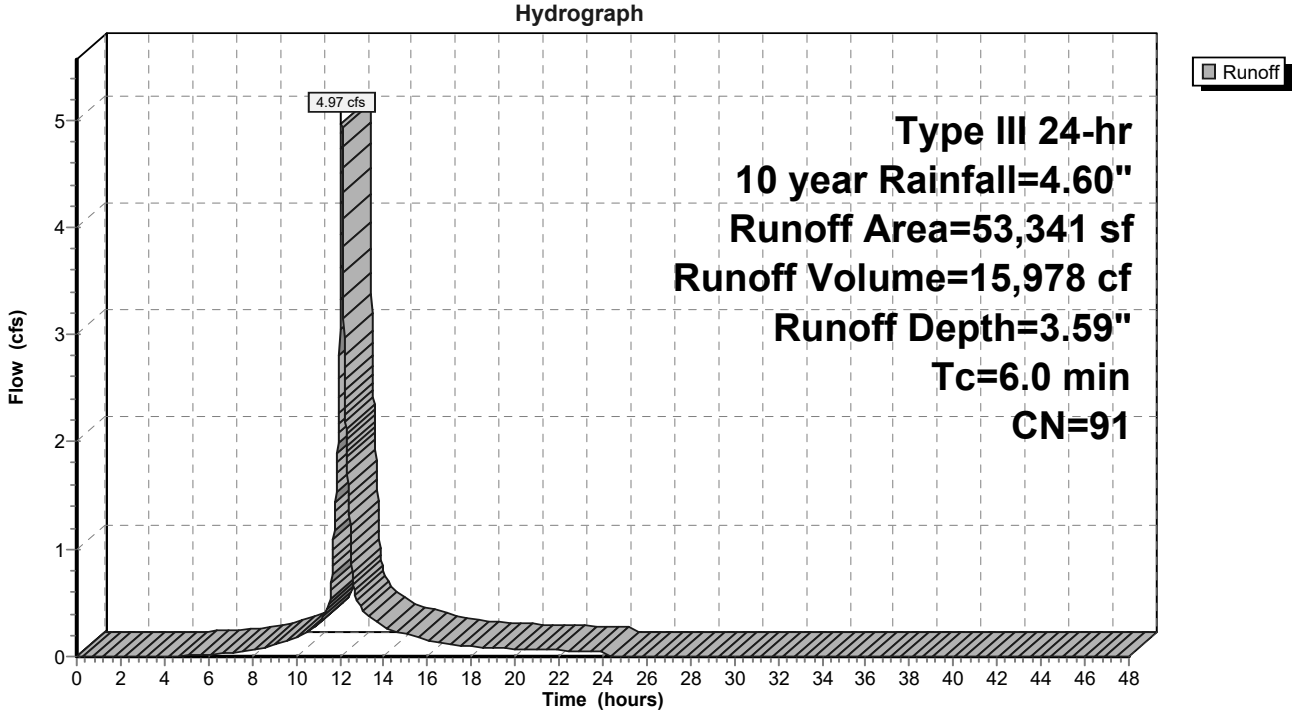
Runoff = 4.97 cfs @ 12.08 hrs, Volume= 15,978 cf, Depth= 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	32,944	98	Paved Parking Lot
	20,397	80	>75% Grass cover, Good, HSG D
	53,341	91	Weighted Average
	20,397		38.24% Pervious Area
	32,944		61.76% Impervious Area

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

Subcatchment 2S: Lower Parking lot & Landscaping



Summary for Subcatchment 3S: Existing Eagles P-Lot

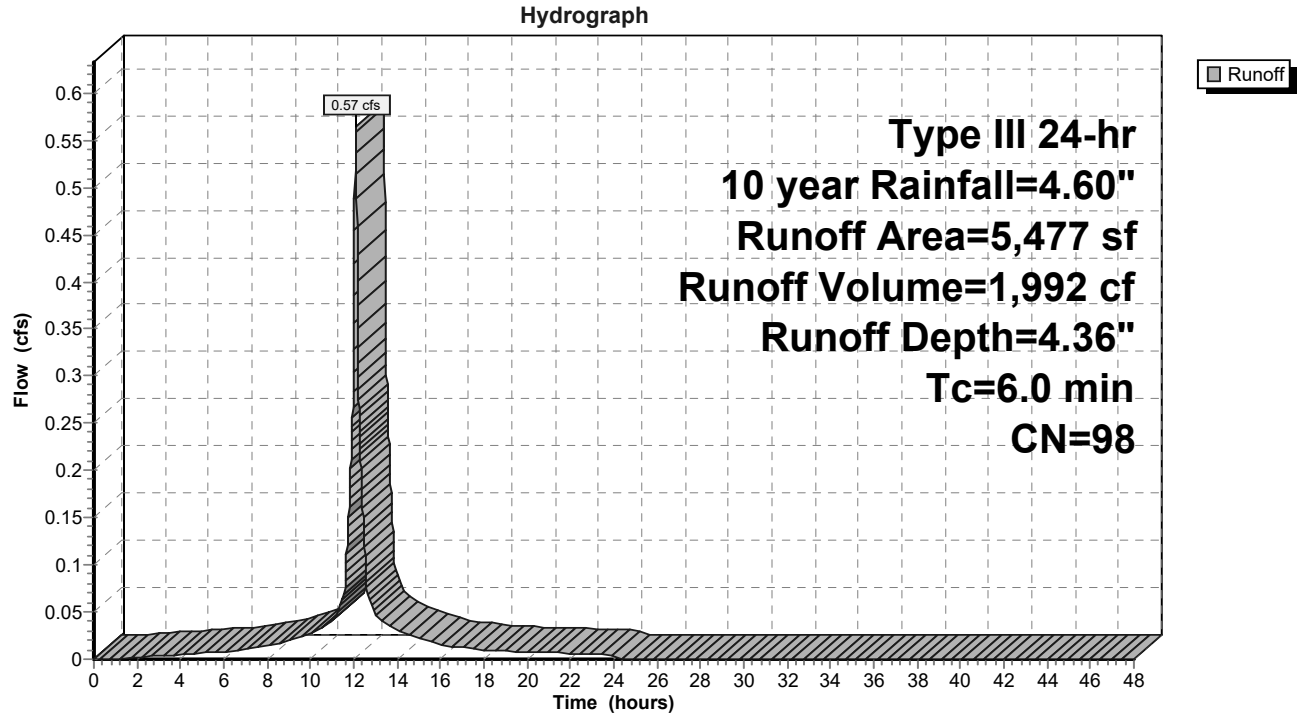
Runoff = 0.57 cfs @ 12.08 hrs, Volume= 1,992 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	5,477	98	existing P-lot
	5,477		100.00% Impervious Area

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

Subcatchment 3S: Existing Eagles P-Lot



Summary for Subcatchment 4S: St. John Street Entrance

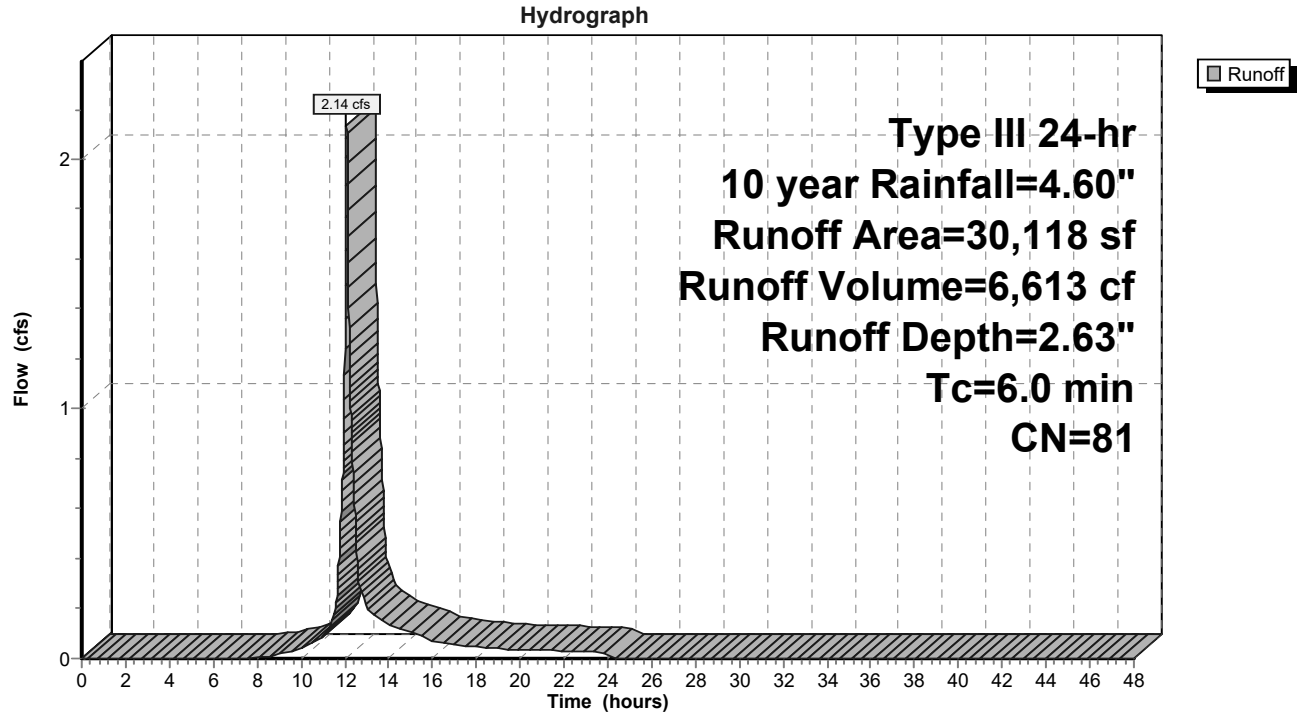
Runoff = 2.14 cfs @ 12.09 hrs, Volume= 6,613 cf, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	9,319	98	New entrane drive and walks
	20,799	74	>75% Grass cover, Good, HSG C
	30,118	81	Weighted Average
	20,799		69.06% Pervious Area
	9,319		30.94% Impervious Area

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

Subcatchment 4S: St. John Street Entrance



Summary for Subcatchment 5S: Southern Drainage

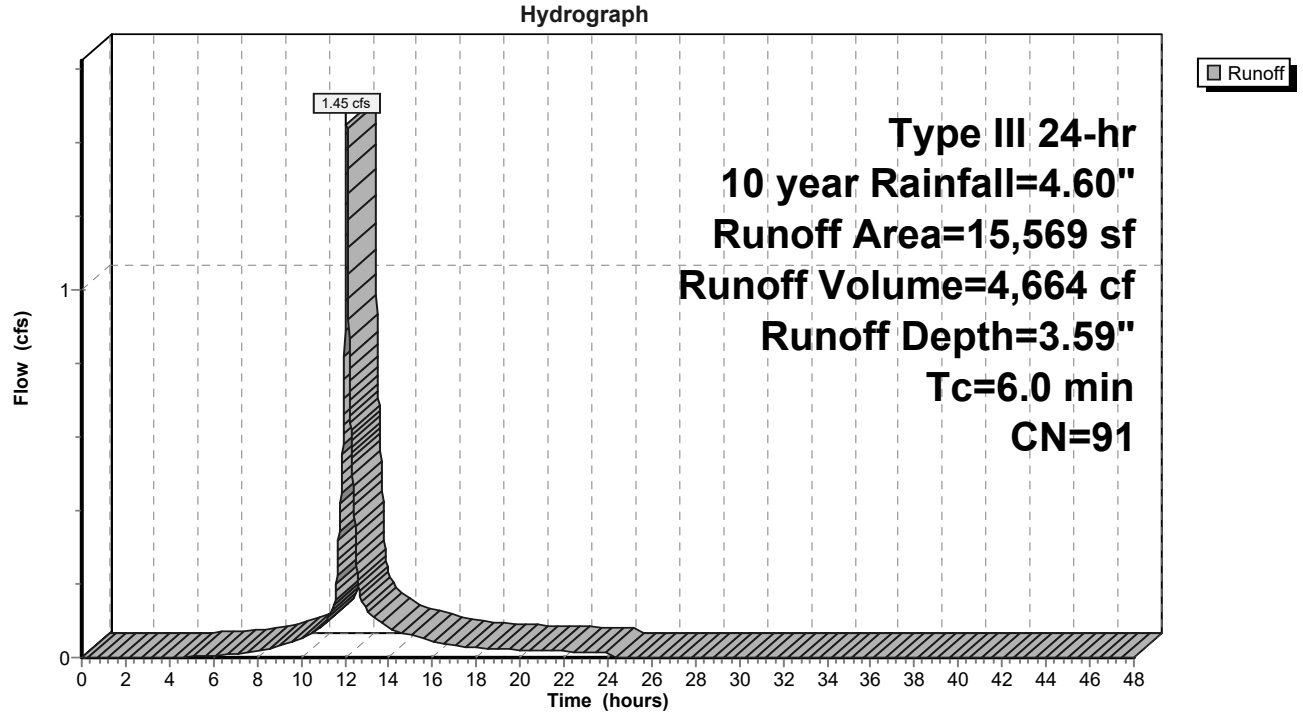
Runoff = 1.45 cfs @ 12.08 hrs, Volume= 4,664 cf, Depth= 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	11,050	89	Crushed Stone
*	3,715	98	Sidewalk
*	591	98	Eagles lot p-lot
*	213	89	eagles lot stone
	15,569	91	Weighted Average
	11,263		72.34% Pervious Area
	4,306		27.66% Impervious Area

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

Subcatchment 5S: Southern Drainage



Summary for Subcatchment 6S: Entrance Drive

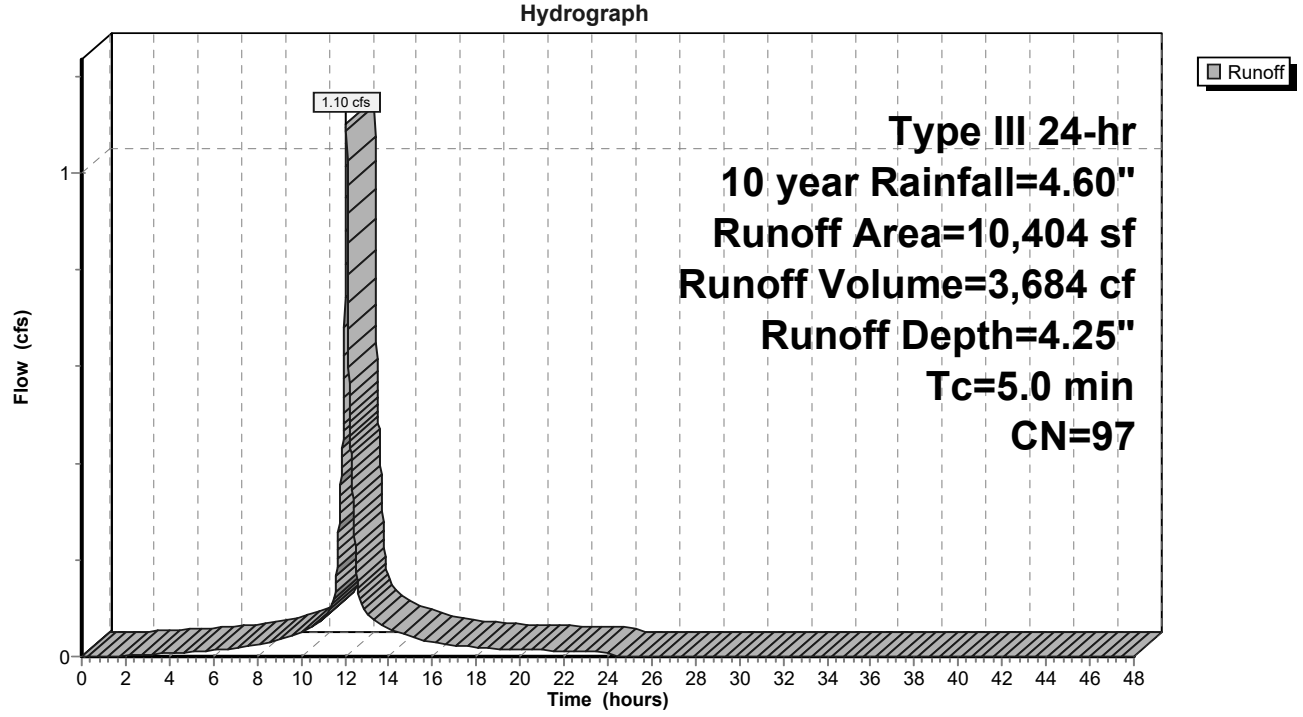
Runoff = 1.10 cfs @ 12.07 hrs, Volume= 3,684 cf, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	9,891	98	Entrance Road
	513	84	50-75% Grass cover, Fair, HSG D
	10,404	97	Weighted Average
	513		4.93% Pervious Area
	9,891		95.07% Impervious Area

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

Subcatchment 6S: Entrance Drive



Summary for Subcatchment 7S: Lower Lot Bypass

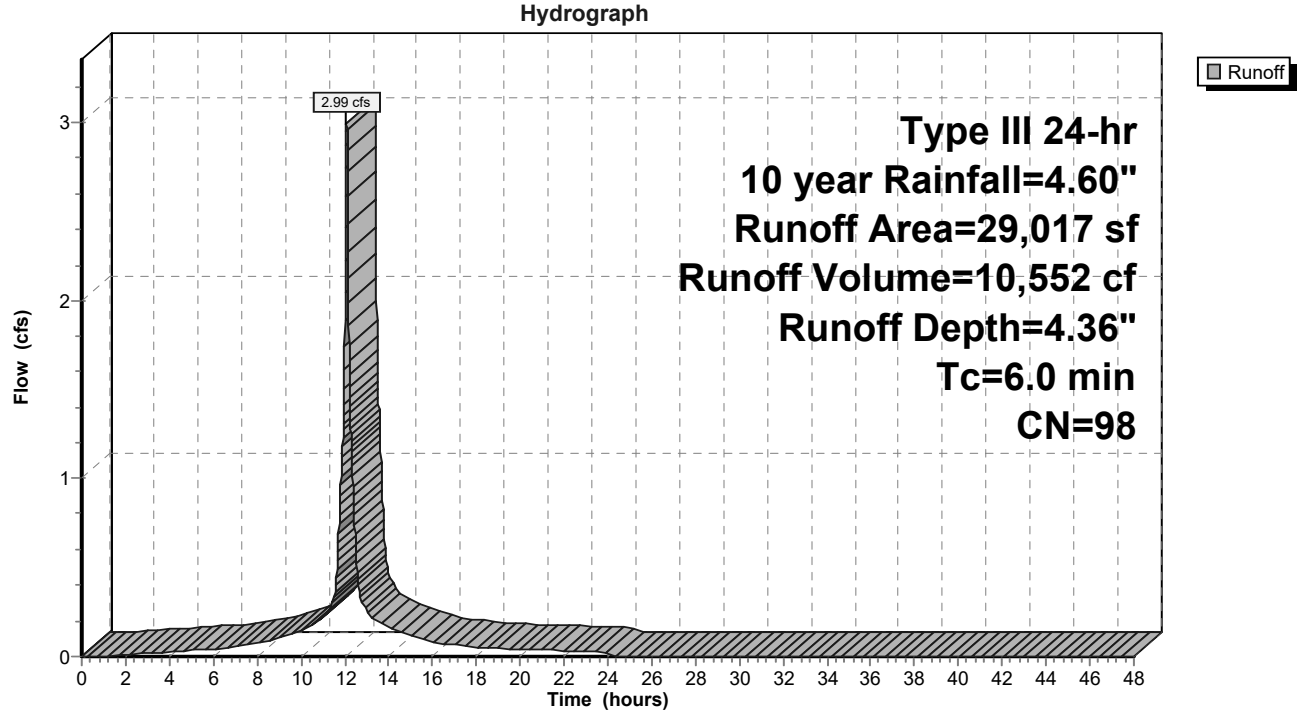
Runoff = 2.99 cfs @ 12.08 hrs, Volume= 10,552 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.60"

	Area (sf)	CN	Description
*	28,534	98	Entrance Drive & Walks
*	483	79	Landscaped area
	29,017	98	Weighted Average
	483		1.66% Pervious Area
	28,534		98.34% Impervious Area

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

Subcatchment 7S: Lower Lot Bypass



Summary for Pond 1P: R-Tank

Inflow Area = 160,921 sf, 80.33% Impervious, Inflow Depth = 4.03" for 10 year event
Inflow = 15.91 cfs @ 12.08 hrs, Volume= 54,102 cf
Outflow = 9.28 cfs @ 12.18 hrs, Volume= 44,413 cf, Atten= 42%, Lag= 5.9 min
Primary = 0.03 cfs @ 17.26 hrs, Volume= 4,534 cf
Secondary = 9.26 cfs @ 12.18 hrs, Volume= 39,879 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 22.53' @ 12.19 hrs Surf.Area= 8,682 sf Storage= 21,974 cf

Plug-Flow detention time= 241.4 min calculated for 44,413 cf (82% of inflow)
Center-of-Mass det. time= 169.5 min (934.2 - 764.8)

Volume	Invert	Avail.Storage	Storage Description
#1	19.58'	4,733 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 33,165 cf Overall - 21,333 cf Embedded = 11,832 cf x 40.0% Voids
#2	19.58'	20,267 cf	**R-Tank Modules (Prismatic)** Listed below (Recalc) Inside #1 21,333 cf Overall x 95.0% Voids
		24,999 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.58	8,682	0	0
23.40	8,682	33,165	33,165

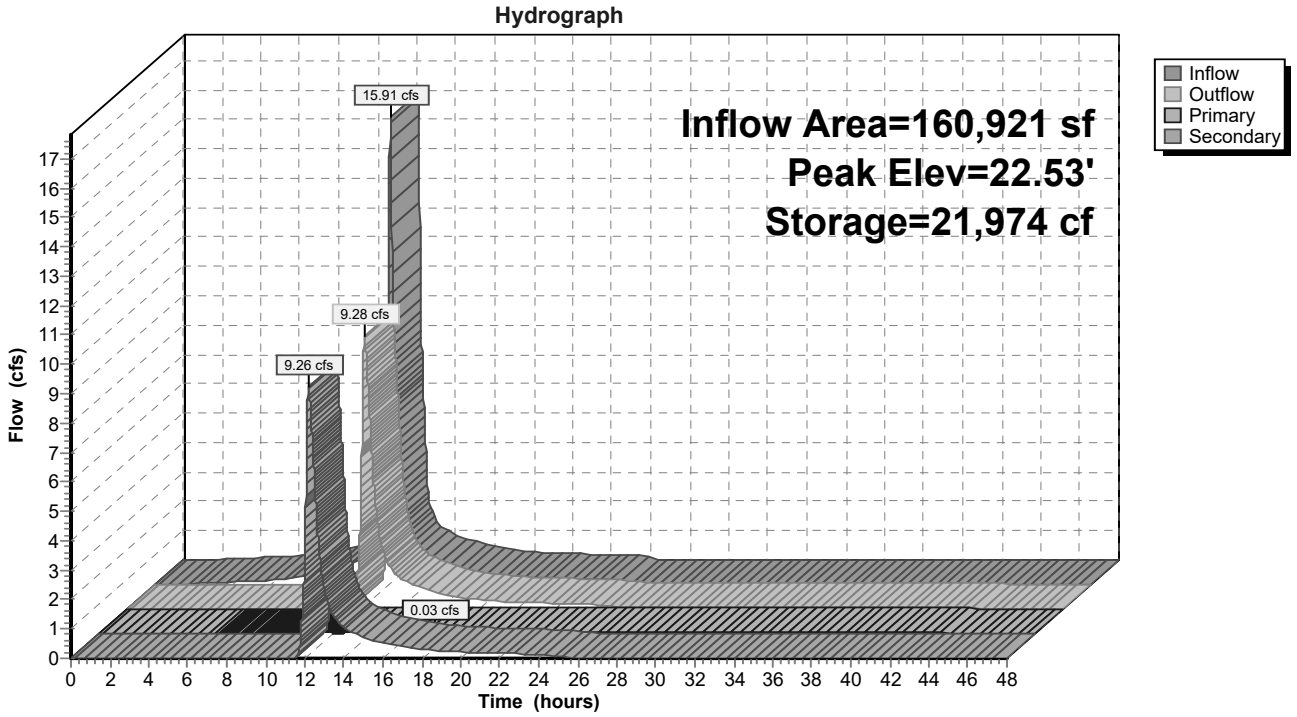
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.58	7,565	0	0
22.40	7,565	21,333	21,333

Device	Routing	Invert	Outlet Devices
#1	Primary	19.58'	**15.0" Round Culvert** L= 15.0' Ke= 0.500 Inlet / Outlet Invert= 19.58' / 19.58' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	19.58'	**1.0" Vert. Orifice/Grate** C= 0.600
#3	Device 2	19.75'	**1.7" Vert. Orifice/Grate** C= 0.600
#4	Secondary	21.13'	**15.0" Round Culvert X 2.00** L= 15.0' Ke= 0.500 Inlet / Outlet Invert= 21.13' / 21.00' S= 0.0087 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.03 cfs @ 17.26 hrs HW=21.34' TW=19.62' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.03 cfs of 5.25 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.03 cfs @ 6.31 fps)
    - **3=Orifice/Grate** (Passes 0.03 cfs of 0.09 cfs potential flow)

Secondary OutFlow Max=9.26 cfs @ 12.18 hrs HW=22.53' TW=21.90' (Dynamic Tailwater)
- **4=Culvert** (Barrel Controls 9.26 cfs @ 4.22 fps)

Pond 1P: R-Tank



Summary for Pond DMH: New DMH

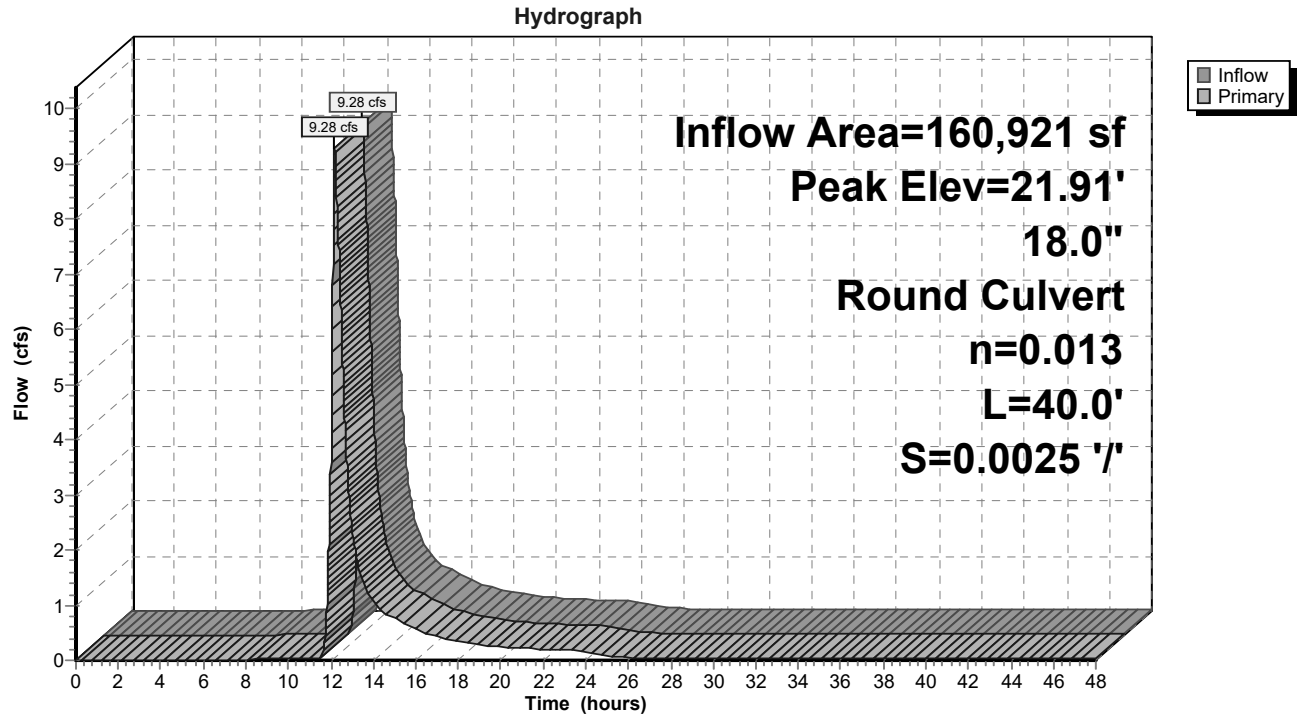
Inflow Area = 160,921 sf, 80.33% Impervious, Inflow Depth > 3.31" for 10 year event
Inflow = 9.28 cfs @ 12.18 hrs, Volume= 44,413 cf
Outflow = 9.28 cfs @ 12.18 hrs, Volume= 44,413 cf, Atten= 0%, Lag= 0.0 min
Primary = 9.28 cfs @ 12.18 hrs, Volume= 44,413 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 21.91' @ 12.18 hrs
Flood Elev= 26.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.25'	**18.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.25' / 19.15' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=9.27 cfs @ 12.18 hrs HW=21.90' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 9.27 cfs @ 5.25 fps)

Pond DMH: New DMH

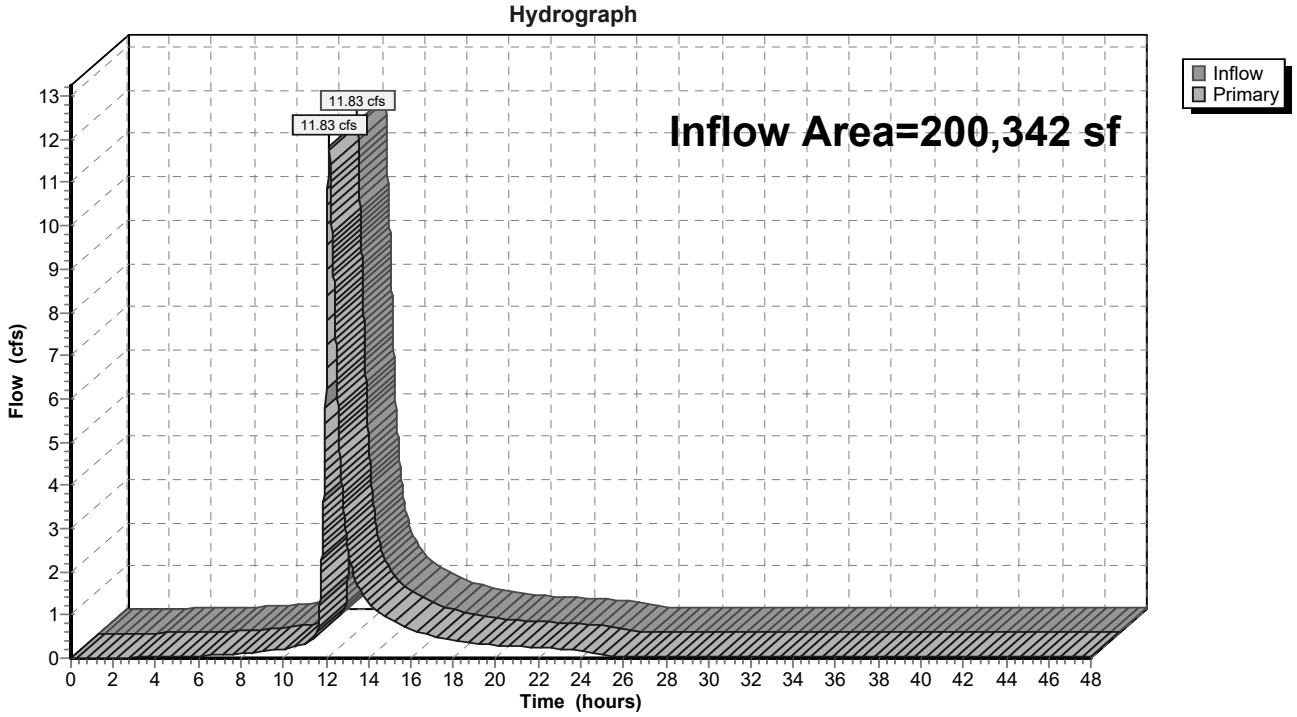


Summary for Link SP1: Existing 18" SD System

Inflow Area = 200,342 sf, 83.70% Impervious, Inflow Depth > 3.51" for 10 year event
Inflow = 11.83 cfs @ 12.16 hrs, Volume= 58,649 cf
Primary = 11.83 cfs @ 12.16 hrs, Volume= 58,649 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link SP1: Existing 18" SD System

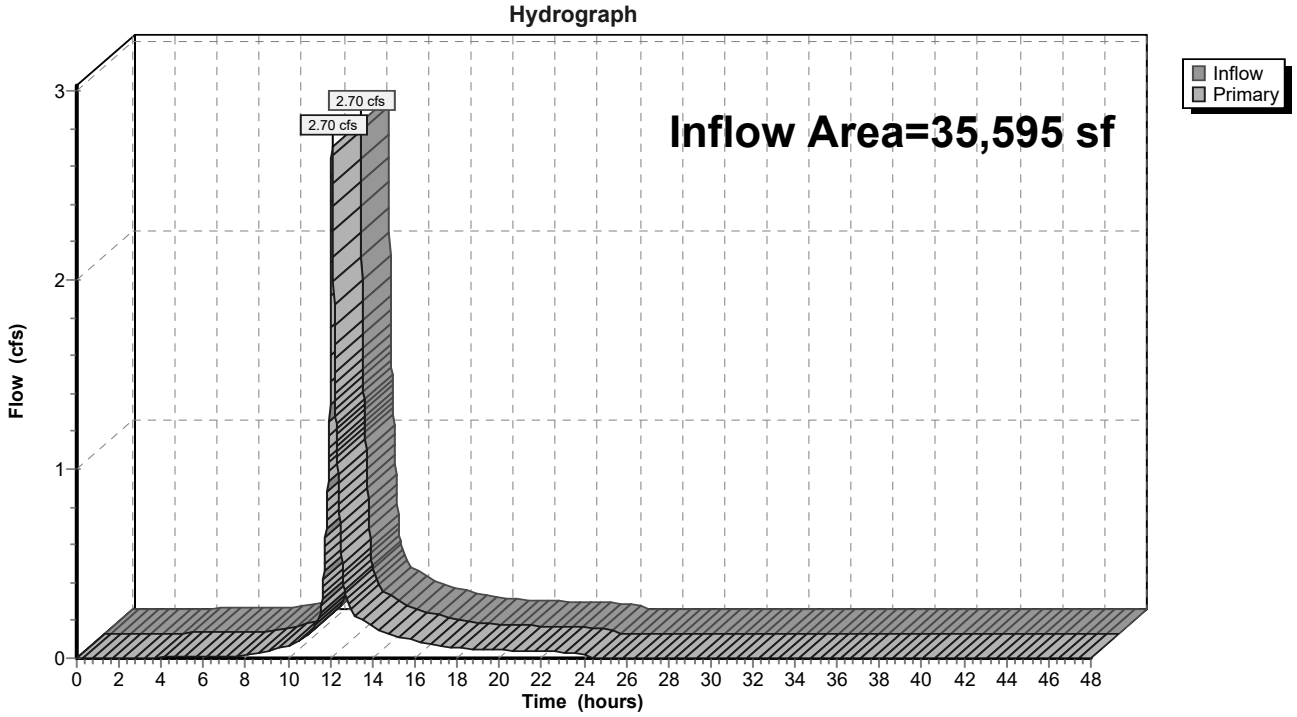


Summary for Link SP2: 30" Storm Drain

Inflow Area = 35,595 sf, 41.57% Impervious, Inflow Depth = 2.90" for 10 year event
Inflow = 2.70 cfs @ 12.09 hrs, Volume= 8,605 cf
Primary = 2.70 cfs @ 12.09 hrs, Volume= 8,605 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link SP2: 30" Storm Drain



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Parking Garage Runoff Area=92,011 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=12.00 cfs 42,648 cf

Subcatchment2S: Lower Parking lot & Runoff Area=53,341 sf 61.76% Impervious Runoff Depth=4.76"
Tc=6.0 min CN=91 Runoff=6.48 cfs 21,166 cf

Subcatchment3S: Existing Eagles P-Lot Runoff Area=5,477 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.71 cfs 2,539 cf

Subcatchment4S: St. John Street Entrance Runoff Area=30,118 sf 30.94% Impervious Runoff Depth=3.70"
Tc=6.0 min CN=81 Runoff=2.99 cfs 9,291 cf

Subcatchment5S: Southern Drainage Runoff Area=15,569 sf 27.66% Impervious Runoff Depth=4.76"
Tc=6.0 min CN=91 Runoff=1.89 cfs 6,178 cf

Subcatchment6S: Entrance Drive Runoff Area=10,404 sf 95.07% Impervious Runoff Depth=5.44"
Tc=5.0 min CN=97 Runoff=1.40 cfs 4,721 cf

Subcatchment7S: Lower Lot Bypass Runoff Area=29,017 sf 98.34% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=3.79 cfs 13,450 cf

Pond 1P: R-Tank Peak Elev=23.30' Storage=24,643 cf Inflow=20.37 cfs 69,991 cf
Primary=0.05 cfs 4,667 cf Secondary=14.68 cfs 56,063 cf Outflow=14.73 cfs 60,280 cf

Pond DMH: New DMH Peak Elev=24.81' Inflow=14.73 cfs 60,730 cf
18.0" Round Culvert n=0.013 L=40.0' S=0.0025 '/' Outflow=14.73 cfs 60,730 cf

Link SP1: Existing 18" SD System Inflow=18.94 cfs 78,900 cf
Primary=18.94 cfs 78,900 cf

Link SP2: 30" Storm Drain Inflow=3.70 cfs 11,830 cf
Primary=3.70 cfs 11,830 cf

Total Runoff Area = 235,937 sf Runoff Volume = 99,991 cf Average Runoff Depth = 5.09"
22.66% Pervious = 53,455 sf 77.34% Impervious = 182,482 sf

Summary for Subcatchment 1S: Parking Garage

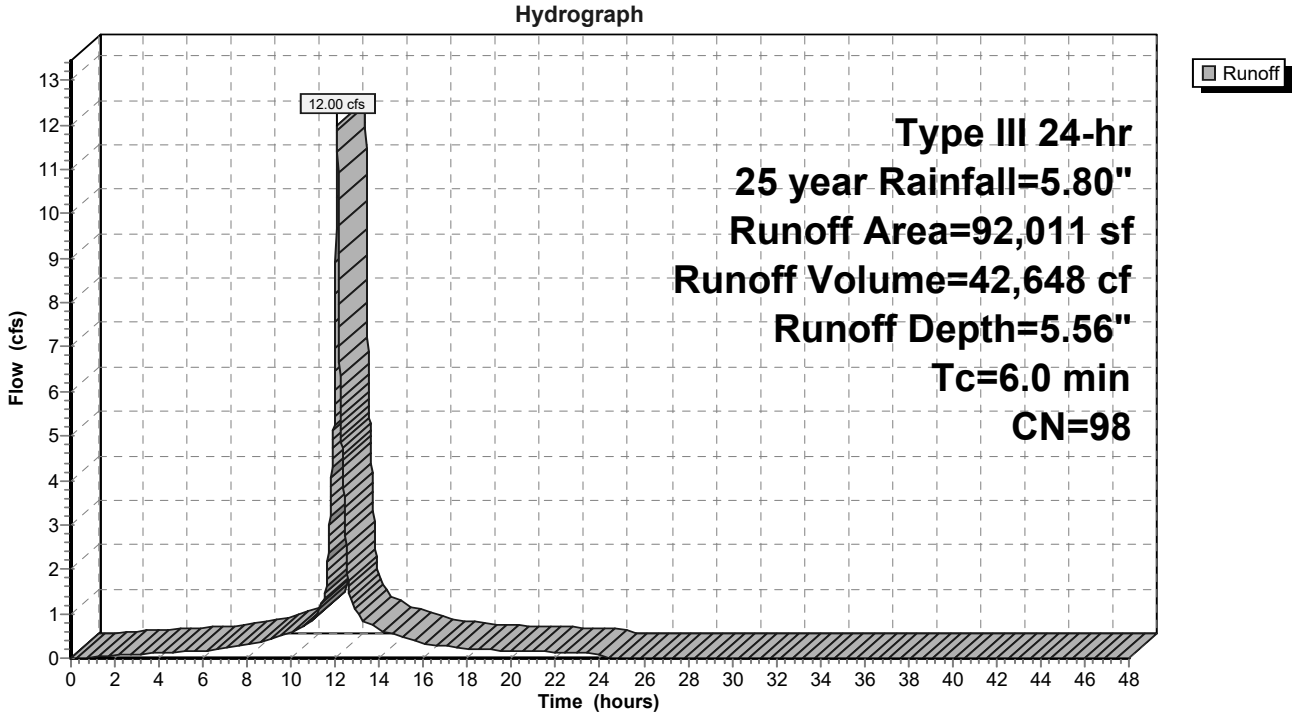
Runoff = 12.00 cfs @ 12.08 hrs, Volume= 42,648 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

Area (sf)	CN	Description
89,825	98	Paved parking, HSG B
2,186	98	Roofs, HSG B
92,011	98	Weighted Average
92,011		100.00% Impervious Area

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

Subcatchment 1S: Parking Garage



Summary for Subcatchment 2S: Lower Parking lot & Landscaping

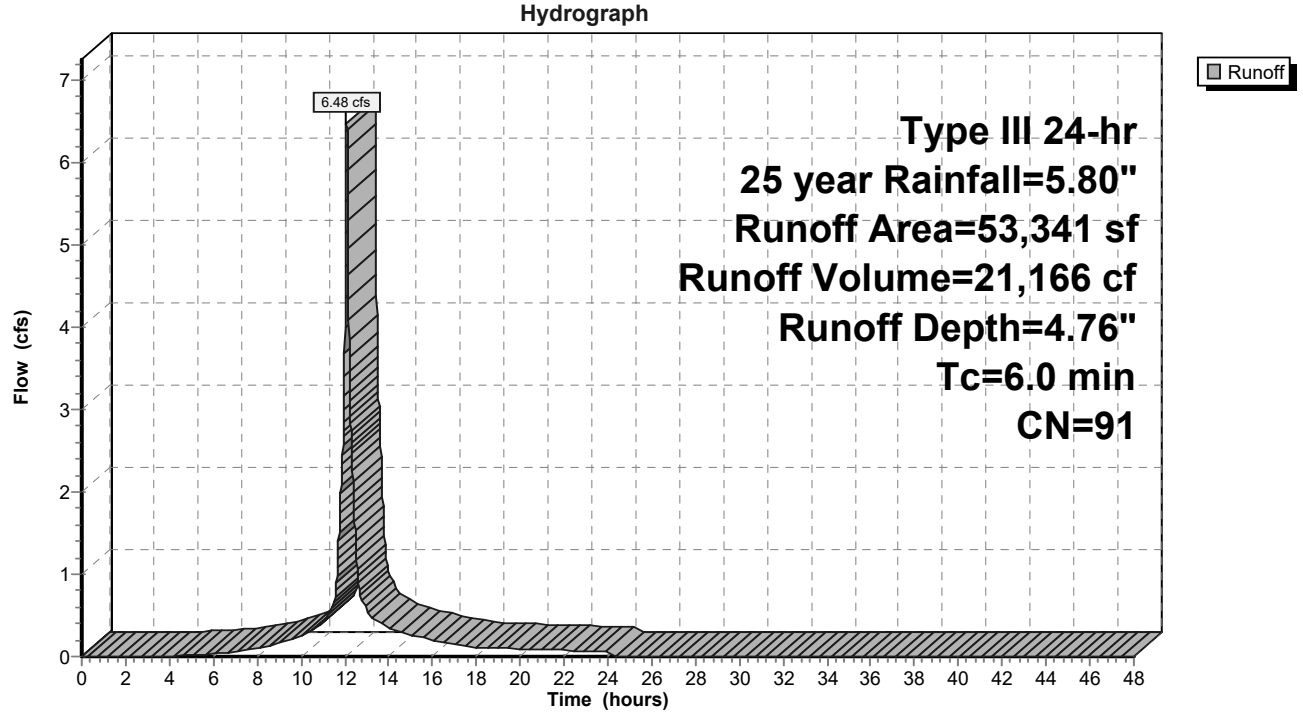
Runoff = 6.48 cfs @ 12.08 hrs, Volume= 21,166 cf, Depth= 4.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	32,944	98	Paved Parking Lot
	20,397	80	>75% Grass cover, Good, HSG D
	53,341	91	Weighted Average
	20,397		38.24% Pervious Area
	32,944		61.76% Impervious Area

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

Subcatchment 2S: Lower Parking lot & Landscaping



Summary for Subcatchment 3S: Existing Eagles P-Lot

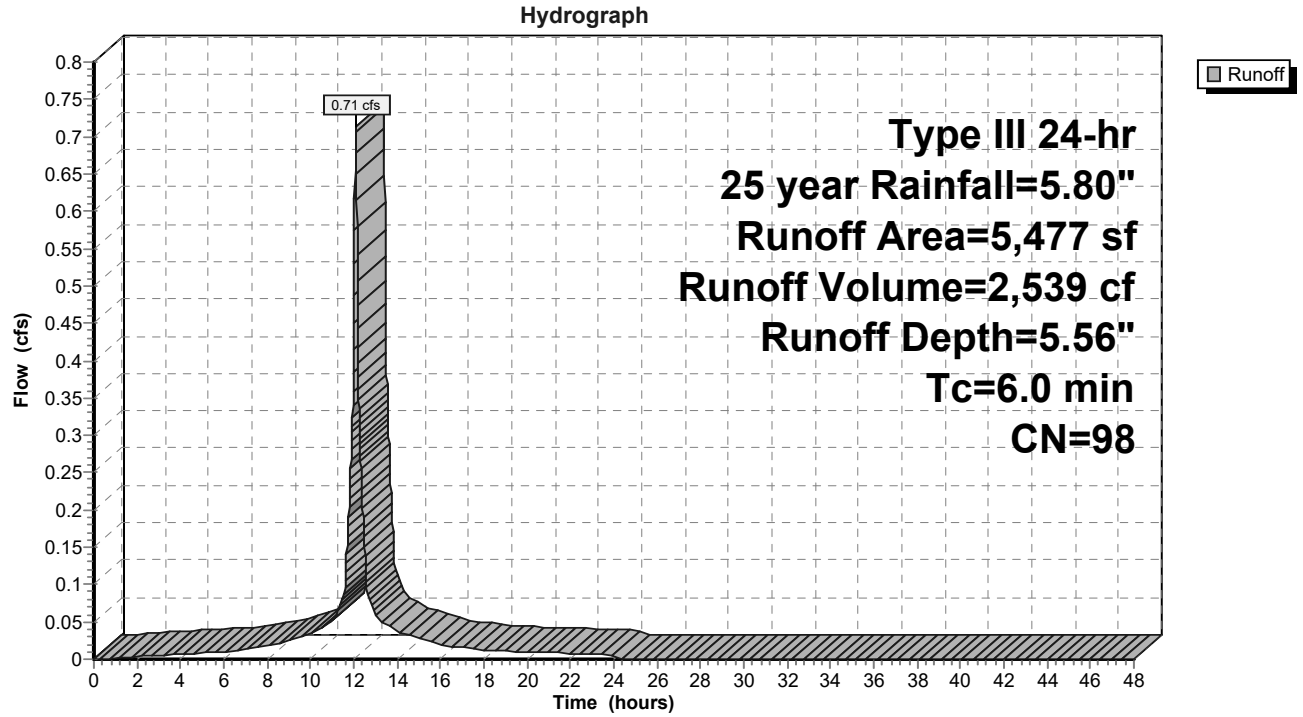
Runoff = 0.71 cfs @ 12.08 hrs, Volume= 2,539 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	5,477	98	existing P-lot
	5,477		100.00% Impervious Area

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

Subcatchment 3S: Existing Eagles P-Lot



Summary for Subcatchment 4S: St. John Street Entrance

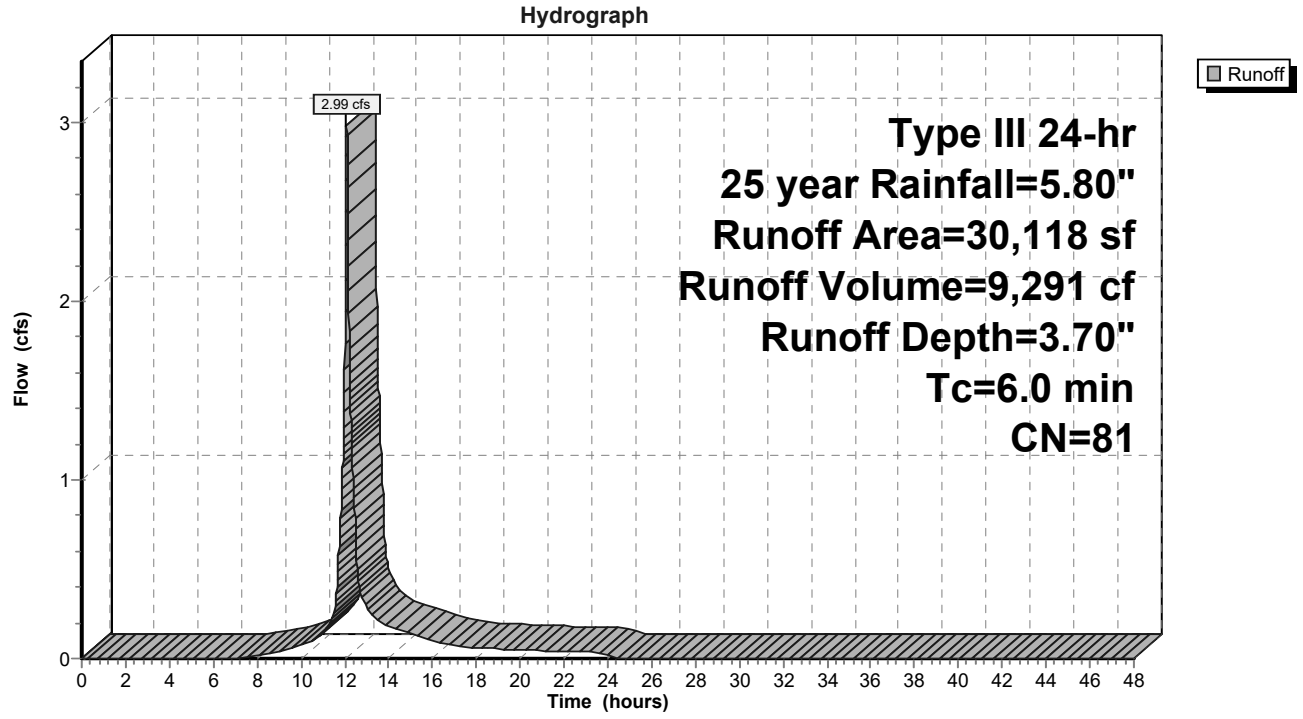
Runoff = 2.99 cfs @ 12.09 hrs, Volume= 9,291 cf, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	9,319	98	New entrane drive and walks
	20,799	74	>75% Grass cover, Good, HSG C
	30,118	81	Weighted Average
	20,799		69.06% Pervious Area
	9,319		30.94% Impervious Area

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

Subcatchment 4S: St. John Street Entrance



Summary for Subcatchment 5S: Southern Drainage

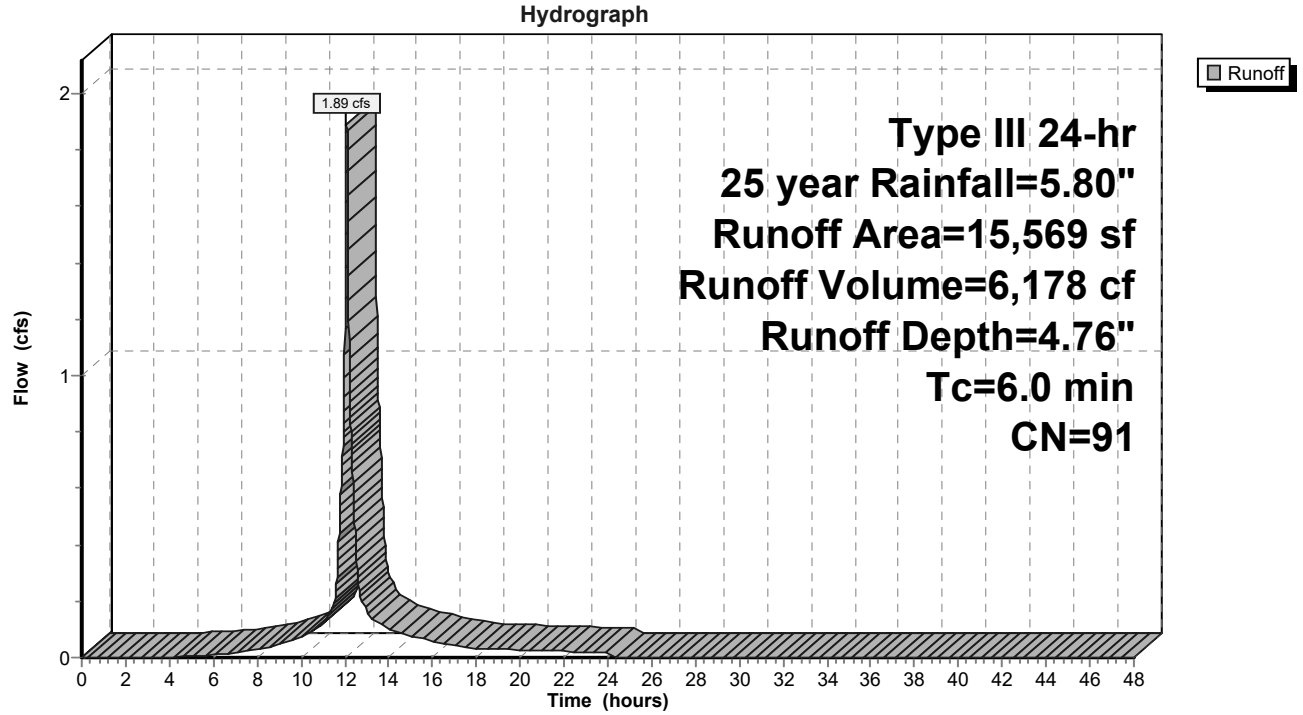
Runoff = 1.89 cfs @ 12.08 hrs, Volume= 6,178 cf, Depth= 4.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	11,050	89	Crushed Stone
*	3,715	98	Sidewalk
*	591	98	Eagles lot p-lot
*	213	89	eagles lot stone
	15,569	91	Weighted Average
	11,263		72.34% Pervious Area
	4,306		27.66% Impervious Area

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

Subcatchment 5S: Southern Drainage



Summary for Subcatchment 6S: Entrance Drive

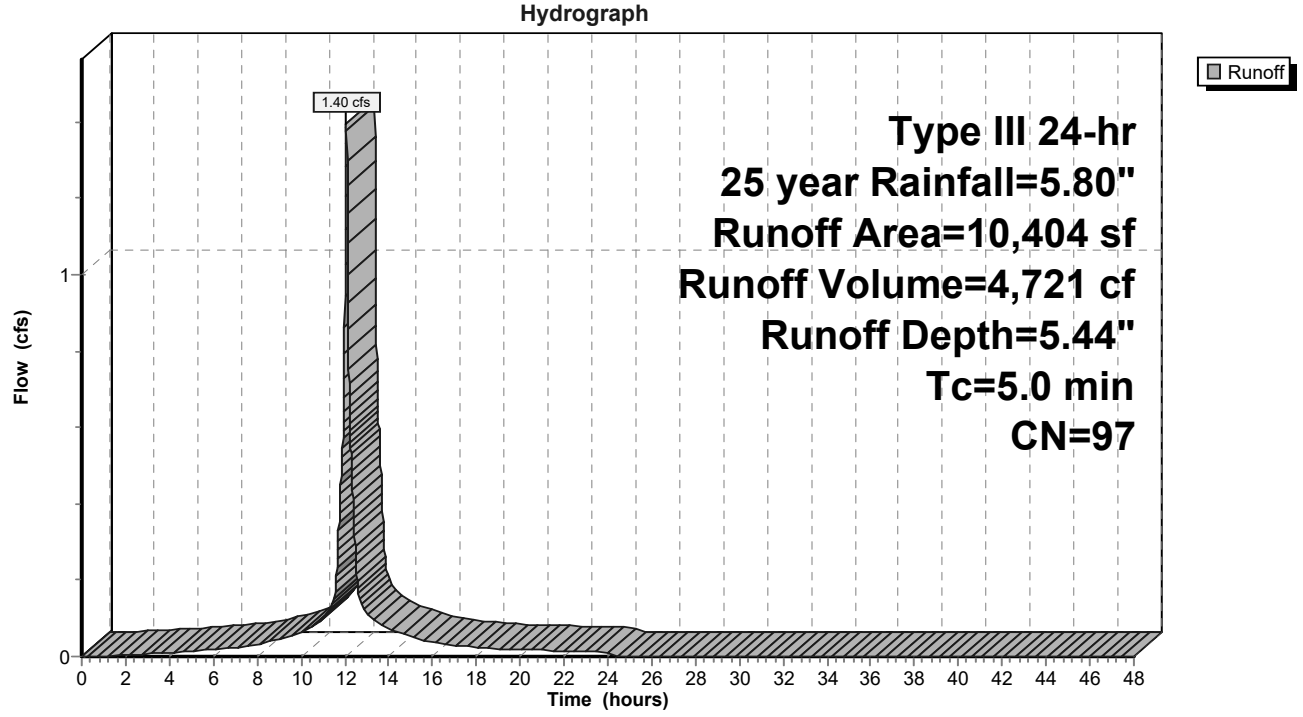
Runoff = 1.40 cfs @ 12.07 hrs, Volume= 4,721 cf, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	9,891	98	Entrance Road
	513	84	50-75% Grass cover, Fair, HSG D
	10,404	97	Weighted Average
	513		4.93% Pervious Area
	9,891		95.07% Impervious Area

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

Subcatchment 6S: Entrance Drive



Summary for Subcatchment 7S: Lower Lot Bypass

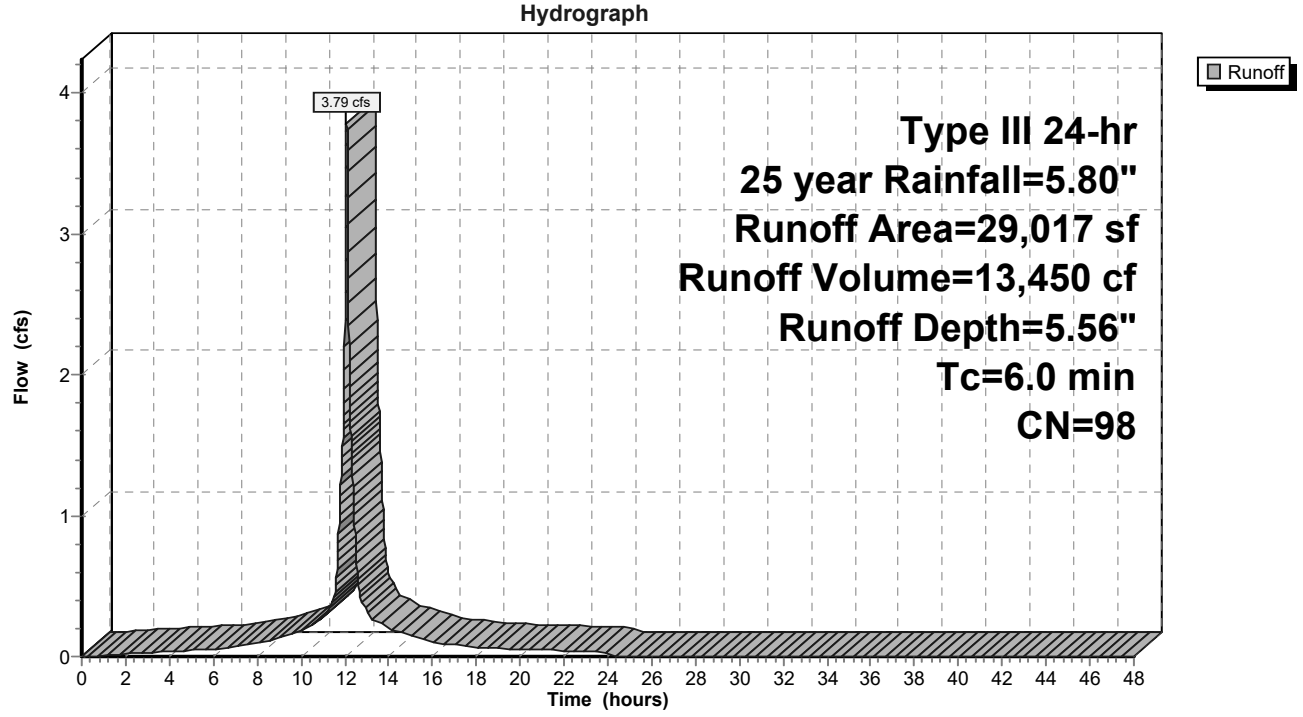
Runoff = 3.79 cfs @ 12.08 hrs, Volume= 13,450 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	28,534	98	Entrance Drive & Walks
*	483	79	Landscaped area
	29,017	98	Weighted Average
	483		1.66% Pervious Area
	28,534		98.34% Impervious Area

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

Subcatchment 7S: Lower Lot Bypass



Summary for Pond 1P: R-Tank

Inflow Area = 160,921 sf, 80.33% Impervious, Inflow Depth = 5.22" for 25 year event
Inflow = 20.37 cfs @ 12.08 hrs, Volume= 69,991 cf
Outflow = 14.73 cfs @ 12.16 hrs, Volume= 60,280 cf, Atten= 28%, Lag= 4.5 min
Primary = 0.05 cfs @ 12.16 hrs, Volume= 4,667 cf
Secondary = 14.68 cfs @ 12.16 hrs, Volume= 56,063 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 23.30' @ 12.16 hrs Surf.Area= 8,682 sf Storage= 24,643 cf

Plug-Flow detention time= 202.0 min calculated for 60,280 cf (86% of inflow)
Center-of-Mass det. time= 140.3 min (900.2 - 759.9)

Volume	Invert	Avail.Storage	Storage Description
#1	19.58'	4,733 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 33,165 cf Overall - 21,333 cf Embedded = 11,832 cf x 40.0% Voids
#2	19.58'	20,267 cf	**R-Tank Modules (Prismatic)** Listed below (Recalc) Inside #1 21,333 cf Overall x 95.0% Voids
		24,999 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.58	8,682	0	0
23.40	8,682	33,165	33,165

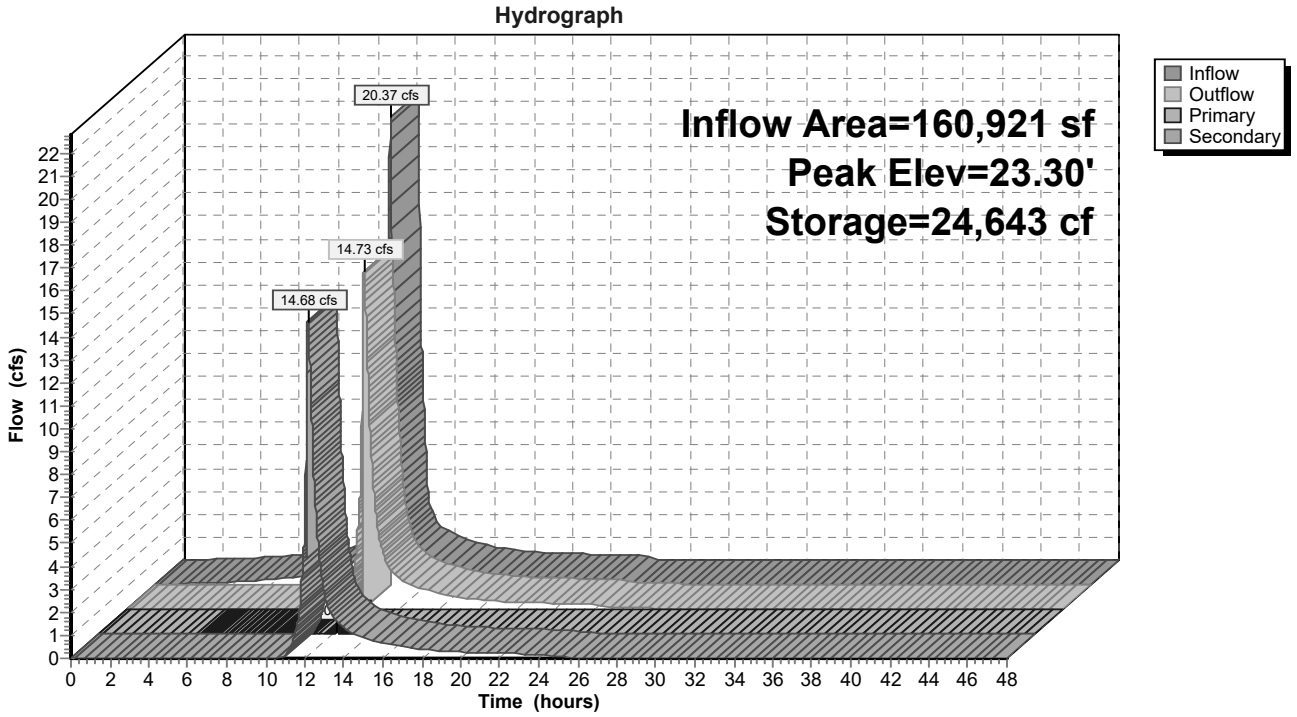
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.58	7,565	0	0
22.40	7,565	21,333	21,333

Device	Routing	Invert	Outlet Devices
#1	Primary	19.58'	**15.0" Round Culvert** L= 15.0' Ke= 0.500 Inlet / Outlet Invert= 19.58' / 19.58' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	19.58'	**1.0" Vert. Orifice/Grate** C= 0.600
#3	Device 2	19.75'	**1.7" Vert. Orifice/Grate** C= 0.600
#4	Secondary	21.13'	**15.0" Round Culvert X 2.00** L= 15.0' Ke= 0.500 Inlet / Outlet Invert= 21.13' / 21.00' S= 0.0087 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.16 hrs HW=23.30' TW=24.80' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)
↑—**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 12.16 hrs HW=23.30' TW=24.80' (Dynamic Tailwater)
↑—**4=Culvert** (Controls 0.00 cfs)

Pond 1P: R-Tank



Summary for Pond DMH: New DMH

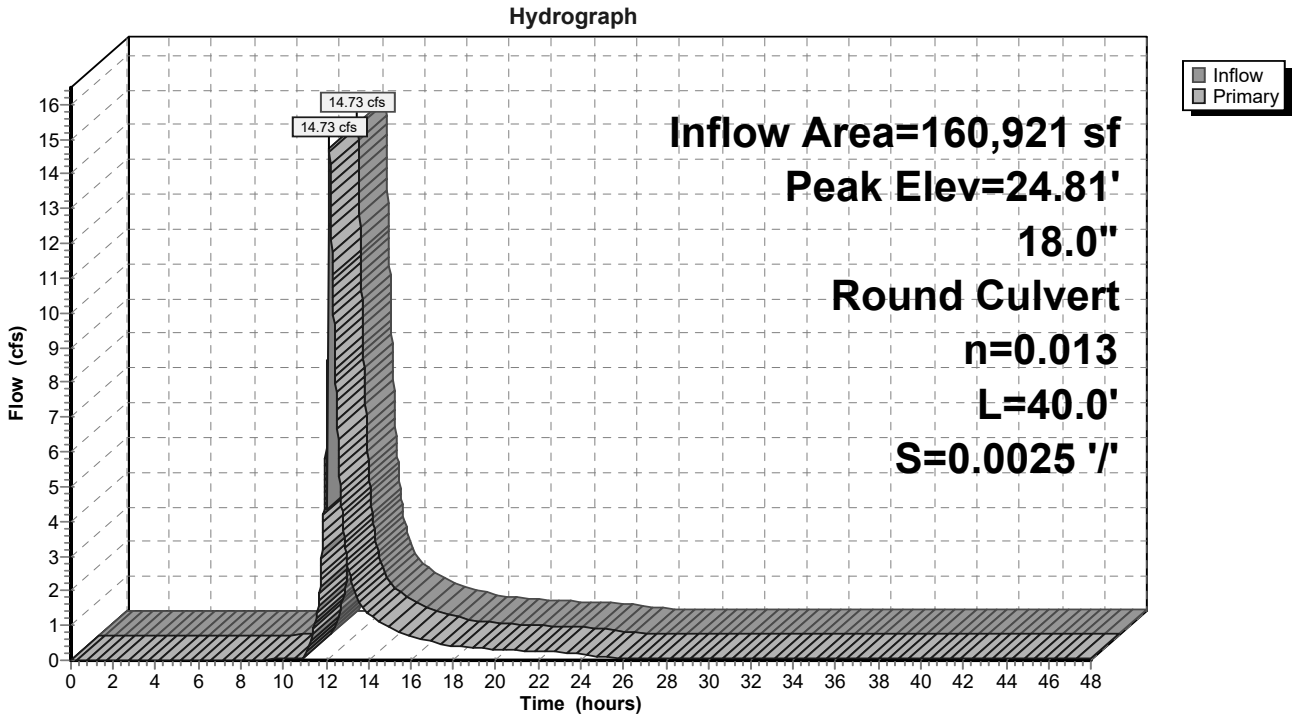
Inflow Area = 160,921 sf, 80.33% Impervious, Inflow Depth > 4.53" for 25 year event
Inflow = 14.73 cfs @ 12.16 hrs, Volume= 60,730 cf
Outflow = 14.73 cfs @ 12.16 hrs, Volume= 60,730 cf, Atten= 0%, Lag= 0.0 min
Primary = 14.73 cfs @ 12.16 hrs, Volume= 60,730 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 24.81' @ 12.16 hrs
Flood Elev= 26.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.25'	**18.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.25' / 19.15' S= 0.0025 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=14.72 cfs @ 12.16 hrs HW=24.80' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 14.72 cfs @ 8.33 fps)

Pond DMH: New DMH

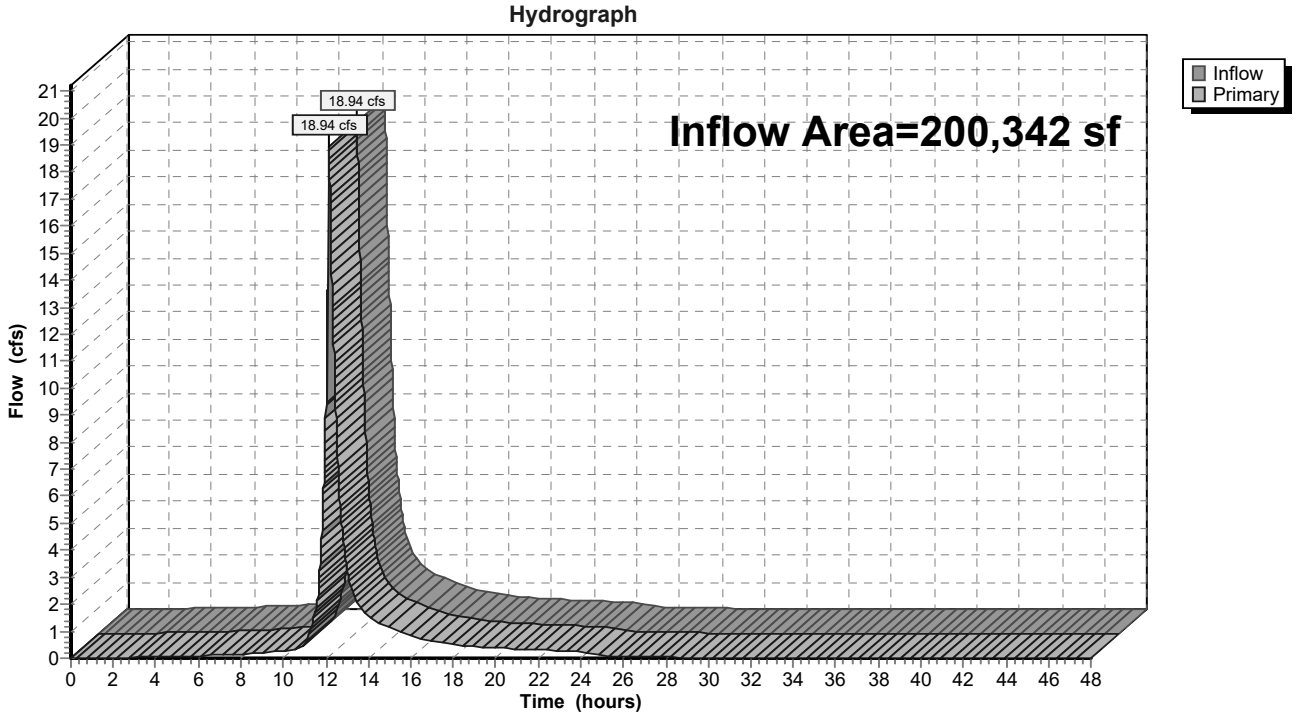


Summary for Link SP1: Existing 18" SD System

Inflow Area = 200,342 sf, 83.70% Impervious, Inflow Depth > 4.73" for 25 year event
Inflow = 18.94 cfs @ 12.12 hrs, Volume= 78,900 cf
Primary = 18.94 cfs @ 12.12 hrs, Volume= 78,900 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link SP1: Existing 18" SD System

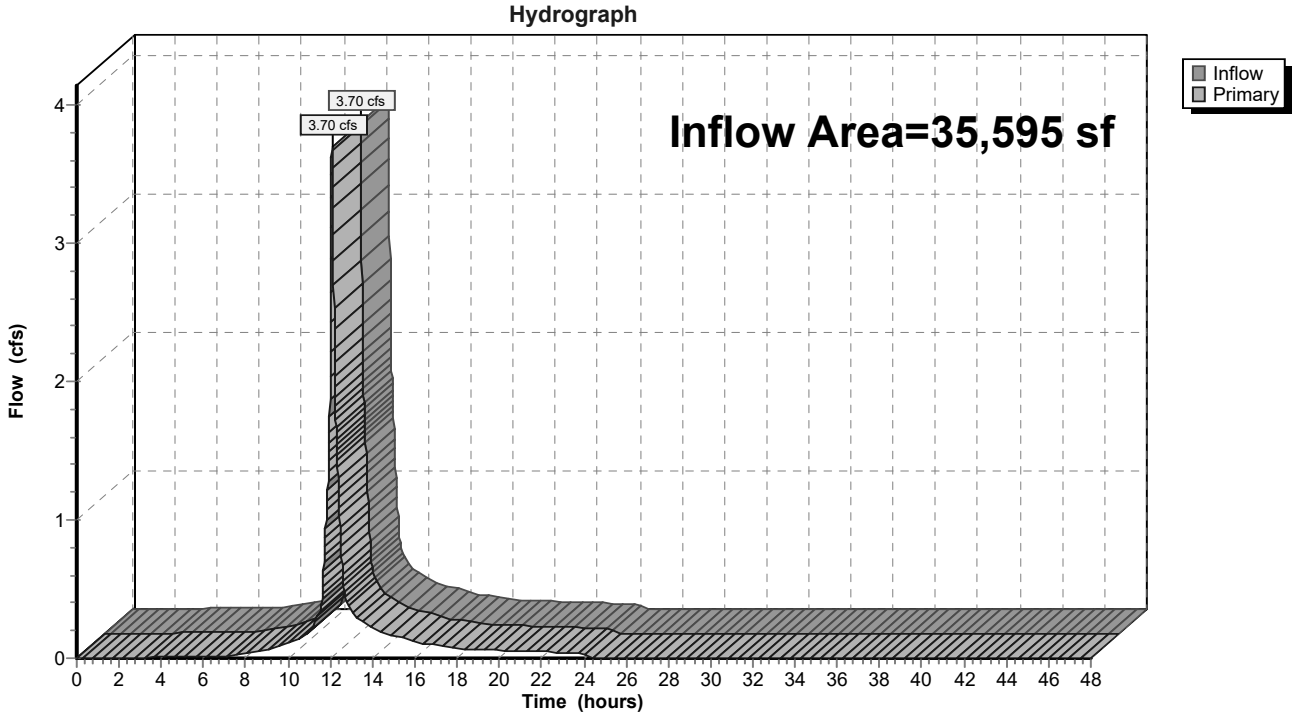


Summary for Link SP2: 30" Storm Drain

Inflow Area = 35,595 sf, 41.57% Impervious, Inflow Depth = 3.99" for 25 year event
Inflow = 3.70 cfs @ 12.09 hrs, Volume= 11,830 cf
Primary = 3.70 cfs @ 12.09 hrs, Volume= 11,830 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link SP2: 30" Storm Drain



Summary for Subcatchment 3S: CB2

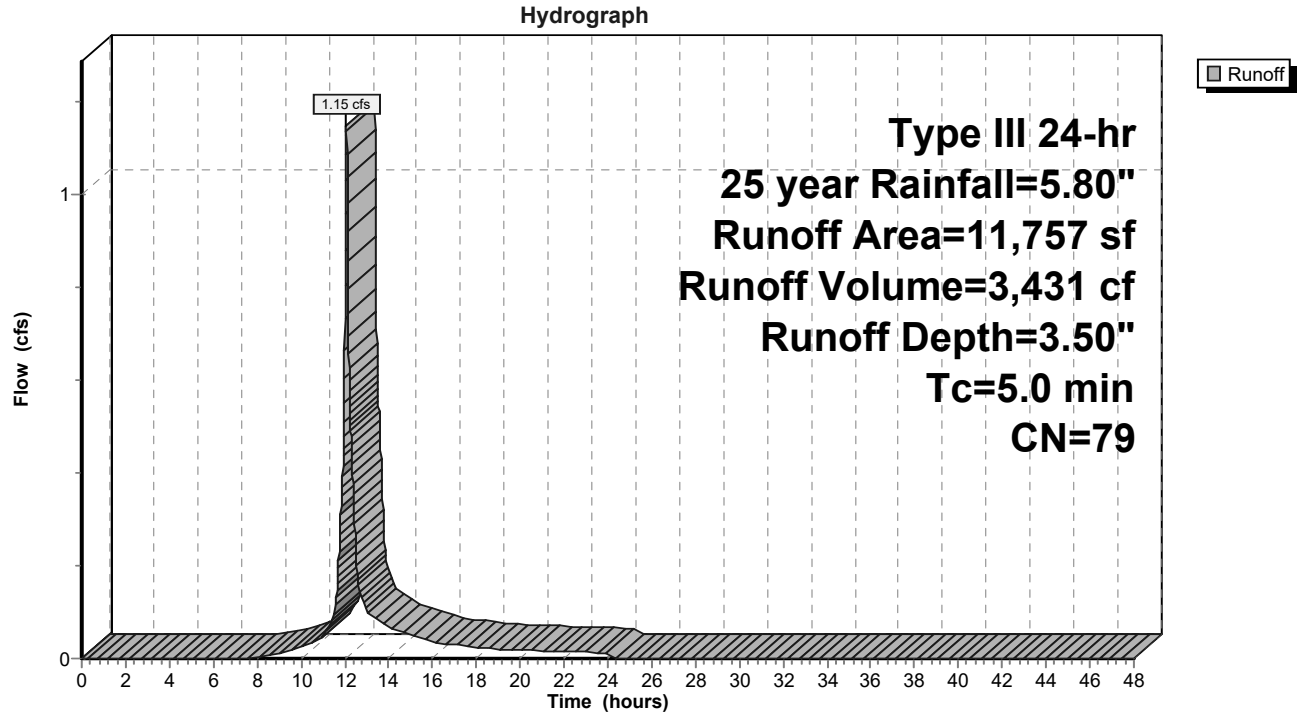
Runoff = 1.15 cfs @ 12.07 hrs, Volume= 3,431 cf, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,398	98	Walks
	9,359	74	>75% Grass cover, Good, HSG C
	11,757	79	Weighted Average
	9,359		79.60% Pervious Area
	2,398		20.40% Impervious Area

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

Subcatchment 3S: CB2



WOODARD &CURRAN
COMMITMENT & INTEGRITY
DRIVE RESULTS

41 HUTCHINS DRIVE
PORTLAND, MAINE 04102
TEL.(207)774-2112

CLIENT Maine Medical Center
PROJECT 222 St. John Street Garage
DESIGNED BY CMS DATE 7/12/2018
CHECKED BY DATE
PROJECT NO. 231158.00 SHEET NO. 1 of 1

Pipe 2 Sizing

Percent Full	Flow Rate (gpd)	Flow Rate (cfs)	Velocity (fps)	Wetted Perimeter	Hydraulic Radius (feet)	Flow Area (sq. ft.)
0	0	0	0	0	0	0
1	197	0.000	0.329	0.167	0.006	0.001
2	877	0.001	0.521	0.236	0.011	0.003
3	2,099	0.003	0.681	0.290	0.016	0.005
4	3,891	0.006	0.822	0.336	0.022	0.007
5	6,270	0.010	0.951	0.376	0.027	0.010
10	27,260	0.042	1.485	0.536	0.053	0.028
15	63,470	0.098	1.913	0.663	0.077	0.051
20	114,343	0.177	2.277	0.773	0.100	0.078
25	178,858	0.277	2.594	0.873	0.122	0.107
30	255,699	0.395	2.874	0.966	0.142	0.138
35	343,323	0.531	3.121	1.055	0.161	0.170
40	440,008	0.681	3.340	1.141	0.179	0.204
45	543,867	0.841	3.534	1.226	0.194	0.238
50	652,855	1.010	3.703	1.309	0.208	0.273
55	764,769	1.183	3.848	1.392	0.221	0.307
60	877,228	1.357	3.971	1.477	0.231	0.342
65	987,650	1.528	4.070	1.563	0.240	0.375
70	1,093,189	1.691	4.146	1.652	0.247	0.408
75	1,190,648	1.842	4.197	1.745	0.251	0.439
80	1,276,288	1.974	4.220	1.845	0.253	0.468
85	1,345,456	2.081	4.211	1.955	0.253	0.494
90	1,391,622	2.152	4.163	2.082	0.248	0.517
95	1,403,004	2.170	4.054	2.242	0.239	0.535
100	1,305,712	2.019	3.703	2.618	0.208	0.545

Diam. (in)	10
Manning n	0.01
Slope(ft/ft)	0.005

NICOLOCK®
paving stones & retaining walls
paver-shield™

Gretchen Kelly Giumarro, RLA
michael boucher landscape architecture
457 US Route 1 Suite 2
Freeport, ME 04032
t 207 865 1080 x7046

Checker Block Snow Guidelines.

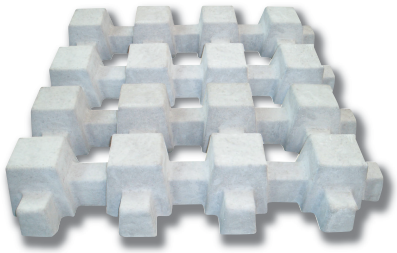
Below are a few bullet points to make sure you are aware and guided through snow removal and maintenance.

- Due to the open surface areas, the water from the melting snow will be absorbed back into the soils and not build up, therefore it will have a superior advantage to ice buildup because there will be no water pooling and water surface freeze.
- Checker Block is a concrete product and therefore if you need to use any de-icing products you should use them sparingly. If you are looking for better traction we recommend using a sand. All concrete block should be treated with caution when it comes to de-icing products
- Plows should be lifted 1-2 inches above surface this will aid in any unnecessary possible damage.
- This product is reinforced and therefore it has a great ability for weight transfer and load supporting ability.

Carl Peterson
Director of Education
Product Development
Nicolock Pavingstones
908-482-8483

REINFORCE YOUR TURF WITH STRENGTH & BEAUTY

checker block®



24" x 24" x 4"
available in natural color

75% SURFACE OPENING

HASTINGS

For more information visit www.checkerblock.com

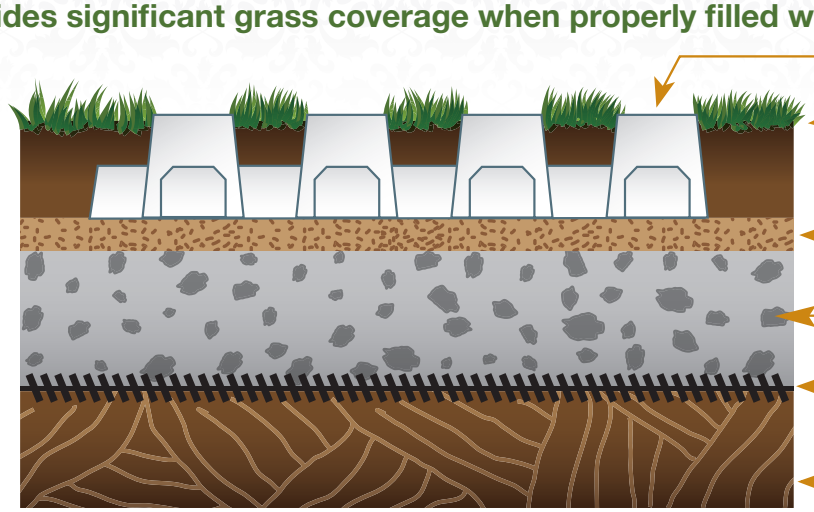
Checker Block® Features & Benefits:

- Steel-reinforced, 4" thick, heavy-duty slab with thick webs, ideal for commercial application.
- Pervious concrete grid.
- Approved for H-20 loading for parking, service roads, tree pits, and fire lanes. It is also Ideal for stabilizing embankments along streams, rivers, and lakes.
- LEED® credit potential: Open grid pavement with an SRI > 29; stormwater runoff reduction; and regional materials.
- Checker Block is manufactured in accordance with ASTM 1319, (Standard Specification for Concrete Grid Paving Units) which requires a minimum compressive strength of 5,000 psi.
- Large surface void area allows for significant turf establishment (not always feasible with plastic or Turfstone products).

checker block®

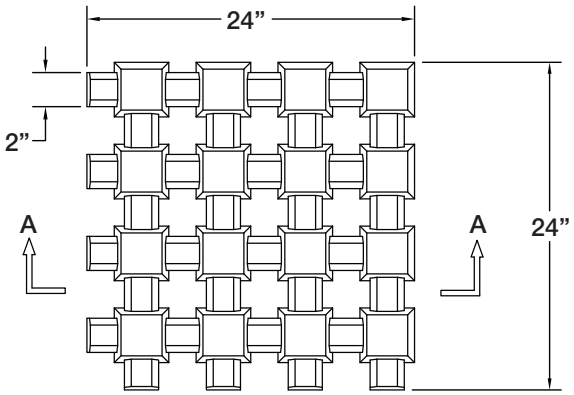
Strength plus nature's beauty.

The unique waffle-like configuration of this pervious castellated product provides significant grass coverage when properly filled with topsoil.

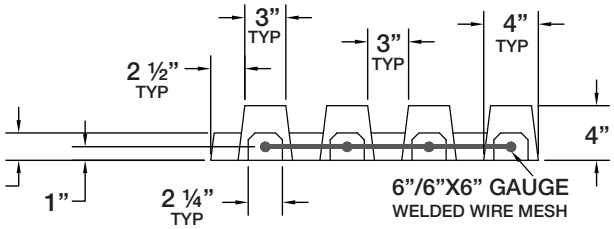


Each 4 square foot unit is 4" thick, and provides a 75% grass to concrete ratio (ratio measured by each 4 s.f. section), ensuring a green turf that can support significant vehicular loads.

CHECKER BLOCK: TOP VIEW



CHECKER BLOCK SIDE VIEW



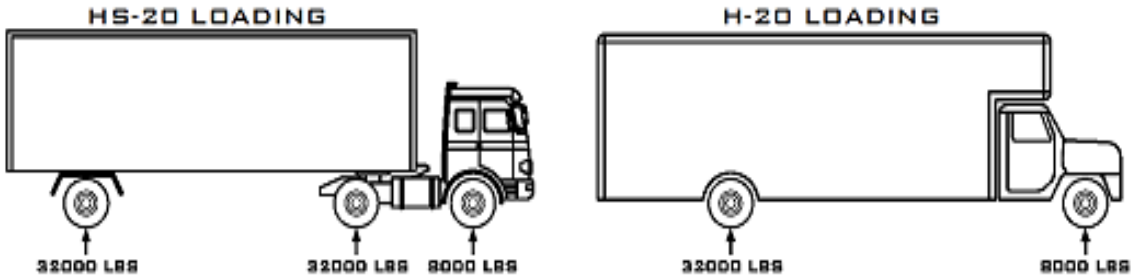
specifications

width	length	height	pieces per s.f.	s.f. per pallet	pieces per pallet	pallet weight
24"	24"	4"	.25	80	20	2000

CHECKER BLOCK TECHNICAL NOTE

TRAFFIC LOADING CALCULATION EXAMPLE

The following calculations demonstrate that Checker Block, a permeable reinforced grid paver, satisfies the requirements of meeting or exceeding an H20 or HS20 loading by comparing the theoretical design loads to the compressive strength of Checker Block.



Step #1) Determine the maximum wheel load:

W_L = 32,000 lb/ 2 (divide by 2 since there are two tires per axle) W_L = 16,000 lb

Step #2) Increase the load by 30% to account for dynamic forces associated with moving vehicles:

$W_{L\text{-Dynamic}} = W_L \times 1.30$ $W_{L\text{-Dynamic}}$ = 20,800 lb

Step #3) Determine the tire contact area:

FHWA has defined an acceptable default tire contact area as a rectangle with an area of $0.01W_L$ (in^2) with a length-to-width ratio of 1:2.5.

$A_{contact} = 0.01\ W_L$ $A_{contact} = 0.01 \times (16{,}000\ lb) = 160\ in^2$

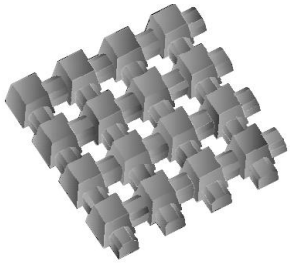
Check dimensions of contact area by confirming that $A_{contact}$ also = 160 in^2

$L = \sqrt{\frac{160}{2.5}} \cdot in$ W = (2.5 x L) L= 8 in W = 20 in

$A_{contact}$ = L X W = 8 in x 20 in = 160 in^2 … checks.

Step #4) Determine the stress exerted per tire in the dynamic load:

$$\sigma_{tire} = \frac{W_{L\text{-}dynamic}}{A_{contact}} \qquad 20{,}800 \text{ lb}/160 \text{ in}^2 \qquad \sigma_{tire} = 130 \frac{\text{lb}}{\text{in}^2}$$



Step # 5) Compare Checker Block strength to H20 or HS20 loading:

Checker Block is manufactured to ASTM C1319 standards requiring a minimum compressive strength of 5,000 psi, which is well in excess of any H20 or HS20 theoretical loading scenarios. As illustrated above, the maximum theoretical tire pressure exerted is 130 psi, so stresses are effectively transferred to the base and subgrade using Checker Block. This significant factor of safety, along with unique steel reinforcement, makes Checker Block the strongest concrete grid paver on the market. Checker Block is castellated, with a 75% turf surface area; optimized for grass establishment. No lattice grid paver can compare to the safety, strength, and turf coverage of Checker Block.

The subgrade soil and base preparation are critical to the performance of any pavement or paver system subjected to vehicular traffic. The subgrade soil and base, in addition to the paver product, must be able to safely transfer the load into the underlying foundation subgrade soil in a stable manner. The above calculations demonstrate that Checker Block is capable of supporting heavy vehicular design loading, but it is up to the design engineer to ensure that an adequate base thickness is specified and that verification of subgrade soil occurs prior to installation of any paver product. All pavement design is site-specific based on actual soil conditions and anticipated vehicular loading patterns.

Nicolock offers the following base thickness guidelines for typical Checker Block applications:

Minimum Dense-Graded Aggregate Base Thickness Guidelines for Checker Block[1]

Conditions	**Subgrade Soil Types**	**Residential Loading** Driveways, walkways, paths, cart paths, trails	**Commercial Loading** Streetways, emergency access, erosion control, slopes, boat ramps
Stable, firm, dry granular soils (CBR > 10)	GP, GW, GC, SW,	**8-inch base**	**8-inch base**
Ground ruts with vehicular traffic (5<CBR<10)	SP, SC	**10-inch base**	**12-inch base**
Ground is soft, moist, and ruts easily (CBR<5)	ML, CL, MH, CH	**12-inch base**	**16-inch base**

[1] notes:

- Subgrade is compacted to 95% of standard Proctor density.
- No free-standing water is observed and a 6 oz woven separation fabric is installed to separate the subgrade from the base material.
- A 1" to 1.5" thick leveling sand bed is used to set the Checker Block grid pavers.

ATTACHMENT 3: CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS CORRESPONDENCE

Craig Sweet

From: Bradley Roland <brad@portlandmaine.gov>
Sent: Monday, July 23, 2018 3:22 PM
To: Lauren Swett
Cc: Craig Sweet
Subject: Re: MMC Garage Stormwater

Hello Lauren,
The St John Street storm drain system will be able to accommodate the proposed 3 CFS from the entrance roadway to the new MMC garage.
No questions on my end.
Just plan to tie into the pipe or a manhole as opposed to a catch basin (which we prefer not to allow).
Brad
--
Bradley A. Roland, P.E.
Senior Project Engineer
Portland Public Works
55 Portland Street
Portland, ME 04101
Tel: 207-874-8840
Fax: 207-874-8852
brad@portlandmaine.gov

On Thu, Jul 19, 2018 at 1:58 PM, Lauren Swett <lswett@woodardcurran.com> wrote:

> Hi Brad,
>
> A few weeks ago we discussed the ability to connect a portion of the site stormwater from the Maine Medical Center Garage project to the stormdrain in St. John Street. The garage itself and a majority of the site will discharge to the stormdrain system that exits the 222 St. John Street parking lot under the railroad tracks and through the County Jail. The portion of the site that fronts on St. John Street, which includes an access driveway and a landscaped area, will discharge to the stormdrain in St. John Street. Attached is the post-development stormwater figure, that shows Subcatchment 4S as the area that drains to St. John Street. In the 25-year storm, the flow from this area will be approximately 3 CFS.
>
> Can you please confirm that this connection to St. John Street will be acceptable, and if you any questions or need any other information?
>
> Thanks for the help!
>
> Lauren

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

41 Hutchins Drive

Portland, Maine 04102

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

(800)426-4262 (office)

Email: lswett@woodardcurran.com

*Licensed in Maine and Wisconsin

Commitment & Integrity Drive Results

www.woodardcurran.com

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

13. CONSISTENCY WITH CITY COMPREHENSIVE PLAN

The project design is governed by the conditions set forth in the Institutional Development Plan (IDP) that was prepared by MMC and approved by City Council. The IDP, page 24, specifically articulates compliance with the City Comprehensive Plan. As mentioned in the IDP, the adopted 2035 Comprehensive Plan "promotes the orderly expansion of institutional uses, such as educational and hospital campuses, which are central to workforce development, employment, and the health of the local and regional economies" (Comprehensive Plan, p.45). The existing MMC staff garage is nearing the end of its structural lifespan and is anticipated to be replaced with a new medical building for patient care on the main campus. The proposed parking garage will provide parking for all staff by replacing spaces in the old garage and consolidating parking from multiple surface lots around the main campus and City.

13.1 Economic Growth

According to the IDP, MMC desires to attract a high quality, highly educated workforce, and hopes that providing convenient parking for all staff members will help achieve this goal.

13.2 Transportation

Since 2009, MMC has implemented a Transportation Demand Management (TDM) plan called "Get on Board!" MMC is updating that plan and considering enhancements to encourage more walking, cycling, and public transportation by its staff members. MMC's ability to promote alternative modes of transportation and success in TDM relies on the availability of a regional system of safe and reliable alternative modes of transportation. A shuttle service will be available to all commuters who park in the proposed garage. Walking from the parking garage to the MMC campus will be encouraged.

13.3 Environment

MMC is environmentally conscious and engages in landscaping best practices to conserve water, reduce maintenance and limit fertilizer use. As mentioned in the approved IDP, MMC has switched away from pesticides to more organic landscape solutions reflecting Portland's goal of "model[ling] environmentally sound landscape management practices, such as planting native species, and limiting the use of pesticides and fertilizers" (Comprehensive Plan, p. 20). MMC intends to continue these best practices by incorporating low maintenance, native plants into the landscaping plan for the proposed project.

14. UTILITY CAPACITY TO SERVE

The Site is proposed to be primarily serviced from utilities within the St. John Street corridor. Letters have been distributed to the local utilities requesting confirmation of capacity to serve the proposed development including water, sanitary sewer, natural gas, electricity, and telecommunications. Copies of these letters are attached to this Section. Responses will be forwarded to the City upon receipt.

We have met with Central Maine Power on February 20, 2018 to discuss the project specific requirements. In addition, the mechanical engineer on the project has been coordinating directly with Unitil on the project's natural gas needs and documentation will be forwarded upon completion of natural gas sizing.

14.1 Attachments

- Ability to Serve Requests to Utilities
- Portland Wastewater Capacity Application

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

June 22, 2018

ATTN: Jamie Cough
Jamie.Cough@cmpco.com
Central Maine Power
162 Canco Road
Portland, ME 04103

Re: Request for Ability to Serve – Maine Medical Center St. John Street Garage

Dear Mr. Cough:

This letter serves as a written request for the ability to serve for the Maine Medical Center Employee Garage project located at 222 St. John Street in Portland, Maine. Woodard & Curran is serving as an agent to the applicant, Maine Medical Center.

The proposed project includes the construction of a new free-standing parking garage structure to accommodate roughly 2,400 parking spaces. The garage is proposed at the location of the existing parking lot currently on the 222 St. John Street property, and it will provide employee parking for the nearby Maine Medical Center Campus. Included in the construction of the garage is a two-story lobby and security building which will house the garage's mechanical room and serve as the primary connection point for all utilities.

The proposed garage building has a footprint of approximately 92,375 square feet and is comprised of the following uses:

- Parking Garage: Approximately 89,925 square feet per floor (nine floors for a total of 808,425 square feet of floor area)
- Lobby and security building: Approximately 2,550 square feet per floor (two floors for a total of 5,100 square feet of floor area)

The intent of the project is to provide a service voltage of 120/208 volts, 3-phase with a transformer installed onsite and to connect to the electrical utility via a new drop pole installed along St. John Street, as shown on the attcahed utility plan.

Please let us know if any additional information is required to evaluate the service capacity for the site. We appreciate your assistance. If you have any questions or require any additional information, please do not hesitate to contact me at 207-558-4258 or csweet@woodardcurran.com.

Sincerely,

WOODARD & CURRAN

Craig Sweet, P.E.
Engineer

Enclosures – Utility Plan
PN: 231158.00

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

June 22, 2018

MEANS Group
Portland Water District
225 Douglass Street
Portland, ME 04104

Re: Request for Ability to Serve – Maine Medical Center St. John Street Garage

To Whom It May Concern:

This letter serves as a written request for the ability to serve for the Maine Medical Center Employee Garage project located at 222 St. John Street in Portland, Maine. Woodard & Curran is serving as an agent to the applicant, Maine Medical Center.

The proposed project includes the construction of a new free-standing parking garage structure to accommodate roughly 2,400 parking spaces. The garage is proposed at the location of the existing parking lot currently on the 222 St. John Street property, and it will provide employee parking for the nearby Maine Medical Center Campus. Included in the construction of the garage is a two-story lobby and security building which will house the garage's mechanical room and serve as the primary connection point for all utilities.

The proposed garage building has a footprint of approximately 92,375 square feet and is comprised of the following uses:

- Parking Garage: Approximately 89,925 square feet per floor (nine floors for a total of 808,425 square feet of floor area)
- Lobby and security building: Approximately 2,550 square feet per floor (two floors for a total of 5,100 square feet of floor area)

The proposed new services provided at the site include:

- 3" domestic water service to serve the lobby and security building
- One new hydrant located along the frontage of St. John Street as shown on the attached utility plan.

The intent of the project is to connect the proposed services descripbed above to the existing 16-inch cast iron watermain located within St. John Street as shown on the attached utility plan. Attached is a copy of the Portland Water District, which provides an estimated water usage for the project.

Please let us know if any additional information is required to evaluate the service capacity for the site. We appreciate your assistance. If you have any questions or require any additional information, please do not hesitate to contact me at 207-558-4258 or csweet@woodardcurran.com.

Sincerely,

WOODARD & CURRAN

Craig Sweet, P.E.
Engineer

Enclosures – Utility Plan
PN: 231158.00

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

June 22, 2018

Spectrum Cable
Attn: Mark Pelletier Mark.pelletier@charter.com
118 Johnson Road
Portland, ME 04102

Re: Request for Ability to Serve – Maine Medical Center St. John Street Garage

Dear Mr. Pelletier:

This letter serves as a written request for the ability to serve for the Maine Medical Center Employee Garage project located at 222 St. John Street in Portland, Maine. Woodard & Curran is serving as an agent to the applicant, Maine Medical Center.

The proposed project includes the construction of a new free-standing parking garage structure to accommodate roughly 2,400 parking spaces. The garage is proposed at the location of the existing parking lot currently on the 222 St. John Street property, and it will provide employee parking for the nearby Maine Medical Center Campus. Included in the construction of the garage is a two-story lobby and security building which will house the garage's mechanical room and serve as the primary connection point for all utilities.

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- Lobby and security building: Approximately 2,550 square feet per floor (two floors for a total of 5,100 square feet of floor area)

The intent of the project is to connect to the communications utility via a new drop pole installed along St. John Street, as shown on the attached utility plan.

Please let us know if any additional information is required to evaluate the service capacity for the site. We appreciate your assistance. If you have any questions or require any additional information, please do not hesitate to contact me at 207-558-4258 or csweet@woodardcurran.com.

Sincerely,

WOODARD & CURRAN

Craig Sweet, P.E.
Engineer

Enclosures – Utility Plan
PN: 231158.00

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

June 22, 2018

ATTN; Bradley Roland, P.E.
Department of Public Works
55 Portland Street,
Portland, ME 04101

Re: Request for Ability to Serve – Maine Medical Center St. John Street Garage

Dear Mr. Roland:

This letter serves as a written request for the ability to serve for the Maine Medical Center Employee Garage project located at 222 St. John Street in Portland, Maine. Woodard & Curran is serving as an agent to the applicant, Maine Medical Center.

The proposed project includes the construction of a new free-standing parking garage structure to accommodate roughly 2,400 parking spaces. The garage is proposed at the location of the existing parking lot currently on the 222 St. John Street property, and it will provide employee parking for the nearby Maine Medical Center Campus. Included in the construction of the garage is a two-story lobby and security building which will house the garage's mechanical room and serve as the primary connection point for all utilities.

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- Lobby and security building: Approximately 2,550 square feet per floor (two floors for a total of 5,100 square feet of floor area)

An oil water separator will be installed to collect runoff from all internal garage floors. Discharge from the oil water separator will be combined with sewer flows generated from the lobby and security building. Once combined the flows will be pumped to a manhole internal to the site which will drain via gravity in a new sewer lateral that will connect to the existing 24-inch sewer main in St. John Street. Please refer to the attached utility plan and wastewater application for additional information.

The oil water separator has been sized for an inflow of 35 GPM which is representative of the use of hose bibs to wash down parking decks. Parking decks will be washed down infrequently and the actual daily flow to the oil water separator is expected to be minimal.

Please let us know if any additional information is required to evaluate the service capacity for the site. If you have any questions or require any additional information, please do not hesitate to contact me at 207-558-4258 or csweet@woodardcurran.com.

Sincerely,
WOODARD & CURRAN

Craig Sweet, P.E.
Engineer

Enclosures – Utility Plan
Waste Water Application
PN: 231158.00

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division

Date: June 22, 2018

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

Site Address: 222 St. John Street

Chart Block Lot Number: Parcel 64-A-2-8-9-11
74-A-7 & 75-A-6

Proposed Use: Parking Garage & Lobby Structure
Previous Use: Parking Lot
Existing Sanitary Flows: N/A GPD
Existing Process Flows: N/A GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Connect to existing 24-inch sewer main located in St. John Street, shown on attached Utility Plan

Site Category

Commercial *(see part 4 below)*	
Industrial *(complete part 5 below)*	
Governmental	
Residential	
Other *(specify)*	X

Private Parking Lot for Institutional Use

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

2. Please, Submit Contact Information.

City Planner's Name: Nell Donaldson Phone: 207-874-8723
Owner/Developer Name: Maine Medical Center
Owner/Developer Address: 22 Bramhall Street Portland, Me 04102
Phone: Fax: E-mail:
Engineering Consultant Name: Woodard & Curran, Craig Sweet
Engineering Consultant Address: 41 Hutchins Drive, Portland Maine, 04102
Phone: 207-558-4258 Fax: E-mail: csweet@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: 830 GPD + Oil Water Separator
Peaking Factor/ Peak Times: x6
Specify the source of design guidelines: *(i.e.*X *"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.

2 public toilets x 325 GPD/ toilet = 650 GPD
15 employees x 12 GPD/Seat= 180 GPD
Total= 830 GPD

Oil water separator has been sized for 35 GPM representing the use of hose bibs to wash down the parking decks, which will occur infrequently. The anticipated daily flow to the oil water separator will be minimal.

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.

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	Maine Medical Center
Street Address	222 St. John Street
City	

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
Bathtub		4	x	0	=	0
Bidet		1	x	0	=	0
Dental Unit		1	x	0	=	0
Drinking Fountain - Public		0.5	x	1	=	0.5
Kitchen Sink		1.5	x	1	=	1.5
Bathroom Sink		1	x	3	=	3
Showerhead (Shower Only)		2	x	0	=	0
Service Sink		3	x	1	=	3
Toilet	-Flushometer(high pressure)	5	x	3	=	15
	-Tank Type	2.5	x	0	=	0
Urinal	-Flushometer Valve	5	x	0	=	0
	-Tank Type	2	x	0	=	0
Wash Sink (Each Set of Faucets)		2	x	0	=	0
Dishwasher		1.5	x	0	=	0
Washing Machine		4	x	0	=	0
Hose (outdoor spigot)	<3/4 in.	2.5	x	36	=	90
Combined Fixture Value Total						113

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Irrigation(Yes/No)?	Yes
If yes, gpm required by irrigation designer:	

Total Fixed Demand (Peak Flow) **0** **gpm**

Customer only needs to complete the cells highlighted in blue

Portland, Maine — Yes. Life's good here.

Christopher C. Branch, P.E.
Director of Public Works

Date: July 26, 2018

Re: Wastewater Capacity Authorization

Address: 222 St. John Street – Parking Garage
Applicant: Maine Medical Center

Planner: Helen Donaldson

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Proposed flow				
Employees at place of employment with no showers	# Employees	15	12 GPD/Employee	180
Public Restroom	# Toilets	2	325 GPD/Toilet	650
			Net Change	**+ 830**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

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

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

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

Sincerely,
CITY OF PORTLAND

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

CC:
Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland

Stuart O'Brien, Planning Director, Department of Planning and Urban Development, City of Portland
Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland

Keith Gray, City Engineer/Engineering Manager, Portland Department of Public Works

Nancy Gallinaro, Water Resources Manager, Portland Department of Public Works
Ben Pearson, Compliance Coordinator, Portland Department of Public Works
John Emerson, Wastewater Coordinator, Portland Department of Public Works

Lauren Swett, Woodard & Curran, DPW Development Review
Scott Firmin, Director of Wastewater, Portland Water District
Charlene Poulin, Wastewater Chief Operator – Systems

Craig Sweet

From: David Senus
Sent: Wednesday, August 15, 2018 7:49 AM
To: Craig Sweet
Subject: Fwd: CMP Ability to Provide Service-Three Phase Service MMC Parking Garage Portland
Attachments: image001.jpg; ATT00001.htm; Easement_Information_Worksheet.doc; ATT00002.htm; Standard Easement Sample.pdf; ATT00003.htm; 2July 2018 EDET.xlsx; ATT00004.htm

Sent from my iPhone

Begin forwarded message:

From: "Cough, Jamie" <Jamie.Cough@cmpco.com>
Date: August 15, 2018 at 7:16:36 AM EDT
To: "David Senus (dsenus@woodardcurran.com)" <dsenus@woodardcurran.com>
Cc: "Bartlett Design (bartlettdesigninc@comcast.net)" <bartlettdesigninc@comcast.net>
Subject: CMP Ability to Provide Service-Three Phase Service MMC Parking Garage Portland

08/15/2018

David Senus
Woodard and Curran, Inc.
41 Hutchins Drive
Portland, ME 04102
Sent via email to: dsenus@woodardcurran.com

RE: CMP Ability to Serve Letter for Proposed MMC Parking Garage 220 St. John Street in Portland

Project Description: . The parking garage consists of eight parking levels, along with roof deck parking. The approximate total area of the eight parking levels of the garage is 700,000 square feet. The estimated connected load is 350 kW.

Dear Mr. Senus:

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Standards Handbook. If you have any questions on the process, or need help in completion of the documents, please feel free to contact CMP.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. Please refer to CMP Installation Checklists for other installations.

- **Call 1-800-565-3181 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.**
- **Submit Load information. Please complete the attached EDET (excel file) using load information. . Please complete this and email back to me.**

- **Submit the easement information worksheet. Please complete this form and either email or fax back to me.**
- **Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.**
- **Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)**
- **Field planner design appointment to cost out job and develop CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.**
- **CMP submits invoice to the customer for payment (typically via email). Payment received from customer.**
- **Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.**
- **Job scheduled for completion after the electrical inspection has been received.**

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

Please complete the attached forms (the specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: CMP Handbook of Standard Requirements

You will be responsible for installing the customer connections, conduits, and metering in accordance with the CMP Handbook of Standard Requirements. The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

Metering:

All metering (including locations) must be preapproved by CMP.

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to Chapter 324 Interconnection Standards and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as "developments" do

not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: PolyphaseLineExtension .

This line extension will be part of Central Maine Power's distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the "Customer" taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don't already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1) **Maine Public Utilities Commission (MPUC) web site- Maine PUC**
2) **By calling the MPUC at (207) 287-3831**

Attachments:

Excel Load Sheet (EDET)
Easement Worksheet and Sample Standard Easement

Regards,

Jamie

Jamie Cough
Energy Services Advisor
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

August 23, 2018

Craig Sweet
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Re: 222 Saint John Street, PO
Ability to Serve with PWD Water

Dear Mr. Sweet:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on June 28, 2018. Based on the information provided per Rev 1 plans dated 7/24/18, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 4-inch domestic service may be installed from the water main in Saint John Street. The service should enter through the properties frontage on Saint John Street at least 10-feet from any side property lines. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- Portland Water District Terms and Conditions require that a service to one parcel cannot serve another parcel. If in the future this parcel is subdivided, a separate service will be required.

- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

- An approved backflow prevention device must be installed on the service line directly after the meter prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site does not currently have existing water service.

Water System Characteristics

According to District records, there is an 16-inch diameter cast iron water main in St. John Street and a public fire hydrant located approximately 500 feet from the site. The most recent static pressure reading was 90 psi on January 22, 2018.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will not require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Robert A. Bartels, P.E.
Senior Project Engineer

15. SOLID WASTE

15.1 Commercial Solid Waste

All solid waste materials generated from the proposed building will be transported and disposed of in accordance with applicable laws and regulations. In addition to the solid waste collected within the building, exterior trash and recycling receptacles are proposed and will be maintained by the applicant. MMC will contract with a private hauler for all solid waste removal.

15.2 Construction & Land Clearing Debris

As with any construction project, the proposed construction will generate construction, and demolition debris. The existing site is primarily impervious surface, and land-clearing debris will be minimal. The contractor(s) for the construction work will be fully responsible for handling all waste generated by the project and for managing and disposing of it 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 applicable Maine regulations and approval of the City of Portland. All efforts will be made during construction to minimize waste and to recycle. Construction debris will be transported to a waste management facility licensed to accept the waste materials.

15.3 Special & Hazardous Waste

The potential for contaminated soil on the site is being investigated and will be addressed as described below. The proposed development will not produce any other special or hazardous waste.

15.3.1 Soil Management

In 2008, a Phase 1 Environmental Site Assessment was completed by Credere Associates, LLC for 222 St. John Street. The assessment identified the possibility that environmental conditions had been impacted through the historical use of portions of the property as a rail yard. The nature of this past use as well as the industrialized character of the site and surrounding properties indicates the potential for historical releases of oil and/or hazardous materials at and in the vicinity of the site. Further, urban fill is prevalent throughout Portland's peninsula and it is therefore likely that shallow subsurface soil at the Site will be consistent with urban fill. "Urban Fill" means soil mixed with other materials that has been placed over an area for the purpose of modifying the elevation of the land surface to facilitate development. This type of material generally requires proper management and/or disposal when generated as excess during redevelopment work. However, no known or expected conditions where state or federal regulations would require active remediation are present at the site

Additional investigation, including soil and groundwater sampling, is being undertaken at the site. This data will be utilized to develop a soil management plan that will address both the reuse and disposal of any contaminated soils identified on the site. Disposal of any contaminated soils will be at appropriate licensed facilities, in accordance with all applicable regulations.

15.4 Findings

Adequate provisions for solid waste disposal have been made. General solid waste, construction, and demolition debris will be managed in full accordance with all applicable laws and will not cause a deleterious effect on the environment.

16. SUMMARY OF FIRE CODES

The items in the Portland Fire Department Site Review Checklist are addressed in the following sub-sections.

16.1 Contact Information

The contact information for the applicant and architect is provided below.

Applicant
Alexander Green
Maine Medical Center
22 Bramhall Street
Portland, ME 04102
(207) 662-3689

Architect
Winton Scott Architects
5 Milk Street
Portland, ME 04101
(207) 774-4811

16.2 Structure Information

- Proposed uses of any structures
    - The proposed structure is a ground level plus eight tiers free-standing parking garage that will accommodate 2,400 new parking spaces and 52 surface parking spaces to the north of the garage.
- Square footage of all structures (total and per story)
    - This information is provided on the attached plan set.
- Elevations of all structures
    - This information is provided on the attached plan set.
- Proposed fire protection of all structures
    - Standpipes that allow at-grade fire department connections to the water supply, with hoses connected to fight fires at each level are provided in the parking garage structure.
- Hydrant locations
    - This information is provided on the attached plan set.
- Water main size and location
    - This information is provided on the attached plan set.
- Fire Department ladder truck access to all structures (minimum 2 sides)
    - This information is provided on the attached plan set.
- A code summary shall be included referencing NFPA 1 and all fire department technical standards
    - This information is provided on the attached plan set.

MMC Staff Parking Garage - Code Review

Building Overview

Tiers:	8 tiers + grade level parking
Area Per Tier / Total Area:	Approximately 90,800 GSF / 817,200 GSF
Building Height	96' - 3"
Fire Protection	Not Sprinklered Dry-pipe standpipe system to be provided
IBC Use Group	S-2
Site Access	PFD ladder truck clearance on north and east sides

Applicable Codes and Standards

Maine Uniform Building and Energy Code (MUBEC)
International Building Code (IBC), 2015 Edition with ME Amendments
- Special Provisions : Section 406 Motor Vehicle Related Occupancies

International Existing Building Code (IEBC), 2015 Edition with ME Amendments
International Energy Conservation Code (IECC), 2009 Edition with ME Amendments
American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
NFPA 1, Uniform Fire Code, 2006 Edition with ME Amendments
NFPA 13, Standard for Installation of Sprinkler Systems, 2016 Edition
NFPA 101, Life Safety Code, 2009 Edition with ME Amendments
- Special Provisions for Parking Structures : Chapter 42.8

Americans with Disabilities Act (ADA), 2010 Standards for Accessible Design

Construction Type:	IBC: 1B (Non-Combustible 2 Hour Rated) / NFPA II(222)
Building Type:	Open Parking Garage (meets IBC 406.5 and NFPA 101 3.3.254.6)
High Rise Building Features:	Not required by NFPA nor IBC for open parking garages
Occupant Load	NFPA : None (42.8.1.7) / IBC : 450 per tier - 150 per stair

Fire Protection Features:

Exterior Wall Openings	All walls meet IBC min. distance of 10' for unlimited openings (Table 705 Note g.)	
Fire Resistance Ratings	Stairs	Not Required for Parking Garages
	Elevator Shafts	Two (2) hours
	Mechanical Room	One (1) hour
Fire Alarm System	To be provided per PFD requirements	
Means of Egress	Distances as shown on Code Plans meet NFPA and IBC	

SR #: 396365

0 100 200 400 600 800 Feet

1 inch = 100 feet

Pressure Zone: 267

PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104
Asset Management and Planning Dept.

Legend

- Air Valve
- Blow Off
- By Pass
- Distribution
- Transmission
- Connection
- Attribute Change
- Reducer
- Hydrant
- Hydrant Control
- Combined Service
- Domestic Service
- Fire Service
- Private Hydrants
- Meter Pits
- Manhole
- CSO
- Gravity
- Force
- Contours

Hydrant Flow Testing Data

Address
Municipality

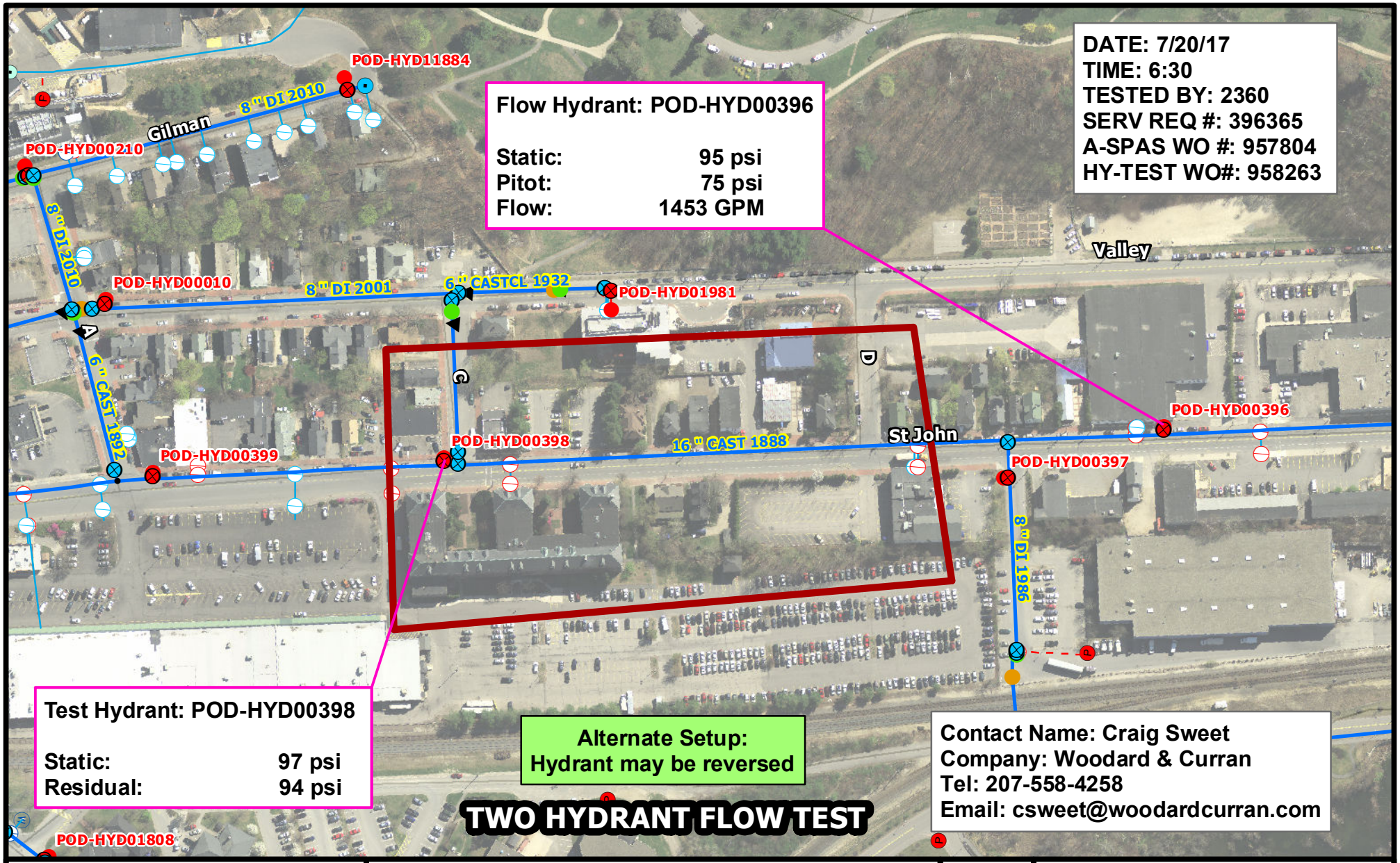
This map depicts flow testing and static pressure data for the selected hydrants from PWD's asset management system. If the data is out of date or insufficient for your needs, please contact the MEANS group to request a hydrant flow test and we will work with you to get more complete data.

Drawn By: RBB

Prepared For: Craig Sweet
Woodard and Curran

Scale: As Noted

Date: June 26, 2017



St. John Street
Portland

Scale 0 100 200 300 400 Feet — 1 inch = 200 feet

PORTLAND WATER DISTRICT
225 Douglass Street
PO Box 3553
Portland, ME 04104
Telephone: (207) 774-5961
Fax: (207) 761-8307

Legend

Air Valve	Connection	Combined Service	Manhole
Blow Off	Attribute Change	Domestic Service	CSO
By Pass	Reducer	Fire Service	Gravity
Distribution	Hydrant	Private Hydrants	Force
Transmission	Hydrant Control	Meter Pits	

N E S W

Disclaimer: This map is suitable for preliminary study and analysis and is based on PWD record information. PWD is not liable for any damages whatsoever resulting from inaccurate data or from errors made in the location and marking of its infrastructure.

Drawn By: RBB
Prepared for: Craig Sweet
Woodard & Curran

Test Fee: $200.00
Date: July 27, 2017

17. CONSISTENCY WITH CITY OF PORTLAND LAND USE CODE

The proposed development meets the City's Site Plan Standards described in City of Portland Land Use Code (Chapter 14-526). The following section demonstrates compliance with City standards.

17.1 Transportation (14-526 (a))

- **Impact on Surrounding Street Systems.** Section 10 includes a detailed Traffic Impact Study.
- **Access and Circulation.** Internal circulation of traffic was designed to provide safe pedestrian and vehicular traffic within and around the parking garage. Points of access and egress are in locations that avoid conflicts with existing traffic flow.
- **Sidewalks.** Brick sidewalks will be replaced along the frontage of the Eagles lot and will be designed to City specifications. Concrete internal sidewalks are proposed from the parking structure to public sidewalks along the street to enhance pedestrian circulation from the main campus to the parking garage. In accordance with the IDP, the sidewalks will be well-lit for pedestrian safety.
- **Public Transit.** As described in the IDP, a private shuttle transit service will be provided from the proposed garage to the main campus. Some staff may use public transit depending on their schedule and destination point. The site was designed to provide safe circulation of shuttles, cars and pedestrians.
- **Parking.** The proposed staff parking garage meets MMC's parking demand and zoning requirements of the IOZ Regulatory Framework as described in Section 6 of this report. As discussed in the IDP, the proposed garage is intended to provide parking for staff, thus allowing expansion of the main campus into the area of the existing staff garage. The following table demonstrates compliance with City off-street parking standards for non-residential structures.

Table 17-1: Parking Space Summary

Category	Spaces Required	Spaces Provided
MMC Personal Vehicle (staff)*	-	2,342
Compact	-	20
Handicap Accessible	35	32 (not including van accessible)
Van Accessible		6
TOTAL for Garage		**2,400**
Shuttle**	-	13
Surface Parking Spaces Behind 222 St. John Street		52 (including 6 handicap accessible spaces, inclusive of 1 van Handicap Accessible)
Bicycle Parking/Storage		40

*2,400 parking spaces are provided in the parking garage and 52 spaces in the adjacent surface parking lot. The spaces in the garage will accommodate patrons of The Fraternal Order of Eagles (50 spaces). The Grade level of the garage and surface parking lot will accommodate businesses and patrons of 222 St. John Street.
**All shuttle parking spaces are provided on the ground level of the parking garage and are assumed to be shared spots. They do not factor into the total number of parking spaces.

Table 17-2: MMC Staff Parking Garage Parking Space Summary

Level	Standard	Compact	Car Accessible Spaces	Van Accessible	Shuttles	Level Total	Notes
Grade (in Garage)	242	2	3		13	247	Accommodates 13 shuttle spaces (off hours) within the garage and designated bike storage areas with capacity for 40 bicycles.
Level 1	251	4	1	6		262	Includes 2 IMT/Elec rooms. All van accessible spaces provided on Level 1, 100 designated carpool spaces & 6 charging stations.
Level 2	264	2	4			270	
Level 3	261	2	4			267	Includes 2 IMT/Electrical Rooms.
Level 4	264	2	4			270	
Level 5	261	2	4			267	Includes 2 IMT/Electrical Rooms.
Level 6	264	2	4			270	
Level 7	264	2	4			270	
Level 8	271	2	4			277	
Total Garage Spaces	**2,342**	**20**	**32**	**6**	**13**	**2,400**	**Approximately 0.8% of spaces are compact**

Below is a summary of how the proposed parking space summary in **Table 17-2** relates to the required number of accessible spaces.

- Total Accessible Spaces – 34 (20 plus 1 for each 100 over 1,000)
    - **38 spaces are provided**
- Van Accessible – 6 (1/6 of spaces required)
    - **6 van spaces are provided (included in total count of 38)**

The table above includes a summary of the parking garage space allocation. All van accessible spaces are provided on Level 1. Levels 1, 3 and 5 include IMT/Electric rooms. MMC will work with City to determine a snow ban parking arrangement on how this garage can help serve snow ban parking needs.

- **Snow Storage.** MMC contracts with an outside snow removal company. For snow management within the garage, snow melters will be located on the roof which will be open deck.

- **Transportation Demand Management (TDM).** The MMC TDM Plan "Get on Board!" is outlined in the approved IDP (IDP page 74). As discussed in **Section 6.7** of this report, MMC intends to continue encouraging staff to use alternative methods of transportation, included walking from the proposed parking garage to the main campus (approximately 0.3 miles).

- **Technical Manual Section 1.** A traffic study was developed for the proposed parking garage in accordance with Section 1 of the Technical Manual; the analysis is included in Section 10 of this report. No public streets are proposed as part of this project; however, a new signalized intersection is proposed at the corner of D Street and St. John Street. Pavement removed from St. John Street for construction of intersections and installation of utilities will be replaced in accordance with specifications provided in Section 1 of the Technical Manual.

  Public crosswalks, curbing and sidewalks meet City specifications as outlined and detailed in Section 1 of the Technical Manual. All sidewalks along St. John Street will be designed for accessibility and constructed out of brick in accordance with the City Sidewalk Materials Policy.

17.2 Environmental Quality (14-526 (b))

- **Preservation of Significant Natural Features.** As described in Section 11, the existing site is developed, and no significant natural features have been identified.

- **Landscaping.** See the detailed Landscaping approach in Section 3.4.3.

- **Parking Lot Landscaping.** The proposed surface parking lot complies with the parking lot landscaping standards. Trees are provided in landscaped islands in accordance with Section 15-526 (b) 2. b. (ii) and Technical Manual Section 4. See the detailed Landscaping approach in Section 3.4.3.

- **Street Trees.** See the detailed Landscaping approach in Section 3.4.3.

- **Stormwater.** As demonstrated in Section 12, the post-development peak flows for the overall project area do not exceed pre-development peak flows, and the proposed improvements are designed to minimize the rate of stormwater leaving the site. Most of the site's stormwater will continue to drain to the existing system to the west, with flows reduced by an onsite stormwater management system. A small portion of the site will now drain to the existing stormdrain in St. John Street, and the City has indicated that this change in flow will be acceptable. Section 12 of this report demonstrates compliance with Portland Stormwater Management Standards and MaineDEP Chapter 500 Basic, General and Flooding standards, in accordance with Technical Manual Section 5. The site is not located within the watershed of an Urban Impaired Stream; therefore, this standard does not apply to the proposed development.

- **Erosion Control.** Plans, notes, and details are provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices for the proposed development in accordance with Appendix A, B, & C of MaineDEP Chapter 500.

- **Sewer.** The proposed development includes office space with two single fixture bathrooms for the users/patrons off of the lobby area and one single fixture bathroom for staff in the break room at the lower level. The sanitary disposal of sewage complies to Section 2 of the Technical Manual.

17.3 Public Infrastructure and Community Safety Standards (14-526 (c))

- **Consistency with City Master Plans.** As demonstrated in Section 13, the proposed development is consistent with the IDP and the City Comprehensive Plan.

- **Public Safety and Fire Prevention.** The proposed development incorporates public safety principles for Crime Prevention through Environmental Design by limiting access to the garage to Maine Med staff, natural surveillance that promotes visibility, territorial reinforcement through sense of ownership and on site security.

The proposed development provides access for emergency vehicles. As demonstrated in Section 16, the proposed development complies with fire codes.

- **Availability and Adequate Capacity of Public Utilities.** As demonstrated in Section 14, public utilities have the capacity to serve the proposed development. Electrical service will be underground. The sanitary sewer and stormwater utilities are designed to City standards.

17.4 Site Design Standards (14-526 (d))

- **Massing, Ventilation and Wind Impact.** The proposed garage complies with the IOZ standards specified in the approved IDP, including maximum building height (100 feet), as demonstrated in Section 6. The bulk, location and height of the proposed structure is not anticipated to reduce ventilation to abutting structures, create unsafe wind conditions, or diminish the value or utility to neighboring structures. The ventilation mechanism will direct exhausted away from public spaces, as discussed in Section 18.

- **Shadows.** The proposed garage complies with the IOZ standards specified in the approved IDP, which includes a shadow analysis. The shadow analysis was conducted in accordance with Technical Manual Section 11.

- **Snow and Ice Loading.** MMC contracts with an outside snow removal company. For snow management within the garage, snow melters will be located on the roof which will be open deck.

- **View Corridors.** This standard does not apply to the proposed development, since it is not located within the area identified in the Downtown Vision View Corridor Protection Plan.

- **Historic Resources.** The proposed garage is located within 100 feet of the Maine Central Railroad General Office Building at 222 St. John Street, which is identified as a historic landmark. The parking garage was designed to minimize its impact to this building to the extent possible. Specifically, the scale and proportion of the principal elevations of the garage have been given a hierarchical treatment, avoiding the repetitive nature of the basic building type. Along St. John Street, the principal façade features a base zone of textured precast concrete spandrels with textured faces which impart detail and scale relating features. On the south side of this elevation, the bottom two tiers of spandrels relate to the low-rise buildings to the south. On the north side, a higher base of feature spandrels relate to a scale of city and institutional uses. The composition is deliberately varied, with an off-centered elevator core. The west side of the building, with no massing relief, is activated with a dramatic variation of the spandrel panels in an undulating pattern. The upper sides of both east and west feature light-catching perpendicular extruded aluminum fins, which create a softening of the mass of the structure. They also feature a horizontal precast concrete shelf cap along the full length of the elevation.

  The structure behind 210 St. John Street and on the 222 St. John Street property will be removed during the project. Research conducted on the structure behind 210 St. John Street provides the following information:

  - The structure is not shown on the 1916 Portland Terminal Plan which was obtained from DPW archives.
  - The structure is not shown on an aerial photo from October 1940 which was obtained from DPW archives.
  - The structure is not shown on the 1954 Sanborn Maps.
  - The structure is shown on an aerial photo from the 1950s (actual year is not clear).

- The structure is shown on a November 1969 aerial photo obtained from DPW archives and the lot has changed to surface parking.

The structure has a concrete foundation, brick exterior, metal stair pans and numerous concrete masonry units (CMUs). Although the structure has a roof and gutter style similar to the 222 St. John Street property, aspects of the building's construction are modern including:

- Precast concrete window sills instead of granite,
- Steel lintels instead of granite,
- Residential-scaled modern 1-over-1 windows instead of the monumental 2-over-2 double hung windows on the main building,
- A modern era reinforced concrete foundation, and
- A dramatic modern cantilevered concrete canopy over the back door.

The information above helps to clarify that the structure behind 210 St. John Street was not built with Union Station or 222 St. John Street and it was likely built sometime in the early 1950s, only being associated with the railroad for a short period of time (less than 20 years). Supporting documentation regarding this research has been attached to this Section.

- MMC attended an Advisory Review meeting with the Historic Preservation Board on April 18, 2018 to discuss the proposed staff parking garage.
- **Exterior Lighting.** This information is provided on the attached plan set. The lighting plan for the proposed project was designed to be consistent with current City standards.
- **Noise and Vibration.** The HVAC and mechanical equipment servicing the proposed development will be screened from public view and is not anticipated to generate noise that exceeds City standards. Section 18 of this report contains more detailed information on proposed mechanical equipment.
- **Signage and Wayfinding.** This information is provided on the attached plan set.

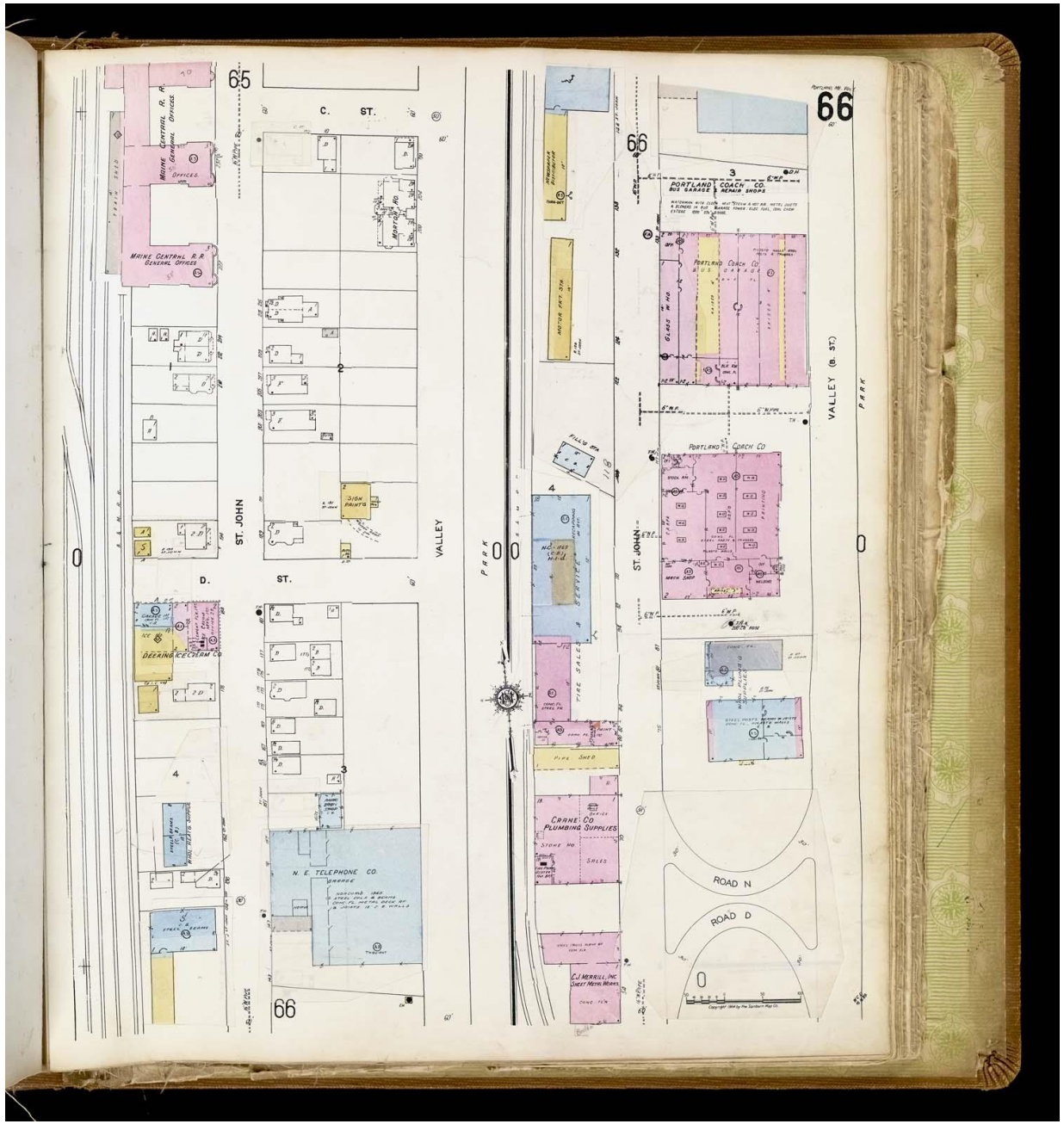
17.5 Attachments

- Structure Behind 210 St. John Street Documentation

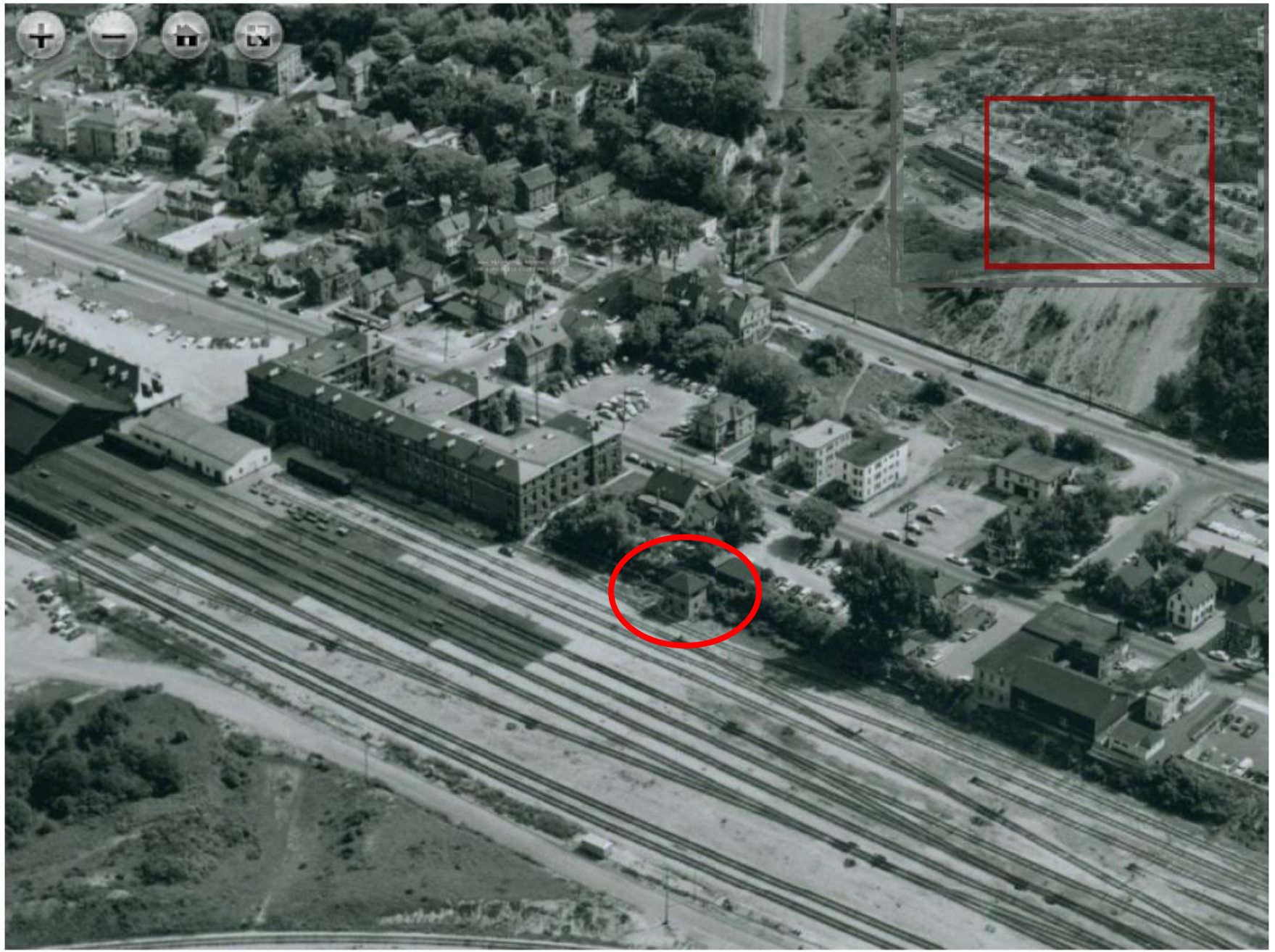
1916 Portland Terminal Plan

1940 Aerial Photo | Obtained from DPW Archives

1954 Sanborn Map | Obtained from Portland Public Library

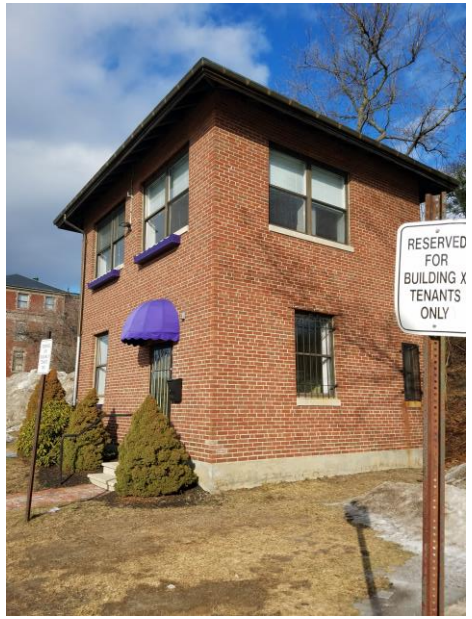


1950s Aerial Photo

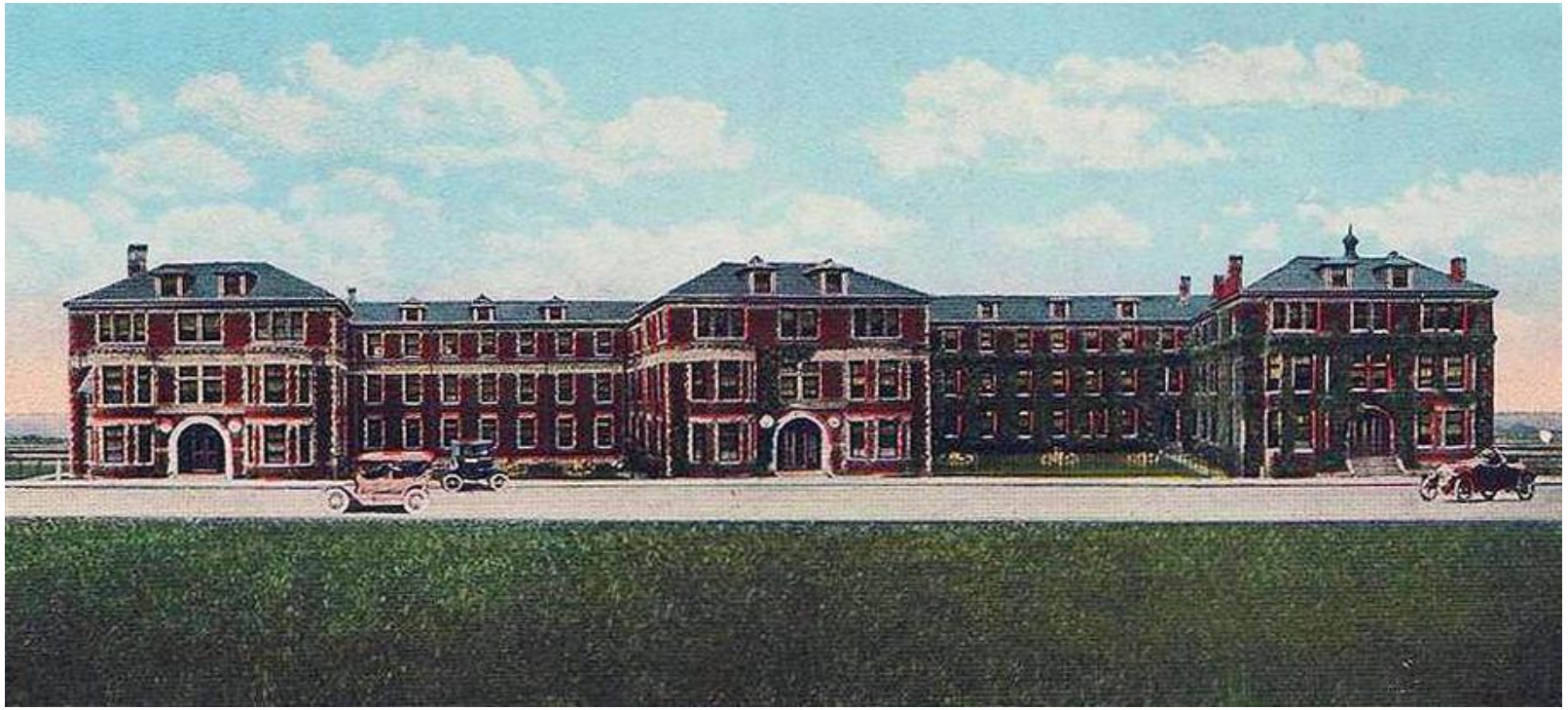


1969 Aerial Photo

February 2018 – Photos of Structure Behind 210 St. John Street



222 St. John Street



18. HVAC & MANUFACTURING EQUIPMENT VERIFICATION

The HVAC equipment for the parking garage has not been selected yet. MMC requests a condition of approval stating that, prior to obtaining a building permit, the Applicant shall submit evidence that the equipment meets applicable state and federal emission requirements.

20. SOILS

In accordance of Section 7 of the City's Technical Manual, Level III Site Plan applications are required to submit a soil survey. The site is located in a developed area of urban fill. In lieu of a soil survey, we are submitting a geotechnical report that has been prepared and stamped by a professional engineer.

Geotechnical data has been collected at the site and a Preliminary Geotechnical Report has been prepared by S.W. Cole Engineering, Inc. A copy of the July 2017 report is attached. Eight test borings were completed in February and March of 2017, and these borings were supplemented by data collected from borings completed in 1995 and 1989. Additional borings are planned for the site to provide supplemental information for the final foundation design.

The geotechnical investigation found that beneath the existing paved surface of the parking lot are layers of urban fill, glaciomarine soils including sand, silt, and clay, and glacial till, with bedrock at depths ranging from 34 to 62 feet. Due to the soil conditions encountered on the site, the garage will be founded on piles.

20.1 Attachments

- Preliminary Geotechnical Report, dated July 11, 2017, by S.W. Cole Engineering, Inc.

REPORT

17-0103 S

July 11, 2017

Explorations and Preliminary Geotechnical Engineering Services

Proposed Parking Structure
222 St. John Street
Portland, Maine

Prepared For:
Cowcatcher, LLC
c/o East Brown Cow Management, Inc.
Attention: Denine Leeman
100 Commercial Street, Suite 306
Portland, Maine 04101

Prepared By:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, Maine 04039
T: 207-657-2866

S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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17-0103 S

July 11, 2017

Cowcatcher, LLC
c/o East Brown Cow Management, Inc.
Attn: Denine Leeman
100 Commercial Street, Suite 306
Portland, Maine 04101

Subject: Explorations and Preliminary Geotechnical Engineering Services
Proposed Parking Structure
222 St. John Street
Portland, Maine

Dear Denine,

In accordance with our Proposal, dated February 8, 2017, we have performed subsurface explorations and a geophysical survey for the subject project. This report summarizes our findings and preliminary geotechnical recommendations and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information at the site in order to provide a preliminary geotechnical assessment of feasible foundation types associated with the proposed construction. Our scope of services included a review of prior explorations, performing eight test boring explorations, soils laboratory testing, a geophysical survey, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is a rectangular parking lot at 222 St. John Street in Portland, Maine. Based on the information provided, we understand development plans call for construction of a new eight to ten-story parking structure. We understand the structure will be a pre-cast

reinforced concrete frame with pre-cast concrete decks and an on-grade, asphalt paved level at approximately elevation 25 to 26 feet (project datum). Based on information provided by Becker Structural Engineers (project structural engineer), we understand the structure will have maximum column loading of about 2,465 kips.

Proposed and existing site features are shown on the "Exploration Location Plan" attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

S. W. Cole Engineering, Inc. (S.W.COLE) coordinated and logged a test boring exploration program at the site and reviewed prior site exploration data as follows:

2.1.1 Current Explorations

Eight test borings (B-201 through B-206, including B-203A and B-203B) were made at the site on February 27 through March 3, 2017 by S. W. Cole Explorations, LLC, a subsidiary of S. W. Cole Engineering, Inc. (S.W.COLE). The exploration locations were selected in conjunction with Becker Structural Engineers and established in the field by S.W.COLE using measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of the test borings and a key to the notes and symbols used on the logs are attached in Appendix C. The elevations shown on the logs were estimated based on topographic information shown on the "Exploration Location Plan".

2.1.2 Prior Explorations

We reviewed explorations made at the site for previously proposed developments, including:

- Seven test borings (B-1 through B-5, including B-2A and B-5A) made in 1989;
- Eight test borings (B-101 through B-108) made in 1995

The approximate locations of these test borings are shown on the "Exploration Location Plan" attached in Appendix B. Logs of these prior explorations are also attached in Appendix C.

2.2 Testing

The test borings were drilled using a combination of solid stem auger and cased wash-boring techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. Pocket penetrometer testing (PPT) was performed on split spoon samples of stiffer silty clay soils, where encountered. Shelby tube sampling and Vane Shear Testing (VST) was performed where softer silty clay soils were encountered. SPT blow counts, as well as PPT and VST results, are shown on the logs.

Soil samples obtained from the explorations were returned to our laboratory for further classification and testing. Atterberg Limits and moisture content test results are noted on the logs. The results of a one-dimensional laboratory consolidation test, performed as part of the prior 1990 study, are attached in Appendix D.

2.3 Geophysical Survey

Hager-Richter Geoscience, Inc. (Hager-Richter) of Salem, New Hampshire, working under subcontract to S.W.COLE, performed a geophysical survey at the site on June 3 and 4, 2017. The purpose of the survey was to assess shear wave velocities of soil and bedrock beneath the site for use in determining Seismic Soil Site Class per IBC, and to obtain additional depth to bedrock information. A geophysical survey report prepared by Hager-Richter is attached as Appendix E.

3.0 SITE AND SUBSURFACE CONDITIONS

3.1 Surficial

The site is located at 222 St. John Street in Portland, Maine and currently consists of a large paved parking lot. Existing grade is relatively flat and level with existing ground surface varying from about elevation 26 to 27 feet. The site is located adjacent to an active railroad alignment and we understand portions of the site were historically used as a train yard. Existing site features are shown on the “Exploration Location Plan” attached in Appendix B.

3.2 Soil and Bedrock

Available soils mapping and the subsurface findings at the explorations indicate the site is located at the margin of Presumpscot Formation glaciomarine sands, silts, and clays and a marine fan deposit of primarily sand and gravel. Underlying a surficial layer of pavement, the borings generally encountered a thin layer of fill soils overlying the glaciomarine and marine fan deposits, overlying glacial till mantling bedrock at depth. The principal strata encountered are summarized below. Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

Fill: Underlying surficial pavement, the borings encountered fill consisting of brown and black sand with varying portions of silt, gravel, and ash-like material. The fill extended to depths varying from approximately 1.5 to 5 feet below the ground surface.

Glaciomarine Soils: Underlying the fill or interbedded in the marine fan sand and gravel, borings B-202, B-204, and B-206, as well as several prior borings made in the northwestern portion of the site, encountered varying thickness of glaciomarine soils consisting of gray to gray-brown sand, silt, and silty clay with some shells. The glaciomarine soils at boring B-202 consisted of relatively soft, compressible gray silty clay at depth intervals of about 2 to 13.5 feet and 30 to 36 feet.

Marine Fan Sand and Gravel: Underlying the fill and underlying or interbedded amongst the glaciomarine soils, the borings encountered brown sand with varying portions of silt, gravel, cobbles and boulders.

Glacial Till: A relatively thin layer of glacial till, up to about 5 feet in thick, was encountered mantling the bedrock surface at the borings. The glacial till consisted of gray sand with varying portions of silt and gravel.

Bedrock: Bedrock was encountered at depths varying from approximately 34 to 62 feet at the borings, and generally appears to be trending deeper to the south. A thin surficial layer of weathered bedrock was penetrated by the drill tooling at some locations. A rock core retrieved at boring B-206 indicates the bedrock consist of gray Phyllite with an RQD of 44.

The Hager-Richter geophysical survey findings generally concur with the depth to bedrock trends encountered at the borings; discussion of depth to bedrock, as well as a bedrock elevation plan (Figure 5) are included in the Hager Richter report, attached as Appendix E.

3.3 Groundwater

Saturated soils or free water were encountered at the borings at depths varying from about 3 to 15 feet. Groundwater likely becomes perched on the relatively impervious silty clay encountered beneath a portion of the site. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

3.4 Frost and Seismic

The 100-year Air Freezing Index for the Portland, Maine area is about 1,410-Fahrenheit degree-days, which corresponds to a frost penetration depth on the order of 4.5 feet. Based on the Hager-Richter geophysical survey findings, we interpret the site soils to correspond to Seismic Soil Site Class D according to 2009/2015 IBC (shear wave velocity method).

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle geotechnical considerations include:

- The proposed parking structure will need to derive support from deep foundations, such as driven H-piles or drilled shafts. Alternatively, the proposed structure may be supported on spread footings bearing on ground improved with rigid inclusions.

- The dead load of the foundation system may be used for uplift resistance. Additionally, rock anchors installed through pipe piles or steel casing may be used to resist structural uplift loading. Battered piles and drilled shafts may be used to resist lateral loads. Lateral earth pressures acting on the sides of foundations may also be used to resist lateral loads.

- The asphalt paved on-grade garage level may be supported on properly prepared

soil subgrades using a conventional asphalt pavement section. If overhead clearance is tight on the ground level, we recommend installing insulation below the paved surface to mitigate potentially adverse frost heaving.

- The site was formerly used for rail operations and ash-like material was observed in the fills at some locations. We recommend the fill soils be characterized for environmental handling purposes prior to construction. As discussed, impacted soils may be able to be reused beneath the first floor ramp to avoid potentially costly export and off-site disposal.

- Imported materials, such as Crushed Stone, Structural Fill, and pavement gravels will be needed for construction.

4.2 Foundation and On-Grade Level Considerations

Given the magnitude of proposed structural loading and the subsurface findings, the parking structure will need to be supported on deep foundations, such as driven H-piles or drilled shafts. Alternatively, the structure may be supported on spread footings bearing on soils improved with rigid inclusions. Discussion of these foundation options follows:

4.2.1 Driven Piles

The proposed structure may be supported on steel H-piles fitted with cast driving tips, driven to end bearing on bedrock. Driven piles should ultimately be designed, sized and installed by a qualified design-build contractor. A driven pile submittal stamped by a Maine licensed professional engineer should be provided for review by the project team. We offer the following H-pile sizes and allowable axial compressive capacities for preliminary design consideration:

RECOMMENDED H-PILE CAPACITIES	
50 ksi Steel H-pile Section	Allowable Axial Compressive Capacity (kips)
HP 10 X 57	225
HP 12 X 84	345
HP 14 X 117	500
Notes: Piles driven to practical refusal on hard sound bedrock with cast driving tips and 0.0625-inch (1/16”) corrosion allowance.	

Pipe piles may be installed at discrete locations to allow for installation of drilled rock anchors for uplift resistance.

We recommend that pile caps for columns be supported by at least two piles if laterally tied together by grade beams or tie beams and three piles if laterally isolated. Grade beams supporting walls may be supported by a single line of alternating piles below the grade beam, as deemed necessary by the structural engineer.

Piles should be spaced a minimum center-to-center distance of at least 3 pile diameters, but no less than 30 inches. Pile caps and grade beams exposed to freezing temperatures should be covered with at least 4.5 feet of soil for frost protection.

Lateral Resistance: Battered piles may be driven to resist lateral loads. Alternatively, lateral resistance acting on the sides of grade beams and pile caps backfilled with compacted Structural Fill may provide some lateral resistance. Depending upon the amount of deflection, lateral earth resistance should consider a total unit weight of granular backfill (γt) of 125 pcf, an angle of internal friction of 30 degrees with an at-rest lateral earth pressure coefficient (Ko) of 0.5 and an ultimate passive lateral earth pressure coefficient (Kp) of 3.0. Additional resistance to lateral loads can be mobilized along the pile shafts, if needed. S.W.COLE can assist with lateral capacities, as deemed necessary by the structural engineer.

Pile Load Test: For piles with a capacity over 40 tons (80 kips), we recommend the contractor coordinate a test pile program including monitoring of several piles with a Pile Driving Analyzer (PDA) to determine pile and driving equipment compatibility as well as to define the “set” criteria and allowable pile capacity. The test pile program should include PDA monitoring of the test piles during re-strikes in order to assess pile capacity. The pile driving contractor should submit a WEAP analysis and information relative to pile driving equipment prior to beginning driving. S.W.COLE should be engaged to observe pile driving and pile load testing activities.

4.2.2 Drilled Shafts

The proposed parking structure may be supported on drilled shafts socketed into bedrock. Drilled shafts should be socketed at least 2 feet into competent bedrock. Deeper rock sockets may be required depending on the load requirements.

The base of the rock sockets should be leveled and cleaned of loose material and soil. We recommend deep foundations be drilled using steel casing within the overburden soils in order to maintain sidewall stability. Prior to installing reinforcing steel, S.W.COLE should observe the base of each drilled foundation. Temporary steel casings should be removed during concrete placement while maintaining a positive head of concrete above the casing bottom to maintain shaft sidewall stability.

Considering the subsurface conditions encountered, we anticipate drilled shaft axial capacity will be controlled by the concrete compressive strength. We recommend an allowable end-bearing pressure of 20 ksf utilizing a factor of safety of 2.0. For piers socketed deeper than two feet, additional axial compressive capacity can be mobilized from skin friction between the pier and rock socket. For a design concrete strength of 4,000 psi, a unit skin friction of 17 ksf is recommended for the portion of the pier socketed greater than two feet into bedrock. For a design concrete strength of 5,000 psi, a unit skin friction of 20 ksf is recommended for the portion of the pier socketed greater than two feet into bedrock.

Uplift resistance of drilled shafts can be developed from skin friction between the drilled shaft and soil and bedrock, as well as the dead weight of the drilled shaft. S.W.COLE can assist with uplift capacities as deemed necessary by the structural engineer.

4.2.3 Ground Improvement

The proposed structure may be supported on spread footing foundations bearing on soils improved by rigid inclusions. Rigid inclusions in granular soils consist of cast-in-place, grouted or cemented aggregate columns, typically installed by rammed or vibroflot methods. Rigid inclusions in clay soils consist of cast-in-place ready mix concrete installed by vibratory mandrel methods under positive pressure to create a concrete shaft. In both cases, load transfer platforms of compacted crushed gravel and geotextile are installed over the improved ground to support spread footings. The rigid inclusions stiffen the soils to reduce settlement and increase bearing capacity for spread footings. Rigid inclusions are designed and installed by a specialty geotechnical contractor. Based on preliminary

discussion with a regional contractor, we understand that net allowable soil bearing pressures of 8 to 10 ksf may be feasible. If the ground improvement option is selected, we recommend a design-phase test program be implemented prior to construction, consisting of full scale installation and modulus testing of several rigid inclusions across the varied subsurface conditions encountered in the test borings drilled at the site.

4.2.4 On-Grade Level

The paved on-grade level may be supported on properly prepared soil subgrades using a conventional asphalt pavement section. Existing pavement, utilities, structures, and foundations will need to be completely removed and replaced with compacted Granular Borrow below new paved areas. Existing fills will need to be proof-rolled and soft areas repaired prior to placing pavement gravels. Woven geotextile will be needed over clayey pavement subgrades in the northwest portion of the garage footprint.

If overhead clearance is less than 6 inches on the ground level, we recommend installing insulation below the paved surface to help mitigate potentially adverse frost heaving.

4.3 Excavation and Dewatering Considerations

Excavation work will generally encounter granular fills with ash-like material, silty clay, sand and gravel. Care must be exercised during construction to reduce strength loss of the native soils from disturbance. Earthwork and grading activities should ideally occur during drier, non-freezing weather of Spring, Summer and Fall. Rubber tired construction equipment should not operate directly on the native clays. Final cuts to subgrade should be performed with a smooth-edged bucket to help reduce soil disturbance.

Sumping and pumping dewatering techniques should be adequate to control groundwater in excavations. Controlling the water levels to at least one foot below planned excavation depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures, utilities and roadways. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

The site was formerly used for rail operations and ash-like material was observed in the fills at several exploration locations. We recommend the fill soils be characterized for environmental handling purposes prior to construction. As discussed, impacted soils may

be able to be reused beneath the first floor ramp to avoid potentially costly export and off-site disposal.

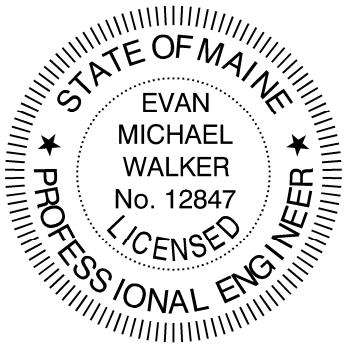
5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We recommend a design-phase geotechnical evaluation be undertaken once the site layout and structural layout has been further defined. We look forward to working with you as the project progresses.

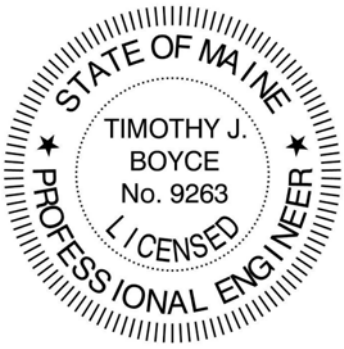
Sincerely,

S. W. Cole Engineering, Inc.

Evan M. Walker, P.E.
Geotechnical Engineer



Timothy J. Boyce, P.E.
Senior Geotechnical Engineer



EMW:tjb

Appendix A - Limitations

This report has been prepared for the exclusive use of Cowcatcher, LLC for specific application to the proposed Parking Structure at 222 St. John Street in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

FIGURES

N/F
PORTLAND TERMINAL CO.

FACTORS FINANCIAL FRC, INC.
17781/288

CHAIN LINK FENCE

AREA BETWEEN FENCE AND EDGE OF PAVEMENT PLANTED WITH PINES

L= 383.52' R= 5710.00' Δ = 3°50'54"
L= 382.85' (L= 383.02' R)
R= 5700.00'

N11°02'22"W 218.83'
S07°11'27"E 71.07'
10.02'
10.00'
0.33' CRF

DUMPSTER AREA
STOCKADE FENCE

B-201 B-101 B-3 B-2 B-2A B-103 B-102 B-202 B-5A B-5 B-205 B-4 B-1 B-206 B-104 B-203 B-203B B-203A B-105 B-204 B-108 B-107 B-106

49 SPACES
16 SPACES
14 SPACES
17 SPACES
39 SPACES
10 SPACES
9 SPACES

CB RIM=25.07
12" INV. OUT=21.17

CB RIM=25.17
12" INV. OUT=22.07

CB RIM=25.66
10" INV. IN=21.86
12" INV. IN=21.66
12" INV. OUT=21.56

CB RIM=25.60
12" INV. IN=21.00
12" INV. IN=21.00
12" INV. OUT=20.80

CB RIM=25.00
12" INV. IN=20.60
15" INV. OUT=20.50

CB RIM=25.15
15" INV. IN=19.15
15" INV. OUT=19.05

12"RCP 15"RCP 12"PVC 10"PVC SHED UGE

PARCEL 1
AREA = 4.9 ACRES ±

PARKING LOT

177.91' N82°23'43"E

TM 64-A-1
TM 65-F-1
N/F
UNION STATION PLAZA LIMITE PARTNERSHIP
6813/250

ACC TO 266

N07°36'17"W 238.44'
26.00'
N07°36'17"W 110.00'
N22°03'1

PAVED WALK
CONCRETE WALK
BRICK STEPS
PILLAR
RAIL
CONC.
LS
BRICK ENT.
4"PVC
CB RIM=25.43
4" INV. IN=25.23
6" INV. OUT=24.63
FFE=30.77

FFE= 28.14
2 STORY BRICK
PAVED
THRES.= 28.07
A/C

S82°23'43"W 195.94'
S82°23'43"W 108.29'
S82°23'43"W 459.84'
S07°05'02"E 24.00'
S07°36'17"E 49.99'
S82°23'43"W 101.17'
S82°23'43"W 94.00'
S07°36'17"E 309.95'

WOOD GUARD RAIL ALONG EDGE OF PAVEMENT

FFE= 30.66
3 STORY BRICK
THRES.= 30.67
FFE= 40.79
DRAIN
A/C
CONC
L/S
BRICK WALK & PATIO AREA
FLAG POLE
THRES.= 30.83
FUEL PUMP
GENERATOR PAD
TRANS PAD
U/P 7208/13
EASEMENT 7208/13
SIGN
FFE=40.81
FFE=40.83
SPRINKLER

BRICK

PARCEL 3
24' EASEMENT BRETTING TRUST
ST. JOHN STREET REALTY
9214/118
S82°23'13"W 106.77'
N82°23'13"E 106.55'

PAVED PARKING LOT

TM 68-D-1-3-13-14-16
N/F
FRATERNAL ORDER OF EAGLES
AERIE NO. 565
9214/114

GARAGE

TM 64-A-10
N/F
PATRICIA P. CHASE
9635/132

TM 64-A-12
N/F
TIM Q. LY
17799/58

WOOD FRAME
PAVED DRIVE
PAVED WALK
GUY
#29.1

" IRON FOUND
174.00' S07°36'17"E
24.00'
BIT. CURB
BRICK SIDEWALK
GRANITE CURB
WV
UP
HYD
#24
#20
#27
#29
#30
#31
#30.1
0.30'
3" OFFSET
CITY MONUMENT W/BRASS PLUG
N: 2975193.34
E: 2923117.86

15" VIT SEWER
4" GAS APPROXIMATE
16" WATER
SMH RIM=39.12 UNABLE TO OPEN
DMH RIM=38.70 UNABLE TO OPEN
DMH RIM=39.27
30" INV. IN=32.87
30" INV. OUT=32.67
11714/47 WHITE LINE
DOUBLE YELLOW LINE
WHITE LINE
30"RCP 24"RCP 12"RCP
TEL MH
BASE 5/8"RF
ELEC. BOX
50.00'
N07°36'17"W 150.00'
UGT

"D" STREET
"C" STREET
ST. JOHN STREET
(PAVED – PUBLIC 60' WIDE)

STREET LINE BASED ON PLAN REFERENCES 1 & 2

PARCEL 2
AREA = 0.34 ACRES

LAWN
CHAIN LINK FENCE
PAVED
10 SPACES
41
40
42
43
100.00'
S82°27'36"E 100.00'
N82°27'36"E 100.00'
S07°36'17"E 150.00'
CRF

TM 64-F-5
N/F
DEBORAH C. HEALD, ET ALS
21867/246

TM 64-F-1
TM 64-F-16
N/F
ST. JOHN STREET LLC
31030/192

LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=30' SCALE PLAN OF THE SITE ENTITLED "BOUNDARY SURVEY TOPOGRAPHIC SURVEY," PREPARED BY OWEN HASKELL, INC., DATED 11/16/2016.
5. THE BORINGS WERE LOCATED IN THE FIELD BY TAPED MEASUREMENTS FROM EXISTING SITE FEATURES.
6. BORINGS B-1 THROUGH B-5 WERE COMPLETED BY S. W. COLE ENGINEERING, INC. (SWCOLE) IN 1989.
7. BORINGS B-101 THROUGH B-108 WERE CMPLETED BY SWCOLE IN 1995.
8. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
9. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.

0 30 60 Feet

S.W.COLE ENGINEERING, INC.

COWCATCHER, LLC

EXPLORATION LOCATION PLAN

PROPOSED PARKING STRUCTURE
222 ST. JOHN STREET
PORTLAND, MAINE

Job No.:	17-0103	Scale:	1" = 30'
Date :	03/15/2017	Sheet:	1

R:\2017\17-0103\CAD\Drawings\17-0103 ELP.dwg, 3/15/2017 2:24:35 PM, 1:1, CEM, S. W. Cole Engineering, Inc.

APPENDIX C

EXPLORATION LOGS AND KEY

BORING LOG

CLIENT:	Cowcatcher, LLC
PROJECT:	Proposed Parking Structure
LOCATION:	222 St. John Street, Portland, Maine

BORING NO.:	**B-201**
SHEET:	1 of 2
PROJECT NO.	17-0103
DATE START:	2/27/2017
DATE FINISH:	2/28/2017

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 26' +/- **TOTAL DEPTH (FT):** 64.0 **LOGGED BY:** Evan Walker

DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Cased Boring

RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** N/A / N/A **SAMPLER:** Standard Split-Spoon

HAMMER TYPE: Automatic / Automatic **HAMMER WEIGHT (lbs):** 140 / 140 **CASING ID/OD:** 4 in / 4 1/2 in **CORE BARREL:**

HAMMER EFFICIENCY FACTOR: **HAMMER DROP (inch):** 30 / 30

WATER LEVEL DEPTHS (ft): ▽ 10

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling; D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector; S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
25			1D		0.5-2.5	24/16	4-6-11-12			0.3 Asphalt Pavement; Brown and Black Silty Gravelly SAND with Probable Ash (Fill)		
			2D		2.5-4.5	24/16	12-12-11-10			2.5 Brown Sand and GRAVEL, trace Silt		
20	5		3D		5-7	24/10	5-6-7-9			Brown Gravelly SAND, Some Silt		
15	10		4D		10-12	24/10	6-7-9-10				▽	
10	15		5D		15-17	24/12	6-5-6-7					
5	20		6D		20-22	24/8	10-9-8-9					
0	25		7D		25-27	24/8	5-4-5-7					
-5	30		8D		30-32	24/10	8-8-8-9					
-10	35		9D		35-37	24/20	5-5-8-9			35.0 Gray-Brown to Gray Sandy SILT, Some Clay		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

(Continued Next Page)

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-201
SHEET: 2 of 2
PROJECT NO. 17-0103
DATE START: 2/27/2017
DATE FINISH: 2/28/2017

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
-15			10D		40-42	24/22	3-3-4-15			40.0 Gray with Black Layering Clayey Silt and SAND with Frequent Sand Layers		Gravelly Layer 41.8' - 43'
	45		11D		45-47	24/20	2-5-10-8			45.0 Brown Clayey SILT		
-20										46.0 Light Brown Fine to Medium SAND, Trace Silt		
	50		12D		50-52	24/22	9-11-21-35			50.0 Brown with Orange Staining Fine SAND with Trace to Some Silt		
-25												
	55		13D		55-57	24/22	11-14-15-17					
-30												
	60		14D		60-62	24/20	10-12-14-36			60.0 Gray Silty SAND, Some Gravel (Glacial Till)		
-35										61.6 Weathered Bedrock		
										62.0 Bedrock - Advance by Roller Cone		
										64.0 Bottom of Exploration at 64.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-202
SHEET: 1 of 2
PROJECT NO. 17-0103
DATE START: 2/28/2017
DATE FINISH: 2/28/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 26' +/- | **TOTAL DEPTH (FT):** 47.0 | **LOGGED BY:** Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Jeff Lee | **DRILLING METHOD:** Cased Boring
RIG TYPE: Track Mounted CME 850 | **AUGER ID/OD:** N/A / N/A | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / Automatic | **HAMMER WEIGHT (lbs):** 140 / 140 | **CASING ID/OD:** 4 in / 4 1/2 in | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 30
WATER LEVEL DEPTHS (ft): ▽ 5
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
										0.3 4" Asphalt Pavement		
25			1D		0.5-2.5	24/16	6-7-5-3			Brown Gravelly SAND, Some Silt (Fill)		Soils Moist
			2D		2.5-4.5	24/20	3-4-3-4			2.2 Gray Clayey SILT, Some Sand, with Frequent Silty Sand Layers		Soils Wet
20	5		3D		5-7	24/20	WOH-WOH-WOH-WOH	q_p=0.5 ksf		5.0 Gray-Brown to Gray Silty CLAY with Occasional Sand Seams	▽	
15	10		1U		10-12	24/0						
			2U		12-14	24/14				13.5 Gray SAND, Trace Silt		
10	15		4D		15-17	24/6	4-4-5-6	w =27.5 %				
5	20		5D		20-22	24/16	1-1-1-1			20.0 Gray Silty SAND with Shells		
0	25		6D		25-27	24/14	4-6-7-7			25.0 Gray Medium to Coarse SAND, Trace Silt, Trace Fine Gravel		
-5	30		7D		30-32	24/14	1-2-2-2			30.0 Gray Silty CLAY		
-10	35		8D		35-37	24/16	2-2-12-9			36.0 Gray Silty Fine SAND with Frequent Clayey Seams		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

(Continued Next Page)

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-202
SHEET: 2 of 2
PROJECT NO. 17-0103
DATE START: 2/28/2017
DATE FINISH: 2/28/2017

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
-15			9D	X	40-42	24/24	1-2-3-6			41.5 Gray Gravelly Silt and SAND (Glacial Till)		
	45									44.0 Bedrock - Advance by Roller Cone		
-20										47.0 Bottom of Exploration at 47.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-203
SHEET: 1 of 1
PROJECT NO. 17-0103
DATE START: 3/1/2017
DATE FINISH: 3/1/2017

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 26' +/-
TOTAL DEPTH (FT): 9.5
LOGGED BY: Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Jeff Lee
DRILLING METHOD: Solid Stem Auger
RIG TYPE: Track Mounted Mobile B-53
AUGER ID/OD: N/A / 4 1/2 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Safety
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR:
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
25			1D		0.5-2.5	24/18	6-7-9-12			0.2 Asphalt Pavement 1.5 Black Silty SAND, Some Gravel (Fill) Brown Gravelly SAND, Some Silt		
			2D		2.5-4.5	24/14	12-20-16-15					
	5											
20			3D		5-7	24/15	7-17-20-30			5.0 Brown Sand and GRAVEL, Some Silt, with Cobbles		
										9.5 Refusal at 9.5 feet Refusal on Probable Boulder		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

S.W.COLE ENGINEERING, INC.

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-203A
SHEET: 1 of 1
PROJECT NO. 17-0103
DATE START: 3/1/2017
DATE FINISH: 3/1/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 26' +/- | **TOTAL DEPTH (FT):** 8.1 | **LOGGED BY:** Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Jeff Lee | **DRILLING METHOD:** Solid Stem Auger
RIG TYPE: Track Mounted Mobile B-53 | **AUGER ID/OD:** N/A / 4 1/2 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Safety | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
25										See Boring B-203 For Approximate Soil Strata Auger to 8.1' - No Sampling		
	5											
20												
										8.1 Refusal at 8.1 feet Refusal on Probable Boulder		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-203B
SHEET: 1 of 2
PROJECT NO. 17-0103
DATE START: 3/1/2017
DATE FINISH: 3/1/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 26' +/- | **TOTAL DEPTH (FT):** 62.0 | **LOGGED BY:** Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Jeff Lee | **DRILLING METHOD:** Cased Boring
RIG TYPE: Track Mounted Mobile B-53 | **AUGER ID/OD:** N/A / N/A | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Safety / Safety | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** 4 in / 4 1/2 in | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL DEPTHS (ft): ▽ 15
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
25										See Boring B-203 for Approximate Soil Strata Auger to 10' - No Sampling		
20	5											
15	10		1D		10-12	24/15	7-9-7-8			10.0 Brown Gravelly SAND, Trace to Some Silt		Soils Damp
10	15		2D		15-17	24/14	8-8-8-10				▽	
5	20		3D		20-22	24/10	13-9-13-13					
0	25		4D		25-27	24/12	10-12-13-15					
-5	30									30.0 Brown SAND, Trace Gravel, Trace Silt 31.0 Brown Fine to Medium SAND, Some Silt		
-10	35									34.5 Gray Silty CLAY with Frequent Sand Seams and Layers		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

(Continued Next Page)

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-203B
SHEET: 2 of 2
PROJECT NO. 17-0103
DATE START: 3/1/2017
DATE FINISH: 3/1/2017

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
-15										40.0 Brown Fine SAND, Trace Silt, With Occasional Clayey Silt Seams and Layers		
	45											
-20												
	50											
-25												
	55									55.0 Brown Silty Fine SAND with Occasional Clayey Silty Seams		
-30										56.0 Gray Silty CLAY with Frequent Sand Seams		
										58.0 Increased Drill Resistance - Probable Glacial Till		
	60											
-35										60.5 Probable Bedrock - Advance By Roller Cone		
										62.0 Bottom of Exploration at 62.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

S.W.COLE ENGINEERING, INC.

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-204
SHEET: 1 of 1
PROJECT NO. 17-0103
DATE START: 2/27/2017
DATE FINISH: 2/27/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 27' +/- | **TOTAL DEPTH (FT):** 37.0 | **LOGGED BY:** Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Jeff Lee | **DRILLING METHOD:** Cased Boring
RIG TYPE: Track Mounted CME 850 | **AUGER ID/OD:** N/A / N/A | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / Automatic | **HAMMER WEIGHT (lbs):** 140 / 140 | **CASING ID/OD:** 4 in / 4 1/2 in | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 30
WATER LEVEL DEPTHS (ft): ▽ 5
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
										0.3 4" Asphalt Pavement		
25			1D		0.5-2.5	24/8	12-8-10-9			Black and Gray-Brown SAND, Some Gravel, Trace Silt (Fill)		
			2D		2.5-4.5	24/10	12-11-14-14			Gray to Gray-Brown Silty Gravelly SAND with Cobbles and Concrete (Fill)		Soils Moist
	5		3D		5-7	24/8	5-7-8-10			5.0 Brown Gravelly SAND, Some Silt	▽	
20												
	10		4D		10-12	24/14	5-5-4-2			10.0 Brown SAND, Some Gravel, Trace Silt, with Silty Seams		
15												
	15		5D		15-17	24/3	3-5-5-8			15.0 Brown Gravel and SAND, Some Silt		
10										18.0 Gray Silty CLAY with Frequent Sand Layers		Wash Turned Gray at 18'
	20		6D		20-22	24/22	WOH-WOH-3-4			21.0 Brown Silty Fine SAND with Frequent Silt and Clay Seams		
5												
	25		7D		25-27	24/18	5-5-3-4			25.0 Brown with Orange Staining Fine to Medium SAND, Trace Silt		
0												
	30		8D		30-32	24/12	4-5-11-9			29.0 Gray Silt and SAND, Some Gravel (Glacial Till)		Cobbles/Gravel at 29'
-5												
	35									34.0 Bedrock - Advance By Roller Cone		
-10										37.0 Bottom of Exploration at 37.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-204

BORING LOG

CLIENT:	Cowcatcher, LLC
PROJECT:	Proposed Parking Structure
LOCATION:	222 St. John Street, Portland, Maine

BORING NO.:	**B-205**
SHEET:	1 of 2
PROJECT NO.	17-0103
DATE START:	3/2/2017
DATE FINISH:	3/2/2017

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 25.5' +/- **TOTAL DEPTH (FT):** 58.0 **LOGGED BY:** Evan Walker

DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Cased Boring

RIG TYPE: Track Mounted Mobile B-53 **AUGER ID/OD:** N/A / N/A **SAMPLER:** Standard Split-Spoon

HAMMER TYPE: Safety / Safety **HAMMER WEIGHT (lbs):** 140 / 300 **CASING ID/OD:** 4 in / 4 1/2 in **CORE BARREL:**

HAMMER EFFICIENCY FACTOR: **HAMMER DROP (inch):** 30 / 16

WATER LEVEL DEPTHS (ft): ▽ 10

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level; ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling; D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector; S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
25			1D		0.5-2.5	24/18	10-12-12-13			0.3 Asphalt Pavement; 1.0 Black Silty SAND, Some Gravel (Fill)		
			2D		2.5-4.5	24/18	9-10-9-10			Brown Gravelly SAND, Trace Silt (Fill); 2.5 Brown SAND, Some Gravel, Trace Silt		
20	5		3D		5-7	24/18	6-14-14-11			5.0 Brown Gravel and SAND, Trace Silt		Soils Damp
15	10		4D		10-12	24/10	4-9-7-8			Brown Gravelly SAND, Some Silt	▽	
10	15		5D		15-17	24/6	5-7-17-11					
5	20		6D		20-22	24/0	8-11-12-20					
0	25		7D		25-27	24/3	10-9-10-11			Brown Silty Gravelly SAND with Cobbles		
-5	30		8D		30-32	24/12	12-14-13-19					
-10	35		9D		35-36.8	22/2	14-33-42-50-4"/4"					

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

(Continued Next Page)

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-205
SHEET: 2 of 2
PROJECT NO. 17-0103
DATE START: 3/2/2017
DATE FINISH: 3/2/2017

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
-15			10D		40-42	24/20	9-8-7-10			40.0		
	45									Brown Silty Fine SAND with Silt Seams		
-20			11D		45-47	24/20	12-14-12-23			46.0 Gray Silty SAND with Frequent Silt Layers		
	50											
-25			12D		50-52	24/24	3-6-10-34			50.0 Gray Silty SAND, Some Gravel (Glacial Till)		
										53.9 Bedrock - Advance by Roller Cone		
-30	55											
										58.0 Bottom of Exploration at 58.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-206
SHEET: 1 of 2
PROJECT NO. 17-0103
DATE START: 3/3/2017
DATE FINISH: 3/3/2017

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 25.5' +/- | **TOTAL DEPTH (FT):** 45.9 | **LOGGED BY:** Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Jeff Lee | **DRILLING METHOD:** Cased Boring
RIG TYPE: Track Mounted Mobile B-53 | **AUGER ID/OD:** N/A / N/A | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Safety / Safety | **HAMMER WEIGHT (lbs):** 140 / 300 | **CASING ID/OD:** 4 in / 4 1/2 in | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: | **HAMMER DROP (inch):** 30 / 16
WATER LEVEL DEPTHS (ft): ▽ 3
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Undisturbed Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
25			1D		0.5-2.5	24/18	6-8-8-12			0.3 4" Asphalt Pavement Black Silty SAND, Some Gravel (Fill) 1.8 Brown SAND, Some Gravel, Trace Silt 2.5 (Probable Fill) Brown Medium to Coarse SAND, Trace Silt		
			2D		2.5-4.5	24/18	10-13-15-13				▽	
20	5		3D		5-7	24/22	6-6-7-9			6.0 Gray-Brown Silty SAND, Trace Gravel		
15	10		4D		10-12	24/14	3-8-7-8			10.5 Brown Medium to Coarse SAND, Trace Gravel, Trace Silt		
10	15		5D		15-17	24/6	4-9-9-12			15.0 Brown Gravelly SAND, Some Silt		
5	20		6D		20-22	24/10	5-5-4-7			20.0 Brown SAND, Some Silt, Trace Gravel		
0	25		7D		25-27	24/22	2-3-3-4			25.0 Gray Silty CLAY with Frequent Sand and Silt Seams		
-5	30		8D		30-32	24/15	3-4-19-34			30.0 Gray Medium to Coarse SAND, Trace Gravel, Trace Silt		
-10	35		9D		35-37	24/2	4-4-5-5			35.0 Gray Silty SAND, Some Gravel (Glacial Till)		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

(Continued Next Page)

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

BORING LOG

CLIENT: Cowcatcher, LLC
PROJECT: Proposed Parking Structure
LOCATION: 222 St. John Street, Portland, Maine

BORING NO.: B-206
SHEET: 2 of 2
PROJECT NO. 17-0103
DATE START: 3/3/2017
DATE FINISH: 3/3/2017

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
-15			10D		40-40.8	9/9	8-50-			40.8 Weathered Bedrock - Advance by Roller Cone		
			1R		40.9-45.9	60/60	3"/3" 44			40.9 Bedrock Gray PHYLLITE, medium hard, fine grained, closely spaced shallow to steep dipping fractures. Light oxidization.		
-20	45									45.9 Bottom of Exploration at 45.9 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 17-0103.GPJ SWCE TEMPLATE.GDT 5/4/17

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

KEY TO THE NOTES & SYMBOLS
Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to ½" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

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BORING NO. B-101
PROJECT NO. 94-716 S

DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION 25.5'±

PROJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
LOCATION 222 ST. JOHN STREET PORTLAND, MAINE
DRILLING FIRM GREAT WORKS TEST BORING, INC. DRILLER DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING				
SAMPLER				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH & BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2"	ASPHALT
	1	24"	18"	2.5'	9	12	13	13	4.0'	LIGHT BROWN SILTY FINE TO MEDIUM SAND W/SOME GRAVEL (FILL) ~~ MEDIUM DENSE ~~
	2	24"	11"	6.5'	23	85	22	20		W= 2.4% BROWN GRAVELLY FINE TO COARSE SAND W/TRACE OF SILT ~~ DENSE TO MEDIUM DENSE ~~
	3	24"	8"	11.5'	7	9	10	13	11.5'	BOTTOM OF EXPLORATION AT 11.5'

SOIL CLASSIFIED BY :

DRILLER-VISUALLY	X
SOIL TECHNICIAN-VISUALLY	X
LABORATORY TESTS	X

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B-101

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BORING NO. B-102
PROJECT NO. 94-716 S

DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION 26.0'±

PROJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
LOCATION 222 ST. JOHN STREET PORTLAND, MAINE
DRILLING FIRM GREAT WORKS TEST BORING, INC. **DRILLER** DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL	WATER LEVEL INFORMATION
CASING					NO FREE WATER OBSERVED
SAMPLER					

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	1	24"	16"	2.5'	3	7	7	6		LIGHT BROWN MEDIUM TO COARSE SAND W/SOME GRAVEL AND TRACE OF SILT (FILL)
									4.0'	~~ MEDIUM DENSE ~~
	2	12"	0	5.5'	1	1				GRAY SILTY CLAY
	1S	30"	30"	8.0'	HYD		PUSH			qu= 1.35 ksf W= 30.4% qp= 0.5-1.0 ksf
	2x3	VANE		8.5'						Sv= 1.38/0.40 ksf Wl= 30.1
	2x3	VANE		9.0'						Sv= 1.58/0.40 ksf Wp= 16.1
										~~ MEDIUM ~~
	3	24"	24"	11.5'	WOH/15"		1/3"	2	12'	W= 28.2%
	2x3	VANE		12.0'						Sv= 7.52/1.98 ksf
	2x3	VANE		12.5'						Sv= 8.01/2.77 ksf
										GRAY SILTY CLAY WITH FINE SAND LAYERS
	4	24"	24"	16.5'	WOH/12"		2	2		W= 26.7% qp= 0.6 ksf
										~~ MEDIUM ~~
	5	24"	24"	21.5'	WOH/12"		WOH	WOH		W= 26.9% qp= 1.0 ksf
									24'.	
									29.5'	STIFFER SILTY CLAY OR MORE DENSE GRANULAR MATERIAL.

BOTTOM OF EXPLORATION AT 29.5'

ROD PROBE

DEPTH	BLOWS
21.5'-22.5'	2
22.5-23.5'	4
23.5'-24.5'	5
24.5'-25.5'	4
25.5'-26.5'	5
26.5'-27.5'	6
27.5'-28.5'	7
28.5'-29.5'	8

SOIL CLASSIFIED BY :

DRILLER-VISUALLY	X
SOIL TECHNICIAN-VISUALLY	X
LABORATORY TESTS	X

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B-102

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BORING NO. B-103
PROJECT NO. 94-716 S

DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION 26.0'±

ROJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
ATION 222 ST. JOHN STREET PORTLAND, MAINE
ILLING FIRM GREAT WORKS TEST BORING, INC. DRILLER DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL	WATER LEVEL INFORMATION
NG					
AMPLER					4.4' OPEN HOLE

SING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									3.5'	ASPHALT
	1	24"	11"	2.5'	7	8	7	8	4.0'	LIGHT BROWN MEDIUM TO COARSE SAND W/SOME GRAVEL AND TRACE OF SILT ~~MEDIUM DENSE~~ (FILL)
	2	24"	0	6.5'	1/12"		1	2	8.0'	GRAY SILTY CLAY W/SOME FINE SAND ~~MEDIUM~~
	3	24"	13"	11.5'	1	5	7	9	11.5'	BROWN FINE TO MEDIUM SAND W/SOME GRAVEL ~~MEDIUM DENSE~~
										BOTTOM OF EXPLORATION AT 11.5'

SOIL CLASSIFIED BY :

DRILLER-VISUALLY	X
SOIL TECHNICIAN-VISUALLY	X
LABORATORY TESTS	

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B-103

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BORING NO. B-104
PROJECT NO. 94-716 S

DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION

OJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
ATION 222 ST. JOHN STREET PORTLAND, MAINE
ILLING FIRM GREAT WORKS TEST BORING, INC. **DRILLER** DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL	WATER LEVEL INFORMATION
ING					
AMPLER					4.I' INSIDE AUGERS

SING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									5"	ASPHALT
									1.3'	BLACK GRAVELLY FINE TO MEDIUM SAND W/SOME SILT AND COAL ASH ~~ MEDIUM DENSE ~~ (FILL)
	1	24"	18"	2.5'	4	7	13	18		
										LIGHT BROWN GRAVELLY FINE TO COARSE SAND W/SOME SILT
									6.5'	~~ MEDIUM DENSE BECOMING DENSE ~~
	2	24"	16"	6.5'	24	30	33	33		BOTTOM OF EXPLORATION AT 6.5'

SOIL CLASSIFIED BY :

DRILLER-VISUALLY	X
SOIL TECHNICIAN-VISUALLY	X
LABORATORY TESTS	

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

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BORING NO. B-105
PROJECT NO. 94-716 S

DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION 27.0'±

PROJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
LOCATION 222 ST. JOHN STREET PORTLAND, MAINE
DRILLING FIRM GREAT WORKS TEST BORING, INC. **DRILLER** DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL	WATER LEVEL INFORMATION
CASING					
SAMPLER					4.0'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	1	24"	17"	2.0'	3	4	6	9	1.3'	BLACK GRAVELLY FINE TO MEDIUM SAND W/SOME SILT AND COAL ASH (FILL) ~~LOOSE~~
	2	24"	14"	6.5'	7	15	15	11		LIGHT BROWN GRAVELLY FINE TO COARSE SAND W/SOME SILT W=14.1% ~~ MEDIUM DENSE ~~
	3	24"	15"	11.5'	10	12	13	9	11.5'	BOTTOM OF EXPLORATION AT 11.5'

SOIL CLASSIFIED BY :

DRILLER–VISUALLY	X
SOIL TECHNICIAN–VISUALLY	X
LABORATORY TESTS	X

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

S.W.COLE
ENGINEERING, INC.
GEOTECHNICAL CONSULTANTS

Six Liberty Drive, Bangor, ME 04401 TEL (207) 848-5714 FAX (207) 848-2403
Gray Plaza, P.O. Box 378, Gray, ME 04039 TEL (207) 657-2800 FAX (207) 657-2810
161 Water St., P.O. Box 220, Caribou, ME 04736 TEL (207) 496-1511 FAX (207) 496-1501

BORING NO. B-106
PROJECT NO. 94-716 S
DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION 38.0'±

PROJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
LOCATION 222 ST. JOHN STREET PORTLAND, MAINE
DRILLING FIRM GREAT WORKS TEST BORING, INC. DRILLER DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
RIG				
SAMPLER				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									3"	ASPHALT
	1	24"	16"	2.5'	6	8	9	12	3.2'	LIGHT BROWN FINE TO COARSE SAND W/SOME GRAVEL AND TRACE OF SILT ~~ MEDIUM DENSE ~~ (FILL)
	2	24"	11"	4.5'	15	19	14	16	6.5'	TAN BROWN MEDIUM TO COARSE SAND W/SOME GRAVEL AND TRACE OF SILT ~~ DENSE TO MEDIUM DENSE ~~ (FILL)
	3	24"	0	6.5'	8	11	12	11		BOTTOM OF EXPLORATION AT 6.5'

SOIL CLASSIFIED BY :

DRILLER-VISUALLY	X
SOIL TECHNICIAN-VISUALLY	X
LABORATORY TESTS	

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B-106

S.W.COLE
ENGINEERING, INC.
GEOTECHNICAL CONSULTANTS

Six Liberty Drive, Bangor, ME 04401 TEL (907) 848-5714 FAX (907) 848-2403
Gray Plaza, P.O. Box 378, Gray, ME 04039 TEL (207) 657-9866 FAX (207) 657-9810
161 Water St., P.O. Box 220, Caribou, ME 04736 TEL (207) 496-1511 FAX (207) 496-1501

BORING NO. B-107
PROJECT NO. 94-716 S

DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION 36.0'±

PROJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
LOCATION 222 ST. JOHN STREET PORTLAND, MAINE
DRILLING FIRM GREAT WORKS TEST BORING, INC. DRILLER DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING				
SAMPLER				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2.5"	ASPHALT
	1	24"	16"	2.5'	9	13	13	14	2.8'	LIGHT BROWN GRAVELLY FINE TO MEDIUM SAND W/TRACE OF SILT AND COBBLES (FILL) ~~MEDIUM DENSE~~
	2	24"	18"	4.5'	5	5	6	9	4.0'	LIGHT BROWN GRAVELLY MEDIUM TO COARSE SAND W/TRACE OF SILT AND COBBLES (FILL) ~~MEDIUM DENSE~~
	3	24"	10"	6.5'	8	7	13	7		LIGHT BROWN MEDIUM TO COARSE SAND W/SOME GRAVEL AND SILT ~~ MEDIUM DENSE~~
	4	24"	8"	8.5'	8	12	14	13	8.5'	BOTTOM OF EXPLORATION AT 8.5'

SOIL CLASSIFIED BY :

DRILLER-VISUALLY	X
SOIL TECHNICIAN-VISUALLY	X
LABORATORY TESTS	

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B-107

S.W.COLE
ENGINEERING, INC.
GEOTECHNICAL CONSULTANTS

Six Liberty Drive, Bangor, ME 04401 TEL (907) 848-5714 FAX (907) 848-2403
Gray Plaza, P.O. Box 378, Gray, ME 04039 TEL (207) 657-2866 FAX (207) 657-2810
161 Water St., P.O. Box 990, Caribou, ME 04736 TEL (207) 496-1511 FAX (207) 496-1501

BORING NO. B-108
PROJECT NO. 94-716 S

DATE START 7/27/95
DATE FINISH 7/27/95
SURFACE ELEVATION 36.0'±

ROJECT/CLIENT : TRAIN STATION / CITY OF PORTLAND
ATION 222 ST. JOHN STREET PORTLAND, MAINE
ILLING FIRM GREAT WORKS TEST BORING, INC. DRILLER DAVE DIONNE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
ING				
AMPLER				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

SING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									2.5'	ASPHALT
	1	18"	9"	2.0'	9	13	9			LIGHT BROWN GRAVELLY FINE TO COARSE SAND W/TRACE OF SILT AND COBBLES (FILL)
									4.0'	~~ MEDIUM DENSE ~~
	2	24"	14"	5.5'	15	19	14	16	5.5'	LIGHT GRAY CLAYEY SILT ~~ HARD ~~ qp= 9.0+ ksf
	3	24"	15"	7.5'	8	15	15	20	7.5'	BROWN CLAYEY SILT ~~ HARD ~~ qp= 9.0+ ksf
										BOTTOM OF EXPLORATION AT 7.5'

SOIL CLASSIFIED BY :

DRILLER-VISUALLY	X
SOIL TECHNICIAN-VISUALLY	X
LABORATORY TESTS	

REMARKS :

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.

BORING NO. B-108

MAINE TEST BORINGS, INC. **BREWER, MAINE 04412**	CLIENT FIRST ATLANTIC	SHEET 1 OF 1 HOLE NO. B-1
DRILLER DARREL MCKEEN	PROJECT NAME MEDICAL BUILDING	LINE & STATION
T.B. JOB NUMBER 89-232	LOCATION PORTLAND, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT 0.00 FT. AFTER 0.00 HOURS

AT 0.00 FT. AFTER 0.00 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	HS	SS	
SIZE I.D.	2 1/2"	1 3/8"	
HAMMER WT.		140	
HAMMER FALL		30"	

DATE START	DATE FINISH
12/28/89	12/28/89

SURFACE ELEVATION
NOT AVAILABLE

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
										0.3	PAVEMENT
										2.0	BLACK GRAVELY SAND W/SILT
	1D	2"	18"		3.5	16	10	16			~ MEDIUM DENSE ~
										4.0	BROWN GRAVELY SILTY SAND
	2D	2"	18"		6.5	20	25	30			~ DENSE ~ W=11.3 % BROWN GRAVELY SAND W/SOME SILT
										10.0	
	3D	2"	18"		11.5	15	20	25			~ DENSE ~ BROWN COARSE SAND TRACE OF GRAVEL
	4D	2"	18"		16.5	10	20	25			
										20.0	
	5D	2"	18"		21.5	9	9	11		21.5	BROWN SILTY SAND TRACE OF GRAVEL ~ MEDIUM DENSE ~ BOTTOM OF BORING @ 21.5' WATER @ 3.0' HOLE CAVED @ 4.0' RUNNING SAND IN AUGERS 10'- 20'

SAMPLES
S = SPLIT SPOON
U = 2" SHELBY TUBE
U = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
[XX] DRILLER-VISUALLY
[X] SOIL TECHNICIAN-VISUALLY
[X] LABORATORY TESTS

REMARKS:

MAINE TEST BORINGS, INC.
BREWER, MAINE 04412

CLIENT: FIRST ATLANTIC

SHEET 1 OF 1

HOLE NO. B-2

DRILLER: DARREL MCKEEN

PROJECT NAME: MEDICAL BUILDING

LINE & STATION:

M.T.B. JOB NUMBER: 89-232

LOCATION: PORTLAND, MAINE

OFFSET:

GROUND WATER OBSERVATIONS

AT 0.00 FT. AFTER 0.00 HOURS

AT 0.00 FT. AFTER 0.00 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	HS	SS	
SIZE I.D.	2 1/2"	1 3/8"	
HAMMER WT.		140	
HAMMER FALL		30"	

DATE START: 12/29/89

DATE FINISH: 12/29/89

SURFACE ELEVATION: NOT AVAILABLE

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
										0.3	PAVEMENT
	1D	2"	18"		3.5	30	30	16		5.5	~ DENSE ~ BROWN GRAVELY SAND
	2D	2"	18"		6.5	6	5	3		8.0	W=26.8% GRAY SILTY CLAY W/ BLACK STREAKS qp=0.5 ksf ~ SOFT TO MEDIUM ~
	3D	2"	18"		11.5	8	12	15			~ MEDIUM DENSE ~ W=14.5% BROWN COARSE SAND TRACE OF GRAVEL AND SILT
	4D	2"	18"		16.5	10	18	12			
	5D	2"	18"		21.5	10	11	12		21.5	BOTTOM OF BORING @ 21.5' WATER @ 4.2' HOLE CAVED @ 8.2'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

HOLE NO. B-2

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT FIRST ATLANTIC	SHEET 1 OF 1 HOLE NO. B-2A
DRILLER DARREL MCKEEN	PROJECT NAME MEDICAL BUILDING	LINE & STATION
M.T.B. JOB NUMBER 89-232	LOCATION PORTLAND, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT 0.00 FT. AFTER 0.00 HOURS

AT 0.00 FT. AFTER 0.00 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	HW	SS	
SIZE I.D.	4"	1 3/8"	
HAMMER WT.	300	140	
HAMMER FALL	16"	30"	

DATE START: 01/02/90 DATE FINISH: 01/02/90

SURFACE ELEVATION: NOT AVAILABLE

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE O.D.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
AUGER										0.3	PAVEMENT
										2.0	BLACK GRAVELY SAND
9											BROWN GRAVELY SAND, TRACE OF COBBLES
10										5.5	
	1U	3	1/2"24"		7.5	WT OF 1 MAN		WT OF 2 MEN		7.8	GRAY SILTY CLAY W=39.6% W_L=37.1 W_P=21.5
											BOTTOM OF BORING @ 7.8' NO PENATRATION ON VANE

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

HOLE NO. B-2A

MAINE TEST BORINGS, INC. **BREWER, MAINE 04412**	CLIENT FIRST ATLANTIC	SHEET 1 OF 1 HOLE NO. B-3
DRILLER DARREL MCKEEN	PROJECT NAME MEDICAL BUILDING	LINE & STATION
T.B. JOB NUMBER 89-232	LOCATION PORTLAND, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT 0.00 FT. AFTER 0.00 HOURS

AT 0.00 FT. AFTER 0.00 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	HS	SS	
SIZE I.D.	2 1/2"	1 3/8"	
HAMMER WT.		140	
HAMMER FALL		30"	

DATE START	DATE FINISH
12/28/89	12/28/89

SURFACE ELEVATION
NOT AVAILABLE

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
										0.4	PAVEMENT
	1D	2"	6"		2.5	65					W = 5.7 % BROWN GRAVELY SAND TRACE OF COBBLES
										4.0	~ MEDIUM DENSE ~
	2D	2"	18"		6.5	10	19	17			W=3.5 %
	3D	2"	18"		11.5	4	8	18			W=5.9 %
	4D	2"	18"		16.5	3	3	3			~ LOOSE ~ BROWN COARSE SAND, TRACE OF GRAVEL
	5D	2"	18"		21.5	6	7	8			~ MEDIUM DENSE ~
	6D	2"	18"		26.5	4	5	9			~ LOOSE TO...
	7D	2"	18"		31.5	4	6	7		31.5	...MEDIUM DENSE ~

ROD PROBES

BLOWS	INTVL	BLOWS	INTVL	BLOWS	INTVL
32-33	7	38-39	51	44-45	28
33-34	15	39-40	45	45-46	36
34-35	16	40-41	52	46-47	64
35-36	17	41-42	38	47-48	80
36-37	24	42-43	32	48-49	97
37-38	40	43-44	26	49-50	112

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:
BOTTOM OF BORING @ 50.0'
HOLE CAVED @ 12.5'

HOLE NO. B-3

MAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT FIRST ATLANTIC	SHEET 1 OF 1 HOLE NO. B-4
DRILLER DARREL MCKEEN	PROJECT NAME MEDICAL BUILDING	LINE & STATION
M.T.B. JOB NUMBER 89-232	LOCATION PORTLAND, MAINE	OFFSET

GROUND WATER OBSERVATIONS

AT 0.00 FT. AFTER 0.00 HOURS

AT 0.00 FT. AFTER 0.00 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	HS	SS	
SIZE I.D.	2 1/2"	1 3/8"	
HAMMER WT.		140	
HAMMER FALL		30"	

DATE START	DATE FINISH
12/29/89	12/29/89

SURFACE ELEVATION
NOT AVAILABLE

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
										0.4	PAVEMENT
	1D	2"	6"		2.5	100				2.0	BLACK GRAVELY SAND
											~ DENSE ~ W = 5.3 % BROWN GRAVELY SAND, TRACE OF COBBLES, TRACE OF SILT
	2D	2"	18"		6.5	22	28	33			
	0	2"	0"		10.0	50				11.0	
											~ MEDIUM DENSE ~ BROWN COARSE SAND, TRACE OF GRAVEL
	3D	2"	18"		16.5	10	15	13			
	4D	2"	18"		21.5	10	15	15		21.5	
											BOTTOM OF BORING @ 21.5' HOLE CAVED @ 10.0' WET

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

HOLE NO. B-4

MAINE TEST BORINGS, INC.
BREWER, MAINE 04412

CLIENT: FIRST ATLANTIC

SHEET 1 OF 1

HOLE NO. B-5

DRILLER: DARREL MCKEEN

PROJECT NAME: MEDICAL BUILDING

LINE & STATION:

M.T.B. JOB NUMBER: 89-232

LOCATION: PORTLAND, MAINE

OFFSET:

GROUND WATER OBSERVATIONS

AT 0.00 FT. AFTER 0.00 HOURS

AT 0.00 FT. AFTER 0.00 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	HS	SS	
SIZE I.D.	2 1/2"	1 3/8"	
HAMMER WT.		140	
HAMMER FALL		30"	

DATE START: 12/28/89

DATE FINISH: 12/28/89

SURFACE ELEVATION: NOT AVAILABLE

CASING BLOWS PER FOOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
										0.5	PAVEMENT
										2.0	BLACK GRAVELY SAND
	1D	2"	18"		3.5	20	30	15			~ MEDIUM DENSE ~
										4.0	BROWN GRAVELY SAND

REFUSAL @ 4.0'

SAMPLES
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
LABORATORY TESTS

REMARKS:

(7)

HOLE NO. B-5

IAINE TEST BORINGS, INC. BREWER, MAINE 04412	CLIENT FIRST ATLANTIC	SHEET 1 OF 1 HOLE NO. B-5A
RILLER DARREL MCKEEN	PROJECT NAME MEDICAL BUILDING	LINE & STATION
T.B. JOB NUMBER 89-232	LOCATION PORTLAND, MAINE	OFFSET

ROUND WATER OBSERVATIONS

T 0.00 FT. AFTER 0.00 HOURS

T 0.00 FT. AFTER 0.00 HOURS

	CASING	SAMPLER	CORE BARREL
TYPE	HS	SS	
SIZE I.D.	2 1/2"	1 3/8"	
HAMMER WT.		140	
HAMMER FALL		30"	

DATE START	DATE FINISH
12/29/89	12/29/89

SURFACE ELEVATION
NOT AVAILABLE

ASING LOWS PER OOT	SAMPLE NO.	O.D.	PEN.	REC.	DEPTH @ BOT.	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	VANE READING	DEPTH	STRATUM DESCRIPTION
										0.5	PAVEMENT
										2.0	BLACK GRAVELY SAND
											~ MEDIUM DENSE TO DENSE ~ BROWN GRAVELY SAND TRACE OF COBBLES AND SILT W= 3.3 %
	1D	2"	18"		6.5	15	40	40		7.0	
	2D	2"	18"		11.5	11	21	32			~ MEDIUM DENSE ~
	3D	2"	18"		16.5	17	17	17			W=15.0% GRAVELLY BROWN COARSE SAND TRACE OF ~~GRAVEL~~ SILT
	4D	2"	18"		21.5	8	15	8			
	5D	2"	18"		26.5	9	10	14			
	6D	2"	18"		31.5	10	12	14		31.5	
											BOTTOM OF BORING @ 31.5'

SAMPLES
) = SPLIT SPOON
= 2" SHELBY TUBE
3 = 3" SHELBY TUBE

SOIL CLASSIFIED BY:
XX DRILLER-VISUALLY
X SOIL TECHNICIAN-VISUALLY
X LABORATORY TESTS

REMARKS:

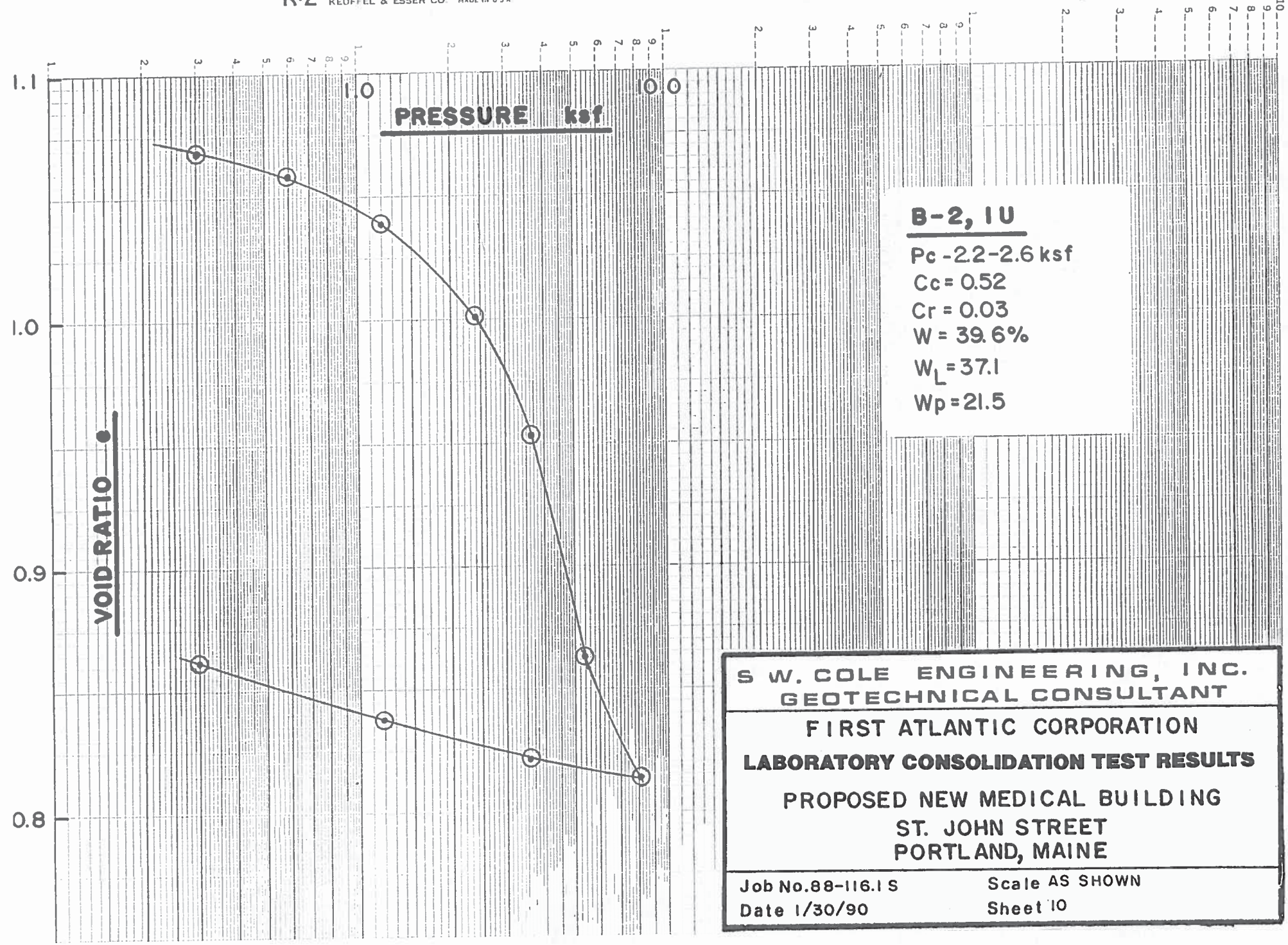
HOLE NO. B-5A

APPENDIX D

LABORATORY TEST RESULTS

K•E SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 6012



B-2, IU

Pc - 2.2-2.6 ksf
Cc = 0.52
Cr = 0.03
W = 39.6%
W_L = 37.1
Wp = 21.5

S W. COLE ENGINEERING, INC.
GEOTECHNICAL CONSULTANT

FIRST ATLANTIC CORPORATION

LABORATORY CONSOLIDATION TEST RESULTS

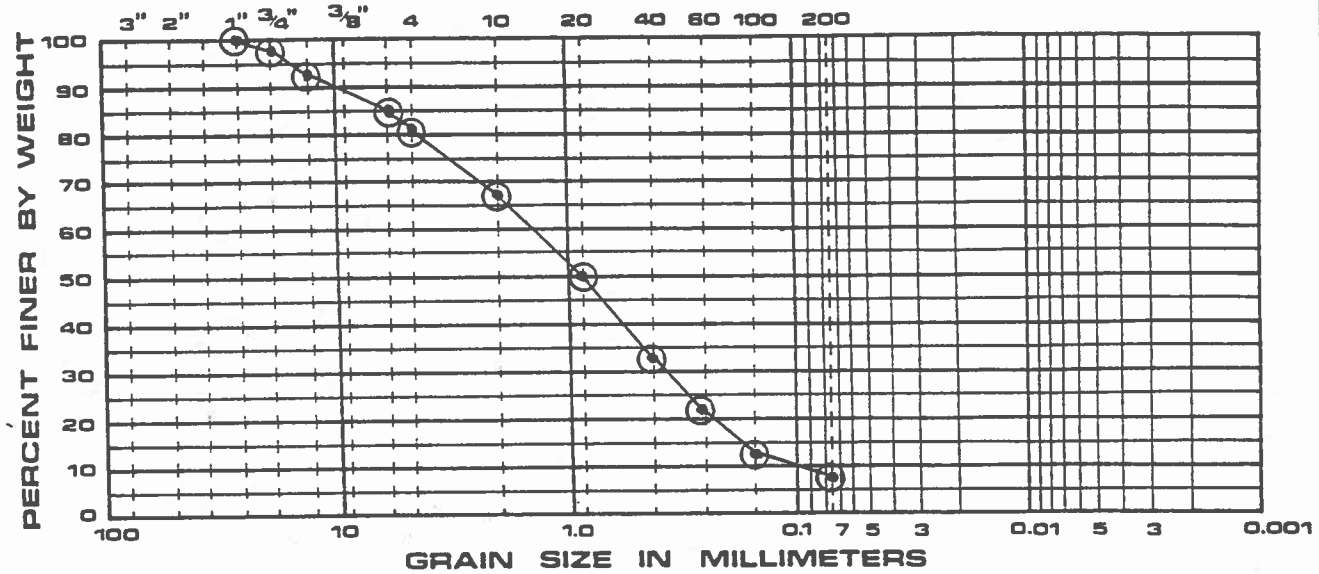
PROPOSED NEW MEDICAL BUILDING
ST. JOHN STREET
PORTLAND, MAINE

Job No. 88-116.1 S	Scale AS SHOWN
Date 1/30/90	Sheet 10

JOB NO: 88-116.1 S

GRAIN SIZE ANALYSIS

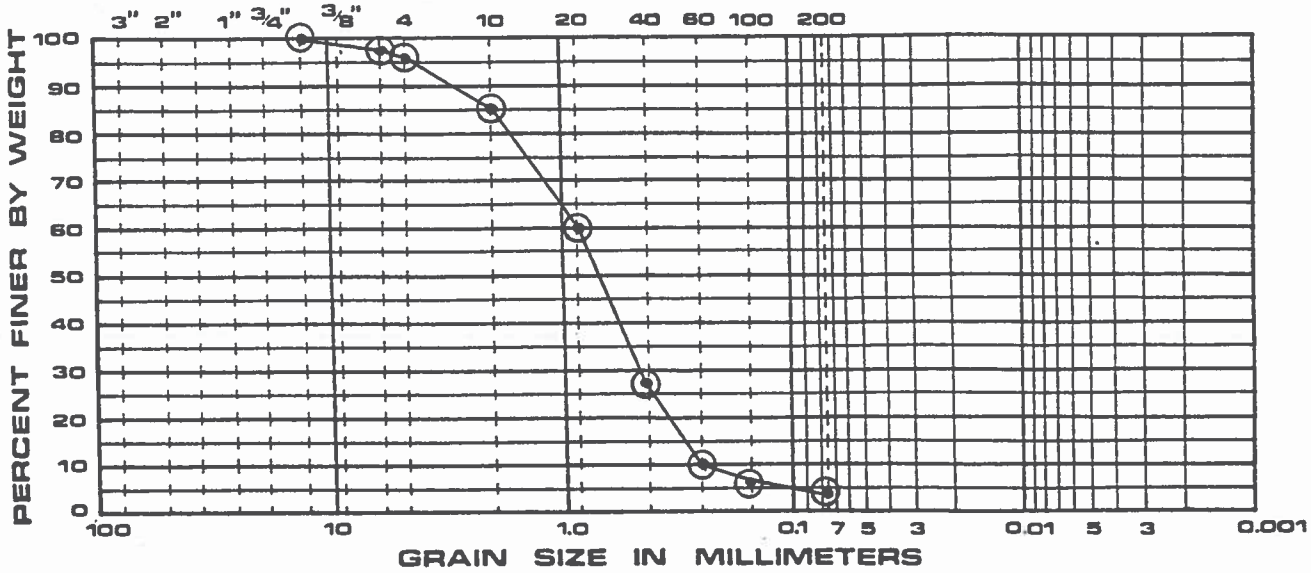
COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	



PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION		W
○	B-1	S-2	5'	Gravelly Sand w/some Silt		11.3 %

GRAIN SIZE ANALYSIS

COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	

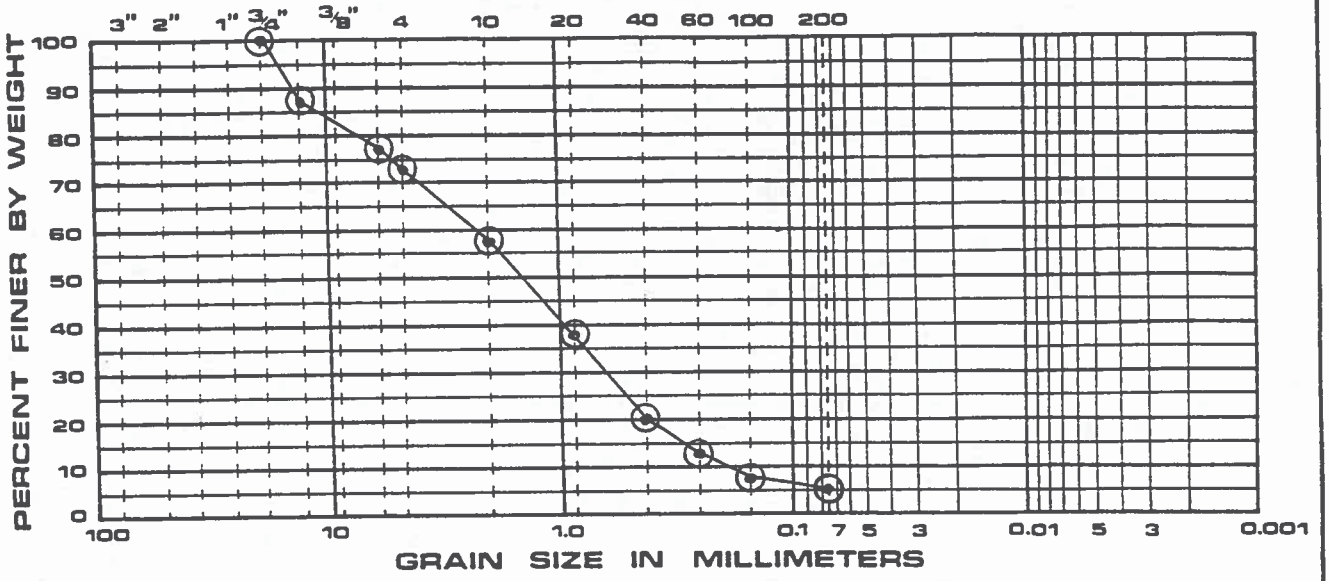


PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION		W
○	B-2	S-3	10'	Sand w/trace Gravel and Silt		14.5%

JOB NO: 88-116.1 S

GRAIN SIZE ANALYSIS

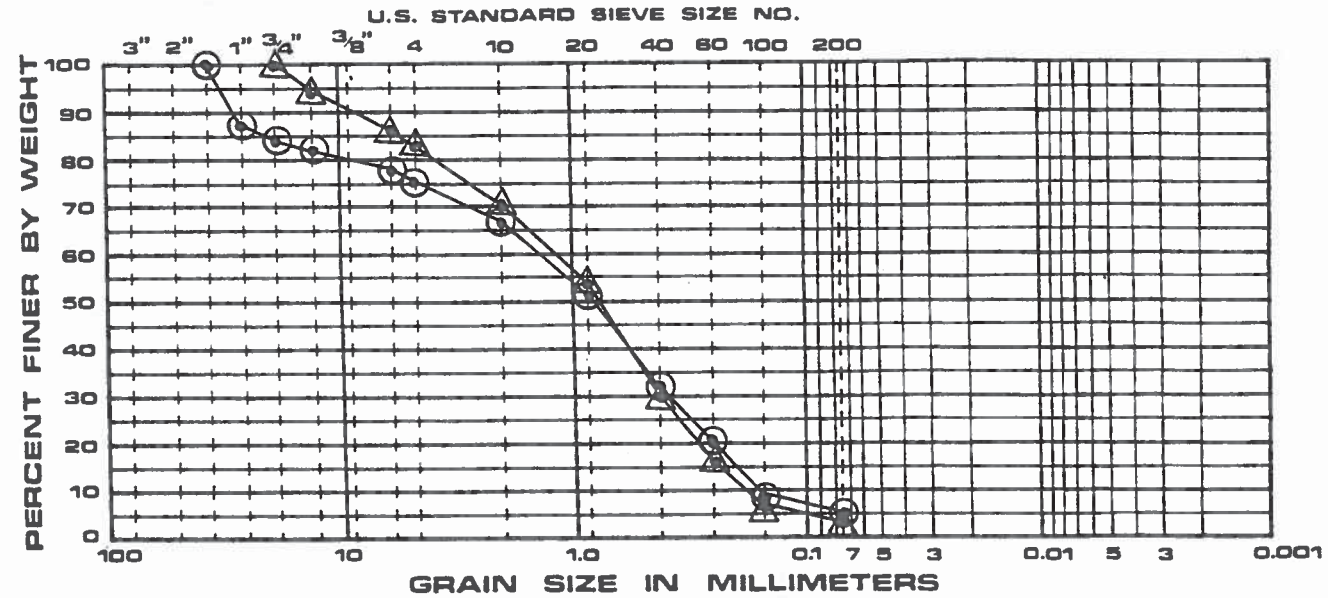
COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	



PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION		W
○	B-4	S-2	5'	Gravelly Sand w/trace of Silt		5.3 %

GRAIN SIZE ANALYSIS

COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	

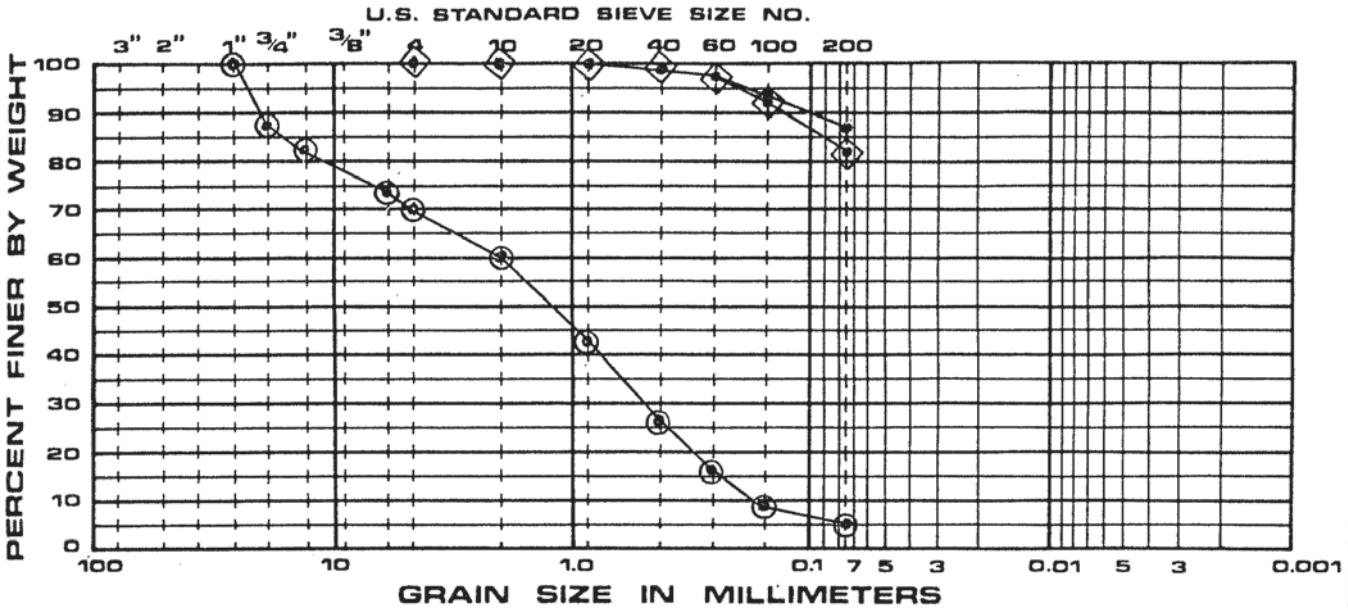


PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION		W
○	B-5A	S-1	5'	Gravelly Sand w/trace of Silt		3.3%
△	B-5A	S-2	10'	Gravelly Sand w/trace of Silt		15.3%

JOB NO. : 94-716 S

GRAIN SIZE ANALYSIS

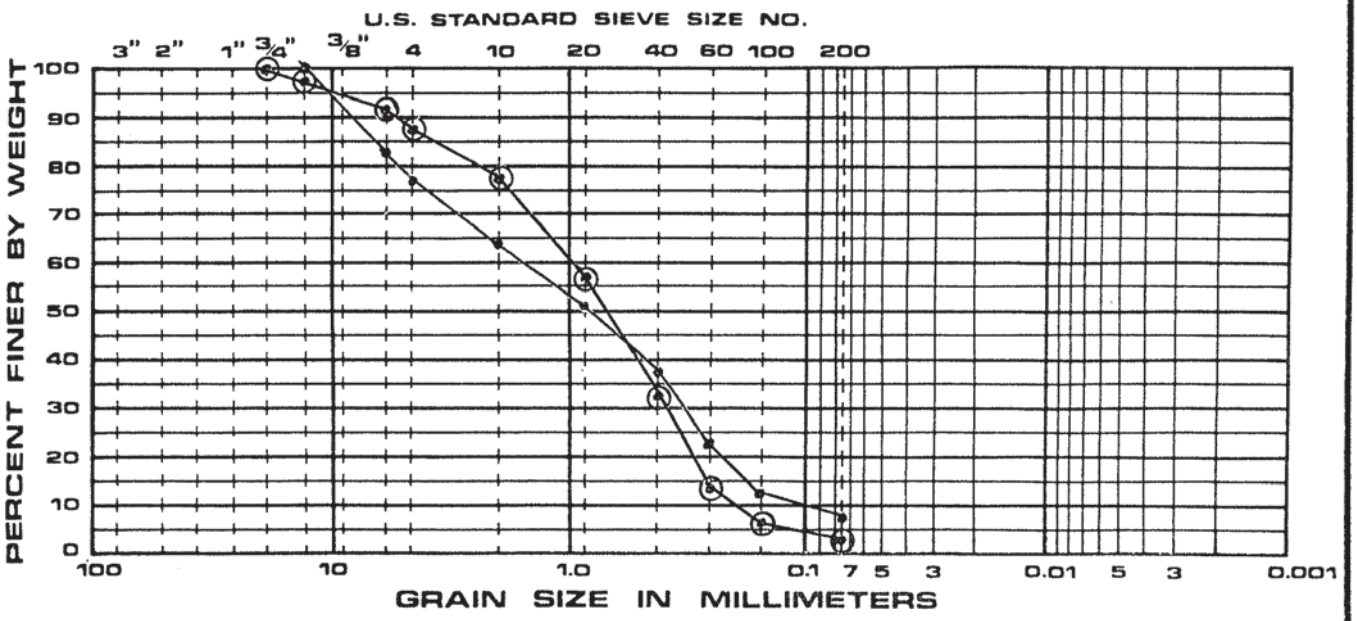
COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	



PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION	W%
⊙	B-101	2	4.5'-6.5'	GRAVELLY FINE TO COARSE SAND W/TRACE OF SILT	2.4
•	B-102	3	9.5'-11.5'	GRAY SILTY CLAY W/SOME FINE SAND LAYERS	28.2
◈	B-102	4	14.5'-16.5	GRAY SILTY CLAY W/FINE SAND LAYERS	26.7

GRAIN SIZE ANALYSIS

COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	



PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION	W%
•	B-105	2	4.5'-6.5'	GRAVELLY FINE TO COARSE SAND W/SOME SILT	14.1
⊙	B-106	2	2.5'-4.5'	FINE TO COARSE SAND W/SOME GRAVEL AND TRACE	4.0
				OF SILT	

APPENDIX E

GEOPHYSICAL SURVEY

HAGER-RICHTER
GEOSCIENCE, INC.

GEOPHYSICAL SURVEY
PROPOSED PARKING STRUCTURE
222 ST. JOHN STREET
PORTLAND, MAINE

Prepared for:

S. W. Cole Engineering, Inc.
286 Portland Road
Gray, Maine 04039-9586

Prepared by:

Hager-Richter Geoscience, Inc.
8 Industrial Way - D10
Salem, New Hampshire 03079

File 17J53
June 2017

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HAGER-RICHTER
GEOSCIENCE,INC.

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June 27, 2017
File 17J53

Evan M. Walker, P.E.
Geotechnical Engineer
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, Maine 04039-9586

Phn: (207) 657-2866
Fax: (207) 657-2840
Email: ewalker@swcole.com

RE: Geophysical Survey
Proposed Parking Structure
222 St. John Street
Portland, Maine

Dear Mr. Walker:

In this letter, we report the results of a surface geophysical survey conducted by Hager-Richter Geoscience, Inc. (H-R) at the above referenced site in Portland, Maine in June, 2017. The survey was conducted to support a geotechnical investigation of the site by S.W. Cole Engineering, Inc. (SW Cole) for possible future development. The scope of the survey and the area of interest were specified by SW Cole.

INTRODUCTION

The Site is an active parking lot located on the west side of St. John Street in Portland, Maine. The general location of the Site is shown in Figure 1. The site is an existing parking lot measuring about 650 feet by 200 feet. According to information provided by S.W. Cole, the subsurface at the site consists of varying amounts of sand and silt over a thin layer of till and phyllite bedrock. The depth of bedrock varies from about 35 feet to about 65 feet across the site.

As part of a geotechnical investigation of the Site for possible future construction, S.W. Cole required a geophysical survey to provide information on site specific shear wave velocity information as a function of depth for the soil and rock to a depth of 100 feet, and the depth and configuration of the bedrock surface. The geophysical survey consisted of shear wave velocity testing and seismic refraction along five transects. The work was conducted over a weekend to minimize disruption to the parking lot and to minimize vehicular interference with the seismic testing.

OBJECTIVE

The objectives of the surface geophysical survey were to: 1) provide information on site specific shear wave velocity information as a function of depth for the soil and rock to a depth of 100 feet, and 2) determine the depth and configuration of the bedrock surface within the specified area of interest at the site.

THE SURVEY

Jeffrey Reid, P.G., and Bryan Carnahan of Hager-Richter conducted the seismic refraction survey on June 3-4, 2017. The fieldwork was coordinated with Evan M. Walker, P.E., of SW Cole who was present for the initiation of the field work. The locations of the seismic transects were selected in consultation with SW Cole. Data analysis and interpretation were completed at the Hager-Richter offices. Original data and field notes will be retained in the Hager-Richter files for a minimum of three years.

The geophysical survey consisted of passive shear wave velocity testing (pVs) and seismic refraction along five traverses totaling approximately 1,500 linear feet. The positions of the seismic transects were recorded using a Trimble Geo 7X CM GPS receiver outfitted with a Zephyr 2 external antenna. The locations of the transects are shown in Figure 2.

EQUIPMENT & PROCEDURES

pVs Survey. We used a 48-channel digital seismograph (Geometrics Geode) coupled to 48 low frequency (4.5 Hz) geophones to acquire the pVs data for the subject testing. pVs data were acquired along five transects. Lines 1 and 2 are composed of two segments or spreads and Lines 3-5 are composed of single spreads. The geophones are installed along a straight line and connected to a seismograph. A five-foot geophone spacing was used for Lines 1 and 2 and a four-foot spacing was sued for Lines 3-5.

Ambient noise is recorded for 30 seconds two or three times, and examined to be sure that noise of sufficiently low frequency is present. If the noise is sufficient, then 10 to 15 such records are acquired. If the noise spectra do not reach sufficiently low frequencies, then one walks or runs along the testing line during data acquisition to add low frequency noise to the ambient noise. The surface waves used in the pVs method, considered noise in seismic refraction and seismic reflection surveys, are enhanced during data acquisition and processing for the pVs method. The seismic data are analyzed using SeisOpt® ReMi™, a commercially licensed software package developed by Optim, Inc. located at the University of Nevada at Reno. Results are normally presented as 1-D plots or in tabular form showing shear wave velocity as a function

of depth for the center point of the seismic line. The pVs method yields a simple vertical shear wave velocity profile for the mid point of each testing line.

Determination of Average Shear Wave Velocity for Building Code Purposes. The pVs method determines (a) the shear wave velocity at the mid point along a survey line for several layers, averaged over the length of the survey line, and (b) the average shear wave velocity V_{avg} for site classification for seismic design in accordance with building codes. Similar calculations can be performed with the results of the shear wave velocity survey. The average value V_{avg} is determined using the equation 16-44 of the IBC as follows:

$$V_{avg} = \left(\sum_{i=1}^{N} d_i\right) / \sum_{i=1}^{N} d_i / V_i$$

where d_i is thickness of layer I
V_i is shear wave velocity of layer I
N denotes the total number of layers

The Seismic Site Class, *based solely on average shear wave velocity*, is defined by the IBC as follows:

Site Class	Soil Profile Name	Soil Shear Wave Velocity (ft/s)
A	Hard rock	$V_s > 5000$
B	Rock	$2500 < V_s \leq 5000$
C	Very dense soil and soft rock	$1200 < V_s \leq 2500$
D	Stiff soil profile	$600 \leq V_s \leq 1200$
E	Soft soil profile	$V_s < 600$

Although the IBC provides other methods to determine the Site Class, such as standard penetration resistance (blow counts) and soil undrained shear strength, this report provides shear wave velocity data only. There is no consideration of other factors that may affect a site class such as liquefaction. The final determination of seismic site class should be made by the project engineer.

Seismic Refraction. For the seismic refraction survey, we used a 48-channel seismograph (two 24-channel Geometrics Geodes) coupled to 48 geophones to acquire seismic refraction records. The seismograph was connected to, and controlled by, a notebook PC computer. The software provides for the acquisition, display, plotting, filtering, and storage of

seismic data. Seismic refraction data were acquired along five transects totaling approximately 1,500 linear feet. Geophone spacing was 5 feet for Lines 1 and 2 and was 4 feet for Lines 3-5. Line 1 and 2 consisted of two seismic spreads configured end to end and Lines 3-5 consisted of a single seismic spread. Seven shot points were used for most seismic spreads - three located internal to the spread, one at each end of the spread, and, where possible, two offset shots located in-line with but beyond the ends of the spread of geophones. This configuration allows for providing reversed profiles. The seismic source was a 12-pound sledgehammer striking a metal plate. The number of stacks per shot point was variable, and the quality of the stacked seismic signal for each shot point was verified in the field. The data were recorded digitally.

The seismic data were interpreted with the Generalized Reciprocal Method, commonly referred to as GRM. GRM allows the depth to bedrock to be determined for *each* geophone location (i.e., generally every 4 or 5 feet at this site), rather than only at the shot points as for most other methods, and it is less sensitive than are most other methods to the presence of dipping interfaces and hidden layers.

LIMITATIONS OF THE METHODS

pVs. As with all physical measurements, there is experimental error in the velocities that are determined using the passive shear wave velocity method. For the pVs method, the accuracy of V_{avg} is stated by Optim, Inc. to be 5-15%.

The depth of investigation is a function of the noise spectrum, and long wave lengths (low frequencies) are required to determine velocity at large depths. Noise levels can be improved by a person running along the seismic spread during data acquisition.

Seismic Refraction. As with all geophysical methods, the seismic refraction method is based on the assumption that the local geology is relatively uncomplicated. In particular, the seismic refraction method assumes that interfaces between geologic materials correlate with sharp increases in seismic velocity and that the interfaces between geologic units are relatively flat-lying. The method is not very sensitive to lateral variations within layers, and relatively subtle features such as fracture zones within bedrock generally cannot be detected unless there is a topographic expression of the feature and/or a significant drop in bedrock velocity. The accuracy of the method is degraded in areas with strong topographic relief and/or where the interfaces have apparent dips greater than about 20°. *In general, the accuracy of depths determined is stated to be about 10% or 2 feet, whichever is greater.*

Where two materials do not exhibit contrasting velocities, or where velocities gradually increase with depth, a clear refracted signal is not generated, and the seismic refraction method

cannot be used to distinguish the two materials. In some cases, the "geophysical contact" between materials with contrasting velocities does not correlate exactly with the "geologic contact." For example, where a highly weathered bedrock is overlain by a dense material such as till, the velocity range of the weathered bedrock might overlap or approach the velocity range of the till, and the two materials cannot be distinguished seismically. In such cases, the depth determined by seismic refraction is the depth of *competent* bedrock, which might be located at some depth below the geologic contact.

The depth relations of the water table and bedrock may constitute a significant problem for the seismic refraction technique. This problem is that of a "blind layer." A blind layer occurs where the thickness of the saturated overburden is less than about half the depth of bedrock. In such cases, the water-saturated material immediately above bedrock is "blind" in the sense that no refracted seismic energy from it will be received as a first arrival of seismic energy, and all methods used to reduce the seismic data to determine the depth of bedrock, the objective of this survey, use *only* first arrivals. Thus, the saturated layer will not be detected where it is close to bedrock, and most methods of seismic data reduction will indicate that bedrock is considerably shallower than it actually is. Although GRM, the method used by Hager-Richter to reduce the seismic refraction data, does not use first arrivals through the water saturated zone (because there is none to use) in such cases, GRM determines the depth of bedrock correctly by using the *average* velocity of the saturated and unsaturated zones.

A "hidden layer" occurs where a lower velocity material underlies a higher velocity material, a common situation in stratified sediments. An example is where sands are present under layers of clay or till. As in the case of a "blind layer," most methods of seismic refraction data reduction will indicate that bedrock is deeper than it actually is, if a hidden layer is present but not detected. Internal tests in the seismic refraction data reduction software that we use (IXRefraX by Interpex) indicate that such layers might be present, and an average velocity of the two layers is used to determine the depth of bedrock.

RESULTS

The geophysical survey consisted of passive shear wave velocity testing (pVs) and seismic refraction along five traverses totaling approximately 1,500 linear feet. The positions of the seismic transects were recorded using a Trimble Geo 7X CM GPS receiver outfitted with a Zephyr 2 external antenna.

Figure 2 is a site plan showing the locations of the seismic refraction transects and center points for the shear wave velocity profiles. Figures 3 and 4 show the seismic refraction results in profile form and Figure 5 is a color contour model of bedrock topography compiled from the

seismic refraction results and available boring information provided by SW Cole. Table 1 lists the results of the pVs survey and Table 2 lists the results of the seismic refraction survey.

pVs Survey. Based on boring logs provided by S.W. Cole, the subsurface at the site consists of varying amounts of sand and silt over a thin layer of till and phyllite bedrock. The depth of bedrock varies from about 35 feet to about 65 feet across the site. The locations of the borings are shown in Figure 2.

The quality for the pVs data at the subject site is judged to be very good. The results of the pVs testing are reported in Table 1. For modeling purposes, the subsurface stratigraphy was divided into four discrete units. The velocity units do not necessarily correlate with specific lithologic units identified in the boring log provided by S.W. Cole. The layer thicknesses that provide the best statistical fit to the dispersion curve are used for the seismic lines. No attempt was made to "force" a specific model to the boring data.

The shear wave velocities for the individual stratigraphic modeled units are provided in Table 1. The average values of the velocities of shear waves for the depth interval of 0-100 ft based on Equation 1 of the IBC , Vs_{100}, vary between 1,035 and 1,376 fps. The root mean square errors for the fit of the dispersion curves versus the measured data using the model velocities are also reported in Table 1 and vary between 1.8% and 3.8%.

Seismic Refraction Survey. The quality of the seismic refraction data ranges from very good to excellent. A measure of the accuracy of the data can be obtained by comparing the bedrock depths determined seismically with depths reported from nearby borings that encountered bedrock, or by comparing bedrock depths at the intersections of seismic refraction lines. Table 3 shows a comparison between bedrock elevations determined seismically and reported in nearby borings. For the present survey, six (6) borings that reported bedrock depths were located within 40 feet of a seismic line and were used for the comparison. An examination of Table 3 shows that the bedrock elevations determined for locations on seismic lines differ by an average of about 2 feet, or 5% from the bedrock elevations reported in boring logs. The standard deviation for the differences is about 1 foot or 2%.

Table 3 also shows a comparison of seismically determined bedrock elevations at six (6) seismic line intersections. Bedrock elevations determined at the seismic line intersections differ by an average of less than a foot, or 1% relative to bedrock depth. The standard deviation for the differences is about 1 foot or 1%. Based on the results of comparing seismically determined elevations at intersecting seismic lines and with nearby borings, and on the results from other similar seismic refraction surveys, we estimate the accuracy (standard deviation) of the *depths* of

competent bedrock determined by the seismic refraction survey to be about ± 10% of the depth of bedrock, or ± 2 feet), whichever is greater.

The results of the seismic refraction survey for the site are shown in profile form in Figures 3 and 4 and in tabular form in Table 2. Materials with three distinct velocity ranges were detected at the Site. The upper material exhibits a velocity range of 1,100 to 1,750 feet per second (fps) and is interpreted to consist of unsaturated soil. The middle material exhibits a velocity range of 4,800 to 5,200 fps and is interpreted to be saturated soil. The lower material exhibits a velocity range of 10,500 to 14,100 fps and is interpreted to be bedrock. Where the top of bedrock is highly fractured and/or deeply weathered, it might exhibit lower velocities that cannot be detected as a distinct layer on the basis of the seismic refraction data. Thus, the top of rock determined on the basis of seismic refraction data generally is the top of competent bedrock, which might be located somewhat below the geologic contact between the overburden and bedrock.

The depth of competent bedrock along Seismic Lines 1 through 5 varies between about 36 feet and 67 feet below ground surface, and the elevation of competent bedrock varies between approximately -40 feet and -10 feet, an *apparent* total relief of 30 feet. Figure 5 is a color contour plot of the bedrock elevation model generated from the seismic refraction survey and the boring data provided by SW Cole. The contours shown on Figure 5 represent interpolations based on the seismic data and available boring information relative to NAVD88. The contours shown represent non-unique models for bedrock elevation (i.e., different valid conceptual models can be developed to fit the data set), and the elevation of competent bedrock at any particular location may differ from that shown. Bedrock elevations based on additional data, such as additional borings or seismic data, may differ significantly from those shown on Figure 5.

Examination of the seismic profiles and the bedrock topographic model shows that bedrock is generally deeper at the south end of the site and shallower to the north. A small N-S bedrock trough is present near the center of the site.

CONCLUSIONS

Based upon the results of geophysical survey conducted by Hager-Richter Geoscience, Inc. at 222 St. John Street, Portland, Maine in June, 2017, we conclude:

- The average values of the velocities of shear waves along Lines 1-5 for the depth interval of 0-100 ft based on Equation 1 of the IBC , Vs_{100}, vary between 1,035 and 1,376 fps.

- The root mean square errors for the fit of the dispersion curves versus the measured data

vary between 1.8% and 3.8%.

- The depth of competent bedrock along Seismic Lines 1 through 5 varies between about 36 feet and 67 feet below ground surface, and the elevation of competent bedrock varies between approximately -40 feet and -10 feet, an *apparent* total relief of 30 feet.

- Materials with three distinct compressional wave velocity ranges were detected at the Site: an upper material exhibiting a velocity range of 1,100 to 1,700 fps and interpreted to consist of unsaturated sediments, a middle material exhibiting a velocity range of 4,800 to 5,200 fps and interpreted to consist of saturated sediments, and a lower material exhibiting a velocity range of 10,500 to 14,100 fps and interpreted to be bedrock.

- Bedrock is generally deeper at the south end of the site and shallower to the north.

- A small north-south bedrock trough is present near the center of the site.

LIMITATIONS

This report was prepared for the exclusive use of S. W. Cole Engineering, Inc. (Client). No other party shall be entitled to rely on this Report or any information, documents, records, data, interpretations, advice or opinions given to Client by Hager-Richter Geoscience, Inc. (H-R) in the performance of its work. The Report relates solely to the specific project for which H-R has been retained and shall not be used or relied upon by Client or any third party for any variation or extension of this project, any other project or any other purpose without the express written permission of H-R. Any unpermitted use by Client or any third party shall be at Client's or such third party's own risk and without any liability to H-R.

H-R has used reasonable care, skill, competence and judgment in the performance of' its services for this project consistent with professional standards for those providing similar services at the same time, in the same locale, and under like circumstances. Unless otherwise stated, the work performed by H-R should be understood to be exploratory and interpretational in character and any results, findings or recommendations contained in this Report or resulting from the work proposed may include decisions which are judgmental in nature and not necessarily based solely on pure science or engineering. It should be noted that our conclusions might be modified if subsurface conditions were better delineated with additional subsurface exploration including, but not limited to, test pits, soil borings with collection of soil and water samples, and laboratory testing.

Except as expressly provided in this limitations section, H-R makes no other representation or warranty of any kind whatsoever, oral or written, expressed or implied; and all implied warranties of merchantability and fitness for a particular purpose, are hereby disclaimed.

If you have any questions or comments on this report, please contact us at your convenience. It has been a pleasure to work with you on this project. We look forward to working with you again in the future.

Sincerely yours,
HAGER-RICHTER GEOSCIENCE, INC.

Jeffrey Reid, P.G.
Vice President/Senior Geophysicist

Dorothy Richter, P.G.
President

Attachments: Tables 1-3
Figures 1-5

TABLE 1
pVs RESULTS

Geologic Unit *	Depth Interval (ft)	Vs** (ft/s)
pVs Test Line 1A @ 1+15		
Soft Loam and Sand	0 - 10	966
Sand	10 - 20	520
Silty Sand	20 - 64	939
Till or Bedrock?	64+	2,714
Vs_{100} (ft/s)	1,035	
RMS	3.8%	
pVs Test Line 1B @ 3+50		
Soft Loam and Sand	0 - 10	388
Silty Sand	10 - 20	495
Silty Sand - More Dense	20 - 45	956
Till or Bedrock?	45+	2,948
Vs_{100} (ft/s)	1,096	
RMS	2.9%	
pVs Test Line 2A @ 1+15		
Soft Loam and Sand	0 - 10	846
Sand	10 - 29	645
Silty Sand	29 - 63	1,403
Till or Bedrock?	63+	2,837
Vs_{100} (ft/s)	1,274	
RMS	3.5%	

The pVs method yields a simple vertical shear wave velocity profile for the mid point of each testing line. Although the IBC provides other methods to determine the Site Class, such as standard penetration resistance (blow counts) and soil undrained shear strength, this report provides shear wave velocity data only. There is no consideration of other factors that may affect a site class such as liquefaction. The final determination of seismic site class should be made by the project engineer.

pVs Test Line 2B @ 3+50		
Soft Loam and Sand	0 - 53	583
Silty Sand	5 - 14	494
Silty Sand - More Dense	14 - 34	783
Till or Bedrock?	34+	3,240
Vs_{100} (ft/s)	1,376	
RMS	2.5 %	
pVs Test Line 3 @ 0+96		
Soft Loam and Sand	0 - 7	853
Silty Sand	7 - 22	540
Silty Sand - More Dense	22 - 50	929
Till or Bedrock?	50+	1,967
Vs_{100} (ft/s)	1,092	
RMS	2.0%	
pVs Test Line 4 @ 0+96		
Soft Loam and Sand	0 - 7	1,333
Sand	7 - 22	540
Silty Sand - More Dense	22 - 57	1,034
Till/Bedrock?	57+	2,356
Vs_{100} (ft/s)	1,175	
RMS	1.8%	
pVs Test Line 5 @ 0+96		
Soft Loam and Sand	0 - 7	853
Sand	7 - 22	540
Silty Sand - More Dense	22 - 50	929
Till/Bedrock?	50+	1,967
Vs_{100} (ft/s)	1,092	
RMS	2.0%	

The pVs method yields a simple vertical shear wave velocity profile for the mid point of each testing line. Although the IBC provides other methods to determine the Site Class, such as standard penetration resistance (blow counts) and soil undrained shear strength, this report provides shear wave velocity data only. There is no consideration of other factors that may affect a site class such as liquefaction. The final determination of seismic site class should be made by the project engineer.

TABLE 2
SEISMIC REFRACTION RESULTS

Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 1							
2922775.0	297267.0	0	14.1	63.5	27.0	12.9	-36.5
2922774.0	297271.9	5	14.1	63.1	27.0	12.9	-36.1
2922773.2	297276.8	10	14.1	62.5	27.0	12.9	-35.5
2922772.2	297281.8	15	14.1	61.8	27.0	12.9	-34.8
2922771.5	297286.7	20	14.1	62.2	27.0	12.9	-35.2
2922770.5	297291.6	25	14.1	62.0	27.0	12.9	-35.0
2922769.8	297296.5	30	14.1	63.8	27.0	12.9	-36.8
2922768.8	297301.4	35	14.1	64.6	27.0	12.9	-37.6
2922767.8	297306.4	40	14.1	64.0	27.0	12.9	-37.0
2922767.0	297311.3	45	14.1	63.8	27.0	12.9	-36.8
2922766.0	297316.2	50	14.1	62.7	27.0	12.9	-35.7
2922765.2	297321.1	55	14.1	62.5	27.0	12.9	-35.5
2922764.2	297326.0	60	14.1	61.0	27.0	12.9	-34.0
2922763.5	297331.0	65	14.1	60.4	27.0	12.9	-33.4
2922762.5	297335.9	70	14.1	61.8	27.0	12.9	-34.8
2922761.8	297340.8	75	14.1	64.0	27.0	12.9	-37.0
2922760.8	297345.7	80	14.1	63.3	27.0	12.9	-36.3
2922759.8	297350.6	85	14.1	66.1	27.0	12.9	-39.1
2922759.0	297355.6	90	14.1	66.4	27.0	12.9	-39.4
2922758.0	297360.5	95	14.0	66.0	27.0	13.0	-39.0
2922757.2	297365.4	100	14.0	66.2	27.0	13.0	-39.2
2922756.2	297370.3	105	14.0	66.8	27.0	13.0	-39.8
2922755.5	297375.2	110	14.0	63.8	27.0	13.0	-36.8

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Maine West State Plane NAD83 (CORS96) in US survey feet. Elevations along the seismic lines were determined from plans provided by S.W. Cole.

Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 1 (cont.)							
2922754.5	297380.2	115	14.1	63.4	27.0	12.9	-36.4
2922753.5	297385.1	120	14.1	62.7	27.0	12.9	-35.7
2922752.8	297390.0	125	13.8	62.5	27.0	13.2	-35.5
2922751.8	297394.9	130	13.3	63.3	27.0	13.7	-36.3
2922751.0	297399.8	135	13.2	62.9	27.0	13.8	-35.9
2922750.0	297404.8	140	12.8	61.4	27.0	14.2	-34.4
2922749.2	297409.7	145	12.9	62.7	27.0	14.1	-35.7
2922748.2	297414.6	150	13.1	60.9	27.0	13.9	-33.9
2922747.5	297419.5	155	13.9	61.6	27.0	13.1	-34.6
2922746.5	297424.4	160	14.6	60.3	27.0	12.4	-33.3
2922745.5	297429.3	165	14.9	60.5	27.0	12.1	-33.5
2922744.8	297434.3	170	15.4	58.8	27.0	11.6	-31.8
2922743.8	297439.2	175	16.2	58.6	27.0	10.8	-31.6
2922743.0	297444.1	180	16.1	56.8	27.0	10.9	-29.8
2922742.0	297449.0	185	16.6	55.8	27.0	10.4	-28.8
2922741.2	297454.0	190	16.6	52.7	27.0	10.4	-25.7
2922740.2	297458.9	195	14.8	53.0	27.0	12.2	-26.0
2922739.2	297463.8	200	14.9	51.0	27.0	12.1	-24.0
2922738.5	297468.7	205	15.1	49.1	27.0	11.9	-22.1
2922737.5	297473.6	210	15.2	47.1	27.0	11.8	-20.1
2922736.8	297478.6	215	15.1	47.1	27.0	11.9	-20.1
2922735.8	297483.5	220	15.1	46.0	27.0	11.9	-19.0
2922735.0	297488.4	225	15.1	45.0	27.0	11.9	-18.0
2922734.0	297493.3	230	15.1	45.0	27.0	11.9	-18.0

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Maine West State Plane NAD83 (CORS96) in US survey feet. Elevations along the seismic lines were determined from plans provided by S.W. Cole.

Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 1 (cont.)							
2922733.0	297498.2	235	15.1	45.2	27.0	11.9	-18.2
2922732.2	297503.2	240	15.0	46.5	27.0	12.0	-19.5
2922731.2	297508.1	245	15.0	44.5	27.0	12.0	-17.5
2922730.5	297513.0	250	14.9	44.3	27.0	12.1	-17.3
2922729.5	297517.9	255	14.9	46.5	27.0	12.1	-19.5
2922728.8	297522.8	260	14.8	45.4	27.0	12.2	-18.4
2922727.8	297527.8	265	14.7	44.7	27.0	12.3	-17.7
2922727.0	297532.7	270	14.7	44.5	27.0	12.3	-17.5
2922726.0	297537.6	275	14.6	43.5	27.0	12.4	-16.5
2922725.0	297542.5	280	14.5	43.9	27.0	12.5	-16.9
2922724.2	297547.4	285	14.5	45.4	27.0	12.5	-18.4
2922723.2	297552.3	290	14.4	44.5	27.0	12.6	-17.5
2922722.5	297557.3	295	14.4	45.0	27.0	12.6	-18.0
2922721.5	297562.2	300	14.3	44.5	27.0	12.7	-17.5
2922720.8	297567.1	305	14.3	43.5	27.0	12.7	-16.5
2922719.8	297572.0	310	14.2	44.5	27.0	12.8	-17.5
2922718.8	297577.0	315	14.1	43.5	27.0	12.9	-16.5
2922718.0	297581.9	320	14.1	44.3	27.0	12.9	-17.3
2922717.0	297586.8	325	14.0	44.1	27.0	13.0	-17.1
2922716.2	297591.7	330	14.0	45.2	27.0	13.0	-18.2
2922715.2	297596.6	335	13.7	43.5	27.0	13.3	-16.5
2922714.5	297601.6	340	13.7	42.0	27.0	13.3	-15.0
2922713.5	297606.5	345	13.6	42.4	27.0	13.4	-15.4
2922712.5	297611.4	350	13.6	44.5	27.0	13.4	-17.5

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Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 1 (cont.)							
2922711.8	297616.3	355	13.6	43.2	27.0	13.4	-16.2
2922710.8	297621.2	360	13.5	45.4	27.0	13.5	-18.4
2922710.0	297626.2	365	13.5	45.8	27.0	13.5	-18.8
2922709.0	297631.1	370	13.5	43.5	27.0	13.5	-16.5
2922708.2	297636.0	375	13.4	44.3	27.0	13.6	-17.3
2922707.2	297640.9	380	13.4	45.8	27.0	13.6	-18.8
2922706.5	297645.8	385	13.3	44.5	27.0	13.7	-17.5
2922705.5	297650.8	390	13.3	45.0	27.0	13.7	-18.0
2922704.5	297655.7	395	13.2	45.8	27.0	13.8	-18.8
2922703.8	297660.6	400	13.2	46.3	27.0	13.8	-19.3
2922702.8	297665.5	405	13.1	46.9	27.0	13.9	-19.9
2922702.0	297670.4	410	13.1	45.6	27.0	13.9	-18.6
2922701.0	297675.3	415	13.0	46.3	27.0	14.0	-19.3
2922700.2	297680.3	420	13.0	45.8	27.0	14.0	-18.8
2922699.2	297685.2	425	12.9	45.4	27.0	14.1	-18.4
2922698.2	297690.1	430	12.9	46.9	27.0	14.1	-19.9
2922697.5	297695.0	435	12.9	44.7	27.0	14.1	-17.7
2922696.5	297700.0	440	12.8	45.8	27.0	14.2	-18.8
2922695.8	297704.9	445	12.8	44.3	27.0	14.2	-17.3
2922694.8	297709.8	450	12.7	43.7	27.0	14.3	-16.7
2922694.0	297714.7	455	12.7	42.6	27.0	14.3	-15.6
2922693.0	297719.6	460	12.6	43.3	27.0	14.4	-16.3
2922692.2	297724.6	465	12.6	43.2	27.0	14.4	-16.2
2922691.2	297729.5	470	12.6	43.2	27.0	14.4	-16.2

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Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 2							
2922962.2	297327.2	0	13.5	64.2	27.0	13.5	-37.2
2922961.2	297332.1	5	13.4	62.5	27.0	13.6	-35.5
2922960.2	297337.0	10	13.3	62.9	27.0	13.7	-35.9
2922959.2	297341.9	15	13.1	63.3	27.0	13.9	-36.3
2922958.2	297346.8	20	13.0	63.8	27.0	14.0	-36.8
2922957.2	297351.7	25	12.9	61.6	26.9	14.0	-34.7
2922956.2	297356.6	30	12.8	60.4	26.9	14.1	-33.5
2922955.5	297361.5	35	12.6	60.6	26.9	14.3	-33.7
2922954.5	297366.4	40	12.5	59.7	26.9	14.4	-32.8
2922953.5	297371.3	45	12.4	59.6	26.9	14.5	-32.7
2922952.5	297376.2	50	12.3	61.2	26.9	14.6	-34.3
2922951.5	297381.1	55	12.1	60.6	26.9	14.8	-33.7
2922950.5	297386.0	60	12.0	59.5	26.9	14.9	-32.6
2922949.5	297390.9	65	11.9	60.0	26.9	15.0	-33.1
2922948.5	297395.8	70	11.8	61.4	26.9	15.1	-34.5
2922947.5	297400.7	75	11.7	61.5	26.8	15.1	-34.7
2922946.5	297405.6	80	11.5	61.5	26.8	15.3	-34.7
2922945.5	297410.5	85	11.4	61.8	26.8	15.4	-35.0
2922944.5	297415.4	90	11.3	62.6	26.8	15.5	-35.8
2922943.5	297420.3	95	11.2	61.1	26.8	15.6	-34.3
2922942.8	297425.2	100	11.2	61.5	26.8	15.6	-34.7
2922941.8	297430.2	105	11.1	61.7	26.8	15.7	-34.9
2922940.8	297435.1	110	11.0	61.4	26.8	15.8	-34.6
2922939.8	297439.9	115	10.9	62.9	26.8	15.9	-36.1

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Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 2 (cont.)							
2922938.8	297444.8	120	10.8	63.5	26.7	15.9	-36.8
2922937.8	297449.8	125	10.7	64.3	26.7	16.0	-37.6
2922936.8	297454.7	130	10.6	65.1	26.7	16.1	-38.4
2922935.8	297459.6	135	10.5	65.9	26.7	16.2	-39.2
2922934.8	297464.5	140	10.4	66.9	26.7	16.3	-40.2
2922933.8	297469.4	145	10.4	65.7	26.7	16.3	-39.0
2922932.8	297474.3	150	10.3	62.9	26.7	16.4	-36.2
2922931.8	297479.2	155	10.2	62.9	26.7	16.5	-36.2
2922930.8	297484.1	160	10.1	63.3	26.7	16.6	-36.6
2922930.0	297489.0	165	10.0	63.8	26.6	16.6	-37.2
2922929.0	297493.9	170	9.9	63.8	26.6	16.7	-37.2
2922928.0	297498.8	175	9.6	64.2	26.6	17.0	-37.6
2922927.0	297503.7	180	9.3	62.5	26.6	17.3	-35.9
2922926.0	297508.6	185	9.1	62.0	26.6	17.5	-35.4
2922925.0	297513.5	190	8.8	60.5	26.6	17.8	-33.9
2922924.0	297518.4	195	8.5	59.8	26.6	18.1	-33.2
2922923.0	297523.3	200	8.3	55.2	26.6	18.3	-28.6
2922922.0	297528.2	205	8.0	53.5	26.6	18.6	-26.9
2922921.0	297533.1	210	7.8	51.0	26.6	18.8	-24.4
2922920.0	297538.0	215	7.7	48.6	26.5	18.8	-22.1
2922919.0	297542.9	220	7.7	44.9	26.5	18.8	-18.4
2922918.0	297547.8	225	7.7	41.3	26.5	18.8	-14.8
2922917.2	297552.7	230	7.6	39.3	26.5	18.9	-12.8
2922916.2	297557.6	235	7.6	39.6	26.5	18.9	-13.1

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Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 2 (cont.)							
2922915.2	297562.5	240	7.6	39.7	26.5	18.9	-13.2
2922914.2	297567.4	245	7.5	40.6	26.5	19.0	-14.1
2922913.2	297572.3	250	7.5	42.3	26.5	19.0	-15.8
2922912.2	297577.2	255	7.5	42.6	26.5	19.0	-16.1
2922911.2	297582.1	260	7.4	42.8	26.4	19.0	-16.4
2922910.2	297587.0	265	7.4	43.2	26.4	19.0	-16.8
2922909.2	297591.9	270	7.4	41.7	26.4	19.0	-15.3
2922908.2	297596.8	275	7.3	42.2	26.4	19.1	-15.8
2922907.2	297601.8	280	7.3	41.2	26.4	19.1	-14.8
2922906.2	297606.7	285	7.3	42.0	26.4	19.1	-15.6
2922905.2	297611.6	290	7.2	42.5	26.4	19.2	-16.1
2922904.5	297616.5	295	7.2	42.6	26.4	19.2	-16.2
2922903.5	297621.3	300	7.2	43.1	26.4	19.2	-16.7
2922902.5	297626.2	305	7.1	42.5	26.4	19.3	-16.1
2922901.5	297631.2	310	7.1	40.0	26.3	19.2	-13.7
2922900.5	297636.1	315	7.1	39.8	26.3	19.2	-13.5
2922899.5	297641.0	320	7.0	38.9	26.3	19.3	-12.6
2922898.5	297645.9	325	7.0	37.2	26.3	19.3	-10.9
2922897.5	297650.8	330	7.0	37.8	26.3	19.3	-11.5
2922896.5	297655.7	335	6.9	38.9	26.3	19.4	-12.6
2922895.5	297660.6	340	6.9	38.8	26.3	19.4	-12.5
2922894.5	297665.5	345	6.9	38.3	26.3	19.4	-12.0
2922893.5	297670.4	350	6.8	36.7	26.3	19.5	-10.4
2922892.5	297675.3	355	7.0	35.9	26.2	19.2	-9.7

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Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 2 (cont.)							
2922891.8	297680.2	360	7.1	36.8	26.2	19.1	-10.6
2922890.8	297685.1	365	7.3	38.7	26.2	18.9	-12.5
2922889.8	297690.0	370	7.4	39.5	26.2	18.8	-13.3
2922888.8	297694.9	375	7.6	41.3	26.2	18.6	-15.1
2922887.8	297699.8	380	7.8	40.7	26.2	18.4	-14.5
2922886.8	297704.7	385	7.9	41.3	26.2	18.3	-15.1
2922885.8	297709.6	390	8.1	41.2	26.2	18.1	-15.0
2922884.8	297714.5	395	8.2	42.6	26.2	18.0	-16.4
2922883.8	297719.4	400	8.4	42.9	26.1	17.7	-16.8
2922882.8	297724.3	405	8.5	42.5	26.1	17.6	-16.4
2922881.8	297729.2	410	8.7	41.9	26.1	17.4	-15.8
2922880.8	297734.1	415	8.8	43.3	26.1	17.3	-17.2
2922879.8	297739.0	420	9.0	42.8	26.1	17.1	-16.7
2922879.0	297743.9	425	9.1	41.7	26.1	17.0	-15.6
2922878.0	297748.8	430	9.2	40.2	26.1	16.9	-14.1
2922877.0	297753.8	435	9.3	42.0	26.1	16.8	-15.9
2922876.0	297758.6	440	9.5	40.0	26.1	16.6	-13.9
2922875.0	297763.5	445	9.6	41.4	26.1	16.5	-15.3
2922874.0	297768.4	450	9.8	40.0	26.0	16.2	-14.0
2922873.0	297773.3	455	9.8	39.3	26.0	16.2	-13.3
2922872.0	297778.2	460	9.7	38.5	26.0	16.3	-12.5
2922871.0	297783.2	465	9.7	38.1	26.0	16.3	-12.1
2922870.0	297788.1	470	9.7	36.6	26.0	16.3	-10.6

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Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 3							
2922754.8	297380.2	0	14.8	64.2	27.0	12.2	-37.2
2922758.8	297381.1	4	14.7	64.6	27.0	12.3	-37.6
2922762.5	297382.0	8	15.0	63.8	27.0	12.0	-36.8
2922766.5	297382.9	12	14.3	62.0	27.0	12.7	-35.0
2922770.2	297383.8	16	14.4	62.7	27.0	12.6	-35.7
2922774.2	297384.8	20	13.6	61.5	27.0	13.4	-34.5
2922778.0	297385.7	24	13.4	60.3	27.0	13.6	-33.3
2922782.0	297386.6	28	13.4	59.3	27.0	13.6	-32.3
2922786.0	297387.5	32	13.8	57.8	27.0	13.2	-30.8
2922789.8	297388.4	36	13.7	58.4	27.0	13.3	-31.4
2922793.8	297389.3	40	13.7	58.1	27.0	13.3	-31.1
2922797.5	297390.2	44	14.2	56.6	27.0	12.8	-29.6
2922801.5	297391.2	48	13.9	57.6	26.9	13.0	-30.7
2922805.2	297392.1	52	13.4	58.6	26.9	13.5	-31.7
2922809.2	297393.0	56	13.2	58.4	26.9	13.7	-31.5
2922813.2	297393.9	60	13.5	56.7	26.9	13.4	-29.8
2922817.0	297394.8	64	13.3	56.8	26.9	13.6	-29.9
2922821.0	297395.7	68	13.4	55.8	26.9	13.5	-28.9
2922824.8	297396.7	72	13.0	56.9	26.9	13.9	-30.0
2922828.8	297397.6	76	13.1	56.6	26.9	13.8	-29.7
2922832.8	297398.5	80	13.0	56.9	26.9	13.9	-30.0
2922836.5	297399.4	84	12.9	56.9	26.9	14.0	-30.0
2922840.5	297400.3	88	12.9	56.6	26.9	14.0	-29.7
2922844.2	297401.2	92	12.9	56.3	26.9	14.0	-29.4

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Seismic Line 3 (cont.)							
2922848.2	297402.1	96	12.6	57.1	26.9	14.3	-30.2
2922852.0	297403.0	100	12.6	56.8	26.9	14.3	-29.9
2922856.0	297404.0	104	12.7	56.2	26.9	14.2	-29.3
2922860.0	297404.9	108	12.4	57.1	26.9	14.5	-30.2
2922863.8	297405.8	112	12.1	57.6	26.9	14.8	-30.7
2922867.8	297406.7	116	11.9	58.1	26.9	15.0	-31.2
2922871.5	297407.6	120	13.0	57.0	26.9	13.9	-30.1
2922875.5	297408.5	124	13.2	55.9	26.9	13.7	-29.0
2922879.2	297409.4	128	13.3	56.1	26.9	13.6	-29.2
2922883.2	297410.3	132	14.2	57.5	26.9	12.7	-30.6
2922887.2	297411.3	136	15.0	57.5	26.9	11.9	-30.6
2922891.0	297412.2	140	15.9	57.3	26.9	11.0	-30.4
2922895.0	297413.1	144	15.9	57.4	26.8	10.9	-30.6
2922898.8	297414.0	148	15.9	57.2	26.8	10.9	-30.4
2922902.8	297414.9	152	15.8	58.9	26.8	11.0	-32.1
2922906.5	297415.8	156	15.7	58.1	26.8	11.1	-31.3
2922910.5	297416.8	160	15.6	58.5	26.8	11.2	-31.7
2922914.5	297417.7	164	15.5	58.9	26.8	11.3	-32.1
2922918.2	297418.6	168	15.4	59.9	26.8	11.4	-33.1
2922922.2	297419.5	172	15.3	61.2	26.8	11.5	-34.4
2922926.0	297420.4	176	15.2	60.9	26.8	11.6	-34.1
2922930.0	297421.3	180	15.1	61.6	26.8	11.7	-34.8
2922934.0	297422.2	184	15.0	60.7	26.8	11.8	-33.9
2922937.8	297423.2	188	14.9	60.5	26.8	11.9	-33.7

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Maine West State Plane NAD83 (CORS96) in US survey feet. Elevations along the seismic lines were determined from plans provided by S.W. Cole.

Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 4							
2922732.5	297498.1	0	8.7	45.1	27.0	18.3	-18.1
2922736.5	297499.0	4	8.7	44.4	27.0	18.3	-17.4
2922740.2	297499.8	8	8.7	45.7	27.0	18.3	-18.7
2922744.2	297500.7	12	8.7	44.7	26.9	18.2	-17.8
2922748.0	297501.5	16	8.7	46.0	26.9	18.2	-19.1
2922752.0	297502.4	20	8.7	47.5	26.9	18.2	-20.6
2922756.0	297503.3	24	8.7	46.7	26.9	18.2	-19.8
2922759.8	297504.1	28	8.7	45.7	26.9	18.2	-18.8
2922763.8	297505.0	32	8.7	45.3	26.8	18.1	-18.5
2922767.8	297505.8	36	8.7	46.4	26.8	18.1	-19.6
2922771.5	297506.7	40	8.8	46.8	26.8	18.0	-20.0
2922775.5	297507.6	44	8.8	48.8	26.8	18.0	-22.0
2922779.2	297508.4	48	8.8	49.1	26.7	17.9	-22.4
2922783.2	297509.3	52	8.8	47.8	26.7	17.9	-21.1
2922787.2	297510.2	56	8.8	48.0	26.7	17.9	-21.3
2922791.0	297511.0	60	8.8	48.1	26.7	17.9	-21.4
2922795.0	297511.9	64	8.8	47.5	26.7	17.9	-20.8
2922799.0	297512.8	68	8.9	48.0	26.6	17.7	-21.4
2922802.8	297513.6	72	8.9	47.3	26.6	17.7	-20.7
2922806.8	297514.5	76	8.9	50.7	26.6	17.7	24.1
2922810.5	297515.3	80	8.9	49.6	26.6	17.7	-23.0
2922814.5	297516.2	84	8.9	51.5	26.6	17.7	-24.9
2922818.5	297517.1	88	8.9	49.3	26.5	17.6	-22.8
2922822.2	297517.9	92	9.0	49.1	26.5	17.5	-22.6

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Maine West State Plane NAD83 (CORS96) in US survey feet. Elevations along the seismic lines were determined from plans provided by S.W. Cole.

Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 4 (cont.)							
2922826.2	297518.8	96	9.0	51.2	26.5	17.5	-24.7
2922830.2	297519.7	100	9.0	51.7	26.5	17.5	-25.2
2922834.0	297520.5	104	9.0	50.7	26.4	17.4	-24.3
2922838.0	297521.4	108	9.0	50.4	26.4	17.4	-24.0
2922841.8	297522.2	112	9.0	49.3	26.4	17.4	-22.9
2922845.8	297523.1	116	9.0	49.9	26.4	17.4	-23.5
2922849.8	297524.0	120	9.1	50.4	26.4	17.3	-24.0
2922853.5	297524.8	124	9.1	49.4	26.3	17.2	-23.1
2922857.5	297525.7	128	9.1	49.1	26.3	17.2	-22.8
2922861.5	297526.5	132	9.1	48.5	26.3	17.2	-22.2
2922865.2	297527.4	136	9.1	50.1	26.3	17.2	-23.8
2922869.2	297528.3	140	9.1	48.8	26.3	17.2	-22.5
2922873.0	297529.1	144	9.1	50.6	26.2	17.1	-24.4
2922877.0	297530.0	148	9.2	51.7	26.2	17.0	-25.5
2922881.0	297530.8	152	9.2	48.3	26.2	17.0	-22.1
2922884.8	297531.7	156	9.2	49.3	26.2	17.0	-23.1
2922888.8	297532.6	160	9.2	49.6	26.1	16.9	-23.5
2922892.8	297533.4	164	9.2	48.6	26.1	16.9	-22.5
2922896.5	297534.3	168	9.2	48.1	26.1	16.9	-22.0
2922900.5	297535.2	172	9.2	47.7	26.1	16.9	-21.6
2922904.2	297536.0	176	9.2	48.5	26.1	16.9	-22.4
2922908.2	297536.9	180	9.2	47.3	26.0	16.8	-21.3
2922912.2	297537.8	184	9.2	47.2	26.0	16.8	-21.2
2922916.0	297538.6	188	9.2	44.6	26.0	16.8	-18.6

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Maine West State Plane NAD83 (CORS96) in US survey feet. Elevations along the seismic lines were determined from plans provided by S.W. Cole.

Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 5							
2922712.5	297611.4	0	7.7	44.1	27.0	19.3	-17.1
2922716.5	297612.2	4	7.7	45.5	27.0	19.3	-18.5
2922720.2	297613.0	8	7.7	45.5	27.0	19.3	-18.5
2922724.2	297613.8	12	7.7	45.4	26.9	19.2	-18.5
2922728.2	297614.6	16	7.8	45.5	26.9	19.1	-18.6
2922732.0	297615.3	20	7.8	43.8	26.9	19.1	-16.9
2922736.0	297616.1	24	8.3	45.4	26.9	18.6	-18.5
2922740.0	297616.9	28	8.8	45.2	26.9	18.1	-18.3
2922743.8	297617.7	32	8.0	46.0	26.8	18.8	-19.2
2922747.8	297618.5	36	8.3	46.4	26.8	18.5	-19.6
2922751.8	297619.3	40	8.5	47.2	26.8	18.3	-20.4
2922755.8	297620.1	44	8.0	47.9	26.8	18.8	-21.1
2922759.5	297620.8	48	7.8	48.6	26.7	18.9	-21.9
2922763.5	297621.7	52	8.7	49.5	26.7	18.0	-22.8
2922767.5	297622.4	56	8.7	48.6	26.7	18.0	-21.9
2922771.2	297623.2	60	8.7	49.0	26.7	18.0	-22.3
2922775.2	297624.0	64	9.1	48.1	26.7	17.6	-21.4
2922779.2	297624.8	68	9.3	50.3	26.6	17.3	-23.7
2922783.0	297625.6	72	9.4	50.4	26.6	17.2	-23.8
2922787.0	297626.4	76	8.9	51.3	26.6	17.7	-24.7
2922791.0	297627.2	80	8.2	51.5	26.6	18.4	-24.9
2922794.8	297627.9	84	8.3	48.6	26.6	18.3	-22.0
2922798.8	297628.7	88	8.4	47.6	26.5	18.1	-21.1
2922802.8	297629.5	92	8.5	44.9	26.5	18.0	-18.4

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Maine West State Plane NAD83 (CORS96) in US survey feet. Elevations along the seismic lines were determined from plans provided by S.W. Cole.

Easting (ft)	Northing (ft)	Station (ft)	Layer 1 Depth (ft)	Bedrock Depth (ft)	Surface Elevation (ft)	Layer 1 Elevation (ft)	Bedrock Elevation (ft)
Seismic Line 5 (cont.)							
2922806.5	297630.3	96	8.7	42.6	26.5	17.8	-16.1
2922810.5	297631.1	100	8.8	42.6	26.5	17.7	-16.1
2922814.5	297631.9	104	9.0	42.6	26.4	17.4	-16.2
2922818.5	297632.7	108	9.1	42.1	26.4	17.3	-15.7
2922822.2	297633.5	112	9.3	41.7	26.4	17.1	-15.3
2922826.2	297634.2	116	9.5	41.8	26.4	16.9	-15.4
2922830.2	297635.0	120	9.6	40.2	26.4	16.8	-13.8
2922834.0	297635.8	124	9.8	40.9	26.3	16.5	-14.6
2922838.0	297636.6	128	10.0	37.8	26.3	16.3	-11.5
2922842.0	297637.4	132	10.2	36.9	26.3	16.1	-10.6
2922845.8	297638.2	136	10.3	36.2	26.3	16.0	-9.9
2922849.8	297639.0	140	10.5	36.1	26.3	15.8	-9.8
2922853.8	297639.8	144	10.2	37.0	26.2	16.0	-10.8
2922857.5	297640.5	148	10.1	37.5	26.2	16.1	-11.3
2922861.5	297641.3	152	10.1	37.8	26.2	16.1	-11.6
2922865.5	297642.1	156	9.4	39.4	26.2	16.8	-13.2
2922869.2	297642.9	160	9.4	39.9	26.1	16.7	-13.8
2922873.2	297643.7	164	9.6	39.7	26.1	16.5	-13.6
2922877.2	297644.5	168	9.9	39.3	26.1	16.2	-13.2
2922881.2	297645.3	172	10.2	39.0	26.1	15.9	-12.9
2922885.0	297646.1	176	10.0	39.4	26.1	16.1	-13.3
2922889.0	297646.8	180	10.3	39.1	26.0	15.7	-13.1
2922893.0	297647.6	184	10.3	39.2	26.0	15.7	-13.2
2922896.8	297648.4	188	10.3	39.4	26.0	15.7	-13.4

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Maine West State Plane NAD83 (CORS96) in US survey feet. Elevations along the seismic lines were determined from plans provided by S.W. Cole.

Geophysical Survey
Proposed Parking Structure
222 St. John Street
Portland, Maine
File 17J53 Table 3 - Page 1

TABLE 3
COMPARISON OF BEDROCK ELEVATIONS

Comparison of Seismically Determined Bedrock Elevations with Bedrock Elevations Reported in Boring Logs							
Seismic Line and Location	/	Boring	Distance from Seismic Line to Boring	Bedrock Depth (feet)		Difference	
				Seismic Line	Boring	Feet	Percent
SL1 0+30	/	B-201	32' E	64	62	2	3
SL1 4+70	/	B-202	40' NE	43	44	1	2
SL2 0+12	/	B-203B	15' W	63	61	2	3
SL2 4+70	/	B-204	27' N	37	34	3	9
SL3 0+99	/	B-205	1' S	57	54	3	6
SL5 1+02	/	B-206	41' N	43	41	2	5
					Average	2	5
					Standard Deviation	1	2

Comparison of Seismically Determined Bedrock Elevations at Seismic Line Intersections								
Seismic Line A and Location	/	Seismic Line B and Location		Distance from Seismic Line A to Seismic Line B	Bedrock Depth (feet)		Difference	
					Seismic Line A	Seismic Line B	Feet	Percent
SL1 1+15	/	SL3	0+00	-	64	64	0	0
SL1 2+35	/	SL4	0+00	-	45	45	0	0
SL1 3+50	/	SL5	0+00	-	45	44	1	2
SL2 0+99	/	SL3	1+88	-	62	61	1	2
SL2 2+19	/	SL4	1+88	-	45	45	0	0
SL2 3+34	/	SL5	1+88	-	39	39	0	0
						Average	0	1
						Standard Deviation	1	1

Boring information provided by S.W. Cole. The absolute differences in feet reflect the absolute difference between bedrock depth determined for a location on a seismic line and bedrock depth reported for a nearby boring. The percentage differences were calculated by dividing the absolute differences in feet by the bedrock depth reported in the boring log.

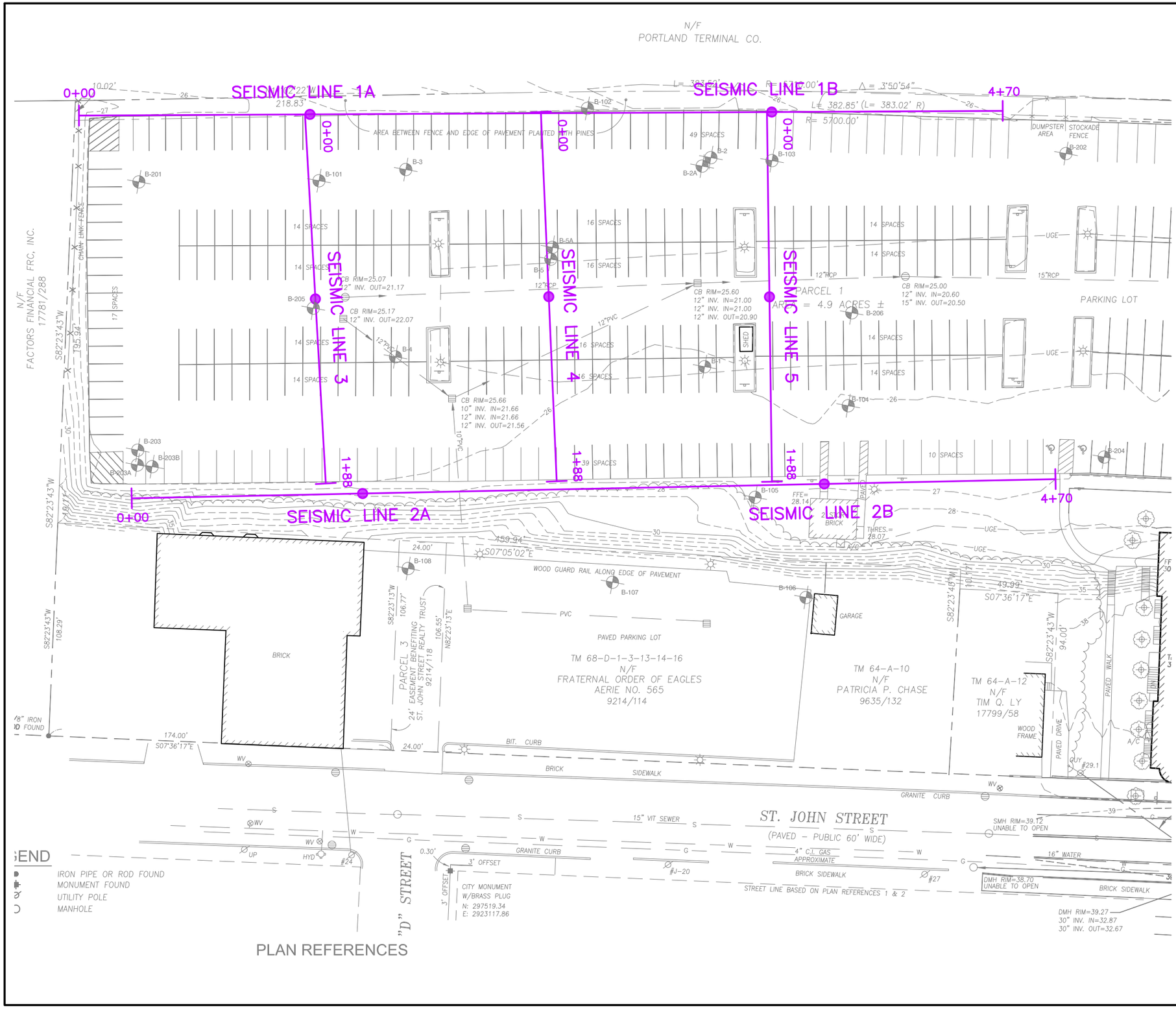
NOTE:

Modified from Google Earth Pro aerial photograph.

Figure 1
General Site Location
Proposed Parking Structure
Portland, Maine

File 17J53 | June, 2017

HAGER–RICHTER
Salem, NH | Fords, NJ



H-R

N

LEGEND

SEISMIC LINE WITH MIDPOINT

SCALE (feet)

0 50 100

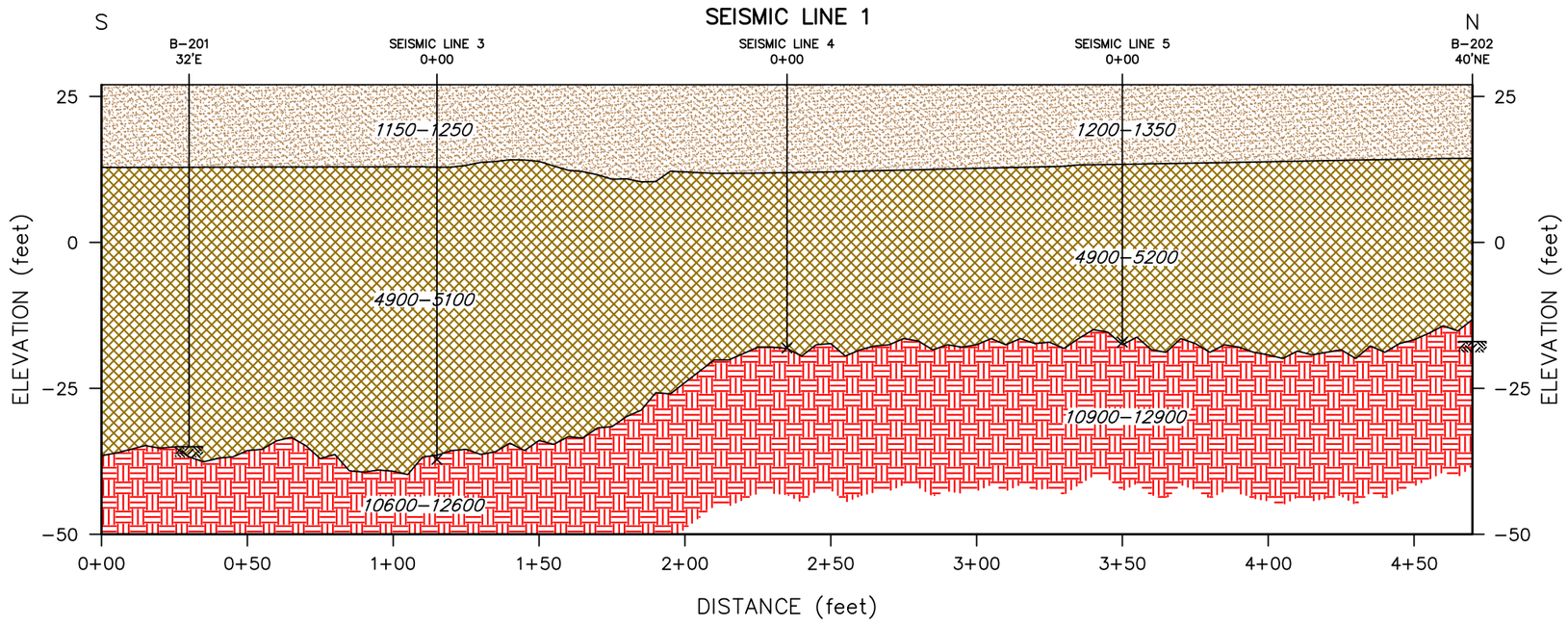
NOTE:

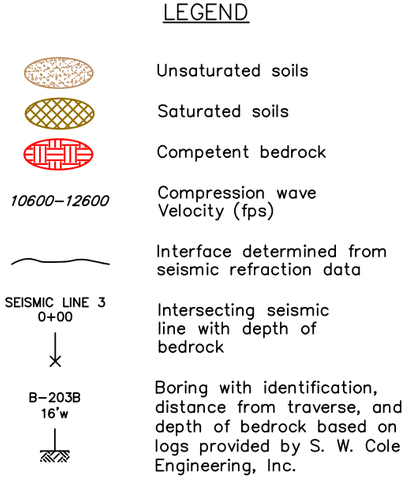
Modified from site plan provided by S.W. Cole Engineering, Inc., identified as 2016-343 USE THIS DWG.dwg.

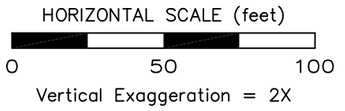
Figure 2
Site Plan
Proposed Parking Garage
Portland, Maine

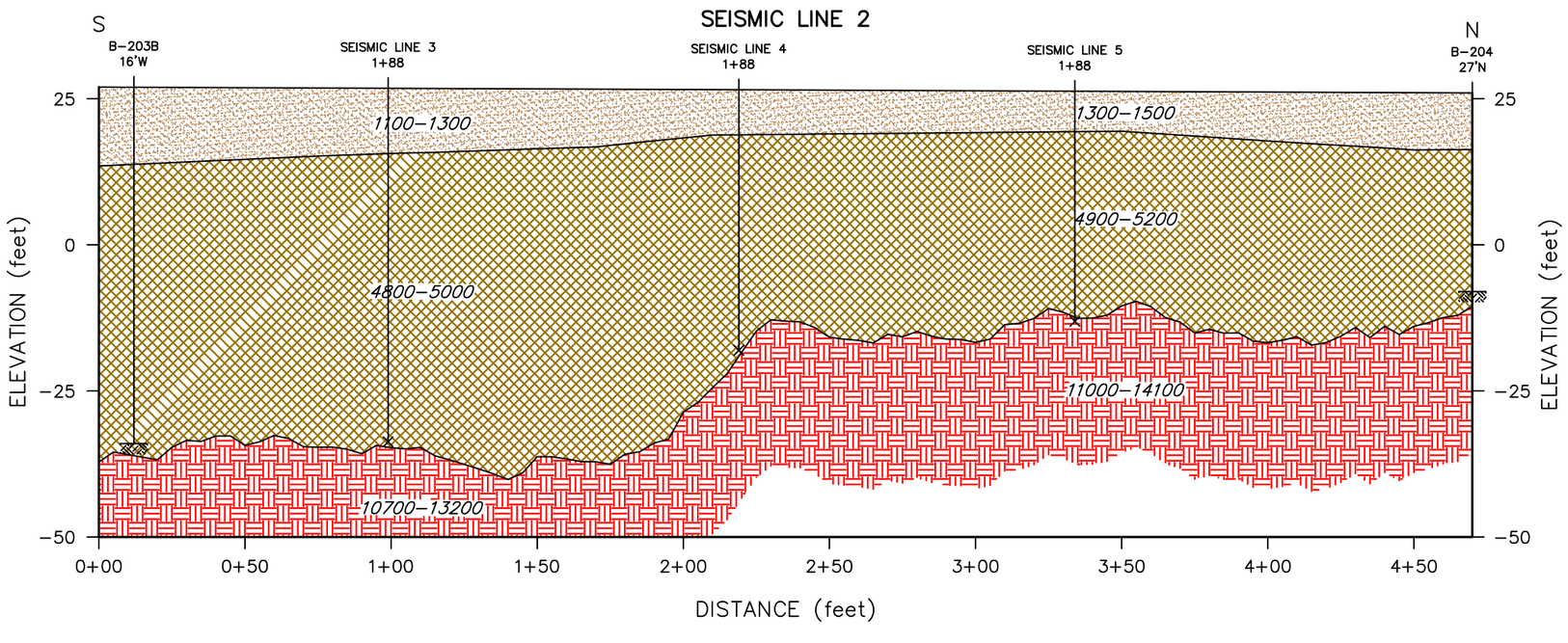
File 17J53 | June, 2017

HAGER-RICHTER
Salem, NH | Fords, NJ









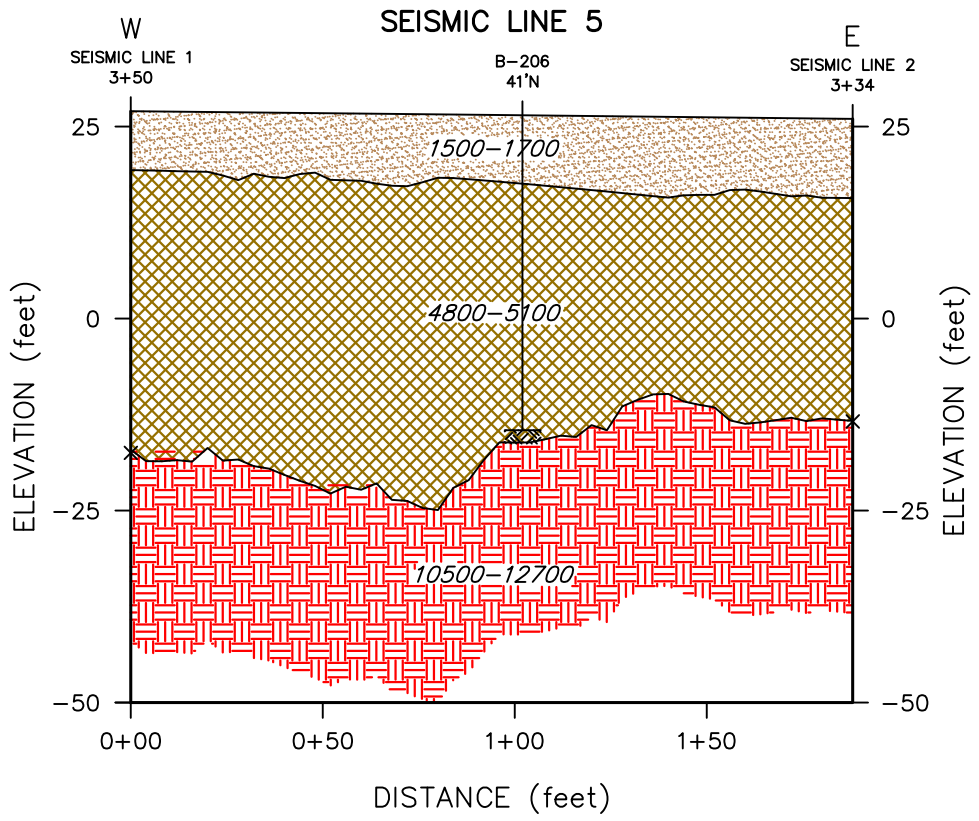
NOTES:

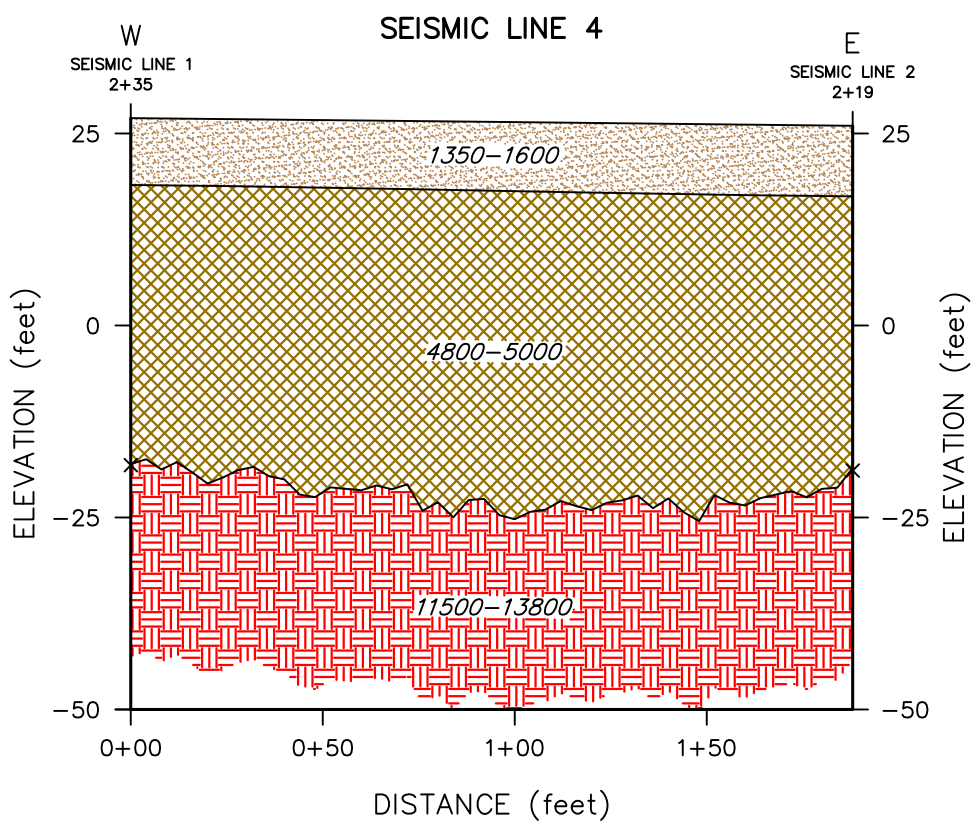
1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations determined from plans provided by S. W. Cole Engineering, Inc.
4. Data were analyzed using the Generalized Reciprocal Method.

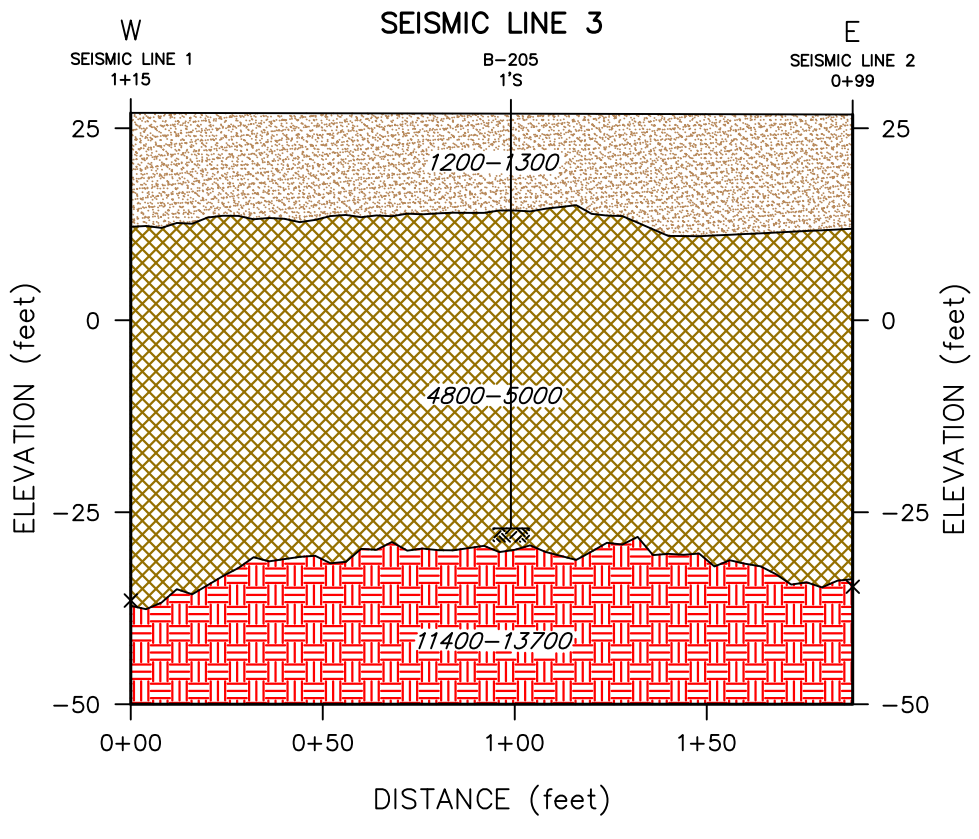
Figure 3
Seismic Lines 1 & 2
Proposed Parking Garage
Portland, Maine

File 17J53 | June, 2017

HAGER–RICHTER
Salem, NH | Fords, NJ







LEGEND

- Unsaturated soils
- Saturated soils
- Competent bedrock
- 10600–12600 — Compression wave Velocity (fps)
- Interface determined from seismic refraction data
- SEISMIC LINE 3 0+00 — Intersecting seismic line with depth of bedrock
- B–203B 16'w — Boring with identification, distance from traverse, and depth of bedrock based on logs provided by S. W. Cole Engineering, Inc.

HORIZONTAL SCALE (feet)

0 50 100

Vertical Exaggeration = 2X

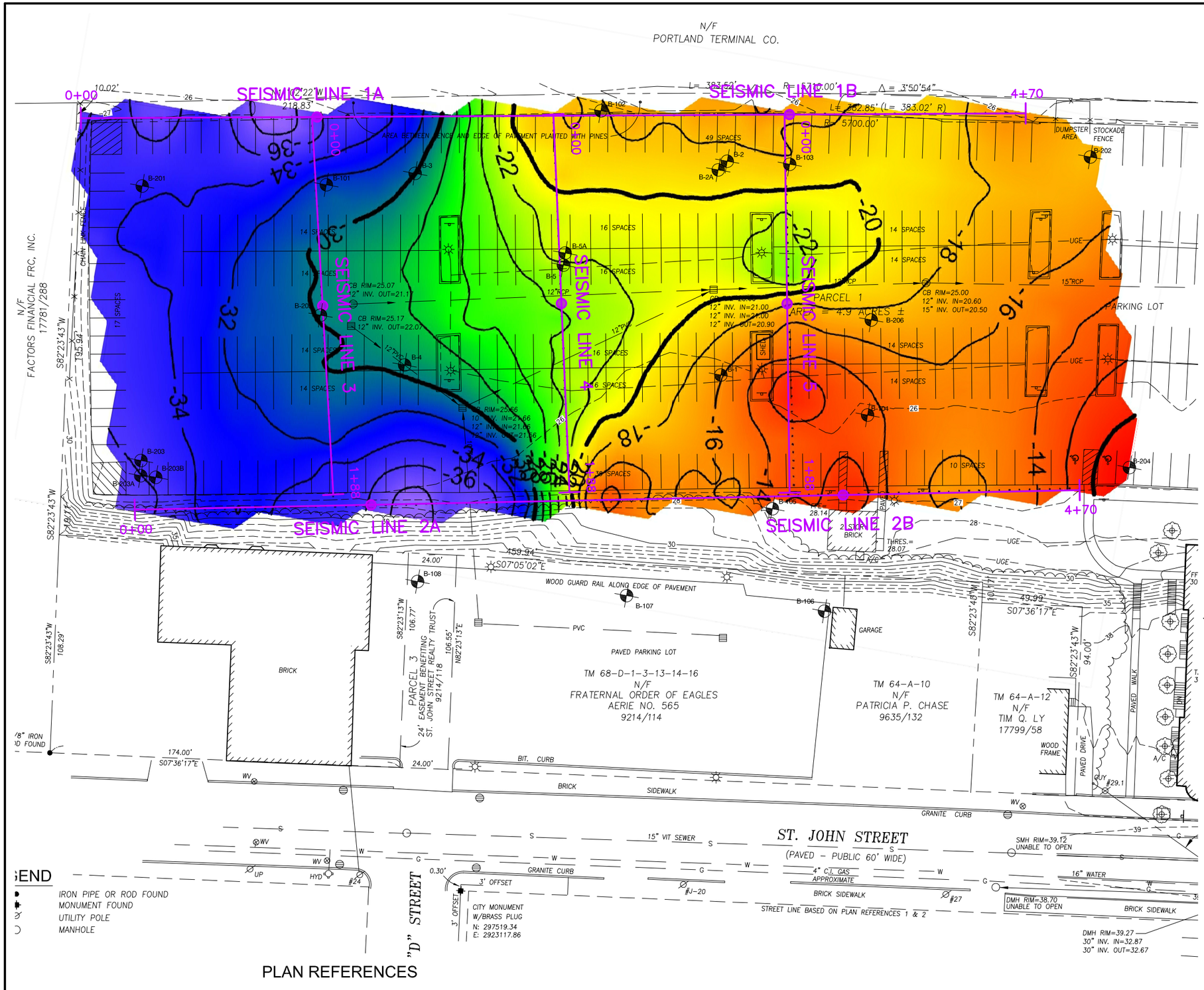
NOTES:

1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations determined from plans provided by S. W. Cole Engineering, Inc.
4. Data were analyzed using the Generalized Reciprocal Method.

Figure 4
Seismic Lines 3, 4, & 5
Proposed Parking Garage
Portland, Maine

File 17J53 | June, 2017

HAGER–RICHTER
Salem, NH | Fords, NJ



NOTES:

1. Modified from site plan provided by S.W. Cole Engineering, Inc., identified as 2016-343 USE THIS DWG.dwg.
2. Contour Interval = 2 Foot.
3. The bedrock elevations shown on this plot are a non-unique model. The contours represent interpolations based on the available data, including seismic refraction data and boring information. The elevations of the bedrock surface at any particular location may differ from that shown. Bedrock elevations based on additional data may differ significantly.

Figure 5
Bedrock Elevation
Proposed Parking Garage
Portland, Maine

File 17J53 | June, 2017

HAGER-RICHTER
Salem, NH | Fords, NJ

woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
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T 800.426.4262
T 207.774.2112
F 207.774.6635

Via Electronic Mail

June 27, 2018

Department of Planning & Development
City of Portland
389 Congress Street
Portland, ME 04101

Re: MMC Staff Parking Garage | 222 St. John Street | Neighborhood Meeting Certification

To Whom It May Concern:

I, David Senus, PE of Woodard & Curran hereby certify that a neighborhood meeting was held on June 25, 2018 at Maine Medical Center's Dana Auditorium located at 66 Bramhall Street, Portland, Maine at 5:30pm regarding the Maine Medical Center Level III Site Plan Submittal for the Staff Parking Garage located at 222 St. John Street.

I also certify that on June 13, 2018, invitations were mailed to the following:

1. All addresses on the abutters list provided by the Planning Division which includes property owners within 500 feet of the proposed development.

2. Residents on the "interested parties" list.

Signed,

David Senus, PE
Woodard & Curran
Project Manager

06/27/2018
Date

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting Minutes
4. Copy of the Neighborhood Meeting Presentation

Maine Medical Center
MaineHealth

Maine Medical Center
22 Bramhall St.
Portland, ME 04102

Address line 1
Address line 2

Dear Property Owner,

This fall, Maine Medical Center (MMC) expects to begin the second phase of its $512 million expansion project, which involves construction of an employee parking garage behind 222 St. John St.

This new garage will accommodate our current and projected employee parking needs and allow the removal of our Gilman Street parking garage, which fronts Congress Street. Once we remove that older garage, MMC will expand into that space with a patient tower featuring modern single-bed patient rooms and procedure rooms centered on enabling modern cardiac care. This project will enhance our quality of care, improve our capacity, modernize our facilities and help us pursue our vision of working together to ensure our communities are the healthiest in America.

Given the proximity of your address to our planned St. John Street Garage, project construction may create direct or indirect impact on your property. It is important that you understand the nature of this project so we can work with you to minimize any inconveniences.

MMC will submit its site plan application to the city of Portland Planning Department on June 22. As part of our planning process, we have scheduled an all-neighborhood briefing.

Briefing details are below, no RSVP required:

> **Time and Date:** 5 p.m., Monday, June 25
> **Location:** Dana Health Education Center Auditorium, adjacent to MMC, entrance across from 7 Bramhall St.
> **Parking:** Street parking outside the Dana Center is available; MMC visitor parking (free) located a short walk away at Bramhall & Chadwick streets in the South Visitor Parking Lot

This information session will help you understand the scope of this phase and allow you to ask any questions you may have.

In the meantime, we urge you to visit www.MMC.org/Modernization for information and to sign up for email and/or text alerts when new project updates posted. If you have any questions, please contact us at MMCProjectContact@mmc.org.

Respectfully,

Jeffrey D. Sanders
Executive Vice President & Chief Operating Officer
Maine Medical Center

22 Bramhall Street • Portland, ME 04102 • Phone: (207) 662-0111
www.mmc.org

Neighborhood Meeting
June 25, 2017, 5:30PM – 6:30PM
Maine Medical Center
Dana Center Auditorium

Minutes

Attendees:

Alan Prosser	Dennis Morelli	Randy Dunton
Beth Prosser	Dominic Gagnon	Mark Wilcox
Tessa Metcalf	Dave Senus	Barry Sheff
Dan Chase	Gretchen Giumarro	Tuck O'Brien
Deborah Heald	Dave Thomas	Matt Wickenheiser
Tyler Brinkmann	Travis Kirby	Matt Tonello
Jeff Sanders	Todd Neal	
Walter Pochebit	Larry Bartlett	

I. Welcome

Jeff Sanders extended a welcome to the attendees and discussed the objectives and previewed the content of the presentation.

II. Project Background and Need & Review Process

- MMC struggles to meet the daily patient care need due to capacity limitations.
- Staff at MMC park in one of 8 different locations near MMC's Bramhall campus. This is a neighborhood and staff dissatisfier.
- Based on observations and reports from patients and staff, the current patient parking deficit is approximately 25 spaces; the staff parking deficit is approximately 220 spaces.
- City of Portland review of MMC's facility project is broken down into three site plan applications: 1. East Tower & Visitor garage (approved), 2. St John Garage (application submitted), 3. Congress Building (application pending).
- Attendees had questions about the placement of the proposed staff garage and whether the South Lot was considered.
- Attendees had questions about whether the proposed staff garage extends behind the historic building structure at 222 St. John Street; MMC team clarified that it does not and is separated by approximately 65'.

III. Transportation Demand Management & Traffic

- MMC's TDM program ("Get on Board!") has been in place since 2008. There are several enhanced and new programs being put into place now. These are outlined in the site plan application for the St John garage.
- The shuttle entrance to the garage will be on the ground floor and accessed via the driveway at Margarita's. The primary commuter entrance will be off of St John St near the existing Eagles building.

- MMC is proposing placement of a permanent traffic signal at the primary garage entrance and St John St.
    - Attendees asked MMC to consider a blinking yellow light during off-peak hours.
    - Attendees had concerns about the ability of tenants at 210 St John to back out of the driveway onto St John St safely.
    - Attendees shared concerns about the permanent loss of on-street parking in the area of the lane reconfiguration. MMC estimates that the number of on-street parking spaces that will be removed is between 10-13. MMC will follow up with City to understand protocol and property owners to discuss the loss of on-street parking further.

IV. <u>Right of Way Improvements</u>

- Potential walking paths from the proposed garage and the Bramhall campus were identified in MMC's Institutional Development Plan. MMC has evaluated the existing conditions of those pathways and identified areas in need of repair. MMC reviewed the repairs that are planned.
    - Attendees asked about the potential walking pathways and the unofficial pathway across the vacant lot adjacent to the Florence House. The unofficial pathways will likely remain until the owners of that property develops the site.
    - Attendees asked if there are any considerations of making "C" Street a 2-way road; Tuck O'Brien (City) noted that there are no current plans that he was aware of to change "C" Street.

V. <u>Landscape Architecture</u>

- An overview of the location and type of planting proposed was reviewed.
    - Attendees shared concerns about the invasive nature of the proposed plantings, specifically Honey Locust. MMC will review the plantings and avoid those which are not approved by the City of Portland.
    - Attendees asked about the proposed grade change behind 210 St. John Street; MMC team explained the grade change that will occur in this area along with improvements to drainage, addition of a privacy fence, and addition of plantings at the rear of these properties if amenable to property owner.

VI. <u>Construction</u>

- Proposed construction plans were shared and are as follows:
    - Work Hours – 7 a.m. – 6 p.m., Monday – Friday.
    - Rare weekend / Holiday work, with advance notice, start after 8 a.m.
    - Pile Driving will create noise, vibration – will fast-track by using 2 crews, October. 2018 - December. 2018 (est.)
    - Vibration monitoring to involve adjacent property surveys.
    - Dust Control – Tarped dump trucks; on-going sidewalk and street cleaning; use of wetting agents; covering stock piles.
    - No smoking allowed on site.
    - Contractor parking not allowed on adjacent public streets.

- The proposed construction traffic route utilizes the Veteran's bridge and St John St. The main site access will be through the north-end of the existing Eagles parking lot. Secondary site access will be through the Margarita's entrance. Flaggers will be in place to facilitate safe traffic flows during key times of construction.
    - Attendees asked about an alternative site access through the Ferguson property to the south of the construction site. MMC has approached the property owner who shared concerns about the impact on the traffic associated with the plumbing supply business there. MMC is unable to use this access point for construction traffic.
- Attendees were interested in the core samples taken during pre-construction. Representatives from Consigli construction explained that geotechnical borings have occurred on the site and bedrock is approximately 50' below grade.
- Attendees asked if the construction plan has been approved by the City; MMC clarified that the construction plan has just been submitted to the City and is now under review.

VII. Communications

- For more information and on-going updates, anyone can visit MMC's website to sign up for email and text alerts: www.mmc.org/modernization.

For construction related issues, there are contact numbers on the MMC Modernization website, as well as on the City's website. In addition, the project Manager, Tim Braun, can be reached for serious and immediate issues at 207-671-8919.

Link to project:
https://mainehealth.org/maine-medical-center/newsroom/modernization

Maine Medical Center
MaineHealth

MAINE MEDICAL CENTER NEIGHBORHOOD MEETING
222 ST. JOHN STREET | STAFF PARKING GARAGE
JUNE 25, 2018 | 5:30PM
SIGN-IN SHEET

	Name	Address	Email
1.	Alan Prosser	195 St John St. c7761816	
2.	Beth	Portland	
3.	TESSA METCALFE	190 VALLEY	TMETCALFE@AVESTAHOUSING.ORG
4.	Dan Chase	210 St. John St.	dpchase26@gmail.com
5.	Deborah Heald	213 St. John St.,	deborah.heald@gmail.com
6.	TYLER BRINKMANN	210 Valley st.	charliebrinkmann@yahoo
7.			
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18.			
19.			
20.			

Alan & Alan Prosser
7761816

Maine Medical Center
MaineHealth

Site Plan Two:
St John Garage
Neighborhood Meeting

June 25, 2018

BEST REGIONAL HOSPITALS U.S.News & World Report PORTLAND-SOUTH PORTLAND-BIDDEFORD RECOGNIZED IN 9 TYPES OF CARE 2017-18

MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER

THE JOINT COMMISSION NATIONAL QUALITY APPROVAL

Neighborhood Meeting Agenda

- **Meeting Objective**
  - Introduce neighbors to the project and Site Plan Review Process
  - Obtain feedback

- **Topics for Discussion**
  - Project Background and Need & Review Process
  - Transportation Demand Management & Traffic Discussion
  - Right of Way Improvements
  - Landscape Design
  - Construction Management & Schedule
  - Ongoing Communications
  - Questions

A Day at the Medical Center

Thursday, September 21st, 2017

Gassed Beds	
Total Beds:	637
Patient condition closures:	44
Construction closures:	4
Staffing closures:	13
Open beds:	576
Held for assigned admits:	7
Census at 0700:	553
Beds remaining:	16

Available Beds	
Medical/Surgical:	0
Cardiac:	4
Intermediate Care:	0
Intensive Care:	4
Psychiatric:	1
Childrens:	2
Obstetrics:	5
Beds remaining:	16

Patients Waiting for a Bed	
In the ED:	17
In the ED waiting for P6 (excludes outside psych placement):	0
In the PACU:	2
Transfer from other facilities:	4
Total:	**23**

Expected Admissions	
ED admits:	45 - 55
Procedural admits:	45 - 50
Cath Lab admits:	1 - 4
Outisde admits:	10 - 15
Total:	**101 - 124**

Jeff Sanders,
Executive Vice President and COO,
MMC

MMC Parking Supply

		Patient / Visitor	Employee	Total at Facility	Ownership
ON-CAMPUS	Employee Garage	0	1,274	1,274	Owned
850 patient / visitor 1,538 employee spaces	Patient / Visitor Garage	480	0	480	Owned
	South Lot	370	0	370	Owned
	887 Congress (Forest St Garage)*	0	178	178	Owned
	7 Bramhall St	0	26	26	*Leased*
	905 Congress St (Sportsman Lot)	0	60	60	*Leased*
OFF-CAMPUS	222 St John St (First Atlantic Lot)	0	283	283	*Leased*
489 employee spaces	181 High St (Gateway Garage)	0	100	100	*Leased*
	993 Congress St (Classic Lot)	0	97	97	Owned
	321 Brackett St	0	9	9	*Leased*
	TOTAL PARKING SPACES	850 Patient / Visitor	2,027 Employee	2,877 Total	

* The Forest St Garage has an additional 222 spaces that are dedicated to medical office staff and patients.

MMC Patient/Visitor Parking Summary

- Existing Peak Parking Demand = 875 parkers
- Existing MMC Parking Supply = 850 spaces
- Current Patient/Visitor Shortfall = (-25) spaces

- Future Patient/Visitor Parking Demand = 175 spaces

- Total New Patient/Visitor Parking Spaces Needed to alleviate existing shortfall and to accommodate anticipated growth = **200-250 spaces**

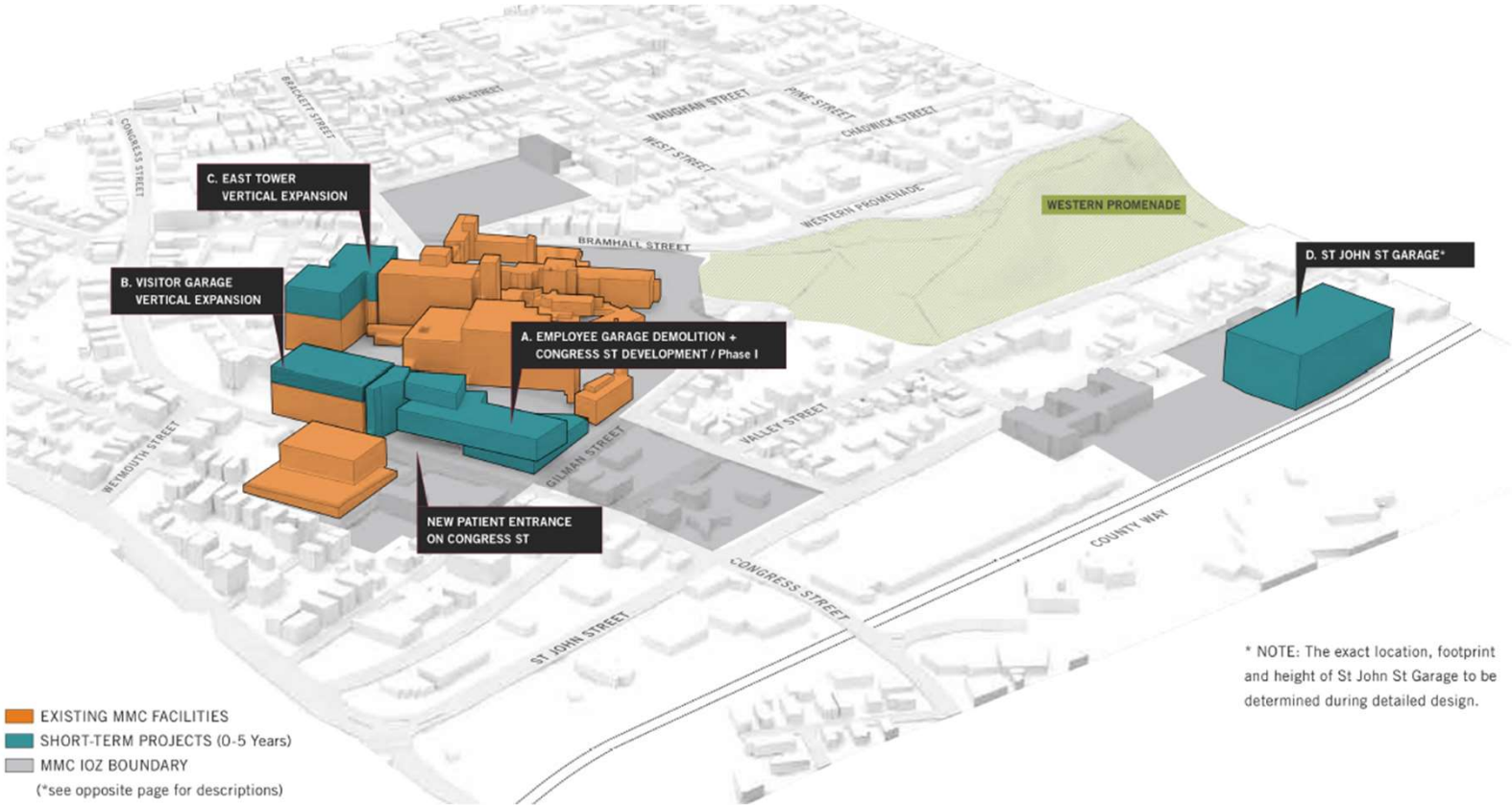
MMC Physician/Staff Parking Summary

- Existing Peak Parking Demand = 2,247 parkers
- Existing MMC Parking Supply = 2,027 spaces
- Current Physician/Staff Shortfall = (-220) spaces

- Future Physician/Staff Parking Demand = 270 spaces

- Total New Physician/Staff Parking Spaces Needed to alleviate existing shortfall and to accommodate anticipated growth = **500-600 spaces**

Master Facility Plan



Act with kindness and compassion. | Be an active listener. | Be a role model. | Set high standards. | Take responsibility. | Embrace change.

Today

- Construction on Phase One has started and will continue through the fall of 2019.

East Tower

Patient & Visitor Garage

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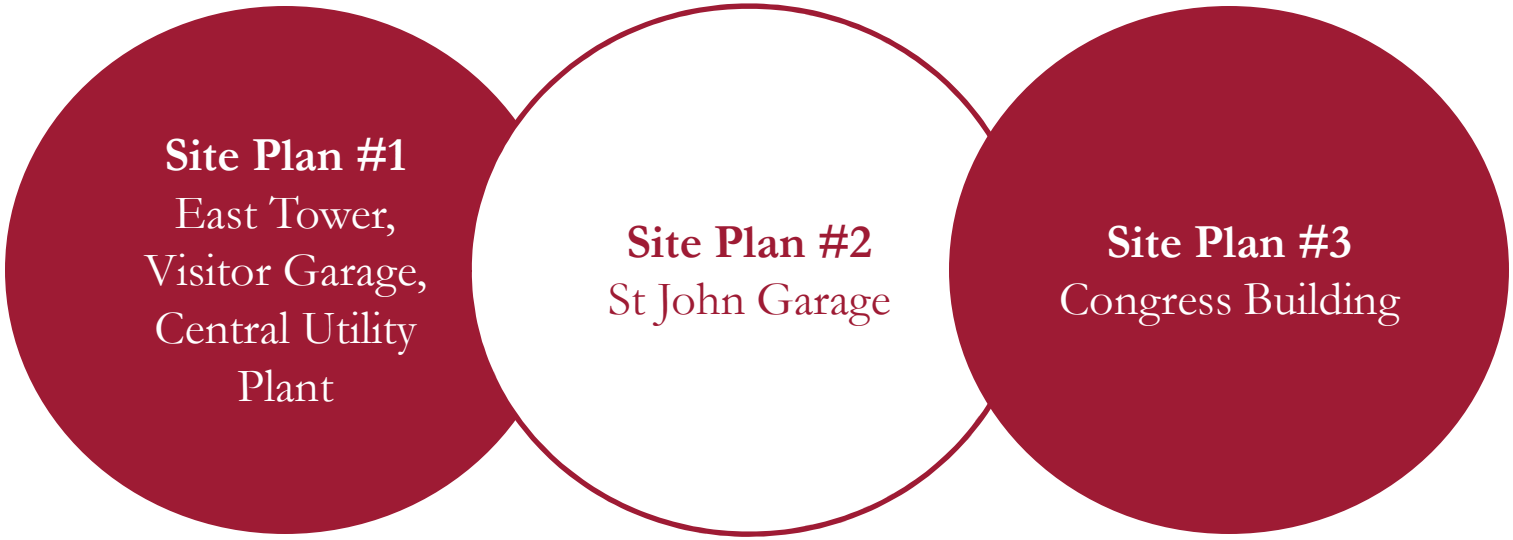
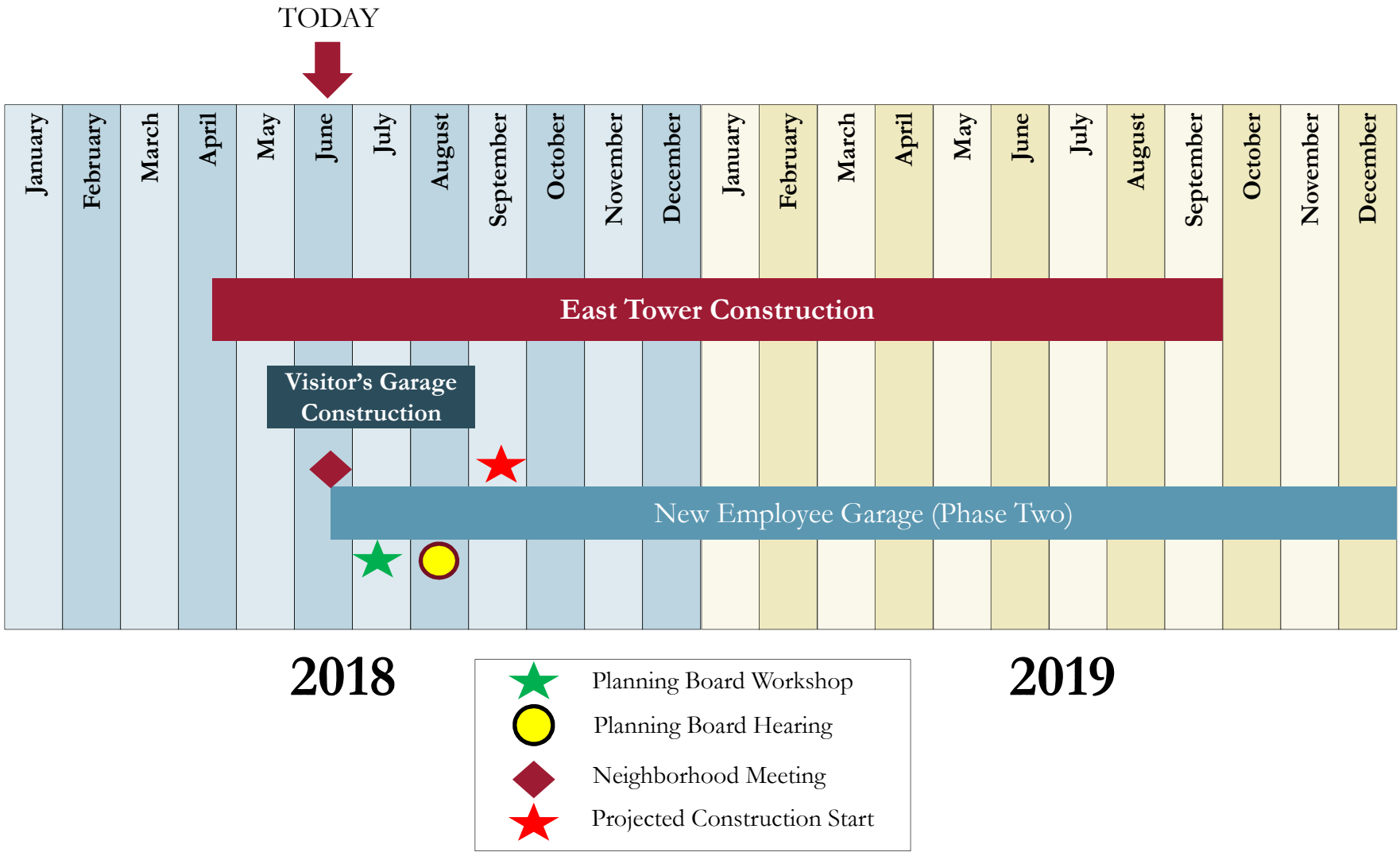
MMC MFP Site Plan Review



- Three separate applications with overlapping schedules
- Intended to make the materials digestible and to provide more opportunities for feedback from the City and Neighbors

Schedule Overview



Staff Parking Garage

Staff Parking Garage

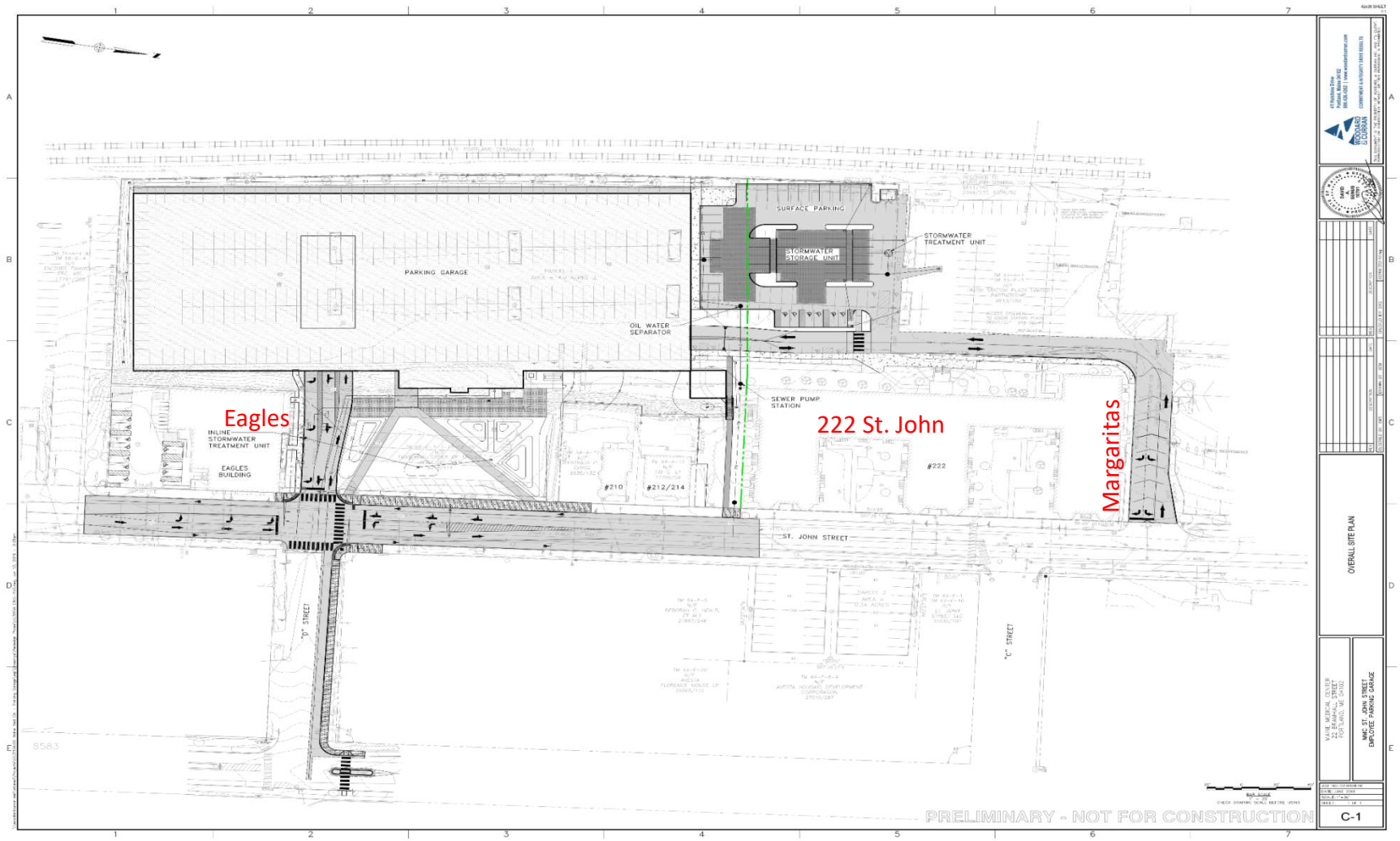
Transportation Demand Management & Traffic

Transportation Demand Management (TDM)

- MMC's "Get on Board!" was one of the first TDM programs in the State of Maine when it was launched in 2008.
- Data collection needs to be improved

Continuing (Enhanced) Program Efforts	New Program Efforts
• Metro pass discounts • Employee carpools • Supporting cycling • Employee shuttles • Pay to park	• TDM Coordinator • Increased education • Bi-annual transportation survey • Regional connections • Guaranteed ride home

Site Overview – Traffic Flow



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Al Green,
Director of Planning,
MMC

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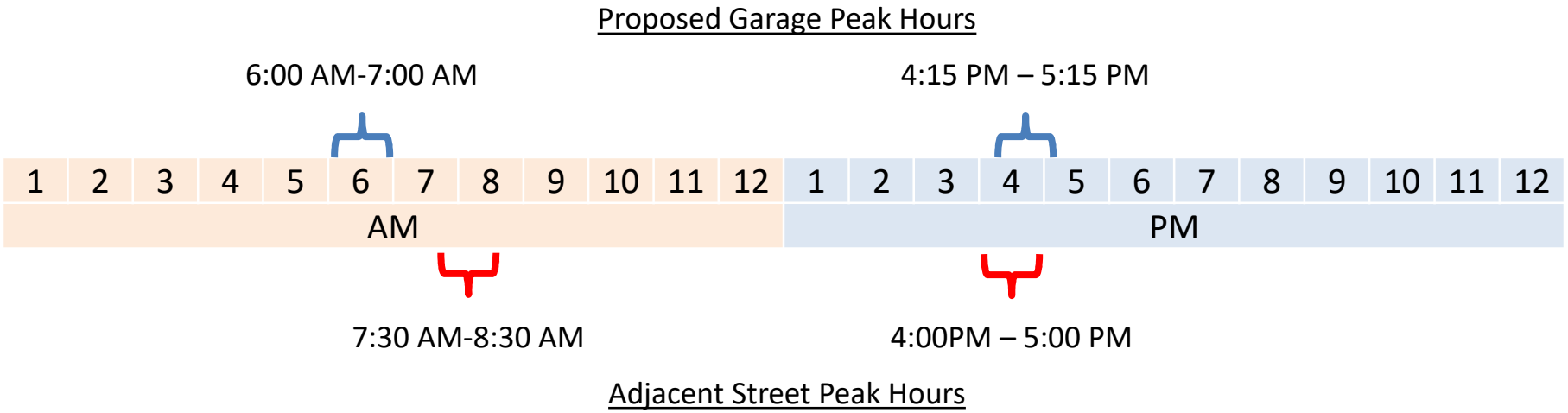
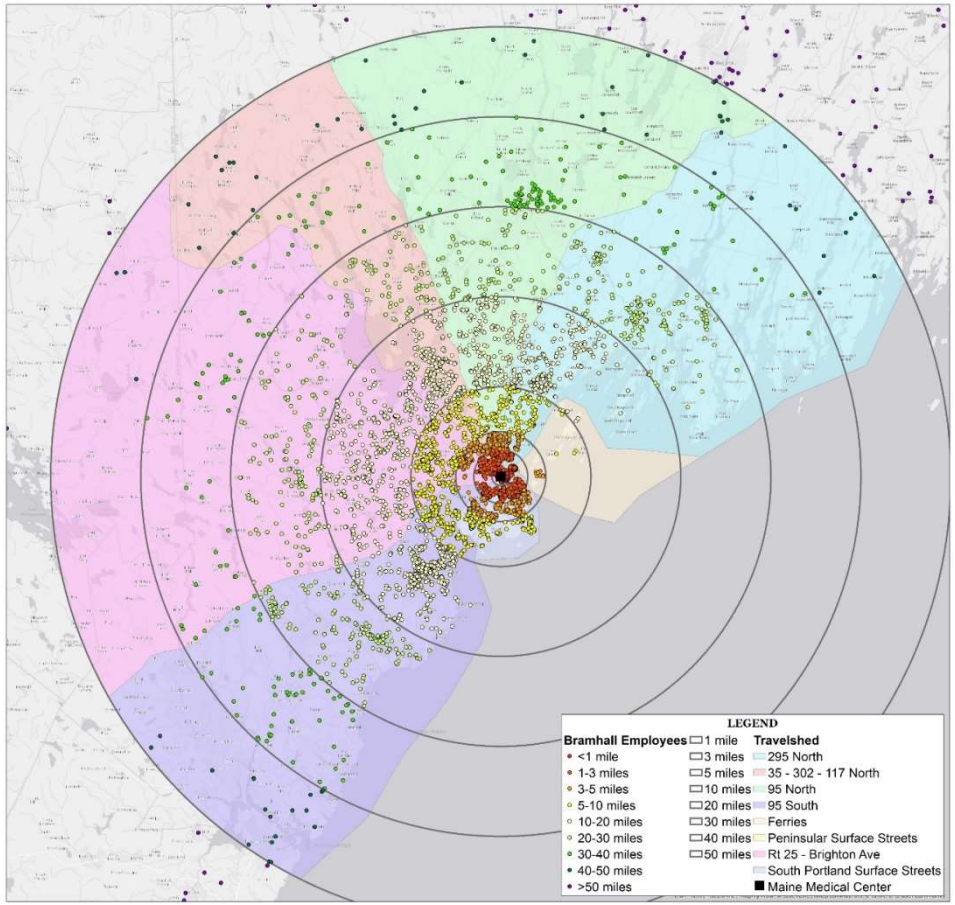
MaineHealth

Traffic – Trip Generation (cont.)



- Trip Generation
  - AM Garage Peak Hour: 1,097 trip ends (1,070 in / 27 out)
  - PM Garage Peak Hour: 571 trip ends (82 in / 489 out)
  - AM Adjacent Street Peak Hour: 556 trip ends (246 in / 310 out)
  - PM Adjacent Street Peak Hour: 519 trip ends (77 in / 442 out)

Traffic – Trip Assignment



Bramhall Employee Address Locations and Travelsheds
Maine Medical Center

- MMC Employee Data
- Regional Transportation Patterns
- Actual Traffic Counts
- Conversations with City Staff about Potential Future Developments

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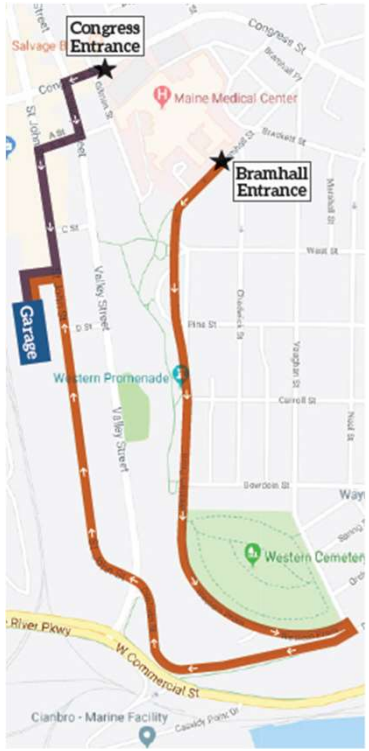
Shuttles

Garage to Hospital

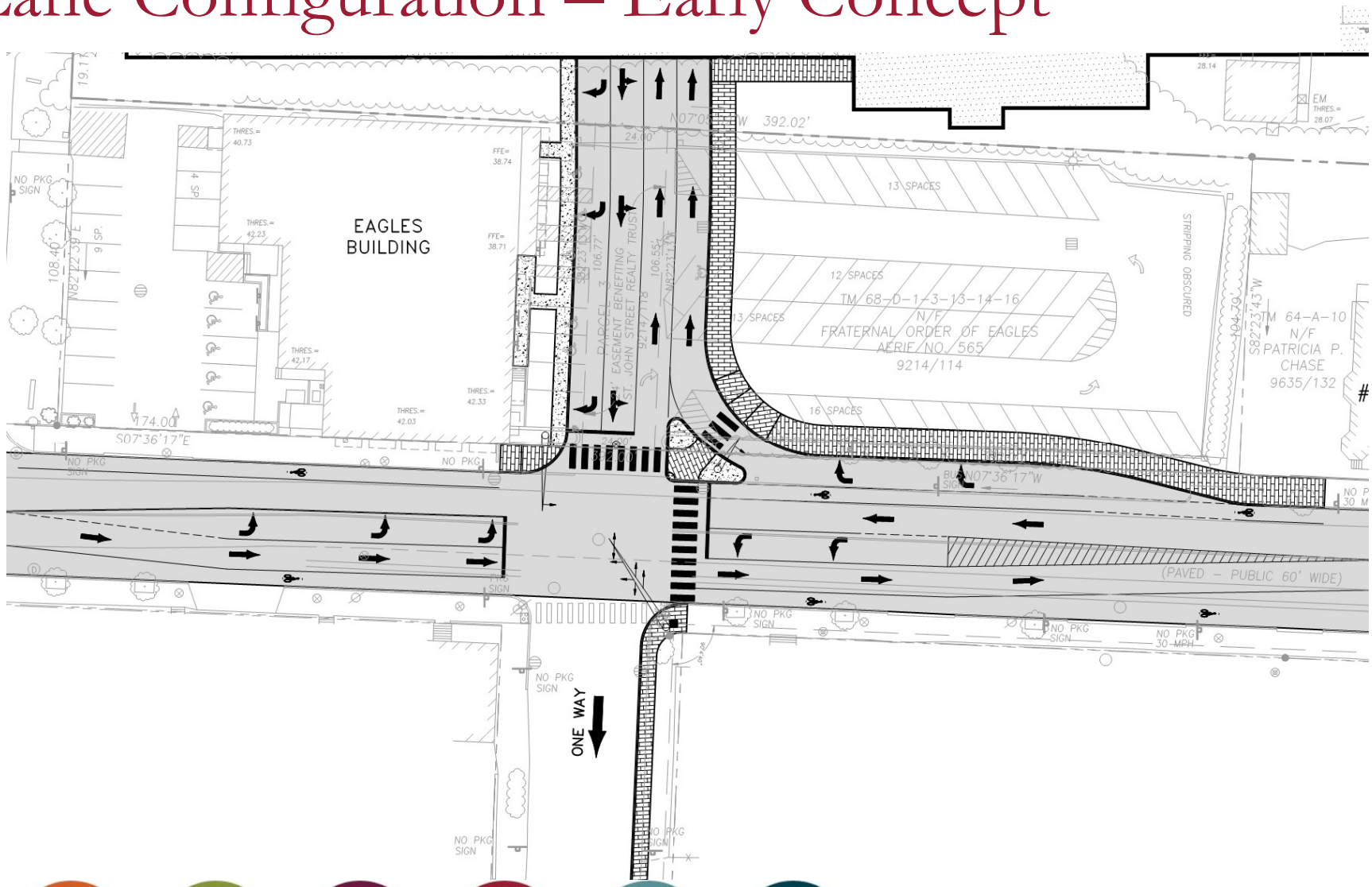
Hospital to Garage



- 13 Shuttles during peak hours
  - 6 to Bramhall Entrance
  - 7 to Congress Entrance
- 15 Minute trip time
- 52 in / 52 out (Total of 104 trip ends)
- Right into Margarita's access, Right out of Margarita's access

Act with kindness and compassion. | Be an active listener. | Be a role model. | Set high standards. | Take responsibility. | Embrace change.

Lane Configuration – Early Concept



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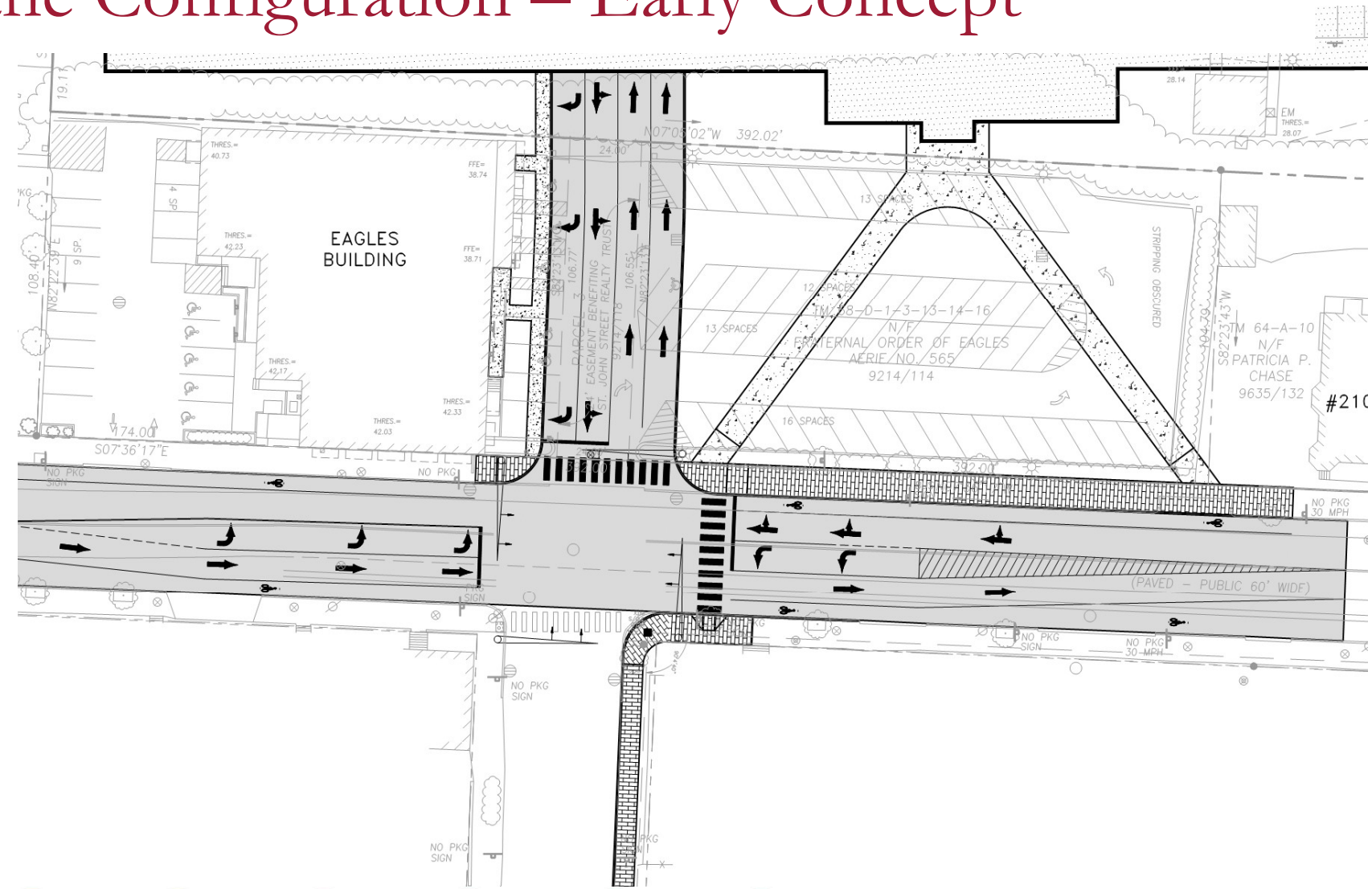
Lane Configuration – Early Concept



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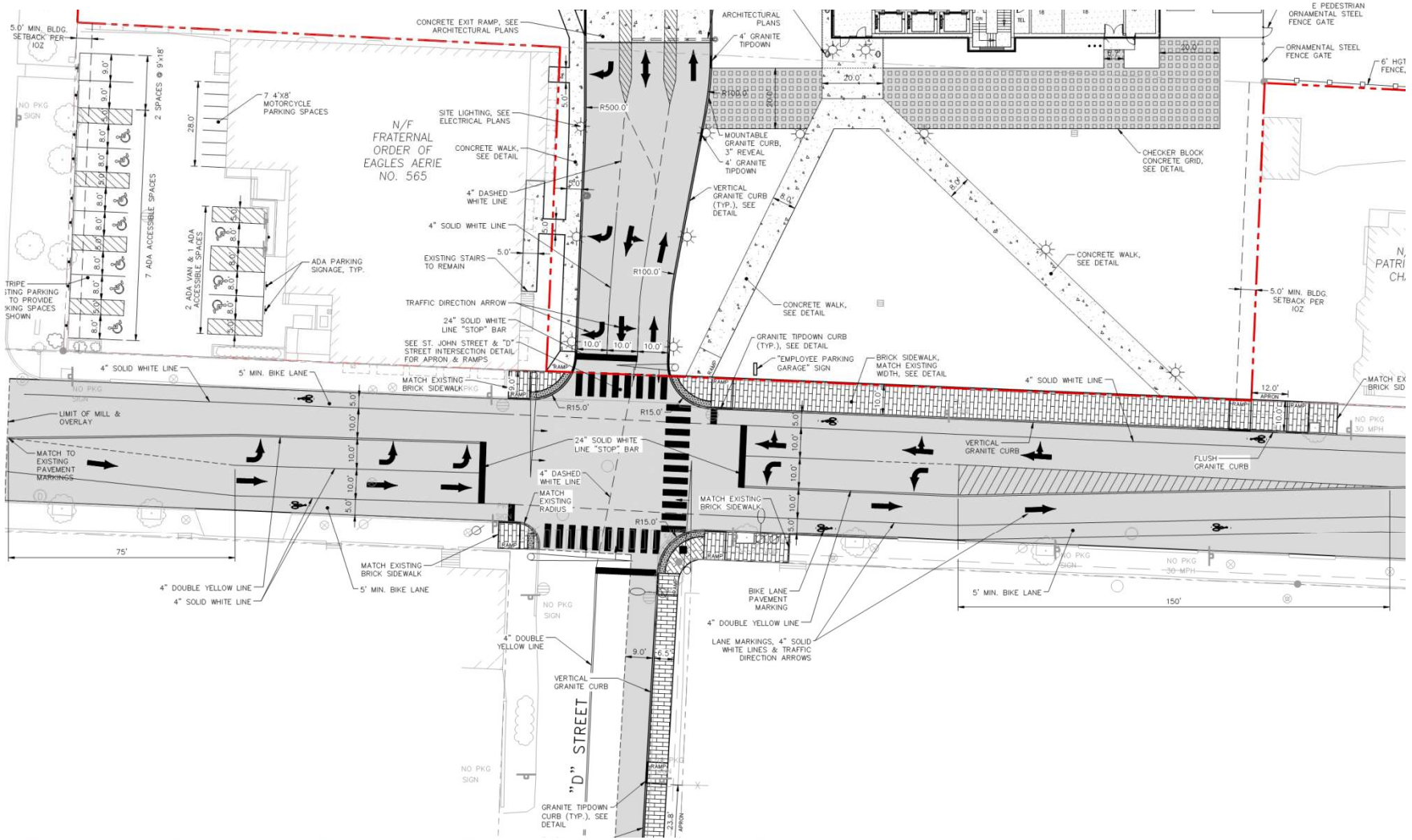
Al Green,
Director of Planning,
MMC

Maine Medical Center
MaineHealth

Lane Configuration – Proposed Concept



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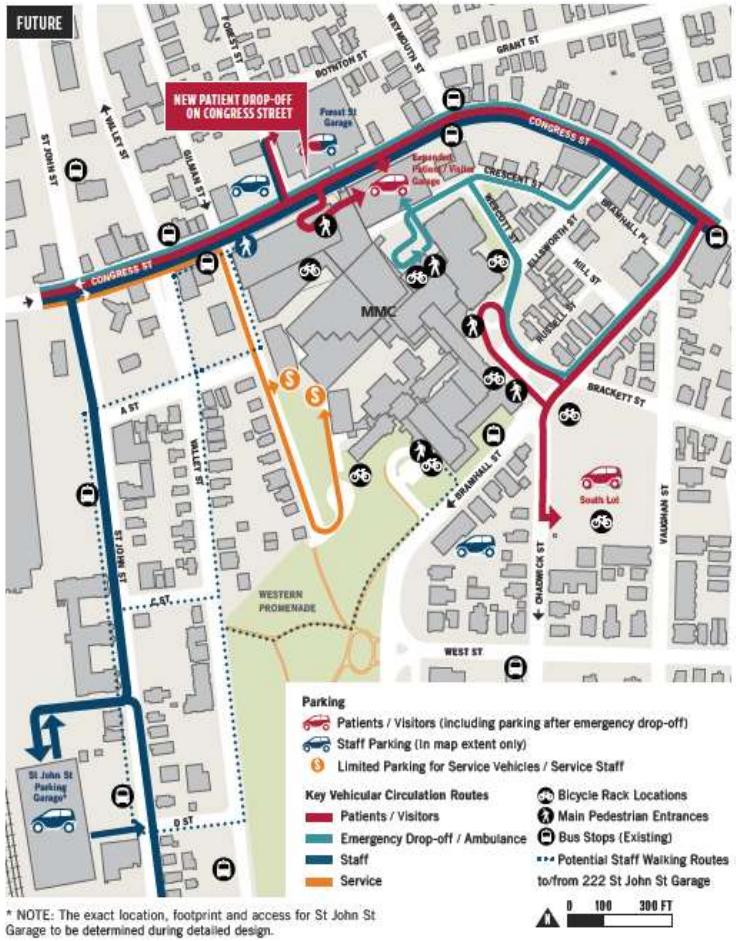
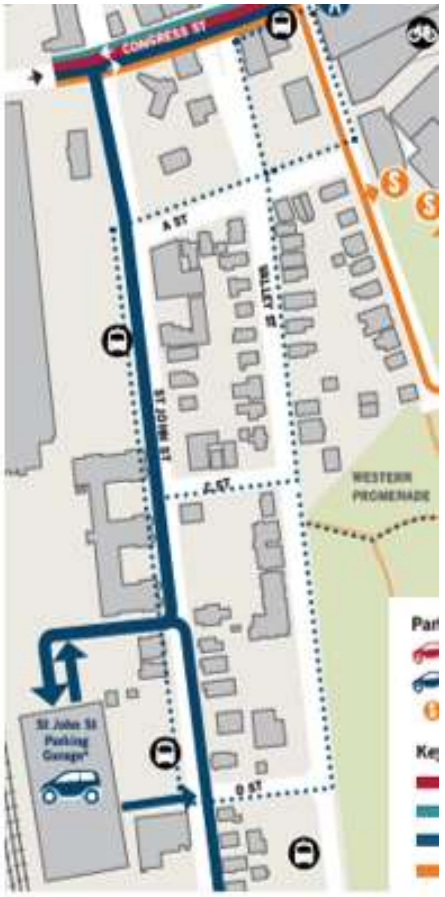
Right of Way Improvements

Pedestrian Travel Routes (as noted in IDP)



* NOTE: The exact location, footprint and access for St John St Garage to be determined during detailed design.



* NOTE: The exact location, footprint and access for S Garage to be determined during detailed design.

MAINE MEDICAL CENTER / Institutional Development Plan 59

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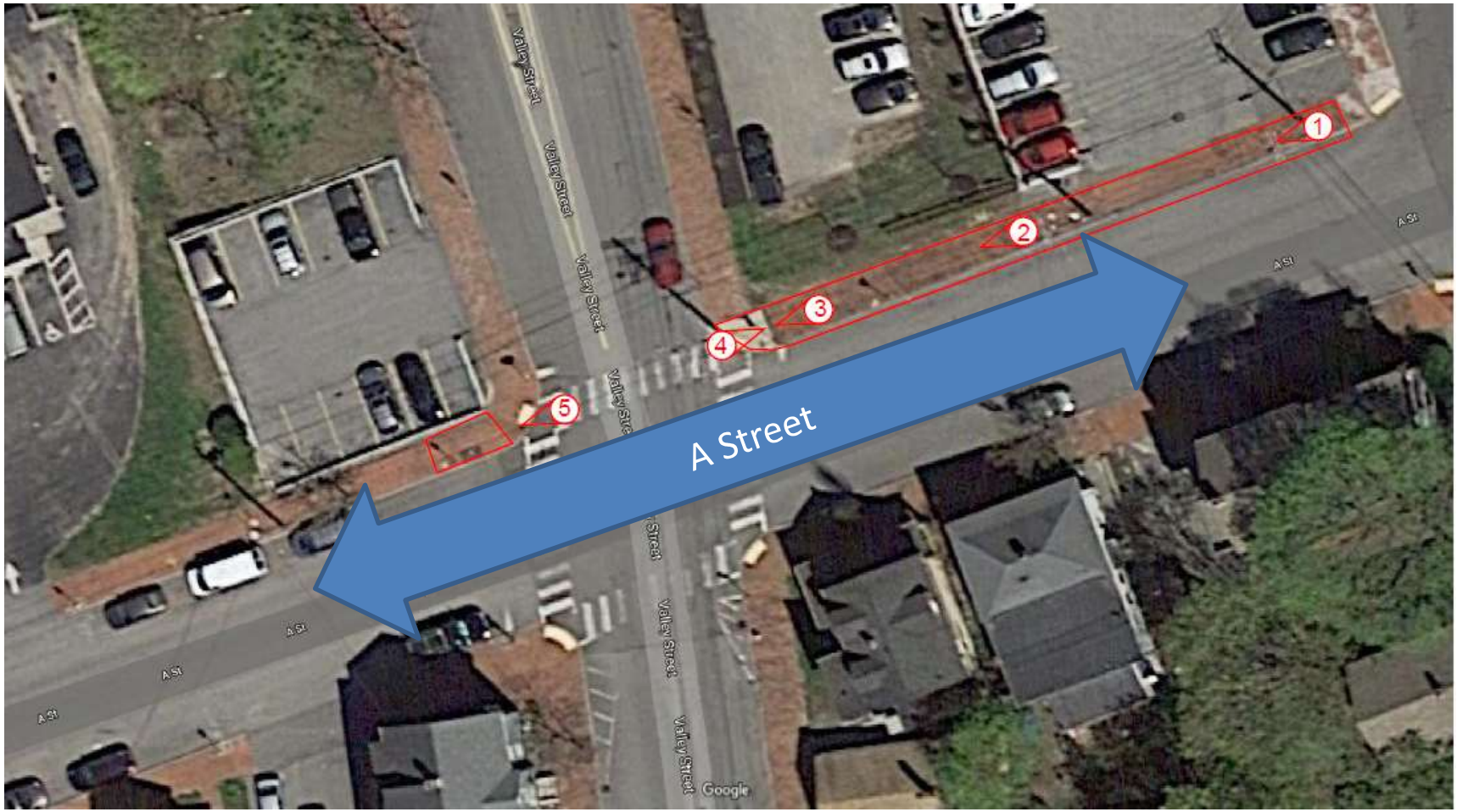
Right of Way Improvements



Act with kindness and compassion. | Be an active listener. | Be a role model. | Set high standards. | Take responsibility. | Embrace change.

ROW Improvements

Photo 1 – Uneven settlement along sidewalk.

Photo 3 - Uneven settlement along sidewalk adjacent to ADA Ramp.

Photo 5 - Uneven settlement along sidewalk & unrepaired section from tree box removal.

Photo 2 - Uneven settlement along sidewalk.

Photo 4 - Uneven settlement along sidewalk.

Photo 6- Unrepaired sidewalk section from utility trenching.

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ROW Improvements

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Dave Senus,
Project Manager,
Woodard & Curran

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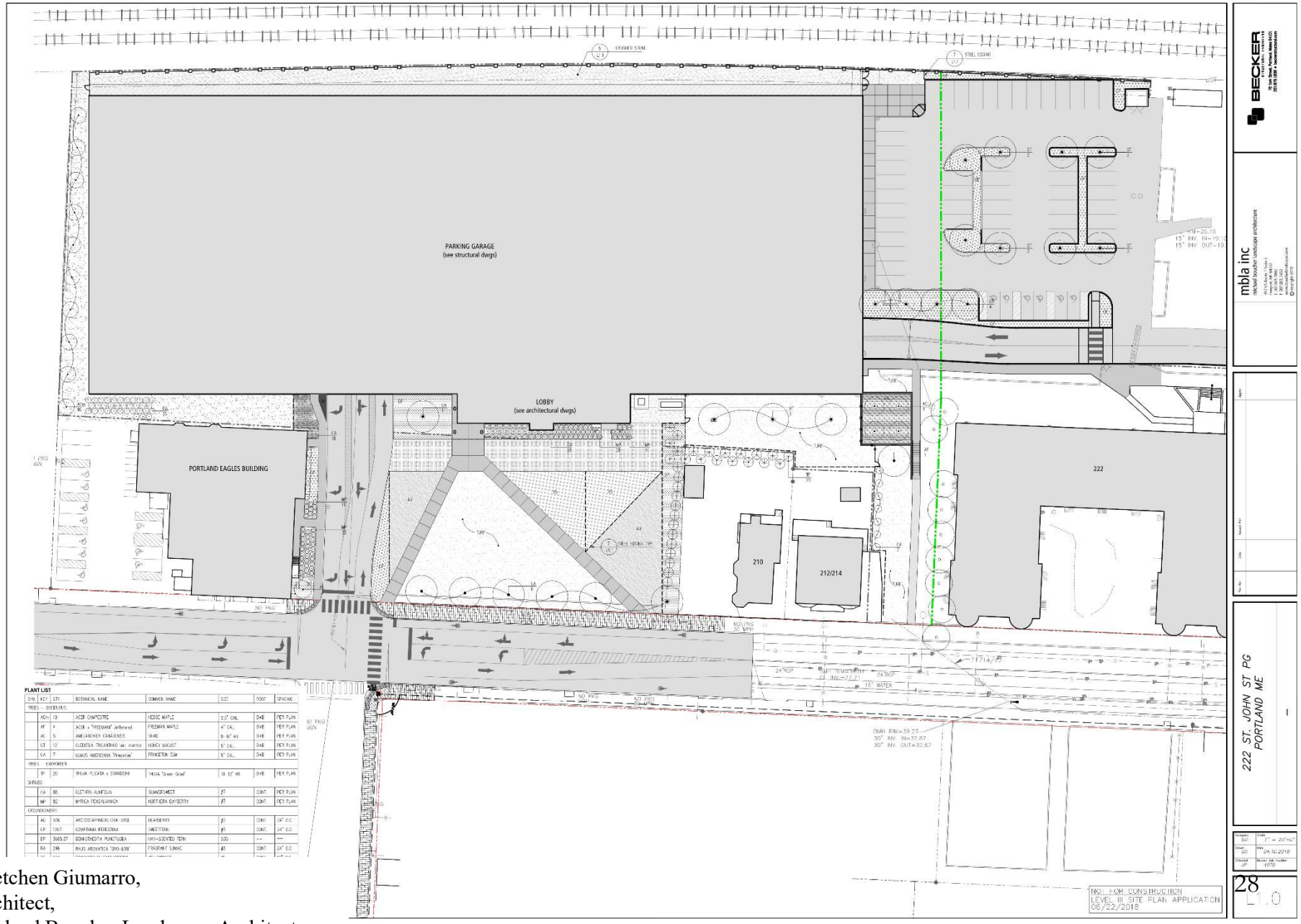
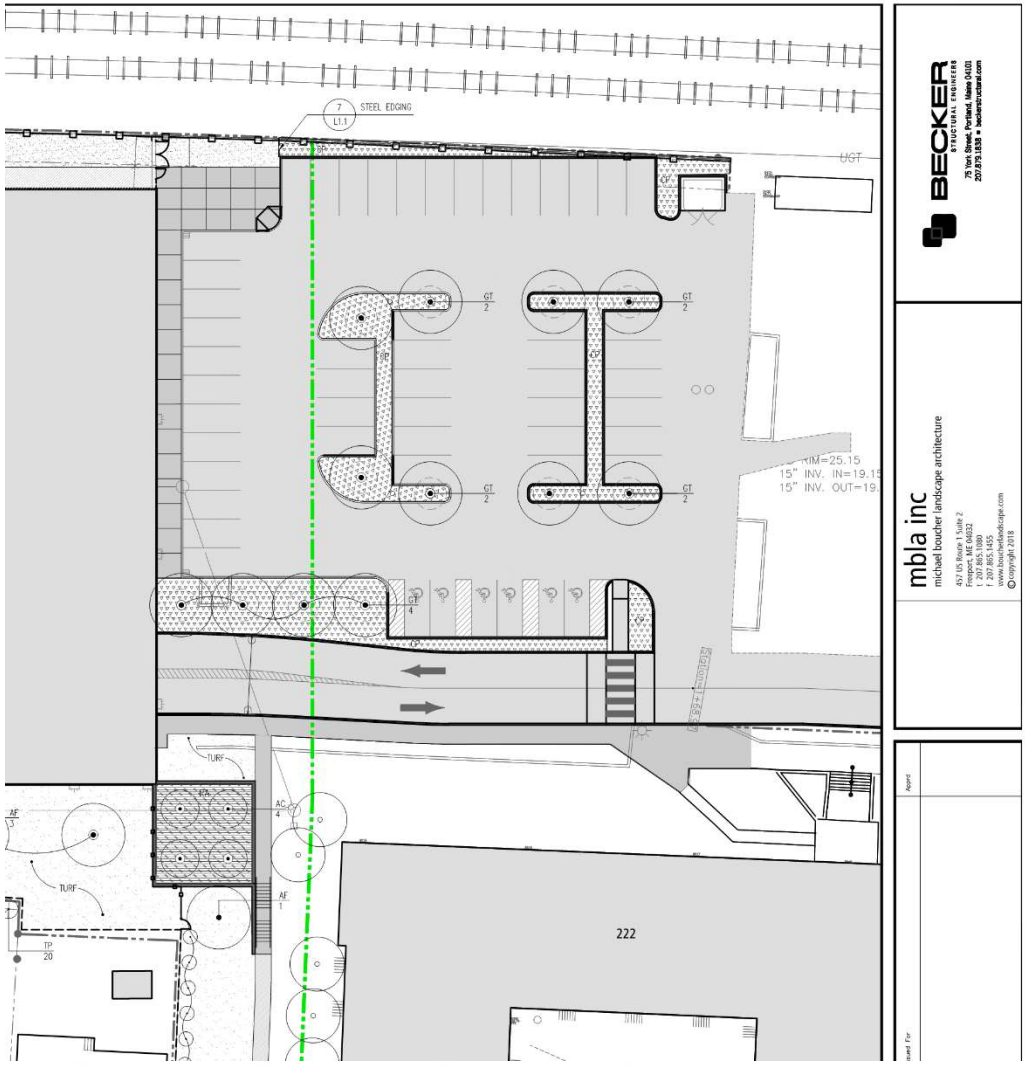
Landscape Architecture

Landscape Architecture



Gretchen Giumarro,
Architect,
Michael Boucher Landscape Architects

Landscape Architecture



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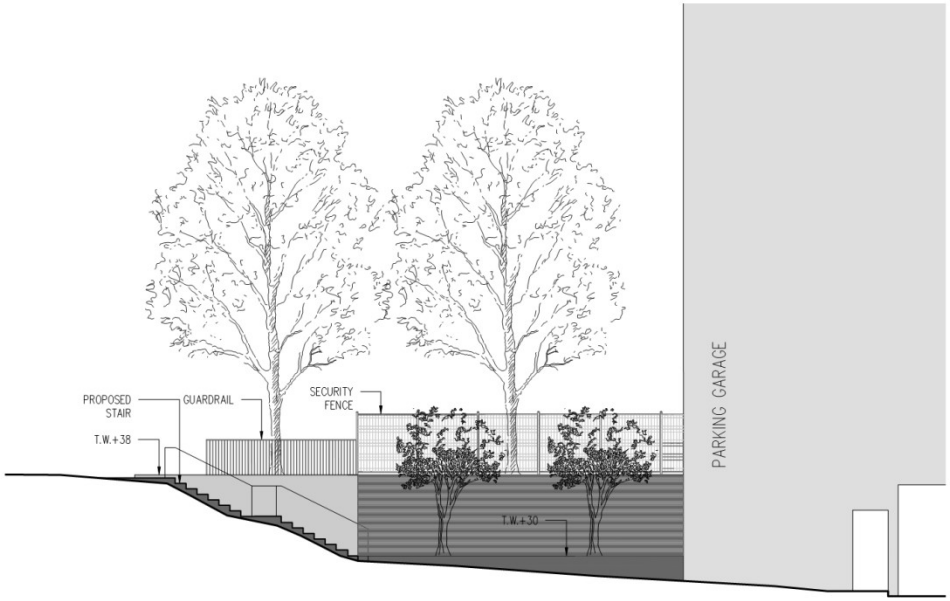

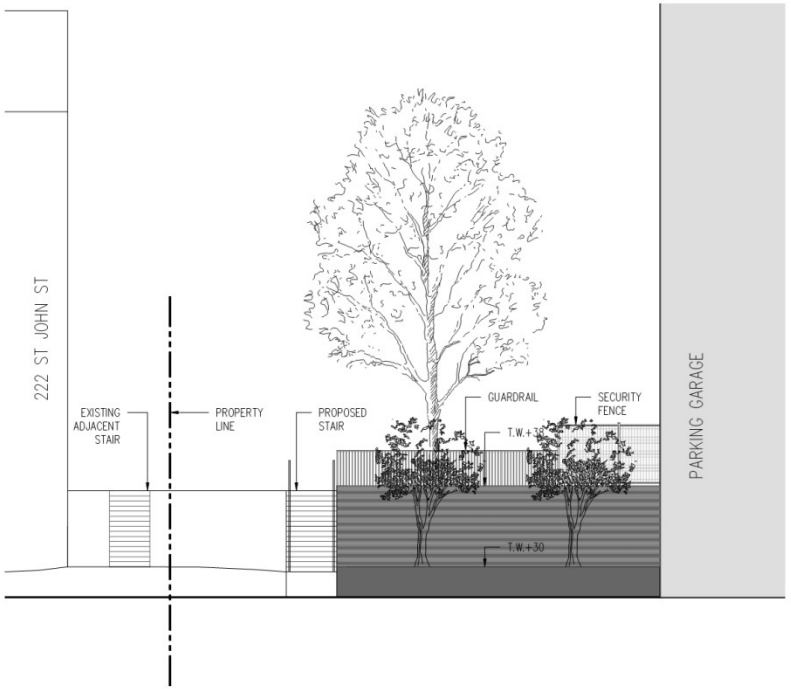

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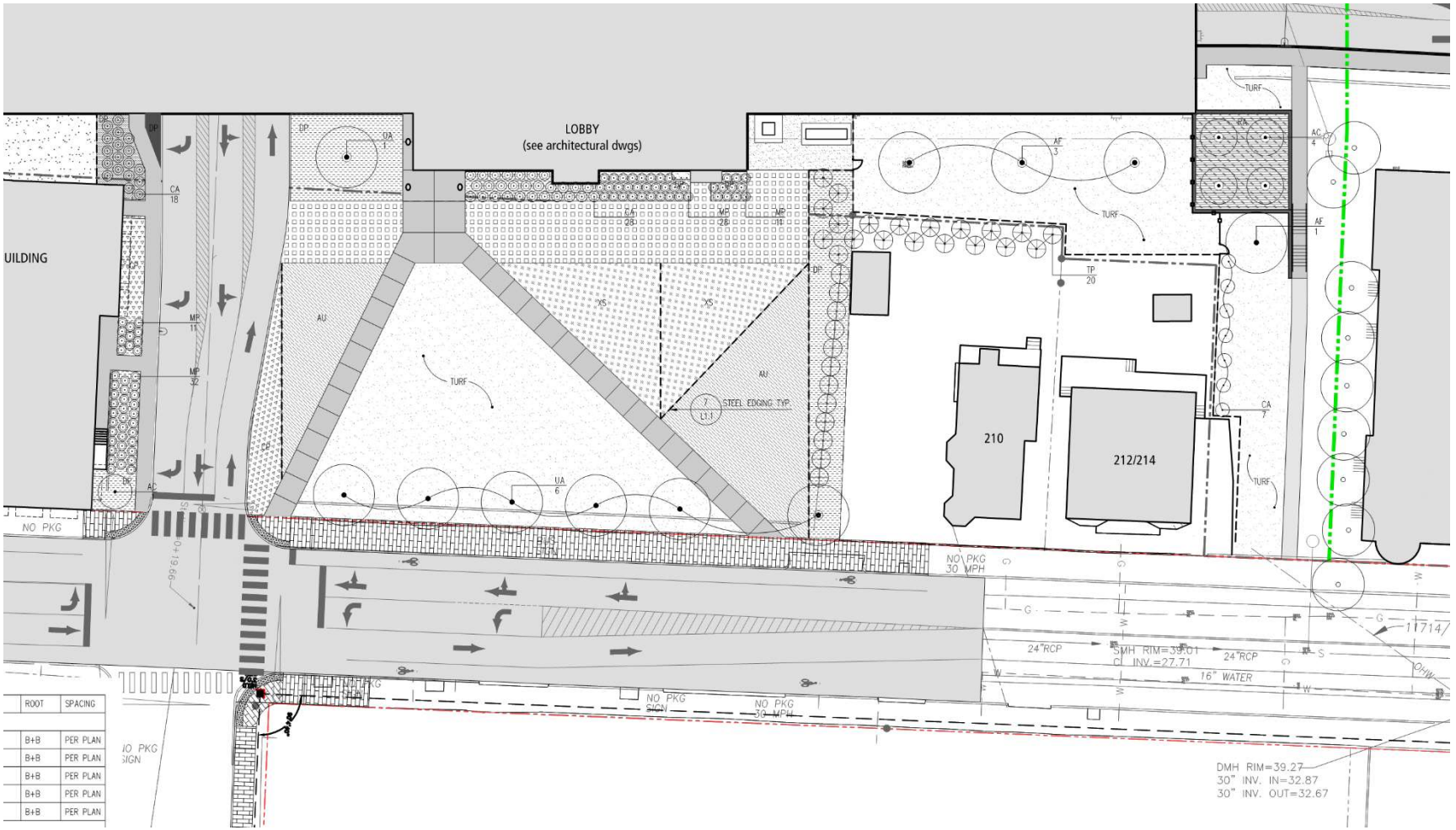
Landscape Architecture



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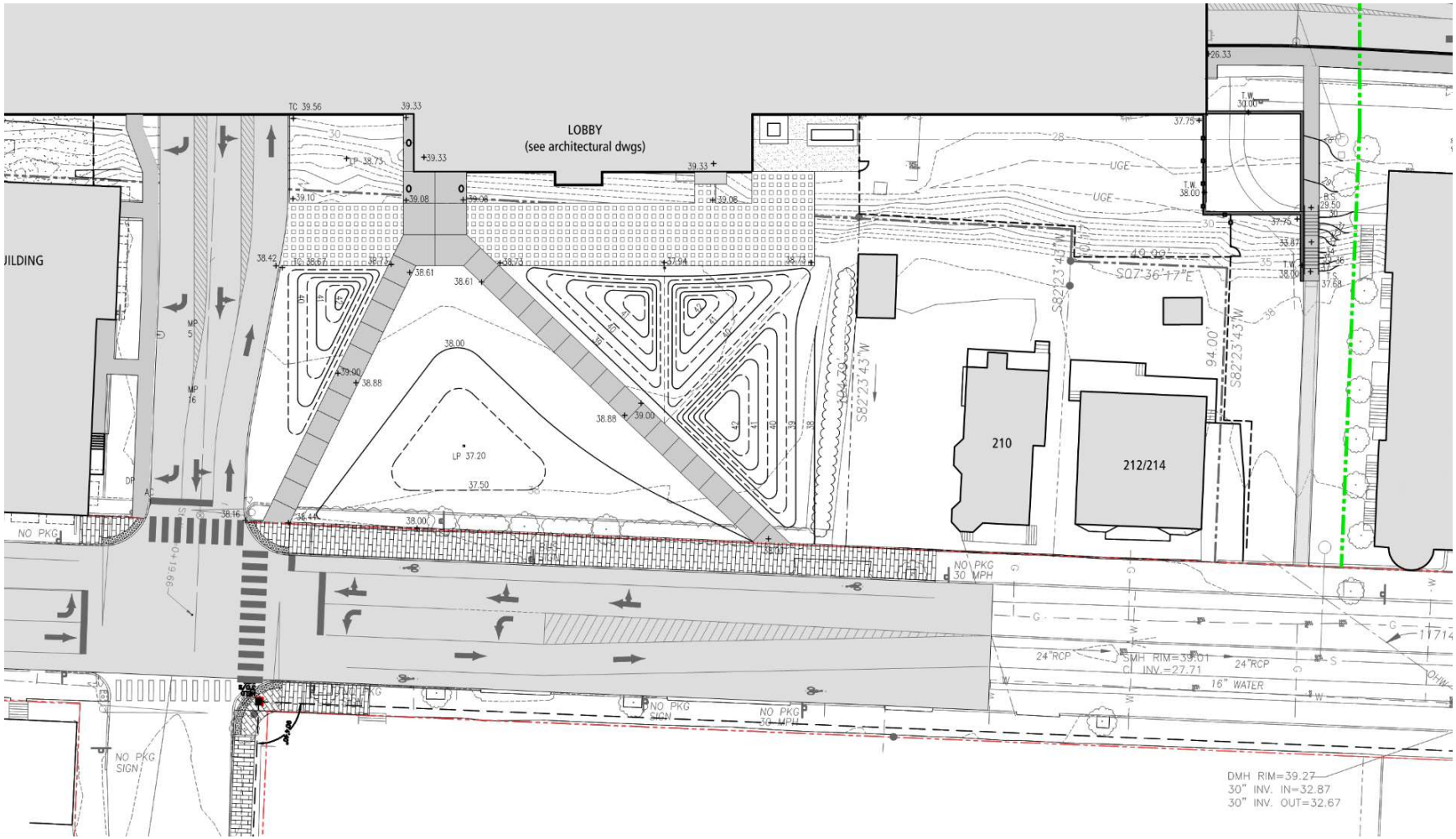

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Gretchen Giumarro,
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Michael Boucher Landscape Architects

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Landscape Architecture

View from St. John Street

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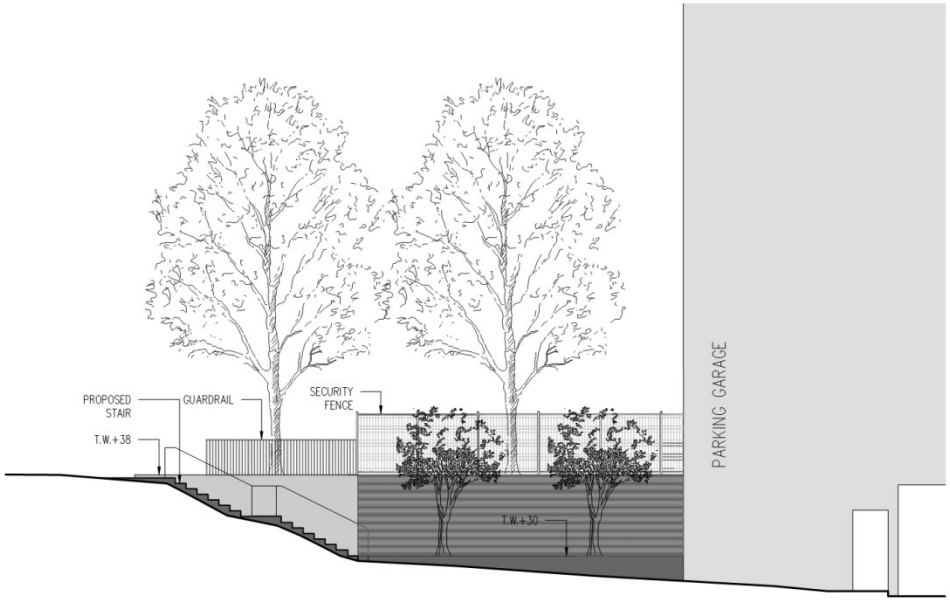

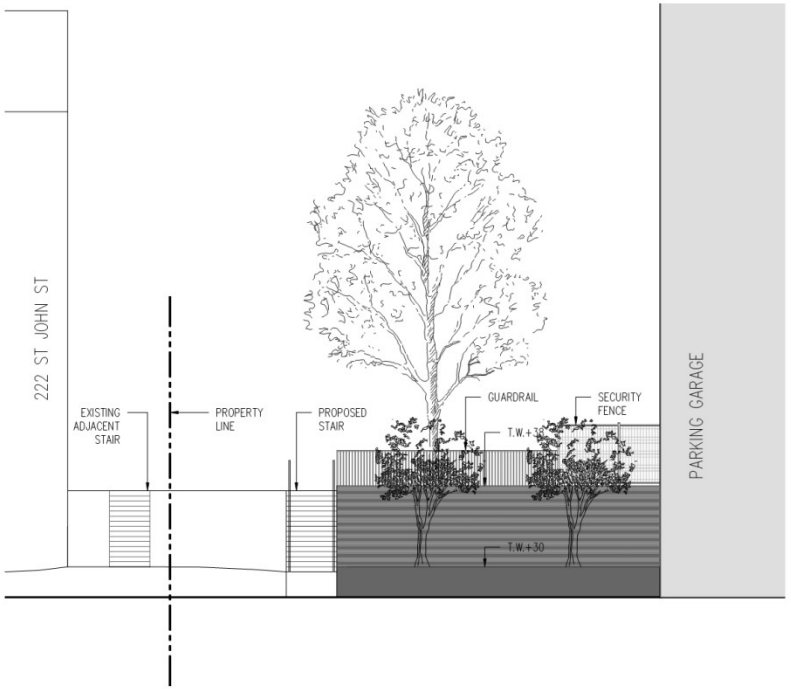

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Gretchen Giumarro,
Architect,
Michael Boucher Landscape Architects

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MaineHealth

Landscape Architecture

Welded Wire Security Fence

Act with kindness and compassion. Be an active listener. Be a role model. Set high standards. Take responsibility. Embrace change.

Gretchen Giumarro,
Architect,
Michael Boucher Landscape Architects

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MaineHealth

Landscape Architecture

Board and Cap Cedar Privacy Fence

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Michael Boucher Landscape Architects

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Landscape Architecture

Checkerblock paving

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Maine Medical Center
MaineHealth

Construction

Construction Details

- Work Hours – 7 a.m. – 6 p.m., Monday – Friday.
- Rare weekend / Holiday work, with advance notice, start after 8 a.m.
- Pile Driving will create noise, vibration – will fast-track by using 2 crews, October. 2018 - December. 2018 (est.)
- Vibration monitoring to involve adjacent property surveys.
- Dust Control – Tarped dump trucks; on-going sidewalk and street cleaning; use of wetting agents; covering stock piles.
- No smoking allowed on site.
- Contractor parking not allowed on adjacent public streets.

Construction Traffic

- There will be two access points to the site
  - Main access point through the north end of the existing Eagles parking lot
  - Secondary access through the existing 222 St. John parking lot via the public right of way
- To navigate precast concrete vehicles to the site a flagger will be stationed at St. John Street as needed
- Due to the large turn radius of some vehicles at the secondary access route, it will be necessary to close parking spaces within the parking lot as well as spaces on St. John Street

Anticipated Construction Traffic Per Day

	2018				2019												2020					
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Earthwork/Ground Improvements	(9)	(20)	(25)	(25)	(25)	(25)				(5)	(7)	(7)	(10)							(5)	(5)	(5)
Structural Precast Erection							(20)	(20)	(20)	(20)	(10)	(5)										
Garage Fit-out													(15)	(15)	(13)	(10)	(6)					

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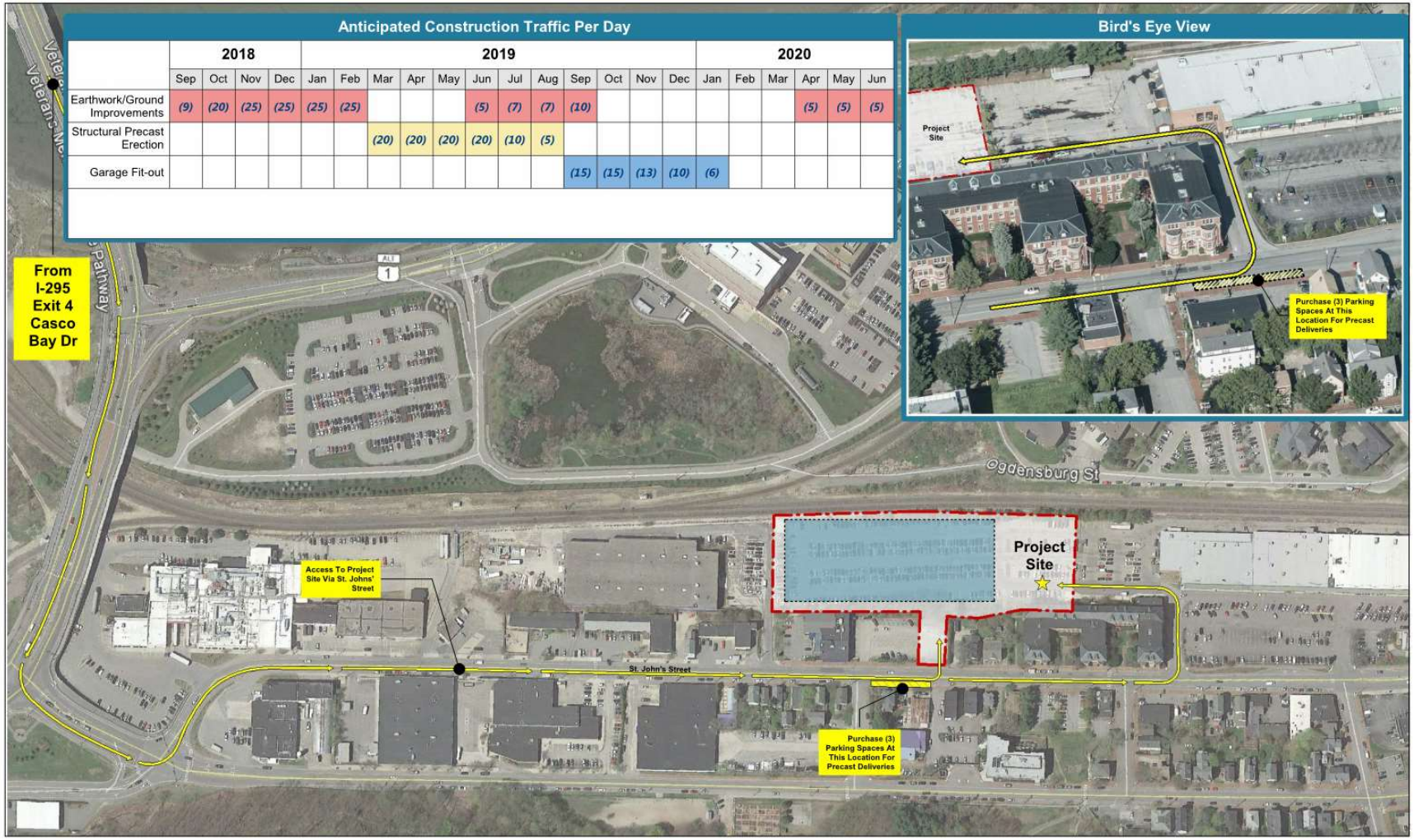
Truck Routes



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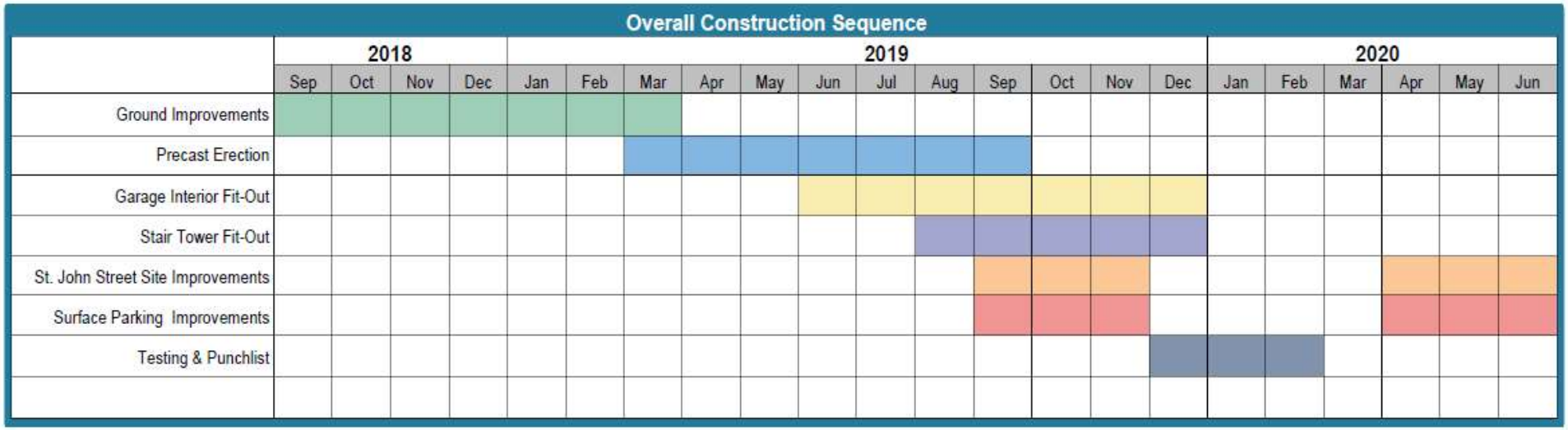
MaineHealth

Construction Schedule



Act with kindness and compassion.

Be an active listener.

Be a role model.

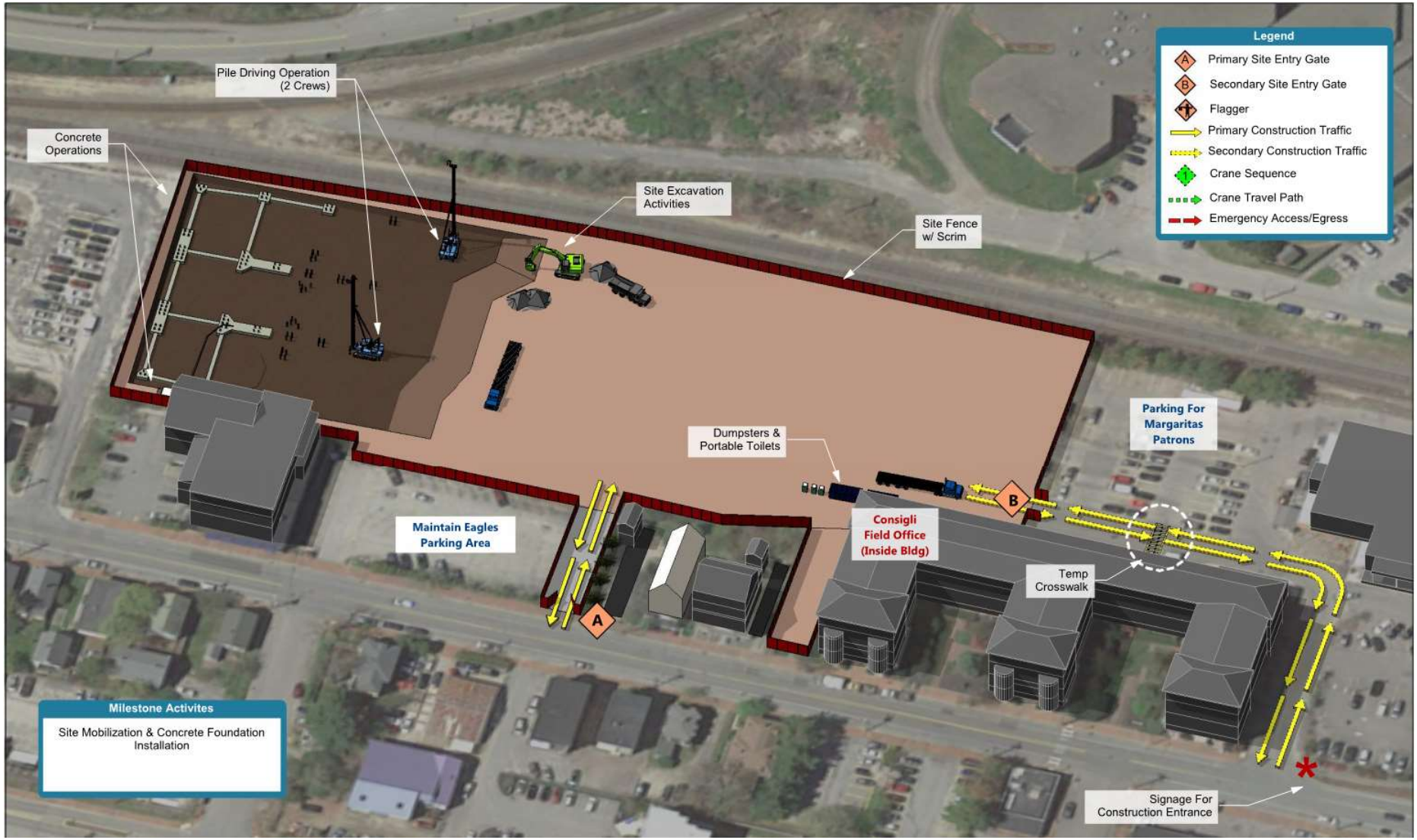
Set high standards.

Take responsibility.

Embrace change.

Dave Thomas,
Project Executive,
Consigli

Maine Medical Center
MaineHealth



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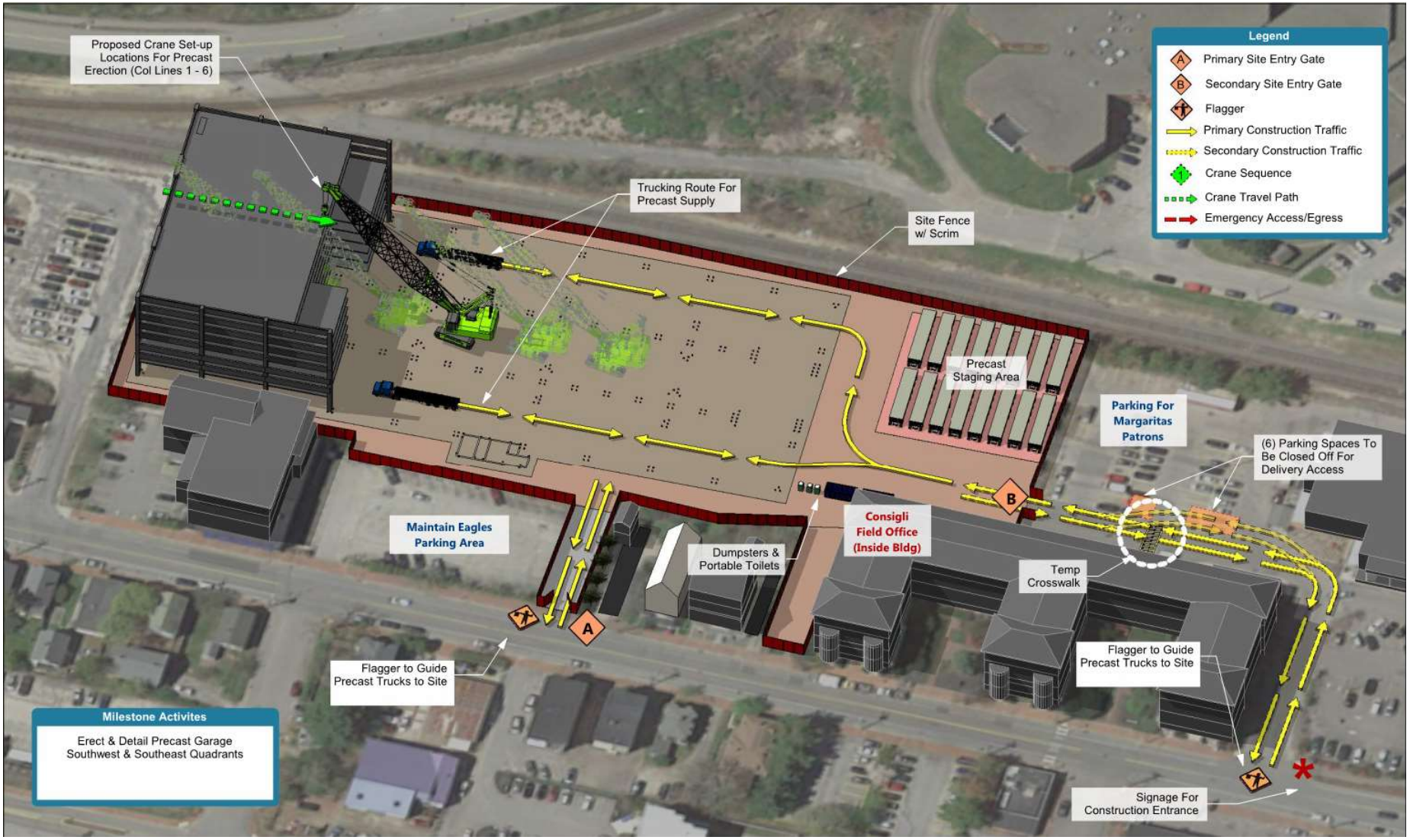

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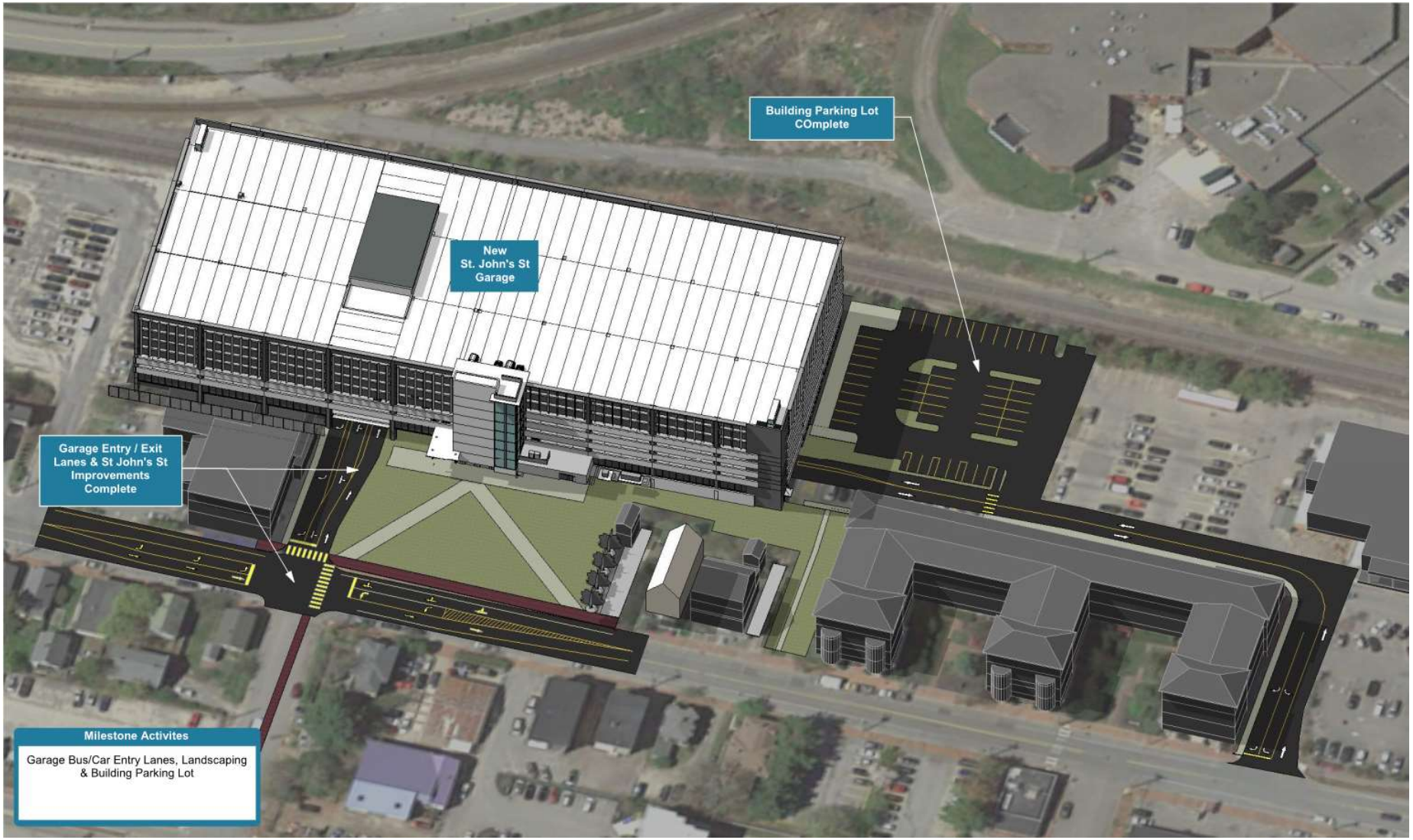

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Dave Thomas,
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Maine Medical Center
MaineHealth

Ongoing Communication

Communications

- For more information and on-going updates, anyone can visit MMC's website to sign up for email and text alerts: www.mmc.org/modernization

Newsroom

Media

Press Releases

MMC Campus Modernization Project

Project Updates

Neighborhood Meeting Minutes

Sign up for Project Alerts

Additional Information

MaineHealth › Maine Medical Center › Newsroom › *MMC Campus Modernization Project*

MMC Campus Replacement & Modernization Project

Maine Medical Center is excited to begin work on the largest modernization and replacement project in its history – a patient-focused initiative that will enable the state's largest hospital to meet the most urgent healthcare needs well into the future.

Altogether, the $512 million project will create 128 new private patient rooms, add 19 procedure rooms for surgeries and other complex treatments, provide an additional 225 spaces for patient and visitor parking, and consolidate MMC employee parking into one nearby garage that will meet current demand and future growth. The project will also open Maine Medical Center to Congress

Act with kindness and compassion. | Be an active listener. | Be a role model. | Set high standards. | Take responsibility. | Embrace change.

Matt Wickenheiser,
Sr Communications Manager,
MMC

Questions?

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.
Section 14-526 (Site Plan) of the Land Use Code	The site plan shall provide secure bicycle parking in conformance with Section 1 of the Technical Manual and shall meet the following requirements: Non-residential structures. Two (2) bicycle parking spaces for every ten (10) vehicle parking	The proposed garage and parking lot will have 2452 parking spaces, requiring a total of 138 bicycle spaces per the standard. We are proposing 40 bicycle parking spaces. We are requesting a waiver from meeting the Bicycle Parking Space standard for this project	Currently, MMC has eight bike racks and ten bike lockers on its main campus for a total storage capacity of 193 bicycles. With the storage available on the main campus, we anticipate that this will be the primary destination for employees using bicycles, and we do not
Technical Manual Section 1.7.2.4 (Maximum Driveway Width for 2-way traffic, commercial property)	1.7.2.4 Maximum driveway width (two-way): The maximum width of a driveway will be based upon site conditions or vehicle characteristics that warrant a wider access (e.g., dedicated turn lanes at exits) and will require approval of	Due to the proposed intersection improvements at the corner of D Street and St. John Street, the driveway is greater than the allowed 24 feet for a commercial use. The parking garage is neither a commercial or industrial use but for the purposes of this	The driveway has been designed for the anticipated capacity. The 30-foot width will allow for three driveway lanes - one entrance, one right-hand turn lane, and one lane that allows left hand turns and straight through traffic onto D Street. The driveway width
Technical Manual Section 1.7.2.7 (Location and spacing of driveways)	Along arterials and collector streets, access driveways to corner lots shall be located a minimum of one hundred fifty (150) feet from the intersection of the projection of the right-of-way lines to the center line of the driveway except as	As part of the proposed improvements within the 184 St. John Street property, the existing parking lot is proposed to be reconstructed. The existing parking lot entrance is located is located approximately 68 feet from the	The proposed driveway entrance on the 184 St. John Street property is proposed to be reconstructed within the existing driveway footprint. The entrance is intended to only serve users of the 184 St. John Street property and will not

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 Section 1.14 (Parking Lot and Parking Space Design)	Refer to Division 20 of the City Land Use Code (Sections 14-331 to 14-350) for zoning ordinance requirements concerning the number of parking spaces required for off-street parking. Parking spaces shall meet the following dimensional	We are requesting a waiver from the parking standard 9'-0" space width, for employee parking spaces within the proposed parking garage.	The parking provided within the garage is proposed at a uniform length of 18'-0"however the width varies from 8'-5" to 9'-0" . As parking within the garage will be private and for the use of Maine Medical Center Employees, a waiver is being requested in
Technical Manual Section 1.14 (Parking Lot and Parking Space Design)	Vehicular access shall be provided by one or more aisles. Minimum widths of aisles are illustrated in Figures I-28 thru I-31.	We are requesting a waiver from the 24-foot aisle width for standard parking spaces, for some of the employee parking spaces within the garage and for the northern parking aisle within the surface parking lot of 222 St. John Street adjacent to Union Station Plaza	Within the garage, the only lanes that are included in this waiver are for one-way traffic. A minimum 23'-9.5" width is requested for these aisles. All 2-way travel lanes are 24'-0" wide. Single-lane and and two-lane travel ways will be clearly marked within the

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PROPOSED SITE LIGHTING

Requirements for site lighting are addressed by the City of Portland in two documents: The City of Portland, Maine - Code of Ordinances, and the City of Portland - Technical Manual. Listed below are the issues pertaining to the proposed IMT site lighting as relates to the two city documents.

The City of Portland, Maine - Code of Ordinances
Chapter 14 – Land Use
Article III Zoning
Division 16.1 Institutional Overlay Zone
14-280 (a) Purpose

Any use conducted by an Eligible Institution and any construction by an Eligible Institution in an Institutional Overlay Zone shall be consistent with an Institutional Development Plan (IDP) approved by the planning Board in accordance with this ordinance..

RESPONSE: The proposed MMC St. John Garage site lighting has been designed to be in conformance with the approved IDP.

The City of Portland - Maine Code of Ordinances
Chapter 14 – Land Use
Article V Site Plan
14-526.6 Exterior Lighting
a. Site Lighting
(i) All exterior site lighting, including lighting of building entrances, shall be full cut-off with no light emitted above the horizontal plane or spilled onto adjacent properties and streets. Illumination levels shall be adequate but not excessive for safety, comfort and convenience of occupants and users of the site, and shall conform to applicable standards of Section 12 of the Technical Manual.

RESPONSE: All of the exterior site lighting has been selected to utilize full-cut-off optics with no light emitted above the horizontal plane. The *Illuminating Engineering Society of North America* (*IESNA*) classifies exterior luminaires according to their potential for producing uplight in the publication *IESNA* TM-15-11. The rating system is a numeric index that ranges from zero (no uplight) to five (greater than 5000 lumens direct upward). All of the proposed site lighting luminaires are classified as having a zero uplight rating.

14-526.6 Exterior Lighting
a. Site Lighting
(ii) For major or minor site plans within or abutting a residential use or zone where light from the proposed development may adversely impact adjacent residential properties, exterior lighting shall employ house-side shielding.

RESPONSE: See the Response included on page 4 for 12.2 Standards, 12.2.5 Light Trespass.

14-526.6 Exterior Lighting

c. Street Lighting

(i) Municipal street lighting shall be adequate for the safety and comfort of pedestrians and motorists and, where applicable, shall conform to specific lighting district requirements, as specified in Section 10 of the Technical Manual.

RESPONSE: At the garage entrance and exit drives that are adjacent to the intersections of St. John Street and D Street, and St. John Street and C Street, additional 50-watt, LED street lights to be supplied by the *City of Portland* have been added to utility poles to meet the *IESNA* recommendations published in *IESNA* RP-8-14 Roadway Lighting. For intersections that are classified as connecting Collector streets and Local streets, and that have a high potential of pedestrian activity, the *IESNA* recommends an average of 2.1 footcandles and an average-to-minimum illuminance uniformity of 4-to-1, or better. The illuminance at the improved lighting at the intersections at St. John Street and D Street has been calculated to be as follows:

Minimum:	0.6 footcandles	Maximum:	3.4 footcandles
Average:	2.2 footcandles	Average-to-Minimum Uniformity:	3.7-to-1

The illuminance at the improved lighting at the intersection at St. John Street and C Street has been calculated to be as follows:

Minimum:	0.9 footcandles	Maximum:	3.3 footcandles
Average:	2.1 footcandles	Average-to-Minimum Uniformity:	2.4-to-1

A new sidewalk is proposed along D Street between St. John Street and Valley Street. The *American Association of State Highway and Transportation Officials* (*AASHTO*) recommends illuminance levels for streets in Roadway Lighting Guide-1984. The recommended standard for D Street, which is classified as a Local/Commercial street, is an average of 0.8 footcandles, and an average-to minimum uniformity of 6-to-1, or better. Additional 30-watt, LED street lights to be supplied by the *City of Portland* have been added to utility poles to meet the *AASHTO* recommendations. The illuminance at the improved lighting along D Street has been calculated to be as follows:

Minimum:	0.2 footcandles	Maximum:	1.4 footcandles
Average:	0.8 footcandles	Average-to-Minimum Uniformity:	3.9-to-1

New crosswalks are proposed at the intersection of D Street and Valley Street, and at the intersection of C Street and Valley Street. The *IESNA* recommends an average of 1.4 footcandles and an average-to-minimum illuminance uniformity of 6-to-1, or better, for intersections that are classified as connecting two Local streets, and that have a medium potential of pedestrian. Additional 30-watt, LED street lights to be supplied by the *City of Portland* have been added to utility poles to meet the *IESNA* recommendations. The illuminance at the D Street and Valley Street intersection has been calculated to be as follows:

Minimum:	0.6 footcandles	Maximum:	2.4 footcandles
Average:	1.4 footcandles	Average-to-Minimum Uniformity:	2.4-to-1

The illuminance at the C Street and Valley Street intersection has been calculated to be as follows:

Minimum:	0.8 footcandles	Maximum:	2.1 footcandles
Average:	1.6 footcandles	Average-to-Minimum Uniformity:	1.9-to-1

The City of Portland Technical Manual
Section 12 Site Lighting Standards
12.2 Standards

12.2.1. Unless otherwise specified below, exterior lighting shall conform to the recommendations put forth in Lighting for Exterior Environments RP-33-99, or its successor, published by the Illuminating Engineering Society of North America (IESNA). Proposed uses that demonstrate a need to exceed the specific site lighting limits shown below for safe and reasonable exercise of the proposed use must provide a professionally produced lighting plan which adheres to the current Illuminating Engineering Society of North America (IESNA) recommendations for the proposed use.

RESPONSE: The proposed lighting meets the recommendations of *IESNA* RP-33-99.

Section 12 Site Lighting Standards
12.2 Standards

12.2.2. Uniformity: As measured in foot candles at grade, maximum-to-minimum illumination levels shall not exceed a ratio of twenty (20) to one (1.).

RESPONSE: The north parking lot has a calculated maximum-to-minimum uniformity of 4.3-to-1. The top deck of the parking garage has a calculated maximum-to-minimum uniformity of 10.7-to-1.

12.2 Standards

12.2.3. Illumination Levels:

Minimum	*0.2 footcandles (fc*
Maximum	*5.0 footcandles (fc)*
Average	*1.25 footcandles (fc)*

RESPONSE: *IESNA* RP-20-14 Lighting for Parking Facilities recommendations for surface parking lots a minimum illuminance level at grade of 0.5 footcandles, an average-to-minimum uniformity of 4-to-1, or better, and a maximum-to-minimum uniformity of 15-to-1, or better. The illuminance at the north parking lot has been calculated to be as follows:

Minimum:	0.6 footcandles	Maximum:	2.6 footcandles
Average:	1.9 footcandles	Average-to-Minimum Uniformity:	3.1-to-1

The illuminance at the top deck of the parking garage has been calculated to be as follows:

Minimum:	0.6 footcandles	Maximum:	6.4 footcandles
Average:	2.4 footcandles	Average-to-Minimum Uniformity:	4.0-to-1

The lighting poles at the roof deck have been limited in height to 18 feet, and are located only within the center zone of the parking deck to minimize the visual impact as might be viewed off-site. This design restriction requires a somewhat higher maximum illuminance level at center of the roof deck than is listed in the City's design criteria, however, the design meets all of the *IESNA* lighting recommendations.

12.2 Standards

12.2.4. Wattage: No fixture shall exceed 250 watts, except in industrial areas.

RESPONSE: The maximum wattage of any of the proposed luminaires is 129.5 watts.

12.2 Standards

12.2.5. Light Trespass: The maximum illumination level at a property line shall not exceed 0.1 foot candle, as measured at grade, except where abutting industrial, or other non-sensitive uses. All residential uses and natural resource protection areas are to be considered sensitive to light trespass. In certain instances where a proposed development is adjacent to a sensitive use, house-side shielding may be necessary to comply with this standard.

RESPONSE: The only residential property that abuts the project are the residences at 210 and 214/214 St. John Street. The proposed lighting has been selected and located to avoid any point of illuminance at grade across the residential property lines that exceeds 0.1 footcandle.

12.2 Standards

12.2.6. Luminaire Types: All fixtures, including pole mounted and wall mounted luminaires, shall be a "cut-off" type where lenses, refractors or lamp sources do not extend below the surface of the fixture housing and no direct light shall be directed at or above the horizontal plane. Sites which are part of an historic district or require specific decorative lighting fixtures as means to achieve compatibility within an existing architectural context may propose non-cutoff fixtures providing that they have built in reflectors to mitigate uplighting and that photometrics fall within IESNA guidelines. Low pressure sodium bulbs are prohibited.

RESPONSE: See the Response included on page 1 for Chapter 14 – Land use, Article V Site Plan, 14-526.6 Exterior Lighting, (a) Site Lighting. All proposed luminaires are classified as having "cut-off" optical distribution with no light being emitted above the horizontal plane.

12.2 Standards

12.2.7. Fixture Height: Fixtures shall be mounted at the lowest height necessary with no fixture height to exceed twenty (20) feet above grade, except in sites proposed for large industrial and/or commercial uses, where the fixture height shall not exceed thirty (30) feet above grade. For the purposes of this standard only, a large industrial and/or commercial use is defined to have greater than fifty thousand (50,000) gross square feet of building space.

RESPONSE: The luminaire mounting height at the lighting poles in the north parking lot is 20 feet. The luminaire mounting height at the lighting poles at the top deck of the parking garage is 18 feet.

12.2 Standards

12.2.8. Lighting Curfew: For non-residential uses, lighting in vehicle parking areas containing twenty (20) or more parking spaces shall be reduced to 50% of permitted levels from one hour after the business closing to one hour before business opening. If lighting levels are already below 50% of permitted levels, no curfew adjustment is required. Motion sensor activated lighting shall be permitted during closed hours to activate additional lighting above the 50%permitted, for the purposes of public safety.

RESPONSE: The parking garage will be in continuous use (at all hours), and therefore, reducing lighting levels after business closing is generally not applicable. The lighting at the roof deck, however, will be controlled both by photocell and by motion sensor such that the lights will only illuminate after 11:00pm when cars or pedestrians are detected. Sensors will be located at the bottom of the vehicle ramp leading from Level 7 up to the roof deck to automatically turn on the lights after 11:00pm when a vehicle is detected entering the ramp. Likewise, sensors will be located at the stair landings between Level 7 and the roof deck to automatically turn on the roof lights when pedestrians are detected. The roof lights will stay on for a period of 30 minutes when motion is no longer detected by the sensors.
Lights in the Mechanical Room on Level 1 will operate from dusk until dawn by means of photocell.

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MMC St. John Street Parking Garage

Portland, Maine

September 5, 2018

PROPOSED SITE LIGHTING LUMINAIRES AND LIGHTING POLES

TYPE S1 & S1a: 12-FOOT TALL POST LIGHTS.
THE FRONT PLAZA LUMINAIRES AND POLES SHALL BE ALCOTT SERIES "METALLIC SILVER" COLOR. THE FOUR LIGHT LUMINAIRES/POLES THAT ARE LOCATED ALONG THE WALK LEADING FROM ST. JOHN STREET, IMMEDIATELY BESIDE 222 ST. JOHN STREET SHALL BE ALCOTT SERIES "BLACK" COLOR.

TYPE S4: WALL MOUNTED LIGHTS ABOVE WALKWAY
LUMINAIRES SHALL BE INSTALLED WITH BOTTOM OF LUMINAIRE AT 10 FEET ABOVE GRADE

TYPE S5: LIGHTS MOUNTED ON UNDERSIDE OF FRONT CANOPY

TYPE S6 & 6a: WALL MOUNTED SECURITY LIGHTS
LUMINAIRES SHALL BE INSTALLED WITH BOTTOM OF LUMINAIRE AT 10 FEET ABOVE GRADE

TYPE S7: WALL MOUNTED LIGHTS ABOVE GARAGE ENTRANCE AND EXIT
LUMINAIRES SHALL BE INSTALLED WITH BOTTOM OF LUMINAIRE AT 20 FEET ABOVE GRADE

TYPE S8, S9 & 9a 20 FOOT TALL PARKING LOT LIGHTING POLES

TYPE S10 18 FOOT TALL TOP GARAGE DECK LIGHTING POLES

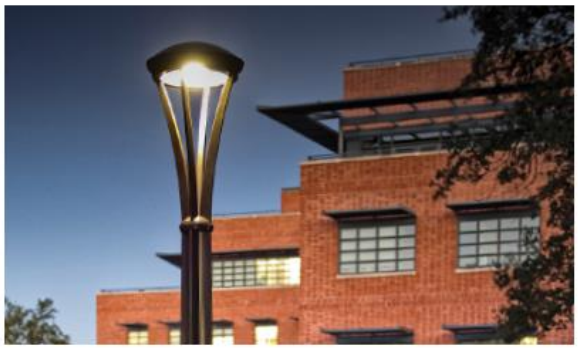
TYPE G1: GARAGE INSIDE LIGHTS

TYPES S1 and S1a

landscapeforms®

ALCOTT

Product Data Sheet



The Alcott pedestrian light is a contemporary interpretation of a traditional lamppost. Its gently curved posts are topped by a domed energy-efficient LED luminaire sealed with thermoformed lens. Proprietary AWEN™ optics combined with multiple aiming angles provide directional lighting, reducing light pollution and wasted energy.

General Description

- Offered in 3 standard mounting heights (12', 14', and 16')
- Asymmetrical and symmetrical distribution types available
- Mounting template and anchor hardware included
- Alcott ships completely assembled and ready for installation
- Zero up-light, International Dark-Sky approved
- UL Listed, suitable for wet locations

Electrical

Surge protected 100V-277V 50/60 Hz, Class 2 dimmable driver mounted within integrated cast aluminum base cabinet. LED cartridge with weatherproof quick-disconnect provides ease of serviceability. Alcott ships prewired and fully assembled.

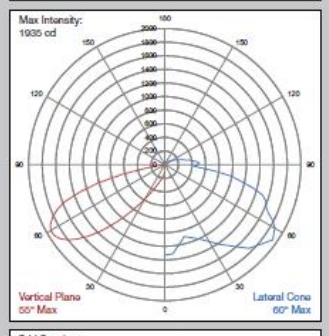
Alcott Type 3

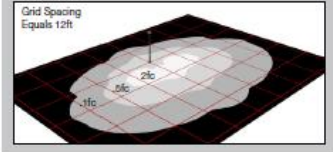
Type 3 Distribution
Structure: Housing, LED cartridge and cabinet are cast aluminum, pole is aluminum extrusion.
Lamp: 48 Cree XP-E2 LEDs
CCT: 3000K, 3500K, 4000K
L70: >100,000 hrs
Drive Current: 350mA
Optic: AWEN™ Optic
Lens: Diffused Acrylite®
Power Supply: 100V-277V
LED Driver: TRP PLED-75W
Dimmable: 0-10V
BUG Rating: B0 U0 G1
IP Rating: IP66 for LED Cartridge

Alcott Type 5

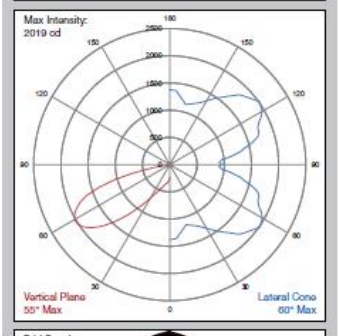
Type 5 Distribution
Structure: Housing, LED cartridge and cabinet are cast aluminum, pole is aluminum extrusion.
Lamp: 96 Cree XP-E2 LEDs
CCT: 3000K, 3500K, 4000K
L70: >100,000 hrs
Drive Current: 350mA
Optic: AWEN™ Optic
Lens: Diffused Acrylite®
Power Supply: 100V-277V
LED Driver: (2) TRP PLED-75W
Dimmable: 0-10V
BUG Rating: B3 U0 G1
IP Rating: IP66 for LED Cartridge

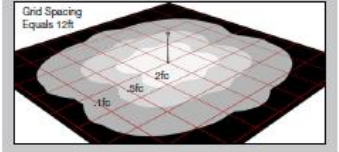
Alcott Type 3





Alcott Type 5





Type S1: Alcott Type 3
Type S1a: Alcott Type 5

TYPES S1 and S1a

Finish

Pangard II®, offered exclusively by Landscape Forms, is a 19 step program of cleaning, priming, and powdercoating that resists rusting, chipping, peeling and fading to produce the finest metal finish available for site furniture and outdoor lighting. In addition, Pangard II® contains no heavy metals and is free of Hazardous Air Pollutants.

Product	Lamp	Drive Current	Color Temp.	Input Voltage	Mounting
AC Alcott	048L3 (48 LED, Type 3) --- 096L5 (96 LED, Type 5)	035F (350 mA)	40K (4000K) 35K (3500K) 30K (3000K)	UV1 (100-277VAC)	12 (144in) 14 (168in) 16 (192in)

TYPE S4

Luminaire Led

	A	B	C
AEL 12	20.79	5.40	3.60

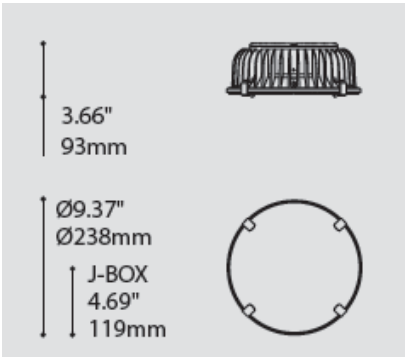
Description	The Architectural Egress Luminaire combines a unique, patented design shaped with high performance, full cut-off optics to achieve completely unobtrusive illumination of a space or path of egress. When mounted over a doorway, the fixture is perceived as an element of the building structure and, additionally, provides water protection in the form of a drip cap over the doorway. Multiple lengths are available to match a given door opening and our unique quick mount system facilitates installation and maintenance.
Housing	Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat.
Wall Mount	Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat. Designed to provide quick mounting to housing and secured with (2) captive stainless steel TORX® head screws.
Lens Frame	Marine grade heat treated extruded aluminum, clear anodized. Secured to fixture via integral concealed hinge and (3) captive stainless steel TORX® head screws.
Lens	UV stabilized diffused extruded polycarbonate.
End Caps	Die-cast marine grade aluminum continuously welded to housing. All welds ground smooth.
Reflector	Electrostatically brightened anodized aluminum PVD coated and absolutely color-free of iridescence. Shaped to provide full cutoff, LED point dispersion and maximum efficiency.
Drivers	Constant current drivers at 350mA. High output version utilizes 700mA.
LED	Samsung LM561B+ Series @ 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of 130,000 hours at 50°C. Tested in accordance with LM-80. Ten year warranty on LED boards against operational defects.
Gaskets	Closed cell self-adhesive neoprene to provide watertight seal between fixture and wall and between fixture and lens frame.

SERIES	LED	CCT	VOLTS	LENS	COLOR
				DP	
AEL 12	12” - 10W	3000K	120-277	DP	BKH
AEL 24	24” - 10W	3500K	347		BZH
AEL 36	24” - 20W	4000K			SVH

LUMINAIRES TO BE INSTALLED ON WALL WITH BOTTOM OF FIXTURE AT 10’-0” ABOVE GRADE

TYPE S5

EUREKA



DESIGN: Coupé is an industrial-looking shallow fixture that can be installed on low ceilings. Add a conical metal shade for a modern look and you have the Turbo.

INSTALLATION: These fixtures are perfect for indoor surface mounted applications and are easy to install due to an integrated connection box. Also designed for outdoor projects, Coupé & Turbo can be used in wet locations.

LIGHT SOURCE: 13W or 26W LED Chip-on-board (COB) emitter. Electronic dimming available on all models.

STRUCTURE: Durable die cast aluminum enclosure with stainless steel spring clips. Turbo has an additional spun aluminum shade with exterior grade fine texture powder coat finish.

DIFFUSER: Compound lens structured around layers of diffusing and conical deglaring prismatic sheet PMMA.

CERTIFIED: CSA Listed to US and Canadian safety standards; 25°C ambient and wet-locations. IP64 rated

MODEL MODÈLE

4766-SIJ	COUPÉ

LIGHT SOURCE SOURCE LUMINEUSE

(WATTAGE, LAMP TYPE, OTHER INFO)

LED.13	⌓	13W, LED
LED.26	⌓	26W, LED

COLOR TEMPERATURE TEMPÉRATURE DE COULEUR

30	3000K
35	3500K
40	4000K

VOLTAGE VOLTAGE

120V	120 VOLT
277V	277 VOLT

DIMMING OPTION OPTION DE GRADATION

DV	0-10V DIMMING (120-277V)
DP	PHASE DIMMING (120V ONLY)

LED DIMMING DRIVER IS STANDARD IN THESE PRODUCTS, PLEASE SPECIFY YOUR DIMMING TYPE.

HEATSINK FINISH FINI RADIATEUR

BLKA	BLACK ANODISED

INTERIOR DIFFUSER FINISH FINI DIFFUSEUR INTÉRIEUR

CDP	CONICAL DEGLARING PRISM

LUMINAIRES TO BE INSTALLED ON UNDERSIDE OF CANOPY

TYPE S6

ONE4TWO™

WEB PIN™ 737

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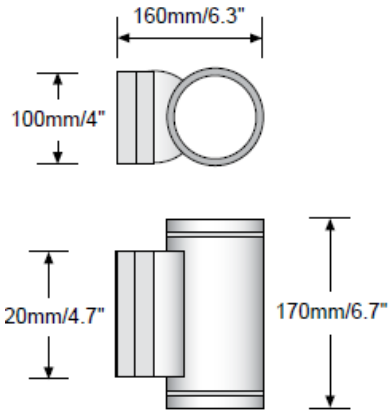

GENERAL SPECIFICATION

Housing: Die-cast and extruded aluminium.

External Screws: Stainless steel.

Lens: Clear glass.

Gaskets: One piece silicone.

Reflector: High purity aluminium, silver anodised. 14° and 40° reflectors may be adjusted to -12° from vertical.

Finish: Silver powder coated light gray or black coated as standard.

Drivers: HPF, electronic for 120-277V. Dimming 0-10V or Trailing edge 120V.

Minimum Starting Temperature: -20°C.

Weight: Maximum 8.8lb.

Approvals: ETL. Wet location, IP65.

Code:	Power:	*Delivered lms:	Distribution:
26 6033	2 x6W **LED**	932lm	10°up + 35° down
26 6013	2 x 6W **LED**	932lm	10°up + 10° down
26 6023	2 x 6W **LED**	932lm	35°up + 35° down
26 6113	6W **LED**	466lm	10°down
26 6123	6W **LED**	466lm	35° down

B SPECIFY CCT

30 3000K (min 80 CRI)

40 4000K (min 80 CRI)

C SPECIFY FINISH

BL Black

GR Light Gray

LUMINAIRES TO BE INSTALLED ON WALL WITH BOTTOM OF FIXTURE AT 10’-0” ABOVE GRADE

TYPE S6a

ONE4TWO™

WEB PIN™ 737

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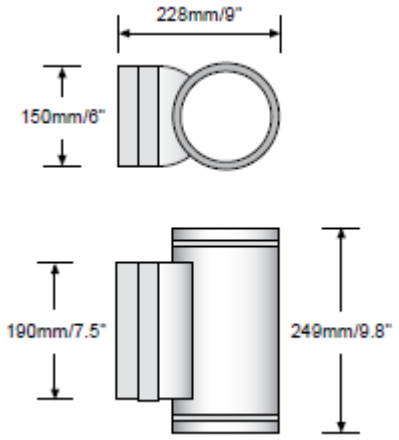


GENERAL SPECIFICATION

Housing: Die-cast and extruded aluminium.

External Screws: Stainless steel.

Lens: Clear glass.

Gaskets: One piece silicone.

Reflector: High purity aluminium, silver anodised. 14° and 40° reflectors may be adjusted to -12° from vertical.

Finish: Silver powder coated light gray or black coated as standard.

Drivers: HPF, electronic for 120-277V. Dimming 0-10V or Trailing edge 120V.

Minimum Starting Temperature: -20°C.

Weight: Maximum 8.8lb.

Approvals: ETL. Wet location, IP65.

Code:	Power:	*Delivered lms:	Distribution:
26 7033	2 x 14W LED	2098	10°up + 35° down
26 7013	2 x 14W LED	2098	10°up + 10° down
26 7023	2 x 14W LED	2098	35°up + 35° down
26 7113	14W LED	1049	10°down
26 7123	14W LED	1049	35° down

B SPECIFY CCT

30 3000K (min 80 CRI)

40 4000K (min 80 CRI)

C SPECIFY FINISH

BL Black

GR Light Gray

LUMINAIRES TO BE INSTALLED ON WALL WITH BOTTOM OF FIXTURE AT 10’-0” ABOVE GRADE

TYPE S7

HUBBELL Outdoor Lighting

SPECIFICATIONS

Intended Use:
Slender wallpack/floodlight available in two sizes for a variety of applications including building perimeter/security lighting, entrances, stairways, loading docks or facades for schools, apartments or commercial buildings.

Construction:
Rugged die-cast aluminum housing with corrosion resistant powder coat finish both protects and provides architectural appearance. Heat dissipating fins provide superior thermal performance extending the life of the electronic components.

Electrical:
- 120-277V, 50/60Hz electronic drivers
- 347V and 480V available in larger SG2 housing
- 10KA surge protection included

LED(s) Optics, CCT:
- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- Smaller SG1 housing has 2 LEDs, larger SG2 housing has 3 LEDS, see page 2 for electrical and photometric data

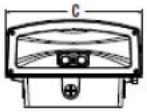
Lenses:
- Impact resistant tempered glass offers zero uplight
- Comfort lens available as an option or accessory to reduce glare (7-10% lumen reduction) and provide better uniformity

Options/Controls
- Button photocontrol for dusk to dawn energy savings. Stock versions include 120V-277V PC with a cover which provides a choice to engage photocontrol or not. PC is installed in top hub.
- Occupancy sensor available for on/off and dimming control in larger SG2 housing.
- SiteSync™ wireless lighting control delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution See ordering information or visit www.hubbelllighting.com/sitesync for more details.
- Battery backup options available in larger SG2 housing rated for either 0˚ C or -30˚ C. Performance exceeds NEC requirement providing 1 fc minimum over 10'x10' at 11' mounting height
- Diffused comfort lens provides glare control and improved uniformity. Available as an option or accessory

Listings
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Listed to UL1598 for use in wet location, listed for -40C to 40C applications
- IDA approved with zero uplight for 3000K and warmer CCTs
- IP65

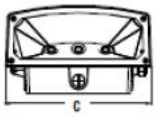
DIMENSIONS

SG1



A	B	C	Weight
4.19" 106.5 mm	7.80" 198 mm	6.61" 168 mm	4.4 lbs. 2 kg

SG2



A	B	C	Weight
5.80" 147 mm	11.14" 283 mm	9.52" 242 mm	11 lbs. 5 kg

FAMILY	CCT/CRI	DISTRIBUTION	VOLTAGE	COLOR/FINISH
SG1-20 Size 1, 20w	3K7 3000K, 70 CRI	FT Fwd Throw	UNV 120V-277V	DB Textured Dark Bronze
SG1-30 Size 1, 30w	4K7 4000K, 70 CRI		120[1] 120V	BL Textured Black
SG2-50 Size 2, 50w	5K7 5000K, 70 CRI		277[1] 277V	WH Textured White
SG2-80 Size 2, 80w			UHV[1] 347V-480V	GYS Smooth Gray
				PS Smooth Plat. Silver
				CC Custom Color

LUMINAIRES TO BE INSTALLED ON WALL WITH BOTTOM OF FIXTURE AT 20'-0" ABOVE GRADE

TYPES S8, S9 & 9a

VIPER S SERIES

SMALL VIPER LUMINAIRE

Cat.#		BEACON design . performance . technology
Job	Type	Approvals

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- Manufactured with die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

Electrical:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is ≥.90 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher.
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.
- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night (see www.beaconproducts.com/products/energeni).
- In addition, Viper can be specified with **SiteSync™** wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/sitesync for more details.

Installation:

- Mounting options for horizontal armd, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- IFS polyester powder-coat electro-statically applied and thermocured.
- IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

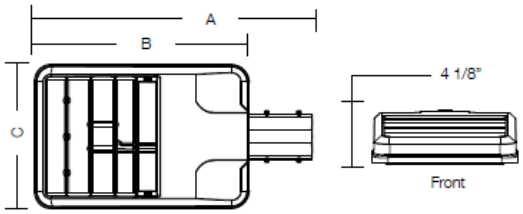
- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Listed to UL1598 and CSA22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications with SF2 mounting
- IDA approved

Warranty:

Five year limited warranty for more information visit:
www.hubbelllighting.com/resources/warranty

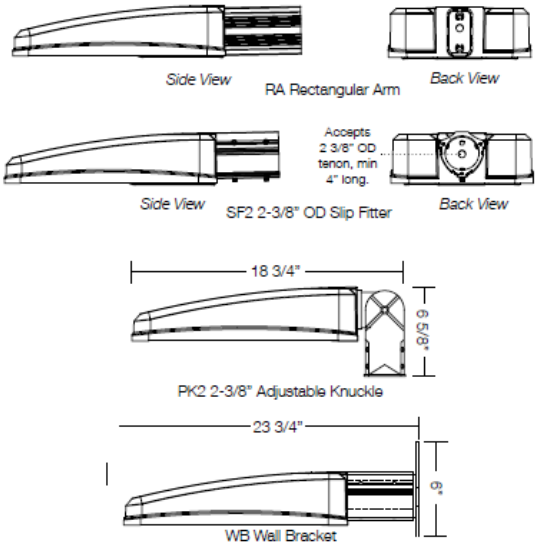
PRODUCT IMAGE(S)

DIMENSIONS



A	B	C	Weight:	EPA
22.75" (578 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

MOUNTING OPTIONS



TYPES S8, S9 & 9a

SERIES
- VPS viper-small

ENGINE-WATTS
- 24NB-55 55W, LED array
- 30NB-70 70W, LED array
- 36NB-80 80W, LED array
- 48NB-110 110W, LED array
- 60NB-136 136W, LED array

LED COLOR
- 3K 3000K
- 4K 4000K
- 5K 5000K

OPTICS[4]
- T1 type I
- T2 type II
- T3 type III
- T4 type IV
- T5R type V, rectangular
- T5QM type V, square medium
- T5W type V, round wide
- FR front row auto optic

VOLTAGE
- UNV 120-277V
- 347V 347V
- 480V 480V

ELECTRICAL OPTIONS
- PCR-TL Twist lock receptacle with photo control
- PCR-SC Twist lock receptacle with short-ing cap
- PCRU Twist lock receptacle
- 2PF[7] dual power feed

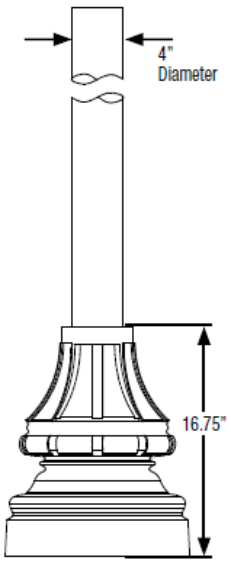
CONTROL OPTIONS
- GENI-XX[6] Energeni

HOUSE SIDE SHIELD OPTIONS
- HSS-90 house side shield 90°
- HSS-180 house side shield 180°
- BLC[3] backlight control

BIRD DETERRENT
- BSP bird spike

MOUNTING OPTIONS
- RA rectangular arm for round or square pole mount. RPA included.

FINISH
- BBT basic black textured
- BMT black matte textured
- WHT white textured
- MBT metallic bronze textured
- BZT bronze textured
- DBT dark bronze textured
- GYS gray smooth
- DPS dark platinum smooth
- GNT green textured
- MST metallic silver textured
- MTT metallic titanium textured
- OWI old world iron



APPLICATIONS

- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION

- SHAFT: One-piece straight aluminum with fluted or smooth cross section; Extruded shafts of 6061-T6 aluminum in 1/8", 3/16", or 1/4" thickness. Decorative base of 356 cast aluminum.
- POLE CAP OR FINALS: Cap or decorative finials available for side mounted luminaires. Open top or tenons provided for post top mounted luminaires.
- HAND HOLE: Hand hole provided in cast base; Mounting provisions for grounding lug located behind cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

FINISH

- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint finish coat available in twelve standard colors; Custom colors available; RAL number preferable.

POLE HEIGHT = 20'-0"

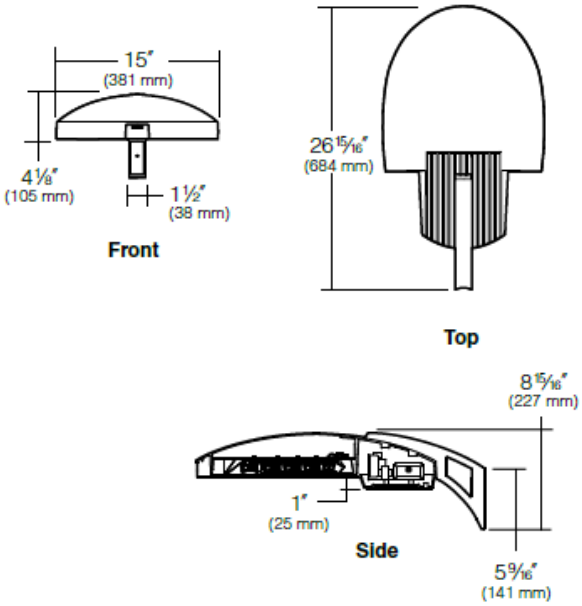
Catalog Number	Height		Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Square	Base Plate Size	Anchor Bolt Size	Bolt Projection	Pole weight (lbs)
	Feet	Meters								
RSA-B-CENA-S-20-40-B	20	6.1	4" Round	0.188"	9.50"	6.72"	13-1/2" dia. X 16-3/4" Tall	5/8 x 24 x 3	3-1/4"	83

Type S8: TYPE T5W OPTICAL DISTRIBUTION – 110 WATT
Type S9: TYPE II OPTICAL DISTRIBUTION – 55 WATT
Type S9a: TYPE III OPTICAL DISTRIBUTION – 55 WATT

TYPE S10

WARP9® Small PicoEmitter® LED

KIM LIGHTING



Housing:

- One-piece die-cast, low copper (<0.6% Cu) aluminumalloy with integral cooling ribs over the optical chamber and electricalcompartment.
- Solid barrier wall separates optical and electrical compartments.
- Double-thick wall with gussets on the support-arm mounting end.
- Housing forms a half cylinder with 55° front face plane providing a recess to allow a flush single-latch detail.
- All hardware is stainless steel or electro-zinc plated steel.

Lens Frame:

- Integral hinges with stainless steel pins provide no-tool mounting and removal from housing.
- Single die-cast aluminum cam-latch provides positive locking and sealing of the optical chamber by a one-piece extruded and vulcanized silicone gasket to provide an IP66 rating for the optical module.
- Clear 3/8" thick tempered glass lens retained by eight steel clips with full silicone gasketing around the perimeter.

Optical Module:

- Precision, replaceable PicoEmitters are positioned to achieve directional control toward desired task.
- The entire EmitterDeck fastens to the housing as a one-piece module.
- Type I, II, III, IV, V, L (left), and R (right) standard distributions. Custom available.
- 3000K, 4000K, 5000K standard CCT. Amber and custom available.
- IP66 certified
- Die-cast, low copper aluminum heat sink modules provide thermal transfer at PCB level.
- Anodized aluminum carrier plate and heat sink modules.

Configuration			EPA
	1SA	1 Arm Side Mt.	.52
	2SB	2 Arm Side Mt.	1.0
	2SL	2 Arm Side Mt.	.82
	3ST	3 Arm Side Mt.	1.3
	3SY*	3 Arm Side Mt.	1.3
	4SC	4 Arm Side Mt.	1.5
	1W	Single Wall Mt.	n/a

Fixture

Housing	Distribution	Drive Current
WP9S Small, 60 LEDs	1 Type I	E35 350mA PicoEmitter
	2 Type II	
	3 Type III	
	4 Type IV	
	5 Type V	
	R Type R, Right	E70 700mA PicoEmitter

Electrical Module

Source	Color Temperature[2]	Voltages
60L 60 LEDs, 66W	2K[3] 580nm	120 120V
	3K 3000K	208 208V
	4K 4000K	240 240V
	5K 5000K	277 277V
		347[4] 347V
		480[4] 480V

Fixture Finish

BL	Black
DB	Dark Bronze
GT	Graphite
LG	Light Gray
PS	Platinum Silver
TT	Titanium
WH	White

Photocell Options

A25-7[1]	7-pin Photocell Receptacle
A30	120V Button Photocell
A31	208V Button Photocell
A32	240V Button Photocell
A33	277V Button Photocell
A34	480V Button Photocell
A354	347V Button Photocell

TYPE S10

KIM LIGHTING

Pole Height	Pole Diameter	Bolt Circle Dia.	Anchor Bolt Projection	Anchor Bolts Size	Base Cover Size	Conduit Opening
8'-14'	4"	8½"	3¼"	¾" x 15" + 3"	11⅞"	3" dia.
8'-14'	5"	8½"	3¼"	¾" x 30" + 4"	11⅞"	3" dia.
10'-14'	3⅜"	7"	3⅛"	¾" x 15" + 3"	10⅛"	2½" dia.
12'	6"	10½"	3⅜"	¾" x 30" + 4"	11⅞"	3" dia.
14'	6"	10½"	3¼"	¾" x 30" + 4"	11⅞"	3" dia.
16'-20'	4"-5"	8½"	3¼"	¾" x 30" + 4"	11⅞"	3" dia.
16'-20'	6"	10½"	3⅜"	¾" x 30" + 4"	14"	5" dia.
25'-30'	6"	10½"	3⅜"	¾" x 30" + 4"	14"	5" dia.

15'-6"-Foot Pole Height on a Raised 2'-6" Base

Pole Construction: Seamless round extruded aluminum tube of alloy 6061-T6, welded to top and bottom of aluminum base casting of alloy 356.

Base Cover: Base has a two-piece cast aluminum full cover of 319 alloy, secured by stainless steel screws.

Pole Cap: A flush-sided cast aluminum pole cap is provided for side arm mounted luminaires.

Handhole: 18" up from base, with a gasketed cover and ground lug. Poles with a 3⅜" O.D. include a handhole reinforcement casting welded in place.

Anchor Bolts: Four galvanized anchor bolts provided, complete with eight nuts, eight flat washers, and a presswood template.

Vibration Dampener: All poles 25' and above include an internally mounted, factory installed pendulum vibration dampener, with flush stainless steel socket head fasteners finished to match pole.

Strength: Poles will withstand wind loads as listed in chart (See page **2**) when luminaires are mounted per fixture installation instructions.

Finish: Super TGIC thermoset polyester powder coat paint applied over a titanated zirconium conversion coating. Standard colors are Black, Dark Bronze, Light Gray, Graphite Platinum Silver, Titanium and White. Custom colors are available.

Pole –

Pole Catalog Number	X	Y	Wind Map Steady Wind 85	90	100	110	120	130	140	150
☐ PRA20-4188	19.5'	4" x .188	5.33	4.37	3.74	2.48	1.52	0.91	0.63	0.42

TYPE G1
(GARAGE LUMINAIRE)

ENDURA SERIES WALL/BUILDING MOUNT	Cat.#	BEACON design . performance . technology
	Job / Type	Approvals

SPECIFICATIONS

Intended Use:
The Endura is a ceiling surface mounted or pendant mounted parking structure luminaire with a field replaceable LED light-engine & optical bezel system. Internal components are totally enclosed in a rain-tight and corrosion-resistant die cast aluminum housing. The Endura Luminaire is CSA listed and suitable for damp locations (wet location available on request).

Construction:
- Die cast aluminum two-piece housing
- Shape of the top housing is designed as a bird nesting deterrent
- Die cast main (thermal) housing provides direct-heat exchange between the LED light engine and the cool outdoor air by drawing heat through integral heat channels and out to the sculptured and functional luminaire surface.
- LED drivers are thermally isolated from the main housing, mechanically attached and heat- sinked to the top housing.
- Main housing is designed with heat dissipating fins for LED thermal management without the use of metallic screens, cages, or fans
- Main and top housings are designed to hinge open for easy mounting and easy access

LED/Optics:
- Endura luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the Endura luminaire to be rated for high-pressure hose down applications.
- Optical cartridge is secured to the extruded housing with fasteners and a heat pad to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assemble is gasketed for high pressure hose down cleaning.
- Cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Electrical:
- 120V through 277V, 50 Hz to 60 Hz.
- Endura comes standard with 70 CRI.
- Power factor is min 0.92 at full load.
- Optional 0 to 10 volt dimming drivers are available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. 15A rating applies to primary (AC) side only.
- Surge protection - 20KA

Controls/Options:
- Endura is available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the wattage down to a factory preset level, reducing light level accordingly. When motion is detected, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from the standard configurations.
- Available with Energeni for optional set dimming with simple delay, or timed dimming based on hours of operation or time of night (see Energeni product page for more details www.beaconproducts.com/products/energeni
- In addition, Endura can be specified with **SiteSync™** wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit: www.hubbelllighting.com/sitesync/ for more details

Installation:
- Top housing is designed with various bolt patterns for mounting to a recessed, surface or rigid-pendant hung 4" junction box and rigid stem provided by others)
- After mounting the top housing to the junction box, the main housing is designed to hang and hinge closed after connecting the male and female quick connectors
- Mounting design permits a simple retrofit to existing parking structure luminaires that utilize surface mount or recessed junction boxes

Finish
- IFS polyester powder-coat electrostatically applied and thermocured.
- IFS finish consists of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, ovendry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

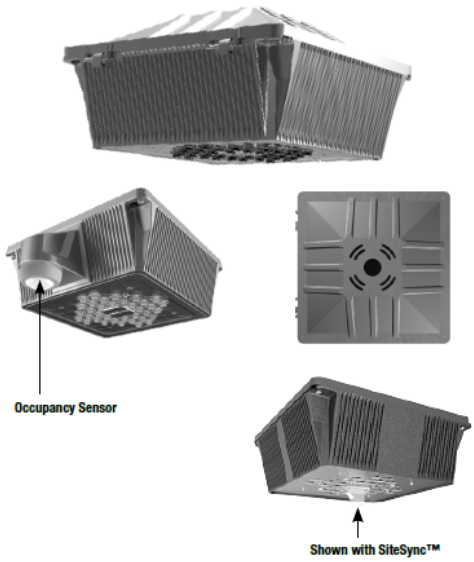
Listings:
- The luminaire shall bear a CSA label and be marked suitable for damp locations (standard). Luminaire may be specified for wet locations.
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://www.beaconproducts.com/products/endura

Warranty:
Five year limited warranty for more information visit: www.hubbelllighting.com/resources/warranty

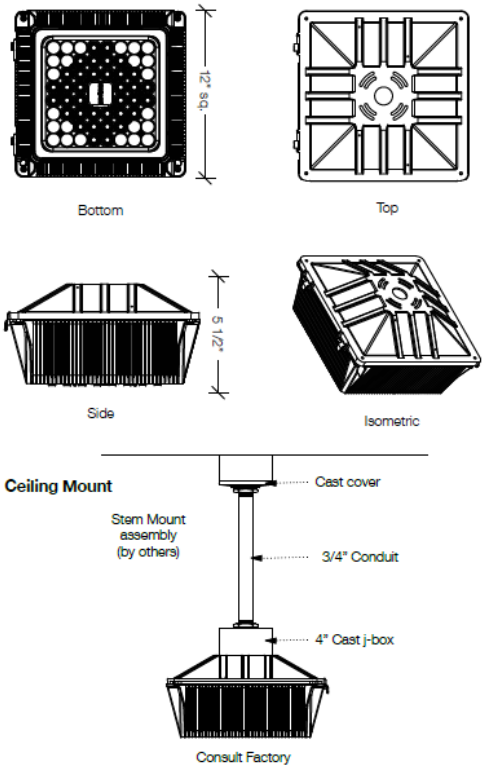
CERTIFICATIONS/LISTINGS

C SP US

PRODUCT IMAGE(S)



DIMENSIONS



TYPE G1
(GARAGE LUMINAIRE)

SERIES		ENGINE-WATTS		LED COLOR[11]	
EDR	Endura	24NB-27	27 Watts - LED array	3K	3000K
		24NB-55	55 Watts - LED array	4K	4000K
		36NB-80	80 Watts - LED array	5K	5000K (std.)
		48NB-110	110 Watts - LED array		

OPTICS	
T5R	Type V, rectangular
T5W	Type V, wide
T5QM	Type V, square medium
T5QN	Type V, square narrow
T5QW	Type V, square wide

HIGHER MOUNTING APPLICATIONS	
2X2	Type V Concentrated Spot
4X4	Type V Concentrated Narrow
5X5	Type V Concentrated Medium

VOLTAGE	
UNV	120-277V
347	347V
480	480V

CONTROL OPTIONS	
GENI-XX[5,9]	Energeni
SWP[6,9]	SiteSync Wireless Pre-Commission
SWPM[6,7,9]	SiteSync Wireless Pre-Commission w/ Motion Detection

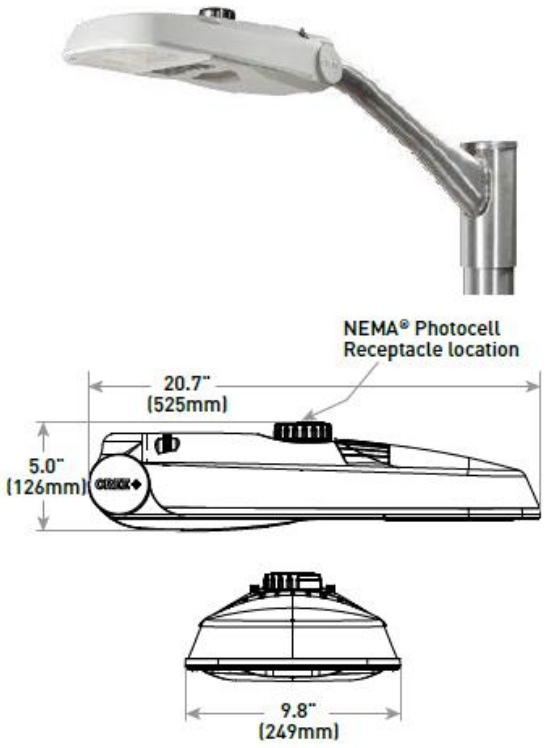
ELECTRICAL OPTIONS	
PEC	Photocell, button
2PF[1,2,8]	Dual power feed
BPC[4,8]	Cold weather battery pack
BP[4,8]	0° C battery pack

SENSOR OPTIONS	
MOB[3,7,9]	Occupancy Sensor (33% or 50% dimming
OCS[9,10]	Occupancy Sensor (on/off)

FINISH	
BBT	basic black textured
BMT	black matte textured
WHT	white textured
MBT	metallic bronze textured
BZT	bronze textured
DBT	dark bronze textured
GYS	gray smooth
DPS	dark platinum smooth
GNT	green textured
MST	metallic silver textured
MTT	metallic titanium textured
OWI	old world iron
RAL	_____

LUMINAIRES THAT ARE IMMEDIATELY ADJACENT TO THE PERIMETER WALLS SHALL BE CONTROLLED WITH DAYLIGHT SENSORS

City of Portland Street Lights



Product Specifications

CREE WAVEMAX® TECHNOLOGY

Featuring up to 90% optical efficiency and precise control, Cree WaveMax® Technology provides unmatched comfort and decreased LED source luminance by smoothly spreading brightness over a broader area. When integrated with luminous surfaces made of a polymer medium engineered with DiamondFacet™ optical elements, extremely high efficacy luminaires are the result – ultimately creating more visually comfortable and appealing environments while exceeding illumination performance.

CONSTRUCTION & MATERIALS

- Housing constructed of high strength, lightweight bulk molding compound for long weathering and durability
- UV stabilized polymeric door with handle pocket for tool-less entry
- Straight in wiring to terminal block for power input (#6-#14 AWG)
- IP66 rated optic box and driver enclosure inside optic box
- Mounts on 1.25" (32mm) IP, 1.66" (42mm) O.D. or 2" (51mm) IP, 2.375" (60mm) O.D. horizontal tenon (minimum 8" [203mm] in length) and is adjustable +/- 5° in 2.5°increments to allow for fixture leveling (two axis T-level included)
- Luminaire secures with two mounting bolts
- Comes standard with Utility Label per ANSI C136.15 and 7-pin NEMA® Photocell Receptacle per ANSI C136.41
- **Weight:** 8.45 lbs. (3.8kg); add 0.4 lbs. (0.2kg) for RSW-BLSS accessory

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V, 50/60Hz
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral 10kV surge suppression protection standard
- When code dictates fusing, a slow blow fuse or type C/D breaker should be used to address inrush current
- **10V Source Current:** 0.25mA
- **Operating Temperature Range:** -40°C - +50°C (-40°F - + 122°F)

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- Meets CALTrans 611 Vibration testing
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions
- RoHS compliant. Consult factory for additional details
- Dark Sky Friendly, IDA Approved when ordered with 27K or 30K CCT
- DLC and DLC Premium qualified versions available. Please refer to https://www.designlights.org/search/ for most current information

ATTACHMENT 2: SIGNAGE PLAN

Maine Medical Center
Bramhall Campus Environmental Graphics & Wayfinding Program

Site Submission
8.15.18

Leverage/

Masterplan Overview

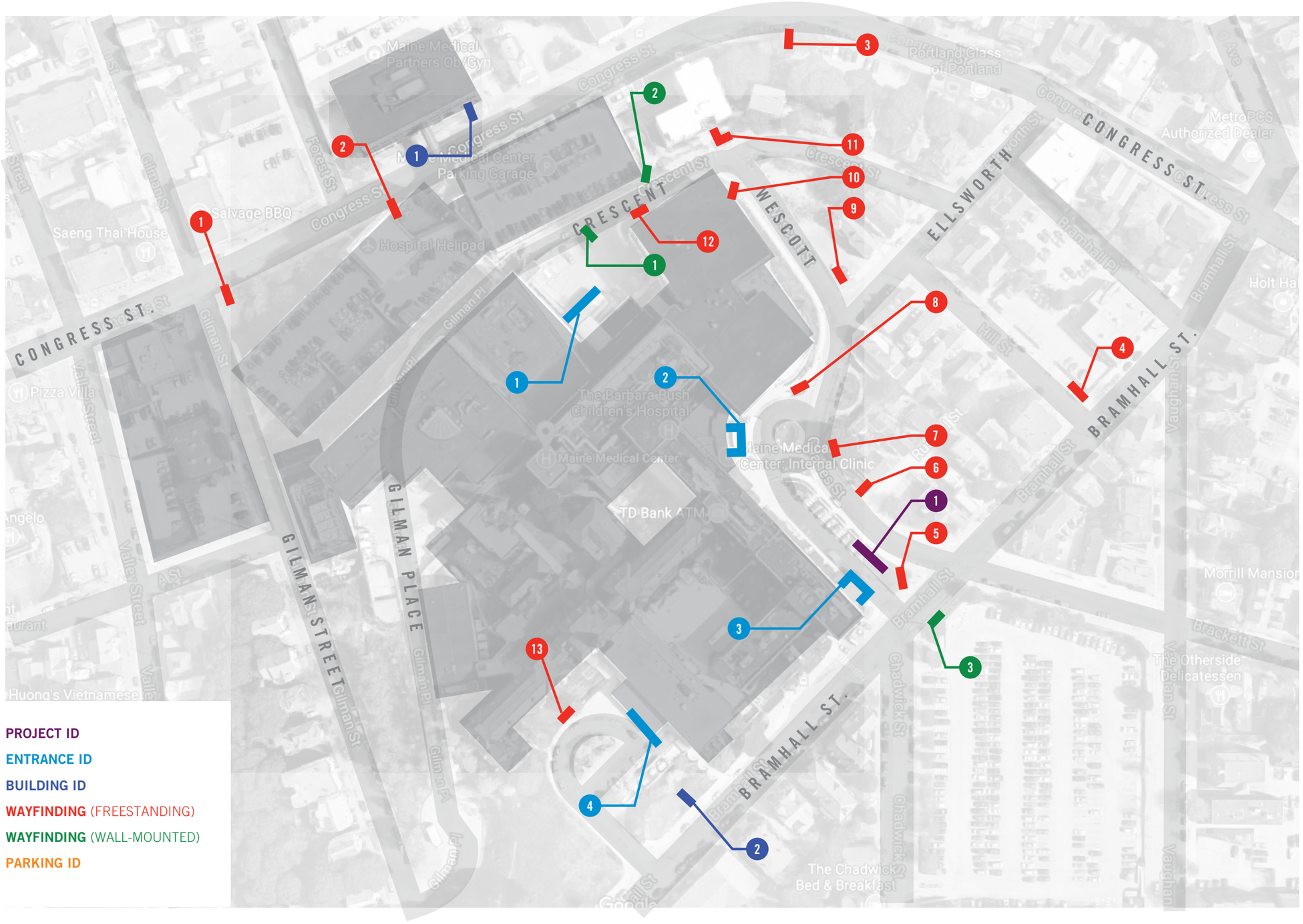
01 Main Campus Signage
02 Congress Street Building Signage
03 Employee Garage Signage

01

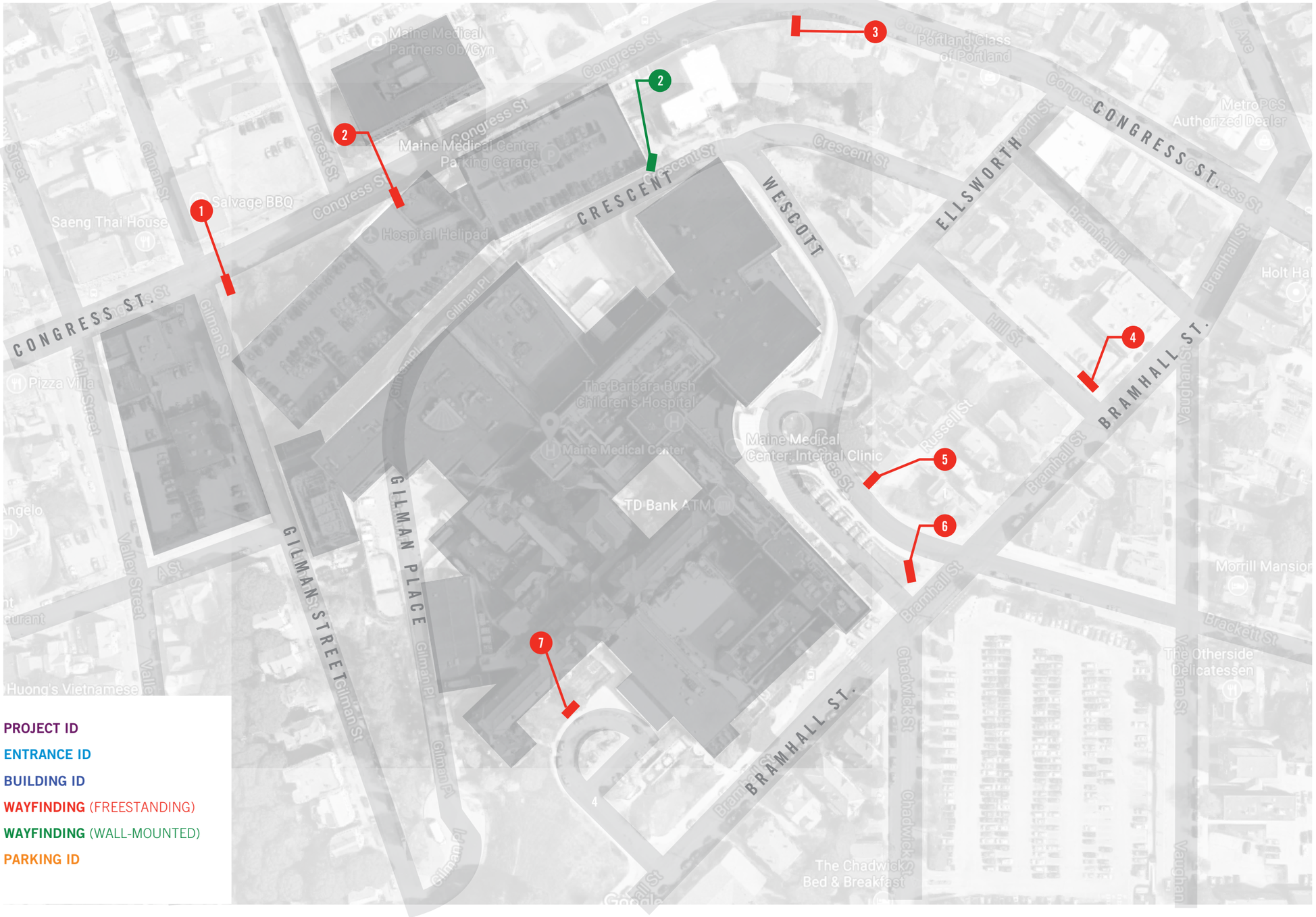
Main Campus Signage

Existing Signage

Existing Signage Location Plan



Demo Signage Elements



PROJECT ID

ENTRANCE ID

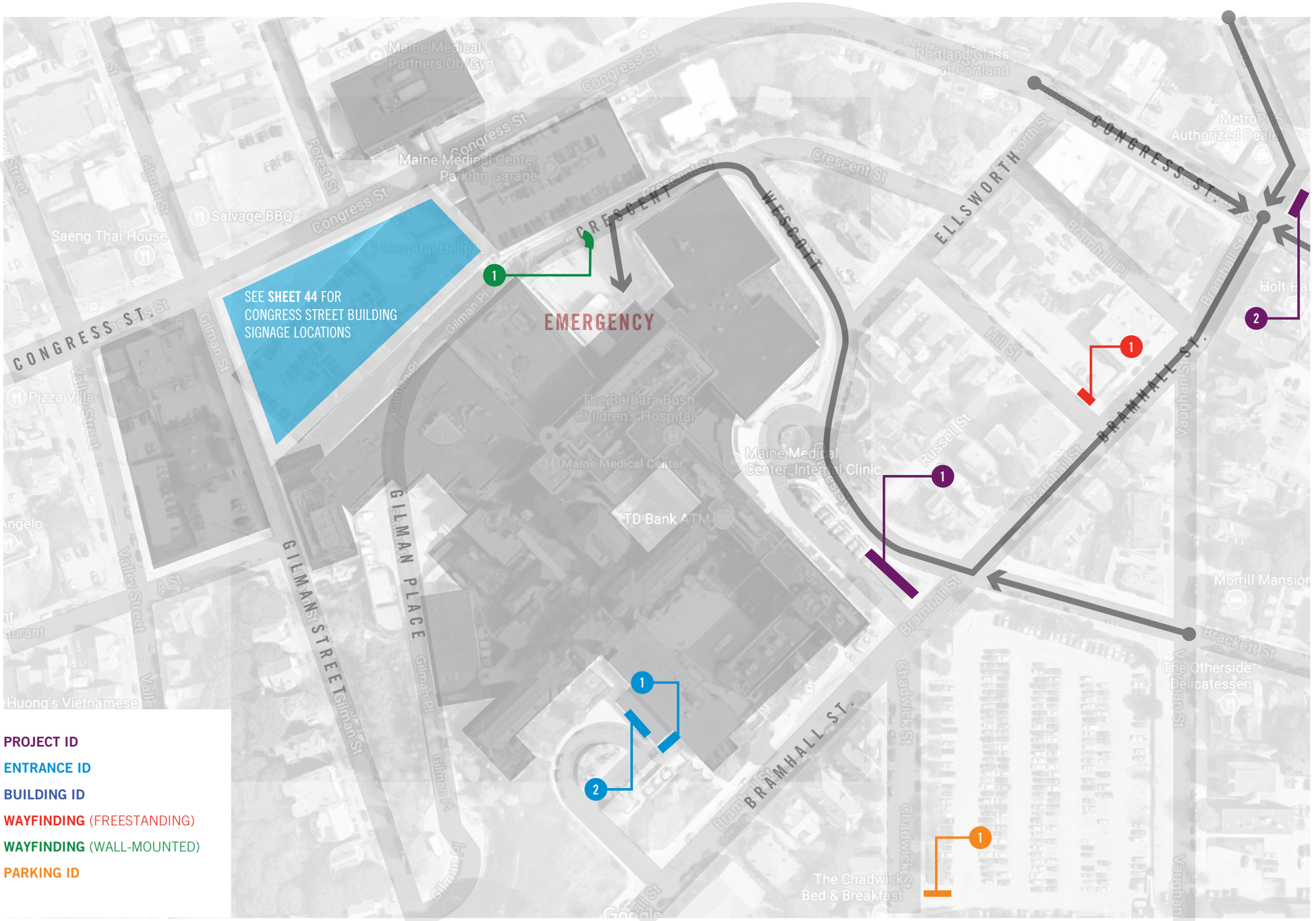
BUILDING ID

WAYFINDING (FREESTANDING)

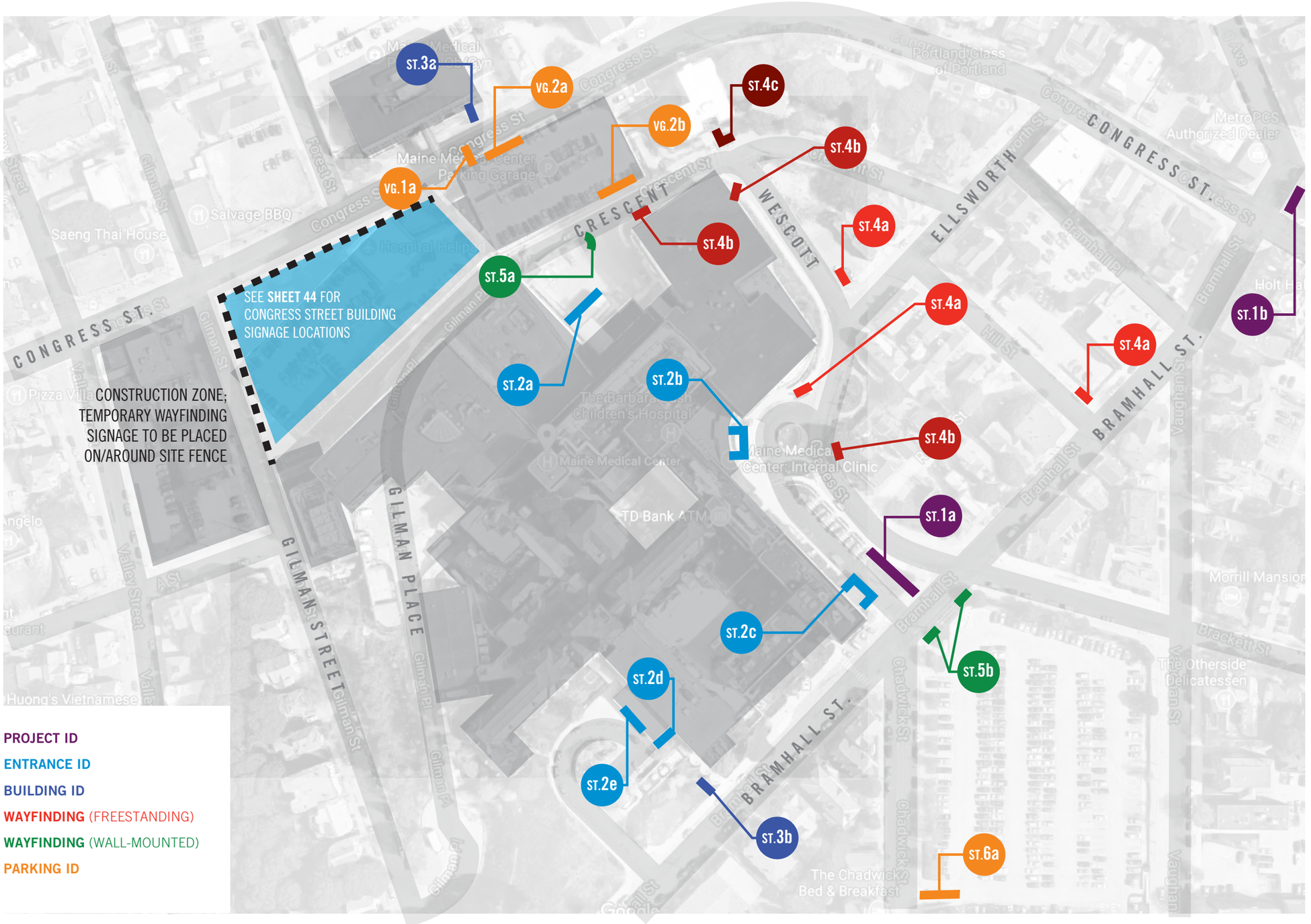
WAYFINDING (WALL-MOUNTED)

PARKING ID

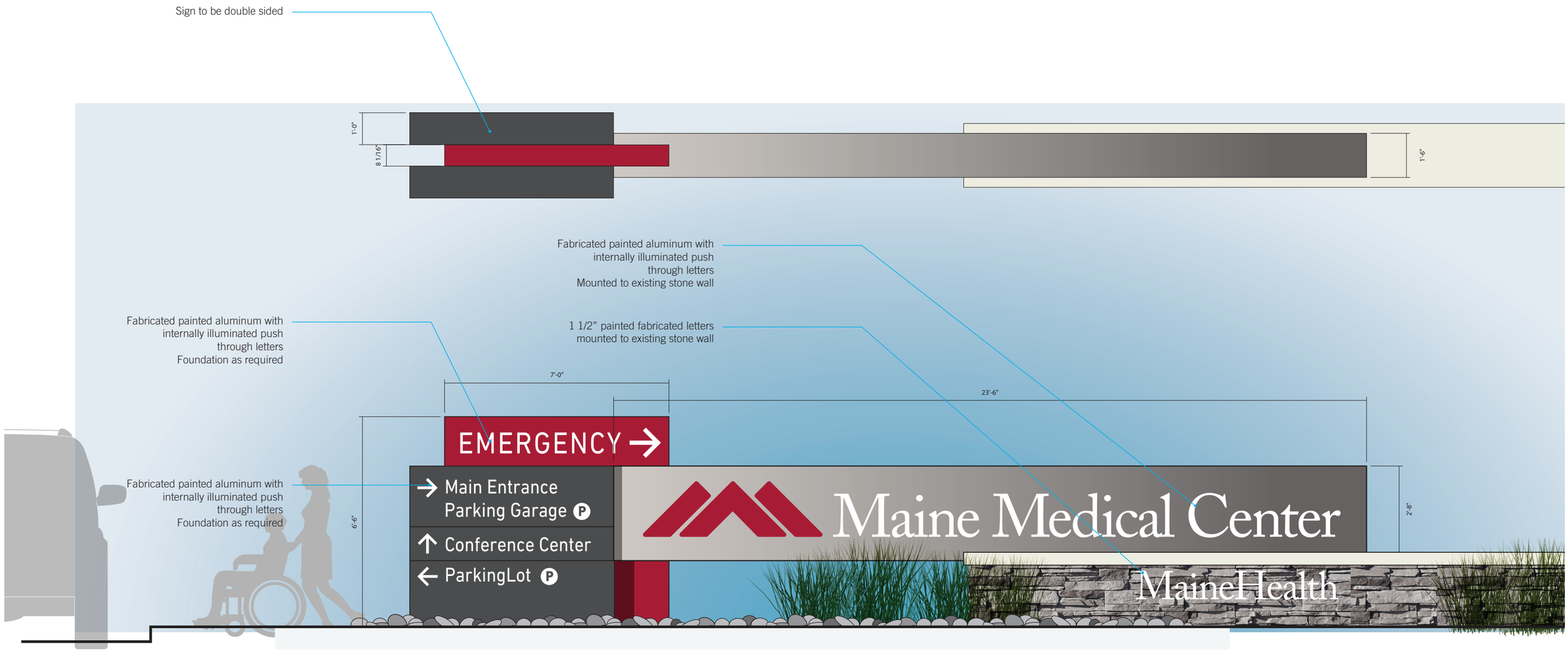
New Signage Elements



Preliminary Sign Location Plan



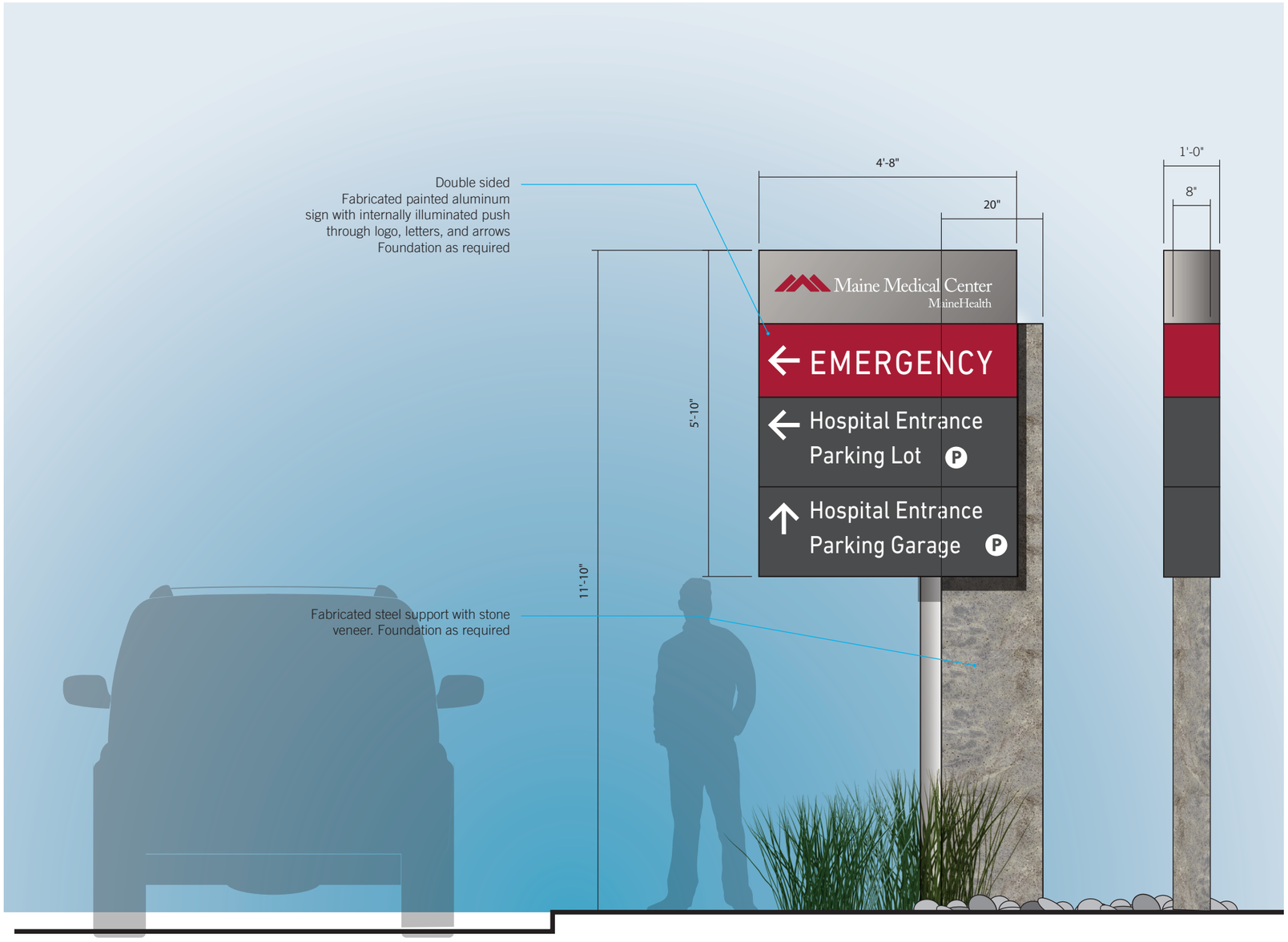
ST.1a Project ID (Bramhall Entry)



ST.1a View 1

EMERGENCY
Main Entrance
Parking Garage
Conference Center
Parking Lot
Maine Medical Center
MaineHealth
SOUTH

ST.1b Project ID (Bramhall Park)



ST.1b View 1

NO PARKING BUS STOP
ONLY
BUS STOP
ROUTE NUMBER:
1
9A
METRO
774-0351
SOUTHERN MAINE TRANSIT TRACKER
STOP ID
122
DEERING
MAINE MED
Maine Medical Center
MaineHealth
EMERGENCY
Hospital Entrance
Parking Lot P
Hospital Entrance
Parking Garage P

ST.1b View 2

Maine Medical Center
MaineHealth
EMERGENCY
Hospital Entrance
Parking Lot
H
MERCY
MAINE MED

ST.2a Entrance ID (Emergency)

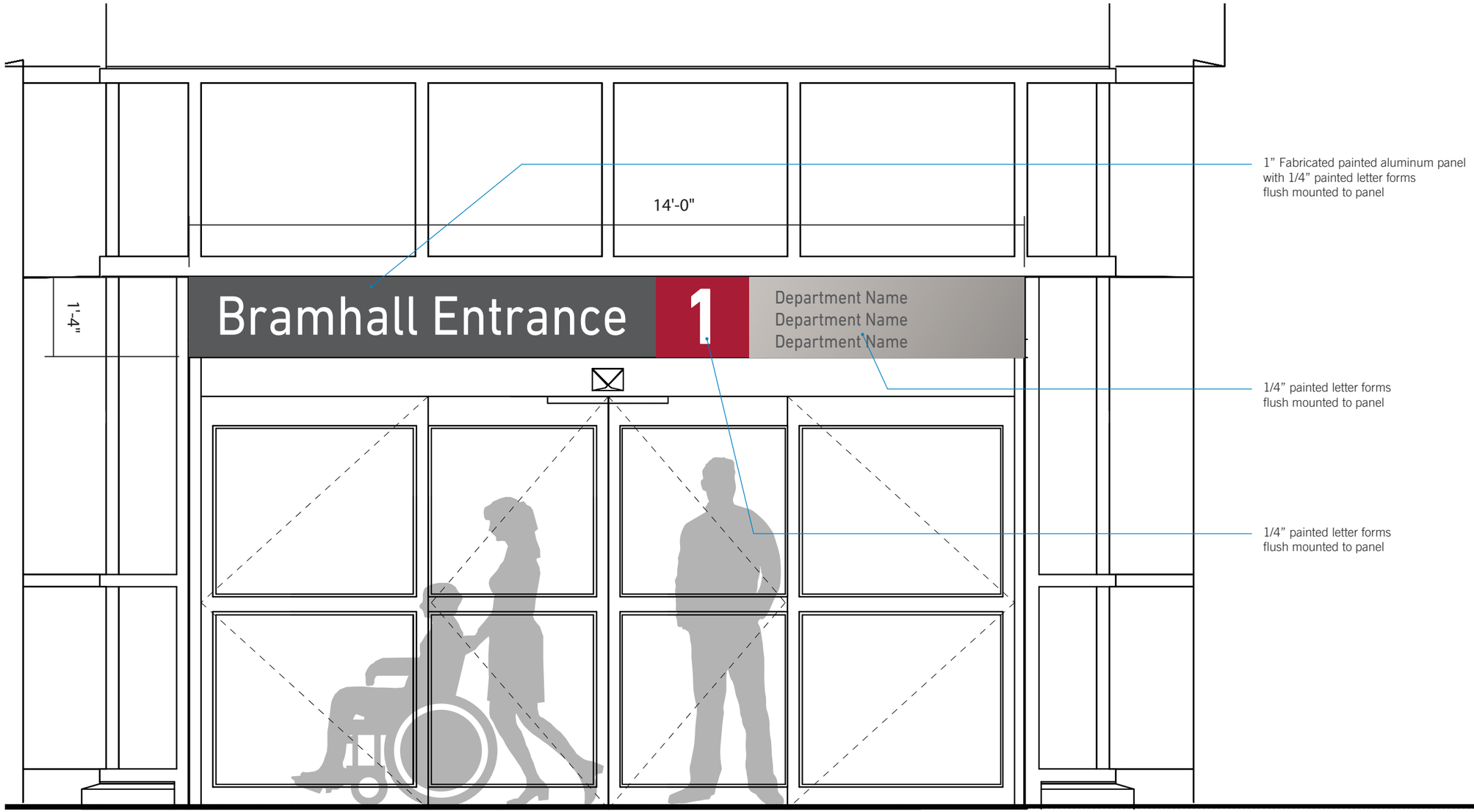
30”T x 24’W x 8”D VIF
Fabricated painted aluminum with internally illuminated push through letters
Mounted to existing columns as shown

24” x 48” x 1” fabricated aluminum panel with direct printed graphics

Fabricated painted aluminum panel with 1/4” painted letter forms flush mounted

Fabricated painted aluminum panel with surface applied vinyl

ST.2b Entrance ID (Bramhall 1)



ST.2b View 1

Bramhall Entrance
1
Department Name
Department Name
Department Name
AUTOMATIC SLIDING DOOR
MAIN
ENTRANCE

ST.2c Entrance ID (Bramhall 2)

FRONT
24”T x 25’-6”W x 1”D Fabricated painted aluminum panel with 1/4” painted letter forms flush mounted to panel

RIGHT/LEFT SIDES
24”T x 9’-10”W x 1”D Fabricated painted aluminum panel with 1/4” painted letter forms flush mounted to panel

ST.2d Entrance ID (Radiation)

8”T x 2”D Fabricated aluminum letter forms with enclosed back surfaces.
Mounted to top raceway, fastened to existing ceiling.

10”T x 60”W x 1/2”D Painted aluminum panel with 1/4” painted logo

12”T x 5”W x 1/4”D Painted aluminum panel with applied vinyl graphics

ST.2e Entrance ID (Dana Conference Center)

8”T x 2”D Fabricated aluminum letter forms with enclosed back surfaces.
Mounted to top raceway, fastened to existing ceiling.

10”T x 72”W x 1/2”D Painted aluminum panel with 1/4” painted logo

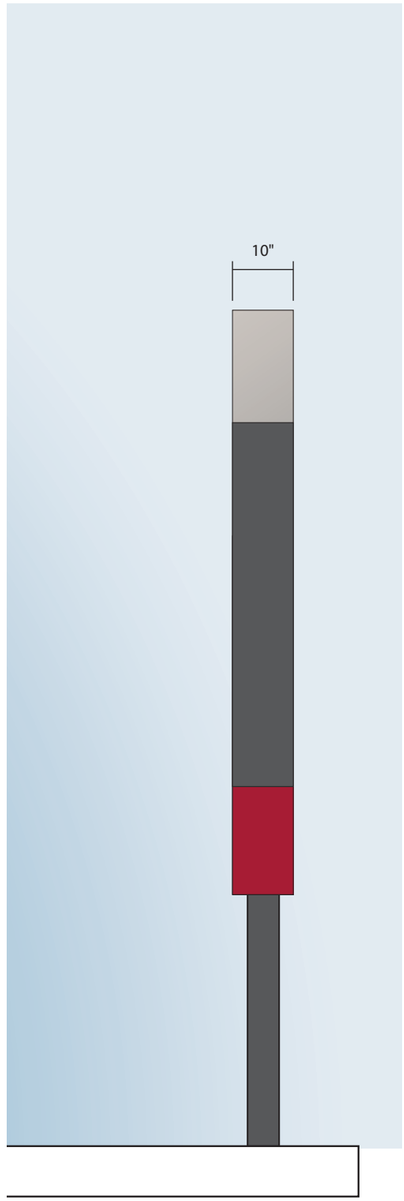
24” x 36” x 1” fabricated aluminum panel with direct printed graphics

ST.3a Building ID (MOB 887)

Double sided
Fabricated painted aluminum sign with internally illuminated push through logo, letters, and arrows
Sign to use existing foundation

Sign to utilized existing steel internal support
Refinish with paint

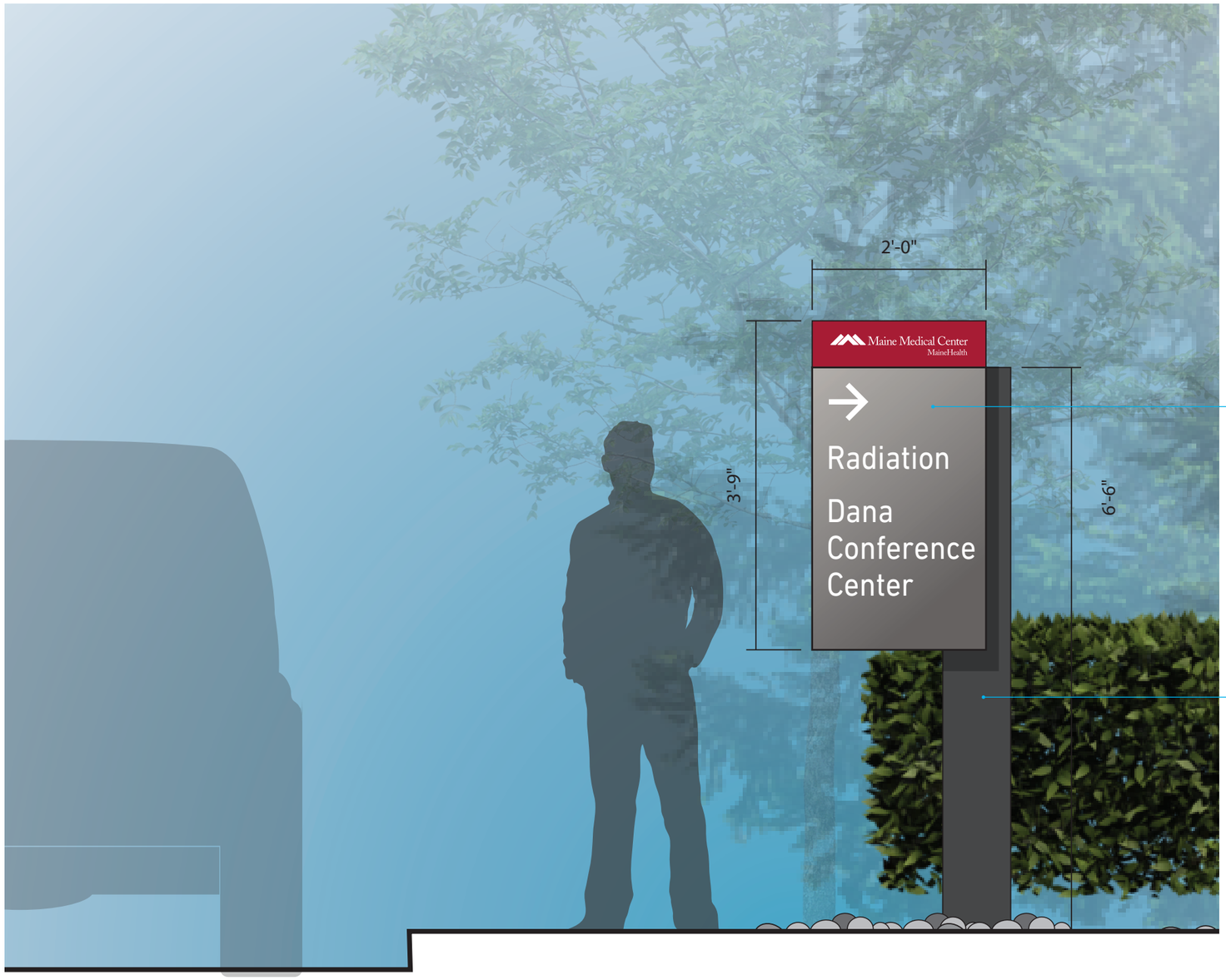
Sign to utilized existing steel internal support
Retro fit with stone veneer



ST.3a View 1

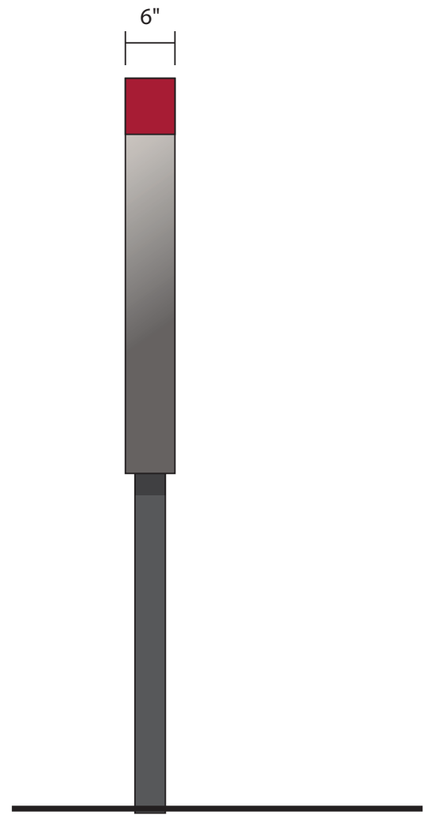
887
Congress Street
Medical Building
PARKING
DO NOT ENTER
ENTER

ST.3b Building ID (Radiation/Dana)



Double sided
Fabricated painted aluminum with
applied vinyl graphics
Foundation as required

Fabricated painted aluminum
support



ST.3b View 1

Maine Medical Center
Conference Center
Radiology Oncology
MRI
Exit

Maine Medical Center
MaineHealth
Radiation
Dana
Conference
Center
ESTERN

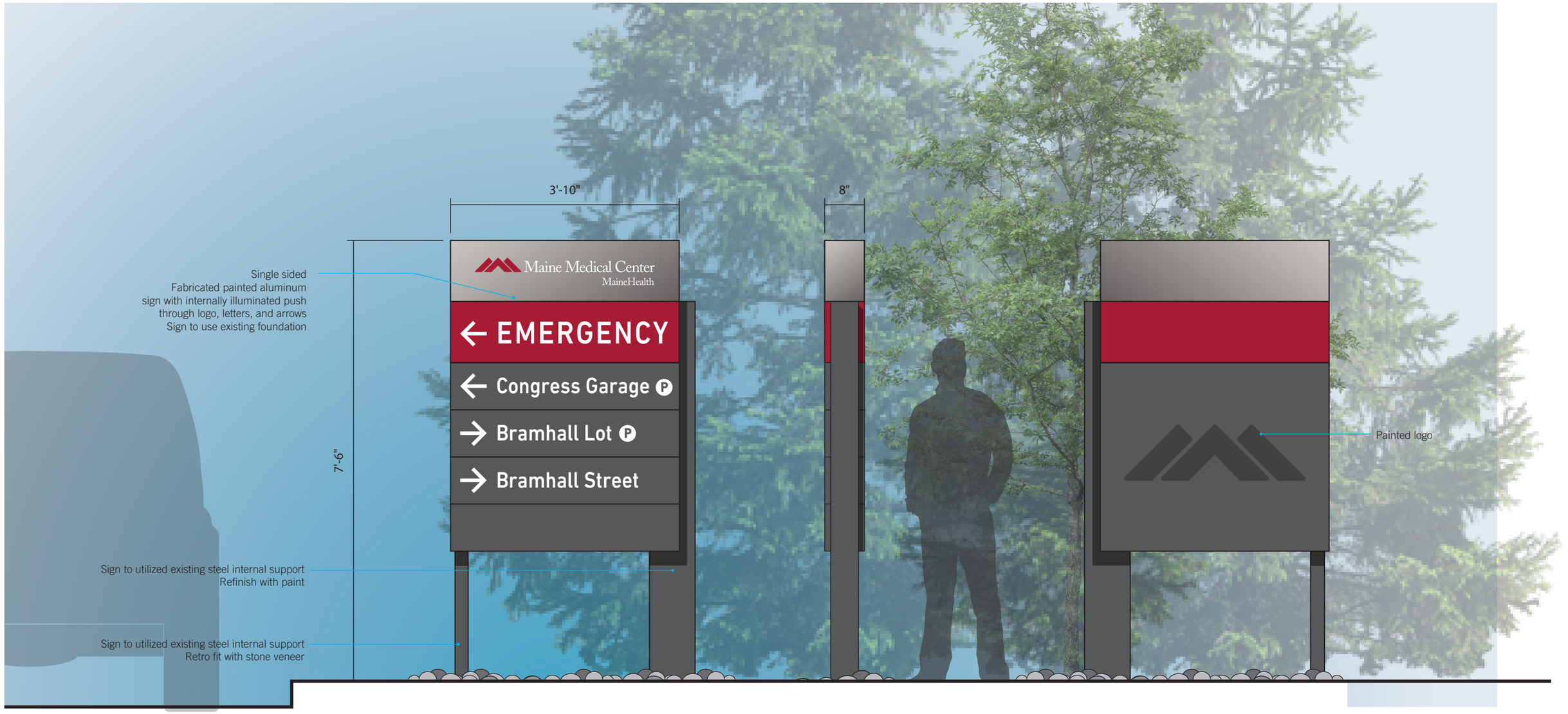
ST.4a Primary Vehicular Directional (Typical)

ST.4a Bramhall Street

ST.4a Bramhall Circle

ST.4a Ellsworth

ST.4b Secondary Vehicular Directional

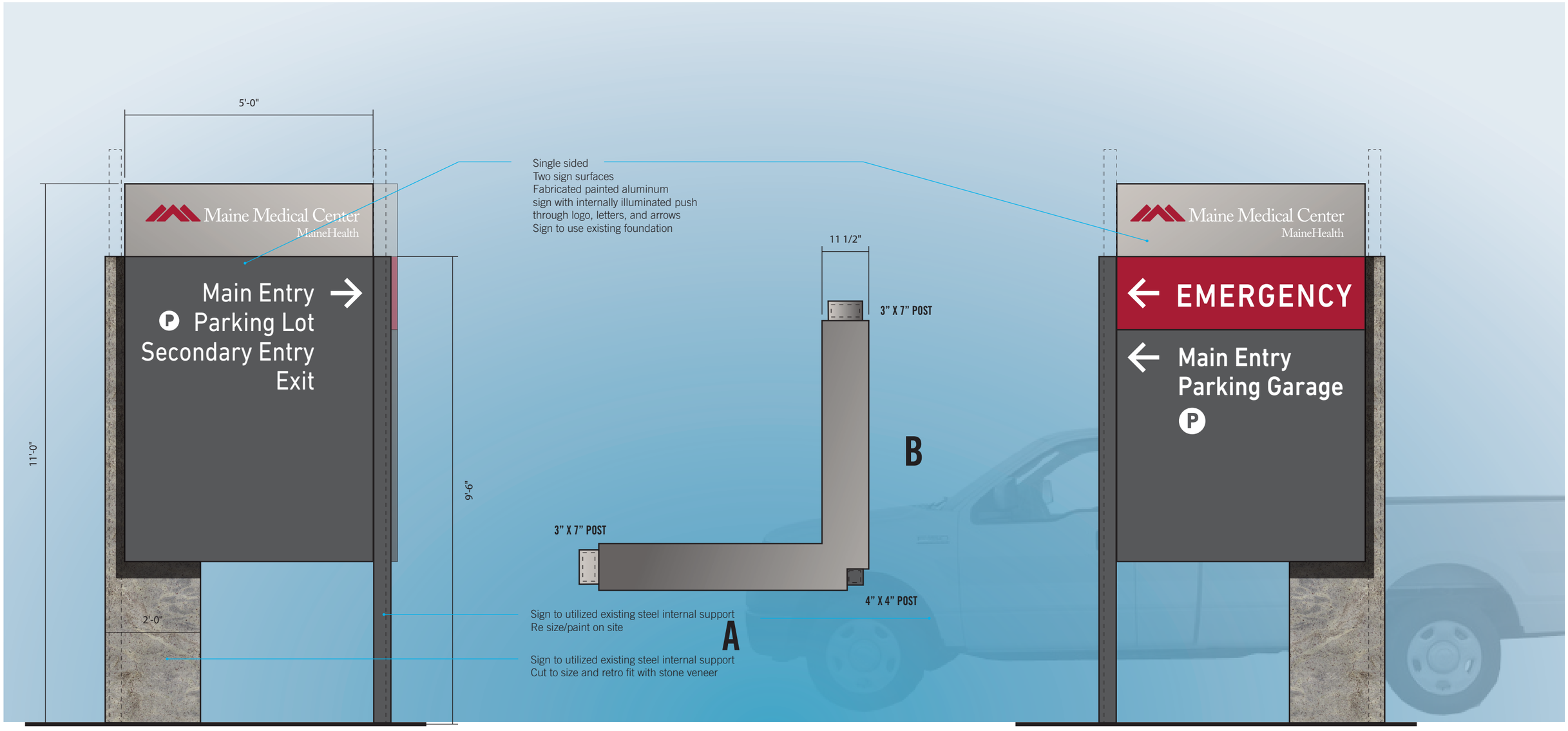


ST.4b Bramhall Circle

ST.4b Ambulance

ST.4b Congress Garage Parking

ST.4c L Vehicular Directional (Crescent & Wescott)



ST.4c View 1

Maine Medical Center
MaineHealth
EMERGENCY
Exit
Bramhall Lot
Bramhall Entrance
Maine Medical Center
MaineHealth
EMERGENCY
Congres Garage
Service
Facilities
NO PARKING

Maine Medical Center
Parking Garage
EMERGENCY
Trauma Center
Surgery

ST.5a Emergency Entrance Wall

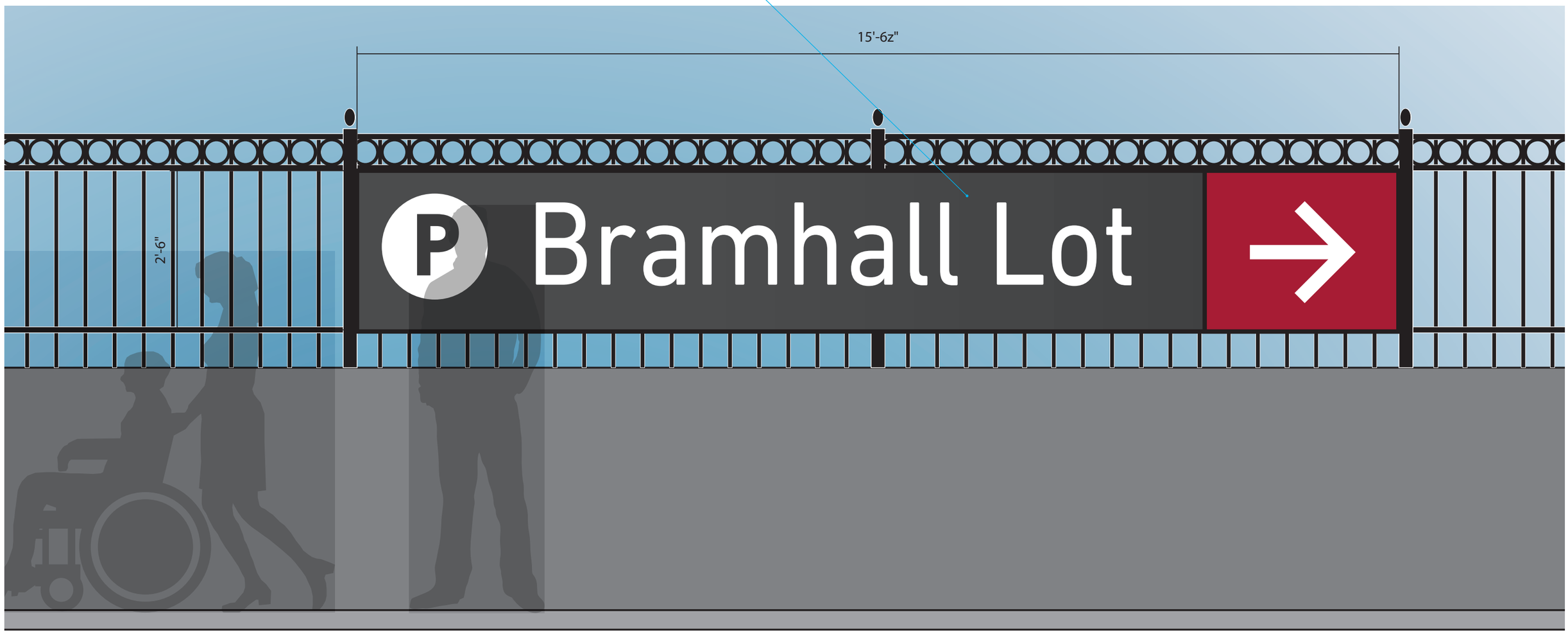
Single sided
16"T x 14'W x 6"D Fabricated painted aluminum sign with internally illuminated push through letters and arrows
Roll formed, flush mounted to existing precast

Single sided
12"T x 10'W x 4"D Fabricated painted aluminum sign with internally illuminated push through letters and arrows
Roll formed, flush mounted to existing precast

ST.5b Bramhall Lot Fence Panels

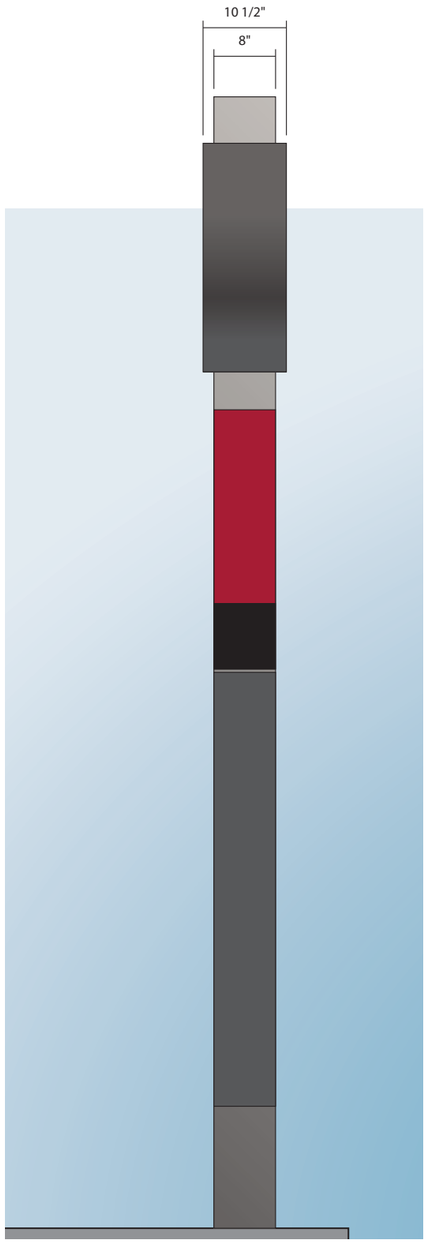
1” Fabricated painted aluminum
Mounted to existing fence
Surface applied reflective vinyl
copy and arrow

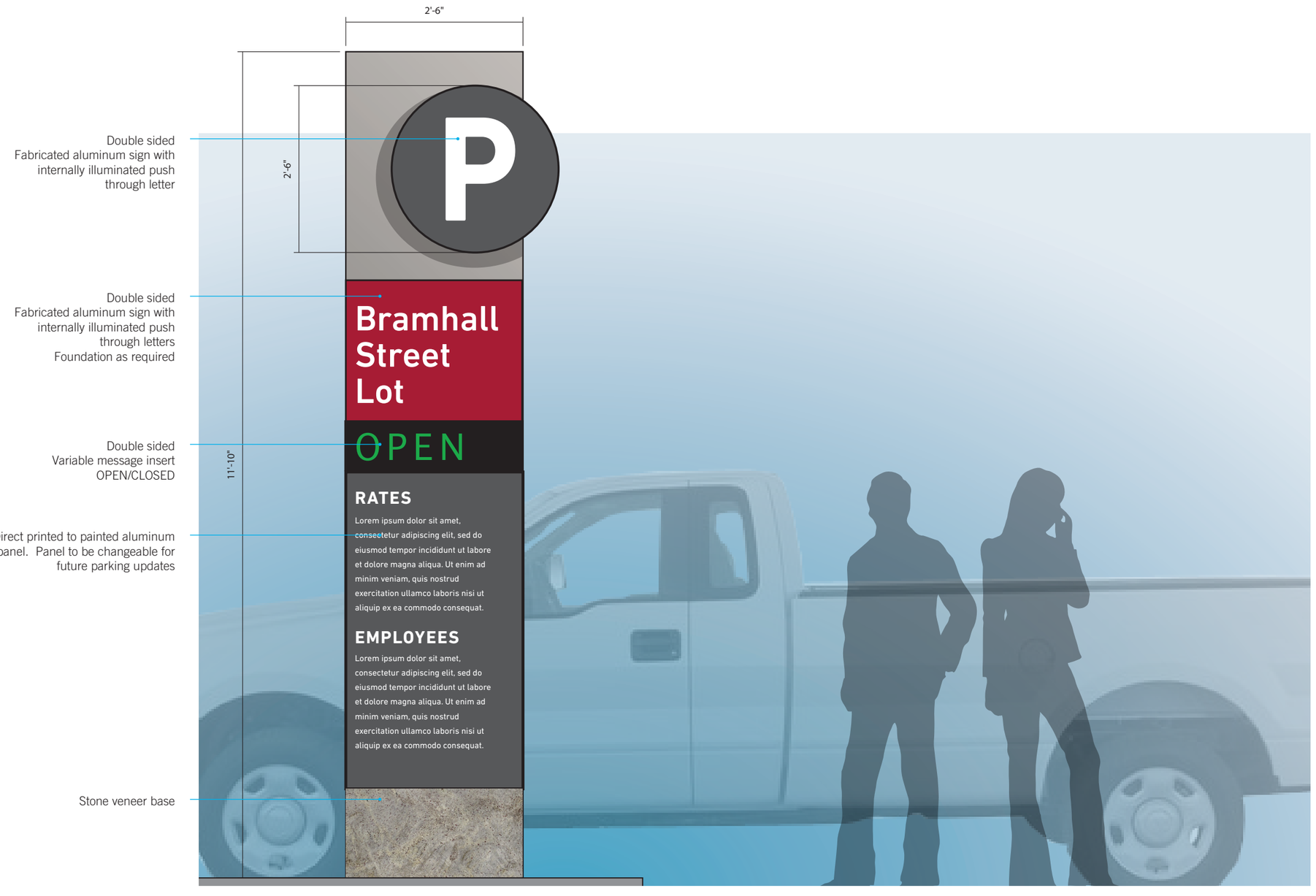
Quantity 2



ST.5b View 1

ST.6a Bramhall Lot Entrance





Double sided
Fabricated aluminum sign with
internally illuminated push
through letter

Double sided
Fabricated aluminum sign with
internally illuminated push
through letters
Foundation as required

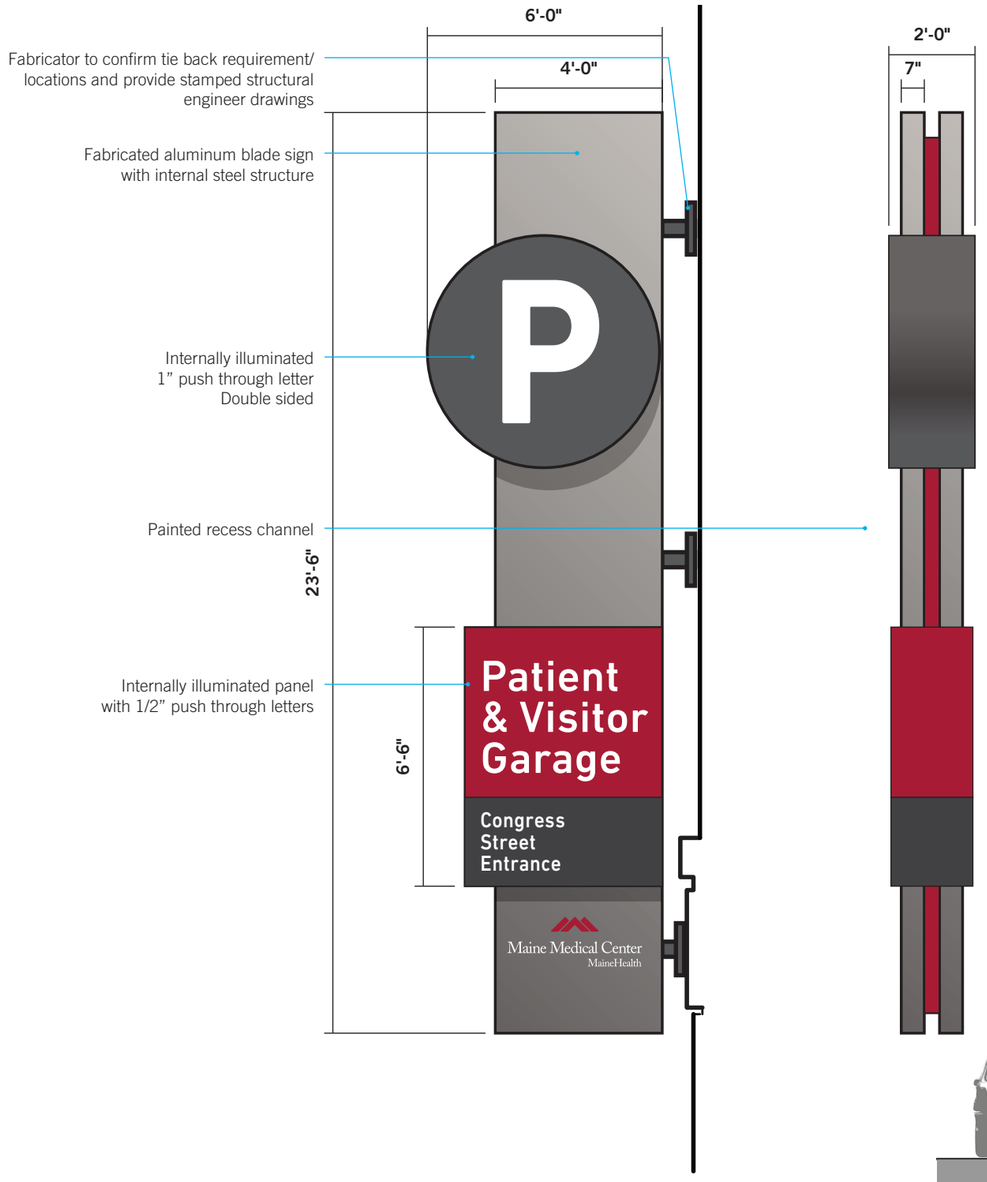
Double sided
Variable message insert
OPEN/CLOSED

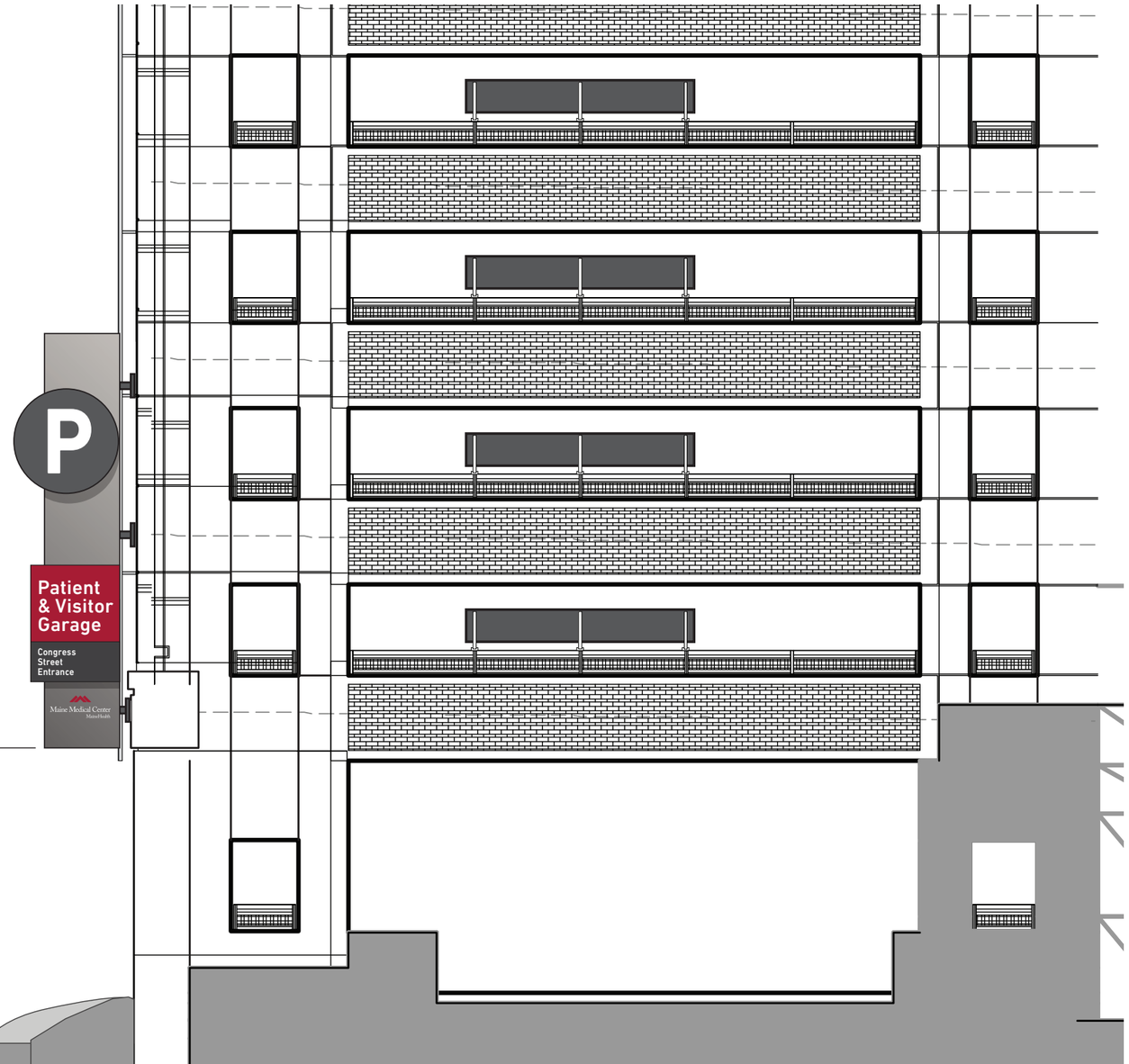
Direct printed to painted aluminum
panel. Panel to be changeable for
future parking updates

Stone veneer base

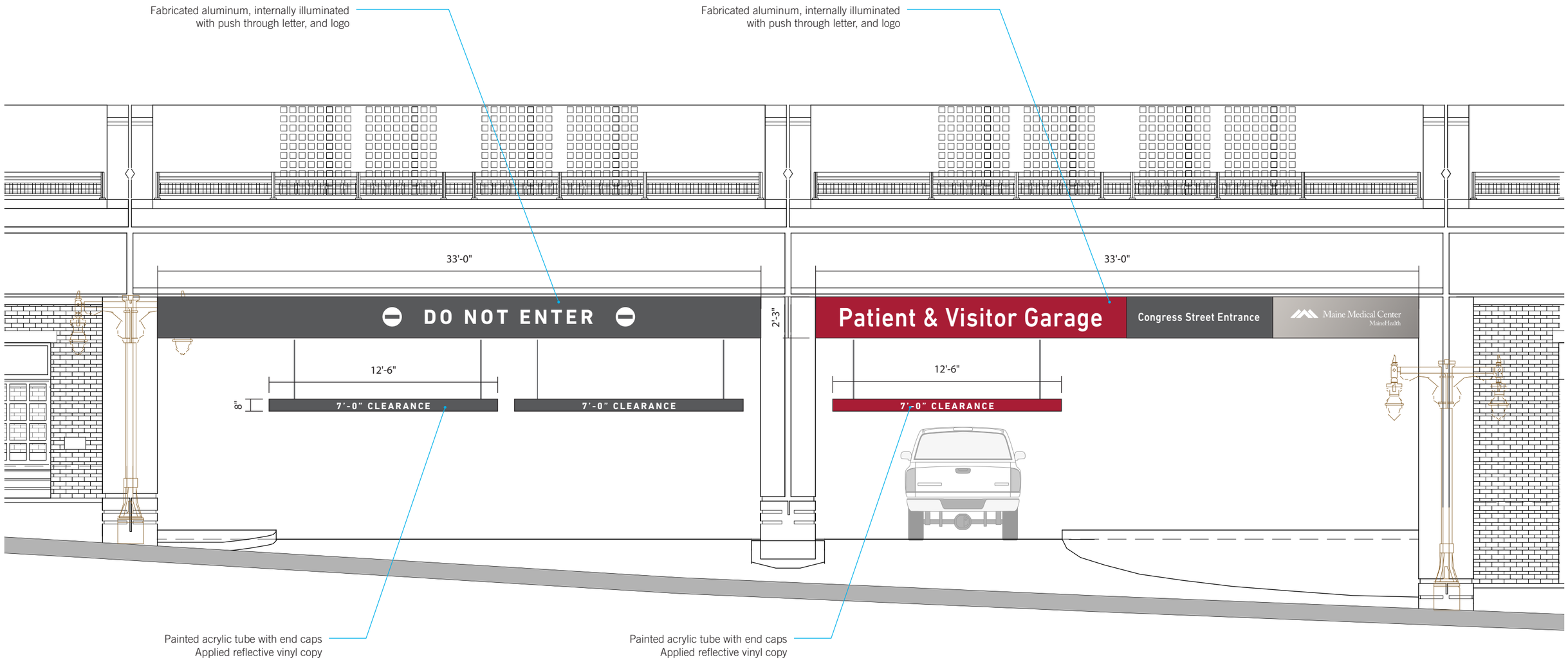
ST.6a View 1

VG.1a Blade Sign (Congress)





VG.2a Garage Identification (Congress)



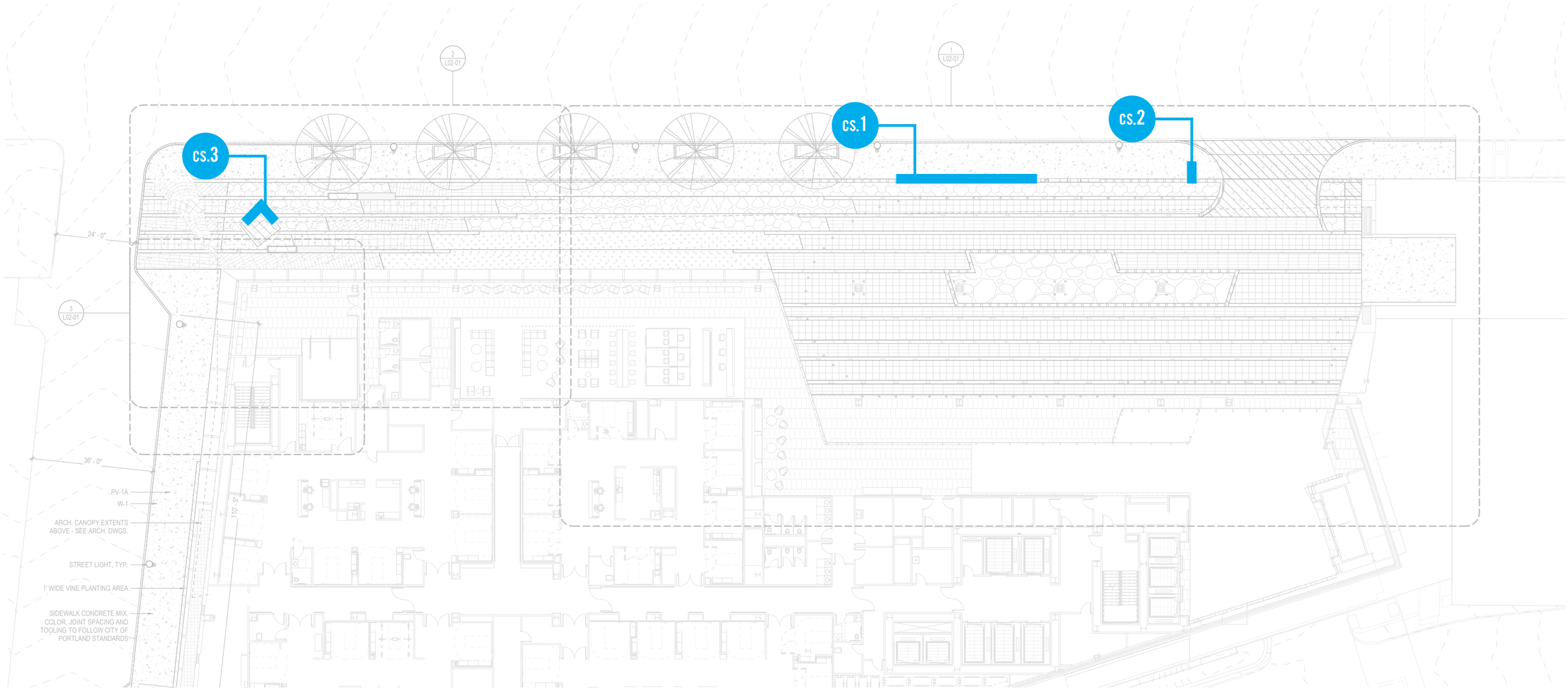
VG.1a & VG.2a View 1

VG.2b Garage Identification (Crescent)

02

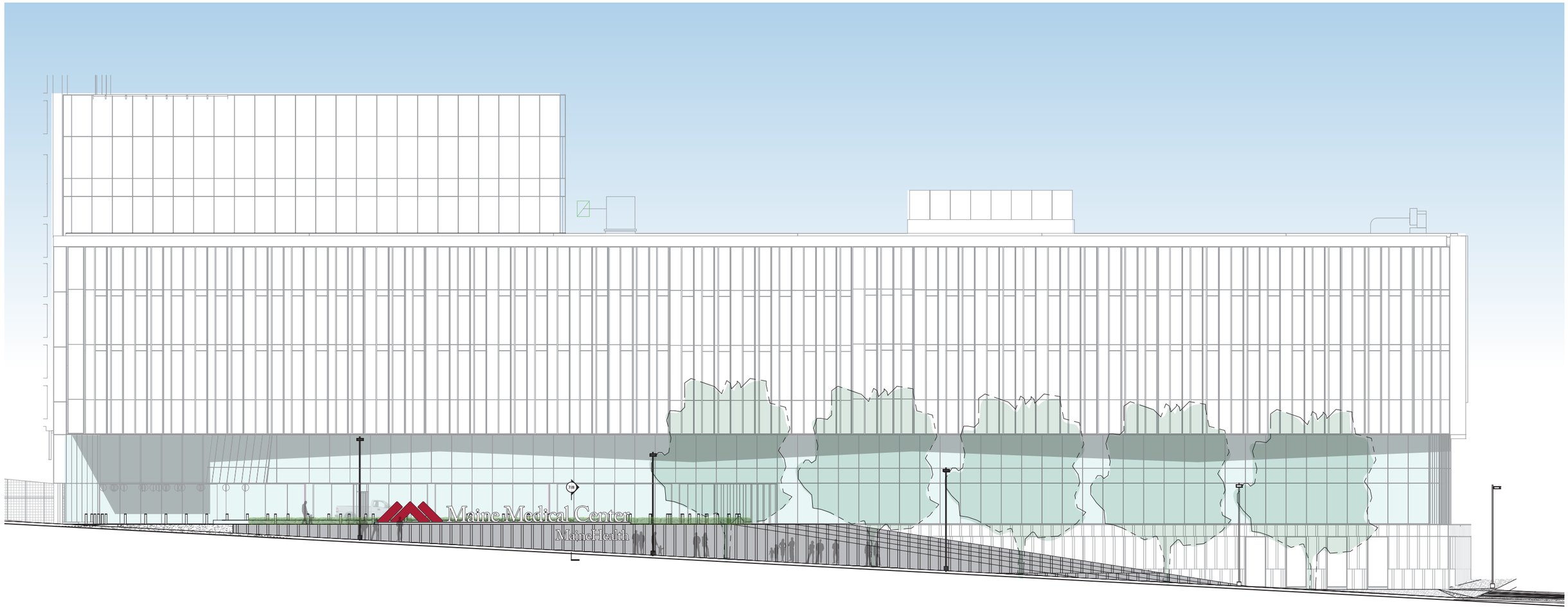
Congress Street Building Signage

Preliminary Sign Location Plan



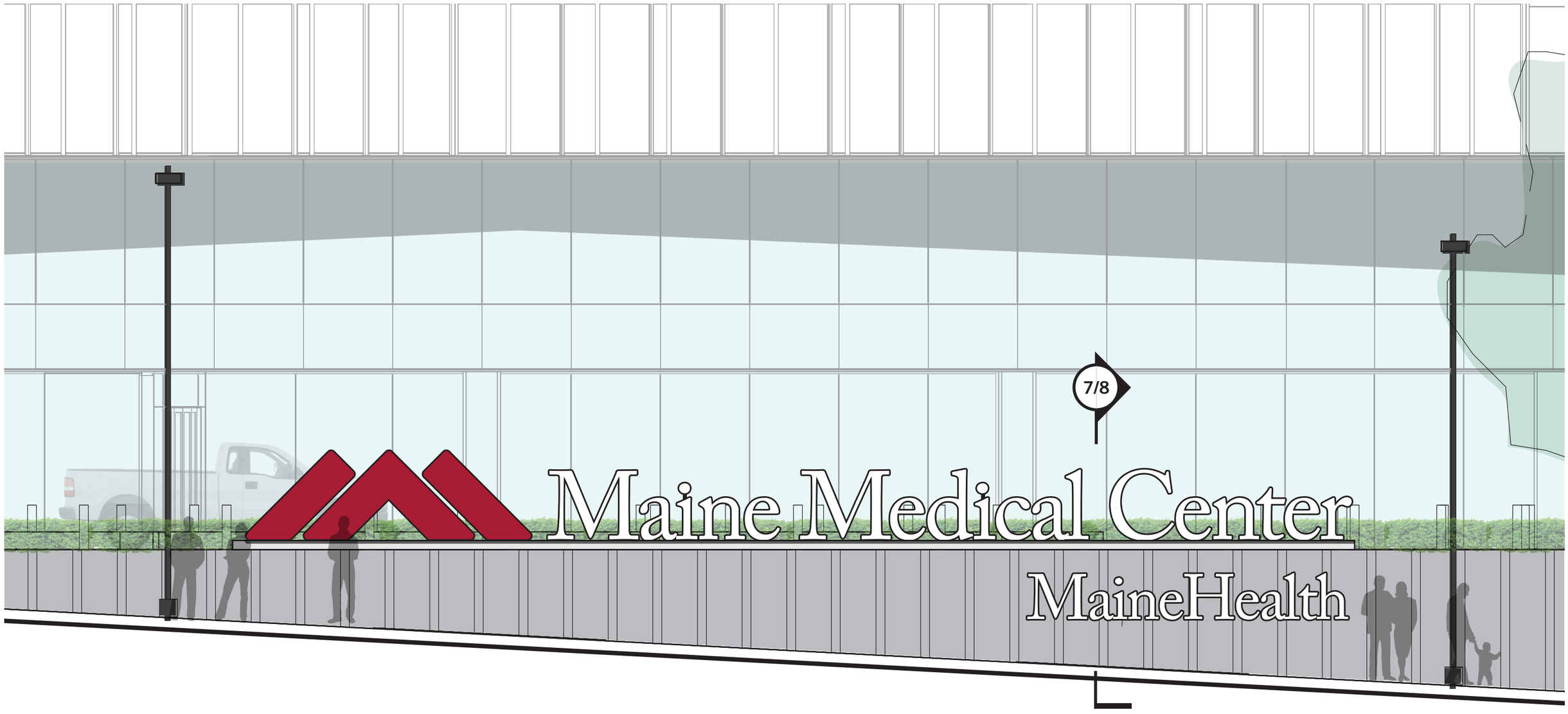
CS.1 Project Monument

NOTE: Exact placement of signage to be determined once landscape design is finalized with the City of Portland.



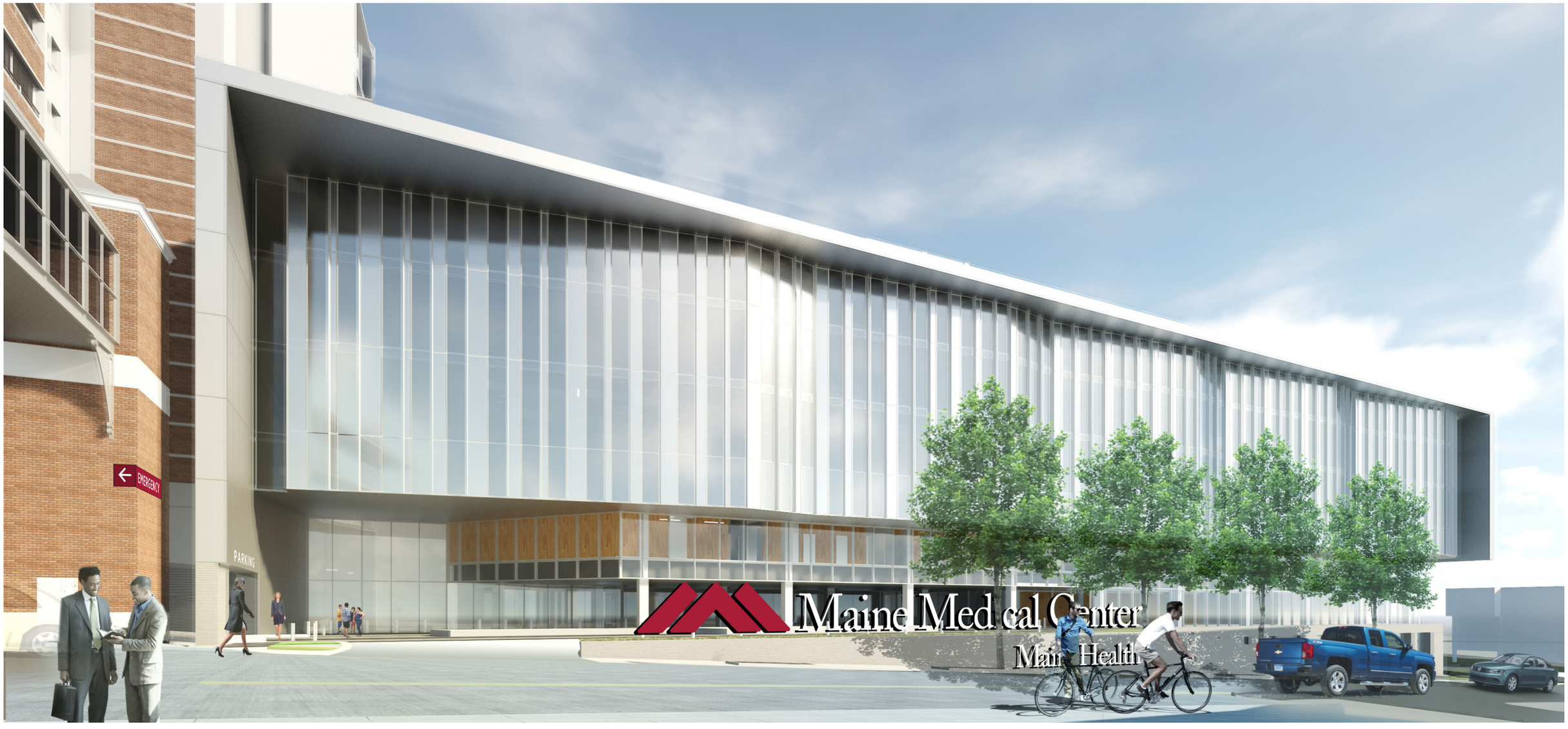
CS.1 Project Monument

NOTE: Exact placement of signage to be determined once landscape design is finalized with the City of Portland.



CS.1 View 1

NOTE: Exact placement of signage to be determined once landscape design is finalized with the City of Portland.

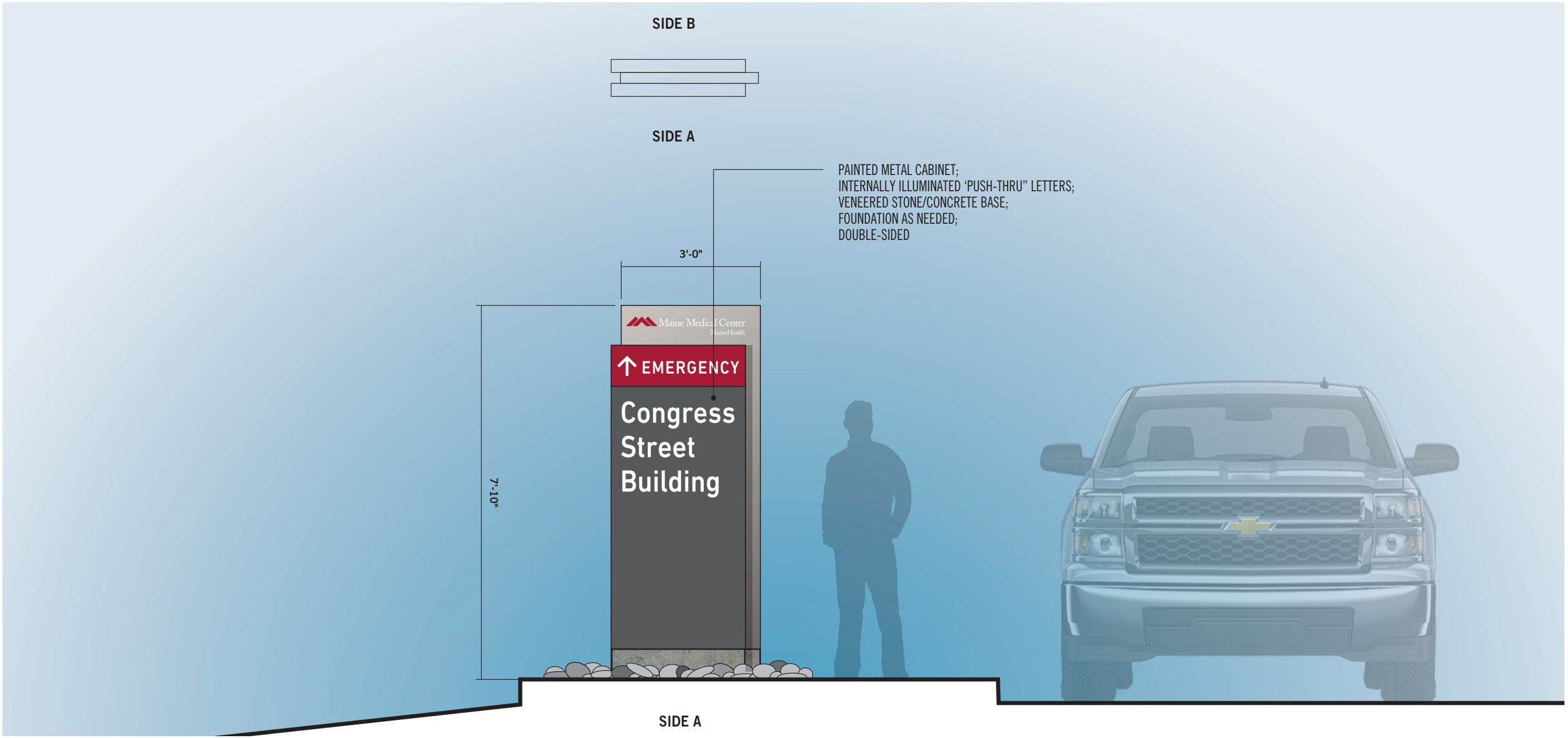


CS.1 View 2

NOTE: Exact placement of signage to be determined once landscape design is finalized with the City of Portland.

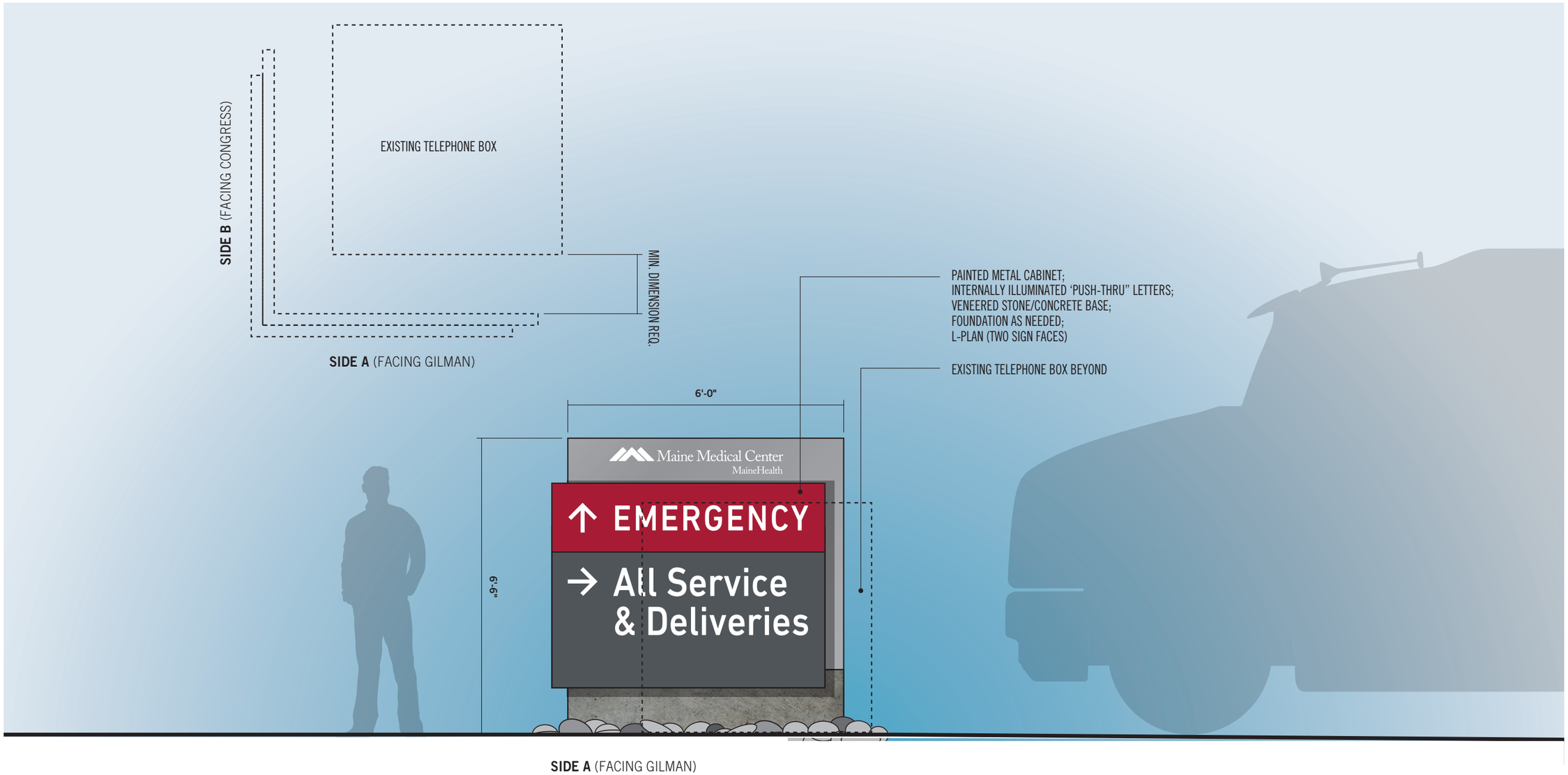
CS.2 Building Identification

NOTE: Exact placement of signage to be determined once landscape design is finalized with the City of Portland.



CS.3 Corner Directional

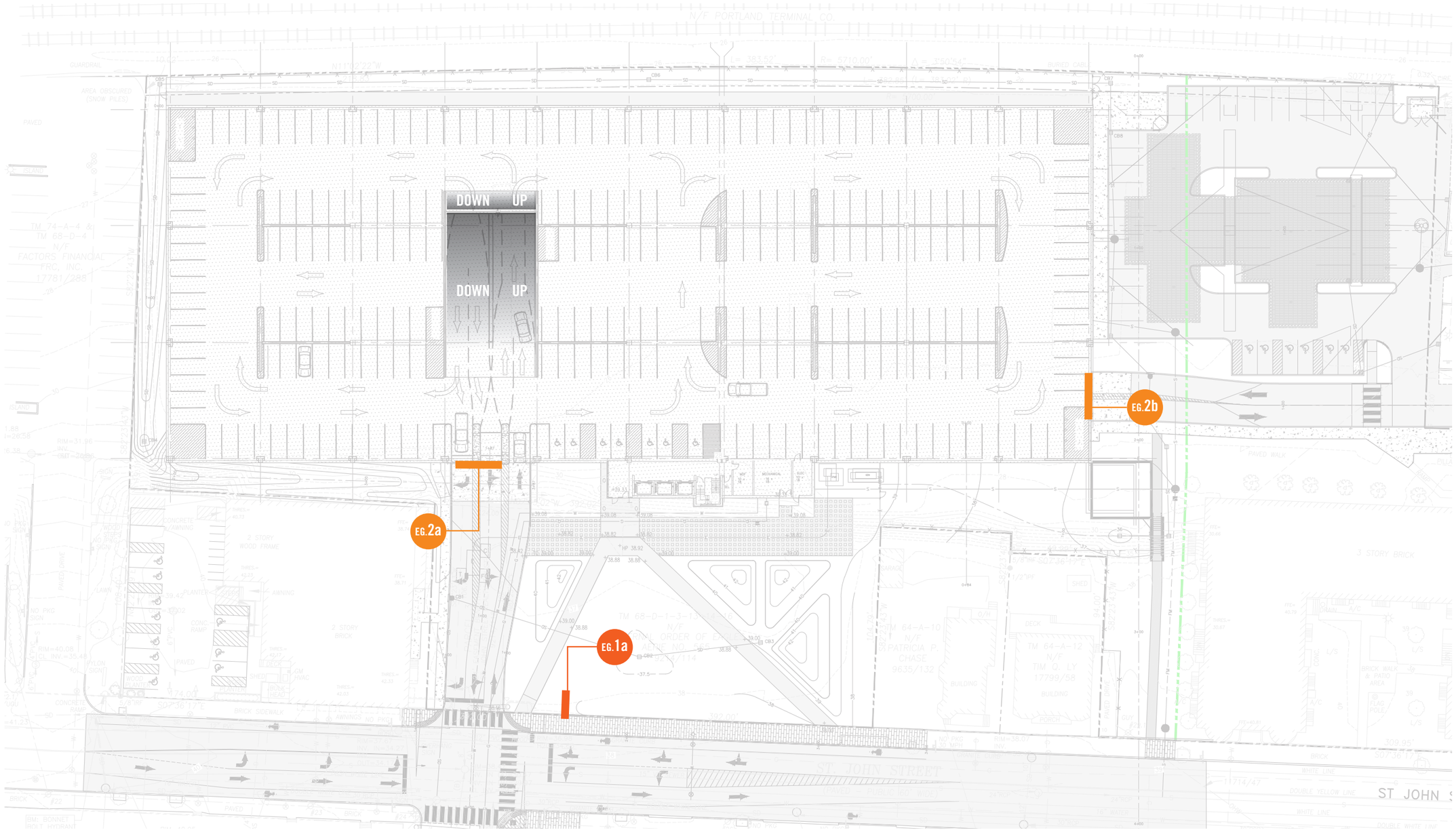
NOTE: Exact placement of signage to be determined once landscape design is finalized with the City of Portland.



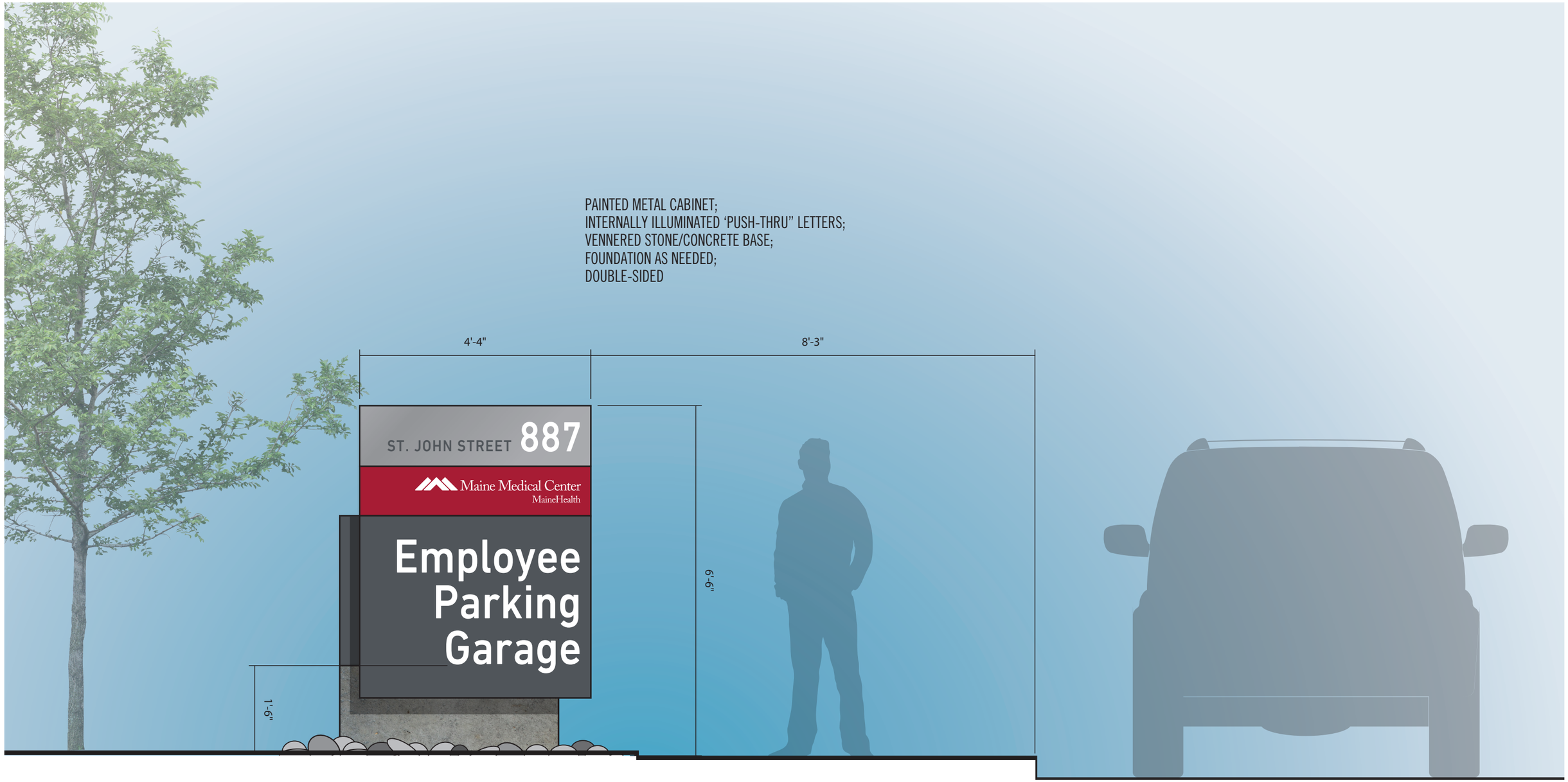
03

Employee Garage Signage

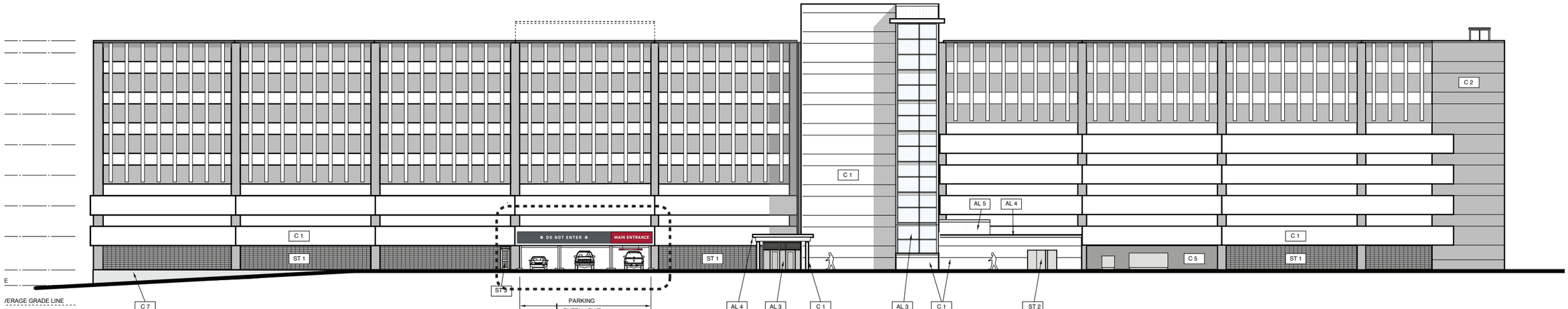
Preliminary Sign Location Plan (Level 1)



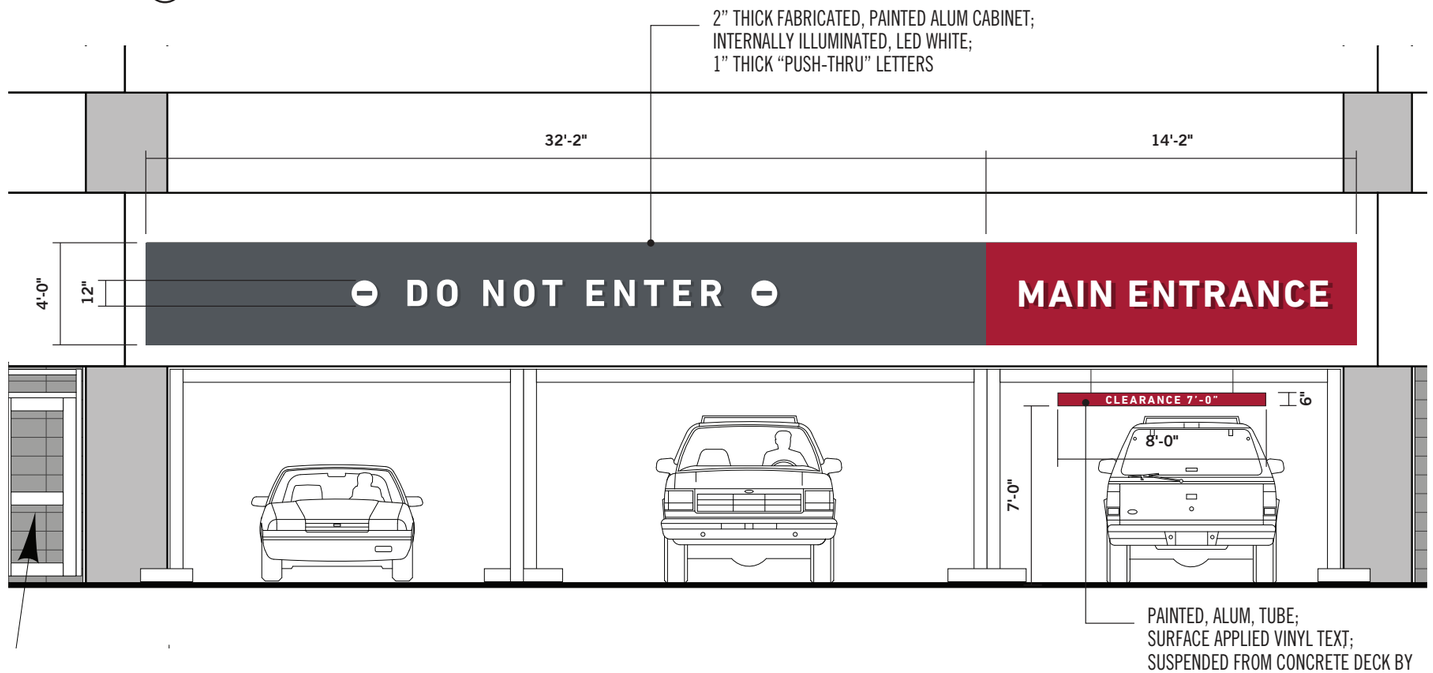
EG.1a Monument Sign



EG.2a Garage IDs (East Elevation)

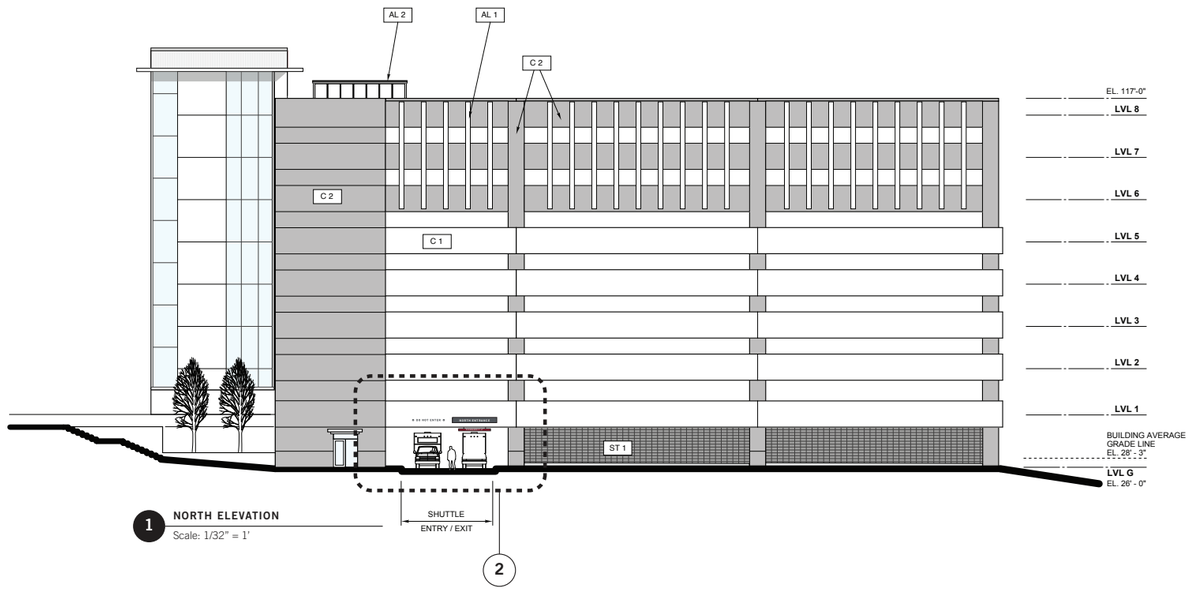


1 **EAST ELEVATION**
Scale: 1/32" = 1'

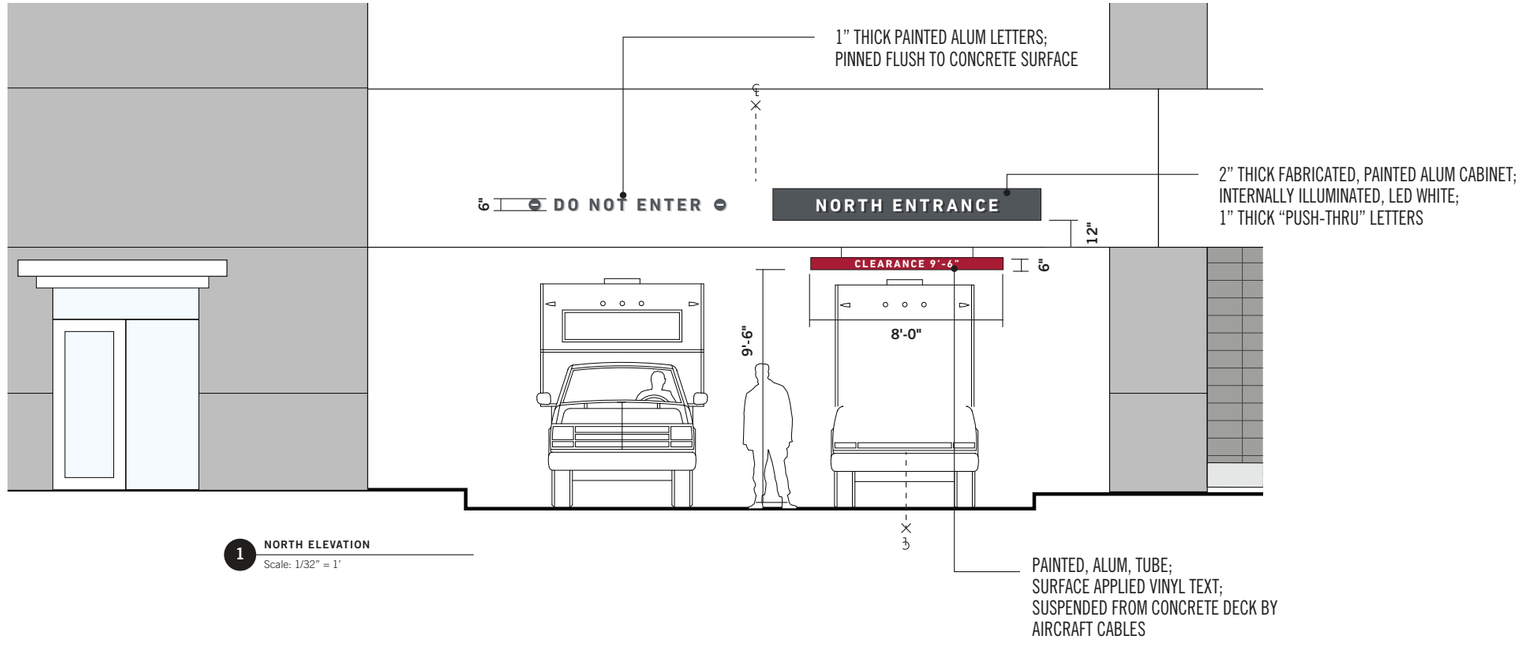


2 **SIGN TYPE F6: ENTRY SIGN**
Scale: 3/16" = 1'

EG.2b Garage IDs (North Elevation)



1 **NORTH ELEVATION**
Scale: 1/32" = 1'



1 **NORTH ELEVATION**
Scale: 1/32" = 1'

Thank You

Leverage

ATTACHMENT 3: VALLEY STREET TRAIL ASSESSMENT

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: Al Green, MMC

FROM: David Senus, PE and Craig Sweet, PE

DATE: August 17, 2018

RE: MMC Staff Parking Garage | Valley Street Trail Condition Assessment

---

The purpose of this memorandum is to summarize Woodard & Curran's assessment of the existing conditions on and around the Valley Street Trail, identified within Maine Medical Center's (MMC) Institutional Development Plan (IDP) as a potential walking route for staff between the future Staff Parking Garage at 222 St. John Street and the MMC Bramhall entrance atop the Western Promenade.

On July 16, 2018, Woodard & Curran performed a visual inspection of the Western Promenade Trail to observe the general condition of the trail system, ADA accessibility, and to identify informal pathways that connect to the trail. Additionally, Bartlett Design Inc. performed a lighting assessment of the Valley Street Trail system.

Trail Condition

Overall the Valley Street Trail pavement is in good condition. Minimal pavement distress such as longitudinal cracks (parallel to walking direction), transverse cracks (across the trail), edge cracks, alligator cracks, rutting, and depressions were observed. The condition of retaining walls along the trail were also visually inspected for signs of damage or deteriorating condition. Overall the retaining walls appear to be in good condition, no leaning, or large settlement was observed. Graffiti is present on some of the walls and several cap stones have been removed at various locations; however, this does not appear to have any impact on the structural integrity of the wall systems. At the connection of the Valley Street Trail and Valley Street, some cap stone blocks have been removed and placed as makeshift "steps" for users of a steep, informal gravel foot path. Large amounts of accumulated sediment were observed at the Valley Street connection. This sediment has been deposited from an ongoing erosion issue caused by concentrated runoff flowing down the informal foot path during rain events at this location. Erosion was not observed at other locations along the extent of the trail.

ADA Accessibility

The current conditions of the Valley Street Trail were reviewed against ADA accessibility standards. The current ADA Standards specify the following requirements for maximum running slopes:

- Maximum allowable running slope without handrails is 5%.
- Maximum allowable running slope with handrails and level landings is 8.33%.

Additionally, the AASHTO Guide for the Development of Bicycle Facilities allows for an 8% running slope for no greater than 300 linear feet.

The Valley Street Trail was constructed in 2006 by the City of Portland. The majority of the trail was constructed with a running slope of 10% or greater, with a maximum slope of 13.3%, which is not in conformance with ADA or AASHTO standards. The City elected to install a trail in 2006 to replace a long stairwell at this location that was unsafe due to condition issues. At that time, the City understood

that the steepness of the trail exceeded design standards, but they elected to install a trail that offered a more accessible route for pedestrians to the top of the Western Promenade than what was provided with the previous staircase.

Foot Path Connectors

During the visual inspection, multiple informal gravel foot paths were observed along the Valley Street Trail, the general location of these paths are shown on the attached figure. As previously noted, at the Valley Street Trail and Valley Street connection, retaining wall endcap blocks were removed and placed as makeshift "steps" for users (Photographs 1 & 2). Pedestrians who utilize these steps either continue east on a gravel path towards the Valley Street Trail avoiding the first trail switchback or northeast on a gravel path and enter the woods adjacent to the trail. From the woods, the foot path continues to a driveway and parking area for 4 Gilman Street. Three other informal gravel foot paths were observed along the Valley Street Trail that connect to this section.

The Valley Street Trail eventually comes to a tee intersection where users can either access Gilman Street to the north or continue south and connect to the sidewalk located on the Western Promenade. From this location, multiple gravel foot path connectors were observed. At the sidewalk intersection, two gravel foot paths were observed (Photo 12), one gravel foot path continues east and connects with the sidewalk on the Western Promenade, the second foot path continues northeast and ties into the Maine Medical Center Campus (Photo 17). Additionally, at the connection of the Valley Street Trail and Gilman Street, a third foot path exists that travels southeast and connects to the previously described trail that ties into the Maine Medical Center Campus.

Trail Drainage

As shown in the attached photographs, the Valley Street Trail area consists of maintained lawn areas where the land is flat to moderately steep and higher "meadow" grasses on steeper slopes, with woodland areas and underbrush abutting the trail area to the north and south. Stormwater runoff generated from the Valley Street Trail sheet flows from the Western Promenade down to Valley Street. The runoff does not appear to concentrate, instead it generally flows overland across the paved trail, mowed lawn, and higher "meadow" grassed areas. These vegetated areas play an important role in limiting erosion by reducing the stormwater velocity as it travels down grade. The areas of higher grass have the most impact in reducing velocities, while the mowed areas have a lesser impact. Overall the majority of the Valley Street Trail system does not show signs of drainage concerns or erosion, with the exception of the locations of the foot path connectors.

As stated above, the foot path connections show signs of erosion. This is due to the concentration of stormwater runoff funneled down these connector trails with no vegetation to control the rate of stormwater flow. Continued foot traffic compacts the surface further reducing its ability to grow vegetation and slow stormwater velocities. As stormwater flows down grade it begins to channelize within the foot path connectors, causing increased erosion. As the foot path connectors begin to erode the condition is exacerbated as the foot path deepens, further collecting and conveying fast flowing stormwater runoff. The combination of channelized stormwater runoff and the lack of ground cover results in noticeable, moderate erosion and sediment runoff conditions in several areas. The notable area of concern is the foot path connecter located to the east of the Valley Street entrance, continuing along the norther edge of the trail towards Gilman Street. Large amounts of trail erosion was observed at the entrance of the Valley Street Trail as shown in Photographs 1 & 2.

To address the drainage concerns at these foot paths we recommend that the foot path connectors be restored to their original intended conditions (field grass or planted trees/undergrowth). Additionally, a

series of stone berm check dams should be installed along the current foot path location to divert and/or slow stormwater flows and prevent further erosion. Please refer to the attached Valley Street Trail Possible Improvements Sketch for further detail.

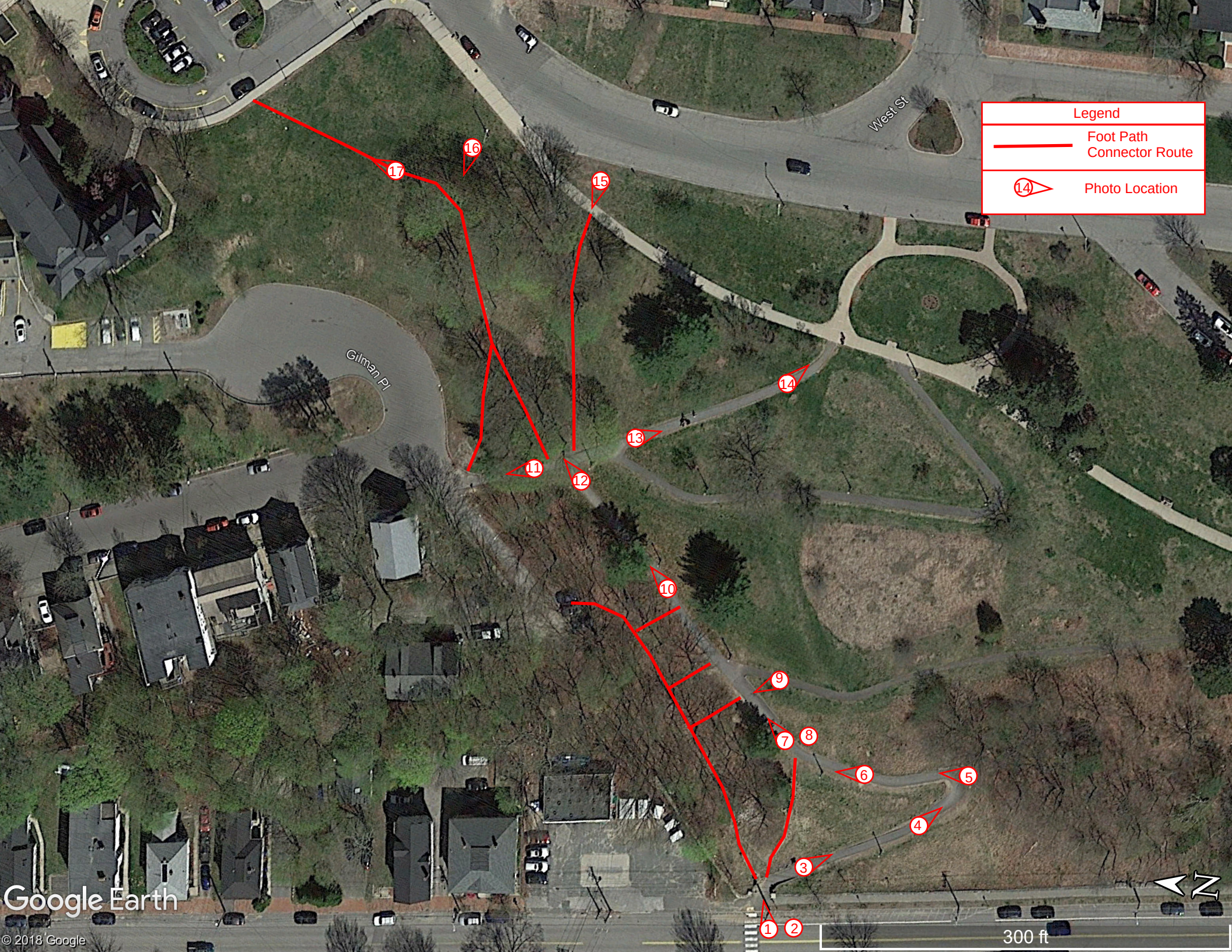
Snow Removal

The City of Portland requested an assessment of maneuvering capabilities of the City's Trackless sidewalk plow equipment along the Valley Street Trail system. The City of Portland provided dimensions for two vehicles a Holder C9.78 (information provided as part of original design in 2006) with an inside turning radius of 7.5-feet and a Trackless MT6 with an inside turning radius of 8-feet. Additionally, City staff have measured their current equipment and provided an outside turning radius of 10-feet. These dimensions were compared to the current trail conditions and it was determined that the current trail can adequately support the maneuvering of the existing tractors.

In discussion with City of Portland Arborist, Jeff Tarling, it was noted that the City's snow clearing equipment can maneuver through the trail during smaller snow storm events, but during larger storm events the City has issues maneuvering vehicles due to snow load and encroaching snow banks. Due to steep grades in the area, widening the trail would require relocating existing and/or building additional retaining walls to adjust the grades in these areas. This option would be expensive, and would require a significant impact to the area for a minimal gain, only to accommodate larger storm events. Maine Medical Center recommends that the Valley Street Trail not be altered at this time.

Attachments

- **Photo Key Map & Sketch of Foot Path Connections**
- **Site Photos**
- **Lighting Assessment by Bartlett Design Inc.**
- **Valley Street Trail Possible Improvements Sketch**


Legend
Foot Path
Connector Route
Photo Location
West St
Gilman Pl
1
2
3
4
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Google Earth
© 2018 Google
300 ft
N

Photo 1: Erosion from retaining wall

Photo 2: Foot path connection at top of retaining wall

Photo 3: Trail section in good condition

Photo 4: Trail section in good condition

Photo 5: Trail and retaining wall section in good condition

Photo 6: Trail section in good condition

Photo 7: Trail section in good condition

Photo 8: Retaining wall in good condition,

Photo 9: Foot path connection at trail

Photo 10: Trail section in good condition

Photo 11: Trail section in good condition

Photo 12: Foot path connections at trail tee intersection

Photo 13: Trail section in good condition

Photo 14: Trail section in good condition

Photo 15: Foot path connector at Western Promenade

Photo 16: Foot path connector at Western Promenade

Photo 17: Foot path connection to MMC campus

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
5 PALMER STREET BATH, MAINE 04530
TEL (207) 443-5447
bartlettdesigninc@comcast.net

MMC St. John Street Parking Garage
Portland, Maine July 18, 2018

WESTERN PROM EXISTING TRAIL LIGHTING

WESTERN PROM TRAIL PLAN
Red Indicates Lighted Section of Trail

TRAIL LIGHT POST

The existing trail network that extends from Valley Street to the Western Promenade above includes one path that is illuminated by post lights that have luminaires with prismatic glass diffusers and high intensity discharge lamps. The spacing of the existing light posts is such that the resulting horizontal illuminance at grade is very uneven. There are numerous places along the path between light posts that have less than 0.2 footcandles of illuminance.

The *Illuminating Engineering Society of North America* (*IESNA*) publishes recommendations for remote walkways in DG-5-94 Recommended Lighting for Walkways and Class 1 Bikeways. The recommended illuminance levels for a walkway within a commercial district that is remote from a street where personal safety is an issue are as follows:

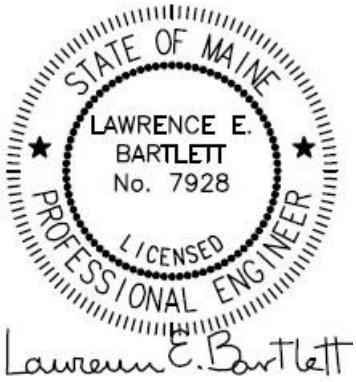
Average Horizontal Illuminance at Grade – 1.0 footcandles
Horizontal Average-to-Minimum Uniformity – 4.0-to 1 (or better)
Average Vertical Illuminance at 5'-0" Above Grade – 2.0 footcandles
Vertical Average-to Minimum Uniformity – 5.0-to-1 (or better)

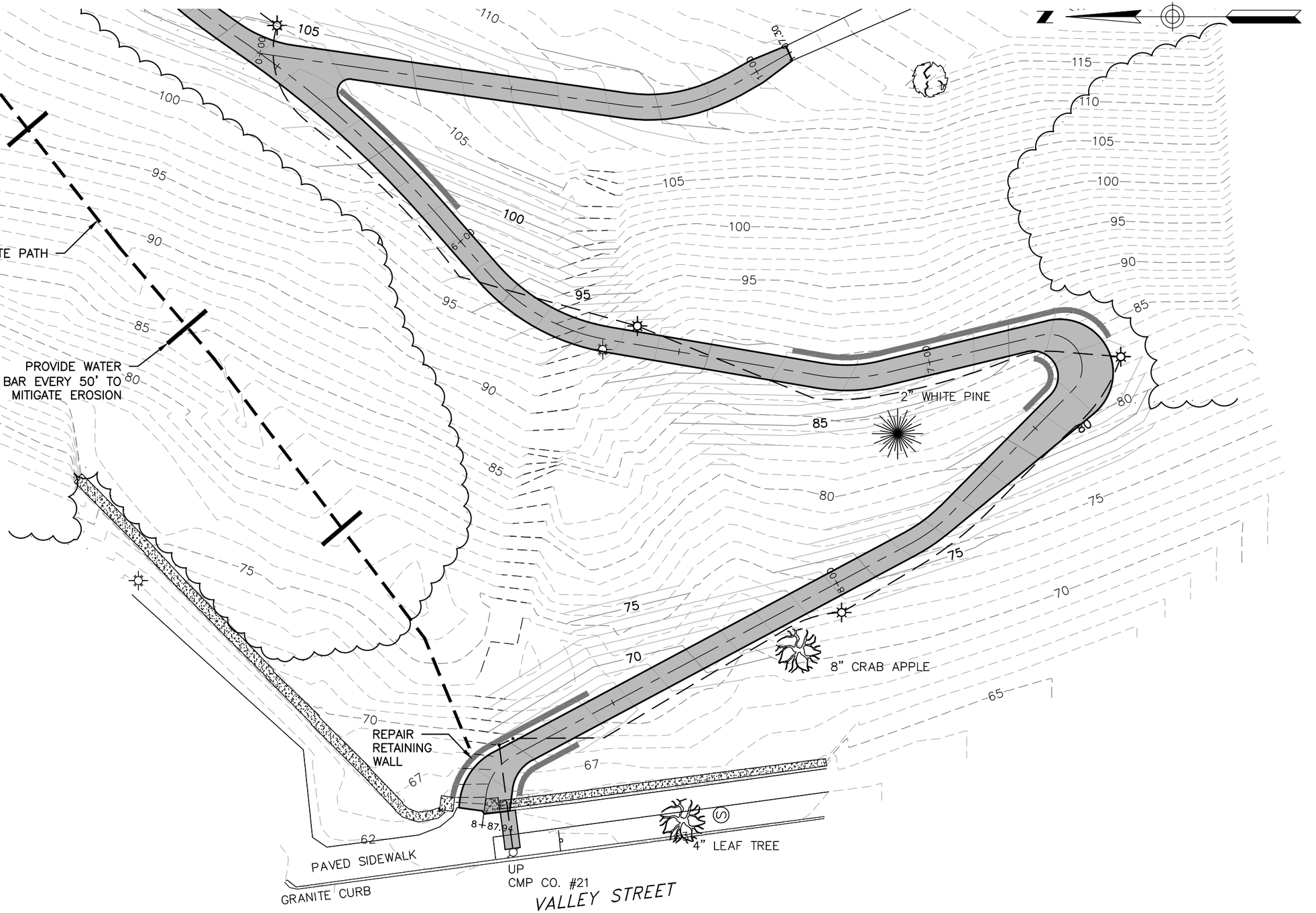
Because the post light luminaires utilize prismatic glass diffusers, the light that is directed side-to-side provides a significant degree of vertical illuminance which can be effective in lighting faces of oncoming pedestrians. Unfortunately, the relatively high brightness of the luminaires is such that once an approaching pedestrian passes in front of a post light, the luminaire brightness immediately behind the person casts them in silhouetted shadow.

The *Illuminating Engineering Society of North America* (*IESNA*) classifies exterior luminaires according to their potential for producing glare in the publication *IESNA* TM-15-11. The rating system is a numeric index for luminaires with a symmetrical optical distribution that ranges from zero (maximum of 660 zonal lumens directed between 60 and 80 degrees) to five (greater than 12,000 lumens directed between 60 and 80 degrees). The existing trail post light luminaires have a rating of three, which represents a high potential for excessive glare.

An additional consideration is that the existing post light luminaires direct a considerable amount of light skyward which contributes to astronomic light pollution. The *IESNA* publication TM-15-11 also classifies exterior luminaires according to their potential for producing uplight. Similar to the rating system for potential glare, the uplight rating system is a numeric index that ranges from zero (no uplight) to five (greater than 5000 lumens direct upward). The existing trail post light luminaires have a rating of five.

Submitted by:
Lawrence E. Bartlett, PE





41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD &CURRAN

POSSIBLE VALLEY STREET TRAIL IMPROVEMENTS

DESIGNED BY: BCM
DRAWN BY: BCM
CHECKED BY: DAS
20384832-C200.dwg

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, MAINE 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO: 0231158.00
DATE: AUGUST 2018
SCALE: 1"=20'

FIG. 1

Comment for March 27 MMC Expansion Meeting

Jenny MacKenzie <gabeat@msn.com> Mar 27, 2018 1:17 PM
Posted in group: **Planning Board**

To Planning Board Members,

I have concerns about the closing of Congress Street during Phase I expansion of MMC and have the following suggestions -

- Traffic be alerted by flashing signage on 295, in the vicinity of Exit 4 or 5 that an alternate route should be sought (suggest taking Exit 4 or Exit 6).
- Traffic coming off the Veteran's Bridge should be directed towards St. John Street or Fore River Parkway (concern about increased traffic on Valley). Another flashing sign would be helpful here.
- Traffic coming in-town via outer Congress and Exit 5 should be diverted to Park Street via St. John Street. I would like to see "Local Traffic Only" signs at the corner of Valley/Congress and Gilman/Congress to prevent excessive traffic from filtering down Forest and Boynton Streets.
- Increased monitoring of on-street parking violations during Sea Dogs games.
- Suspension of the weekly overnight parking restrictions in the surrounding streets (St. John, Valley, A, C, D, Gilman, Boynton, Weymouth, Forest, Park, etc.)

In addition, I would like an update from MMC on the plans for baseline inspections of the home owner's and business foundation walls in the surrounding neighborhoods. I am especially concerned about the construction of the employee garage on St. John, the new entrance on Congress and demolition of the old garage which could adversely impact properties.

Thank you.
Jenny MacKenzie
8 A Street

Portland Maine Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

Thank you! and follow up on the idea for the MMC garage

Emma Holder <pna@parksideneighborhood.org> Thu, Jun 7, 2018 at 10:57 AM
To: "Donaldson, Helen" <hcd@portlandmaine.gov>
Cc: Josef Kijewski <josef.kijewski@gmail.com>, hans breaux <hbreaux@me.com>, Tuck O'Brien <sgo@portlandmaine.gov>

Hi Nell,

Thanks for being part of the MMC meeting yesterday. It was heartening to have you there and to see some many folks around the table making this huge development move forward in an acceptable way.

I'd like to follow up on the idea I presented about the St. John st. X D Street "complete streets" striping near the proposed MMC garage. If the bike lane can be striped to merge with through-traffic at that intersection, it will get the bikes out of the right turn lane and avoid possible "right hook" injuries while allowing for smoother flow of motorists into the facility from St John st.

Would it be possible to ask the MMC-folk for another street-striping proposal with this in mind? As someone who rides 100% of the time, I can guarantee that cyclists would prefer not to be edged to the side of the road into the way of turning traffic.

AND - I am grateful that both sides of the street now contain bike lanes.

Please also consider a timed pedestrian walk light that gives pedestrians a 3-second head start before the traffic is allowed to move (as on St John X Park ave. under the trestle - it works really well.)

Thanks for all you and your team do for our fair city.

Cheers,

Emma

--
Parkside Prez
207 415 7204
http://parksideneighborhood.org

MMC's New Employee Parking Garage

Laura Noddin <laura.noddin@maine.edu> Jun 26, 2018 12:23 PM
Posted in group: **Planning and Urban Development**

To whom it may concern:

I'm writing in regard to the recent proposal to build MMC's new parking garage on St John Street. I have been a resident at 205 St John Street for the last two years (and hoping to stay for a third), and myself and my roommates rely on having on-street parking. My apartment building is 3 units, with 3 people per unit. Removing 13 parking spots from in front of our building would be incredibly inconvenient - as there are many other apartment buildings in this vicinity as well. Not to mention that these spots are nearly always filled -- if you drive around looking for a spot (say, during street cleaning) you will clearly see that the adjacent roads are filled with bumper to bumper parking as well.

I also believe that having on street parking available here is better for our local businesses. Take for example the Sea Dogs - many families opt for parking on this street to avoid the hassle of traffic. If we remove these street parking spots, we are essentially cutting off this part of Portland (and it's local businesses) to the public. From what I know about our city's values - I do not at all believe this is the right choice.

Thank you for taking the time to read this, and I hope you carefully consider the cons before making a decision.

Best,
Laura Noddin
205 St John Street, Apt #3

MMC proposal for parking garage 222 St. John Street

Beth Prosser <bprosser1@gmail.com> Jun 26, 2018 12:24 PM
Posted in group: **Planning and Urban Development**

Good Morning, please take this into consideration for the above-referenced proposal. Thanks very much!
Beth Prosser

Eliminating 13 parking spaces used by tenants, homeowners and businesses just isn't nice or neighborly. Unless I'm mistaken, it has not been reported in the newspaper that this new plan eliminates parking spaces and adds a street light at the D Street intersection with St. John Street.

I can appreciate Matt Wickenheiser's statement: "the goal is to consolidate parking into one spot, where employees can quickly and easily find a parking space, grab a shuttle and get to work." What about people who live and work directly across from this proposed private garage? What about landlords who have rentals and don't have off-street parking? Many of these people work late into the evening or early morning. Can they not easily find a parking space and go to work or home safely and easily?

I'm a landlord and own a business directly across the street. Employees park on St. John Street as do tenants and homeowners. Valley Street parking spots are usually always full and D Street is limited to 3 spaces on one side and 2-3 on the other side with limited one hour parking. With a proposed sidewalk and a street light at this intersection, parking may certainly become even more limited or possibly eliminated.

Jeff Sanders stated "This new plan meets the needs of our employees and addresses our neighbors' concerns." Taking away these parking spots do not mesh with this neighborhood as part of Portland's "institutional overlay zone." How will he meet MMC's neighbors' concerns by taking away much needed street parking?

It seems to me that for MMC's 2,450 spaced proposed parking garage, current street parking should not be eliminated. Will MMC give up 13 first floor spots in their garage in exchange for the ones they want to take away from the city residents in this neighborhood?

Concern with elimination of 13 on-street parking spaces with regards to the MMC Employee Parking Garage Project on St. John Street

DC Heald <deborah.heald@gmail.com> Jun 26, 2018 4:51 PM
Posted in group: **Planning and Urban Development**

Dear Planning Board Members,
Last night MMC held a neighborhood meeting at MMC's Dana Center to share the plans for the new Employee Parking Garage on St. John St.

This was the first time property owners adjacent to and near the D Street and St. John Street intersection learned of the addition of a traffic light there and the elimination of 13 on-street parking spaces (northbound side of St. John just before and after where D Street intersects with St. John).

When property owners asked about the 13 parking space eliminations, MMC, and others said they assessed/studied that area of the neighborhood and concluded that the elimination of the on-street parking would not have any negative impact.

As it turns out, this assumption by MMC and others, is incorrect. It does have a negative impact.

Property owners have asked MMC to revisit this concern and to work with them to find a way or ways to remediate the impact of this decrease in on-street parking in front of their properties.

Most sincerely,
Deborah Heald (resident/property owner)
213 St. John Street

Google Groups

Maine Med submits Phase 2 site plan for 2,450-space parking garage

Flexon, Dana <Dana.Flexon@consolidated.com> Jun 27, 2018 1:01 PM
Posted in group: **Planning Board**

Good afternoon

I am writing to you to express my concern over Maine Med's proposed plan for a new 2,450-space parking garage to be built on Saint John Street in Portland. I currently reside on Saint John Street with my husband and 18 month old. Street parking is currently extremely limited. With the construction of the new garage, there will be a loss of at least thirteen parking places. Does the city have plans to replace the parking spots with safe and convenient spaces for the residents? I totally understand the need for safe and convenient parking for Maine Med employees but as a resident, I also need safe and convenient parking. What are the plans?

Thanks

DANA FLEXON | Manager Access Management

D: 207-535-4169 | C: 603-657-8846

dana.flexon@consolidated.com

consolidated.com | NASDAQ: CNSL

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Google Groups

St John St Parking

Gregory Durgin <GWDurgin@mmc.org> Jun 28, 2018 4:48 AM
Posted in group: **Planning and Urban Development**

To whom it may concern,

I have recently learned that there are plans to eliminate 13 street parking spaces on St. John St as a part of the Maine Medical Center employee parking garage construction. Many of these spaces are currently used by myself and other residents of Portland as a part of daily life, and their loss would be a massive one. As I'm sure you are aware, parking within Portland particularly during the winter, is difficult enough with the scant spaces that exist and further removing parking is not going to help this issue for locals. Eliminating these parking spaces is also damaging to local business as it limits accessibility to those businesses. This is, for obvious reasons, undesirable.

I hope that if the parking garage proposal is approved, it can go forward without eliminating these crucial parking spaces. As residents of Portland, we also require parking and if no other alternative is afforded it will cause undue hardship and difficulty. Please take into consideration the needs of the residents and businesses of Portland that are not Maine Medical Center.

Regards,

Greg Durgin

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Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

sidewalk to MMC garage

Zack Barowitz <zbarowitz@gmail.com> Tue, Jul 10, 2018 at 6:24 PM
To: Helen Donaldson <hcd@portlandmaine.gov>, Stuart O'Brien <sgo@portlandmaine.gov>

Tuck, Nell;
Did my comment about the sidewalk leading to the garage make it to the Planning Board? If not can you send it along to them? Here it is again:
I noticed on one of the renderings of the front of the proposed MMC garage that there is a large open grassy space to the right of the driveway but only a narrow strip of paved sidewalk on the left side (when facing the garage). I'd like to see those spaces evened out a little bit, a wider sidewalk with a row of trees on the side would make a great difference. The sidewalk as rendered does not look pleasant for pedestrians.
Thank you,
Zack

--
207-838-6120
917-696-5649
ZacharyBarowitz.com

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Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

Sidewalk part deux this time with pictures

zbarowitz@gmail.com <zbarowitz@gmail.com> Wed, Jul 11, 2018 at 5:31 PM
To: Tuck O'Brien <SGO@portlandmaine.gov>, Helen Donaldson <hcd@portlandmaine.gov>

Tuck Nell;
When I brought up the possibility and efficacy of a wider sidewalk today at the meeting it was met with general perplexity. Yet undeterred here are a few sketches to demonstrate the idea as well as a work around so that the driveway will still like up with D Street (are a lot of people expected to use D Street).
Thanks
Zack

Sent from my iPhone

IMG_3002.JPG
88K

Eagles
sidewalk
driveway
greenspace
Elevation
Illustration of Sidewalk, driveway, and greenspace at MMC garage
Eagles
sidewalk
driveway
greenspace
PLAN
Proposed:
Eagles
driveway
green space
Eagles
driveway
green space
My Suggestion: Angled Sidewalk

Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

MMC parking garage

Dan & Pat Chase <dpchase26@gmail.com> Mon, Jul 16, 2018 at 8:18 PM
To: Helen Donaldson <hcd@portlandmaine.gov>

Nell,

In the afterglow of the Planning Board workshop, I am concerned that the loss of on-street parking spaces on St. John St. is not considered a serious issue.

I find it ironic that this project is being driven by MMCs' parking needs, and the other participants in the plan, the Railroad Building and the Eagles Club, are having their parking needs addressed, but the parking needs of the neighborhood at ground zero are just being blown off. They get their brand new parking while we get our existing parking taken away.

On the stretch of St. John St. from D Street to the Railroad Building parking lot, a distance of 200 ft., there are seven residential buildings, comprising 17 units of housing and one professional office, and Alan Auto Volvo Service. These buildings have existed in their current usage for a long time, since long before modern building codes, parking requirements, zoning rules, planning boards, and planning departments, but always in harmony with the amount of parking and traffic on St. John St. Now that harmony is to be destroyed. These buildings have always relied on having a certain amount of on-street parking to function.

I also find it ironic that the City of Portland considers housing such an important issue that building owners are fined $50,000 if they do something to their own property that results in the loss of a housing unit, and the City seems happy enough to accept our property taxes (something which MMC and the Eagles Club don't pay, I can't help but mention), but apparently feels no obligation to support the building owners in return.

Not long ago, the City approved the remodeling of 212-214 St. John St. from a two unit residential building into a four unit. But 212-214 does not even have a curb cut or driveway, let alone parking for four units. How could the City approve this remodeling unless the assumption was that the units would utilize on-street parking? And now the City is proposing to take that parking away?

With all the planning, architectural, engineering, landscaping, construction, financing, management, and other professional firepower involved in this project, I realize I don't know all the issues involved. However, I do agree with the comment made at the workshop (the speaker took the thought right out of my own head, actually) that it doesn't seem to make sense to make allowances for bicycling to the new garage. Anyone who bicycles will just go straight to the hospital to avoid walking or waiting for a shuttle. My suggestion is to minimize the bicycle lanes and use the roadway width saved to keep the on-street parking. However, if this suggestion is unsatisfactory, I'm sure all the professionals involved can come up with another way to keep the on-street parking.

Best regards,

Dan Chase

Portland Maine Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

MMC parking garage

Dan & Pat Chase <dpchase26@gmail.com> Wed, Jul 18, 2018 at 8:22 AM
To: Helen Donaldson <hcd@portlandmaine.gov>

Nell,

Beside the potential loss of on-street parking, I have other concerns about the parking garage project. The before and after architectural projections of how the building will look from various locations don't ring true to me. It's such a huge building, but the projections show it as hardly visible. In some cases, the building is shown as obscured by trees which happen to be in the way from that location. Trees are hardly permanent shielding, and don't even have their leaves for half the year to begin with.

Lots of sunlight, views of the Fore River estuary behind Veterans Bridge, and open skies to the west for nice sunsets have been some of the benefits of living in our little neighborhood. These will all be impacted by construction of the garage. I'd like request that before and after sun/shadow studies of the building be completed. I think these might give a more accurate idea of its size and effects. I'd also like to request architectural projections done from the top floor back corner of the Railroad Building looking toward the Fore River estuary.

Please share these concerns with the Planning Board.

Best regards,

Dan Chase

Portland Maine Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

MMC parking garage

Dan & Pat Chase <dpchase26@gmail.com> Thu, Jul 19, 2018 at 10:30 AM
To: Helen Donaldson <hcd@portlandmaine.gov>

Nell,

Yes, please pass my comments along to MMC.

I looked at the shadow studies in the Institutional Development Plan and notice that the location and size of the garage is now changed. I realize MMC was limited to static images in the printed document, but a static image does not convey the changes in sunlight and shadow through different day lengths, sun angles, seasons, etc. I would like to see continuous motion studies of full days on all four solstice dates at least.

I think further discussion of the renderings would also be helpful. I see from the site plan that the elevation of the parking lot is around El. 26. The building is to be just under 100 ft. tall, putting the top of the building somewhere around El. 125. Also from the site plan, the elevation of the yard at 210 St. John St. is around El. 42 and the building is about 33 ft. tall, putting the ridge of the roof at around elevation 75. This means that the parking garage exceeds the height of the top of 210 St. John St. roof by 50 ft. – five stories! I don't know the height of the Railroad Building, but say it's 50 ft. This means the top of the Railroad Building is around El. 90 and parking garage exceeds it by 35 ft. – approximately as if 210 St. John St. were put on top of the Railroad Building. I just don't think the renderings reflect how high the garage is proposed to be.

Please pass my comments along to the Planning Board and MMC.

Best,

Dan

From: Helen Donaldson <hcd@portlandmaine.gov>
Sent: Wednesday, July 18, 2018 5:48 PM
To: Dan & Pat Chase <dpchase26@gmail.com>
Subject: Re: MMC parking garage

Dan,

Thanks for this email, and I will certainly share your comments with the Board. If you're amenable, I will also pass them along to MMC in advance of the Board's next workshop so that they can be aware of your concerns.

For reference, I'm attaching MMC's Institutional Development Plan, which was approved by the Planning Board last year, here. It includes some shadow analysis (see p. 125 and 125). Let me know if you have questions on this.

Second, while we can't request renderings from the top of a nearby building, we certainly share your concern about the long views to and across the Fore River. The applicant has provided renderings from the Western Promenade, 295, and the Veteran's Bridge in an attempt to address these concerns (see attached). Please let me know if more discussion on these renderings would be helpful.

We appreciate your continued input on this, Dan.

Nell

On Wed, Jul 18, 2018 at 8:22 AM, Dan & Pat Chase <dpchase26@gmail.com> wrote:

> Nell,
>
> Beside the potential loss of on-street parking, I have other concerns about the parking garage project. The before and after architectural projections of how the building will look from various locations don't ring true to me. It's such a huge building, but the projections show it as hardly visible. In some cases, the building is shown as obscured by trees which happen to be in the way from that location. Trees are hardly permanent shielding, and don't even have their leaves for half the year to begin with.
>
> Lots of sunlight, views of the Fore River estuary behind Veterans Bridge, and open skies to the west for nice sunsets have been some of the benefits of living in our little neighborhood. These will all be impacted by construction of the garage. I'd like request that before and after sun/shadow studies of the building be completed. I think these might give a more accurate idea of its size and effects. I'd also like to request architectural projections done from the top floor back corner of the Railroad Building looking toward the Fore River estuary.
>
> Please share these concerns with the Planning Board.
>
> Best regards,
>
> Dan Chase

--

Nell Donaldson
City of Portland Planning Division
874-8723
hcd@portlandmaine.gov

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government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

Concerns over 222 St. John St- 7/10/2018 Planning Board Workshop

Karen Snyder <karsny@yahoo.com> Jul 20, 2018 8:01 AM
Posted in group: **Planning and Urban Development**

Greetings Planning Board,

I have concerns over last Planning Board workshop held for 222 St. Johns St. on 7/10/2018.

There was concerns from Planning Board members regarding the fact there is no clear TDM plan for this garage to hold 2,400 parking spaces. One of the Planners (Nell) said something to the affect, that it would basically be okay to continue and once a TDM person is hired by MMC at that time there will be clarification. That is not suffice to approve a development without getting commitment and clarification of concerns over the TDM. That is like putting the cart before the horse.

Furthermore when asked for another workshop to gain further clarification, there was a lack of verbal clarity as to if another workshop should be needed before going to council for approval.

I believe another workshop is needed for 222 St. John development to get clarification on the following:

1) Clarification of the TDM Plan that MMC will use with this new garage on St. Johns street
2) Commitment from MMC that the neighborhood can use the garage during snow bans. Note: When asked this specific question, there was lack of clarification and evasiveness.
3) There was concerns of the neighborhood that MMC taking 13 parking spaces on St. John St for bike stations. These bike stations should NOT replace neighborhood parking but should instead be moved into the large green turn expanse field between side walk and the garage. So, instead of maintaining a turf field, a part of it should be replaced with these biking stations so that crucial parking for the neighborhood is NOT taken away. Even Planning Board member, Maggie Stanley, indicated that as a cyclist, the bike parking should be near the hospital and not at the garage.

Consequently, some important aspects of this plan are still not clarified and another workshop is needed before going to council.

Regards,
Karen Snyder
24 Gilman St.

Portland Maine Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

Comment for the PB on MMC Parking Garage

Zack Barowitz <zbarowitz@gmail.com> Fri, Jul 27, 2018 at 7:46 AM
To: Helen Donaldson <hcd@portlandmaine.gov>

Nell;
Please submit this article (below) I that I wrote to for the *Phoenix* to the Planning Board in regard to the MMC employee garage. (I removed part of the headline that I did not write but the whole headline is in the online text). This is my personal comment, but I'll try to wrangle a neighborhood association letter as well.
Thanks,
Zack

Maine Medical Center's planned parking garage reaches new heights and goes to great lengths, but aren't we in the depths of a housing crisis?

Zack Barowitz Apr 26, 2018

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Projected design from City of Portland Historical Preservation Board proposal [http://www.portlandmaine.gov/AgendaCenter/ViewFile/Item/6106?fileID=33263]

We interrupt the teeth-gnashing over Munjoy Hill condo heights to take you to the post-railway wilderness of Libbytown, where Maine Medical Center's 96-foot tall, 500-foot long, 2,500-stall employee parking garage is moving through the planning process.

This will be a massive structure, easily the biggest garage in Maine. Were it built for housing, it would hold roughly 1,000 apartments. It will sit in the vast parking lot next to the strip mall where old Union Station used to be and where Maine Hardware and Save-a-Lot supermarket are now.

The area where the proposed parking lot will stand is an interesting one. It's bounded on one side by the railroad tracks, Mercy Hospital, the hobo jungle, and the Fore River. On the other side it backs up to the buildings now lining St. John Street, from the Casco Aerie of the Fraternal Order of Eagles to the southern

end of the historic Maine Central Railroad General Office Building, currently housing a Margarita's Mexican Restaurant.

If you're having a hard time picturing the site, that's because most of its landmarks no longer exist, having been demolished in deference to the ongoing triumph of the automobile. But traces of the old fabric endure. Besides the Maine Central Railroad building, a few other railway-associated buildings linger throughout the area, including the Inn at St. John, an old railway hotel.

It is also an historic African-American neighborhood, which Greater Portland Landmarks recently cited as threatened. Pullman porters, the class of African-Americans who found work as train attendants after emancipation, settled there to be close to the train station. At least one family and a number of buildings significant to that history remain.

Projected design from City of Portland Historical Preservation Board proposal [http://www.portlandmaine.gov/AgendaCenter/ViewFile/Item/6106?fileID=33263]

The 1961 destruction of the granite, châteauesque Union Station is only the most infamous example of auto blight in the neighborhood. Further depredations include the demolition of homes to make way for I-295 (Exit 5) and the insertion of three Maine Med parking garages on Congress Street and one on Forest. Even city councilors and planning staff would be hard-pressed to say whether this latest garage site is in Libbytown or in the Saint John Valley neighborhood (which old-timers still call the West End). One thing is for certain: both cars and shit run downhill.

Critics of the approximately $60 million project point to the large proportion of hospital employees who live within two miles of their workplace and the fact that the hospital charges only *$6 per month* for employee parking, this amounts to an incentivization program to encourage employees to drive to work. It also translates to a payback period of over a thousand years for the garage (not including maintenance costs). While neither the hospital administration nor city planning staff have had the chutzpah to tout the project as beneficial for the city, the general line has been that it is "necessary" that one of the city's "core institutions" be able to maintain employees by providing ample parking.

But it is land-use decisions like this one that have driven up city housing costs and pushed hospital workers into outlying communities like Gorham and Scarborough, both of which have been growing at a double-digit rates far higher than Portland's rate of growth. This means that the garage will essentially subsidize those towns' lack of public transportation, pushing the burden onto Portland residents. Employees can drive in, use the infrastructure, cause traffic, drive home, and pay taxes to whatever town they're living in. In return, Portland gets virtually nothing in the way of tax revenue: being a non-profit, Maine Med is tax-exempt.

In a perfect city, East Brown Cow and Maine Medical Center would have seen the benefit of developing the garage site for 1,000 units of housing. This would shorten the commutes of Maine Med employees,

relieve the housing shortage, add to the tax rolls — and give succor to East End residents as Condomageddon looms over Munjoy Hill.

--
207-838-6120
917-696-5649
ZacharyBarowitz.com

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Portland Maine Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

Construction period for new MMC garage on St John St

DC Heald <deborah.heald@gmail.com> Fri, Jul 27, 2018 at 12:56 PM
To: hcd@portlandmaine.gov
Cc: Beth Prosser <bprosser1@gmail.com>, DC Heald <deborah.heald@gmail.com>, Dan Chase <dpchase26@yahoo.com>

Hello, Nell. Because MMC ran out of time at the Planning Board Workshop on July 10th to present info on the construction phase of their project, I have some questions and concerns about how all that construction traffic will impact not only those of us who live within close proximity of the temporary entrance to the site, but also the flow of traffic in general on the street. Most of my concerns are with noise, construction vehicles gearing up and down while turning into and leaving the construction site, traffic back ups, etc. I realize that we can't eliminate the traffic and noise, but what has MMC planned to help mitigate these concerns as much as possible during the construction phase?

The other thing regarding the loss of on-street parking. It seemed to me that there was an assumption on either the city's part and/or MMC's part that the loss of those 13 spaces on St John would be "recovered" up on Valley Street once MMC employees who park there started using the new garage. This would be great if MMC could ensure that employees would not park on Valley. But how do you enforce this? Is there a plan being worked on to help those most impacted by this loss of parking?

Thank you for your time and consideration of my concerns.

Most sincerely,
Deborah Heald
213 St. John Street

Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

MMC Employee Garage site plan review - revised plans and Planning Board timeline

Dan & Pat Chase <dpchase26@gmail.com> Tue, Aug 28, 2018 at 3:59 PM
To: Helen Donaldson <hcd@portlandmaine.gov>

Thanks, Nel

Yes, the plans generally represent what I talked about with MMC with regard to our property. I'm having trouble visualizing how things are going to look and be when the work is done, but I don't have any objections right now.

Looking at C-100, the site plan, is on-street parking still going to be allowed beginning basically across the street from our house where the intersection transition ends?

MMC says that constructing curbs and sidewalks, and better defining D Street, is going to allow more on-street parking there, but I don't see where there is any room for parking at all. The driving lanes seem to take up the entire width of the street between sidewalks.

My bet is that MMC employees will continue to park on Valley St. They won't have to pay to park their vehicles, and it is a closer walk to the hospital than from the new parking garage. I don't see how a neighborhood parking permit system can work on that part of Valley St. when the traffic that Florence House attracts is sporadic, irregular, and short term rather than long term residential.

I still think MMC should be required to develop continuous motion, full day, sun/shade studies for the garage. The new images are done at noon, but the afternoons are when the shadow from the building is really going to impact the neighborhood. It looks like the entire neighborhood is going to be in the shade for the entire afternoon during the winter. At what point during the year does this shading impact develop and when does it go away?

MMC says nothing about my comments about the height of the building except that it is within the height limit of the zoning. Just because the height limit is 100 ft. does not mean they are automatically able to build that high. Subsequent measurements I took indicate the top of the Railroad Building is about El. 80, which puts the building at about 40 ft tall. With the top of the garage at El. 125, the garage will exceed the height of the Railroad Building by 45 ft., more than the Railroad Building is tall. Does the City really want to allow a building this massive? Options are available. For example, some levels could be built underground. Also, initially, MMC proposed building the new garage on Gilman St. rather than St. John St. The parking load could be split and two garages could be built, one on Gilman St. and one on St. John St.

Please share these comments with the Planning Board and MMC as appropriate.

Best,

Dan Chase

From: Helen Donaldson <hcd@portlandmaine.gov>
Sent: Monday, August 27, 2018 4:08 PM
To: Dan & Pat Chase <dpchase26@gmail.com>
Subject: Fwd: MMC Employee Garage site plan review - revised plans and Planning Board timeline

[Quoted text hidden]

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

Neighborhood Assoc. comment on MMC garage at 190-222 St. John Street

Zack Barowitz <zbarowitz@gmail.com> Thu, Aug 30, 2018 at 12:50 PM
To: Helen Donaldson <hcd@portlandmaine.gov>, planningboard@portlandmaine.gov
Cc: libbytown@googlegroups.com

LIBBYTOWN
NEIGHBORHOOD ASSOCIATION

Zack Barowitz, Chair
Maureen Morse, Vice Chair
Damon Yakovleff, Treasurer
Brett Gabor, Secretary
Nicole Anderson, Past Chair

Dear Chair Dundon and Planning Board Members:

The Libbytown Neighborhood Association has discussed the proposal of the parking garage at 190-222 Saint John Street and according the association bylaws, we voted to request that you please consider the following:

Whereas, a c.2,000 stall employee parking garage will bring continued motor vehicle traffic;
Whereas, the $6/month parking fee acts as an incentive for employees to drive to work;
Whereas, a significant portion of MMC employees do not live nor pay real estate tax in Portland;
Whereas, the tax revenue from the site shall be negligible;
Whereas, a similarly sized commercial building, such as housing (the highest and best use) would be expected to generate well upwards of $100,000 in annual tax revenue;
Whereas, a parking structure is devoid of future opportunity costs;

Heretofore, the purpose of this CBA is to:

- Build healthier communities;
- Offset employee vehicular traffic with better walk, cycling, and transit options and conditions;
- Promote healthy, safe, and clean commuting options for MMC employees;
- Promote affordable housing options for MMC employees proximate to the Portland campus;
- Recoup some monetary benefit from the site on the basis of tax-payer standing;

Therefore, the Libbytown Neighborhood Association makes the following recommendations for community benefits within a 1/2 mile of the Portland MMC campus; MMC shall be responsible for:

- Establishment annual contribution of not less than $70,000 of a TMA for the western fringe of downtown to include but not be limited to the following entities: Mercy hospital, Sea Dogs, Thompson's Point, and the PTC;
- Annual contribution to METRO Bus of not less than $10,000 to METRO bus service for improvements such as installation of bus shelters;
- Annual contribution of not less than $20,000 designated to Pedestrian and bicycle improvements on Congress Street, Park Avenue, and Saint John Street;
  Annual contribution of not less than $20,000 to the city's Housing Trust Fund to promote workforce housing that may be marketed to MMC employees;
- Annual contribution to Portland Trails of not less than $5,000 to improve trail network connectivity.

Thank you for your consideration of this matter.

Sincerely,
Zack Barowitz
Chair

--
207-838-6120
917-696-5649
ZacharyBarowitz.com

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Portland Maine | Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

RE: 189 St John/Maine Med

Robert Moldaver <moldaver.robert@gmail.com> Thu, Aug 30, 2018 at 9:40 PM
To: Helen Donaldson <HCD@portlandmaine.gov>, Jeanne Handy <jmhandy@maine.rr.com>

Good Morning, Nell,

Thanks again for sending this. In terms of the fence, our preference is definitely the latter, to maintain the fence line and install smaller plantings along the sidewalk edge. The portion of fencing that will need to be moved is a section across the back of the driveway and the portion next to Alan's little garage.

Concerning the plan, we're interested in what the lighting of the walkways will be and hope that it is more about low level, safety lighting rather than tall, old fashioned street lighting that will shine in our windows at night. The technologies exist that can direct light where needed and not add to overall light pollution in the city. We will also have to deal with the traffic lights of red, yellow, and green during the nights hours. This is a big change.

We also request that the crosswalks not include the audio or beeping sounds that some have. We request that the crossing signals be activated by buttons, not on timers. This would decrease the frequency of stopping and accelerating vehicles and such noise at the corners.

We would appreciate seeing the other plans and documents you refer to.

We hope that we will be given enough notice to make appropriate changes to our landscaping at the least damaging times for the plants that need to be moved. Our gardener is coming to take a look next week. Also, we'd like Ron Forest & Sons to handle moving the fence at the end of the driveway, since they are the company that installed the fence and the structure is unique to their company. Again, we hope MMC will reimburse us for these expenses.

Please let us know if we should be doing anything to make our concerns known to MMC directly or if we should plan to comment at the hearing.

Thanks again for your consideration and work.

Best,
Jeanne & Robert
[Quoted text hidden]
--
Robert Moldaver
moldaver.robert@gmail.com

Portland Maine Yes. Google's good here.

Helen Donaldson <hcd@portlandmaine.gov>

RE: 189 St John/Maine Med

Robert Moldaver <moldaver.robert@gmail.com> Mon, Aug 13, 2018 at 11:19 AM
To: Tom Errico <thomas.errico@tylin.com>
Cc: Jeanne Handy <jmhandy@maine.rr.com>, Helen Donaldson <HCD@portlandmaine.gov>

Hello Ms. Donaldson,
Welcome back from your vacation. I hope you had a great time.
My wife, Jeanne Handy, and I would like to be sure the plans for D Street will preserve some of the very important investments we have made during our 19 years in our home. We have tried to be be clear in our descriptions, in the list below, but let us know if you need other details and if you would like a walk of the property. We'd be happy to schedule that with you. In all, hopefully our concerns and descriptions will help you and others in the planning stage.

D Street Side Walk Impacts to 189 St. John Street property

Our first request would be that the city consider putting the sidewalk on the other side of D street, rather than the proposed side in the plan, since it would be much less of a disruption to our neighbor, who said he doesn't care, than to us. One of the most important reasons to consider the other side is the very significant loss of mature plantings and tree. These impacts make up the bulk of our concerns listed below.

1) The large, mature poplar tree on the corner of D and St. John has been pruned and maintained at our expense over the years. This is a very significant shade tree for our property and a big "tree presence" in this part of the neighborhood. We have had at least 4 visits to our property to maintain this tree and others, most recently by Southern Maine Tree Service. The loss of this tree will have a huge impact on the shade it provides our property, especially in the afternoons. It also provides an aesthetic component that all mature trees offer. This loss will be replaced by large traffic light poles, wires, traffic lights etc.. We would like to see more tree wells and trees planted to at least attempt to add a softening to the changes coming. We understand that no new trees will be significant in terms of shade for our property, nor will they block the poles, wires, and traffic signals, however, they might provide a bit of softening and a bit of compensation for the loss of greenery.

2) It appears that the mature forsythia bush, all the mature lilac bushes, and the established vinca vine (ground cover) will be lost in this work. These were all planted by my wife and me. Their loss also impacts our property by the loss of color, and fragrance, and the softening of visual and aural aspects of living on a busy corner. Also, they protected the fence from becoming a target for vandalism. There was significant cost and labor involved with these plantings, not to mention a bit of an emotional attachment that has developed as they have grown. However, we understand that they are on city property, we only ask that Mr. Tarling include some plant screening that he sees fit, in between the sidewalk and the fence, to replace some of what is being lost. Lastly, we will ask a landscaping company that we have used in the past about transplanting the lilacs and forsythia to the inside the fence. We would hope to be compensated for this work.

3) We understand the fence at the end of our driveway will need to be pushed back and we'd like to request that Maine Medical Center pay for the cost of this. We put this fence in in phases due to the cost and were not anticipating needing to move it, since until the expansion, the city hasn't shown any interest in adding a sidewalk to the area. We anticipate that we would also lose a parking space because our drive way would have to be modified to fit between the hemlock (approximately 60' tall) and the white pine (approximately 80'). Currently we can fit 3 cars in the driveway, that would reduce us to 2 spots. This loss has a big impact on the value of our property. No doubt about the loss of parking, but also the loss of a large piece of our backyard changing to driveway. In this zone we have invested a great deal of money in the landscaping on the inside of the fence. We'd be happy to meet with you if it can be scheduled, but otherwise, please feel free to enter the driveway gate and inspect our lovely "city yard and garden" when you get the chance.

Thanks very much for your time and consideration. We believe Maine Medical Center wants to be a good neighbor, we do too. We love this city.

We look forward to hearing from you.

Best,
Robert Moldaver and Jeanne Handy
c.207-712-4920 c.207-712-4919

[Quoted text hidden]
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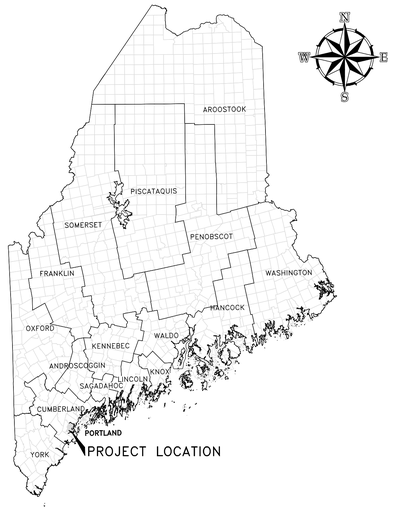
MAINE MEDICAL CENTER

PORTLAND, ME 04102

ST. JOHN STREET EMPLOYEE PARKING GARAGE

W&C PROJECT NO. 0231158.00

JUNE 22, 2018
LEVEL III SITE PLAN APPLICATION
NOT FOR CONSTRUCTION
REV. 8/23/2018



PROJECT LOCATION MAP

50 0 50 100 scale mile

DAVID A SENUS 10791
STATE OF MAINE
REGISTERED PROFESSIONAL ENGINEER
6/22/2018

WOODARD & CURRAN

41 Hutchins Drive | Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

SOURCE: USGS TOPOGRAPHIC MAP

SITE LOCATION MAP

1/2 0 1/2 1 scale mile

2000 0 2000 4000 scale feet

\\woodardcurran.net\shared\Projects\02311580.00 Maine Med Ctr - Parking Garage\Cad\Drawings\Wcdesign Phase\02311580.00 Aug 23, 2018 - 1:42pm

GENERAL NOTES:

1. EXISTING CONDITIONS, TOPOGRAPHIC INFORMATION, UTILITY LOCATIONS & PROPERTY LINE INFORMATION SHOWN HEREON HAVE BEEN PROVIDED FROM A FIELD SURVEY PREPARED BY OWEN HASKELL, INC., DATED NOV. 16, 2016 & UPDATED MARCH 26, 2018.
2. ELEVATIONS REFERENCED TO VERTICAL DATUM: NGVD29/ CITY DATUM.
3. ELEVATIONS REFERENCED TO HORIZONTAL DATUM: WEST, U.S. FOOT STATE PLANE NAD83.
4. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS, AND LOCATION AND SIZE OF BUILDINGS.
5. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY CODES.
6. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO THE CITY. PROPERTY MONUMENTS SHALL BE RESET IN ACCORDANCE WITH CITY OF PORTLAND STANDARDS.
7. DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT CITY OR PRIVATELY OWNED LOTS, UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY CITY AND/OR LAND OWNER.
8. 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, AS SPECIFIED IN THE CITY OF PORTLAND TECHNICAL MANUAL.
9. IF CONTRACTOR PROPOSES TO TEMPORARILY STOCKPILE ANY SURPLUS SOIL AND ROCK IN THE CITY OF PORTLAND, THE CONTRACTOR SHALL OBTAIN APPROVAL FOR EACH STOCKPILE LOCATION FROM THE ENGINEER. IF CONTRACTOR PROPOSES TO PERMANENTLY STOCKPILE ANY SURPLUS SOIL AND ROCK ON PROPERTY IN THE CITY OF PORTLAND, THE CONTRACTOR MUST OBTAIN ANY SITE PLAN PERMITS REQUIRED FROM THE CITY PLANNING AUTHORITY OR ANY FILL PERMITS REQUIRED FROM MDEP OR U.S. ARMY CORPS OF ENGINEERS. BOTH TEMPORARY AND PERMANENT STOCKPILE LOCATIONS SHALL MEET THE APPLICABLE SETBACK REQUIREMENTS IN THE CITY LAND USE CODE AND SHALL RECEIVE PROPER STABILIZATION AND EROSION & SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH APPROVED SOIL EROSION & WATER POLLUTION CONTROL PLAN.
10. 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.
11. CONTRACTOR IS RESPONSIBLE FOR ALL SNOW REMOVAL AND WINTER MAINTENANCE OF ACCESS PATHS WITHIN THE LIMIT OF WORK.
12. 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.
13. LAND OUTSIDE THE PROPOSED LIMIT OF WORK SHALL NOT BE DISTURBED BY THE CONTRACTOR.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
15. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES, REGULATIONS, LEGAL REQUIREMENTS, PERMIT CONDITIONS, ETC.
16. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKWAYS, STREETS, PAVEMENTS, CURBING, TREES, PLANTINGS, LAWN, FENCING TO REMAIN ON OR OFF THE PREMISES, AND SHALL REPAIR AND REPLACE AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER, ANY ITEMS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK.
17. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING CODES AND REGULATIONS.
18. SAWCUTS IN EXISTING PAVEMENT SHALL BE SMOOTH AND STRAIGHT. EXISTING PAVEMENT SHALL BE SAWCUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED.
19. WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL COMPLY WITH APPLICABLE CITY OF PORTLAND AND STATE REQUIREMENTS.
20. IF IMPORTED FILL MATERIAL IS REQUIRED, IT SHALL BE CERTIFIED IN WRITING BY LICENSED GEOLOGIST OR 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.
21. 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.
22. ALL CURB DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND AND SHALL CONFORM TO CITY OF PORTLAND SPECIFICATIONS. COST IS INCIDENTAL TO CONTRACT.
23. ALL MATERIAL SHALL BE FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.
24. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.
25. ALL FULL DEPTH PAVEMENT REPLACEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL STANDARDS.
26. ALL WORK WITHIN THE RIGHT OF WAY OF CITY STREETS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLANS TO THE TRAFFIC ENGINEER AT LEAST 7 DAYS BEFORE BEGINNING CONSTRUCTION IN ANY STREET. THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE SUBJECT TO APPROVAL BY THE TRAFFIC ENGINEER, WHO MAY ATTACH SPECIAL CONDITIONS TO, OR REQUIRE MODIFICATIONS OF, THE TRAFFIC CONTROL PLAN. WORK SHALL NOT BEGIN UNTIL THE PLAN IS APPROVED BY THE TRAFFIC ENGINEER.
27. RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
28. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
29. THE CONTRACTOR SHALL OBTAIN A CITY STREET OPENING PERMIT BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR WILL ALSO BE REQUIRED TO HAVE A CURRENT EXCAVATOR'S LICENSE IN THE CITY.
30. ALL WORK IN THE PUBLIC R.O.W. SHALL BE COMPLETED IN ACCORDANCE WITH ARTICLES VI, VII, AND IX OF CHAPTER 25-STREETS, SIDEWALKS, AND OTHER PUBLIC PLACES OF THE CITY OF PORTLAND CODE OF ORDINANCES.
31. ALL SEWER CONSTRUCTION IN THE PUBLIC WAY SHALL BE COMPLETED IN ACCORDANCE WITH ARTICLE II OF CHAPTER 24-SEWERS OF THE CITY OF PORTLAND CODE OF ORDINANCES.
32. CONTACT CITY OF PORTLAND ARBORIST AND ENGINEER PRIOR TO CUTTING ROOTS, TRIMMING BRANCHES, OR DISTURBING TREES WITHIN THE R.O.W. THAT NOT HAVE BEEN NOTED FOR REMOVAL ON THE PLANS.
33. ST. JOHN STREET IS A MORATORIUM STREET. EXCAVATION WITHIN STREET WILL NOT BE ALLOWED UNTIL 6-2-2022, EXCEPT IN ACCORDANCE WITH THE CITY OF PORTLAND FIVE-YEAR MORATORIUM STREET RESTORATION REQUIREMENTS AS OUTLINED WITHIN THE RULES AND REGULATIONS FOR EXCAVATION ACTIVITY WITHIN THE PUBLIC RIGHT-OF-WAY. THE PERMANENT PAVEMENT RESTORATION LENGTH SHALL BE 20' IN BOTH DIRECTIONS FROM FURTHEST EDGES OF EXCAVATION AND THE PERMANENT PAVEMENT RESTORATION WIDTH SHALL BE THE ENTIRE WIDTH OF THE PAVEMENT STREET. THE PERMANENT PAVEMENT RESTORATION DEPTH SHALL BE 2" (ARTERIAL STREET). PREPARATION FOR PERMANENT RESTORATION SHALL BE ACCOMPLISHED BY MACHINE GRINDING THE EXISTING PAVEMENT TO MEET THE DEPTH REQUIREMENT VERTICAL SURFACES OF MACHINE GROUND PAVEMENT SHALL BE PERPENDICULAR TO THE PAVEMENT SURFACE.
34. 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.
35. 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.
36. CONTRACTOR SHALL MAINTAIN EROSION CONTROL AND STORMWATER POLLUTION PREVENTION SYSTEMS IN COMPLIANCE WITH THE REQUIREMENTS OF THE MAINE CONSTRUCTION GENERAL PERMIT (MCGP). CONTRACTOR SHALL CONDUCT AND MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS PER THE NOTICE OF INTENT TO COMPLY WITH THE MAINE CONSTRUCTION GENERAL PERMIT. CONTRACTOR SHALL PREPARE AND SUBMIT A NOTICE OF TERMINATION TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, UPON COMPLETION OF THE CONSTRUCTION PROJECT. SUBMIT A COPY OF THE INSPECTION RECORDS AND THE NOTICE OF TERMINATION TO THE OWNER AND ARCHITECT. PROVIDE CRANE PADS PER DIRECTION OF CONSIGLI.

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. THE WORD "DEMOLISH" SHALL IMPLY THE FULL REMOVAL AND PROPER DISPOSAL OF THE ITEM AND ANY APPURTENANT ITEMS, AS NOTED, OR AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE. THE OWNER RETAINS THE RIGHT TO KEEP ANY ITEM NOTED FOR REMOVAL OR DEMOLITION AT THE REQUEST OF THE OWNER OR THEIR REPRESENTATIVE.
3. 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.
4. 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 IN WRITING OF THE CONFLICT.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR, THE CITY OF PORTLAND AND APPLICABLE UTILITY.
6. 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.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
8. 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.

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. UNSUITABLE FILL AND BACKFILL MATERIALS ARE MATERIALS CONTAINING EXCESSIVE AMOUNT OF WATER, PLASTIC, CLAY, VEGETATION, ORGANIC MATTER, DEBRIS, PAVEMENT, STONES OR BOULDERS OVER 12 INCHES IN GREATEST DIMENSION, FROZEN MATERIAL, AND MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, WILL NOT PROVIDE A SUITABLE FOUNDATION OR SUBGRADE.
3. SUITABLE SOIL SHALL BE PLACED IN LAYERS TO THE REQUIRED ELEVATIONS AS SHOWN ON THE DRAWINGS. FILL, BACKFILL AND COMPACT TO PRODUCE MINIMUM SUBSEQUENT SETTLEMENT OF THE MATERIAL AND PROVIDE ADEQUATE SUPPORT FOR THE SURFACE TREATMENT OR STRUCTURE TO BE PLACED ON THE MATERIAL. PLACE MATERIAL IN APPROXIMATELY HORIZONTAL LAYERS OF BEGINNING AT LOWEST AREA TO BE FILLED. DO NOT IMPAIR DRAINAGE. DO NOT USE ON-SITE TOPSOIL AS FILL MATERIAL.
4. FOR GROUND SURFACE PREPARATION, CONTRACTOR SHALL REMOVE VEGETATION, DEBRIS, UNSUITABLE SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILL. REMOVE MATERIAL TO THE FULL EXTENT OF ROOT PENETRATION. PROOF-ROLL EXISTING GROUND SURFACE PRIOR TO PLACEMENT OF FILL TO PROVIDE A DENSE, STABLE BASE FOR THE FIRST LIFTS OF THE STRUCTURAL FILL.

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.
2. CONDUIT FOR ELECTRIC LINES SHALL BE WATER-TIGHT IN ADDITION TO CONFORMING TO UTILITY COMPANY REQUIREMENTS.
3. REFER TO ELECTRICAL DRAWINGS PREPARED BY BARTLETT DESIGN FOR ELECTRICAL WIRING DIAGRAMS, SCHEDULES, CONDUIT MATERIAL, POWER CONNECTIONS AND ENERGIZATION AND ALL OTHER APPURTENANCES RELATED TO ELECTRICAL WORK FOR THIS PROJECT.
4. ALL PROPOSED ELECTRICAL AND LIGHTING WORK SHOWN ON THESE CIVIL DRAWINGS SHALL BE COORDINATED WITH THE ELECTRICAL PLANS AND SPECIFICATIONS PREPARED BY COMPANY. IN THE EVENT THERE IS A DISCREPANCY BETWEEN THE CIVIL AND ELECTRICAL DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IN WRITING.CLEAN AND/OR FLUSH ALL MANHOLES, CATCH BASINS, AND ASSOCIATED PIPING AFTER THE WORK HAS BEEN COMPLETED.
5. COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND CITY. NOTIFY UTILITY COMPANIES WITHIN 48 HOURS OF WORK ACTIVITY ADJACENT TO THOSE UTILITIES.
6. COORDINATE DISRUPTION OF PRIVATE UTILITY SERVICES WITH LANDOWNERS AT LEAST TWO DAYS (48 HOURS) PRIOR TO DISRUPTION. ALL UTILITY COORDINATION IS RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY CONNECTION, RETIREMENT, AND COORDINATION FEES.
7. CONTRACTOR SHALL ARRANGE AND PREPARE FOR ALL NECESSARY TEMPORARY UTILITIES AS REQUIRED TO COMPLETE WORK, INCLUDING ANY NECESSARY SUB-METERING OR TEMPORARY CONNECTIONS.
8. ALL WATER LINE (MAINS, SERVICES, HYDRANTS, ETC.) CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT TECHNICAL SPECIFICATIONS, LATEST EDITION. PORTLAND WATER DISTRICT TECHNICAL SPECIFICATIONS SHALL GOVERN IN THE CASE OF ANY AND ALL CONFLICTS IN THE PROJECT CONSTRUCTION DOCUMENTS AT NO ADDITIONAL COST TO OWNER.
9. ALL GAS LINE (MAINS, SERVICES, GATE VALVES, METERS, ETC.) CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH UNITIL'S TECHNICAL SPECIFICATIONS, LATEST EDITION. UNITIL'S TECHNICAL SPECIFICATIONS SHALL GOVERN IN THE CASE OF ANY AND ALL CONFLICTS IN THE PROJECT CONSTRUCTION DOCUMENTS AT NO ADDITIONAL COST TO OWNER.
10. 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).
11. WHEREVER POSSIBLE, PROVIDE 10 FOOT HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES. WHEN THIS HORIZONTAL SEPARATION IS NOT POSSIBLE, INSTALL SEWER LINE AT LEAST 18 INCHES BETWEEN BOTTOM OF WATER LINE AND TOP OF SEWER.
12. FOR SEWER LINE CROSSING WATER LINE TRENCHES, PROVIDE AT LEAST 18 INCHES BETWEEN BOTTOM OF WATER LINE AND TOP OF SEWER.
13. INSULATE ALL SEWER, FORCEMAINS AND WATER MAINS WHICH HAVE LESS THAN 4 FEET OF COVER OR WHERE DIRECTED BY THE ENGINEER. RIGID INSULATION REQUIRED: 2" THICK, BY 4' WIDE, UNLESS OTHERWISE NOTED. COSTS ASSOCIATED WITH INSULATION ARE INCIDENTAL TO CONTRACT.
14. INSTALL THRUST BLOCKS AT ALL BENDS IN FORCEMAIN AND WATER MAIN. SEE CIVIL DETAIL ON SHEET C-202.
15. PROVIDE END CAPS ON ALL UNDERDRAIN PIPING EXCEPT WHERE DAYLIGHTED, UNLESS OTHERWISE NOTED.
16. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL DIG TEST PITS TO VERIFY THE LOCATION OF POTENTIAL EXISTING UNDERGROUND UTILITY CONFLICTS. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS, AND ADVISE THE ENGINEER IN WRITING OF ANY DISCREPANCIES.
17. ALL PROPOSED UTILITIES 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.
18. UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE MATERIAL OR APPROVED EQUAL, WITH WATER TIGHT JOINTS. PIPE JOINTS, FITTINGS AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH SECTION X.

ABBREVIATIONS

&	AND	N.I.C.	NOT IN CONTRACT
A.G.	ABOVE GROUND	NO.	NUMBER
		NR	NO REFUSAL
BC	BOTTOM OF CURB	N.T.S.	NOT TO SCALE
BIT	BITUMINOUS		
BW	BOTTOM OF WALL	OE	OVERHEAD ELECTRIC
B/W	BETWEEN	OH	OVERHEAD
CB	CATCH BASIN	±	PLUS OR MINUS
CI	CAST IRON	LLS	LICENSED LAND SURVEYOR
CMP	CENTRAL MAINE POWER	PROP.	PROPOSED
CMP	CORRUGATED METAL PIPE	PT.	POINT
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON	R.O.W.	RIGHT-OF-WAY
DIA.	DIAMETER	RCP	REINFORCED CONCRETE PIPE
DMH	DRAIN MANHOLE	REINF.	REINFORCED
DTL.	DETAIL	REQ'D	REQUIRED
E	UNDERGROUND ELECTRICAL	S	SLOPE (FT./FT.)
EL.	ELEVATION	S	SEWER
E.O.P.	EDGE OF PAVEMENT	SD	STORM DRAIN
EXIST.	EXISTING	SMH	SEWER MANHOLE
		SCH	SCHEDULE
FF	FINISH FLOOR	STA.	STATION
FM	FORCEMAIN		
FT	FOOT/FEET	TS	TOP OF STAIRS
		TW	TOP OF WALL
G	GAS MAIN	TYP.	TYPICAL
GS	GAS SERVICE		
GALV.	GALVANIZED	UP	UTILITY POLE
GRAN.	GRANITE		
		VC	VITRIFIED CLAY
HDPE	HIGH DENSITY POLYETHYLENE	VIT.	VITRIFIED CLAY
HYD	HYDRANT		
		W	WEST
INV.	INVERT	W	WATER
		W/	WITH
LF	LINEAR FEET	W	WATERMAIN
		WS	WATER SERVICE
MAX.	MAXIMUM	WV	WATER VALVE
MDOT	MAINE DEPARTMENT OF TRANSPORTATION		
MIN.	MINIMUM		
MON	MONUMENT		

DRAWING INDEX

Sheet Number	Sheet Title	Sheet Description
CIVIL		
--	G-000	COVER
1	G-001	GENERAL NOTES, LEGEND, SHEET INDEX & ABBREVIATIONS
2	B&TS-1	BOUNDARY & TOPOGRAPHIC SURVEY
3	C-001	EXISTING CONDITIONS & DEMOLITION PLAN
4	C-100	SITE LAYOUT & MATERIALS PLAN - 1
5	C-101	SITE LAYOUT & MATERIALS PLAN - 2
6	C-102	GRADING & DRAINAGE PLAN - 1
7	C-103	GRADING & DRAINAGE PLAN - 2
8	C-104	UTILITY PLAN - 1
9	C-105	UTILITY PLAN - 2
10	C-106	FIRE TRUCK MOVEMENT PLAN
11	C-107	SIDEWALK IMPROVEMENT PLAN
12	C-200	CIVIL DETAILS - 1
13	C-201	CIVIL DETAILS - 2
14	C-202	CIVIL DETAILS - 3
15	C-203	CIVIL DETAILS - 4
16	C-204	CIVIL DETAILS - 5
17	C-205	CIVIL DETAILS - 6
LANDSCAPING		
18	L1.0	LANDSCAPE SITE PLAN
19	L2.0	LANDSCAPE DETAILS
ARCHITECTURAL		
20	G101	GROUND LEVEL CODE INFORMATION PLAN
21	G102	LEVEL 1 CODE INFORMATION PLAN
22	G103	LEVEL 2 CODE INFORMATION PLAN
23	A101	BUILDING ELEVATIONS
24	A102	BUILDING ELEVATIONS
STRUCTURAL		
25	PS1	GRADE LEVEL PARKING LAYOUT
26	PS2	LEVEL 1 PARKING LAYOUT
27	PS3	LEVELS 2,4 & 6 PARKING LAYOUT
28	PS4	LEVEL 3 & 5 PARKING LAYOUT
29	PS5	LEVEL 7 PARKING LAYOUT
30	PS6	LEVEL 8 PARKING LAYOUT
ELECTRICAL		
31	E0.1	SITE LIGHTING CALCULATION PLAN - 1
32	E0.2	SITE LIGHTING CALCULATION PLAN - 2
33	E0.3	SITE LIGHTING CALCULATION PLAN - 3
34	E0.4	SITE LIGHTING CALCULATION PLAN - 4
35	E0.5	ROOF DECK LIGHTING CALCULATION PLAN
36	E1.1	ELECTRICAL SITE PLAN - 1
37	E1.2	ELECTRICAL SITE PLAN - 2
38	E1.3	ELECTRICAL SITE PLAN - 3
39	E1.4	ROOF DECK ELECTRICAL PLAN

LEGEND

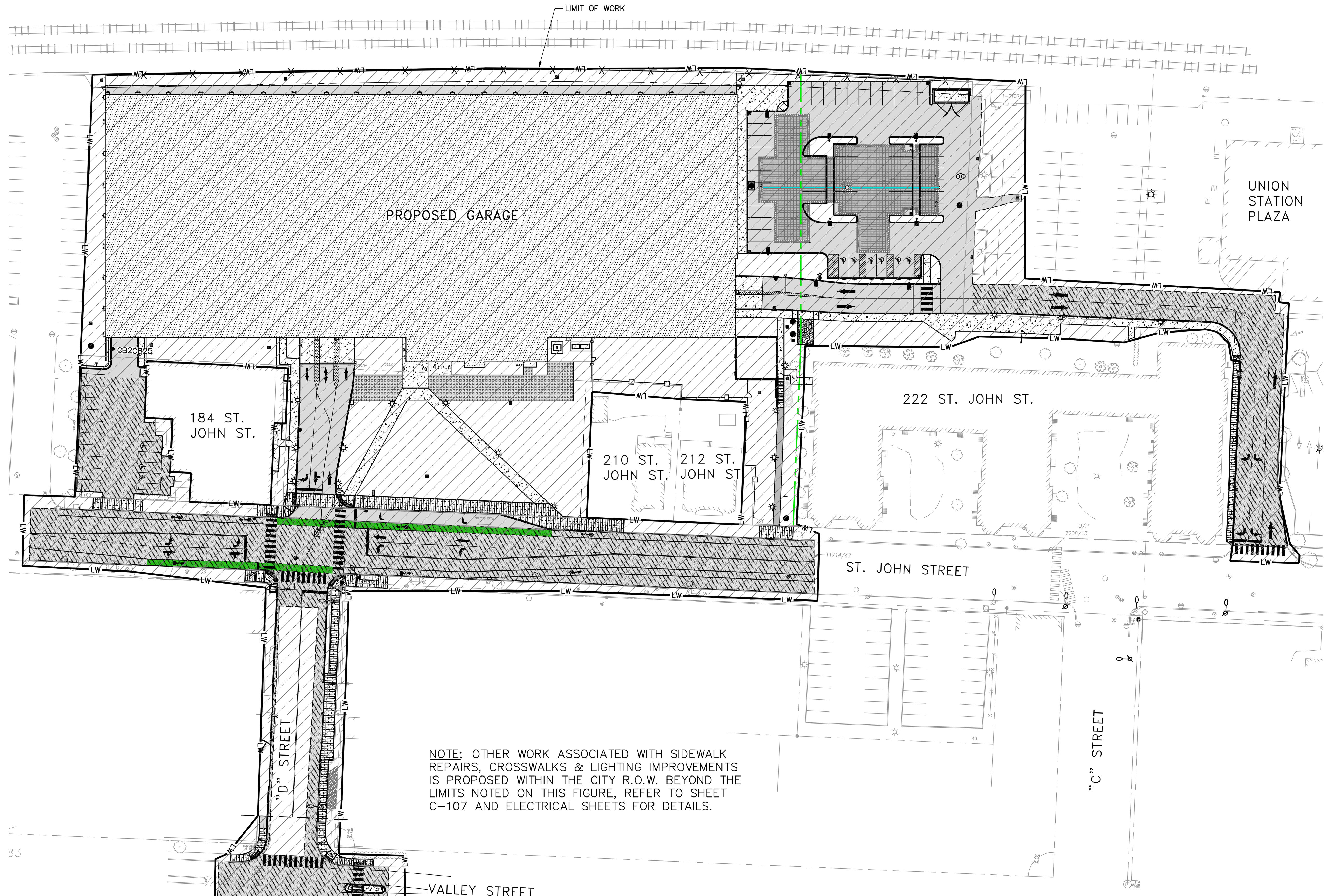
EXISTING / PROPOSED

- CONTOUR (1' OR 2' INTERVAL)
- CONTOUR (INDEX)
- SANITARY SEWER
- FORCEMAIN
- STORM DRAIN
- UNDERDRAIN
- WATER LINE
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND TELEVISION
- GAS LINE
- OVERHEAD ELECTRIC
- ABANDONED SEWER
- ABANDONED WATER LINE
- PROPERTY LINE
- RIGHT OF WAY
- EASEMENT
- EDGE OF VEGETATION
- FENCE
- CENTERLINE
- RETAINING WALL
- STONEWALL
- CURB
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- GUARDRAIL
- RAILROAD TRACKS
- DRAINAGE DITCH / SWALE
- SILT FENCE
- LIMIT OF WORK
- BITUMINOUS PAVEMENT
- CONCRETE WALKWAY
- MILL & OVERLAY

LEGEND

EXISTING / PROPOSED

- SANITARY SEWER MANHOLE
- CLEAN OUT
- DRAINAGE MANHOLE
- FIELD INLET CATCH BASIN
- CURB INLET CATCH BASIN
- TELEPHONE MANHOLE
- TELEPHONE STAND BOX
- GAS METER BOX
- GAS VENT
- GATE GATE
- TRANSFORMER
- UTILITY POLE
- UTILITY POLE WITH GUY
- LIGHTPOST
- WATER GATE
- CURB STOP
- REDUCER
- COUPLING
- WATER SHUT OFF VALVE
- HYDRANT
- WATER METER BOX
- GATE VALVE BOX
- GATE VALVE
- PROPERTY MONUMENT
- MAIL BOX
- STREET AND MISCELLANEOUS SIGNS
- FLAGPOLE
- SPOT ELEVATION
- DECIDUOUS TREE/SHRUB
- CONIFEROUS TREE/SHRUB
- TEST PIT



LIMIT OF WORK PLAN
SCALE: 1"=50'

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

WOODARD & CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

REV	DESCRIPTION	DATE
2	RESPONSE TO COMMENTS SUBMISSION	8/23/2018
1	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BCM | CHECKED BY: DAS

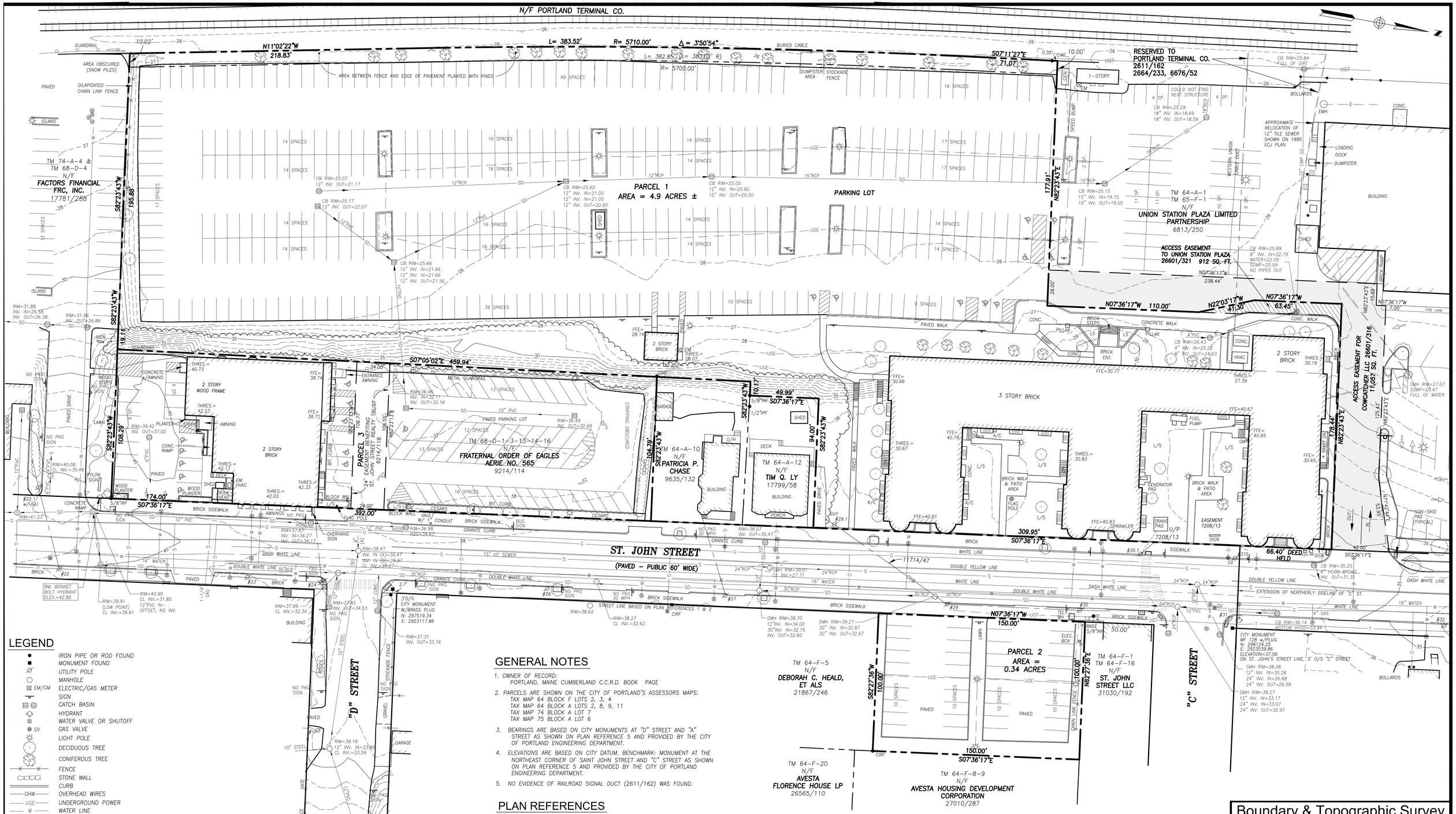
GENERAL NOTES, LEGEND, SHEET INDEX & ABBREVIATIONS

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET EMPLOYEE PARKING GARAGE

JOB NO.: 0231158.00
DATE: JUNE 22, 2018
SCALE: N.T.S.
SHEET: 1 OF 17

G-001



LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- EM/GM — ELECTRIC/GAS METER
- SIGN
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GV — GAS VALVE
- LIGHT POLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- FENCE
- STONE WALL
- CURB
- OHW — OVERHEAD WIRES
- UGE — UNDERGROUND POWER
- W — WATER LINE
- G — GAS LINE
- UGT — TELEPHONE
- SD — STORM DRAIN
- S — SANITARY SEWER
- 25 — 1' CONTOUR
- FFE — FINISHED FLOOR ELEVATION
- CONC. — CONCRETE
- A/C — AIR CONDITIONING UNIT
- L/S — LANDSCAPED AREA
- IPF/IRF — IRON PIPE OR ROD FOUND
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK AND PAGE

GENERAL NOTES

1. OWNER OF RECORD:
   PORTLAND, MAINE CUMBERLAND C.C.R.D. BOOK PAGE
2. PARCELS ARE SHOWN ON THE CITY OF PORTLAND'S ASSESSORS MAPS:
   TAX MAP 64 BLOCK F LOTS 2, 3, 4
   TAX MAP 64 BLOCK A LOTS 2, 8, 9, 11
   TAX MAP 74 BLOCK A LOT 7
   TAX MAP 75 BLOCK A LOT 6
3. BEARINGS ARE BASED ON CITY MONUMENTS AT "D" STREET AND "A" STREET AS SHOWN ON PLAN REFERENCE 5 AND PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
4. ELEVATIONS ARE BASED ON CITY DATUM. BENCHMARK: MONUMENT AT THE NORTHEAST CORNER OF SAINT JOHN STREET AND "C" STREET AS SHOWN ON PLAN REFERENCE 5 AND PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
5. NO EVIDENCE OF RAILROAD SIGNAL DUCT (2611/162) WAS FOUND.

PLAN REFERENCES

1. "PLAN OF LAND ON ST. JOHN STREET FOR ST. JOHN STREET REALTY TRUST" DATED SEPTEMBER 10, 1985 AND REVISED THRU JAN. 15, 1990 BY OWEN HASKELL, INC.
2. "PLAN OF LAND ON ST. JOHN STREET, PORTLAND, MAINE MADE FOR ST. JOHN STREET REALTY TRUST" DATED SEPT. 10, 1985 REVISED THRU 11-03-00 BY OWEN HASKELL, INC.
3. CITY OF PORTLAND'S ASSESSOR'S MAPS.
4. "ALTA/ACSM LAND TITLE SURVEY, 217, 218-238, 221 AND 225 ST. JOHN STREET, PORTLAND, MAINE MADE FOR COWCATCHER LLC" DATED JUNE 27, 2008 REV. 3 11/18/08 BY OWEN HASKELL, INC.
5. "SAINT JOHN ST./VALLEY ST. STREETSCAPE IMPROVEMENTS EXISTING CONDITIONS PLAN" CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION DATED NOV. 2011
6. "BOUNDARY AND TOPOGRAPHIC SURVEY AT 217, 218-238, 221 AND 225 ST. JOHN STREET, PORTLAND, MAINE MADE FOR COWCATCHER, LLC" DATED NOV. 16, 2016 BY OWEN HASKELL, INC.

UTILITY NOTE

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

CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

SAMUEL D. GLIDDEN, PLS NO. 2520

DATE

Boundary & Topographic Survey

On

St. John Street, Portland, Maine

Made for

Woodard & Curran, Inc.

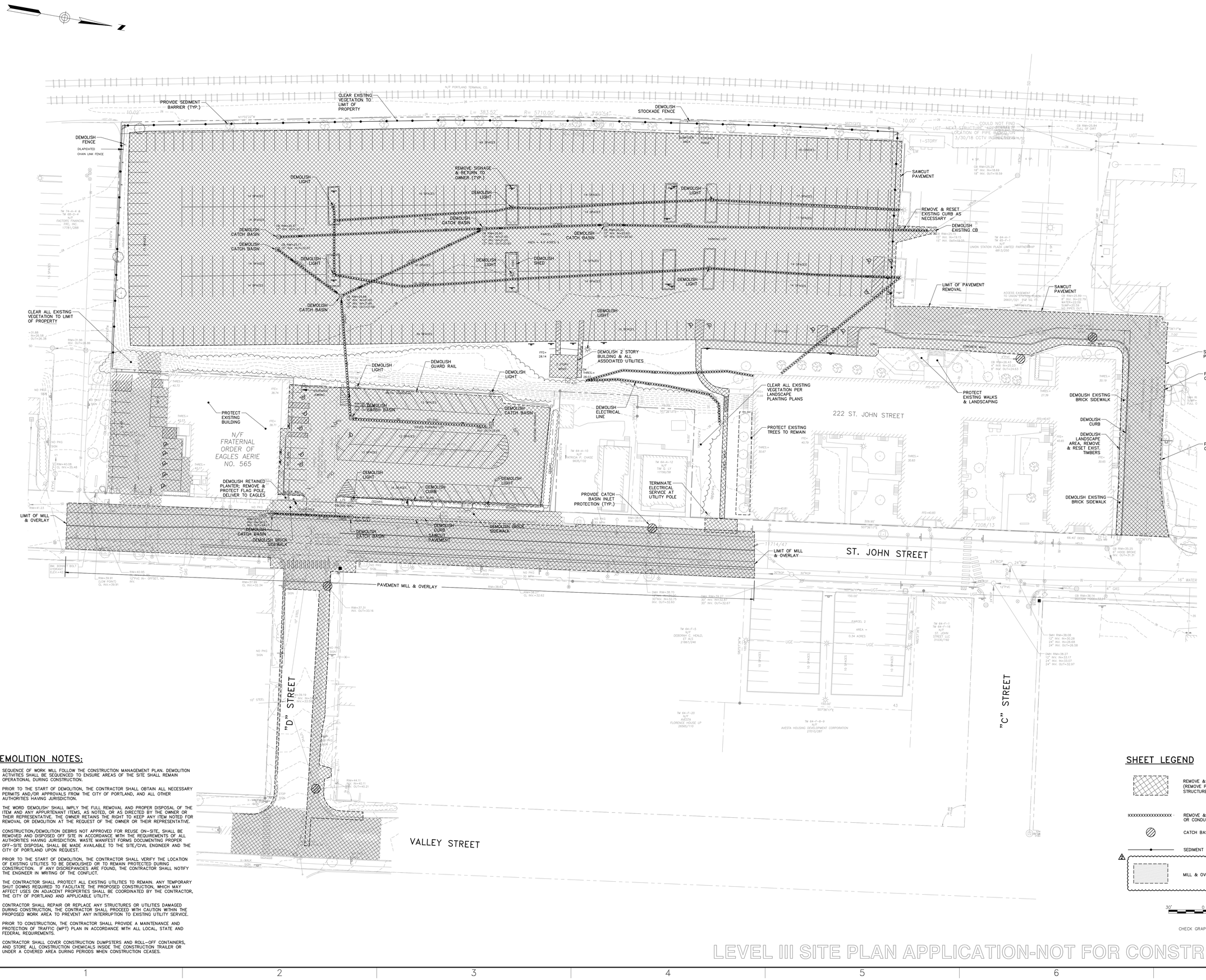
41 Hutchins Drive, Portland, Maine

OWEN HASKELL, INC.

PROFESSIONAL LAND SURVEYORS

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

DRAWN BY: SDG / JLW	DATE: APRIL 2018	JOB NO. 2018-019P	
CHECKED BY: SDG	SCALE: 1" = 30'	DRWG. NO. 1	



DEMOLITION NOTES:

1. SEQUENCE OF WORK WILL FOLLOW THE CONSTRUCTION MANAGEMENT PLAN. DEMOLITION ACTIVITIES SHALL BE SEQUENCED TO ENSURE AREAS OF THE SITE SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
2. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF PORTLAND, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
3. THE WORD 'DEMOLISH' SHALL IMPLY THE FULL REMOVAL AND PROPER DISPOSAL OF THE ITEM AND ANY APPURTENANT ITEMS, AS NOTED, OR AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE. THE OWNER RETAINS THE RIGHT TO KEEP ANY ITEM NOTED FOR REMOVAL OR DEMOLITION AT THE REQUEST OF THE OWNER OR THEIR REPRESENTATIVE.
4. CONSTRUCTION/DEMOLITION DEBRIS NOT APPROVED FOR REUSE ON-SITE, SHALL BE REMOVED AND DISPOSED OFF SITE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. WASTE MANIFEST FORMS DOCUMENTING PROPER OFF-SITE DISPOSAL SHALL BE MADE AVAILABLE TO THE SITE/CIVIL ENGINEER AND THE CITY OF PORTLAND UPON REQUEST.
5. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED OR TO REMAIN PROTECTED DURING CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF THE CONFLICT.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR, THE CITY OF PORTLAND AND APPLICABLE UTILITY.
7. CONTRACTOR SHALL REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROCEED WITH CAUTION WITHIN THE PROPOSED WORK AREA TO PREVENT ANY INTERRUPTION TO EXISTING UTILITY SERVICE.
8. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
9. CONTRACTOR SHALL COVER CONSTRUCTION DUMPSTERS AND ROLL-OFF CONTAINERS, AND STORE ALL CONSTRUCTION CHEMICALS INSIDE THE CONSTRUCTION TRAILER OR UNDER A COVERED AREA DURING PERIODS WHEN CONSTRUCTION CEASES.

SHEET LEGEND

- REMOVE & DISPOSE OF PAVEMENT (REMOVE PAVEMENT, CURB AND/OR STRUCTURE WITHIN ZONE)
- XXXXXXXXXXXXXXXXX · REMOVE & DISPOSE OF PIPE OR CONDUIT
- CATCH BASIN INLET PROTECTION
- SEDIMENT BARRIER
- MILL & OVERLAY ZONE

30' 0 30' 60'
BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING

LEVEL III SITE PLAN APPLICATION-NOT FOR CONSTRUCTION

WOODARD & CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
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DAVID A. SENUS 10791 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE 6/22/2018

REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS	6/04/2018
2	RESPONSE TO COMMENTS	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BEM | CHECKED BY: DAS

EXISTING CONDITIONS & DEMOLITION PLAN

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.: 0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=30'
SHEET: 3 OF 17

C-001

\\woodardcurran.net\shares\Projects\0231158.00 Maine Med Ctr - Parking Garage\cad\Drawings\Redesign Phase\0231158 C001.dwg, Aug 23, 2018 - 1:46pm

42x30 SHEET
1:1

N/F
PORTLAND TERMINAL CO.

4' WIDE PEDESTRIAN CHAINLINK GATE, SEE DETAIL

BITUMINOUS WALK, SEE DETAIL

6' HGT. CHAINLINK FENCE, SEE DETAIL

8' WIDE EQUIPMENT ACCESS CHAINLINK GATE, SEE DETAIL

4' WIDE PEDESTRIAN CHAINLINK GATE, SEE DETAIL

N/F
FACTORS FINANCIAL FRC, INC.
17781/288

PARKING GARAGE
SEE ARCHITECTURAL PLANS

LEVEL 1 DECK

SURFACE PARKING

EAGLES PARKING

HEADACHE BAR, SEE ARCHITECTURAL PLANS

CANOPY SUPPORT, SEE ARCHITECTURAL PLANS

4' GRANITE TIPDOWN

PAD MOUNTED TRANSFORMER & GENERATOR, SEE ELECTRICAL PLANS

4' WIDE PEDESTRIAN ORNAMENTAL STEEL FENCE GATE, SEE LANDSCAPING PLANS

ORNAMENTAL STEEL FENCE GATE, SEE LANDSCAPING PLANS

6' HGT. PRIVACY FENCE, SEE DETAIL

ORNAMENTAL STEEL FENCE GATE, SEE LANDSCAPING PLANS

RETAINING WALL TO BE DETAILED ON STRUCTURAL PLANS

LOT DIVISION

FALL PROTECTION RAIL TO BE DETAILED ON STRUCTURAL PLANS

6' HGT. PRIVACY FENCE, SEE DETAIL

4' HGT. DECORATIVE METAL FENCE; FENCE TYPE TO BE COORDINATED WITH & APPROVED BY CITY OF PORTLAND

5.0' MIN. BLDG. SETBACK PER IOZ

"YIELD TO BIKES" SIGN

N/F
PATRICIA P. CHASE

N/F
TIM Q. LY

MATCH EXISTING BRICK SIDEWALK

MATCH EXISTING BRICK SIDEWALK

NO PKG 30 MPH

5.0' MIN. BLDG. SETBACK PER IOZ

CB24 CB25

6' HGT. CHAINLINK FENCE, SEE DETAIL

CONCRETE EXIT RAMP, SEE ARCHITECTURAL PLANS

SITE LIGHTING, SEE ELECTRICAL PLANS

CONCRETE WALK, SEE DETAIL

4" DASHED WHITE LINE

4" SOLID WHITE LINE

EXISTING STAIRS TO REMAIN

24" SOLID WHITE LINE "STOP" BAR

SEE ST. JOHN STREET & "D" STREET INTERSECTION DETAIL FOR APRON & RAMPS

MOUNTABLE GRANITE CURB, 3" REVEAL

4" GRANITE TIPDOWN

VERTICAL GRANITE CURB (TYP.), SEE DETAIL

CONCRETE WALK, SEE DETAIL

TRAFFIC DIRECTION ARROW

GRANITE TIPDOWN CURB (TYP.), SEE DETAIL

"EMPLOYEE PARKING GARAGE" SIGN

BRICK SIDEWALK, SEE DETAIL

4" SOLID WHITE LINE

VERTICAL GRANITE CURB

BIKE RACK (TYP. OF 6), SEE DETAIL

CHECKER BLOCK CONCRETE GRID, SEE DETAIL

CONCRETE WALK, SEE DETAIL

10 SPACES @ 9'x18'

2 ADA VAN & 1 ADA ACCESSIBLE SPACES

VAN ACCESSIBLE ADA PARKING SIGNAGE, TYP.

ADA PARKING SIGNAGE, TYP.

RESTRIPE EXISTING PARKING LOT TO PROVIDE PARKING SPACES AS SHOWN

N/F
FRATERNAL ORDER OF EAGLES AERIE NO. 565

5' MIN. BIKE LANE

LIMIT OF MILL & OVERLAY

METRO BUS STOP SIGN

6" SOLID WHITE LINE

6" DASHED WHITE LINE

24" SOLID WHITE LINE "STOP" BAR

8" SOLID WHITE LINE

4" DASHED WHITE LINE

6" DASHED WHITE LINE

MATCH TO EXISTING PAVEMENT MARKINGS

4" SOLID WHITE LINE

75'

4" DOUBLE YELLOW LINE

4" SOLID WHITE LINE

6" SOLID WHITE LINE

MATCH EXISTING BRICK SIDEWALK

5' MIN. BIKE LANE

PROTECT EXISTING CONCRETE STAIRS

BIKE LANE PAVEMENT MARKING

4" DOUBLE YELLOW LINE

LANE MARKINGS, 4" SOLID WHITE LINES & TRAFFIC DIRECTION ARROWS

4" DOUBLE YELLOW LINE

VERTICAL GRANITE CURB

SELECTIVE VINE PLANTINGS PLANTED BETWEEN FENCE AND SIDEWALK, SPECIES AND LOCATION T.B.D. AS COORDINATED WITH PROPERTY OWNER

TWO (2) 1.75" TO 2" C. KARPICK RED MAPLES PLANTED IN ESPLANADE

RELOCATE FENCE TO ALLOW FOR PARKING ON PROPERTY, COORDINATE WITH OWNER

"D" STREET

GRANITE TIPDOWN CURB (TYP.), SEE DETAIL

RELOCATE EXISTING UTILITY POLE

NO PKG SIGN

ST. JOHN STREET

6" SOLID WHITE LINE

5' MIN. BIKE LANE

120'

4" SOLID WHITE LINE

1 1/2" MILL & OVERLAY; PROVIDE MORATORIUM PAVEMENT REPAIR OF ST. JOHN STREET IN ACCORDANCE WITH CITY OF PORTLAND STREET OPENING STANDARDS

MATCHLINE – SEE THIS SHEET

MATCHLINE – SEE THIS SHEET

"D" STREET

RIPRAP D50=8"

DETECTABLE WARNING STRIP

MATCH EXISTING BRICK SIDEWALK

SAWCUT EXISTING PAVEMENT

GRANITE TIPDOWN CURB (TYP.), SEE DETAIL

4" SOLID WHITE LINE

KEEP RIGHT SYMBOL SIGN MUTCD X-R4-7

KEEP RIGHT SYMBOL SIGN MUTCD X-R4-7

GRANITE CURB ISLAND

BITUMINOUS WALK

DETECTABLE WARNING STRIP

REMOVE & RESET EXISTING "NO PARKING" SIGN

AREA OF DETAIL

SITE KEY PLAN

SCALE: 1"=200'

20' 0 20' 40'

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
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DAVID A. SENUS 10791 STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER 9/22/2018

REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS SUBMISSION	9/7/2018
2	RESPONSE TO COMMENTS SUBMISSION	4/25/2018
3	RESPONSE TO COMMENTS SUBMISSION	3/27/2018
4	RESPONSE TO COMMENTS SUBMISSION	1/24/2018
REV	DESCRIPTION	DATE

DESIGNED BY: CMS DRAWN BY: BEM CHECKED BY: DAS

03108 C100-10.dwg

SITE LAYOUT & MATERIALS PLAN - 1

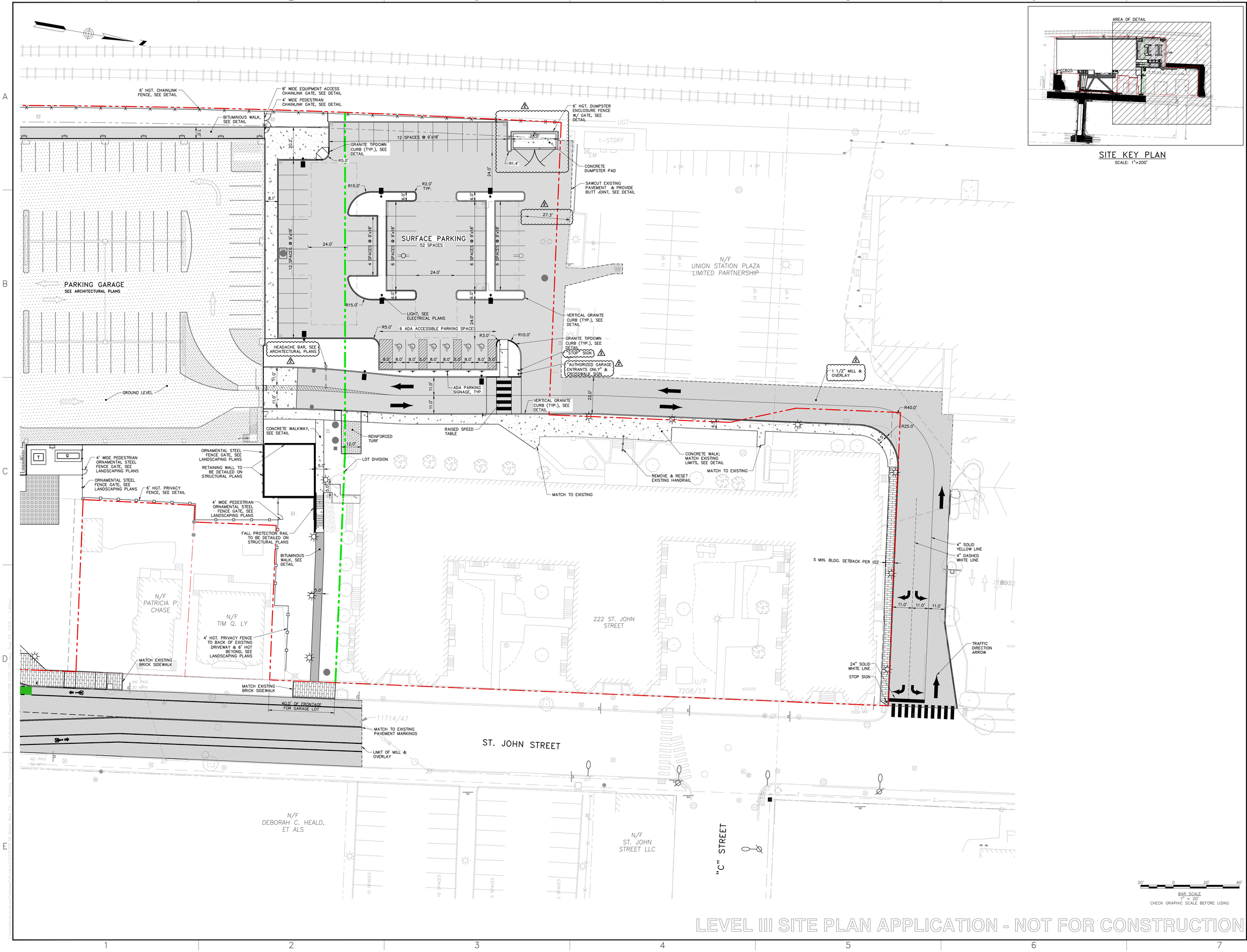
MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=20'
SHEET: 4 OF 17

C-100

42x30 SHEET
1:1



LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

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REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS SUBMISSION	8/31/2018
-	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BEM | CHECKED BY: DAS | 031158.0305.10.dwg

SITE LAYOUT & MATERIALS PLAN - 2

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=20'
SHEET: 5 OF 17

C-101

42x30 SHEET
1:1

PORTLAND TERMINAL CO.

N/F FACTORS FINANCIAL FRC, INC. 17781/288

PARKING GARAGE
SEE ARCHITECTURAL PLANS

SURFACE PARKING

LOBBY
SEE ARCHITECTURAL PLANS

ELEVATOR SUMP DISCHARGE ONLY

N/F FRATERNAL ORDER OF EAGLES AERIE NO. 565

N/F PATRICIA P. CHASE

N/F TIM Q. LY

RETAINING WALL TO BE DETAILED ON STRUCTURAL PLANS

MATCH TO EXISTING GRADE ALONG PROPERTY LINE

STORMBASIN, SEE SHT. C-205 FOR DETAIL

MATCH TO EXISTING GRADE, EXISTING STAIRS TO REMAIN

MATCH TO EXISTING GRADE

2% MAX CROSS SLOPE

2% MAX SLOPE

CORE & CONNECT TO DMH

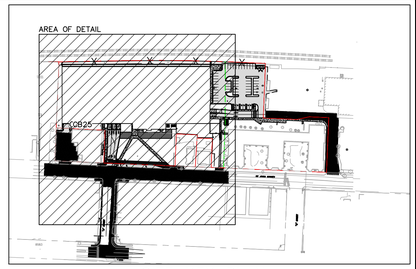
RESET CATCH BASIN FRAME & COVER AS NECESSARY

ST. JOHN STREET

"D" STREET

MATCHLINE – SEE THIS SHEET

AREA OF DETAIL



SITE KEY PLAN

SCALE: 1"=200'

STRUCTURE TABLE

NAME	DIA.	RIM	SUMP DEPTH	INV IN/SIZE/FROM	INV OUT/SIZE/TO
CB1	4'	37.22	2'	33.42/10"SD/CB2	33.22/12"SD/EXIST. DMH
CB2	4'	37.20	2'	33.81/10"SD/CB3	33.71/10"SD/CB1
CB3	4'	39.77	2'	34.15/6"SD/GAR.	34.05/10"SD/CB2
CB4	4'	27.90	2'	23.00/12"SD/GAR, 23.00/10"SD/DMH3	22.99/15"SD/CB5
CB5	4'	27.60	2'	22.18/15"SD/CB4 22.00/6"FD/GAR,	21.88/15"SD/WYE 5
CB6	4'	25.80	2'	21.32/18"SD/WYE 2	21.22/18"SD/WYE 1
CB7	4'	26.00	2'	21.05/18"SD/WYE 1 21.62/10"SD/CB22	20.95/18"SD/CB8
CB8	4'	25.47	2'	20.92/18"SD/CB7	20.82/18"SD/DMH1
CB9	4'	25.39	2'	21.27/15"SD/CB10	21.17/15"SD/DMH1
CB10	4'	25.47	2'	21.43/15"SD/CB11	21.33/15"SD/CB9
CB11	4'	25.48	2'	21.58/10"SD/CB12	21.48/15"SD/CB10
CB12	4'	29.02	2'	21.73/10"SD/CB13 22.00/6"FD/GAR, 24.00/4"SD/	21.63/10"SD/CB11
CB13	4'	29.80	2'	24.93/10"SD/CB14	24.83/10"SD/CB12
CB14	4'	36.50	2'		25.00/10"SD/CB13
CB22	4'	25.49	2'		21.89/10"SD/CB7
CB23	4'	26.00	2'	21.67/15"SD/WYE 4	21.57/18"SD/WYE 3
CB24	4'	38.80	2'	33.20/10"SD/CB25	33.10/10"SD/DMH3
CB25	4'	38.80	2'	33.35/10"SD/CB26	33.25/10"SD/CB24
CB26	4'	37.75	2'	33.48/10"SD/CB27	33.38/10"SD/CB25
CB27	4'	37.75	2'		33.75/10"SD/CB26
CB28	4'	36.90	2'		34.63/12"SD/CB29
CB29	4'	37.90	2'	34.27/12"SD/CB28	34.17/12"SD/EXDMH
DMH1	4'x6'	26.43	2'	21.05/15"SD/CB9 20.75/18"SD/CB8	20.65/18"SD/RTANK 1
DMH3	4'	35.36	2'		30.00/10"SD/CB4

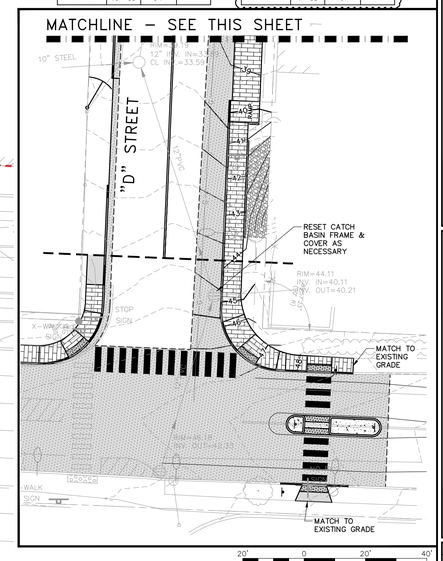
PIPE TABLE

PIPE NAME	SIZE	LENGTH	SLOPE
PIPE 1	12" SD	101'	0.0051
PIPE 2	10" SD	99'	0.0028
PIPE 3	10" SD	81'	0.0028
PIPE 4	15" SD	182'	0.0043
PIPE 5	15" SD	39'	0.0015
PIPE 6	18" SD	111'	0.0012
PIPE 7	18" SD	22'	0.0012
PIPE 8	15" SD	45'	0.0022
PIPE 9	15" SD	25'	0.0022
PIPE 10	15" SD	19'	0.0022
PIPE 11	10" SD	13'	0.0028
PIPE 12	10" SD	35'	0.0785
PIPE 13	10" SD	20'	0.0030
PIPE 18	18" SD	51'	0.0012
PIPE 19	10" SD	32'	0.0077
PIPE 20	12" SD	11'	0.0028
PIPE 21	18" SD	5'	0.0000
PIPE 28	15" SD	84'	0.0015

PIPE TABLE

PIPE NAME	SIZE	LENGTH	SLOPE
PIPE 29	15" SD	14'	0.0015
PIPE 31	18" SD	115'	0.0012
PIPE 32	10" SD	86'	0.0030
PIPE 33	10" SD	8'	0.0028
PIPE 34	10" SD	14'	0.0028
PIPE 35	10" SD	13'	0.1814
PIPE 36	10" SD	13'	0.4019
PIPE 37	12" SD	82'	0.0042
PIPE 38	18" SD	28'	0.0012
PIPE 39	18" SD	59'	0.0012
PIPE 40	18" SD	29'	0.0012
PIPE 41	12" SD	12'	0.0022
PIPE 42	12" SD	13'	0.0022
PIPE 43	12" SD	13'	0.0022
PIPE 44	12" SD	12'	0.0022
PIPE 45	12" SD	11'	0.0022
PIPE 46	6" SD	33'	0.0040
PIPE 47	4" SD	187'	0.0040

MATCHLINE – SEE THIS SHEET



BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

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Portland, Maine 04102
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DAVID SENUS 10781 MAINE LICENSED PROFESSIONAL ENGINEER 6/22/2018

REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS	7/24/2018
2	RESPONSE TO COMMENTS SUBMISSION	8/31/2018
	03108 CSD-103.dwg	

DESIGNED BY: CMS | DRAWN BY: BCM | CHECKED BY: DAS

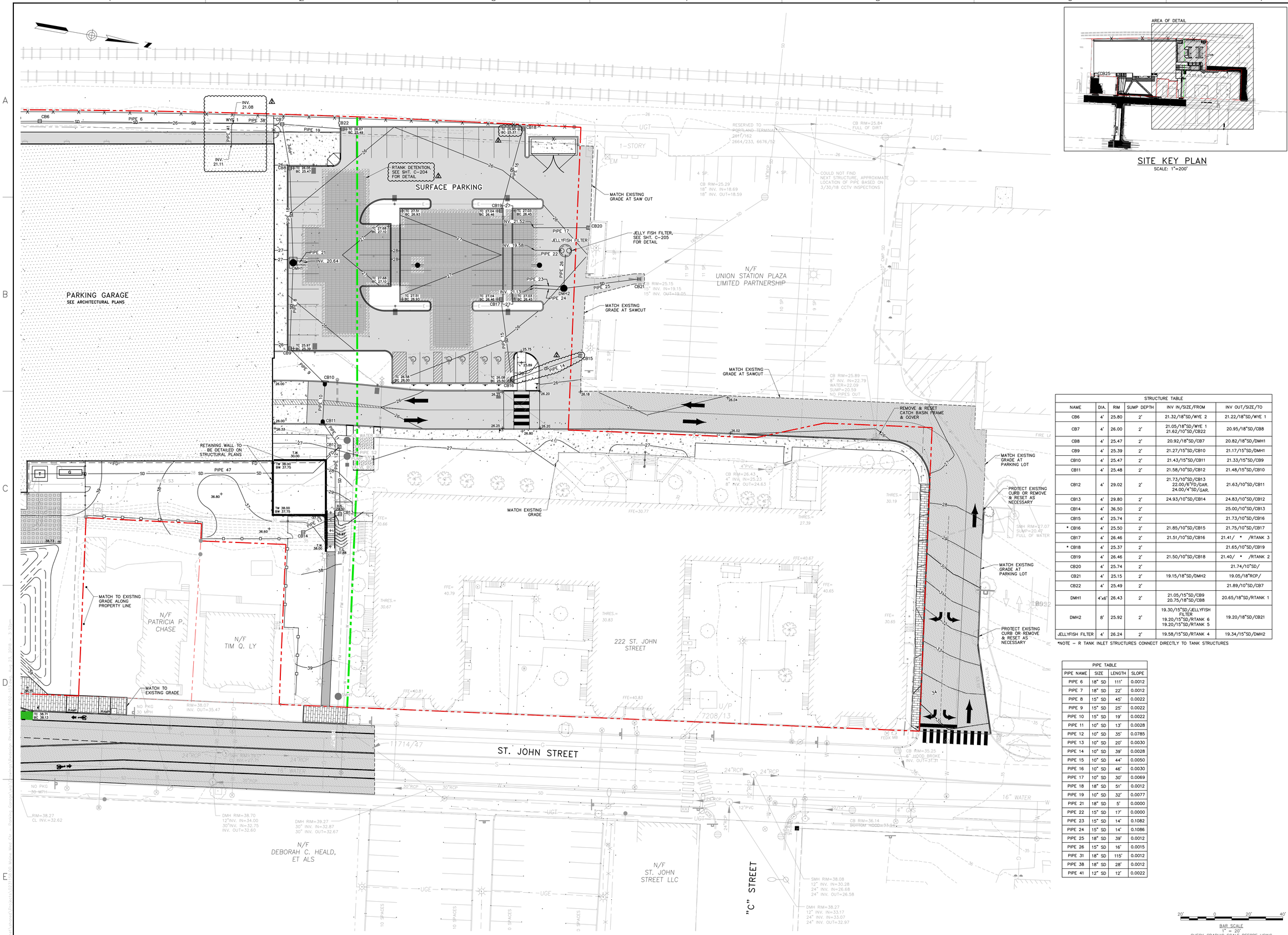
GRADING & DRAINAGE PLAN - 1

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=20'
SHEET: 6 OF 17

C-102



SITE KEY PLAN
SCALE: 1"=200'

STRUCTURE TABLE					
NAME	DIA.	RIM	SUMP DEPTH	INV IN/SIZE/FROM	INV OUT/SIZE/TO
CB6	4'	25.80	2'	21.32/18"SD/WYE 2	21.22/18"SD/WYE 1
CB7	4'	26.00	2'	21.05/18"SD/WYE 1 21.62/10"SD/CB22	20.95/18"SD/CB8
CB8	4'	25.47	2'	20.92/18"SD/CB7	20.82/18"SD/DMH1
CB9	4'	25.39	2'	21.27/15"SD/CB10	21.17/15"SD/DMH1
CB10	4'	25.47	2'	21.43/15"SD/CB11	21.33/15"SD/CB9
CB11	4'	25.48	2'	21.58/10"SD/CB12	21.48/15"SD/CB10
CB12	4'	29.02	2'	21.73/10"SD/CB13 22.00/6"FD/GAR, 24.00/4"SD/GAR,	21.63/10"SD/CB11
CB13	4'	29.80	2'	24.93/10"SD/CB14	24.83/10"SD/CB12
CB14	4'	36.50	2'		25.00/10"SD/CB13
CB15	4'	25.74	2'		21.73/10"SD/CB16
* CB16	4'	25.50	2'	21.85/10"SD/CB15	21.75/10"SD/CB17
CB17	4'	26.46	2'	21.51/10"SD/CB16	21.41/ * /RTANK 3
* CB18	4'	25.37	2'		21.65/10"SD/CB19
CB19	4'	26.46	2'	21.50/10"SD/CB18	21.40/ * /RTANK 2
CB20	4'	25.74	2'		21.74/10"SD/
CB21	4'	25.15	2'	19.15/18"SD/DMH2	19.05/18"RCP/
CB22	4'	25.49	2'		21.89/10"SD/CB7
DMH1	4'x6'	26.43	2'	21.05/15"SD/CB9 20.75/18"SD/CB8	20.65/18"SD/RTANK 1
DMH2	8'	25.92	2'	19.30/15"SD/JELLYFISH FILTER 19.20/15"SD/RTANK 6 19.20/15"SD/RTANK 5	19.20/18"SD/CB21
JELLYFISH FILTER	4'	26.24	2'	19.58/15"SD/RTANK 4	19.34/15"SD/DMH2

*NOTE – R TANK INLET STRUCTURES CONNECT DIRECTLY TO TANK STRUCTURES

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
PIPE 6	18" SD	111'	0.0012
PIPE 7	18" SD	22'	0.0012
PIPE 8	15" SD	45'	0.0022
PIPE 9	15" SD	25'	0.0022
PIPE 10	15" SD	19'	0.0022
PIPE 11	10" SD	13'	0.0028
PIPE 12	10" SD	35'	0.0785
PIPE 13	10" SD	20'	0.0030
PIPE 14	10" SD	39'	0.0028
PIPE 15	10" SD	44'	0.0050
PIPE 16	10" SD	46'	0.0030
PIPE 17	10" SD	30'	0.0069
PIPE 18	18" SD	51'	0.0012
PIPE 19	10" SD	32'	0.0077
PIPE 21	18" SD	5'	0.0000
PIPE 22	15" SD	17'	0.0000
PIPE 23	15" SD	14'	0.1082
PIPE 24	15" SD	14'	0.1086
PIPE 25	18" SD	39'	0.0012
PIPE 26	15" SD	16'	0.0015
PIPE 31	18" SD	115'	0.0012
PIPE 38	18" SD	28'	0.0012
PIPE 41	12" SD	12'	0.0022

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

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DAVID M. SENUS 10791 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE
6/22/2018

REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS	8/24/2018
2	RESPONSE TO COMMENTS	10/18/2018

DESIGNED BY: CMS DRAWN BY: BCM CHECKED BY: DAS

GRADING & DRAINAGE PLAN - 2

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=20'
SHEET: 7 OF 17

C-103

42x30 SHEET
1:1

PORTLAND TERMINAL CO.

N/F FACTORS FINANCIAL FRC, INC. 17781/288

PARKING GARAGE
SEE ARCHITECTURAL PLANS

LOBBY
SEE ARCHITECTURAL PLANS

SURFACE PARKING

PAD MOUNTED TRANSFORMER & GENERATOR, SEE ELECTRICAL PLANS

GAS METER

NEW LIGHTING (TYP.), SEE ELECTRICAL DRAWINGS

SEE ELECTRICAL DRAWINGS

2" WELDED STEEL GAS SERVICE

3" D.I. WATER – DOMESTIC SERVICE

4" GATE VALVE & REDUCER

4" D.I. WATER – DOMESTIC SERVICE

N/F FRATERNAL ORDER OF EAGLES AERIE NO. 565

N/F PATRICIA P. CHASE

N/F TIM Q. LY

SEWER CROSSINGS TO BE DETAILED ON STRUCTURAL PLANS

SLOPE FM BACK TO PUMP STATION (NO SAGS IN LINES)

2" SEWER FORCE MAIN

OIL WATER SEP.

PIPE S2 PUMP ST. VALVE BOX

WATER GATE VALVE

6" D.I. WATER

6"X16" TAPPING SLEEVE

WYE CONNECTION TO EXISTING SEWER MAIN, CONTRACTOR TO FIELD VERIFY DEPTH

NOTE: PROVIDE RESTRAINED GASKETS ON EACH SLIP JOINT ON WATER LINES.

NEW UTILITY POLE (TYP.), SEE ELECTRICAL DRAWINGS

NEW TELCOM UTILITY POLE, SEE ELECTRICAL DRAWINGS

4" SERVICE SADDLE

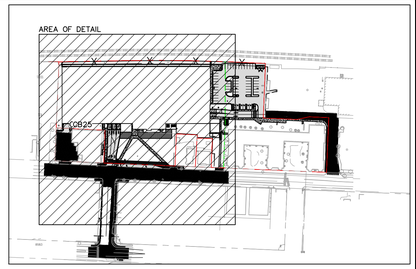
NEW GAS SERVICE FROM VALLEY STREET TO BE INSTALLED BY UNTIL, TRENCHING BY SITE CONTRACTOR

ST. JOHN STREET

"D" STREET

MATCHLINE – SEE THIS SHEET

AREA OF DETAIL



SITE KEY PLAN

SCALE: 1"=200'

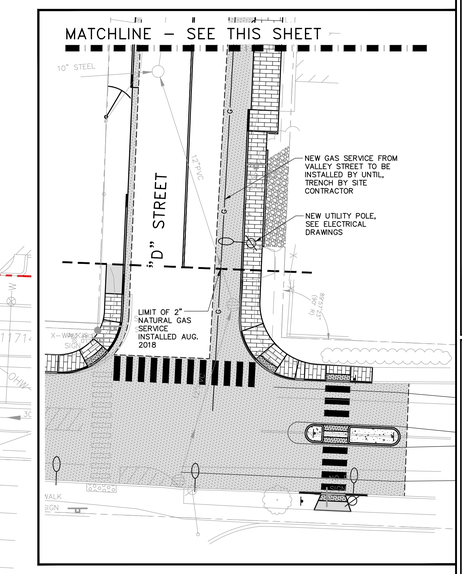
STRUCTURE TABLE

NAME	DIA.	RIM	SUMP DEPTH	INV IN/SIZE/FROM	INV OUT/SIZE/TO
OIL WATER SEP.	4'	26.70	0'	13.44/6"S/GAR.	13.10/6"S/PUMP ST.
PUMP ST.	4'	27.20	5'	13.05/6"S/OIL WATER SEP. 17.90/6"S/GAR.	23.00/2"FM/VALVE BOX
SMH1	4'	38.99	0'	35.00/2"FM/VALVE BOX	34.90/8"S/MAIN
VALVE BOX	2'X2'	27.50	0'	23.00/2"FM/PUMP ST.	23.00/2"FM/SMH1

PIPE TABLE

PIPE NAME	SIZE	LENGTH	SLOPE
FM1	2" FM	2'	N/A*
FM2	2" FM	133'	N/A*
PIPE S1	6" S	42'	0.0050
PIPE S2	6" S	5'	0.0050
PIPE S3	6" S	190'	0.0059
PIPE S4	8" S	32'	0.1157

*SLOPE BACK TO PUMP STATION



20' 0 20' 40'
BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

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Portland, Maine 04102
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DAVID SENUS 10781 STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER 8/22/2018

REV	DESCRIPTION	DRAWN BY	DATE
1	RESPONSE TO COMMENTS	BCM	8/24/2018
2	RESPONSE TO COMMENTS SUBMISSION	DAS	7/24/2018
REV	DESCRIPTION	CHECKED BY: DAS	DATE
			07/31/8 7:04:35 PM

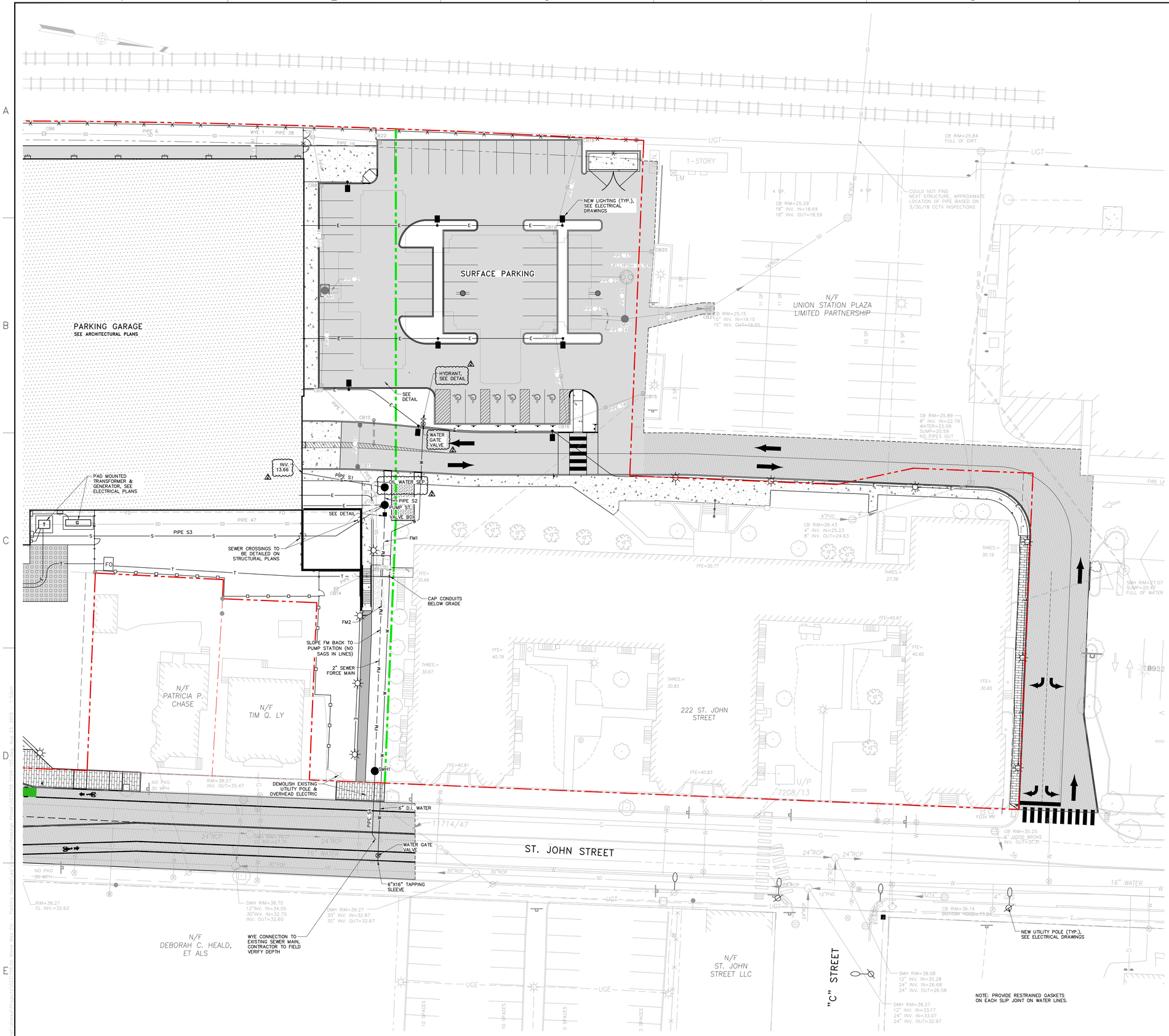
UTILITY PLAN - 1

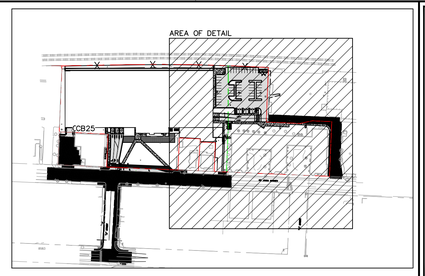
MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=20'
SHEET: 8 OF 17

C-104





SITE KEY PLAN

SCALE: 1"=200'

STRUCTURE TABLE					
NAME	DIA.	RIM	SUMP DEPTH	INV IN/SIZE/FROM	INV OUT/SIZE/TO
OIL WATER SEP.	4'	26.70	0'	13.44/6"S/GAR.	13.10/6"S/PUMP ST.
PUMP ST.	4'	27.20	5'	13.05/6"S/OIL WATER SEP. 17.90/6"S/GAR.	23.00/2"FM/VALVE BOX
SMH1	4'	38.99	0'	35.00/2"FM/VALVE BOX	34.90/8"S/MAIN
VALVE BOX	2'X2'	27.50	0'	23.00/2"FM/PUMP ST.	23.00/2"FM/SMH1

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
FM1	2" FM	2'	N/A*
FM2	2" FM	133'	N/A*
PIPE S1	6" S	42'	0.0050
PIPE S2	6" S	5'	0.0050
PIPE S3	6" S	190'	0.0059
PIPE S4	8" S	32'	0.1157

*SLOPE BACK TO PUMP STATION

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DAVID A. SENUS 11791 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE
8/23/2018

REV	DESCRIPTION	DATE
2	RESPONSE TO COMMENTS SUBMISSION	8/23/2018
1	RESPONSE TO COMMENTS SUBMISSION	7/24/2018
REV	DESCRIPTION	DATE

DESIGNED BY: CMS | DRAWN BY: BCM | CHECKED BY: DAS | 03108.094-105.dwg

UTILITY PLAN - 2

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=20'
SHEET: 9 OF 17

C-105

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

42x30 SHEET
1:1

PARKING GARAGE

STAND PIPE LOCATION (TYP.)

LOBBY

SURFACE PARKING

NEW HYDRANT LOCATION

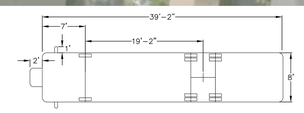
R500.0'

ST JOHN STREET

"D" STREET

"C" STREET

EXISTING HYDRANT LOCATION



MIN CENTERLINE RADIUS=35'
BLOCK NAME – "LADDER"
LADDER 6

BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING

LEVEL III SITE PLAN APPLICATION-NOT FOR CONSTRUCTION

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DAVID JAMES SENUS 10791 REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT STATE OF MAINE 8/22/2018

REV	DESCRIPTION	DATE	CHECKED BY: DAS
			07/18 CSK

REV	DESCRIPTION	DATE	DRAWN BY: BDM
2	RESPONSE TO COMMENTS SUBMISSION	9/24/2018	
1	RESPONSE TO COMMENTS SUBMISSION	7/24/2018	

DESIGNED BY: CMS

FIRE TRUCK MOVEMENT PLAN

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.: 0231158.00
DATE: JUNE 22, 2018
SCALE: 1" = 30'
SHEET: 10 OF 17

C-106

\\woodardcurran.net\shares\Projects\0231158.00 Maine Med Ctr - Parking Garage\wip\Drawings\Redesign Phase\0231158_0106.dwg, Aug 23, 2018 - 1:53pm

*NOTE: DETAILED SITE DESIGN OF OFF-SITE IMPROVEMENTS WILL BE FINALIZED UPON COMPLETION OF GROUND SURVEY.

50' 0 50' 100'
BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

LEVEL III SITE PLAN APPLICATION-NOT FOR CONSTRUCTION

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DAVID SENUS 10581 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE
8/22/2018

REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS SUBMISSION	6/21/2018
2	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BCM | CHECKED BY: DAS

SIDEWALK IMPROVEMENT PLAN

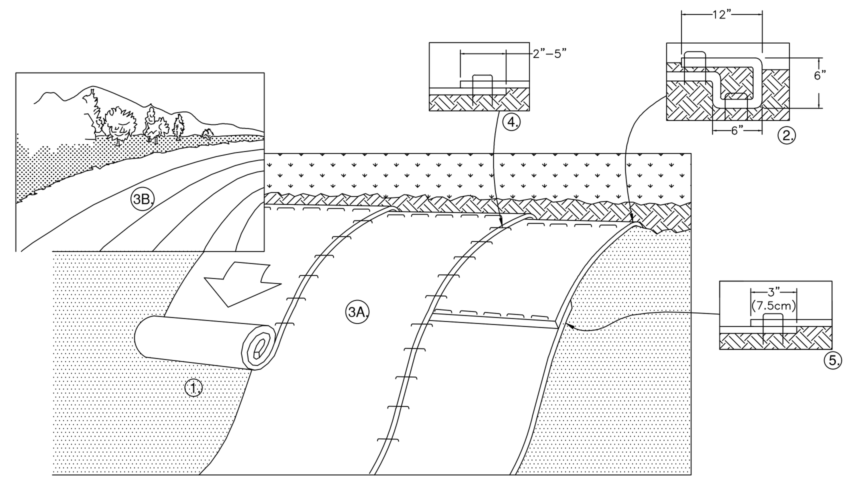
MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: 1"=50'
SHEET: 11 OF 17

C-107

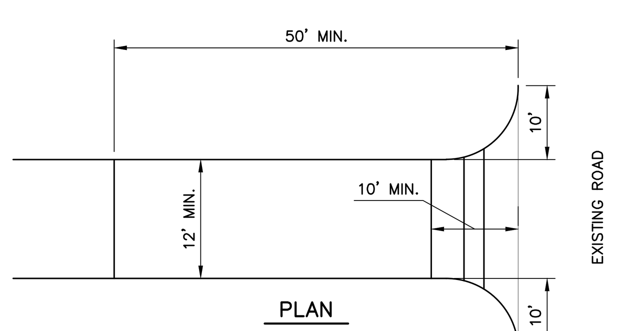
\\woodardcurran.net\shares\Projects\0231158.00 Maine Med Ctr - Parking Garage\Wip\Drawings\Redesign Phase\0231158 C107.dwg, Aug 23, 2018 - 1:53pm



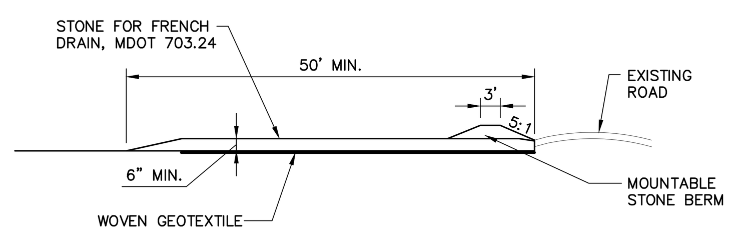
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED AS WELL AS REMOVING ANY PROTRUDING ROCKS, STUMPS OR ROOTS. DURING THE GROWING SEASON (APRIL 15–SEPTEMBER 15) USE RECP'S ON THE BASE OF GRASSED WATERWAYS, SOIL SLOPES HAVING A GRADE GREATER THAT 15%, OR ANYWHERE WHERE HAY MULCH HAS PROVEN TO BE INEFFECTIVE AT CONTROLLING SHEET EROSION. RECP'S ARE A MANUFACTURED COMBINATION OF MULCH AND NETTING DESIGNED TO PREVENT EROSION AND RETAIN SOIL MOISTURE. FOR OVER WINTER PROTECTION, APPLY RECP'S ON THE BASE AND SIDE SLOPES OF GRASSED WATERWAYS AND ON SLOPES STEEPER THAN AN 8% GRADE.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP's WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
6. UNTIL GRASS IS ABUNDANT, INSPECT PERIODICALLY AND AFTER EACH RAINSTORM TO CHECK FOR EROSION. IMMEDIATELY REPAIR AND ADD MORE MULCH UNTIL GRASSES ARE FIRMLY ESTABLISHED. DO NOT MOW THE FIRST YEAR.

ROLLED EROSION CONTROL MATTING

N.T.S.



PLAN



PROFILE

NOTES:

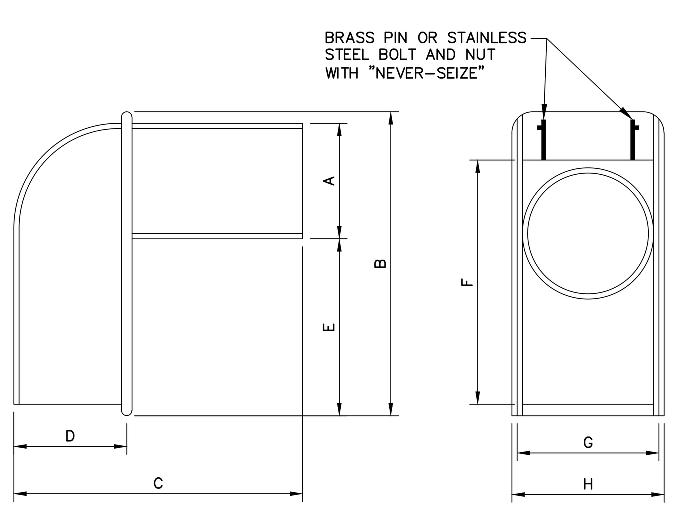
- CONSTRUCTION ENTRANCES MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
- WHEEL WASH PITS MAY ALSO BE USED, IF APPROVED.

MAINTENANCE: INSPECT FOR EFFECTIVE REMOVAL OF SOIL FROM VEHICLES PRIOR TO LEAVING THE SITE. SWEEP ANY SOIL FROM ADJACENT ROADWAYS.

REMOVAL: AT LEAST ONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL ALL AREAS OF THE SITE ARE STABILIZED.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.



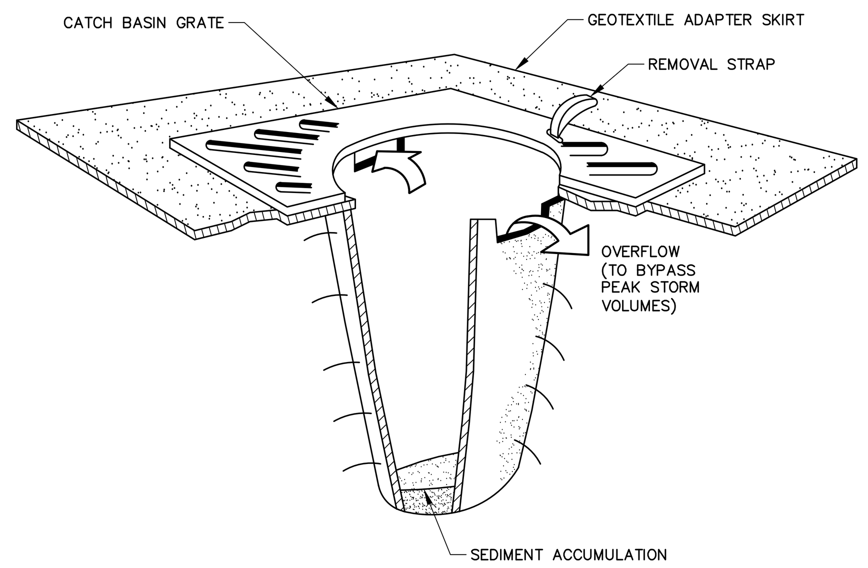
SIZE	A	B	C	D	E	F	G	H
10"	9 1/2"	16"	16 1/4"	6"	4 1/2"	14 1/8"	11 1/2"	12 3/8"
15"	14 1/2"	22 1/2"	23"	10 1/4"	5 3/4"	21"	14 1/2"	15 3/4"

NOTE:

1. CASCO TRAP SHALL BE CAST IRON CASCO TRAP BY ETHERIDGE FOUNDRY OR APPROVED EQUAL.
2. BOLT AND NUT REQUIRED WHERE HOOD WILL NOT OPEN COMPLETELY.
3. CASCO TRAP SHALL BE INSTALLED ON ALL CATCH BASIN OUTLET PIPES, INCIDENTAL TO COST OF CATCH BASIN

CASCO TRAP DETAIL

N.T.S.



NOTES:

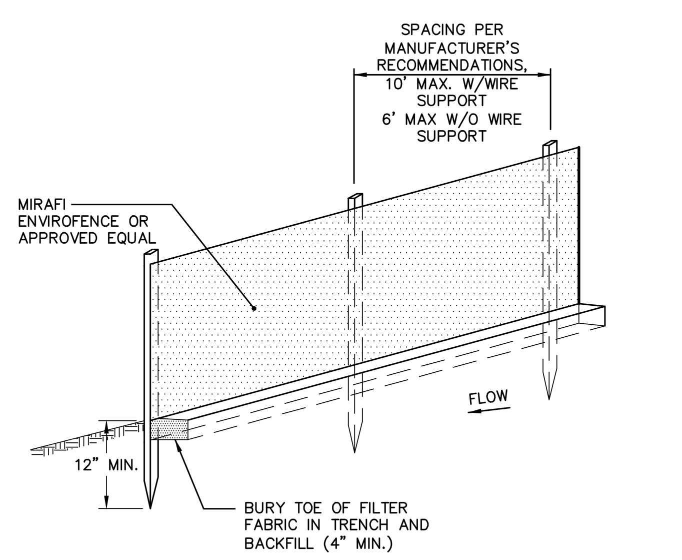
CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).

INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.

INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

TEMPORARY INLET PROTECTION

N.T.S.



NOTES:

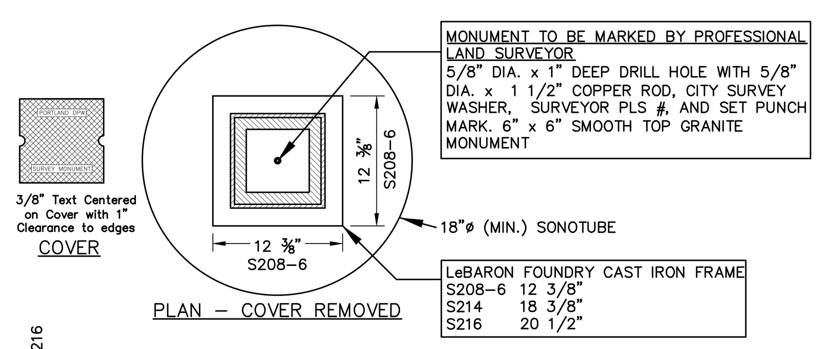
- INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS
- INSTALL SILT FENCE ACROSS SLOPES
- SILT FENCE SHALL NOT BE USED IN DRAINAGE WAYS

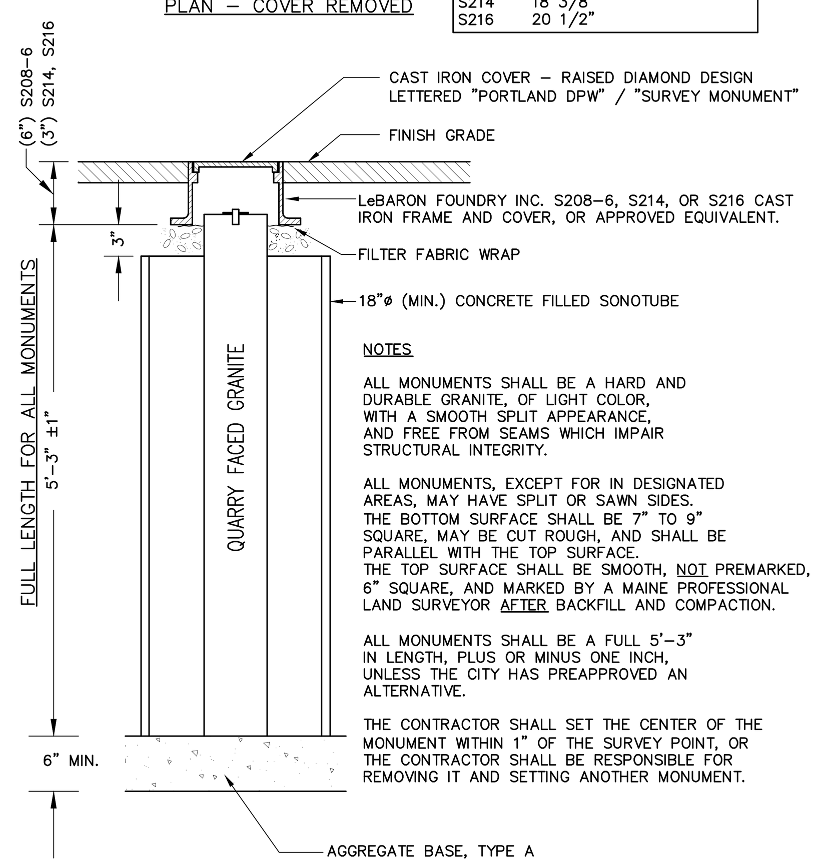
MAINTENANCE: INSPECT FOR TEARS IN THE FABRIC OR DAMAGE TO SUPPORTS. REPAIR AS NECESSARY. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES A DEPTH OF SIX–INCHES OR LESS.

REMOVAL: WHEN UPSLOPE AREAS ARE STABILIZED, THE STRUCTURE AND ANY ACCUMULATED SEDIMENT WILL BE REMOVED.

SEDIMENT BARRIER – SILTATION FENCE DETAIL

N.T.S.





NOTES

ALL MONUMENTS SHALL BE A HARD AND DURABLE GRANITE, OF LIGHT COLOR, WITH A SMOOTH SPLIT APPEARANCE, AND FREE FROM SEAMS WHICH IMPAIR STRUCTURAL INTEGRITY.

ALL MONUMENTS, EXCEPT FOR IN DESIGNATED AREAS, MAY HAVE SPLIT OR SAWN SIDES. THE BOTTOM SURFACE SHALL BE 7" TO 9" SQUARE, MAY BE CUT ROUGH, AND SHALL BE PARALLEL WITH THE TOP SURFACE. THE TOP SURFACE SHALL BE SMOOTH, NOT PREMARKED, 6" SQUARE, AND MARKED BY A MAINE PROFESSIONAL LAND SURVEYOR AFTER BACKFILL AND COMPACTION.

ALL MONUMENTS SHALL BE A FULL 5'–3" IN LENGTH, PLUS OR MINUS ONE INCH, UNLESS THE CITY HAS PREAPPROVED AN ALTERNATIVE.

THE CONTRACTOR SHALL SET THE CENTER OF THE MONUMENT WITHIN 1" OF THE SURVEY POINT, OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING IT AND SETTING ANOTHER MONUMENT.

GRANITE STREET MONUMENT

N.T.S.

NOTE: AGGREGATE TYPES PER MDOT SECTION 304.02

EROSION AND SEDIMENT CONTROL NOTES

Temporary Erosion Control

Contractor shall prepare and submit a soil erosion and water pollution control plan to engineer in accordance with section 656.

Measure	Dates For Use	Timing, Activity, and Location
Sedimentation Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up–slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsack, Siltsaver Inlet Filter. or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 1	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 95% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events or every __ days, apply 100–150 lbs (2.5 bales) per 1,000 sq ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation or every __ days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower. Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and maintain and repair as necessary.

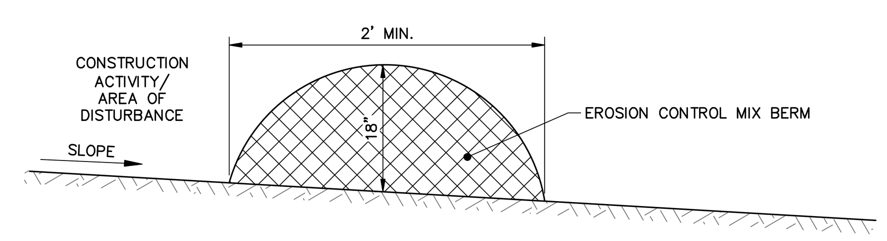
Permanent Erosion Control:

Measure	Dates For Use	Timing, Activity, and Location
Pavement – Base Course – Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build–up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build–up and structure blockages. Slow flow/Ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build–up.
Construction Entrance	Sedimentation of roadways. Off–site dust complaints.



NOTES:

1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
2. EROSION CONTROL MIX SHALL CONTAIN A WELL–GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
   - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100%, DRY WEIGHT BASIS.
   - PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.
   - THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   - LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
   - SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
   - THE PH SHOULD FALL BETWEEN 5.0 AND 8.0.

EROSION CONTROL MIX BERM

N.T.S.

EROSION AND SEDIMENTATION 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, PLUNGE POOLS, CHECK DAMS, SEDIMENT TRAPS, CATCHBASIN SEDIMENT COLLECTION BAGS AND GEOTEXTILE FILTER BAGS. PERMANENT MEASURES INCLUDE THE USE OF RIPRAP AT EXPOSED STORMDRAIN AND CULVERT INLETS AND OUTLETS, ARMORED SWALES AND SLOPES AND PERMANENT VEGETATION.

GENERAL

A. THE PROJECT SHALL CONFORM WITH THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT, IF APPLICABLE. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK PUBLISHED BY THE MAINE DEP UNLESS OTHERWISE NOTED IN THESE PLANS. HTTP://WWW.MAINE.GOV/DEP/LAND/EROSION/ESCBMPS/

B. 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.

C. 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.

D. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE SITE WHENEVER POSSIBLE WHILE ALLOWING PROPER SITE DEVELOPMENT.

E. CONSTRUCTION STAGING SHALL BE CONDUCTED IN A WAY TO MINIMIZE THE POTENTIAL FOR STORMWATER RUN–ON TO DISTURBED AREAS.

F. 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 AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL–GRADED GRAVEL OR APPROVED GEOTEXTILE. STONE MUST BE SIZED APPROPRIATELY AND IN ACCORDANCE WITH SECTION E–6 OF THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL.
v. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE ASPHALT BINDER COURSE.
vi. FOR OPEN CHANNELS, LEVEL SPREADERS, ENGINEERED BUFFERS OR OTHER DESIGNED STORMWATER CONVEYANCE STRUCTURE, PERMANENT STABILIZATION MEANS THE CHANNELIZED AREA(S) IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH APPROVED RIPRAP, OR WITH OTHER NON–EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE SHALL BE NO EVIDENCE OF SLUMPING, UNDERCUTTING OR DOWNCUTTING OF THE DESIGNED CHANNEL.

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: SEED MIXES AND APPLICATION ARE SPECIFIED ON THE LANDSCAPING PLANS.

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. DITCH LININGS AND RIPRAP INLET AND OUTLET PROTECTION SHALL BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR INSTALLATION OF THE CULVERT.

L. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1, IN THE BASE OF DITCHES AND ANY DISTURBED AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE (WETLANDS AND WATER RESOURCES). 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.

M. 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.

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

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STATE OF MAINE – DAVID A. SENUS – 10791 – LICENSED PROFESSIONAL ENGINEER – 8/22/2018

REV	DESCRIPTION	DATE
2	RESPONSE TO COMMENTS SUBMISSION	8/23/2018
1	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BCM | CHECKED BY: C-205 | 0231158 C20X.dwg

CIVIL DETAILS - 1

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

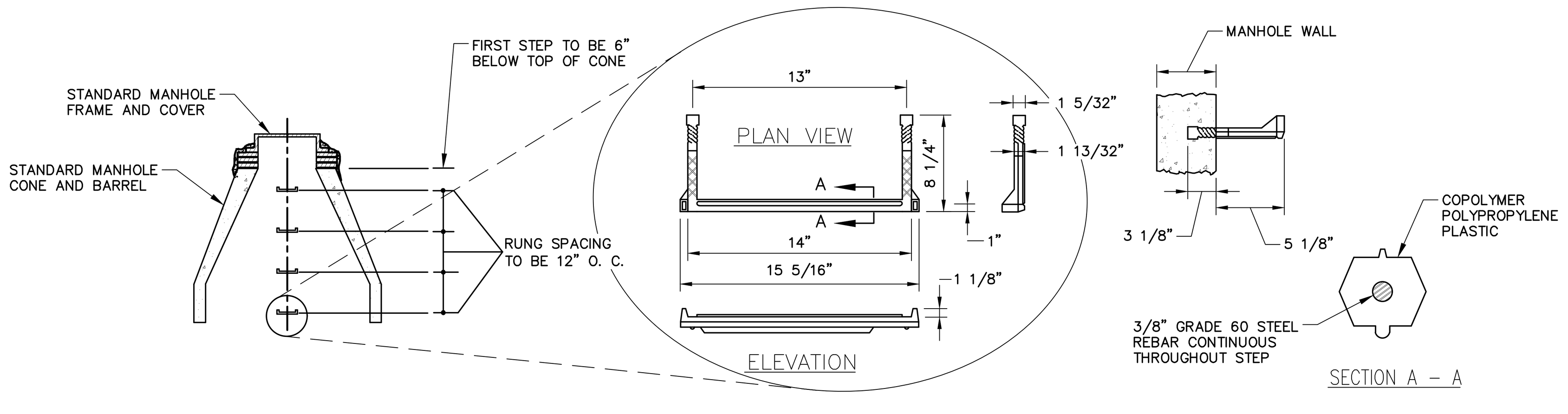
MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.: 0231158.00
DATE: JUNE 22, 2018
SCALE: AS NOTED
SHEET: 12 OF 17

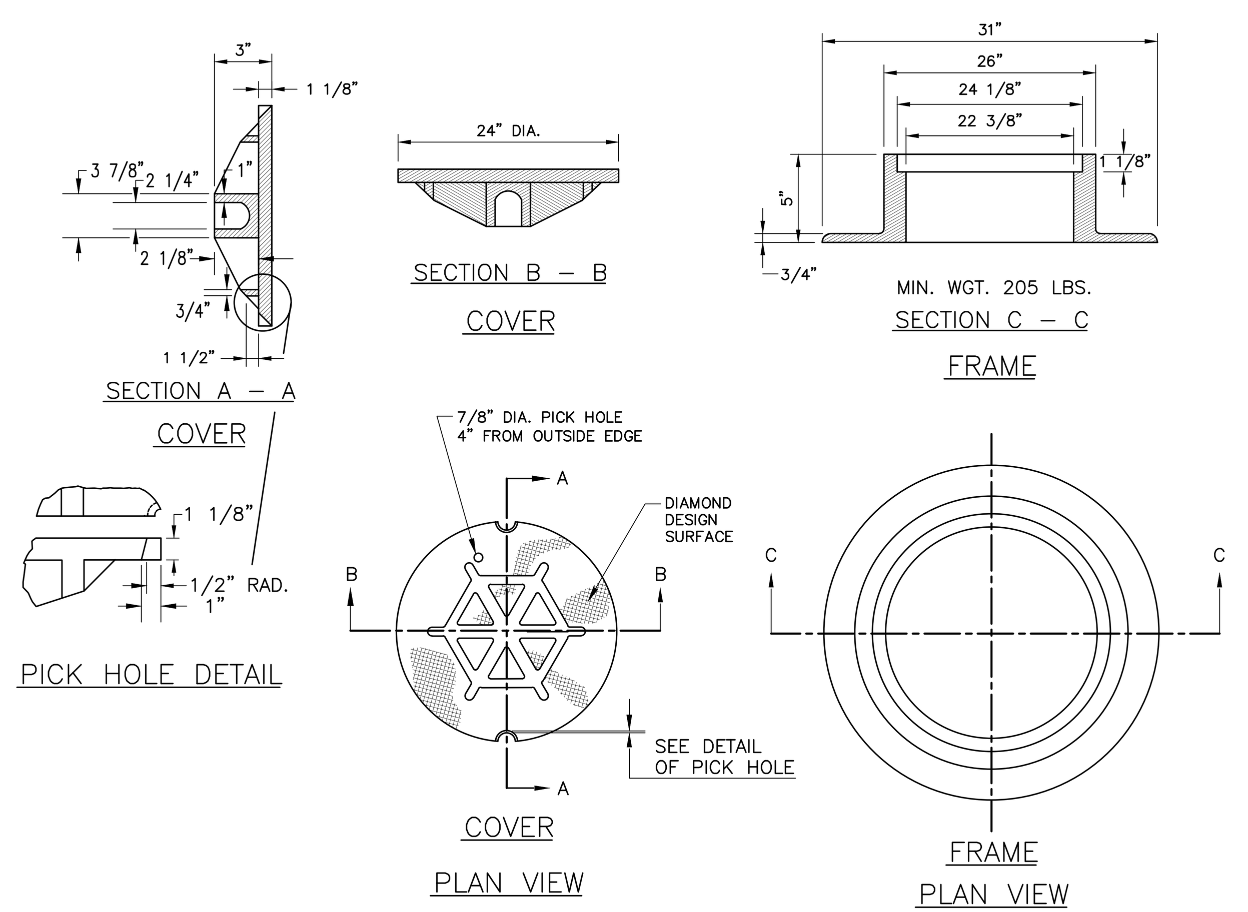
C-200

42x30 SHEET 1:1

\\woodardcurran.net\shared\Projects\0231158.00 Maine Med Ctr – Parking Garage\wip\Drawings\Redesign Phase\0231158 C20X.dwg, Aug 23, 2018 – 1:54pm



PLASTIC MANHOLE STEPS
N.T.S.

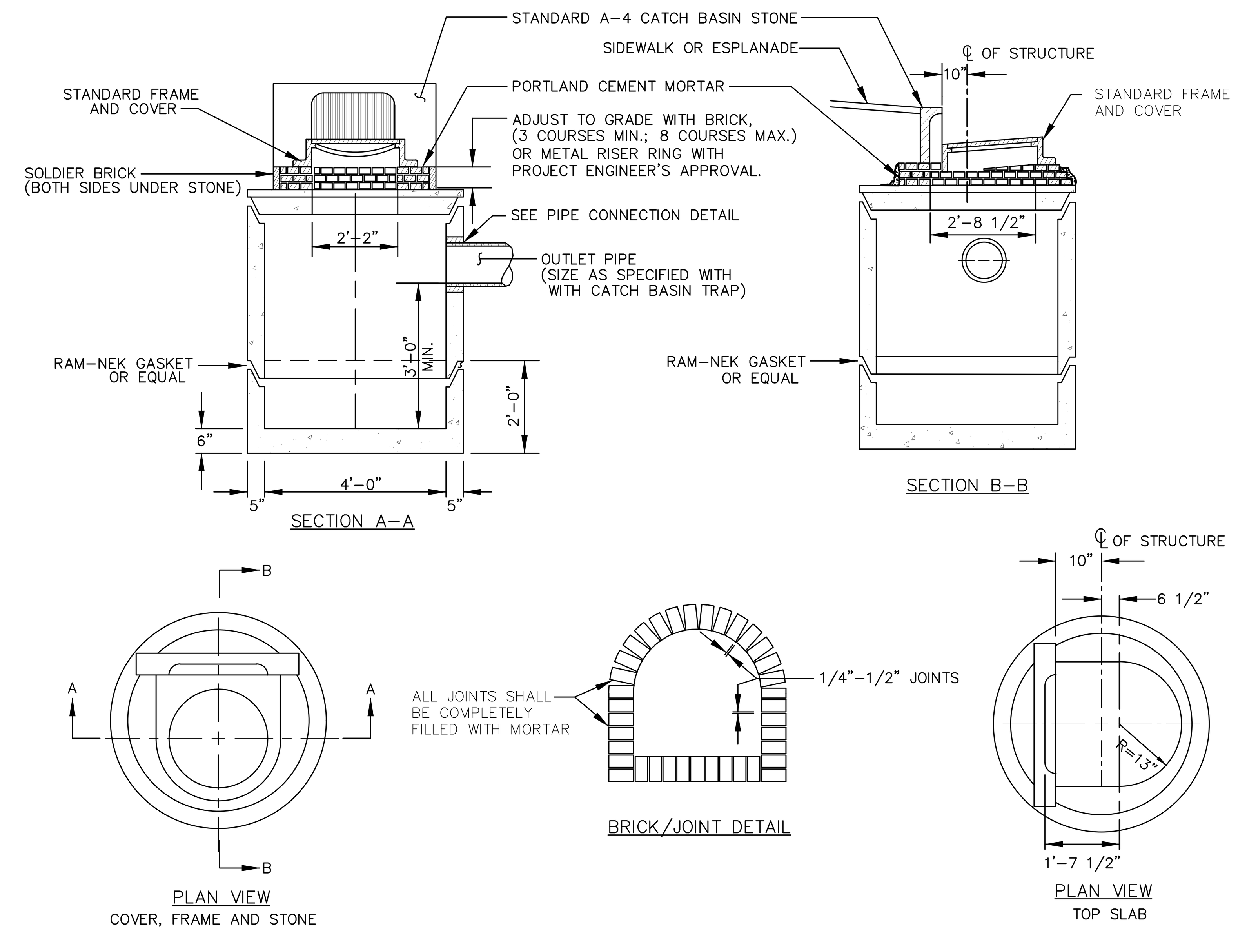


NOTE:
FOR ALL CROSS COUNTRY MANHOLES (LAWN AREAS), USE PAM REXUS MANHOLE COVERS BY CERTAINTEED.

TYPE "A" CAST IRON MANHOLE COVER AND FRAME
N.T.S.

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

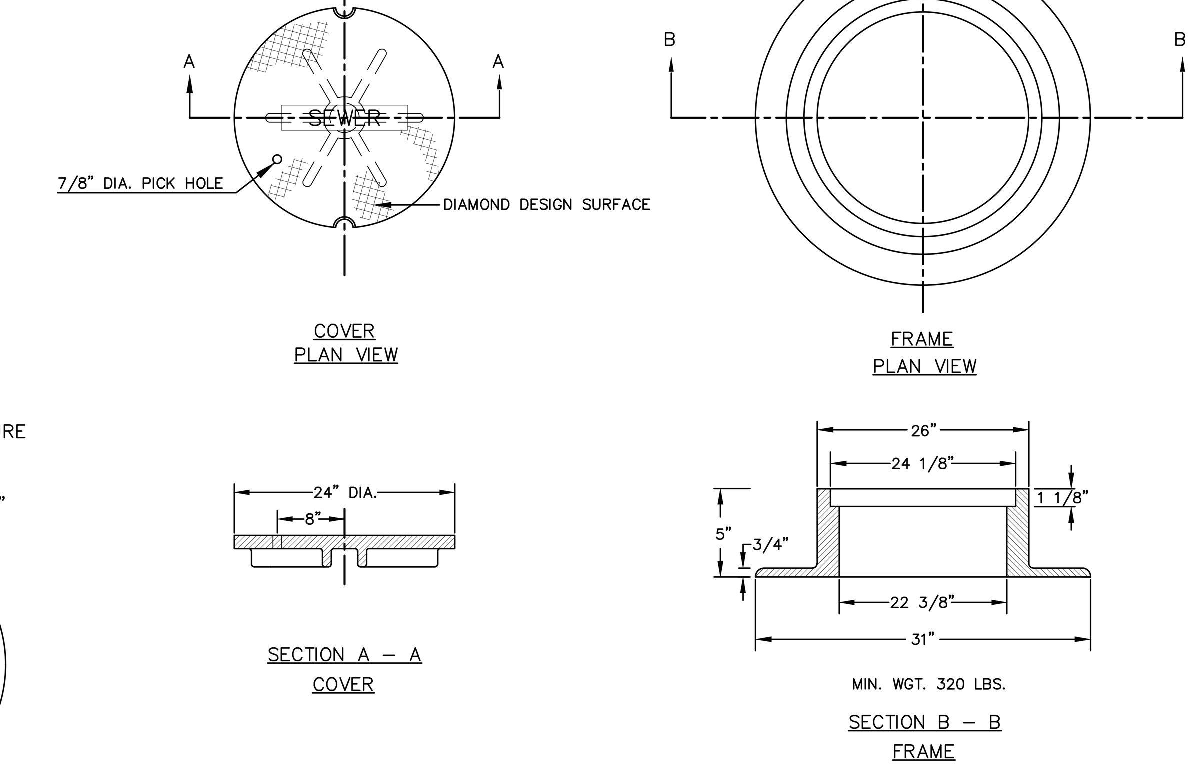
1. ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C–478.
3. ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTED OF BRICK MASONRY, SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
4. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48–CLASS 35. ALL PARTS OF CASTINGS, EXCEPT FINISHED SURFACE, SHALL RECEIVE A COAT OF COAL TAR PITCH VARNISH OR ASPHALTUM PAINT WHICH SHALL BE SMOOTH AND TOUGH BUT NOT BRITTLE.
5. MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
6. CONTRACTOR SHALL SUBMIT ANTIFLOATATION CALCULATIONS FOR ALL MANHOLE AND CATCH BASIN STRUCTURES.
7. ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION, OFFSET, AND STRUCTURE ID PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
8. STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED PICK HOLE.
9. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
10. WHEN THE FLOW CHANGES DIRECTION IN A MANHOLE, THE CHANNEL ALIGNMENT SHALL FOLLOW A SMOOTH RADIUS. CHANNELS SHALL BE FORMED TO ACCEPT ALL INLET PIPES.
11. ON STORM AND SEWER MANHOLES, THE SHELF AND CHANNEL SHALL BE FORMED BY BRICK SET IN CEMENT MORTAR OR BY FACTORY PRE–CAST CONCRETE. SUCH PRE–CAST CONCRETE SHALL BE EPOXY COATED AND THE SHELF SHALL HAVE A PERMANENT NON–SKID SURFACE.



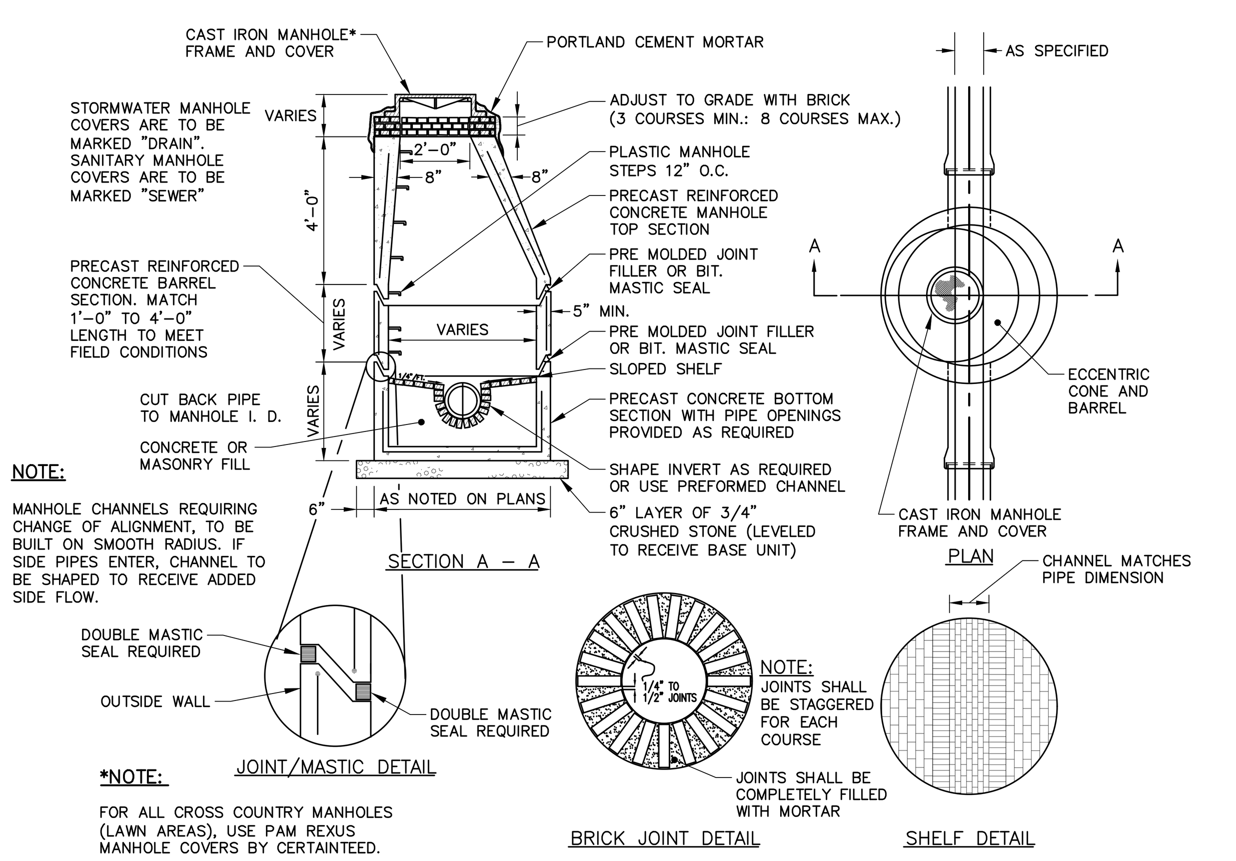
PRECAST CONCRETE CATCH BASIN – TYPE "D"
N.T.S.

NOTE:
ALL MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE, LOCATED 8" FROM THE CENTER OF THE COVER.

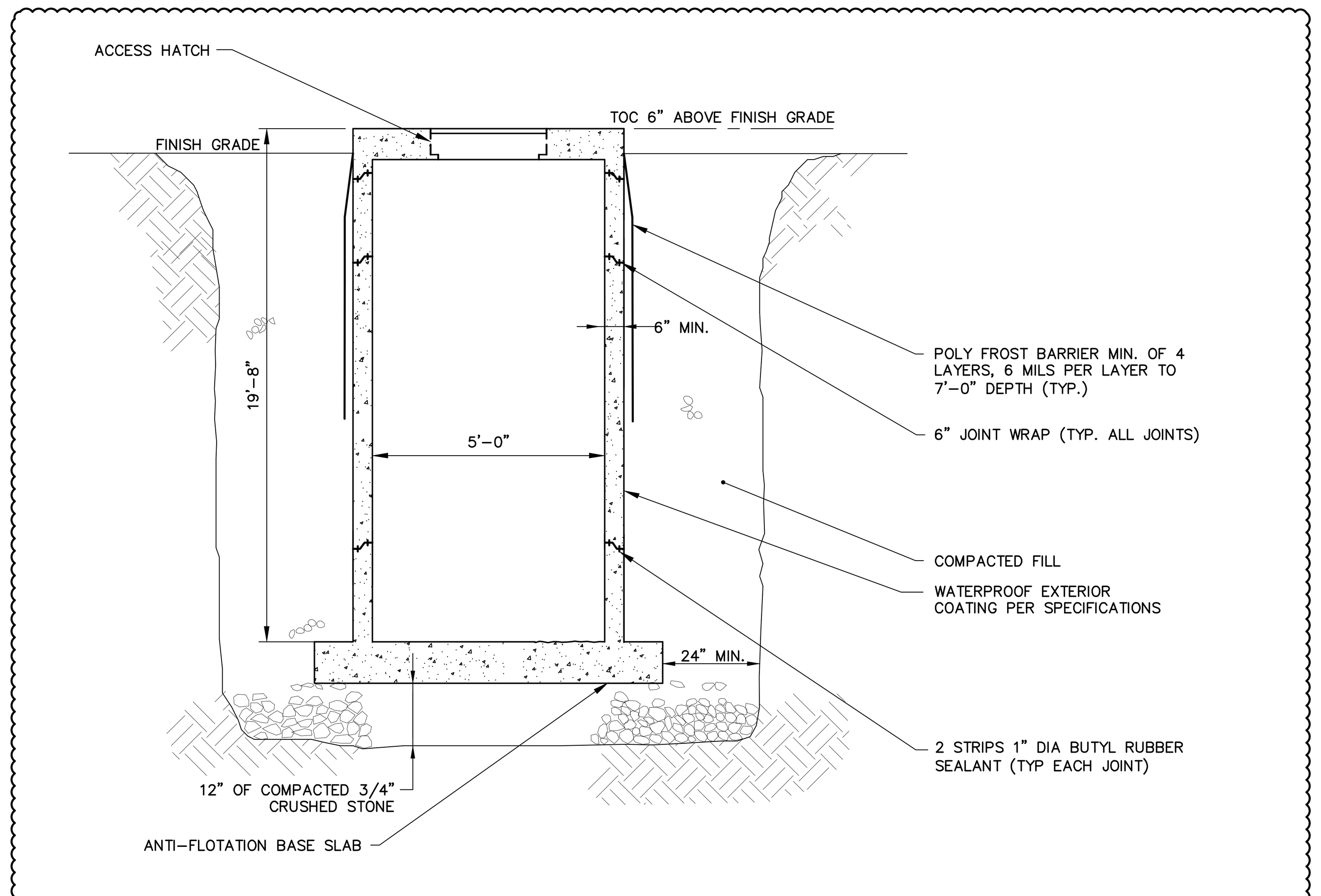
ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.



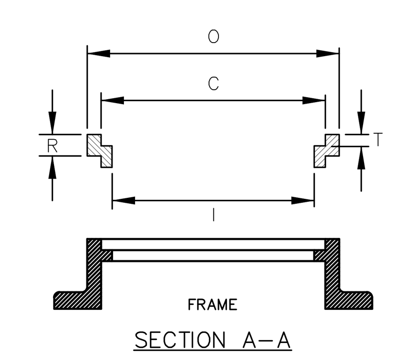
CAST IRON MANHOLE COVER AND FRAME
N.T.S.



PRECAST CONCRETE MANHOLE
N.T.S.

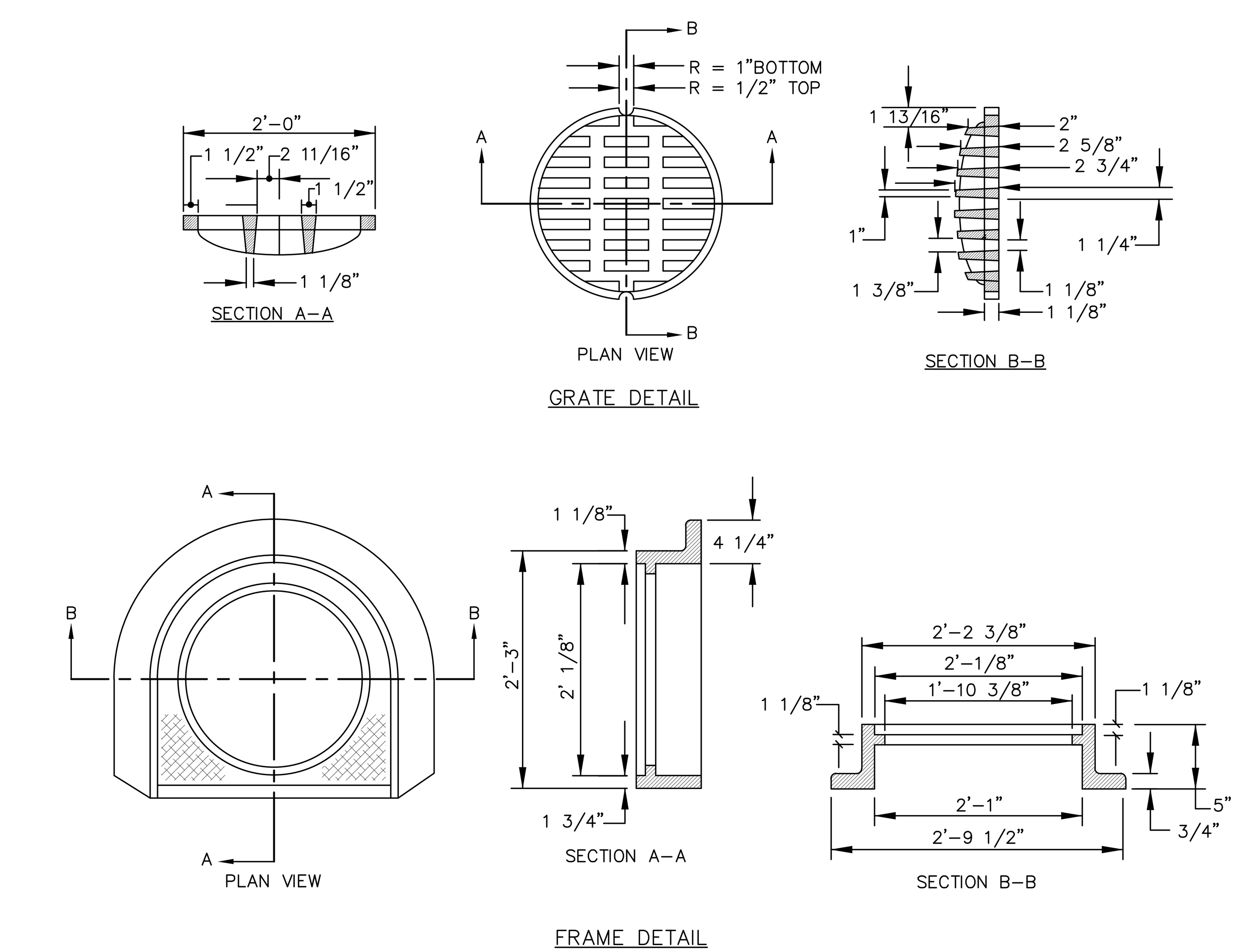


PUMP STATION
N.T.S.



SIZE	C	R	T	O	I	Wt.
R241 1/2	24	1 1/2	1 1/8	26 1/4	22 1/2	60
R242	24	2	1 1/8	26 1/4	22 1/2	80
R242 1/2	24	2 1/2	1 1/8	26 1/4	22	100
R243	24	3	1 1/8	26 1/4	22	120

MANHOLE RISER RING
N.T.S.



CATCH BASIN FRAME & GRATE
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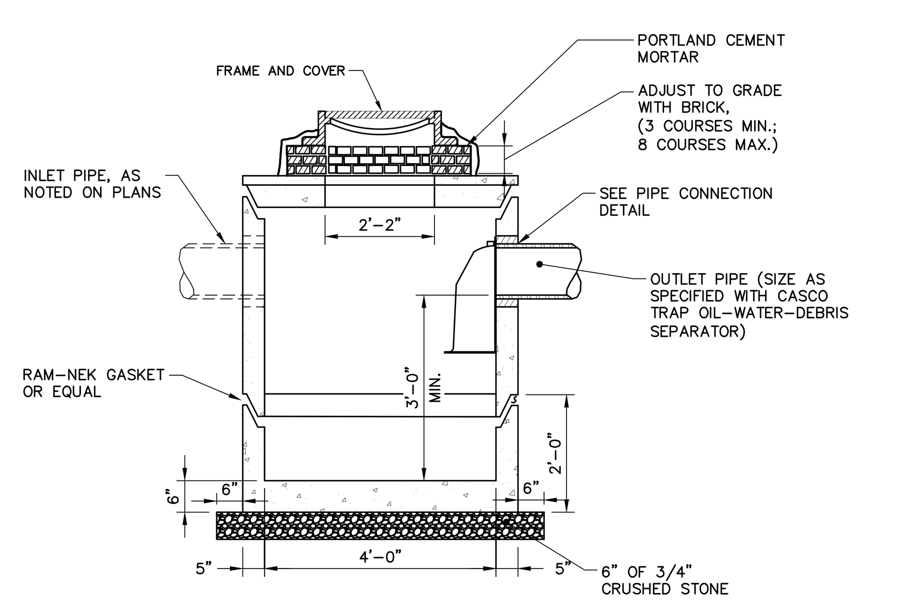
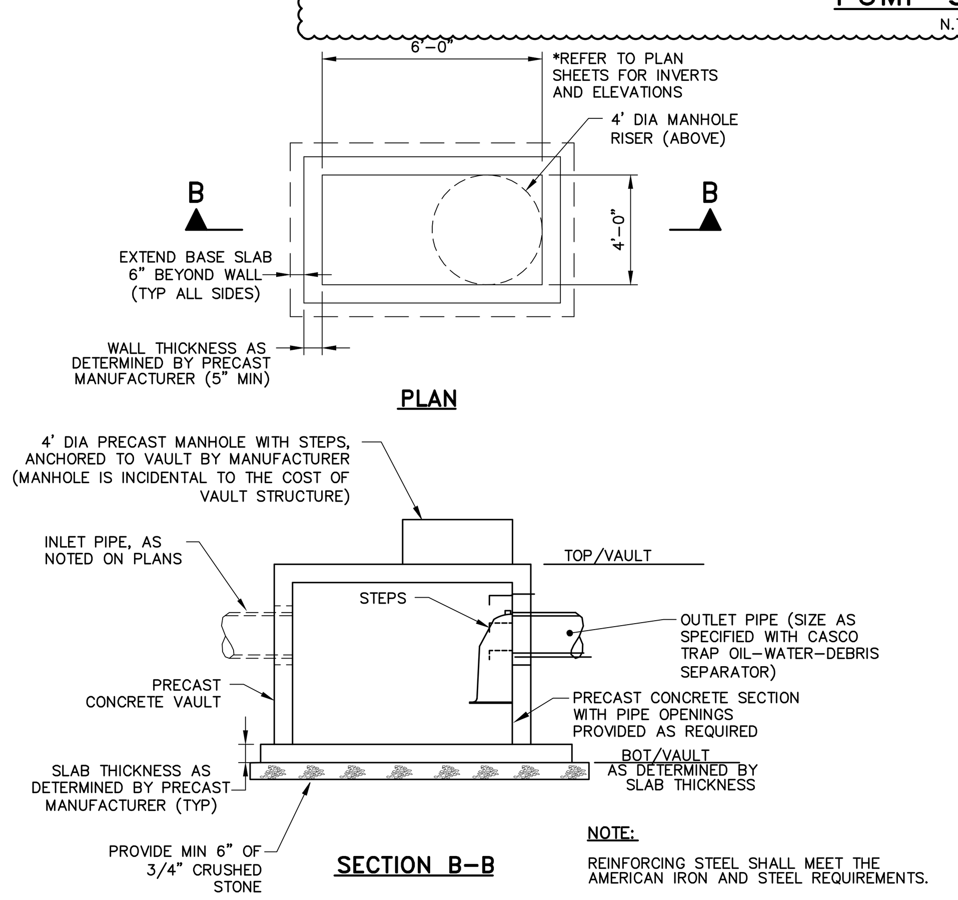
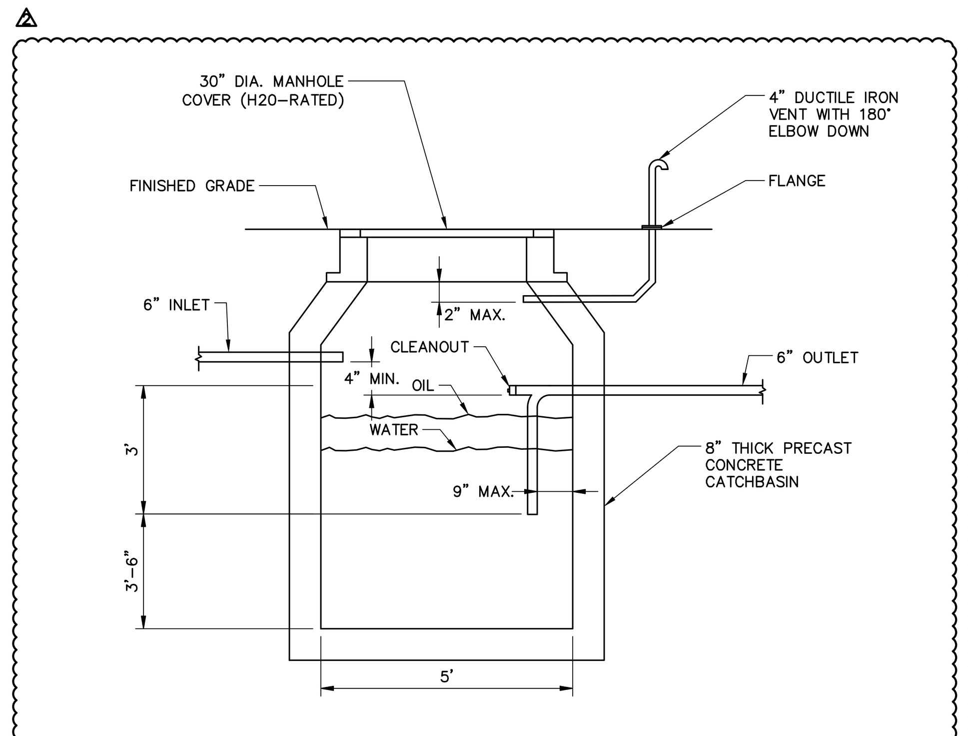


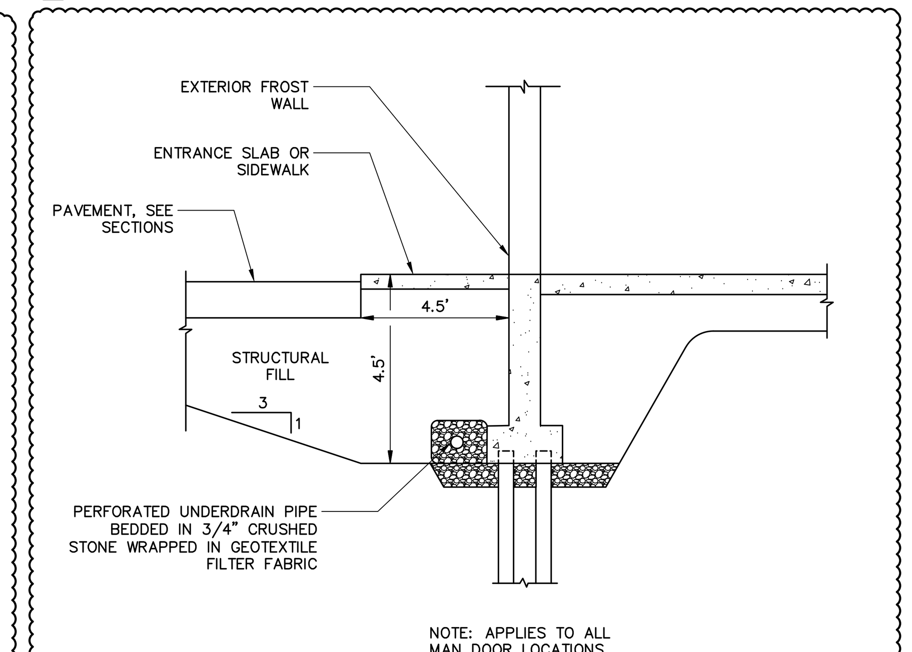
PRECAST CONCRETE CATCH BASIN
N.T.S.



PRECAST CONCRETE VAULT
N.T.S.



OIL WATER SEPARATOR
N.T.S.



FROST PROTECTION AT DOORWAY ENTRANCES
N.T.S.

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

42x30 SHEET 1:1

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STATE OF MAINE – DAVID A. SENUS 10791 – LICENSED PROFESSIONAL ENGINEER – 6/22/2018

REV	DESCRIPTION	DATE
2	RESPONSE TO COMMENTS SUBMISSION	8/23/2018
1	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BCM | CHECKED BY: C–205 | 0231158 C20X.dwg

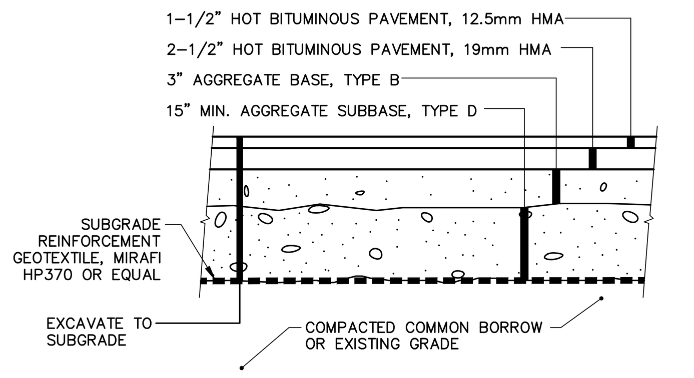
CIVIL DETAILS - 2

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

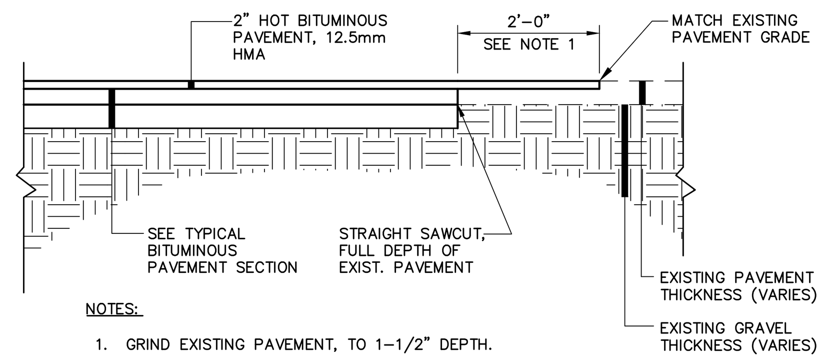
MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: AS NOTED
SHEET: 13 OF 17

C-201



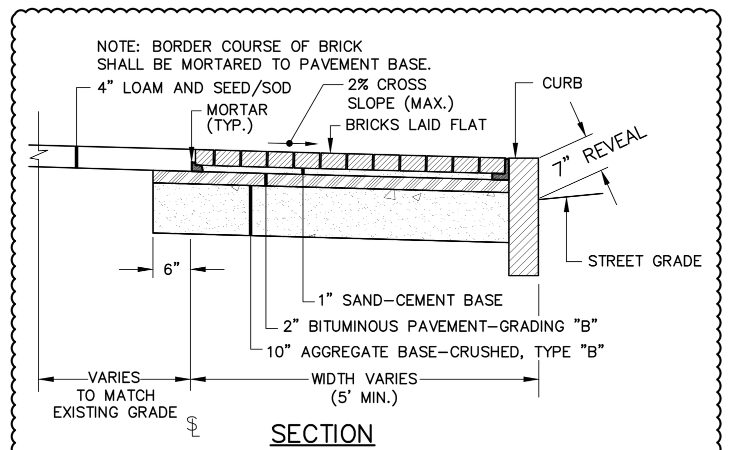
TYPICAL BITUMINOUS PAVEMENT SECTION – PARKING
N.T.S.



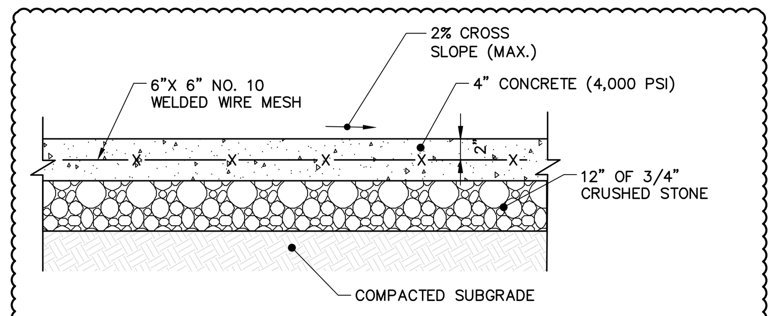
NOTES:

1. GRIND EXISTING PAVEMENT, TO 1-1/2" DEPTH.
2. PROVIDE BITUMINOUS TACK COAT ON VERTICAL AND HORIZONTAL SURFACES PRIOR TO PAVING.
3. DETAIL APPLICABLE TO PAVEMENT BUTT JOINTS AT ROADWAY WORK LIMITS. REFER TO PIPE INSTALLATION DTL. OR PAVED ROAD SECTION DTLS. FOR TRENCH REPAIR REQUIREMENTS.

PAVEMENT BUTT JOINT DETAIL
N.T.S.



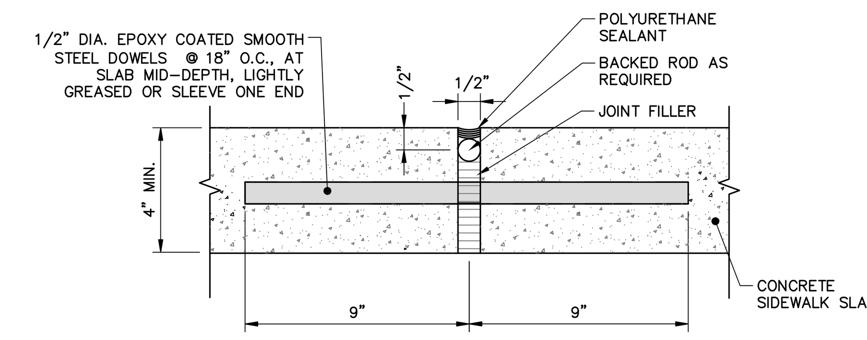
BRICK SIDEWALK DETAIL
N.T.S.



NOTES:

1. PROVIDE 1/2" PREMOLDED BITUMINOUS EXPANSION JOINTS AT 20 FT. INTERVALS.
2. PROVIDE CONTROL JOINTS AT 5 FT. INTERVALS OR AS SHOWN ON LANDSCAPE PLANS.
3. PROVIDE LIGHT BROOM FINISH AFTER TOOLING OF EDGES/ JOINTS. NO TOOLING PATTERNS ON FINISH SLAB

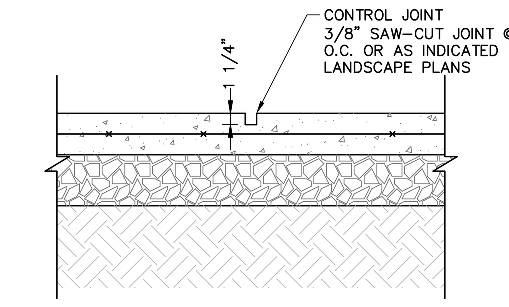
CAST-IN-PLACE CONCRETE SIDEWALK
N.T.S.



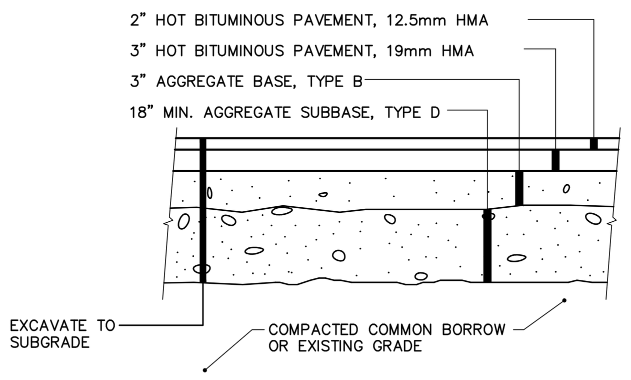
NOTES:

1. EXPANSION JOINTS SHALL BE 60' O.C.
2. DISCONTINUE REINFORCING AT EACH SIDE OF JOINT.
3. DOWELS SHALL BE CUT STRAIGHT AND DEBURRED.

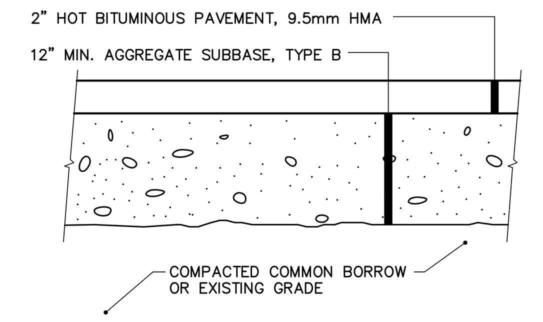
CONCRETE SIDEWALK EXPANSION JOINT
N.T.S.



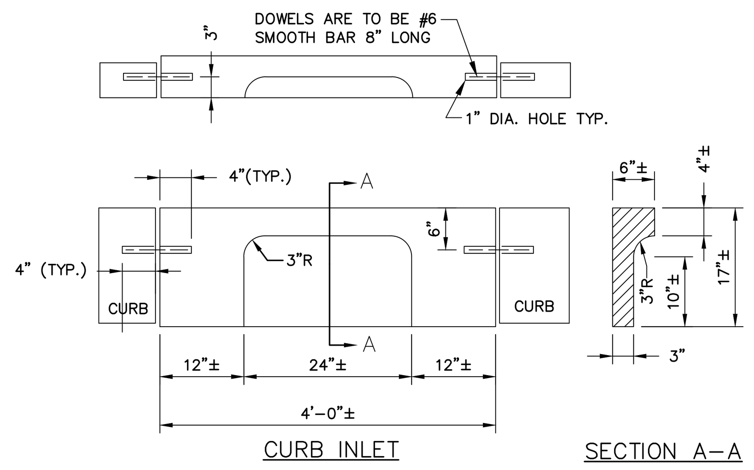
SIDEWALK CONTROL JOINT
N.T.S.



TYPICAL BITUMINOUS PAVEMENT SECTION – CITY RIGHT-OF-WAY
N.T.S.

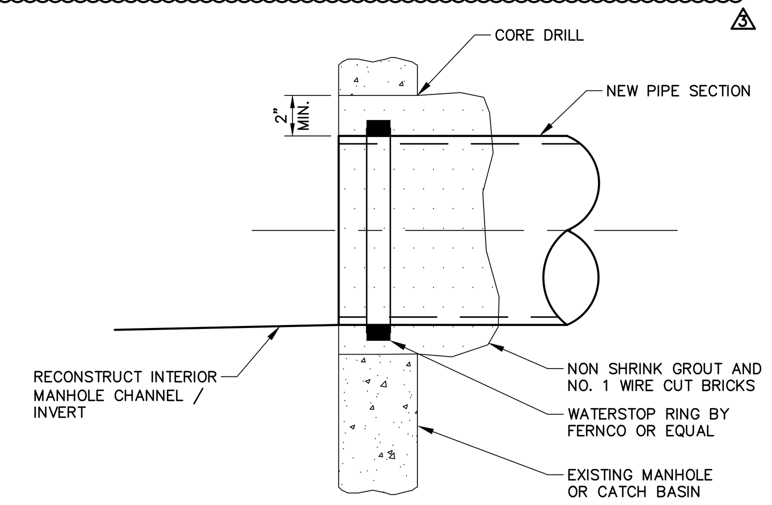


TYPICAL BITUMINOUS PAVEMENT SECTION – SIDEWALKS
N.T.S.



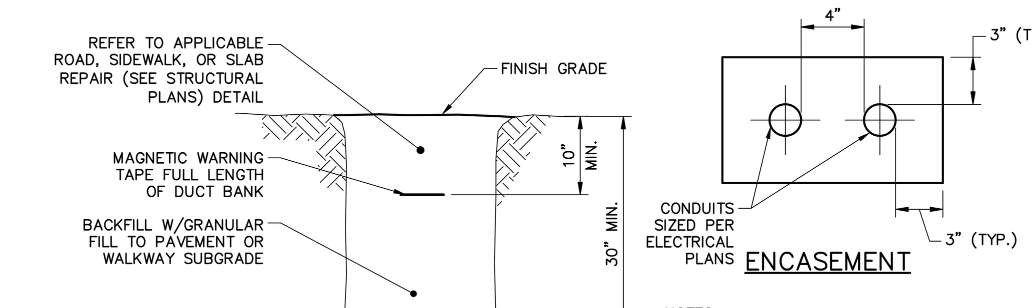
*FOR "D" FRAME & COVER INLETS

TYPE 1 GRANITE CURB INLET
N.T.S.



NEW PIPE TO EXISTING STRUCTURE
N.T.S.

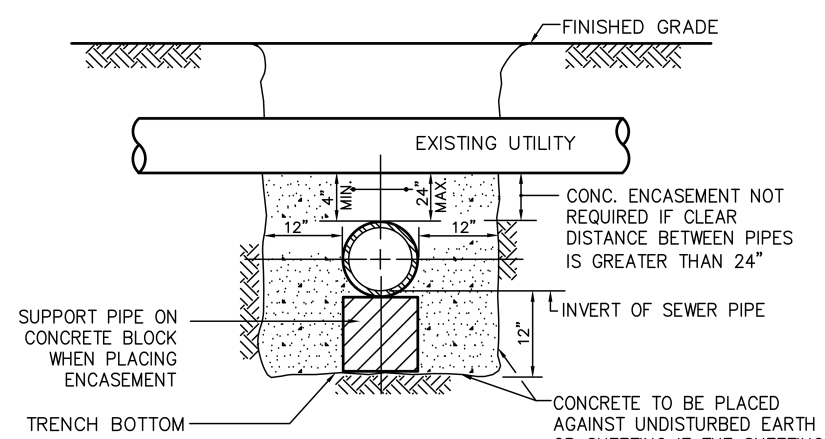
NOTE: EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION



NOTES:

1. ALL CONDUITS, INCLUDING RISER CONDUITS, NEED TO BE SLOPED TO DRAIN INTO MANHOLES OR TRANSFORMER FOUNDATIONS, 3" PER 100'.
2. INSTALL A PULLING LINE WITHIN EACH CONDUIT.
3. CONDUIT SHALL BE SCHEDULE 40 PVC, CONDUIT SWEEPS SHALL BE MIN. 48" RADIUS RIGID GALV. STEEL.

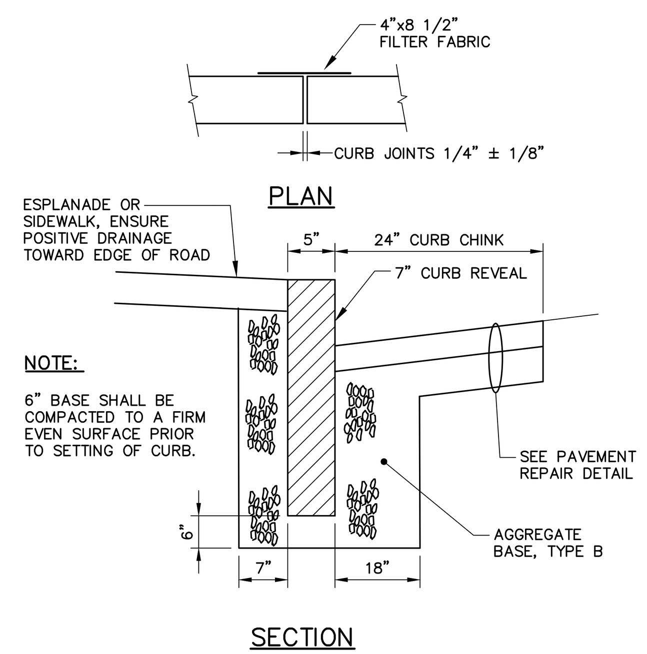
BURIED ELECTRICAL CONDUIT DETAIL
N.T.S.



NOTE:

PIPE MUST BE BRACED VERTICALLY & HORIZONTALLY TO PREVENT FLOATATION DURING PLACEMENT OF CONC.

UTILITY CROSSING LESS THAN 24" CLEARANCE
N.T.S.

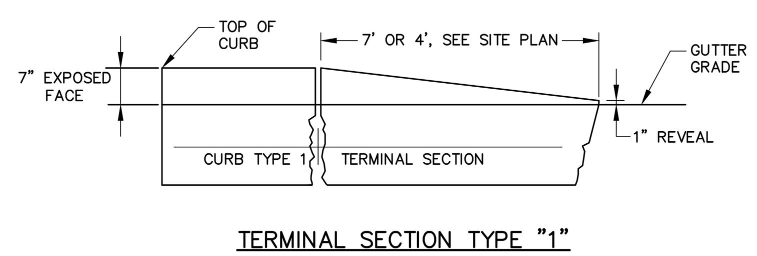


CURB TYPE 1 ON CURVES

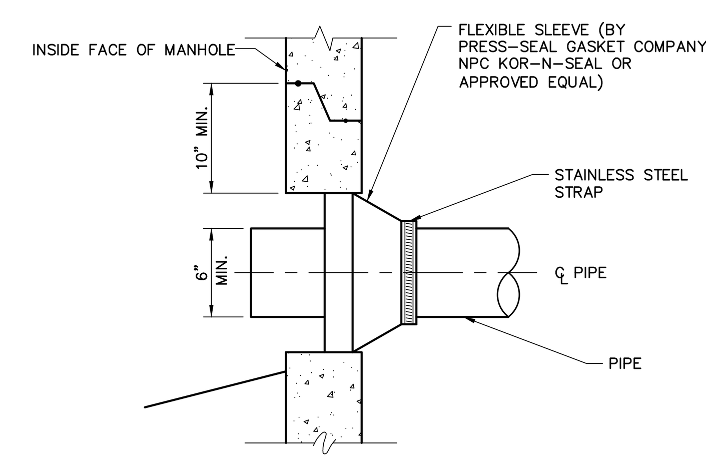
TYPE	RADIUS OF CURVE	LENGTH	STONE IS CUT OR CAST
1	0' TO 60' INCL.	4' MIN.	ARC TO FIT CURVE
	OVER 60' TO 160'	4' TO 6'	STRAIGHT PIECES

TYPICAL NEW AND RESET CURB INSTALLATION
N.T.S.

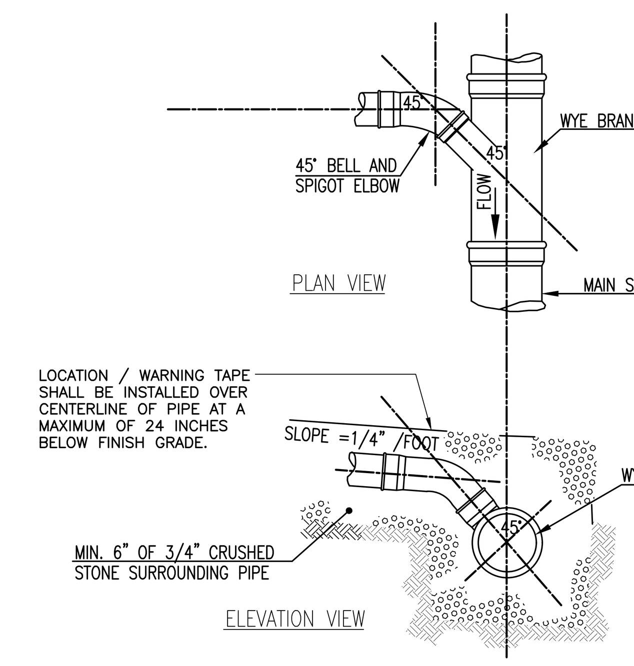
NOTE: AGGREGATE TYPES PER MDOT SECTION 304.02



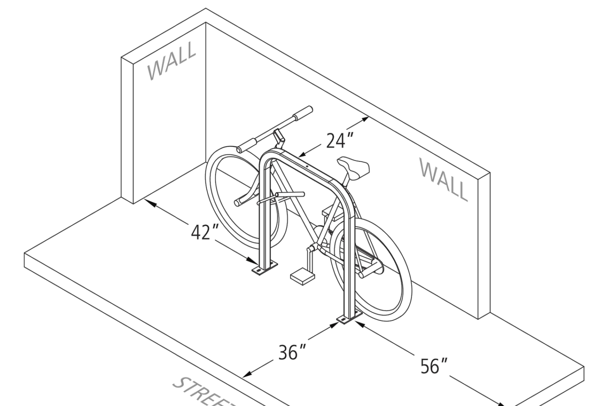
TERMINAL CURB SECTION
N.T.S.



NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL
N.T.S.



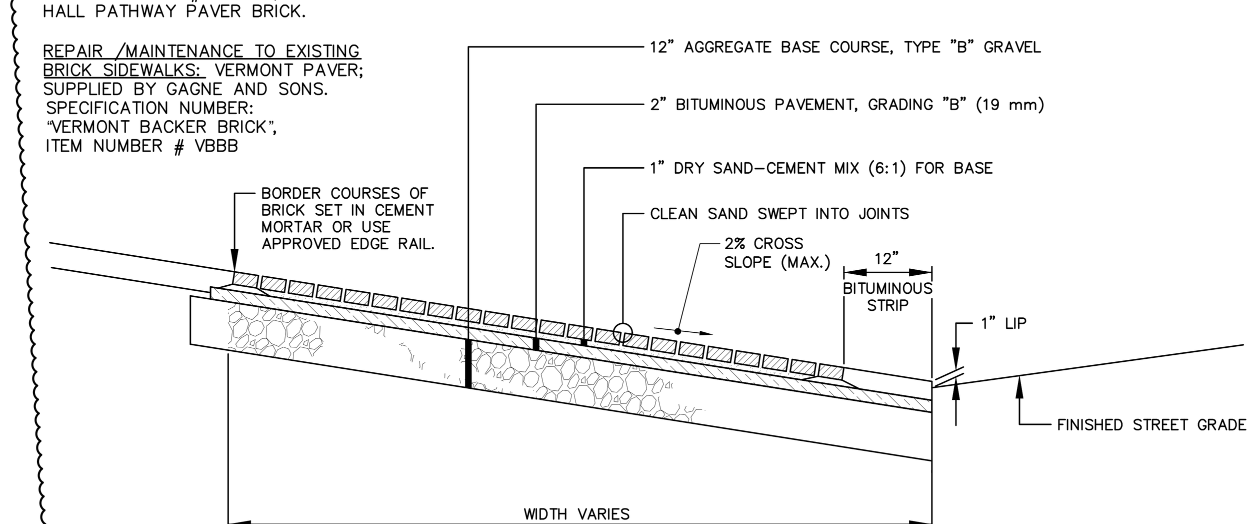
TYPICAL SEWER LATERAL WYE CONNECTION DETAILS
N.T.S.



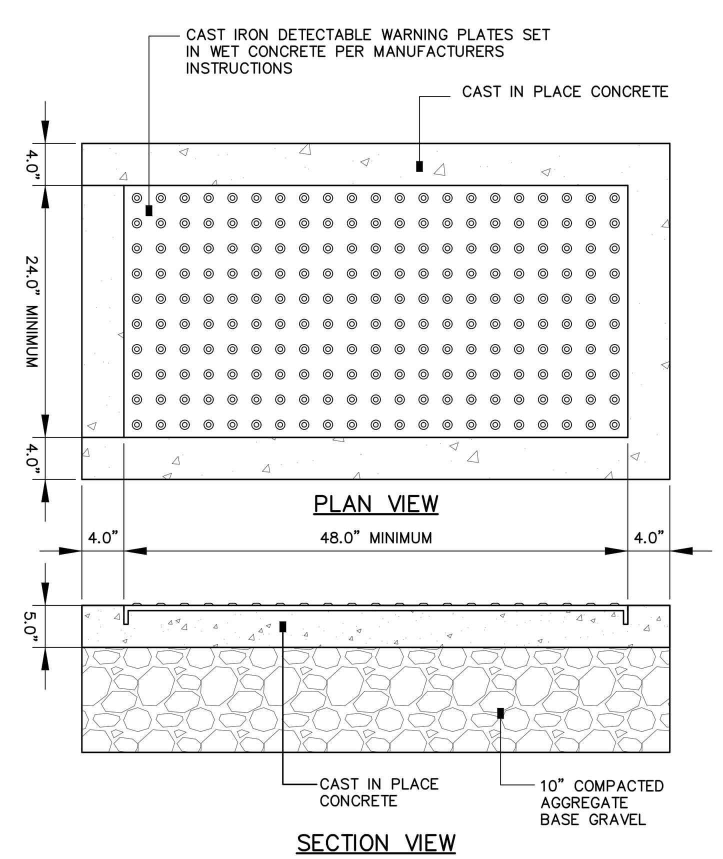
BRICKS TO BE USED:

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 PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: "VERMONT BACKER BRICK", ITEM NUMBER # VBBB



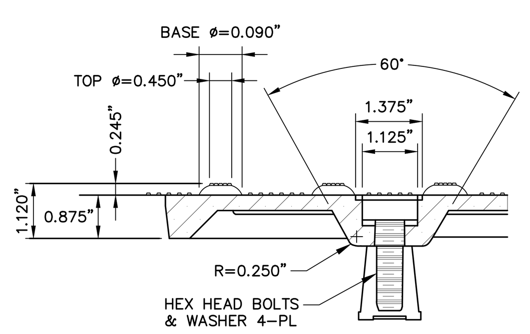
BRICK DRIVEWAY APRON WITH BITUMINOUS BASE
N.T.S.



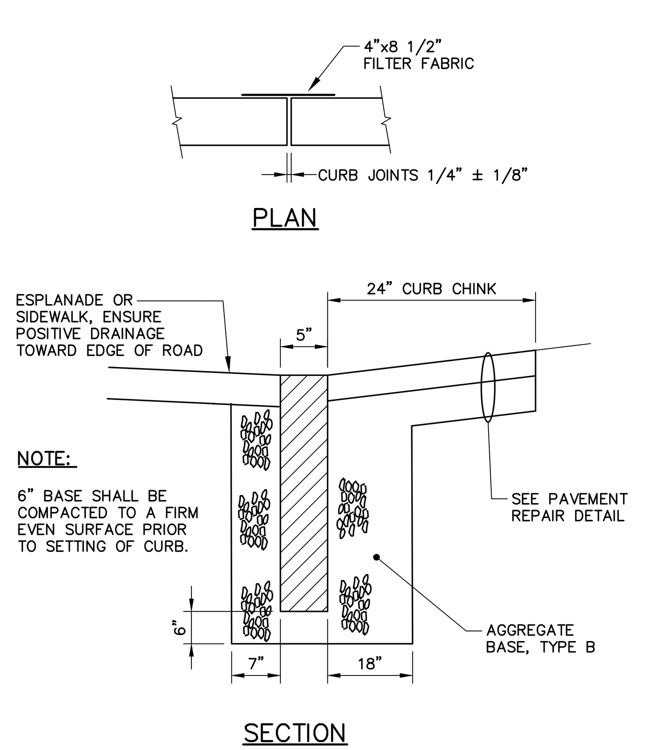
SIDEWALK RAMP DETECTABLE WARNING
N.T.S.

NOTES:

1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE PLATE WIDTH AND CONCRETE SHALL EXTEND THE WIDTH OF THE CURB RAMP, LANDING, OR BLENDING TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

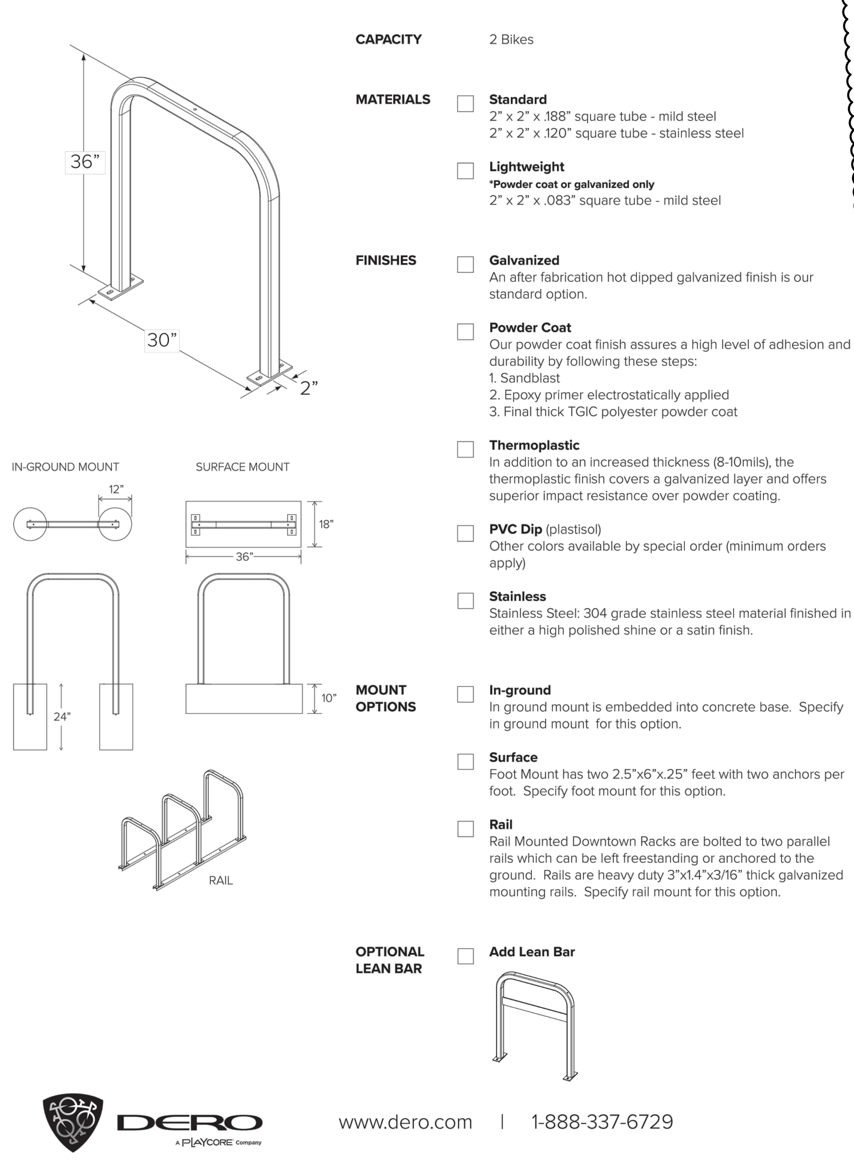


BOLT DETAIL

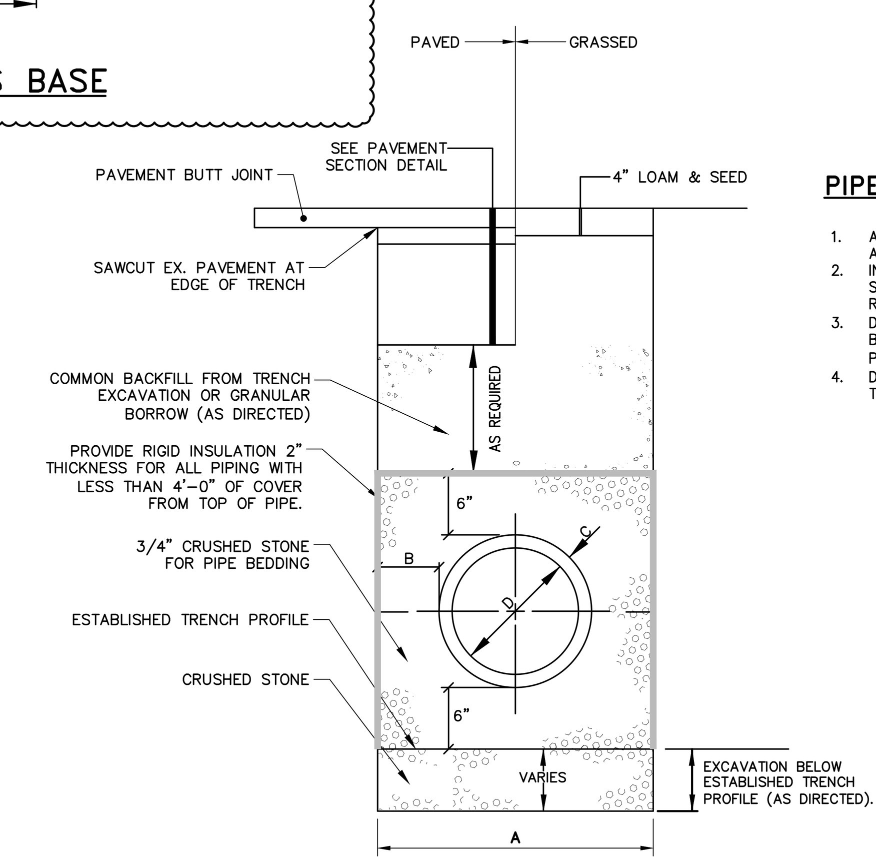


TYPICAL FLUSH CURB INSTALLATION
N.T.S.

NOTE: AGGREGATE TYPES PER MDOT SECTION 304.02



BIKE RACK DETAIL
N.T.S.



PIPE INSTALLATION DETAIL
N.T.S.

PIPE INSTALLATION DETAIL – NOTES

1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE.
2. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION "B" SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES "B" SHALL BE AT LEAST 9".
4. DIMENSION "A" SHALL BE BASED ON PIPE DIAMETER, AS SET FORTH IN THE FOLLOWING TABLE.

PIPE DIAMETER, "D" (INCHES)	MAX. TRENCH WIDTH, "A" (FEET)
6	4.0
8	4.0
10	4.0
12	4.0
15	4.0
18	5.0
21	5.0
24	5.5
27	6.0
30	6.0
36	7.0
42	8.0
48	8.0

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

42x30 SHEET 1:1

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STATE OF MAINE — DAVID A. SENUS 10791 — LICENSED PROFESSIONAL ENGINEER — 9/22/2018

REV	DESCRIPTION	DATE
3	RESPONSE TO COMMENTS SUBMISSION	9/5/2018
2	RESPONSE TO COMMENTS SUBMISSION	8/23/2018
1	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BCM | CHECKED BY: C-205 | 0231158 C20X.dwg

CIVIL DETAILS - 3

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: AS NOTED
SHEET: 14 OF 17

C-202

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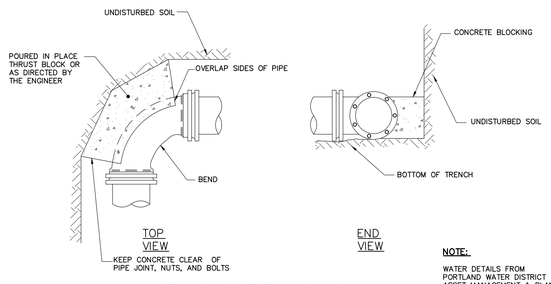
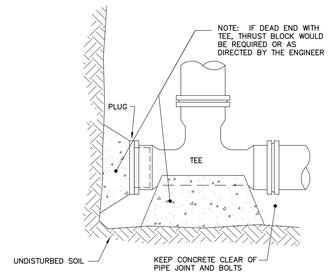


STANDARD BEND BLOCKING

N.T.S.

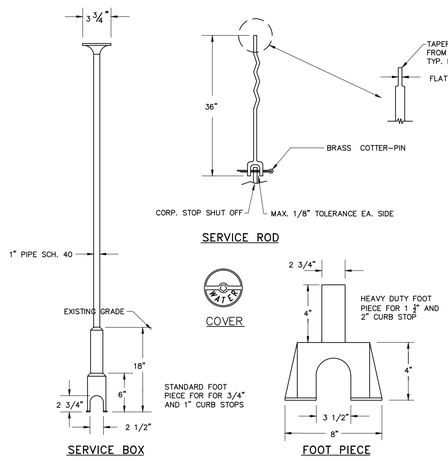
NOTE:

WATER DETAILS FROM PORTLAND WATER DISTRICT ASSET MANAGEMENT & PLANNING DEPT. "STANDARD WATER DETAILS WATER MAIN REPLACEMENTS PORTLAND – SOUTH PORTLAND"



STANDARD TEE BLOCKING

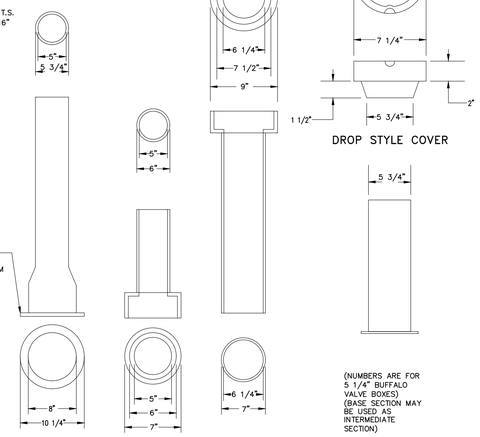
N.T.S.



NOTE : ANY EXTENSION OF SERVICE BOX REQUIRES:

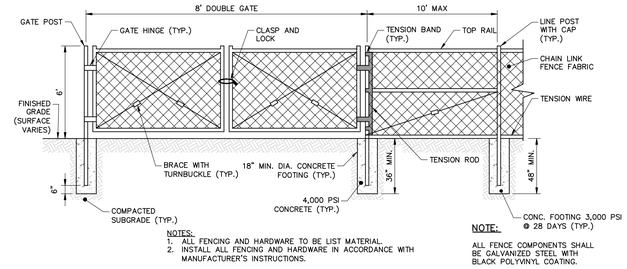
1.) 1" FEMALE IRON PIPE COUPLING 2) 1" THREADED PIPE (THIS IS TO BE A NON-WELDED,

TWO PIECE ARRANGEMENT. SLIP ON ADAPTERS ARE NOT PERMISSIBLE.)



VALVE BOX & COVER

N.T.S.



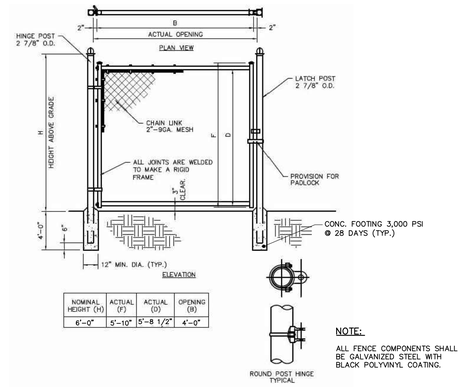
NOTES:
1. ALL FENCING AND HARDWARE TO BE LIST MATERIAL.
2. INSTALL ALL FENCING AND HARDWARE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

NOTE:

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH BLACK POLYVINYL COATING.

6' HGT. CHAIN LINK FENCE AND GATE

N.T.S.



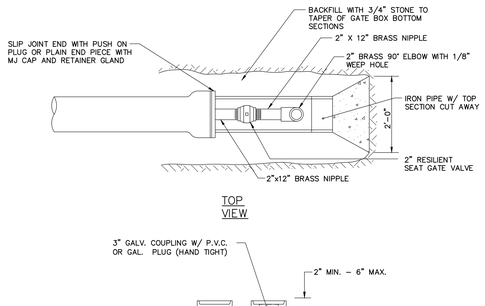
NOMINAL HEIGHT (H)	ACTUAL (F)	ACTUAL (D)	OPENING (B)
6'-0"	5'-10"	5'-8 1/2"	4'-0"

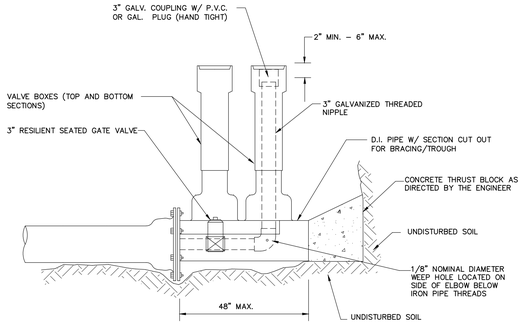
NOTE:

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH BLACK POLYVINYL COATING.

CHAIN LINK PERSONNEL GATE

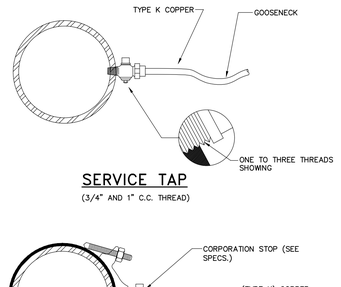
N.T.S.





STANDARD 3" BLOW OFF

N.T.S.

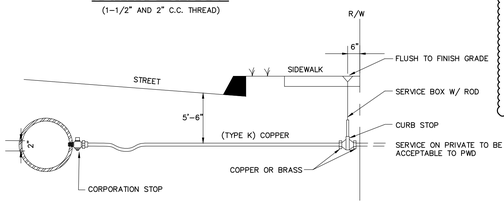


SERVICE TAP

(3/4" AND 1" C.C. THREAD)

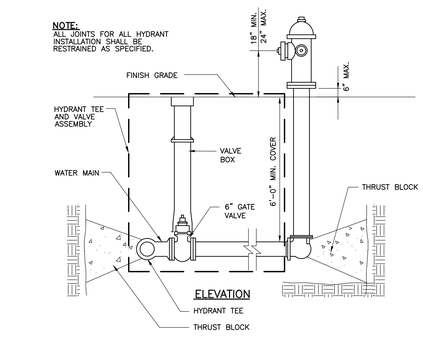
SERVICE SADDLE

(1-1/2" AND 2" C.C. THREAD)



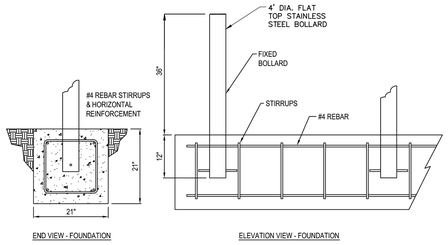
TYPICAL SERVICE CONNECTION

N.T.S.



TYPICAL HYDRANT ASSEMBLY DETAIL

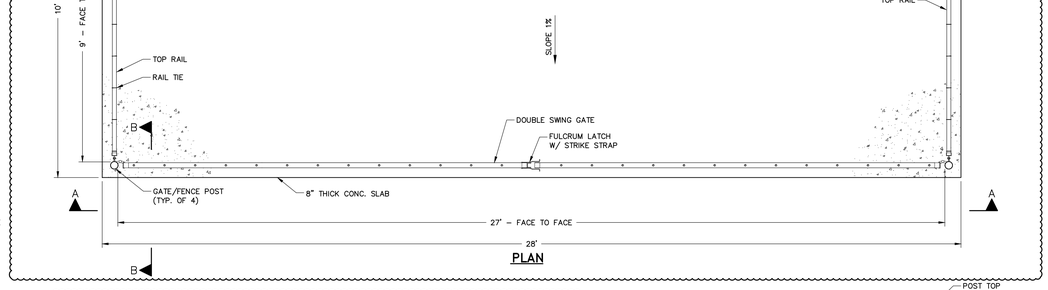
N.T.S.

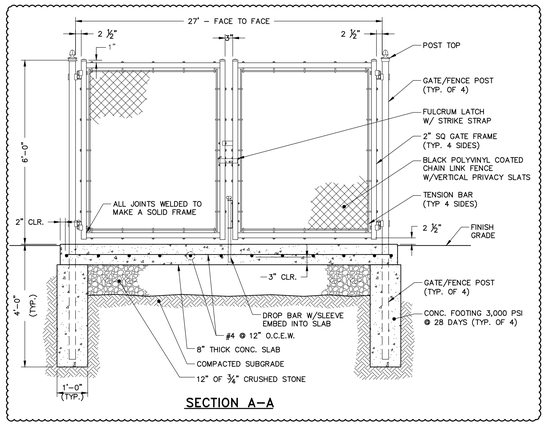


NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.
3. DO NOT SCALE DRAWING.
4. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 2905-015.

BOLLARD DETAIL

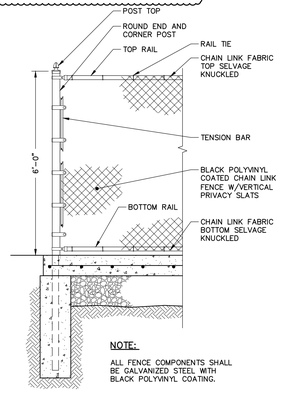
N.T.S.





DUMPSTER ENCLOSURE & PAD DETAIL

SCALE: N.T.S.



NOTE:

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH BLACK POLYVINYL COATING.

SECTION B–B

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WOODARD & CURRAN

DAVID SENUS 10124 STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER 6/22/2018

REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS SUBMISSION	6/25/2018
2	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BEM | CHECKED BY: C. FOS | 03118.259.dwg

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

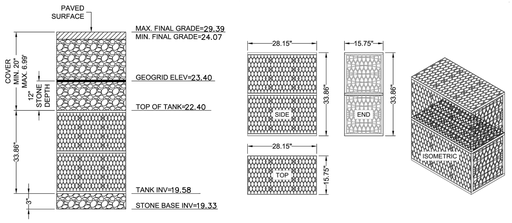
JOB NO.:0231158.00
DATE: JUNE 22, 2018
SCALE: AS NOTED
SHEET: 15 OF 17

CIVIL DETAILS - 4

C-203

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

\\woodardcurran.net\shares\Projects\02311158.00 Maine Med Ctr – Parking Garage\Web\Drawings\Redesign Phase\02311158 C203X.dwg, Aug 23, 2018 - 1:52pm



DOUBLE R-TANKHD-ELEVATION

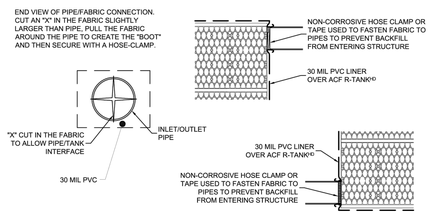
N.T.S.

MODULE DATA

GEOMETRY:	**LOAD RATING:**
LENGTH = 28.15 IN. (715 MM)	33.4 PSI, (MODULE ONLY)
WIDTH = 15.75 IN. (400 MM)	HS20, (WITH ACF COVER SYSTEM)
HEIGHT = 33.86 IN. (860 MM)	**MATERIAL:**
TANK VOLUME = 8.69 CF	100% RECYCLED POLYPROPYLENE
STORAGE VOLUME = 8.25 CF	**SMALL PLATES PER**
VOID INTERNAL VOLUME: 95%	**SEGMENT/TOTAL:**
VOID SURFACE AREA: 90%	5/10

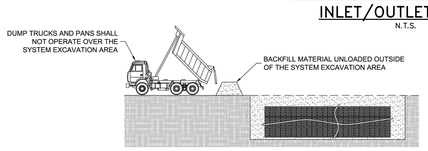
DOUBLE R-TANKHD-MODULE DETAIL

N.T.S.



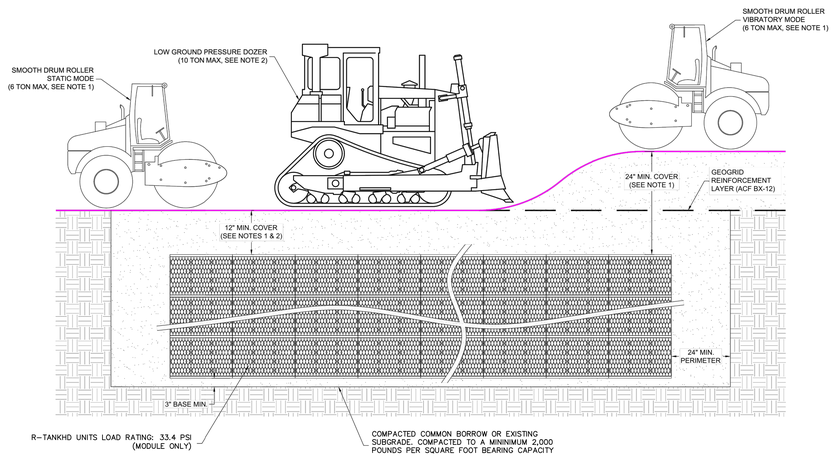
DOUBLE R-TANKHD TYPICAL INLET/OUTLET DETAIL

N.T.S.



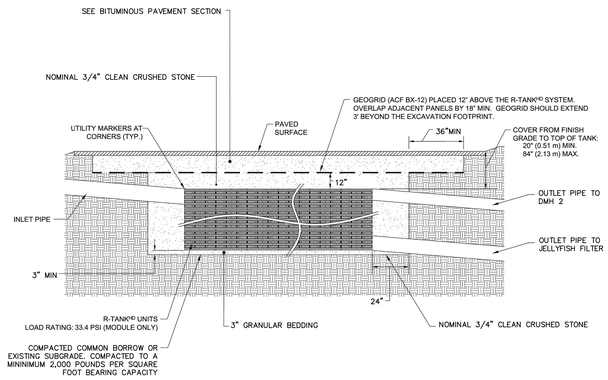
DUMP TRUCK DETAIL (SEE NOTE 3)

NOTES:
1. FOLLOWING PLACEMENT OF SIDE BACKFILL, A UNIFORM 12" LIFT OF 3/4-1.5" CLEAN CRUSHED, ANGULAR STONE SHALL BE PLACED OVER THE R-TANK AND LIGHTLY COMPACTED USING A WALK-BEHIND TRENCH ROLLER. ALTERNATELY, A ROLLER (MAXIMUM GROSS VEHICLE WEIGHT OF 6 TONS) MAY BE USED. ROLLERS MUST REMAIN IN STATIC MODE UNTIL A MINIMUM OF 24 INCH OF COVER HAS BEEN PLACED OVER THE MODULES. SHEEP FOOT ROLLERS SHOULD NOT BE USED
2. ONLY LOW PRESSURE TIRE OR TRACK VEHICLES (LESS THAN 7 PSI AND OPERATING WEIGHT OF LESS THAN 20,000 LBS) SHALL BE OPERATED OVER THE R-TANK SYSTEM AT ANY TIME. WHERE NECESSARY, THE HEAVE EQUIPMENT SHOULD UNLOAD IN AN AREA ADJACENT TO THE R-TANK SYSTEM AND THE MATERIAL SHOULD BE MOVED OVER THE SYSTEM WITH TRACKED EQUIPMENT.
3. ENSURE THAT ALL UNRELATED CONSTRUCTION TRAFFIC IS KEPT AWAY FROM THE LIMITS OF EXCAVATION UNTIL THE PROJECT IS COMPLETE AND FINAL SURFACE MATERIALS ARE IN PLACE. NO NON-INSTALLATION RELATED LOADING SHOULD BE ALLOWED OVER THE R-TANK SYSTEM UNTIL THE FINAL DESIGN SECTION HAS BEEN CONSTRUCTED (INCLUDING PAVEMENT)



DOUBLE R-CONSTRUCTION EQUIPMENT COVER DETAIL

N.T.S.

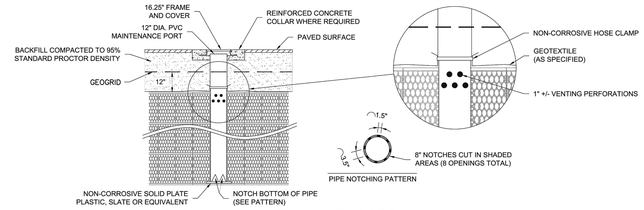


R-TANKHD & H-20 LOAD SECTION VIEW

N.T.S.

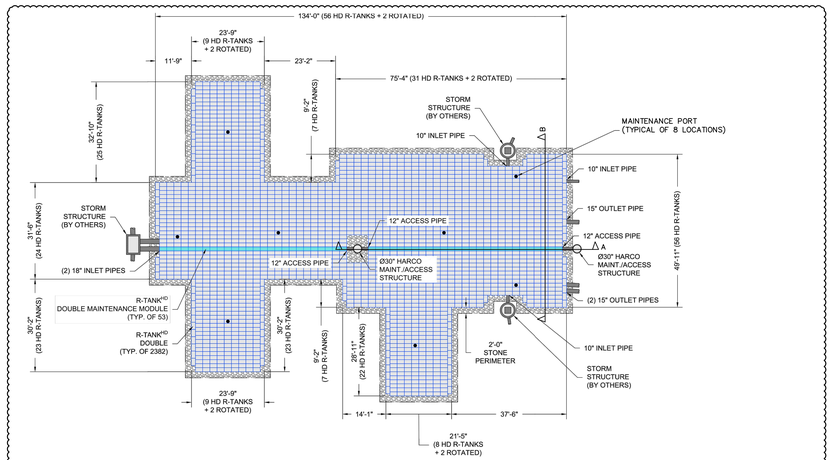
R-TANK^HD & H-20 LOADS - SEE

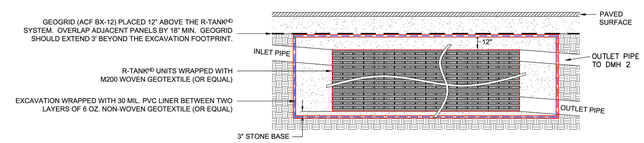
NOTES
1. THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.



R-TANKHD TYPICAL MAINTENANCE PORT

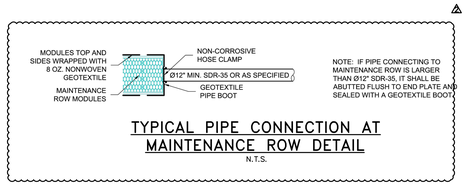
N.T.S.





R-TANKHD TANK WRAP & EXCAVATION ENVELOPE DETAL

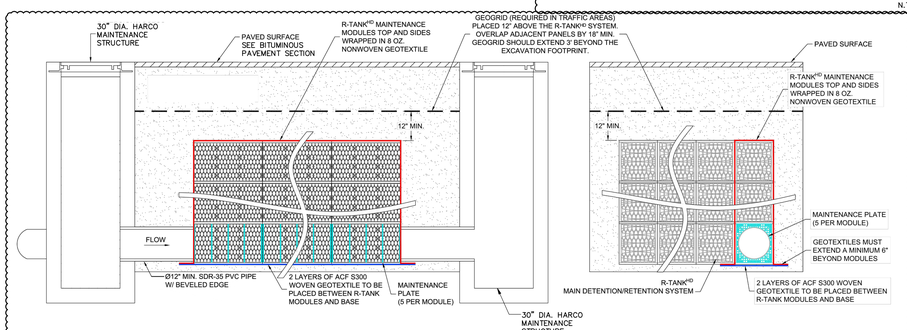
N.T.S.



NOTE: IF PIPE CONNECTING TO MAINTENANCE ROW IS LARGER THAN Ø12" SDR-35, IT SHALL BE ABUTTED FLUSH TO END PLATE AND SEALED WITH A GEOTEXTILE BOOT

TYPICAL PIPE CONNECTION AT MAINTENANCE ROW DETAIL

N.T.S.

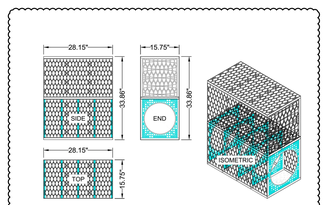


R-TANK MAINTENANCE ROW SECTION A-A

N.T.S.

R-TANK MAINTENANCE ROW SECTION B-B

N.T.S.



DOUBLE R-TANK MAINTENANCE MODULE DETAILS

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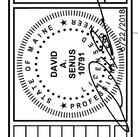


REV	DESCRIPTION	DATE

CHECKED BY: C-205 | 03108 C09.dwg

REV	DESCRIPTION	DATE
2	RESPONSE TO COMMENTS SUBMISSION	8/24/2018
1	RESPONSE TO COMMENTS SUBMISSION	7/24/2018

DESIGNED BY: CMS | DRAWN BY: BCM

CIVIL DETAILS - 5

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

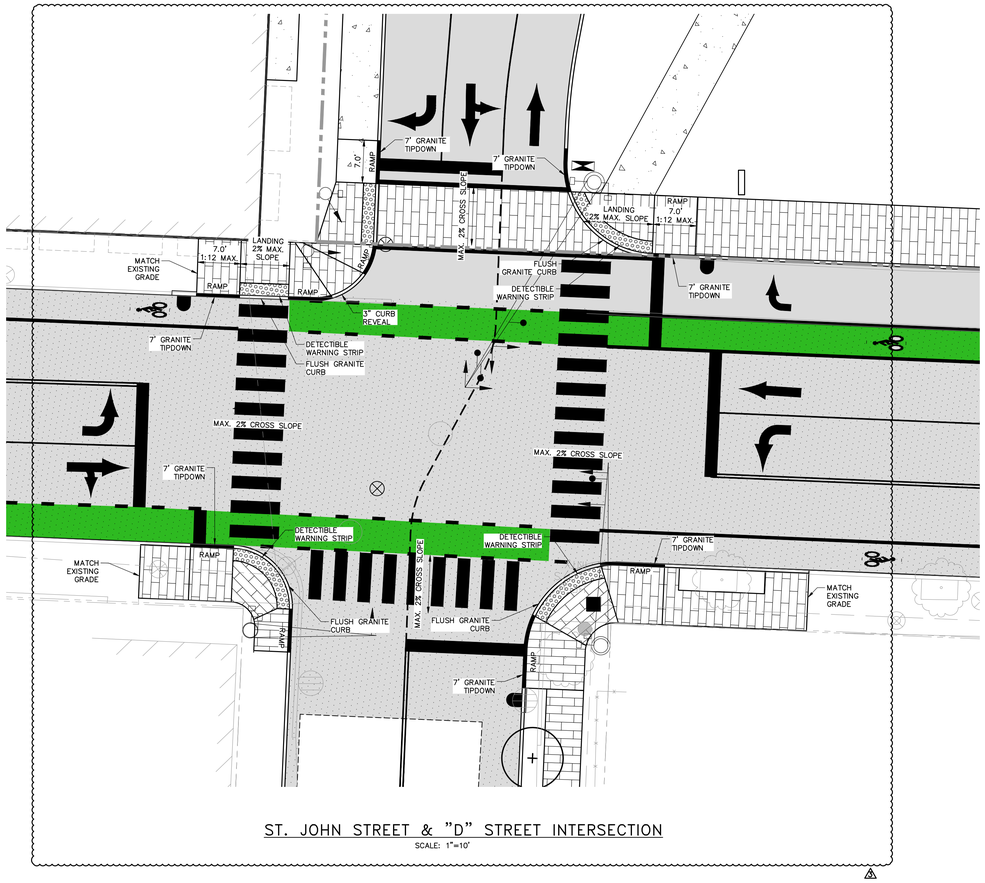
MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.:02311158.00
DATE: JUNE 22, 2018
SCALE: AS NOTED
SHEET: 16 OF 17

C-204

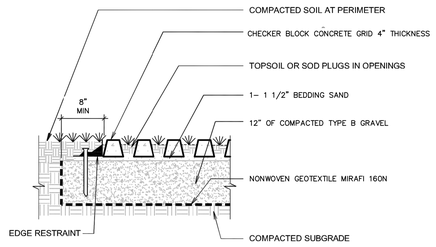
LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

\\woodardcurran.net\shares\Projects\02311158.00 Maine Med Ctr - Parking Garage\Web\Drawings\Redesign Phase\02311158 C20X.dwg, Aug 23, 2018 - 1:46pm



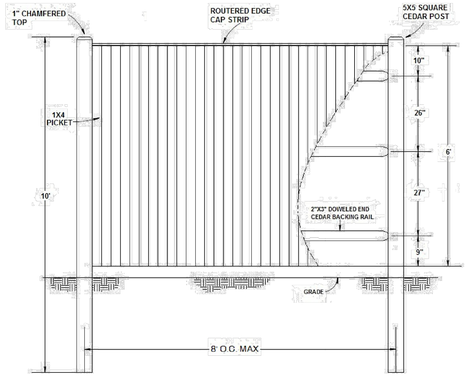
ST. JOHN STREET & "D" STREET INTERSECTION

SCALE: 1"=10'



CHECKER BLOCK CONCRETE GRID DETAIL

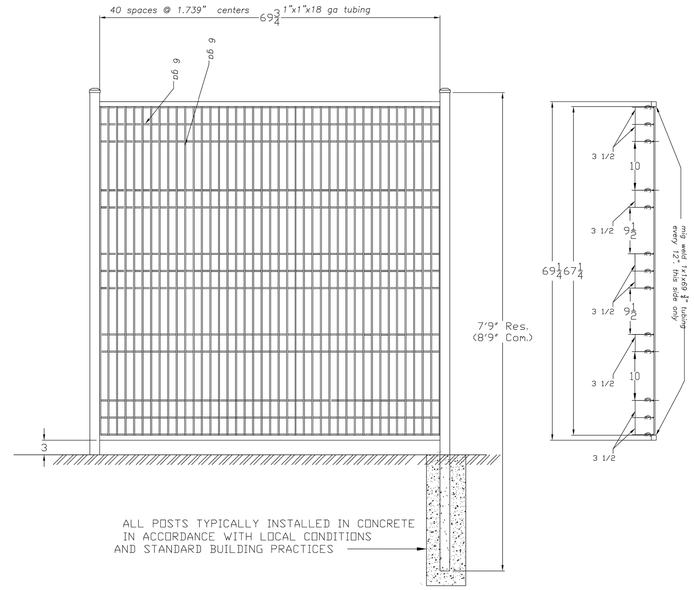
N.T.S.



GENERAL NOTES:
1. ALL MATERIALS ARE PREMIUM, #1 GRADE CEDAR
2. ALL POSTS ARE "DIRECT BURIAL" SET AT AN APPROXIMATE DEPTH OF 4'– CONCRETE IS NOTE RECOMMENDED FOR BACKFILL

6–FOOT SOLID BOARD W/THINK CAP STRIP– CEDAR PRIVACY FENCE

N.T.S.



ORNAMENTAL STEEL FENCE DETAIL

N.T.S.

NOTES:

1. WEIGHT (EMPTY): 50 LB MAX, NO CARTRIDGES

⚠ MATERIAL:
A) ADJUSTABLE FLANGE AND DEFLECTOR: ALUMINUM ALLOY 6063-T6
B) BASIN (PLASTIC): POLYPROPYLENE POLYETHYLENE COPOLYMER
C) CORNER FILL: ALUMINUM ALLOY: 5052-H32
D) SUPPORT HARDWARE: CRES 300 SERIES

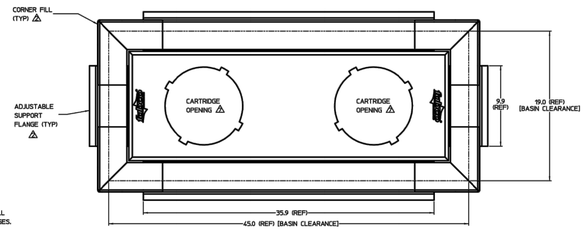
⚠ PERFORMANCE CHARACTERISTICS (TYP):
A) DEBRIS CAPACITY: 4.0 CU-FT
B) FILTERED FLOW RATE: STANDARD CARTRIDGE: 230 GPM (.51 CFS)
C) TOTAL BYPASS FLOW RATE: 2315 GPM (5.2 CFS)

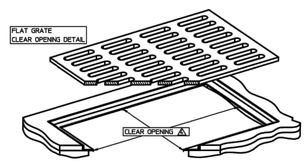
⚠ CLEAR OPENING RANGE (0.5 INCH INCREMENTS):
A) MINIMUM SIZE: 19.0 X 45.0
B) MAXIMUM SIZE: 24.0 X 50.0

⚠ RECOMENDED MINIMUM VAULT DEPTH 2-IN BELOW CARTRIDGE

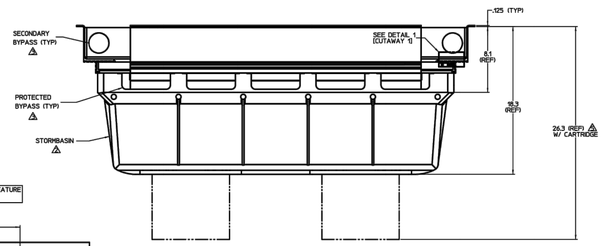
6. TYPICAL INSTALLATION: REMOVE STORM GRATE, MEASURE CATCH BASIN CLEAR OPENING AND ADJUST FLANGES TO REST ON GRATE SUPPORT LEDGE, PLACE STORMBASIN IN THE GRATE OPENING SO THE ADJUSTABLE FLANGES ARE RESTING ON THE GRATE SUPPORT LEDGE. INSTALL CORNER FILL PIECES AND REINSTALL STORM GRATE DIRECTLY ON STORMBASIN SUPPORT FLANGES.

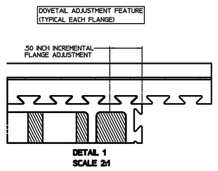
⚠ USE WITH FABCO REPLACEABLE MEDIA CARTRIDGES ONLY.





SCALE: 1/8
(STORMBASIN SHOWN WITHOUT CARTRIDGES INSTALLED)

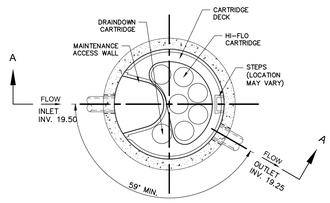




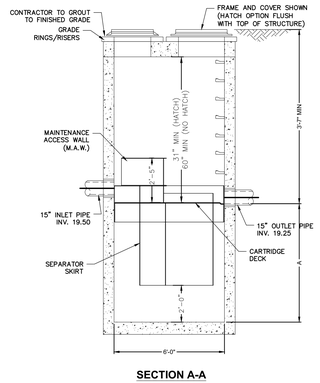
DETAIL 1
SCALE 2/1

FABCO STORMBASIN, TYPE C FLANGE

N.T.S.



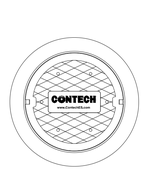
PLAN VIEW



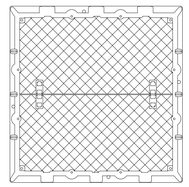
SECTION A-A

CONTECH JELLYFISH FILTER DETAIL

N.T.S.



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



HATCH
(48" x 48" CAST INTO SLAB)
N.T.S.

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS–20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' – 3', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C–478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB–BASE, BACKFILL DEPTH, AND/OR ANTI–FLOTATION PROVISIONS ARE SITE–SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON–SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION–RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740–3318.

LEVEL III SITE PLAN APPLICATION - NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

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DAVID A. SENUS 11791 PROFESSIONAL ENGINEER STATE OF MAINE 6/22/2018

REV	DESCRIPTION	DATE
1	RESPONSE TO COMMENTS SUBMISSION	4/25/2018
2	RESPONSE TO COMMENTS SUBMISSION	5/24/2018
3	RESPONSE TO COMMENTS SUBMISSION	6/22/2018

DESIGNED BY: CMS | DRAWN BY: BEM | CHECKED BY: C-205

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO.: 0231158.00
DATE: JUNE 22, 2018
SCALE: AS NOTED
SHEET: 17 OF 17

CIVIL DETAILS - 6

C-205

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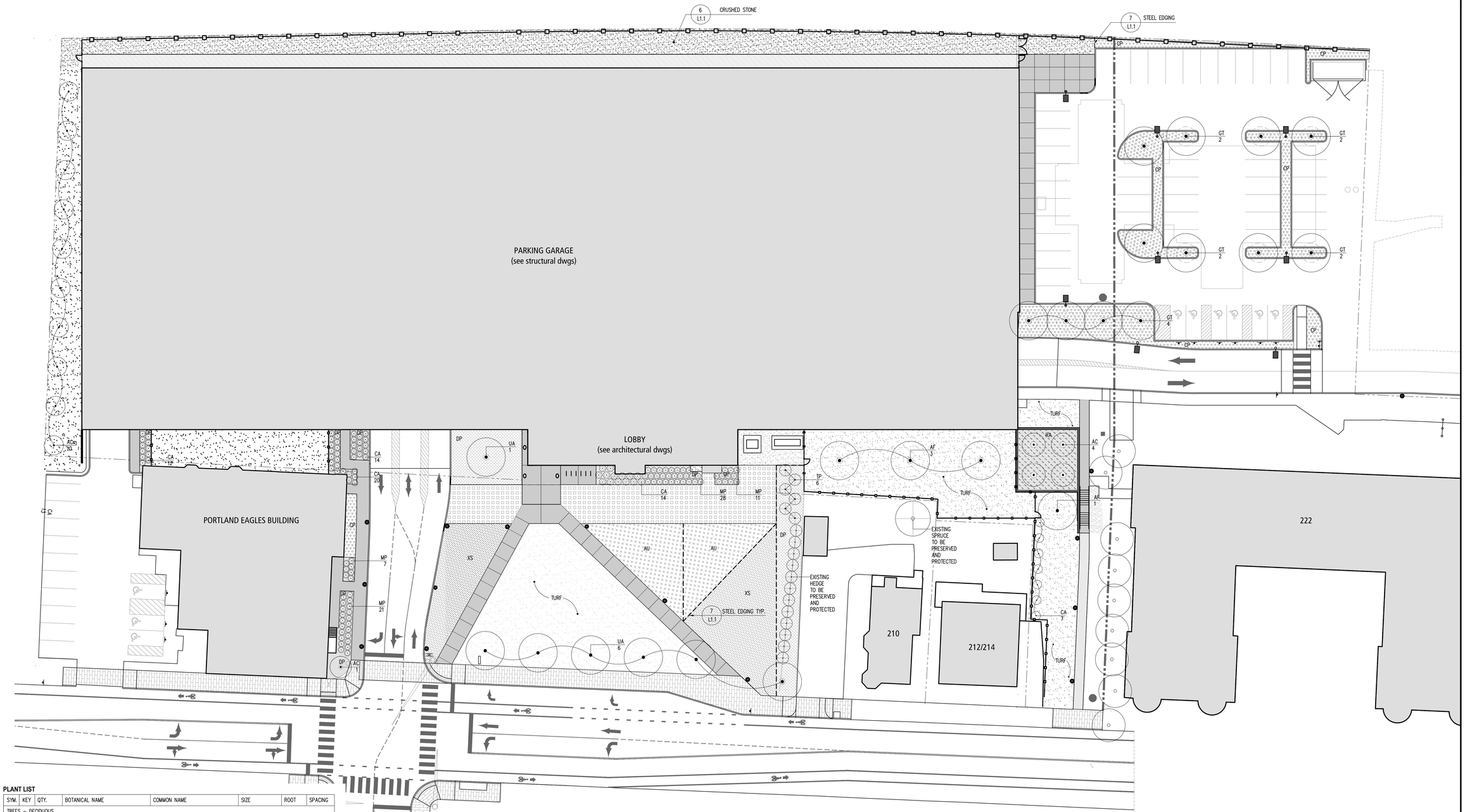

PLANT LIST

SYM.	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
TREES – DECIDUOUS							
	ACm	10	ACER CAMPESTRE	HEDGE MAPLE	2.5" CAL.	B+B	PER PLAN
	AC	5	AMELANCHIER CANADENSIS	SHAD	8–10' HT.	B+B	PER PLAN
	AF	4	ACER x 'FREEMANII' Jeffersred	FREEMAN MAPLE	4" CAL.	B+B	PER PLAN
	AR	2	ACER RUBRUM 'Karpick'	'Karpick' RED MAPLE	1.75–2" CAL.	B+B	PER PLAN
	GT	12	GLEDITSIA TRICANTHOS var. inermis	HONEY LOCUST	2" CAL.	B+B	PER PLAN
	UA	7	ULMUS AMERICANA 'Princeton'	PRINCETON ELM	5" CAL.	B+B	PER PLAN
TREES – EVERGREEN							
	TP	6	THUJA PLICATA x STANDISHII	THUJA 'Green Giant'	10–12' HT.	B+B	PER PLAN
SHRUBS							
	CA	59	CLETHRA ALNIFOLIA	SUMMERSWEET	#3	CONT.	PER PLAN
	MP	82	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	#3	CONT.	PER PLAN
GROUNDCOVERS							
	AU	684	ARCTOSTAPHYLOS UVA–URSI	BEARBERRY	#3	CONT.	24" O.C.
	CP	1094	COMPTONIA PEREGRINA	SWEETFERN	#3	CONT.	24" O.C.
	DP	3564	DENNSTAEDTIA PUNCTILOBA	HAY–SCENTED FERN	SOD	--	--
	RA	252	RHUS AROMATICA 'GRO–LOW'	FRAGRANT SUMAC	#3	CONT.	24" O.C.
	XS	1015	XANTHORHIZA SIMPLICISSIMA	YELLOWROOT	#1	CONT.	18" O.C.

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NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
08/23/2018

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mbla inc
michael boucher landscape architecture
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f 207.865.4555
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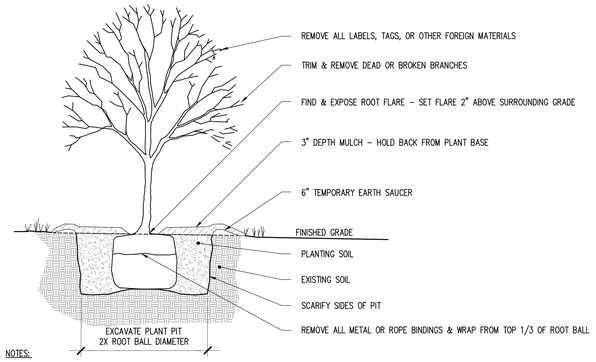
Rev. No	Date	Issued For
1	07/24/2018	RESPONSE TO COMMENTS SUBMISSION
2	08/23/2018	RESPONSE TO COMMENTS SUBMISSION
3	09/05/2018	RESPONSE TO COMMENTS SUBMISSION

222 ST. JOHN ST PG
PORTLAND ME

Designed GG	Scale 1" = 20'-0"
Drawn GG	Date 09.05.2018
Checked JP	Becker Job Number 4070

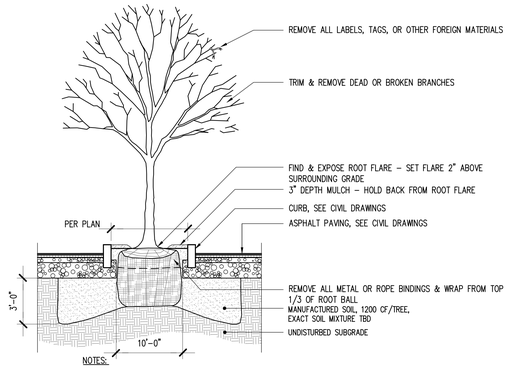
L1.0



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.

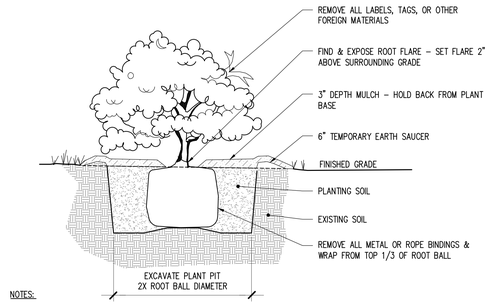
1 TREE PLANTING DETAIL
1/4"=1'-0"



NOTES:

1. TREE PITS TO INCLUDE ROOT IRRIGATION AND AERATION SYSTEM, TBD.
2. TREE TO BE SET PLUMB.
3. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
4. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

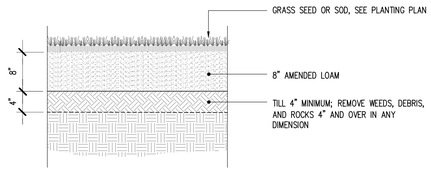
2 TREE PLANTING IN ASPHALT DETAIL
1/4"=1'-0"



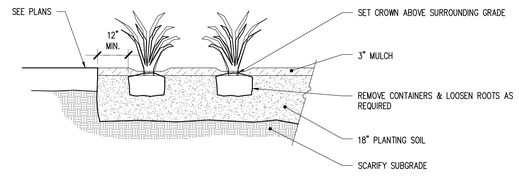
NOTES:

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.

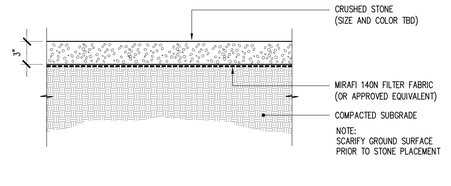
3 SHRUB PLANTING DETAIL
1/2"=1'-0"



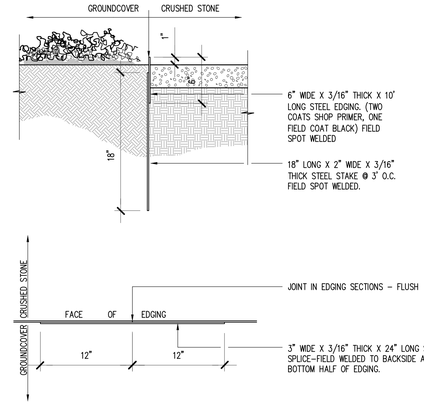
4 TURF PLANTING DETAIL
1"=1'-0"



5 GROUNDCOVER PLANTING DETAIL
1/2"=1'-0"

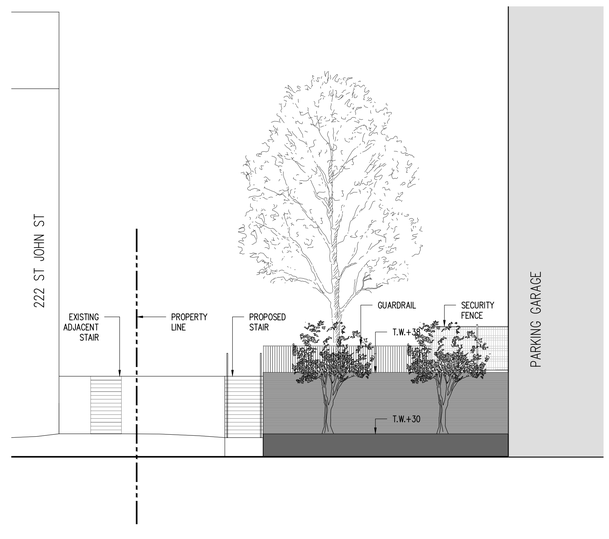


6 CRUSHED STONE PAVING DETAIL
1-1/2"=1'-0"



7 STEEL EDGE DETAIL
1-1/2"=1'-0"

8 E/W SECTION AT STAIR
1/8" = 1'-0"



9 N/S SECTION AT STAIR
1/8" = 1'-0"

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NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
06/22/2018

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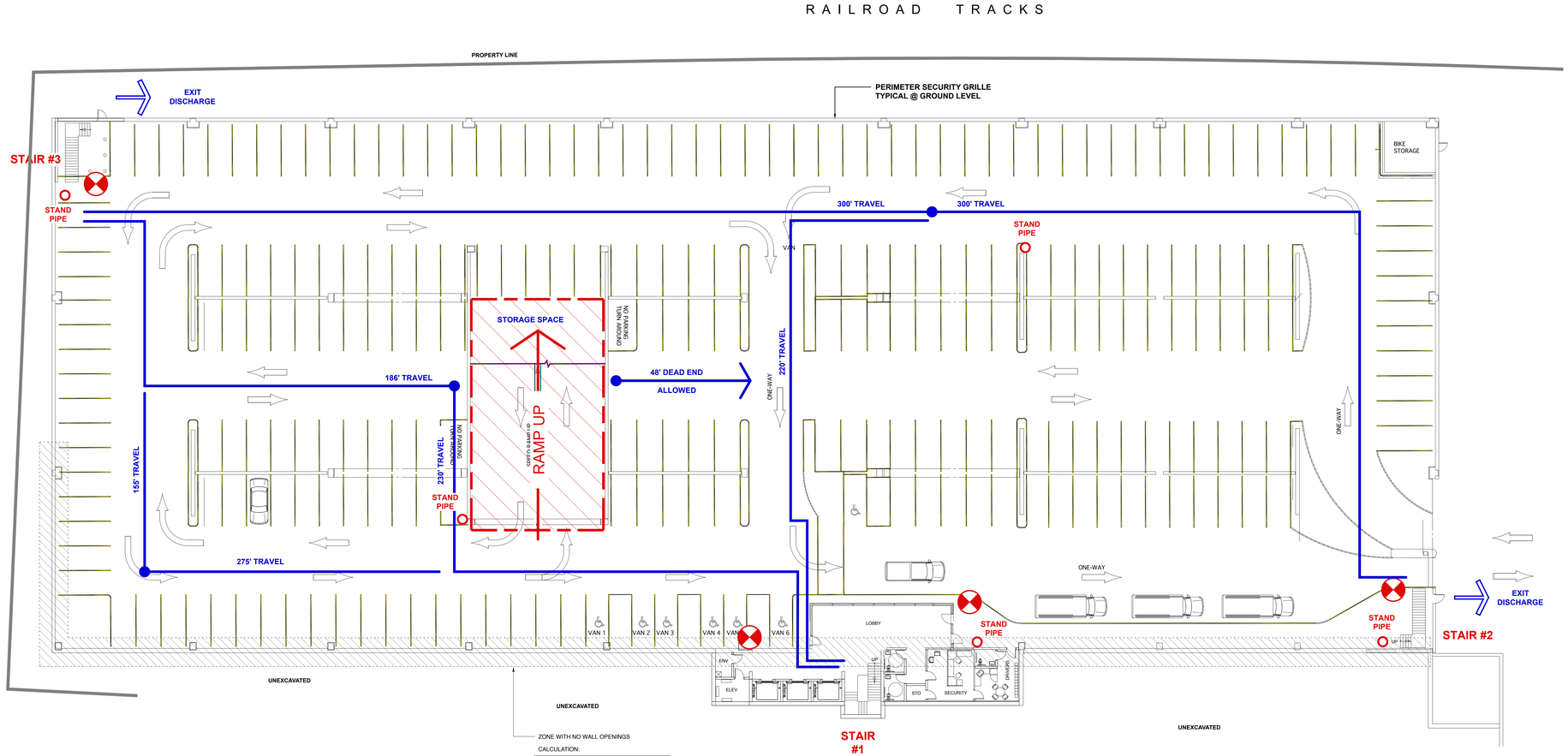
Rev. No	Date	Issued For
		Appvd

222 ST. JOHN ST PG
PORTLAND, ME

LEVEL III SITE PLAN SUBMITTAL

Designed GG	Scale 1" = 20'-0"
Drawn GG	Date 04.10.2018
Checked JP	Becker Job. Number 4070

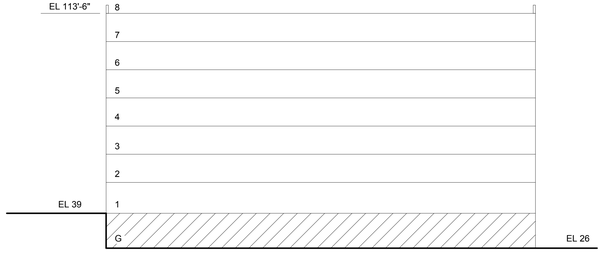
L2.0



ZONE WITH NO WALL OPENINGS

CALCULATION:

PERIMETER :	1,325 LF
NO OPENINGS ZONE:	577 LF
NO OPENINGS ZONE PERCENTAGE	43.6%
OPENINGS DISTRIBUTED OVER	56.4%



PARKING GARAGE SECTION DIAGRAM

GROUND FLOOR CODE INFORMATION PLAN

1" = 20' - 0"

BUILDING CODE SUMMARY

St. John Street Parking Garage
Building Address: Portland, ME

APPLICABLE CODES (Per MUBEC: Maine Uniform Building and Energy Code)

Building	IBC 2015 (International Building Code)
	IEBC 2009 (International Existing Building Code)
Electrical	National Electrical Code 2009
Fire Protection	NFPA Life Safety Code 2009 and NFPA 1 Uniform Fire Code 2003
Mechanical	International Mechanical Code 2009 (ASHRAE 62.1 2007 and 90.1 2007)
Plumbing	Maine State Internal Plumbing Code (UPC 2000)
Energy	IECC 2009 (International Energy Conservation Code)
Accessibility	ADA 2010 (Americans With Disabilities Act)

PROJECT DESCRIPTION:

New Construction - Open Parking Garage	Meets IBC 406.5 and NFPA 101: 3.3.254.6
Proposed Construction Type :	Type I B / NFPA II (222)
Gross Area Per Tier:	90,800 +/-
Height :	8 Tiers / 96'-3" (Top of Speed Ramp Roof Double Tees)
Use Group IBC :	Open Parking Garage Section 406
Use Group NFPA :	Open Parking Garage Chapter 42.8
High Rise Requirements	Exemptions for Parking Garages
	IBC 403.1
	NFPA 101 42.8.4
Automatic Suppression System	No
Dry Standpipe System	Yes

BUILDING CODE REQUIREMENTS (IBC 2015)

Height and Area Summary (Table 406.5.4)

Allowable Height :	12 Tiers
Allowable Area	Unlimited

REQUIRED FIRE RESISTANCE RATINGS

ELEMENT (IBC Table 601/NFPA 101 Table A8.2.1.2)	RATING (In Hours)
Primary Structural Frame	2
Bearing Walls:	
Exterior	2
Interior	2
Non-Bearing Walls & Partitions	
Exterior	0
Interior	0
Floor Construction & Secondary Members	2
Roof Construction & Secondary Members	2

SPECIFIC ROOM RATINGS	RATING (In Hours)
Stairs and Floor Openings	0
Parking Open Ramps	0
Offices + Break Room	0
Electrical	0
Mechanical Room	1
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 / 454 Per Tier
Egress Width Required : Stairs @ 0.3" Per Person	137"
Egress Width Provided :	144" / (3) 48" Wide Stairs / 152 Persons Each
Stair Exit Door Width Required:	30.4"
Stair Exit Door Width Provided:	32" Clear Door @ Each Stair

OPENNESS CALCULATIONS:

GROUND FLOOR SUMMARY IBC

IBC 2015 SECTION 406.5

GROUND FLOOR WALL AREA:	13,536 SF
GROUND FLOOR NET OPEN AREA:	5,010 SF
OPENNESS RATIO [20% REQD]	37%

OPENINGS DISTRIBUTED AROUND 56% OF THE PERIMETER [40% REQD]

GROUND FLOOR SUMMARY NFPA

NFPA 101 3.3.254.6

GROUND FLOOR PERIMETER:	1,332 LF
GROUND FLOOR NET OPEN AREA:	5,010 SF
OPEN AREA PER LF [1.4 SF REQD]	3.7 SF/LF

OPENINGS DISTRIBUTED AROUND 56% OF THE PERIMETER [40% REQD]

BAR SCALE
1" = 16'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
6 / 22 / 18

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WSA
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Rev No	Date	Issued For
1	7/ 24 / 18	RESPONSE TO COMMENTS SUBMISSION

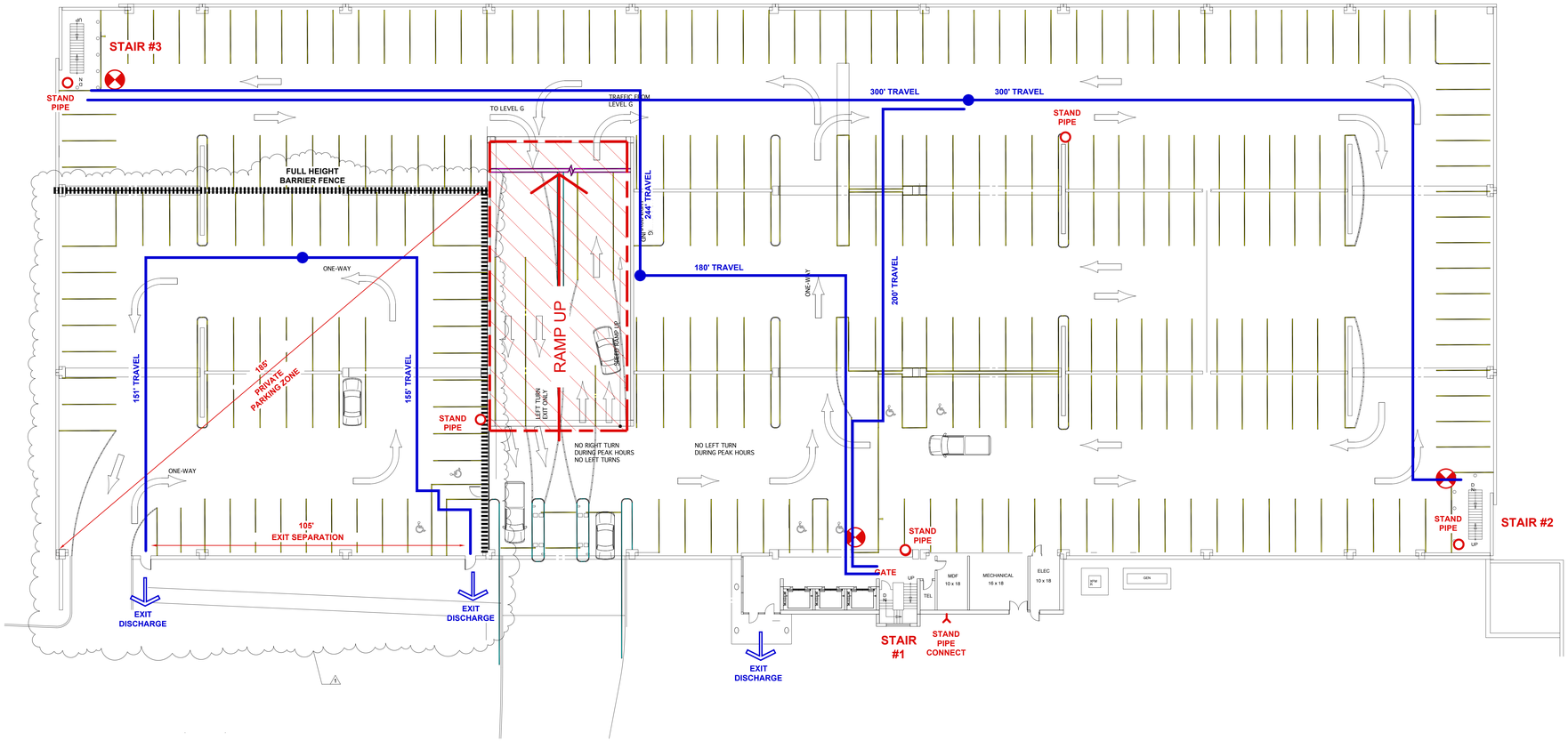
Appvd

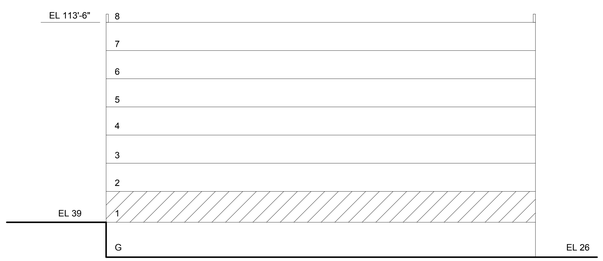
MMC ST. JOHN ST PG
PORTLAND, ME

CODE INFORMATION PLANS

Designed	Scale
MMW	AS NOTED
Drawn	Date
MMW	6/22/18
Checked	Becker Job Number
MMW	4070.1

G 101





PARKING GARAGE SECTION DIAGRAM

FIRST FLOOR CODE INFORMATION PLAN

1" = 20' - 0"

BUILDING CODE SUMMARY

St. John Street Parking Garage
Building Address: Portland, ME

APPLICABLE CODES (Per MUBEC: Maine Uniform Building and Energy Code)

Building	IBC 2015 (International Building Code)
	IEBC 2009 (International Existing Building Code)
Electrical	National Electrical Code 2009
Fire Protection	NFPA Life Safety Code 2009 and NFPA 1 Uniform Fire Code 2003
Mechanical	International Mechanical Code 2009 (ASHRAE 62.1 2007 and 90.1 2007)
Plumbing	Maine State Internal Plumbing Code (UPC 2000)
Energy	IECC 2009 (International Energy Conservation Code)
Accessibility	ADA 2010 (Americans With Disabilities Act)

PROJECT DESCRIPTION:

New Construction - Open Parking Garage	Meets IBC 406.5 and NFPA 101: 3.3.254.6
Proposed Construction Type :	Type I B / NFPA II (222)
Gross Area Per Tier:	90,800 +/-
Height :	8 Tiers / 96'-3" (Top of Speed Ramp Roof Double Tees)
Use Group IBC :	Open Parking Garage Section 406
Use Group NFPA :	Open Parking Garage Chapter 42.8
High Rise Requirements	Exemptions for Parking Garages IBC 403.1 NFPA 101 42.8.4
Automatic Suppression System	No
Dry Standpipe System	Yes

BUILDING CODE REQUIREMENTS (IBC 2015)

Height and Area Summary (Table 406.5.4)

Allowable Height :	12 Tiers
Allowable Area	Unlimited

REQUIRED FIRE RESISTANCE RATINGS

ELEMENT (IBC Table 601/NFPA 101 Table A8.2.1.2)	RATING (In Hours)
Primary Structural Frame	**2**
Bearing Walls:	
Exterior	**2**
Interior	**2**
Non-Bearing Walls & Partitions	
Exterior	**0**
Interior	**0**
Floor Construction & Secondary Members	**2**
Roof Construction & Secondary Members	**2**
SPECIFIC ROOM RATINGS	RATING (In Hours)
Stairs and Floor Openings	**0**
Parking Open Ramps	**0**
Offices + Break Room	**0**
Electrical	**0**
Mechanical Room	**1**
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 / 454 Per Tier
Egress Width Required : Stairs @ 0.3" Per Person	137"
Egress Width Provided :	144" / (3) 48" Wide Stairs / 152 Persons Each
Stair Exit Door Width Required:	30.4"
Stair Exit Door Width Provided:	32" Clear Door @ Each Stair

OPENNESS CALCULATIONS:

FIRST FLOOR SUMMARY IBC

IBC 2015 SECTION 406.5

GROUND FLOOR WALL AREA:	13,536 SF
GROUND FLOOR NET OPEN AREA:	7,014 SF
OPENNESS RATIO [20% REQD]	51%

OPENINGS DISTRIBUTED AROUND 92% OF THE PERIMETER [40% REQD]

FIRST FLOOR SUMMARY NFPA

NFPA 101 3.3.254.6

GROUND FLOOR PERIMETER:	1,332 LF
GROUND FLOOR NET OPEN AREA:	7,014 SF
OPEN AREA PER LF [1.4 SF REQD]	5.2 SF/LF

OPENINGS DISTRIBUTED AROUND 92% OF THE PERIMETER [40% REQD]

BAR SCALE
1" = 16'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
6 / 22 / 18

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MMC ST. JOHN ST PG
PORTLAND, ME

CODE INFORMATION PLANS

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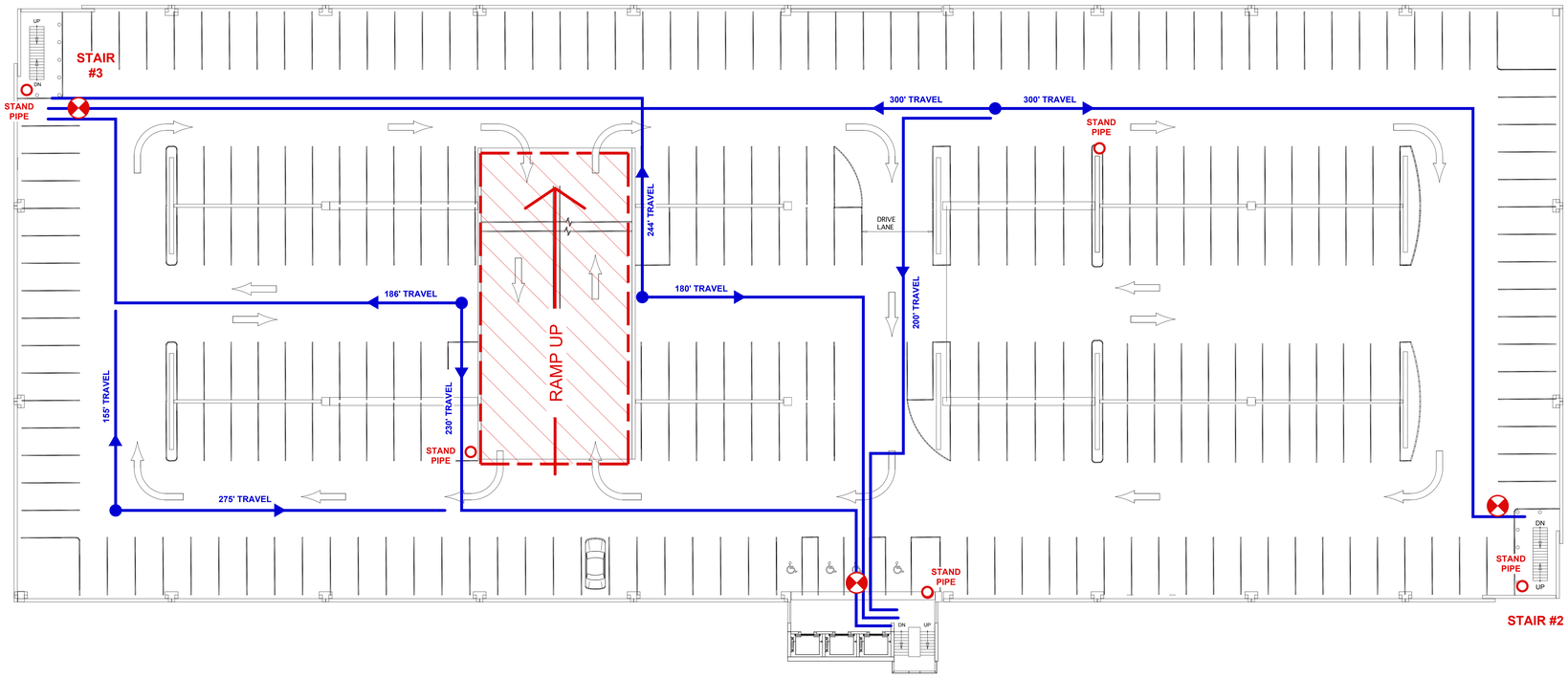
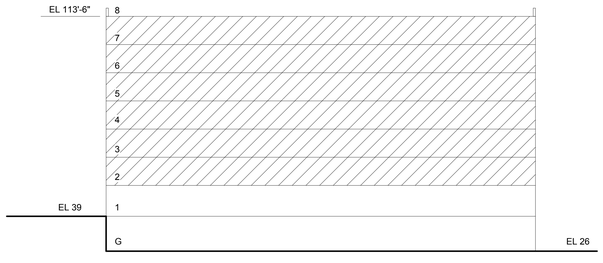
MMW	AS NOTED
Drawn	Date
MMW	6/22/18
Checked	Becker Job Number
MMW	4070.1

G 102





PARKING GARAGE SECTION DIAGRAM

SECOND FLOOR CODE INFORMATION PLAN

1" = 20' - 0" LEVELS 3 - 8 SIMILAR

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BUILDING CODE SUMMARY

St. John Street Parking Garage
Building Address: Portland, ME

APPLICABLE CODES (Per MUBEC: Maine Uniform Building and Energy Code)

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Fire Protection	NFPA Life Safety Code 2009 and NFPA 1 Uniform Fire Code 2003
Mechanical	International Mechanical Code 2009 (ASHRAE 62.1 2007 and 90.1 2007)
Plumbing	Maine State Internal Plumbing Code (UPC 2000)
Energy	IECC 2009 (International Energy Conservation Code)
Accessibility	ADA 2010 (Americans With Disabilities Act)

PROJECT DESCRIPTION:

New Construction - Open Parking Garage	Meets IBC 406.5 and NFPA 101: 3.3.254.6
Proposed Construction Type :	Type I B / NFPA II (222)
Gross Area Per Tier:	90,800 +/-
Height :	8 Tiers / 96'-3" (Top of Speed Ramp Roof Double Tees)
Use Group IBC :	Open Parking Garage Section 406
Use Group NFPA :	Open Parking Garage Chapter 42.8
High Rise Requirements	Exemptions for Parking Garages
	IBC 403.1
	NFPA 101 42.8.4
Automatic Suppression System	No
Dry Standpipe System	Yes

BUILDING CODE REQUIREMENTS (IBC 2015)

Height and Area Summary (Table 406.5.4)

Allowable Height :	12 Tiers
Allowable Area	Unlimited

REQUIRED FIRE RESISTANCE RATINGS

ELEMENT (IBC Table 601/NFPA 101 Table A8.2.1.2)	RATING (In Hours)
Primary Structural Frame	**2**
Bearing Walls:	
Exterior	**2**
Interior	**2**
Non-Bearing Walls & Partitions	
Exterior	**0**
Interior	**0**
Floor Construction & Secondary Members	**2**
Roof Construction & Secondary Members	**2**

SPECIFIC ROOM RATINGS	RATING (In Hours)
Stairs and Floor Openings	**0**
Parking Open Ramps	**0**
Offices + Break Room	**0**
Electrical	**0**
Mechanical Room	**1**
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 / 454 Per Tier
Egress Width Required : Stairs @ 0.3" Per Person	137"
Egress Width Provided :	144" / (3) 48" Wide Stairs / 152 Persons Each
Stair Exit Door Width Required:	30.4"
Stair Exit Door Width Provided:	32" Clear Door @ Each Stair

OPENNESS CALCULATIONS:

SECOND FLOOR SUMMARY IBC

IBC 2015 SECTION 406.5

SECOND FLOOR WALL AREA:	12,538 SF
SECOND FLOOR NET OPEN AREA:	6,582 SF
OPENNESS RATIO [20% REQD]	52%

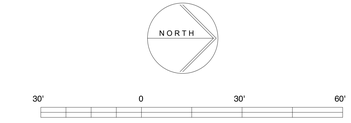
OPENINGS DISTRIBUTED AROUND 96% OF THE PERIMETER [40% REQD]

SECOND FLOOR SUMMARY NFPA

NFPA 101 3.3.254.6

SECOND FLOOR PERIMETER:	1,332 LF
SECOND FLOOR NET OPEN AREA:	6,582 SF
OPEN AREA PER LF [1.4 SF REQD]	4.9 SF/LF

OPENINGS DISTRIBUTED AROUND 96% OF THE PERIMETER [40% REQD]



BAR SCALE
1" = 16'
CHECK GRAPHIC SCALE BEFORE USING

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LEVEL III SITE PLAN APPLICATION
6 / 22 / 18

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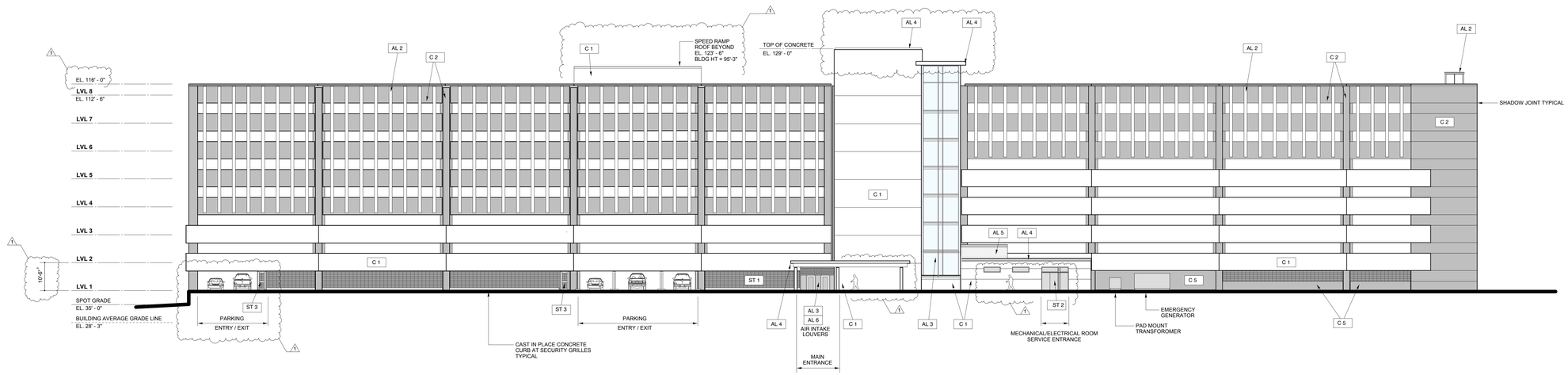
MMC ST. JOHN ST PG
PORTLAND, ME
CODE INFORMATION PLANS

Designed MMW	Scale AS NOTED
Drawn MMW	Date 6/22/18
Checked MMW	Becker Job Number 4070.1

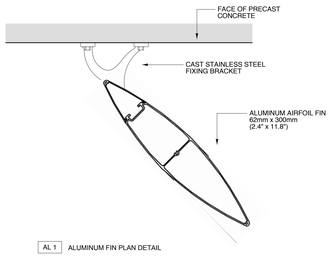
G 103



EAST ELEVATION

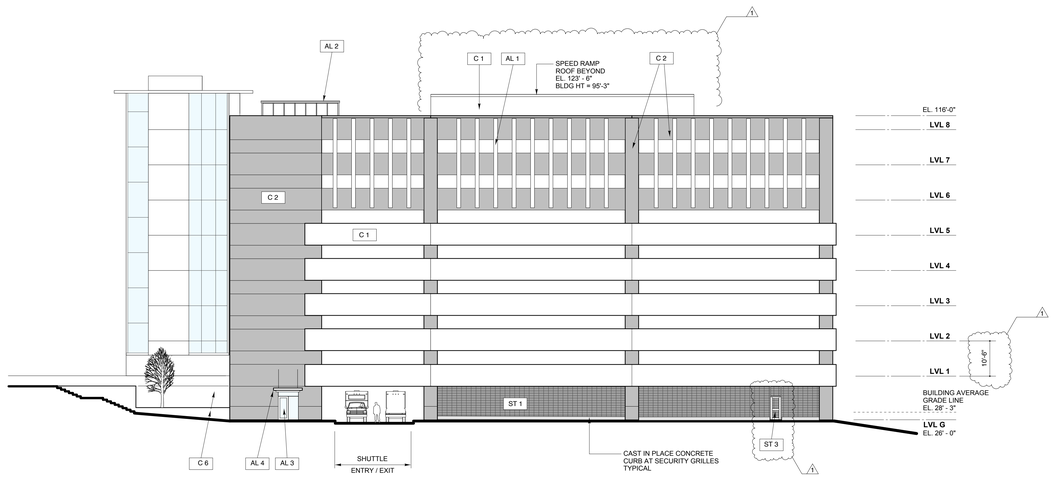
1/16" = 1' - 0"

0' 4' 8' 16' 32'



AL 1 ALUMINUM FIN PLAN DETAIL

ST 1 SECURITY GRILLE DETAIL



NORTH ELEVATION

1/16" = 1' - 0"

0' 4' 8' 16' 32'

EXTERIOR MATERIALS LEGEND

AL 1	ALUMINUM LIGHT-CONTROL FIN ASSEMBLY
AL 2	ALUMINUM STOREFRONT FRAMED STAIR PENTHOUSE ENCLOSURE
AL 3	CURTAINWALL : CLEAR GLASS / CLEAR ANODIZED ALUMINUM FRAMING
AL 4	ALUMINUM ROOF EDGE TRIM
AL 5	ALUMINUM SIDING EQUIPMENT SCREEN
AL 6	ALUMINUM LOUVER
C 1	PRECAST CONCRETE : WHITE WITH LIGHT SANDBLAST
C 2	PRECAST CONCRETE : CHARCOAL GRAY WITH LIGHT SANDBLAST
C 3	PRECAST CONCRETE PROJECTING CORNICE
C 4	PRECAST CONCRETE COLUMNS : WHITE WITH LIGHT SANDBLAST
C 5	PRECAST CONCRETE SMOOTH WALL PANEL
C 6	CAST IN PLACE CONCRETE FOUNDATION / RETAINING WALL
ST 1	SECURITY ENCLOSURE GRILLE : PREFINISHED STEEL BAR GRATING
ST 2	PAINTED FLUSH HOLLOW METAL DOORS
ST 3	PAINTED WELDED TUBE STEEL STILE AND RAIL DOOR AND FRAME

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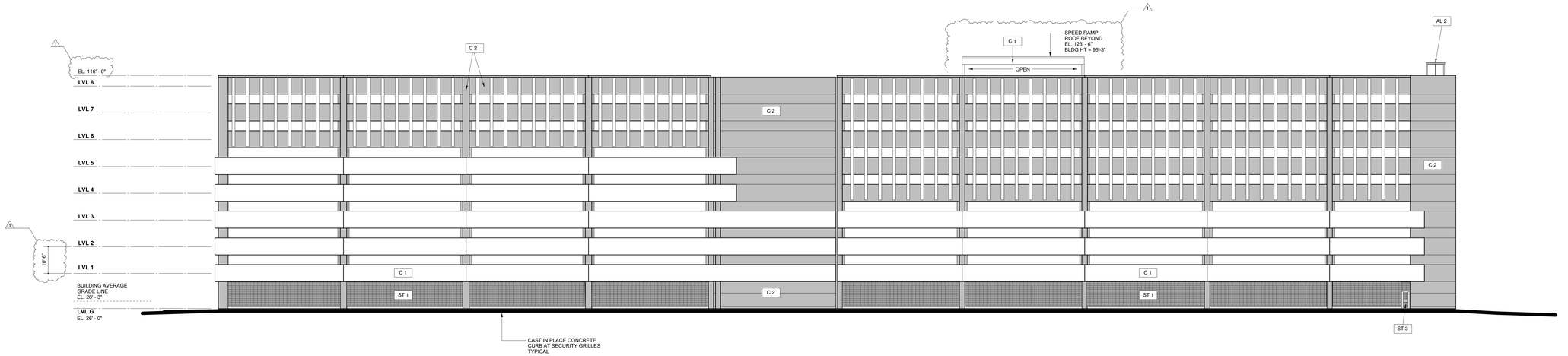
MMC ST. JOHN ST PG
PORTLAND, ME

BUILDING ELEVATIONS

Designed	Scale
MMW	AS NOTED
Drawn	Date
MMW	4/10/18
Checked	Becker Job Number
MMW	4070.1

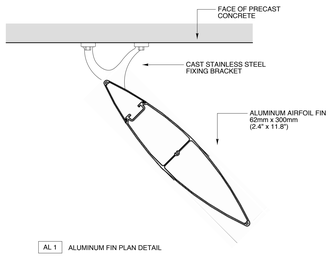
A 101



WEST ELEVATION

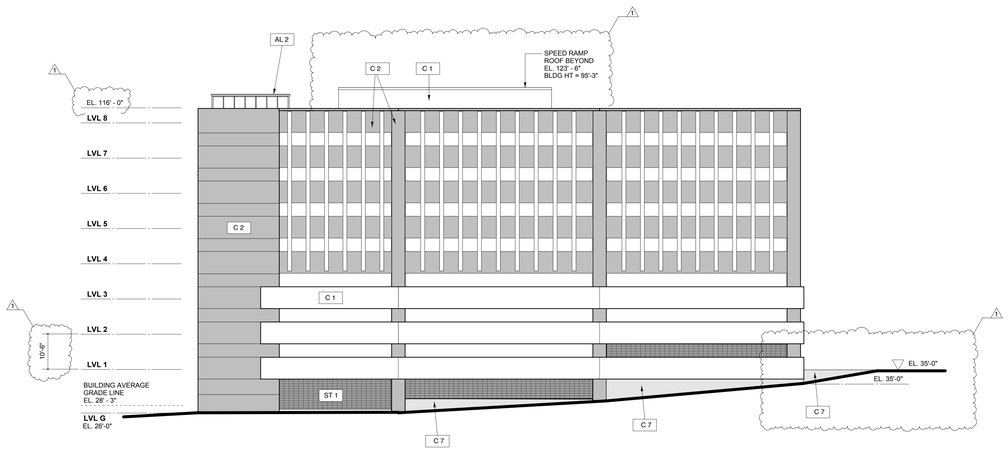
1/16" = 1' - 0"

0' 4' 8' 16' 32'



AL 1 ALUMINUM FIN PLAN DETAIL

ST 1 SECURITY GRILLE DETAIL



SOUTH ELEVATION

1/16" = 1' - 0"

0' 4' 8' 16' 32'

EXTERIOR MATERIALS LEGEND

AL 1	ALUMINUM LIGHT-CONTROL FIN ASSEMBLY
AL 2	ALUMINUM STOREFRONT FRAMED STAIR PENTHOUSE ENCLOSURE
AL 3	CURTAINWALL : CLEAR GLASS / CLEAR ANODIZED ALUMINUM FRAMING
AL 4	ALUMINUM ROOF EDGE TRIM
AL 5	ALUMINUM SIDING EQUIPMENT SCREEN
AL 6	ALUMINUM LOUVER
C 1	PRECAST CONCRETE : WHITE WITH LIGHT SANDBLAST
C 2	PRECAST CONCRETE : CHARCOAL GRAY WITH LIGHT SANDBLAST
C 3	PRECAST CONCRETE PROJECTING CORNICE
C 4	PRECAST CONCRETE COLUMNS : WHITE WITH LIGHT SANDBLAST
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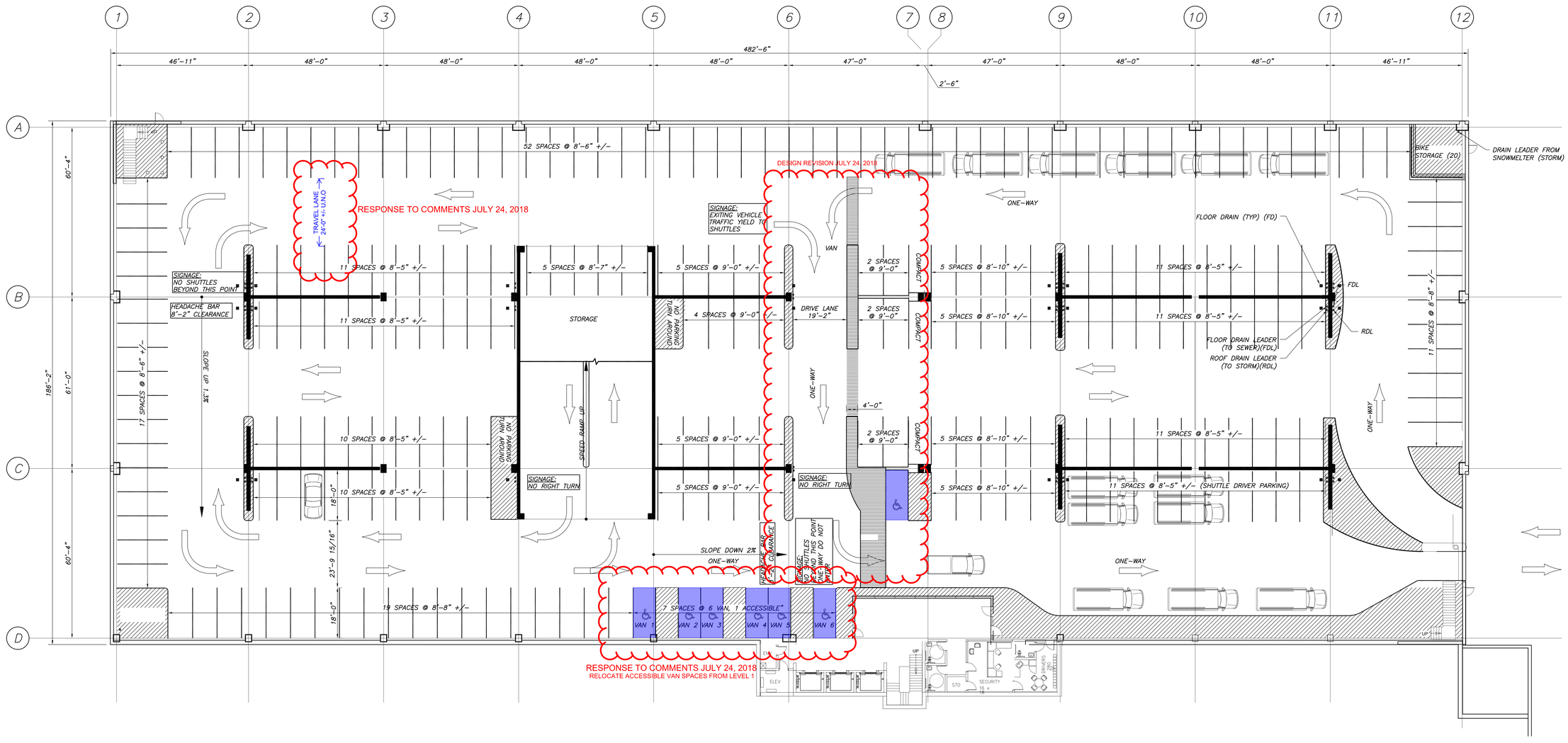
MMC ST. JOHN ST PG
PORTLAND, ME

BUILDING ELEVATIONS

Designed MMW	Scale AS NOTED
Drawn MMW	Date 4/10/18
Checked MMW	Becker Job Number 4070.1

A 102



RESPONSE TO COMMENTS JULY 24, 2018
RELOCATE ACCESSIBLE VAN SPACES FROM LEVEL 1

RESPONSE TO COMMENTS JULY 24, 2018

GRADE LEVEL
1/16"=1'-0"

SIZE	QTY
HC	1
HC VAN	6
COMPACT	3
REGULAR	235
TOTAL	245

GARAGE PARKING COUNT

SIZE	QTY
HC	42
HC VAN	6
COMPACT	52
REGULAR	2,289
TOTAL	2,389

NOTE:
PARKING COUNTS ARE PRELIMINARY

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LEVEL III SITE PLAN APPLICATION
6/22/18

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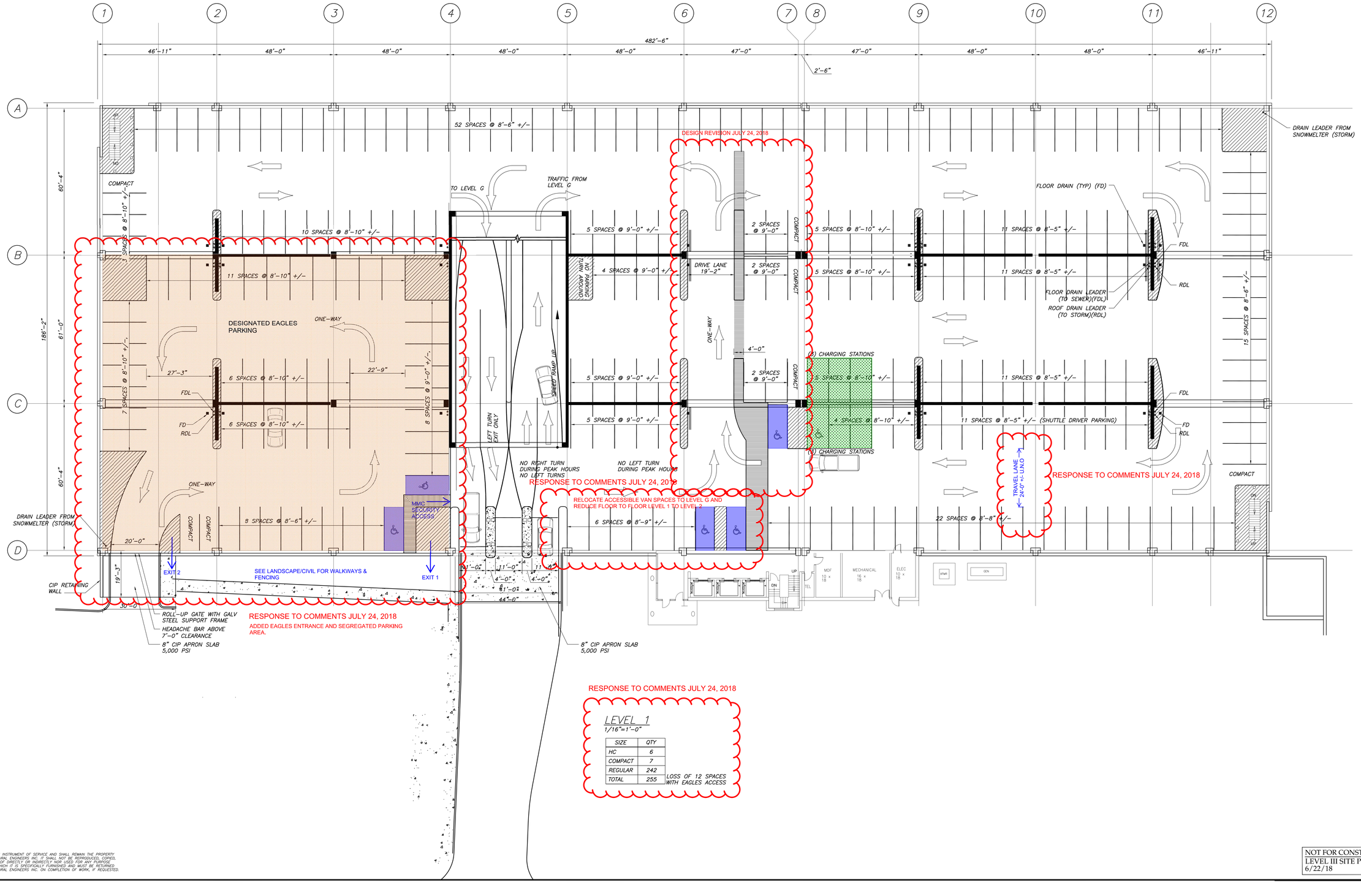
Date
Rev No

MMC ST. JOHN ST PG
PORTLAND, ME

GRADE LEVEL PARKING LAYOUT

Designed: TMN	Scale: AS NOTED
Drawn: CHF	Date: 2/23/18
Checked: TMN	Becker Job Number: 4070

PS1



RESPONSE TO COMMENTS JULY 24, 2018

LEVEL 1

1/16"=1'-0"

SIZE	QTY
HC	6
COMPACT	7
REGULAR	242
TOTAL	255

LOSS OF 12 SPACES WITH EAGLES ACCESS

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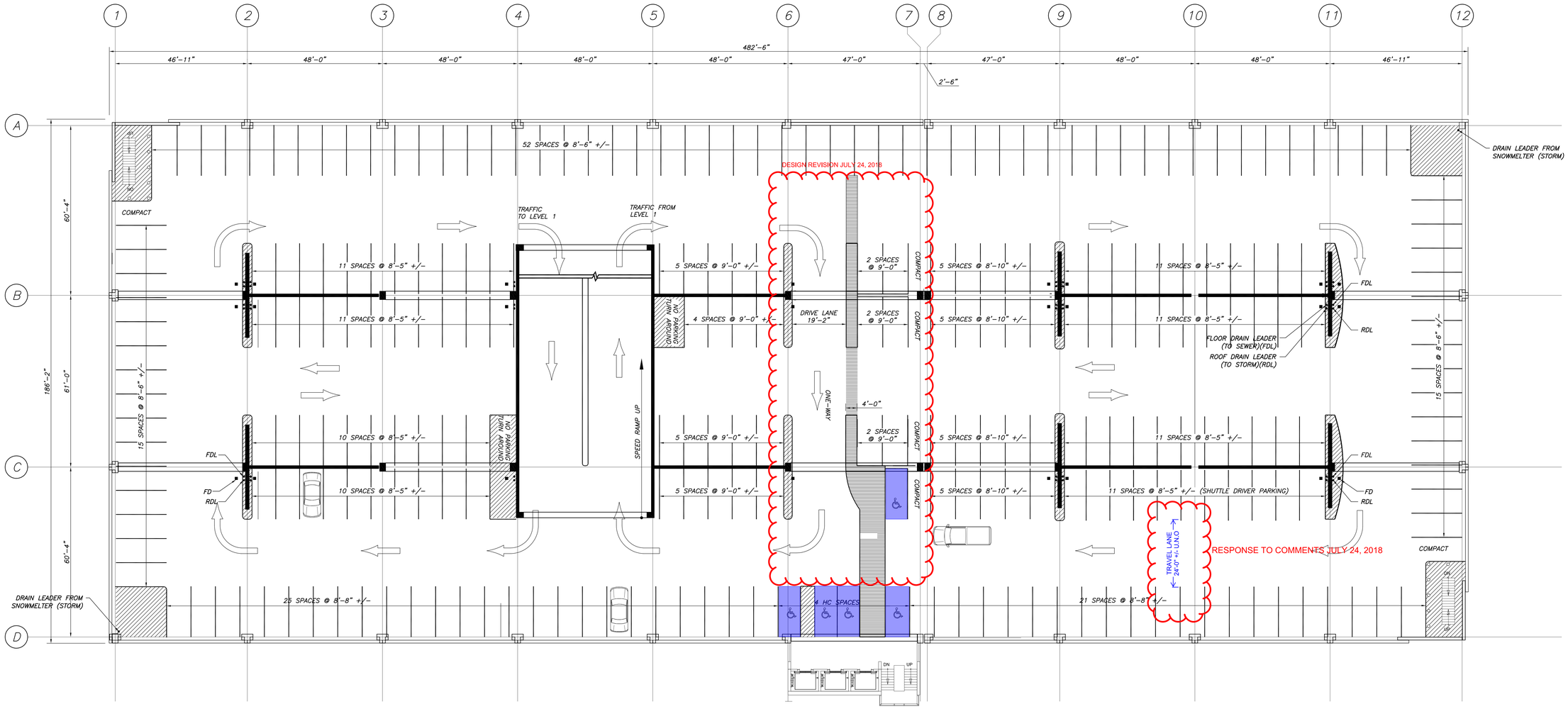
LEVEL 1 PARKING LAYOUT

Designed	Scale
TMN	AS NOTED
Drawn	Date
CHF	2/23/18
Checked	Becker Job Number
TMN	4070

PS2



RESPONSE TO COMMENTS JULY 24, 2018

LEVELS 2,4&6

1/16"=1'-0"

SIZE	QTY	
HC	~~4~~	5
COMPACT	~~2~~	6
REGULAR	~~254~~	259
TOTAL	270	

NOTE:
PARKING COUNTS ARE PRELIMINARY

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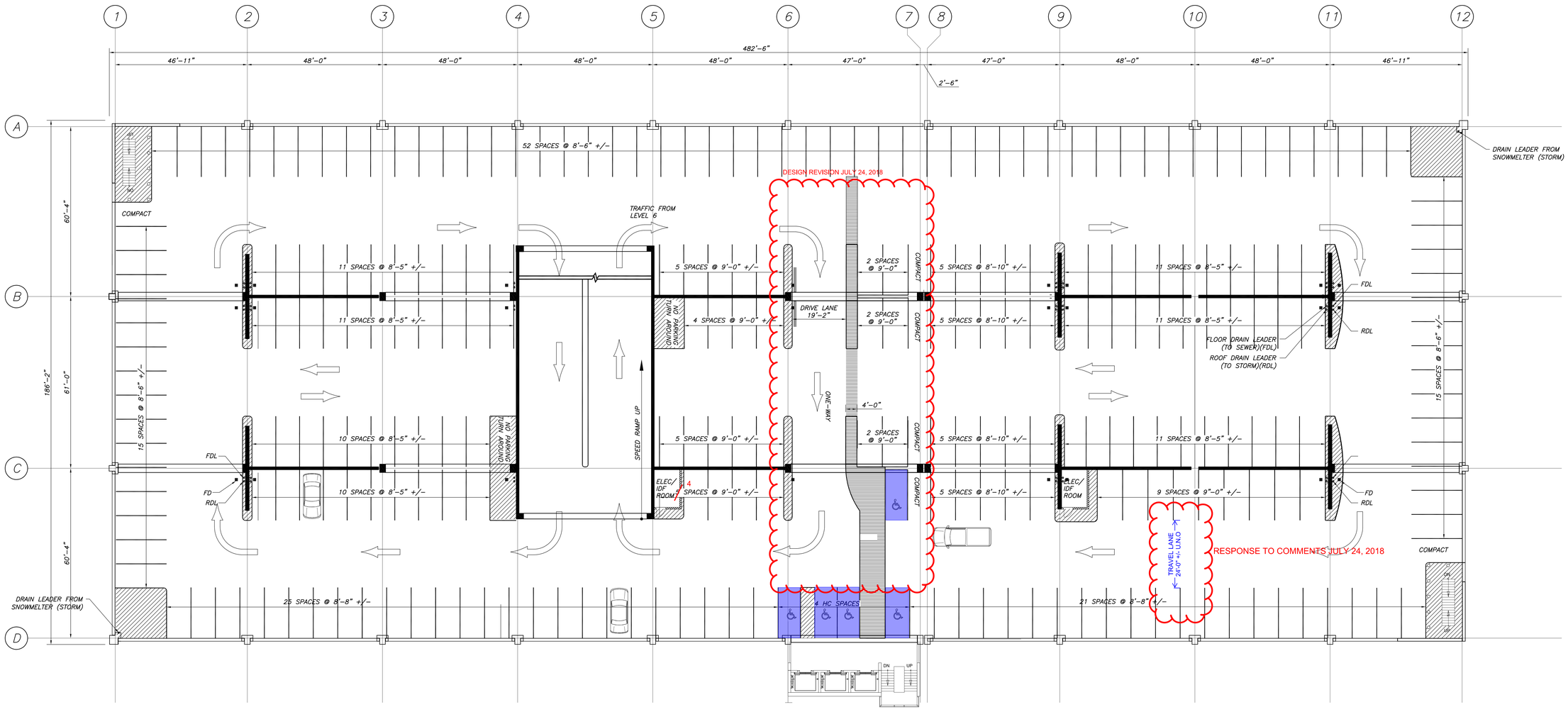
LEVELS 2,4&6 PARKING LAYOUT

Designed	Scale
TMN	AS NOTED
Drawn	Date
CHF	2/23/18
Checked	Becker Job Number
TMN	4070

PS3



RESPONSE TO COMMENTS JULY 24, 2018

LEVELS 3,5

1/16"=1'-0"

SIZE	QTY	
HC	~~4~~	5
COMPACT	~~2~~	6
REGULAR	~~261~~	256
TOTAL	267	

NOTE:
PARKING COUNTS ARE PRELIMINARY

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LEVEL III SITE PLAN APPLICATION
6/22/18

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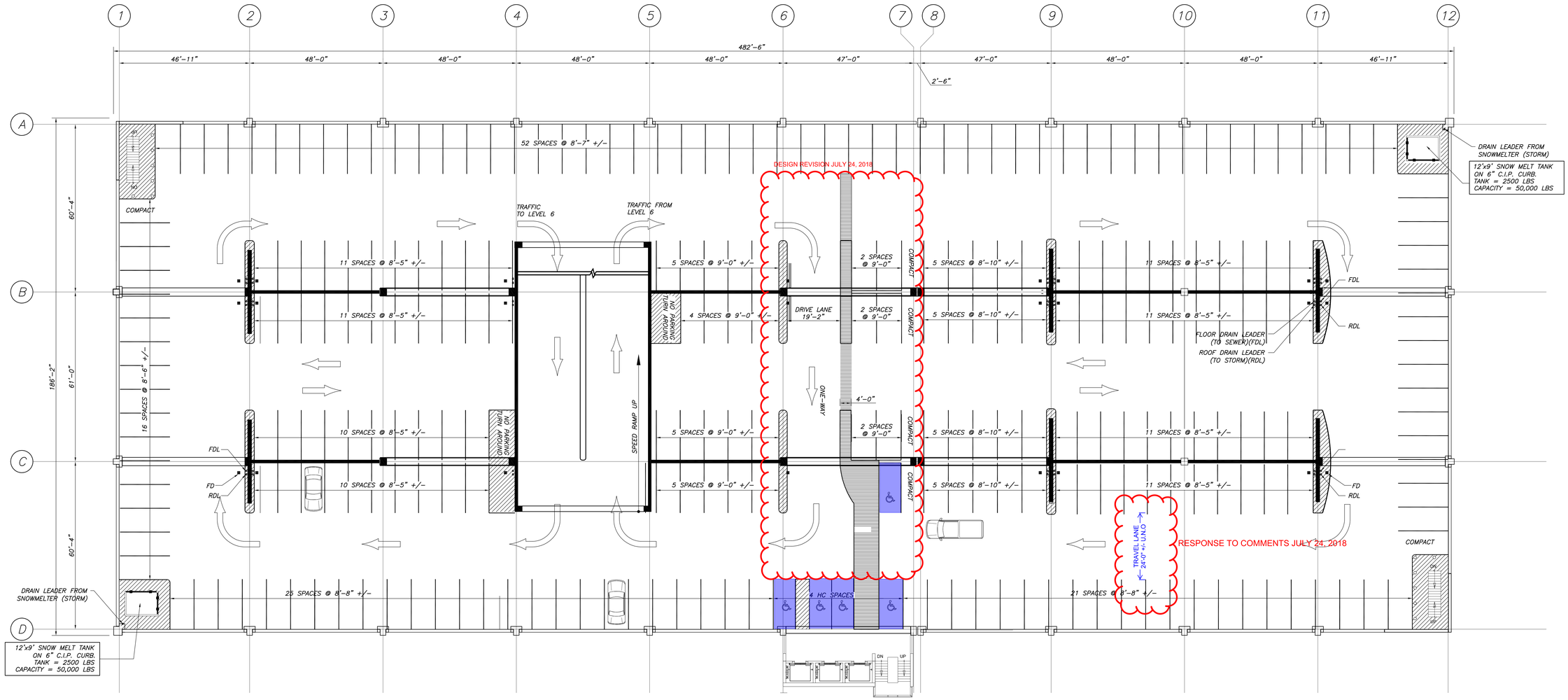
Date
Rev No

MMC ST. JOHN ST PG
PORTLAND, ME

LEVELS 3&5 PARKING LAYOUT

Designed	Scale
TMN	AS NOTED
Drawn	Date
CHF	2/23/18
Checked	Becker Job Number
TMN	4070

PS4



RESPONSE TO COMMENTS JULY 24, 2018

LEVEL 7
1/16"=1'-0"

SIZE	QTY	
HC	~~1~~	5
COMPACT	~~2~~	6
REGULAR	~~264~~	259
TOTAL	270	

NOTE:
PARKING COUNTS ARE PRELIMINARY

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NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
6/22/18

BECKER
STRUCTURAL ENGINEERS
75 York Street, Portland, Maine 04101
207.879.1838 ✉ beckerstructural.com

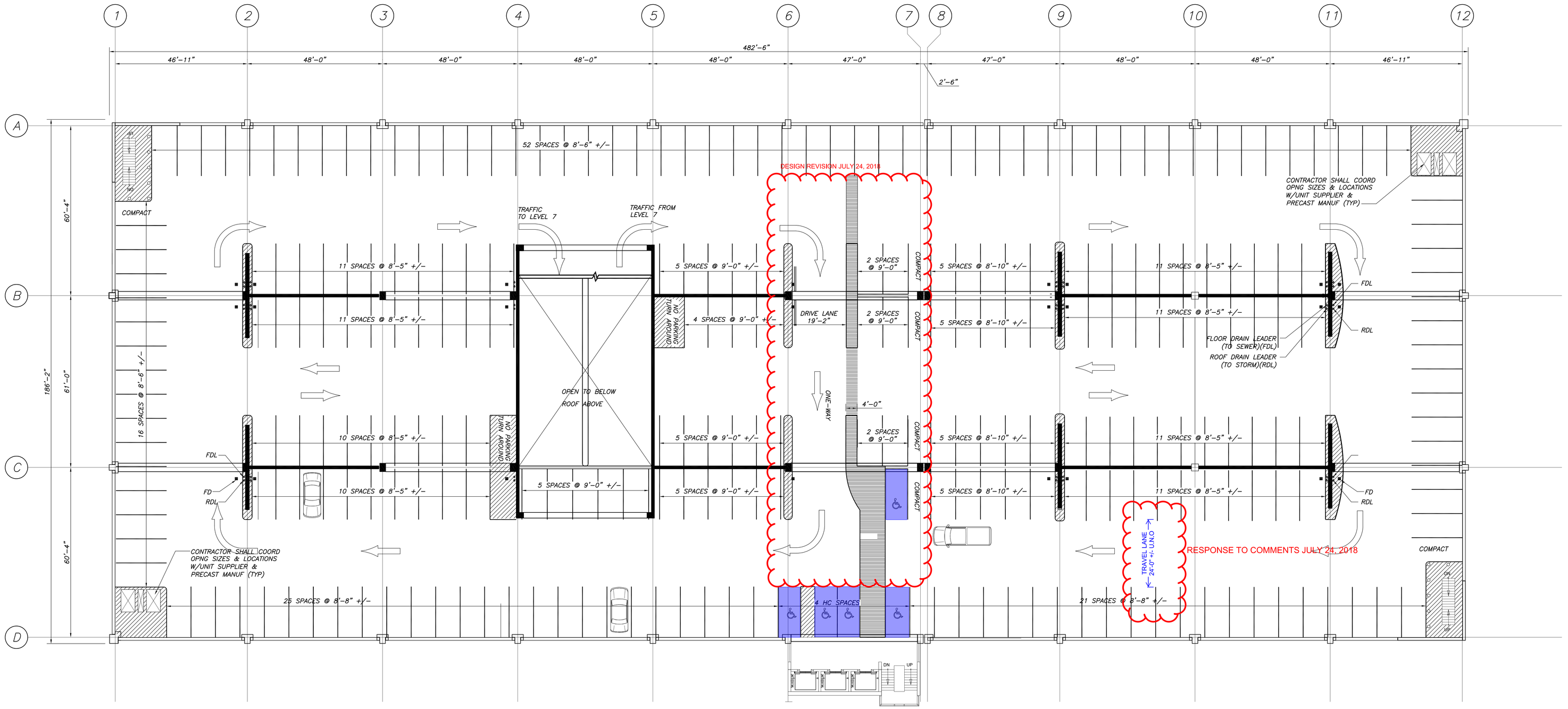
Rev No | Date | Issued For | Appvd

MMC ST. JOHN ST PG
PORTLAND, ME

LEVEL 7 PARKING LAYOUT

Designed	Scale
TMN	AS NOTED
Drawn	Date
CHF	2/23/18
Checked	Becker Job Number
TMN	4070

PS5



RESPONSE TO COMMENTS JULY 24, 2018

ROOF LEVEL

1/16"=1'-0"

SIZE	QTY	
HC	~~4~~	5
COMPACT	~~2~~	6
REGULAR	~~271~~	264
TOTAL	~~277~~	275

NOTE:
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LEVEL III SITE PLAN APPLICATION
6/22/18

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75 York Street, Portland, Maine 04101
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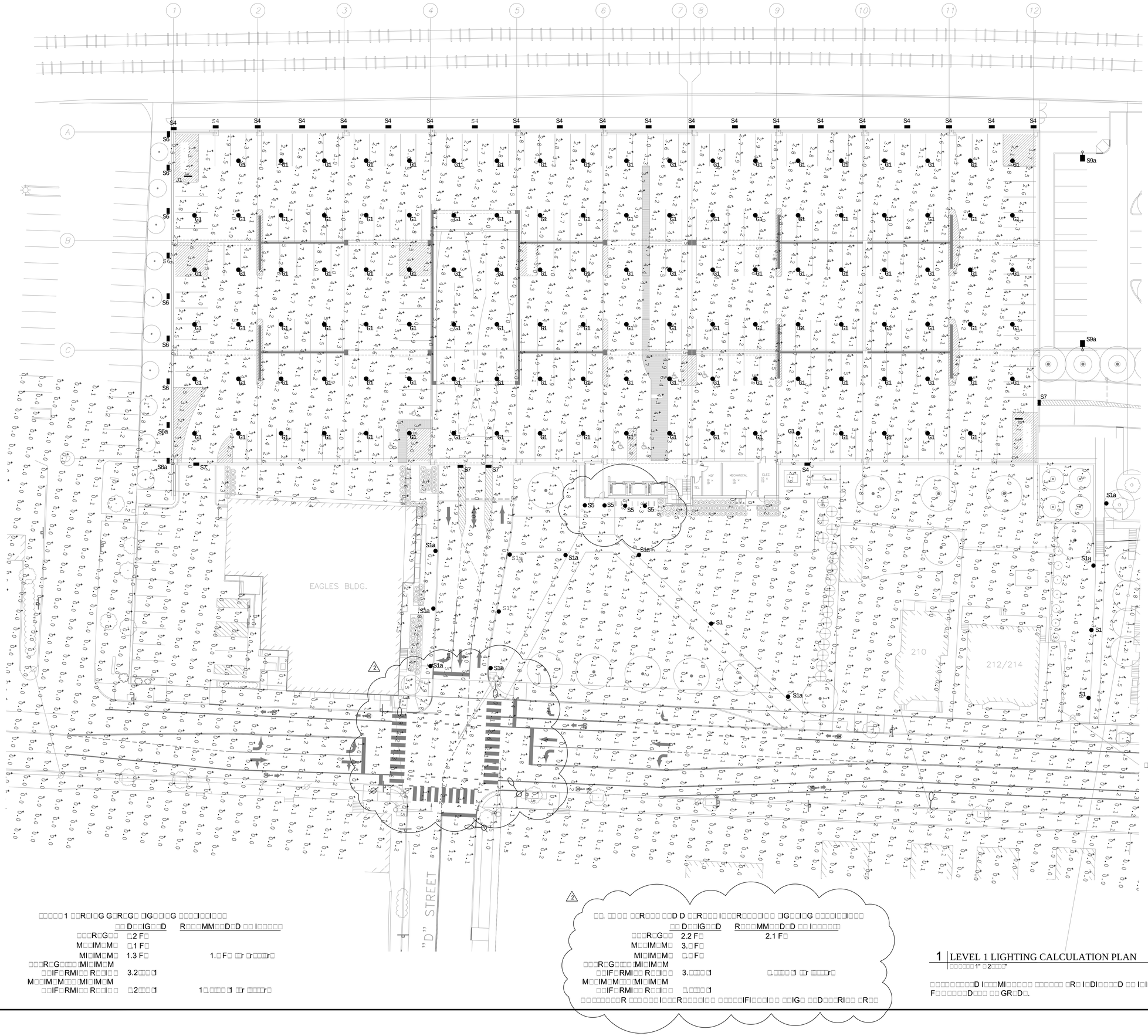
Rev No	Date	Issued For

MMC ST. JOHN ST PG
PORTLAND, ME

LEVEL 8 PARKING LAYOUT

Designed	Scale
TMN	AS NOTED
Drawn	Date
CHF	2/23/18
Checked	Becker Job Number
TMN	4070

PS6



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1 LEVEL 1 LIGHTING CALCULATION PLAN

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NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
8/23/18

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Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
5 PALMER STREET, SUITE 1, PORTLAND, ME 04550
TEL. (207) 443-5447

STATE OF MAINE · LAWRENCE E. BARTLETT · No. 7928 · PROFESSIONAL ENGINEER
Lawrence E. Bartlett 8/22/18

Rev. No	Date	Issued For
1	7/24/18	Response to Comments
2	8/23/18	Response to Comments

222 ST. JOHN ST PG
PORTLAND, ME

SITE LTG. CALCULATION PLAN – 1

Designed	Scale
LEB	1"=20'-0"
Drawn	Date
LEB	08/23/18
Checked	Becker Job Number
LEB	4070

E0.1

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1 LEVEL 1 LIGHTING CALCULATION PLAN
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CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
7/24/18

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Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
5 PALMER STREET, SUITE 1 SOUTH PORTLAND, ME 04530
TEL: (207) 482-5447

STATE OF MAINE
LAWRENCE E. BARTLETT
No. 7928
PROFESSIONAL ENGINEER
Lawrence E. Bartlett 7/24/18

Rev No.	Date	Issued For
		Appvd

222 ST. JOHN ST PG
PORTLAND, ME

SITE LTG. CALCULATION PLAN - 2

Designed	Scale
LEB	1"=20'-0"
Drawn	Date
LEB	07/16/18
Checked	Becker Job Number
LEB	4070

E0.2

GR□D□ □□□□□ □□R□I□G G□R□G□ □IG□□I□G □□□□I□□I□□□

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1 GRADE LEVEL LIGHTING CALCULATION PLAN

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CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
7/24/18

BECKER STRUCTURAL ENGINEERS
LIGHTING & ELECTRICAL ENGINEERING
45 Exchange Street, Portland, Maine 04101
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Bartlett Design
5 PALMER STREET PORTLAND, MAINE 04101
TEL: (207) 774-5447

STATE OF MAINE LAWRENCE E. BARTLETT No. 7528 REGISTERED PROFESSIONAL ENGINEER
7/24/18

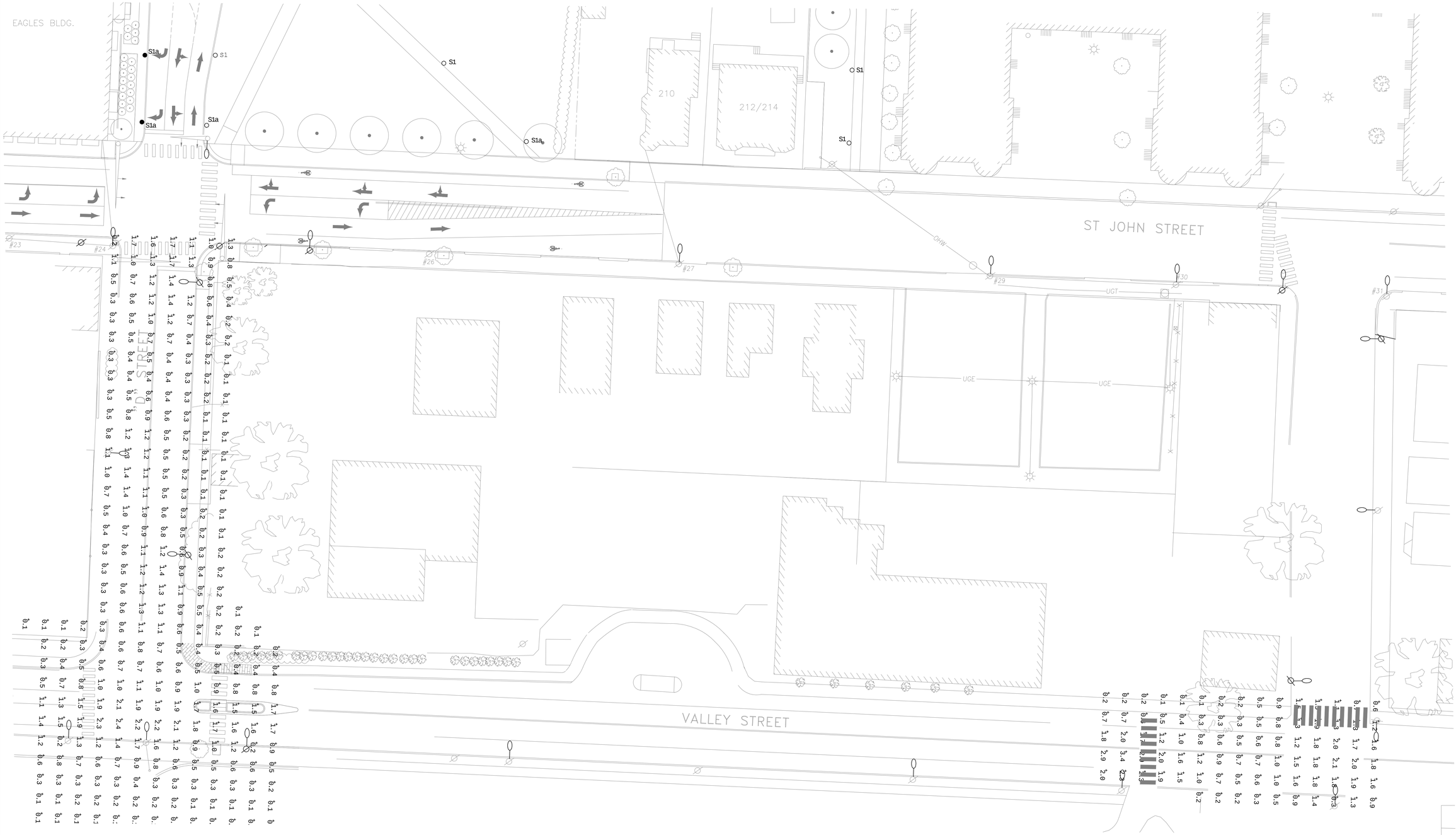
Rev No	Date	Issued For

222 ST. JOHN ST PG
PORTLAND, ME

SITE LTG. CALCULATION PLAN - 3

Designed LEB	Scale 1"=20'-0"
Drawn LEB	Date 07/16/18
Checked LEB	Becker Job Number 4070

E0.3



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1 "D" STREET & "C" STREET LIGHTING CALCULATION PLAN

□□□□□□1" □2□□□□"

□□□□□□□□D I□□□MI□□□□□ □□□□□□ □R□ I□DI□□□□D □□ I□I□I□□

F□□□□□□D□□□ □□ GR□D□.

N

FEET

20 0 20 40

CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
07/24/18

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LIGHTING & ELECTRICAL ENGINEERING
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TEL: (207) 482-1547

STATE OF MAINE
LAWRENCE E. BARTLETT
No. 7928
REGISTERED PROFESSIONAL ENGINEER
Lawrence E. Bartlett 7/24/18

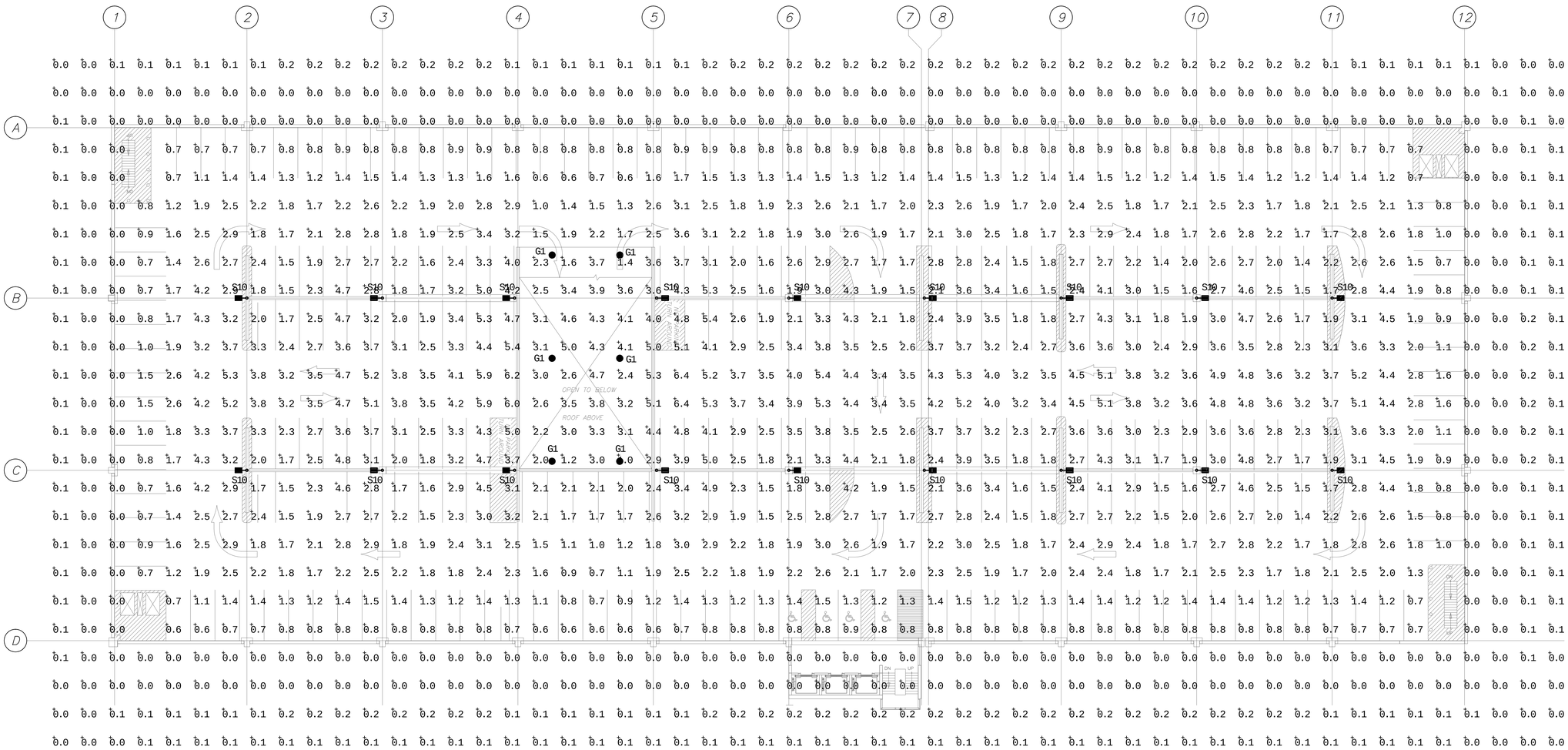
No.	Description	Date

222 ST. JOHN ST PG
PORTLAND, ME

SITE LIGHTING CALCULATION PLAN – 4

Designed LEB	Scale 1"=20'-0"
Drawn LEB	Date 7/16/18
Checked LEB	Becker Job Number 4070

E0.4



R□□F D□□□ □□R□I□G □IG□□I□G □□□□I□□I□□□

	□□ D□□IG□□D	R□□□MM□□D□D □□ I□□□□□
□□□R□G□□	2.□F□	
M□□IM□M□	□.□F□	
MI□IM□M□	□.□F□	□.□F□ □□r □r□□□r□
□□□R□G□□□□□MI□IM□M		
□□IF□RMI□□ R□□I□□	□.□□□□□1	□.□□□□□1 □□r □□□□□r□
M□□IM□M□□□□MI□IM□M		
□□IF□RMI□□ R□□I□□	1□.□□□□□1	1□.□□□□□1 □□r □□□□□r□

1 ROOF DECK LIGHTING CALCULATION PLAN

□□□□□□ 1:1□" □ 1□□□"

□□□□□□□□D I□□□MI□□□□□ □□□□□□ □R□ I□DI□□□□D □□ I□I□I□□ F□□□□□D□□□ □□ □□□ R□□F D□□□.

N

16 0 FEET 16 32

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7/24/18

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STATE OF MAINE LAWRENCE E. BARTLETT No. 7928 REGISTERED PROFESSIONAL ENGINEER
Lawrence E. Bartlett 7/24/18

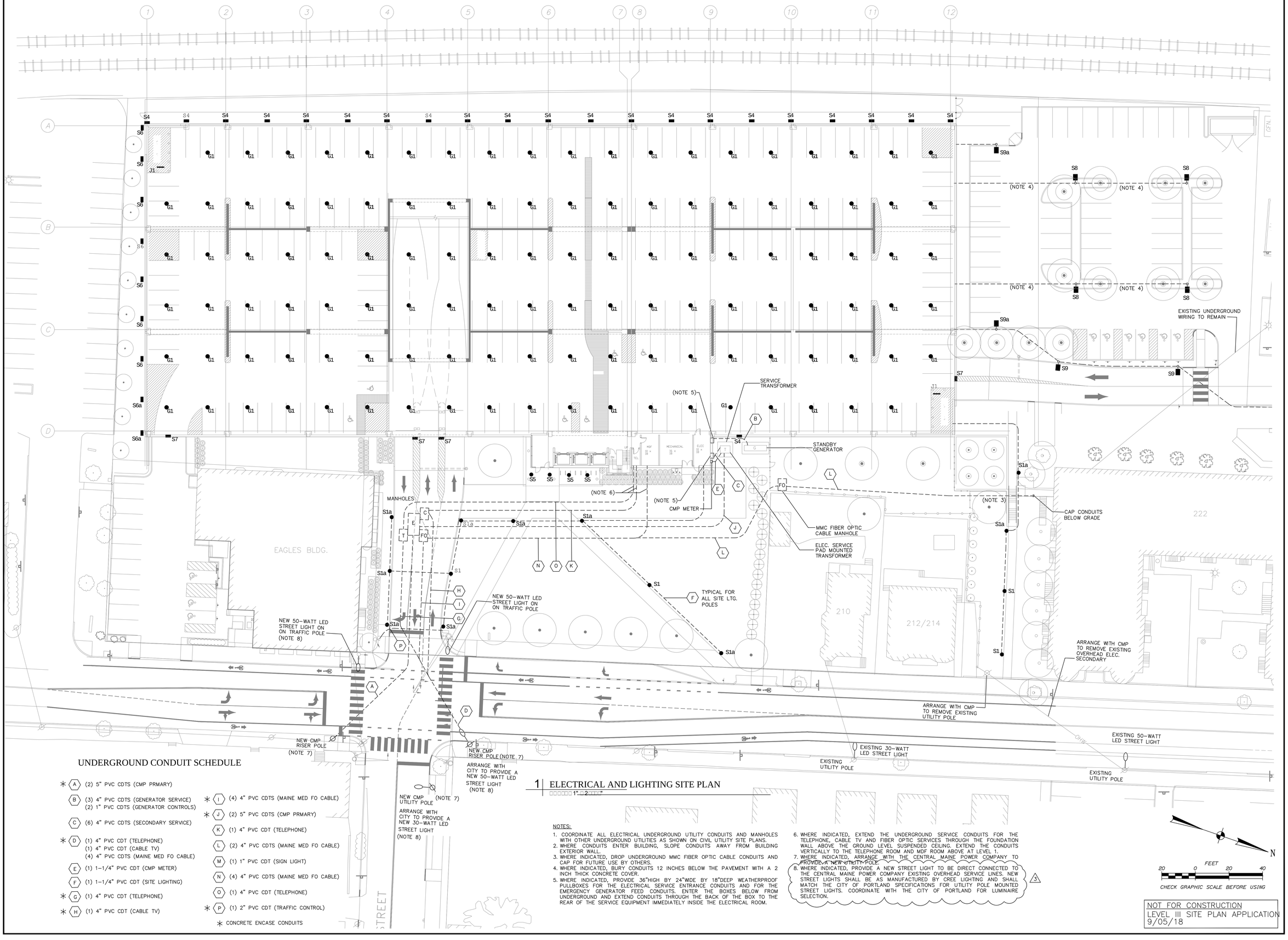
Rev No	Date	Issued For
		Appvd

222 ST. JOHN ST PG
PORTLAND, ME

ROOF DECK LIGHTING CALCULATION PLAN

Designed LEB	Scale 1"=16'-0"
Drawn LEB	Date 07/16/18
Checked LEB	Becker Job Number 4070

E0.5



UNDERGROUND CONDUIT SCHEDULE

- ✱ (A) (2) 5" PVC CDTS (CMP PRMARY)
- (B) (3) 4" PVC CDTS (GENERATOR SERVICE)
  (2) 1" PVC CDTS (GENERATOR CONTROLS)
- (C) (6) 4" PVC CDTS (SECONDARY SERVICE)
- ✱ (D) (1) 4" PVC CDT (TELEPHONE)
  (1) 4" PVC CDT (CABLE TV)
  (4) 4" PVC CDTS (MAINE MED FO CABLE)
- (E) (1) 1-1/4" PVC CDT (CMP METER)
- (F) (1) 1-1/4" PVC CDT (SITE LIGHTING)
- ✱ (G) (1) 4" PVC CDT (TELEPHONE)
- ✱ (H) (1) 4" PVC CDT (CABLE TV)
- ✱ (I) (4) 4" PVC CDTS (MAINE MED FO CABLE)
- ✱ (J) (2) 5" PVC CDTS (CMP PRMARY)
- (K) (1) 4" PVC CDT (TELEPHONE)
- (L) (2) 4" PVC CDTS (MAINE MED FO CABLE)
- (M) (1) 1" PVC CDT (SIGN LIGHT)
- (N) (4) 4" PVC CDTS (MAINE MED FO CABLE)
- (O) (1) 4" PVC CDT (TELEPHONE)
- ✱ (P) (1) 2" PVC CDT (TRAFFIC CONTROL)

✱ CONCRETE ENCASE CONDUITS

1 ELECTRICAL AND LIGHTING SITE PLAN

□□□□□□ 1" □ 2 □□□□"

NOTES:

1. COORDINATE ALL ELECTRICAL UNDERGROUND UTILITY CONDUITS AND MANHOLES WITH OTHER UNDERGROUND UTILITIES AS SHOWN ON CIVIL UTILITY SITE PLANS.
2. WHERE CONDUITS ENTER BUILDING, SLOPE CONDUITS AWAY FROM BUILDING EXTERIOR WALL.
3. WHERE INDICATED, DROP UNDERGROUND MMC FIBER OPTIC CABLE CONDUITS AND CAP FOR FUTURE USE BY OTHERS.
4. WHERE INDICATED, BURY CONDUITS 12 INCHES BELOW THE PAVEMENT WITH A 2 INCH THICK CONCRETE COVER.
5. WHERE INDICATED, PROVIDE 36"HIGH BY 24"WIDE BY 18"DEEP WEATHERPROOF PULLBOXES FOR THE ELECTRICAL SERVICE ENTRANCE CONDUITS AND FOR THE EMERGENCY GENERATOR FEED CONDUITS. ENTER THE BOXES BELOW FROM UNDERGROUND AND EXTEND CONDUITS THROUGH THE BACK OF THE BOX TO THE REAR OF THE SERVICE EQUIPMENT IMMEDIATELY INSIDE THE ELECTRICAL ROOM.
6. WHERE INDICATED, EXTEND THE UNDERGROUND SERVICE CONDUITS FOR THE TELEPHONE, CABLE TV AND FIBER OPTIC SERVICES THROUGH THE FOUNDATION WALL ABOVE THE GROUND LEVEL SUSPENDED CEILING. EXTEND THE CONDUITS VERTICALLY TO THE TELEPHONE ROOM AND MDF ROOM ABOVE AT LEVEL 1.
7. WHERE INDICATED, ARRANGE WITH THE CENTRAL MAINE POWER COMPANY TO PROVIDE A NEW UTILITY POLE.
8. WHERE INDICATED, PROVIDE A NEW STREET LIGHT TO BE DIRECT CONNECTED TO THE CENTRAL MAINE POWER COMPANY EXISTING OVERHEAD SERVICE LINES. NEW STREET LIGHTS SHALL BE AS MANUFACTURED BY CREE LIGHTING AND SHALL MATCH THE CITY OF PORTLAND SPECIFICATIONS FOR UTILITY POLE MOUNTED STREET LIGHTS. COORDINATE WITH THE CITY OF PORTLAND FOR LUMINAIRE SELECTION. (3)

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN APPLICATION
9/05/18

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STATE OF MAINE — LAWRENCE E. BARTLETT — 2549 — REGISTERED PROFESSIONAL ENGINEER — Laurence E. Bartlett 9/5/18

Rev. No	Date	Issued For
1	7/24/18	Response to Comments
2	8/23/18	Response to Comments
3	9/05/18	Response to Comments

MMC ST. JOHN ST PG
PORTLAND, ME

ELECTRICAL SITE PLAN – 1

Designed LEB	Scale AS NOTED
Drawn LEB	Date 8/23/18
Checked LEB	Becker Job Number 4070

E1.1

10 11 12

S4 S4 S4 S4 S4

1 G1 G1 G1 G1

S9a

S8 S8

(NOTE 4) (NOTE 4)

(NOTE 4) (NOTE 4)

S8 S8

EXISTING UNDERGROUND WIRING TO REMAIN

S9a

S7 S9 S9

J1

S1 S1 S1

STANDBY GENERATOR

S1a

FO

L

(NOTE 3)

CAP CONDUITS BELOW GRADE

222

S1a

MMC FIBER OPTIC CABLE MANHOLE

ELEC. SERVICE PAD MOUNTED TRANSFORMER

S1

210

212/214

S1

S1

S1

S1

ARRANGE WITH CMP TO REMOVE EXISTING UTILITY POLE

ARRANGE WITH CMP TO REMOVE EXISTING OVERHEAD ELEC. SECONDARY

ST JOHN STREET

ORW

EXISTING UTILITY POLE

ARRANGE WITH CITY TO PROVIDE A NEW 50-WATT LED STREET LIGHT

NEW CMP UTILITY POLE

ARRANGE WITH CITY TO PROVIDE A NEW 50-WATT LED STREET LIGHT

EXISTING 30-WATT LED STREET LIGHT

EXISTING UTILITY POLE #27

EXISTING 50-WATT LED STREET LIGHT

EXISTING UTILITY POLE #29

EXISTING UTILITY POLE #30

ARRANGE WITH CITY TO PROVIDE A NEW 50-WATT LED STREET LIGHT

UGT

NEW CMP UTILITY POLE

ARRANGE WITH CITY TO PROVIDE A NEW 50-WATT LED STREET LIGHT

EXISTING 50-WATT LED STREET LIGHT

#31

EXISTING UTILITY POLE

NEW CMP UTILITY POLE

ARRANGE WITH CITY TO PROVIDE A NEW 50-WATT LED STREET LIGHT

#32

NEW CMP UTILITY POLE

ARRANGE WITH CITY TO PROVIDE A NEW 30-WATT LED STREET LIGHT

NEW CMP UTILITY POLE

N

FEET

20 0 20 40

CHECK GRAPHIC SCALE BEFORE USING

1 ELECTRICAL AND LIGHTING SITE PLAN

1" □2□□□"

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN SUBMISSION
07/24/18

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STATE OF MAINE LAWRENCE E. BARTLETT No. 7928 PROFESSIONAL ENGINEER
Lawrence E. Bartlett 7/24/18

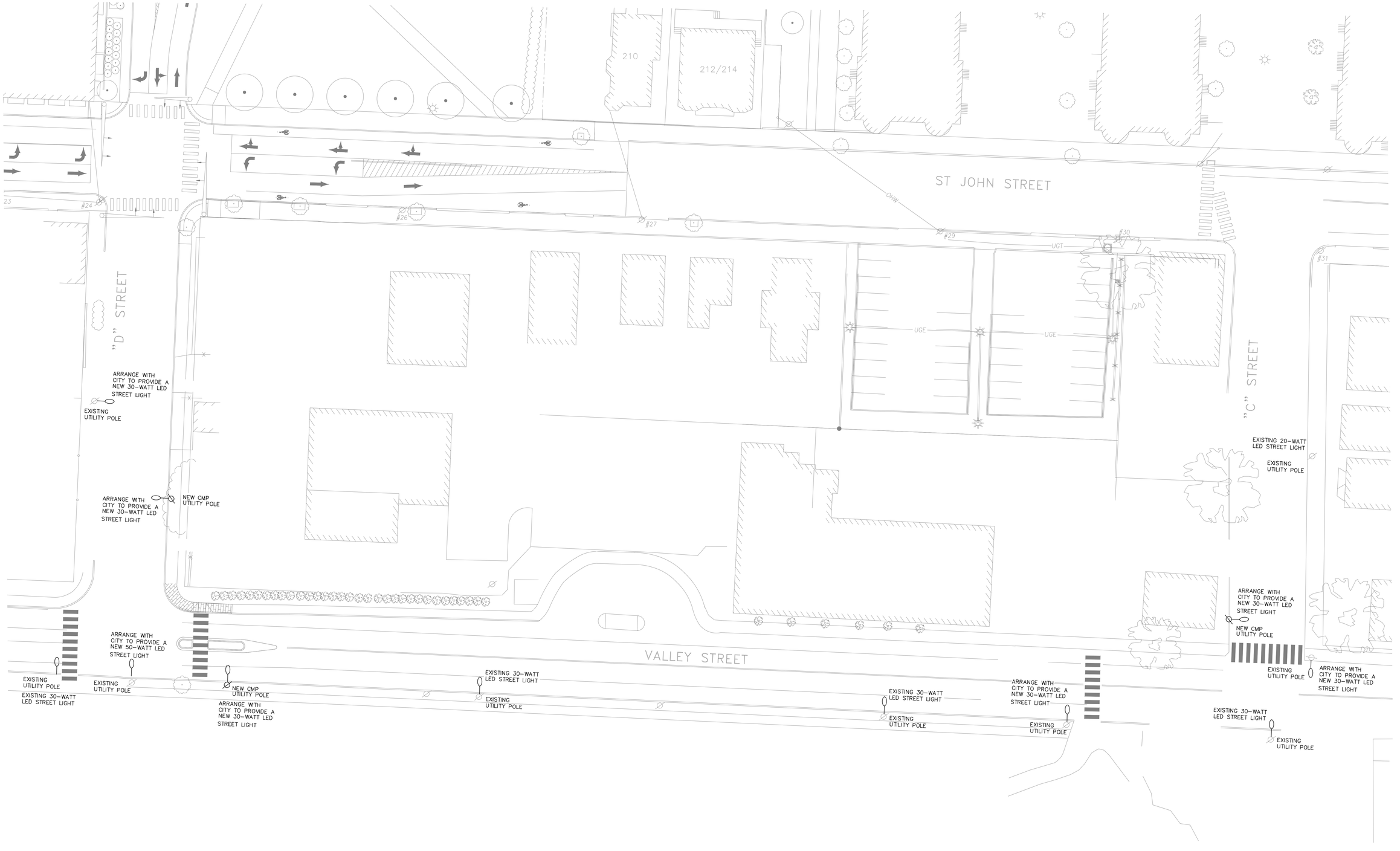
Rev No	Date	Issued For

222 ST. JOHN ST PG
PORTLAND, ME

ELECTRICAL SITE PLAN - 2

Designed LEB	Scale 1"=20'-0"
Drawn LEB	Date 7/16/18
Checked LEB	Becker Job Number 4070

E1.2



NOTES:

1. ALL WORK SHOWN SHALL BE QUOTED UNDER AN ALTERNATE BID. INFORMATION SHOWN IS FOR PRICING ONLY AND NOT FOR CONSTRUCTION.

□FF□I□□ □R□ □□□□ IM□R□ □□M□□□□

□□□ □ID□□ □□□ □□□□G D □□R□□□

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□□□ □R□ □□□ □□□ □□ □□□ I□□□R□□□□I□□ □F □ □□R□□□ □□D □□□□□□ □□R□□□

1 ELECTRICAL AND LIGHTING SITE PLAN

□□□□□□1" □2□□□□"

N

FEET

20 0 20 40

CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN SUBMISSION
07/24/18

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STATE OF MAINE
LAWRENCE E BARTLETT
No. 7928
REGISTERED PROFESSIONAL ENGINEER
7/24/18

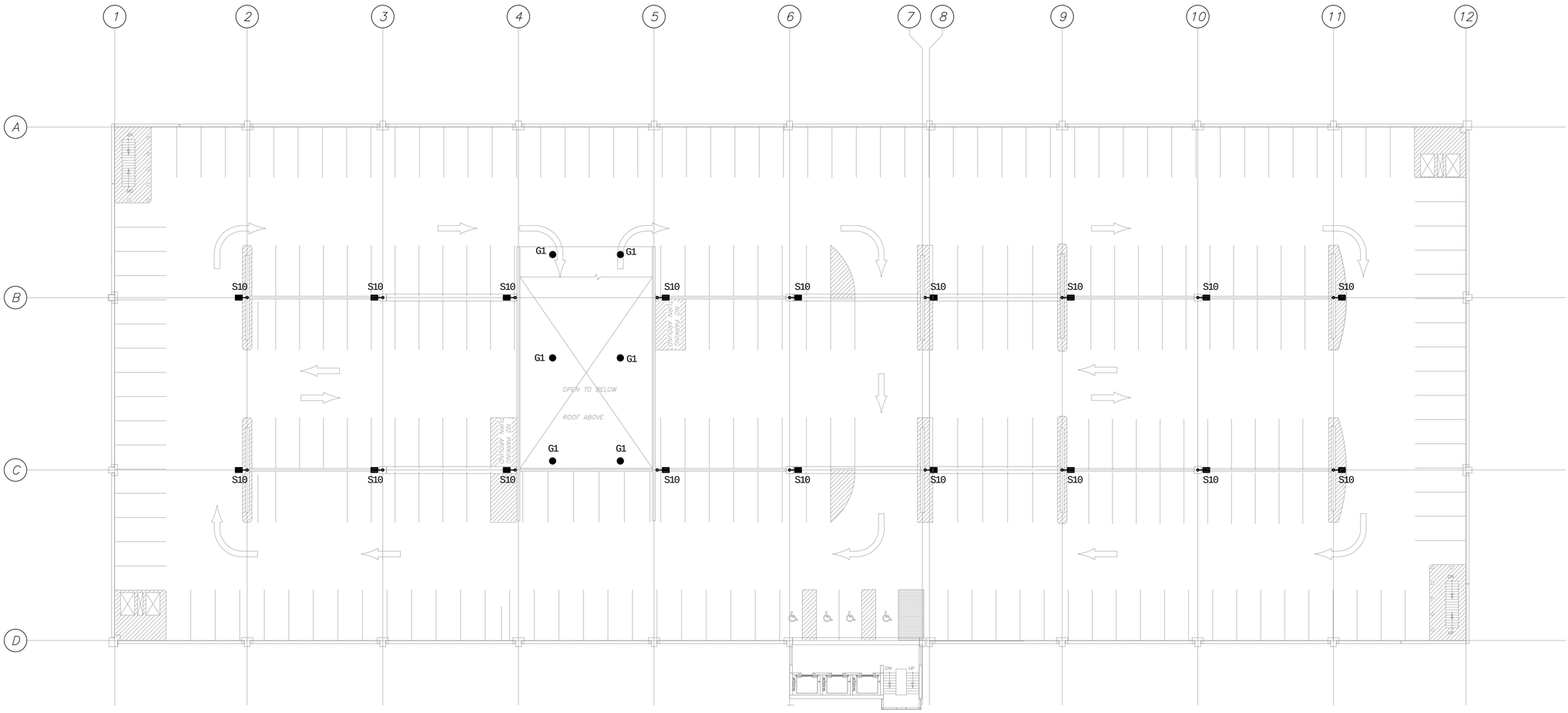
Rev No	Date	Issued For	Appvd

222 ST. JOHN ST PG
PORTLAND, ME

ELECTRICAL SITE PLAN - 3

Designed LEB	Scale 1"=20'-0"
Drawn LEB	Date 7/16/18
Checked LEB	Becker Job Number 4070

E1.3



1 ROOF DECK ELECTRICAL PLAN

N

16 0 FEET 16 32

CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION
LEVEL III SITE PLAN SUBMISSION
7/24/18

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STATE OF MAINE
LAWRENCE E. BARTLETT
No. 7928
REGISTERED PROFESSIONAL ENGINEER
7/24/18

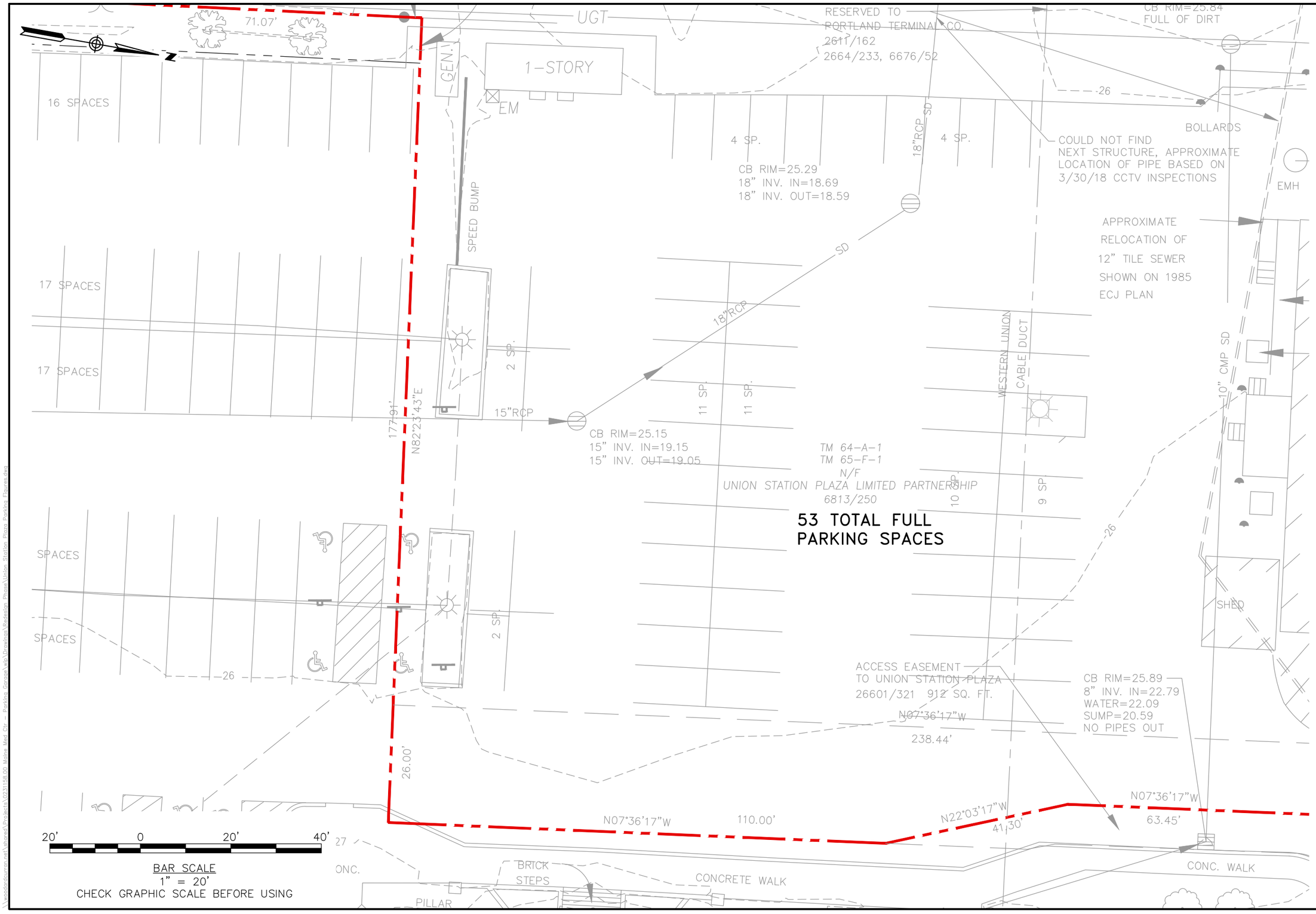
Rev No	Date	Issued For
		Appvd

222 ST. JOHN ST PG
PORTLAND, ME

ROOF DECK ELECTRICAL PLAN

Designed LEB	Scale 1"=16'-0"
Drawn LEB	Date 07/16/18
Checked LEB	Becker Job Number 4070

E1.4



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COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD & CURRAN

EXISTING CONDITIONS
UNION STATION PLAZA LEASE AREA

DESIGNED BY: DAS
DRAWN BY: BCM
CHECKED BY: DAS
UNION STATION PLAZA PAR*.dwg

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO: 0231158.00
DATE: SEPT. 2018
SCALE: 1"=20'

FIG. 1

\\woodardcurran.net\shared\Projects\0231158.00 Maine Med Ctr - Parking Garage\wip\Drawings\Redesign Phase\Union Station Plaza Parking Figures.dwg

71.07'
16 SPACES
17 SPACES
17 SPACES
SPACES
SPACES
UGT
GEN.
1-STORY
EM
RESERVED TO
PORTLAND TERMINAL CO.
2611/162
2664/233, 6676/52
CB RIM=25.84
FULL OF DIRT
-26
BOLLARDS
COULD NOT FIND
NEXT STRUCTURE, APPROXIMATE
LOCATION OF PIPE BASED ON
3/3/16 CCTV INSPECTIONS
EMH
3 SPACES @ 9'x18'
NO PARKING
SPEED BUMP
4 SP.
CB RIM=25.29
18" INV. IN=18.69
18" INV. OUT=18.59
18"RCP
SD
4 SP.
10 SPACES @ 9'x18'
APPROXIMATE
RELOCATION OF
12" TILE SEWER
SHOWN ON 1985
ECJ PLAN
15 SPACES @ 9'x18'
18"RCP
23.5'
OPEN LANE
2 SP.
15"RCP
CB RIM=25.15
15" INV. IN=19.15
15" INV. OUT=19.05
11 SP.
11 SP.
WESTERN UNION
CABLE DUCT
COMPACT
COMPACT
10" CMP SD
TM 64-A-1
TM 65-F-1
N/F
UNION STATION PARTNERSHIP LIMITED PARTNERSHIP
6813/250
15 SPACES @ 9'x18'
2 SPACES @ 9'x18'
5 SPACES @ 9'x18'
8.0'
5.0'
8.0'
8.0'
8.0'
24.0'
5 SPACES @ 9'x18'
24.0'
SHED
2 SP.
ACCESS EASEMENT
TO UNION STATION
26601/321 912 SQ. FT.
CB RIM=25.89
8" INV. IN=22.79
WATER=22.09
SUMP=20.59
NO PIPES OUT
N07°36'17"W
238.44'
8.0'
PHYSICAL BARRIER
TO SEPARATE
PARKING LOT FROM
CONSTRUCTION SITE
PEDESTRIAN CROSSWALK
ADA PEDESTRIAN RAMP
26.00'
N07°36'17"W
110.00'
N22°03'17"W
41.30'
N07°36'17"W
63.45'
RAMP
RAMP
BRICK
STEPS
CONCRETE WALK
CONC. WALK
PILLAR
177.91'
N82°23'43"E

55 PARKING SPACES (9'x18')
3 ADA PARKING SPACES (8'x18)
58 TOTAL PARKING SPACES

20' 0 20' 40'

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

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COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD &CURRAN

DURING CONSTRUCTION PARKING LAYOUT UNION STATION PLAZA LEASE AREA

DESIGNED BY: DAS
DRAWN BY: BCM
CHECKED BY: DAS
UNION STATION PLAZA PAR*.dwg

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO: 0231158.00
DATE: SEPT. 2018
SCALE: 1"=20'

FIG. 2

PRECAST DUMPSTER ENCLOSURE

PROPOSED PAVEMENT

UGT

RESERVED TO PORTLAND TERMINAL CO. 2664/233, 6676/52

CB RIM=25.84
FULL OF DIRT

1-STORY

GRAVEL

NO PARKING

11 SPACES @ 9'x18'

4 SP.

18" RCP SD

4 SP.

CB RIM=25.29
18" INV. IN=18.69
18" INV. OUT=18.59

COULD NOT FIND NEXT STRUCTURE, APPROXIMATE LOCATION OF PIPE BASED ON 3/30/18 CCTV INSPECTIONS

BOLLARDS

EMH

SPEED BUMP

24.0'

15 SPACES @ 9'x18'

APPROXIMATE RELOCATION OF 12" TILE SEWER SHOWN ON 1985 ECJ PLAN

18"RCP

2 SP.

11 SP.

11 SP.

WESTERN UNION CABLE DUCT

15"RCP

CB RIM=25.15
15" INV. IN=19.15
15" INV. OUT=19.05

14 SPACES @ 9'x18'

177.91'

N82°23'43"E

TM 64-A-1
TM 65-F-1
N/F
UNION STATION PLAZA LIMITED PARTNERSHIP
6813/250

24.0'

10" CMP SD

9 SP

7 SPACES @ 9'x18'

8.0'

8.0'

8.0'

5 SPACES @ 9'x18'

24.0'

SHED

2 SP.

ACCESS EASEMENT TO UNION STATION PLAZA 26601/321 912 SQ. FT.

CB RIM=25.89
INV. IN=22.79
WATER=22.09
SUMP=20.59
NO PIPES OUT

7 SPACES @ 9'x18'

8.0'

8.0'

8.0'

5 SPACES @ 9'x18'

N07°36'17"W
208.44'

26.00'

N07°36'17"W
118.00'

N82°23'43"E
41.80'

65.45'

RAMP

RAMP

BRICK STEPS

PILLAR

64 PARKING SPACES (9'x18')
4 HC PARKING SPACES (8'x18)
68 TOTAL PARKING SPACES

20' 0 20' 40'

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

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COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD & CURRAN

POST CONSTRUCTION PARKING LAYOUT
UNION STATION PLAZA LEASE AREA

DESIGNED BY: DAS
DRAWN BY: BCM
CHECKED BY: DAS
UNION STATION PLAZA PAR*.dwg

MAINE MEDICAL CENTER
22 BRAMHALL STREET
PORTLAND, ME 04102

MMC ST. JOHN STREET
EMPLOYEE PARKING GARAGE

JOB NO: 0231158.00
DATE: SEPT. 2018
SCALE: 1"=20'

FIG. 3

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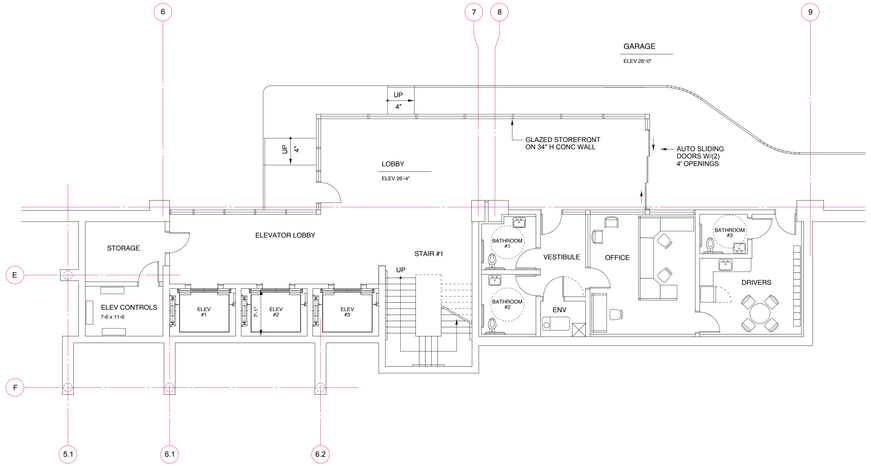
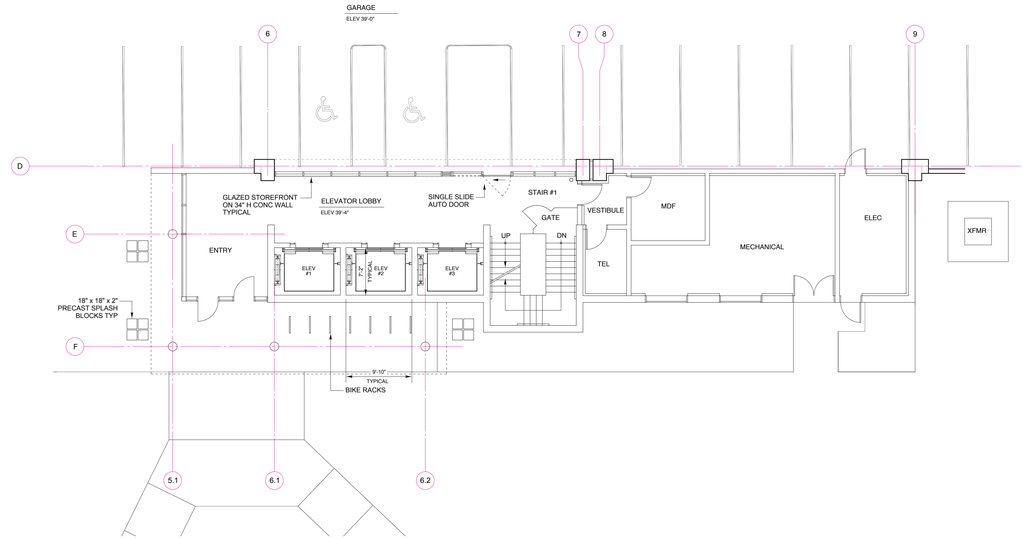


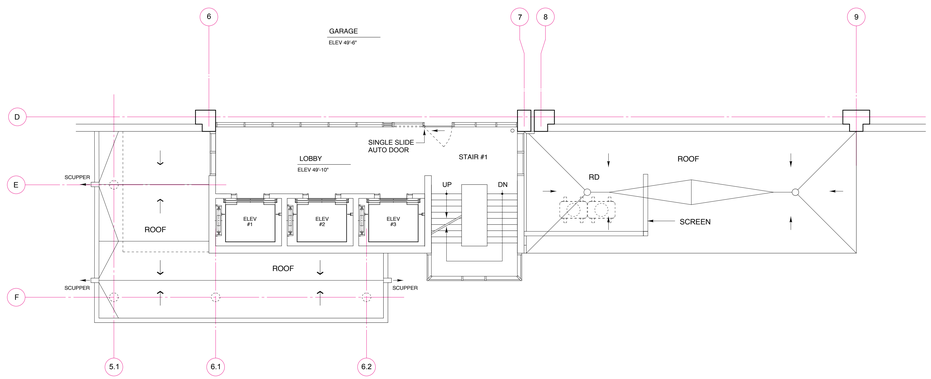
LEVEL G FLOOR PLAN

1/8" = 1' - 0"



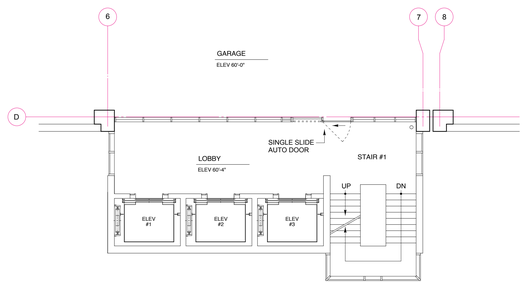
LEVEL 1 FLOOR PLAN

1/8" = 1' - 0"



LEVEL 2 FLOOR PLAN

1/8" = 1' - 0"



LEVEL 3 FLOOR PLAN

1/8" = 1' - 0" LEVEL 4 - 8 SIMILAR

DRAWING SCALE

1/8" = 1' - 0"

PRINT ON 30 x 48 TO CORRECTLY SCALE

0' 4' 8' 16' 32'

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Rev No.	Date	Issued For
	08/05/18	*RESPONSE TO COMMENTS SUBMISSION*

MMC ST. JOHN ST PARKING GARAGE
PORTLAND, ME
CORE FLOOR PLANS

Designed	Scale
MMW	*AS NOTED*
Drawn	Date
MMW	*08/03/18*
Checked	Becker Job Number
MMW	*4070*

A 103

Parking

Ashley Sanborn <ashleydrydock@gmail.com> Sep 11, 2018 12:54 PM
Posted in group: **Planning Board**

Hello,
My name is Ashley Sanborn and I am a resident of the apartment building at 205 St. John Street. It is my understanding that there are potential plans for Maine Medical Center to reserve 10 or more parking spaces in the area in front of my apartment building as well as some of the surrounding buildings. This is a residential area of St. John street and it is very important to renters in this neighborhood to have access to parking on the street. While my landlords do provide 2 parking spaces per apartment unit, these are 3 bedroom apartments and my roommates and I, as well as the other tenants in the building rely on street parking for the 3rd car in each unit. I know that others in my neighborhood are in similar situations. Rent is very expensive in Portland as it is a wonderful city to live in and I believe that this area would suffer by taking parking spots away from its residents. My landlords, Beth and Allen Prosser have been business owners and contributing members of the Portland community for years. They are excellent landlords and I would hate for them to have trouble renting their apartments because of lack parking going forward. I urge you not to approve the allowance of Maine Medical Center to reserve these parking spots. Thank you for your consideration.

Sincerely,

Ashley Sanborn

Sent from my iPhone

St John Street parking spaces

Bailey Nunan <bailey.nunan@gmail.com> Sep 11, 2018 1:10 PM
Posted in group: **Planning Board**

To whom it may concern,

It has come to my attention that Maine Medical Center plans to build a new parking garage on St. John Street in Portland, Maine. While I believe it is wise to expand MMC for the growing needs of our healthcare community, this has a negative impact for those who live and have to park on the street. I live in an apartment building at 201 St John St. I moved here in the middle of April, 2018 with my two roommates. Each of us drives big vehicles with a not so big lot in the back of the building, where there are only 2 spots for the three of us. This means one of us has to always be parked on the street. Though sometimes tricky to find, there is usually always a spot on St John close enough to my building where I feel safe enough to walk after working nights. Eliminating these spaces in order to build MMCs parking garage would not only mean losing one of OUR parking spaces, it would mean losing multiple spots for the other apartments and local businesses on the street as well. Where will we all be able to park?

I hope you consider making necessary adjustments in order to appease both Maine Medical Center, as well as those who have to reside close by. Thank you for taking the time to read these concerns.

-Bailey Nunan

MAINE MEDICAL CENTER PROPOSED PARKING GARAGE

Beth Prosser <bprosser1@gmail.com> Sep 11, 2018 2:03 PM
Posted in group: **Planning Board**

September 11, 2018

Members of the City Planning Board,

My husband and I own 4 rental buildings consisting of 11 units in Portland. Three are located at 201, 205 and 167 St. John Street, directly across the street from the proposed MMC parking garage.

We pay $23,545.56 in taxes, $17, 735.00 of which are on St. John Street. We rely on rental income and have invested thousands of dollars in refurbishing our apartment buildings and keeping them affordable and very well maintained

We do have limited off-street parking for two vehicles for each of our 6 three-bedroom units. However, of these 3 bedrooms, each tenant has their own vehicle……..meaning there are 6-7 needed street parking spots. The 2 unit building does not have off-street parking so therefore relies on 3-4 street parking spots.

Purportedly, MMC said they would be eliminating 13 spots of street parking on St. John Street. This would a great disservice to our tenants and the neighborhood. People should be able to continue to park on the street in front of their homes.

The current state of this area does not lend itself to being walker friendly. People do not want to walk any distance from their cars to their homes. They have children, baby carriers, and groceries to transport. Our tenants professions range from waitresses, nurses, night time cleaners and some who work from home. Due to their jobs, many return to their homes late at night and have the right to feel safe and to easily access their cars.

Thank you for taking this into consideration.

Beth Prosser

Google Groups

St John Parking

Greg Durgin <grdurgin@gmail.com> Sep 11, 2018 1:40 PM
Posted in group: **Planning Board**

To whom it may concern,

I am writing to formally express my concerns regarding the construction of the new MMC Parking garage. I have learned that in the process of creating this garage, it will also eliminate multiple critical parking spaces on St John St. Parking on this end of Portland (and all of Portland) for residents and visitors is known to be a chronic pain of the city. Removal of these parking spaces, while ultimately helpful for Maine Med, greatly exacerbates an already challenging part of living in the city. Myself and my two roommates rely on the availability of on-street parking spaces in order to legally park our vehicles. The parking spaces Maine Med wishes to remove (and not replace) are crucial for us and many others. Please consider this need of the people and businesses on St John St before allowing these parking spaces to be removed.

Thank you,
Greg Durgin

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Please read this testimony at the planning board meeting on Monday

Helen Donaldson <hcd@portlandmaine.gov> Tue, Sep 11, 2018 at 12:50 PM
To: James Dealaman <jdealaman@portlandmaine.gov>, Jennifer Munson <jmy@portlandmaine.gov>

Jimmy/Jen,

Can you print copies of this for tonight's MMC garage hearing?

Thanks,
Nell
---------- Forwarded message ----------
From: **Zack Barowitz** <zbarowitz@gmail.com>
Date: Sun, Sep 9, 2018 at 8:45 AM
Subject: Please read this testimony at the planning board meeting on Monday
To: Helen Donaldson <hcd@portlandmaine.gov>, tuckobrien@me.com

Tuck, Nell,
Please read the below testimony at the PB meeting during the MMC garage item.
Thanks,
Zack

Zack Barowitz, Huntress Street, Portland

Chair Dundston and board members.

The Libbytown Neighborhood Association submitted recommendations and I also submitted public comment. I speak today on behalf of myself.

The garage proposal before you represents a human resources problem. Maine Medical needs parking to attract and retain employees

This is then a labor shortage problem

And a housing problem.

The Question is:

Why–in the most densely populated and most economically diverse square half mile in the state–is there not a sufficient labor pool for a

hundred and fifty year old institution?

The Answer is Better Planning.

Thank you.

Sent from my iPad

--
Nell Donaldson
City of Portland Planning Division
874-8723
hcd@portlandmaine.gov

Kate Orcutt <katelynn.orcutt@gmail.com> Sep 11, 2018 2:45 PM
Posted in group: **Planning Board**

Good afternoon,

I am emailing to oppose the plan that MMC is developing to build a parking garage on Saint John St. If this plan goes through, myself and my 2 roommates will not longer have the option to park on the street where we live, meaning we would need to move out of the area as there are already limited options for our cars. We have lived on this street for nearly 2 years and gave otherwise no intention of leaving our peaceful, friendly neighborhood. Parking on Saint John St. is vital to the residents as well as the businesses along this busy street. Please consider the impacts of the residents before allowing this plan to go through.

Thank you for your time.

-Katelynn Orcutt

PLANNING BOARD REPORT
PORTLAND, MAINE

Verdante
56 Hampshire Street
Level III Site Plan/Subdivision; IOZ Conditional Use
2017-294
NewHeight Group, LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: September 11, 2018	Prepared by: Caitlin Cameron, Urban Designer Date: August 31, 2018

I. INTRODUCTION

NewHeight Group LLC has submitted Level III Site Plan and Subdivision, and Inclusionary Conditional Use applications for a residential project on Federal Street between Hampshire and Franklin streets in the India Street neighborhood. The proposal is for a three to six story single building of 30 market-rate condominiums, a retail space, and structured and surface parking. The parking includes spaces for 60 vehicles – 17 for the neighboring apartment building and the remaining 43 for the residential use. One of the required 3 affordable units will be provided off-site with the remainder accounted for by fee-in-lieu. The project is located in the IS-FBC zone (UN and UT subdistricts) and within 100 feet of the India Street Historic District. Note that since the workshop, the scope of this project to increase the property boundary, revise the number of residential units and parking spaces, and enlarge the building footprint.

This Hearing was noticed to 134 neighbors and interested parties for July 17th and was tabled to August 14th and the public notice appeared in the *Portland Press-Herald* on July 6th and 9th 2018.. The item was tabled on August 14th. The September 11th public hearing was noticed to 114 property owners and residents and the legal ad appeared in the *Portland Press-Herald* on August 31 and September 3, 2018. The applicant held a Neighborhood Meeting on March 2nd 2018 with fifteen (15) attendees and the notes are included in Attachment U. At the workshop, four (4) members of the public spoke – speakers were generally supportive of the project but raised concerns about traffic/parking impacts, pedestrian safety on Hampshire Street, construction impacts on parking and trash, dust, and debris on neighboring uses. One speaker expressed disappointment in the design and its relationship to Franklin Street, questioned the contextuality, and suggested shadow studies for the impacts on neighboring buildings. The Planning Division received four additional written comments since the workshop (PC 4-7). Comments from neighbors are primarily concerned with the height and shadow impact of the new building so close to the small-scale, historic residential buildings, impacts of parking near buildings, loss of street trees and location of new trees nearby, and lack of historic character in the new building. There is concern about the impact of construction activity on offices nearby. There is also some question about the appropriateness of commercial space on Hampshire Street. One property

owner raises the question of whether this project will cause loss of value to their property claiming the shadow impacts will cause building deterioration and questions the appropriateness of the UT zoning boundaries.
Applicant: NewHeight Group LLC (represented by Chip Newell)
Agent and Engineer: Terradyn Consultants, LLC (Michael Tadema-Wielandt, P.E.)
Architect: Archetype, P.A. (David Lloyd)

Required reviews and requested waivers:

Applicant's Proposal	Applicable Standards
New construction over 50,000 sf	Level III Site Plan Review and ISFBC UN/UT Design Review
Subdivision (30 dwelling units)	Level III Subdivision Review
Multi-family Residential >10 units	Inclusionary Zoning Conditional Use
Waivers	**Citation**
Min. Driveway Width – width less than 20'	City of Portland Technical Manual (Section 1.7.2.3)
Parking Aisle Width – less than 24'	City of Portland Technical Manual (Section 1.14)
Parking Stall Dimensions – smaller than 9'x18'	City of Portland Technical Manual (Section 1.14)

II. PROJECT DATA

SUBJECT	*DATA*
Total area of the site	19,366 sq ft
Total Disturbed Area	19,366 sq ft
Existing Zoning	ISFBC (UT, UN)
Existing Use	Commercial building, surface parking
Proposed Use	Residential, retail, parking
Impervious Surface Area --Existing --Proposed --Net Change	 16,555 sq ft 9,683 sq ft 6,872 sq ft
Building Footprint --Existing --Proposed --Net Change	 5,118 sq ft 13,817 sq ft 8,699 sq ft
Building Floor Area --Existing --Proposed -Net Change	 5,118 sq ft 64,377 sq ft 59,259 sq ft
Proposed Room Mix -One-bedroom -Two-bedroom -Three-bedroom	 9 9 12
Parking Spaces	60 (43 residential; 17 neighbor spaces)
Bicycle parking Spaces	12 (none existing)
Estimated Cost of the project:	$12,950,000

III. EXISTING CONDITIONS

This site is within the India Street neighborhood and has frontage on three streets – Hampshire, Federal, and Franklin Street. The development site has been aggregated by combining the former Portland Food Co-op site, a former city property on Franklin Street, and a portion of the rear lots of two neighboring residential properties. The property is currently occupied by an old industrial bakery building used for storage for the Portland Food Co-op and surface parking. Several new buildings have recently been completed or are under construction around this site – the Luminato residential building on Franklin Street a block away, and a renovation of a former apartment building into a hostel. These new buildings are quickly defining the Franklin Street character and streetscape.

The site is within the India Street Form-based Code zone and near a prominent, gateway corner of Congress and Franklin streets. Hampshire and Federal streets are designated as Urban Neighborhood (UN) zoning subdistricts which emphasizes small-scale, private frontage with the intent of maintaining a private, small street character. Franklin Street and a portion of Federal Street has an Urban Transitional (UT) zoning designation that allows for up to six stories and longer buildings with a more flexible approach to use and ground floor character. The UT boundary was recently redefined in a text and map amendment in 2017 to better clarify the extent of that subdistrict on Federal and Newbury streets.

The parcel is near the India Street Historic District. However, the so-called 100' rule does not apply in this case and new development on this site is not subject to historic review. Buildings on this site will be part of historic streetscapes of Federal and Hampshire streets and the zoning and design standards emphasize contextuality in order to create a congruent and cohesive streetscape.

The site has long-view approaches both from Congress Street and for traffic coming up Franklin Street. As such, it is important to consider the character of this building as it relates to the historic buildings of Congress Street but also how it creates a new character on Franklin Street.

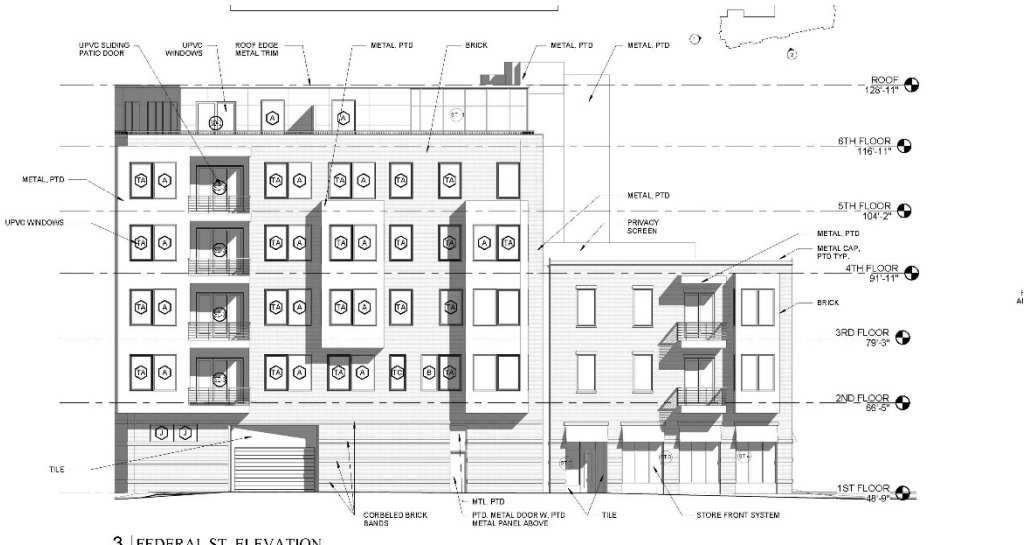
IV. PROPOSED DEVELOPMENT

The proposed building is shown in the Plan set and described in the applicant's submittal. This image (Plan P21) shows the overall project view from Franklin and Congress streets.

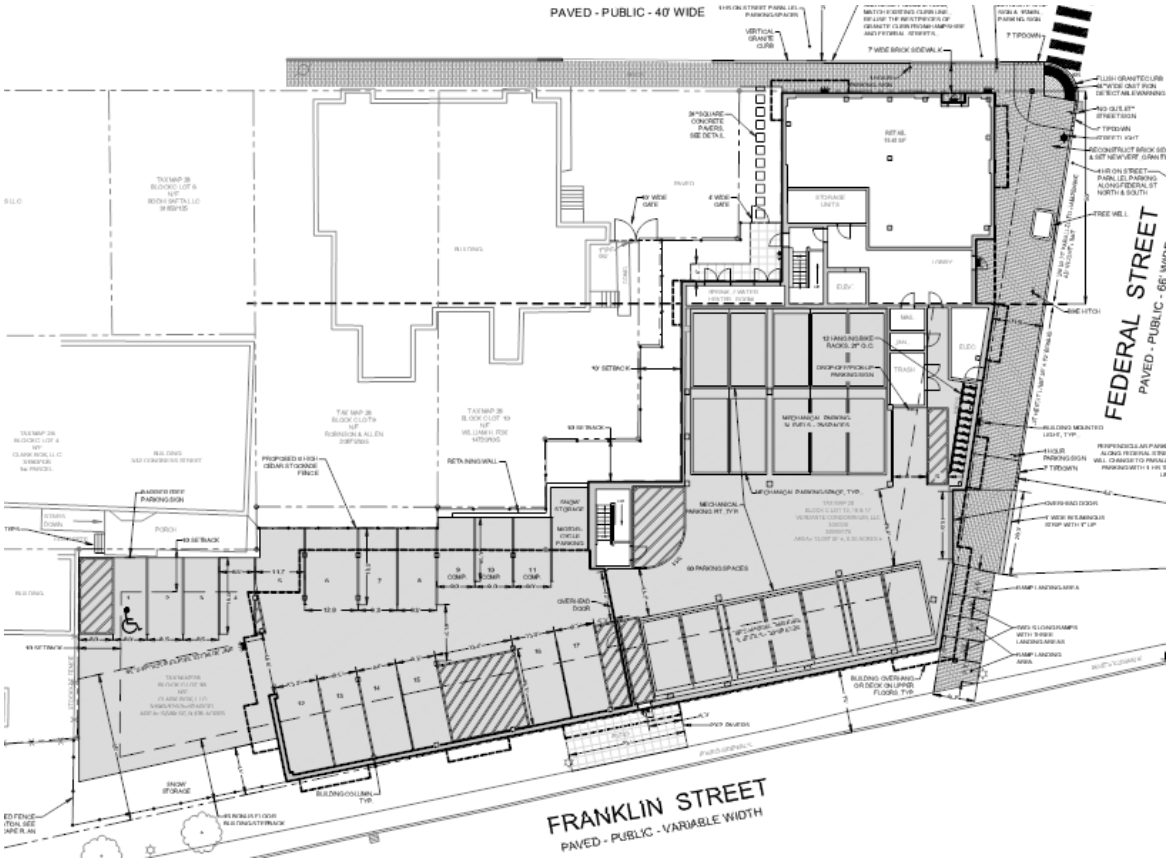
The proposal includes:

- 30 market-rate condominiums
- 3 workforce housing units are required by Inclusionary Zoning – one (1) provided off-site, two (2) fee-in-lieu
- Parking for 60 vehicles (structured, mechanical, surface)
- 1 retail space (under 2,000 sf) – condo docs prohibit cooking/restaurant
- Extended planting areas on City property along the Franklin Street frontage, dead-end of Federal Street

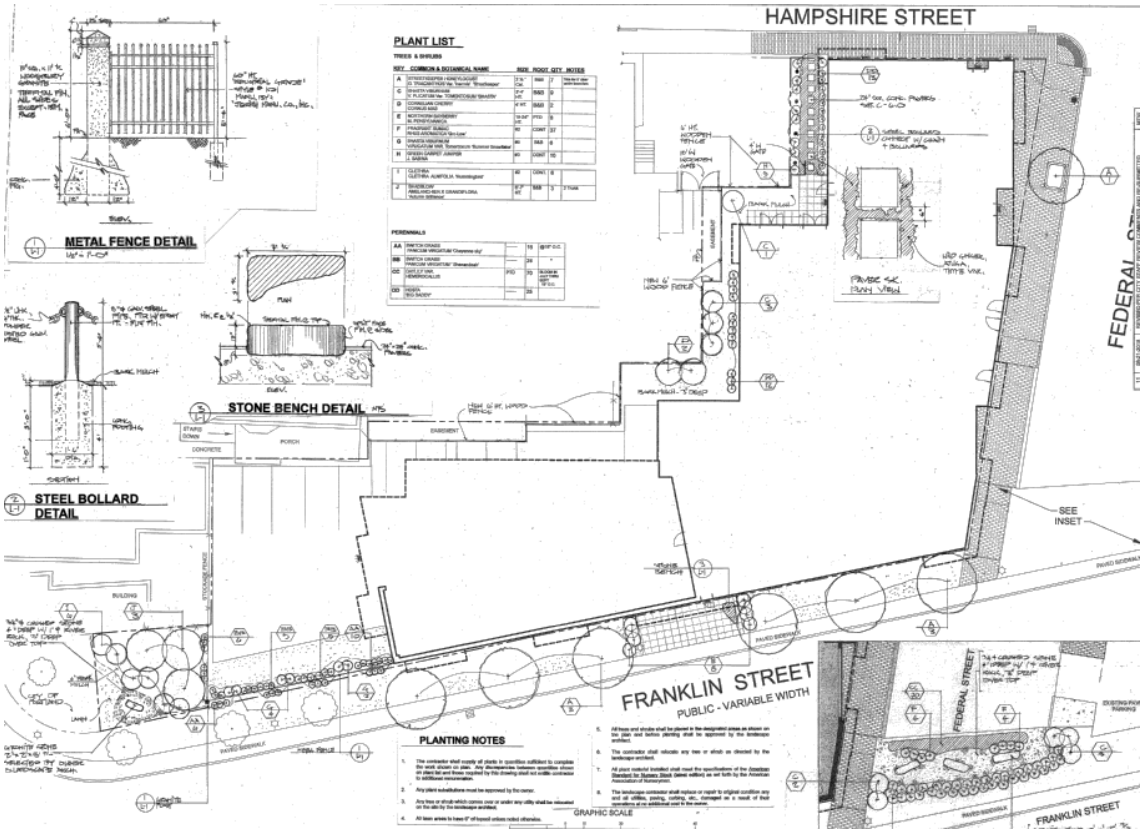
The elevation below faces Federal Street and shows the residential and garage entrances (Plan P21). Hampshire and Federal have a 45', four-story height maximum; Franklin Street allows up to 65' and six stories. The resulting proposal includes height and massing variation.



3 | FEDERAL ST. ELEVATION
3/32" = 1'-0"



Site plan- revision date 8-27-18



Landscape Plan -revision date 8-21-2018

STAFF REVIEW

A. RIGHT, TITLE AND INTEREST

The applicant has submitted the deed (Attachment B). The applicant has agreed to provide 17 parking spaces for a neighboring apartment building as well as maintain light and air for that building. The applicant also acquired land from the City in order to have direct frontage onto Franklin Street.

Since the original application, the applicant has acquired property from two neighbors to expand the lot size. The Boundary Survey has been updated to reflect a recent land acquisitions.

A number of easements exist over this property. There is a 12' easement connecting Federal Street to the surface parking area. The neighboring property at 62 Hampshire Street maintains a 5' easement along the abutting property line. The survey further shows a potential 5' easement to benefit 60 Hampshire Street.

The applicant is proposing to encroach on the City's ROW with a number of habitable bay windows over Franklin, Federal, and Hampshire streets. These occupied overhangs will have to be approved by City Council. If this is allowed, licenses and financial contributions will be required, which is included as a condition of approval.

B. ZONING ASSESSMENT

1. General Assessment: The proposed building and parking structure is located in the IS-FBC zone and includes one UN, a split UN/UT, and one UT frontages. On UN streets there is a three-story minimum and a four-story, 45' maximum. On UT streets the height maximum is six stories and 65'. The project appears to meet the height, setback requirements. The proposal is taking advantage of the ability to have a height bonus on the UT portions of the building – this takes the building up to six stories and potentially 77'. The project meets the maximum building length on Hampshire and Federal Streets (Federal Street frontage is split between two zones). The project seeks to use Additional Building Length provisions on Franklin Street. The building may be up to 200' (157' proposed) in length given certain requirements which the project meets by using structured parking. On Hampshire Street, which can allow up to 50' (50' proposed), the project includes a commercial ground floor but this cannot be used for additional building length. See the Zoning Checklist for a complete analysis (Attachment 1).

2. Staff Analysis: The intent of the zone is for new buildings to be human-scaled and contextual – staff feel the intent of the zone and subdistrict purpose statements are being met by the project as currently proposed.

   14-275.1 Purpose: *The India Street Form-based Code is different that traditional zoning, . . . The intent of the India Street Form-based Code Zone is to establish a zoning district that encourages a vibrant, walkable, mixed-use urban district, preserves and values the existing historic neighborhood fabric, and fosters and supports local businesses and residential areas.*

   Outstanding Zoning questions:

   - Height – The height bonus on Franklin Street is contingent on meeting the green roof requirements which shall be a condition of approval – calculations, recorded maintenance agreement, condo documents, plat

C. SUBDIVISION STANDARDS

(14-497(a). Review Criteria)

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

1. Water, Air Pollution

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

2 & 3. Adequacy of Water Supply
The applicant has provided evidence of capacity from the Portland Water District with conditions (Attachment P).

4. Soil Erosion
No unreasonable soil erosion or reduction in the capacity of the land to hold water is anticipated. Site Plan (Plan P6) and Erosion Control Plan (Plan P7) provide information about stabilizing the site during and after construction.

5. Impacts on Existing or Proposed Highways and Public Roads
The applicant has provided a full traffic and transportation analysis. Tom Errico, the city's consulting traffic engineer, has made the following comments on impacts to the future Franklin Street design (Attachment 3).

- *Based upon trip generation estimates provided by the Applicant, the Applicant shall contribute $14,300 towards implementation of improvements to the Franklin Street transportation influence area.*

6. Sanitary Sewer/Stormwater Disposal
A 6-inch sewer line is proposed to service the building and would outlet to Hampshire Street. No grease trap is proposed – restaurant uses are not allowed as part of the building. The applicant received Wastewater Capacity Authorization from the Department of Public Works (Attachment W).

The greenroof is proposed to achieve a height bonus – that green roof will be required to meet Chapter 32 and provide stormwater runoff detention – shown through calculations. The applicant has provided stormwater management and utility plans as well as information for the green roof details and specifications (Attachments S, P20 and P25). The City's consulting civil engineer will review the outstanding information (conformance with Chapter 32, calculations) as a condition of approval (Attachment 2).

7. Solid Waste
The applicant has proposed a trash and recycling room adjacent to the residential entrance and has indicated in the condominium documents that residents are responsible for engaging a waste management contractor to provide waste removal service. The project is not anticipated to cause an unreasonable burden on the ability of the city to dispose of solid waste (Attachments L and X).

8. Scenic Beauty
This proposal is not deemed to have an adverse impact on the scenic beauty of the area. The project is not within a historic district or within 100' of a historic landmark.

9. Comprehensive Plan
India Street Sustainable Neighborhood Plan
This newly adopted neighborhood plan includes the following goals and principles which are met by this proposal:

Goal – Vitality – the project adds 30 new units bringing more people to the neighborhood
Goal – Diversity of building types and residents – The project targets a different demographic for the neighborhood.
Principle 7: Guided Growth – the project provides dense residential development on Franklin Street corridor, one of the areas identified as potential growth and infill development sites.
Principle 8: Form of Development – High residential density, maintaining the pedestrian-scale blocks, continuous sidewalks, and street-oriented buildings – these concepts are all included in the project.
Principle 13: Responsive to Climate Change – this will be the second project in the neighborhood to have a green roof and address stormwater runoff.

Incentives for Affordable Housing and *Housing – Sustaining Portland's Future*
The city believes that it is in the public interest to promote an adequate supply of affordable housing for its residents. The proposed project is required under the newly adopted Division 30, Section 14-487, Ensuring Workforce Housing to provide at least 10% workforce housing units. As described below and in (Attachment 5), the project proposes to provide three off-site rental units. Housing stock is placed in a multi-modal neighborhood with good connections to several neighborhoods, offices, and services.

10. Financial and Technical Capacity
As noted above, the applicant has provided evidence of financial and technical capacity (Attachment G).

11. Wetland/Water Body Impacts
Project is not located within a watershed of any pond or lake or within 250 feet of any wetland, great pond or river.

12. Groundwater Impacts
There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area
Per the FEMA flood maps, the site is not located in a flood zone.

14. Wetland/Water Body Impacts
No potential wetlands within the proposed subdivision.

15. Wetland/Water Body Impacts
No river, stream or brook within or abutting the proposed subdivision.

(14-497(c) Conformity with Code) *Any proposed subdivision shall be in conformity with all relevant provisions of this Code.* Project has been reviewed for conformity with the zoning code – see staff analysis above.

D. SITE PLAN STANDARDS

14-526 Site Plan Standards

Traffic - Access, Circulation, Loading and Servicing
The current proposal introduces one curb cut onto Federal Street for a single entry/exit for all 60 parking spaces. The project also includes one retail space (under 2,000sf) with proposed loading/service on Hampshire Street. Zoning requires surface parking to be set back 35' from the street –the applicant has reduced the surface paving to the minimum amount required to access the surface parking spaces.

The Traffic Engineering Reviewer has also noted the following (Attachment 3):

- *The location of the proposed driveway shall consider future Franklin Street improvement conditions (particularly that a new intersection of Federal Street and Franklin Street will be created – with possible traffic signal control).*
- *Truck deliveries are proposed on Federal Street, but circulation in and out of the space will be difficult given the dead-end street condition. Hampshire Street may be a more suitable location and additional review is required.*

The applicant shall coordinate with the Department of Public Works on the question of access for operations vehicles – this is a condition of approval.

Sidewalks – Staff previously had several revisions requested for the sidewalk design to meet the *City of Portland Technical Manual* standards especially regarding curb alignment, pedestrian crossings ramp, street trees, street

lighting placement and fixture selection that have now been addressed. The City is now satisfied by the current design of sidewalk connecting Federal and Franklin streets, including the ramps providing an ADA compliant solution without handrails. The Transportation Planner had these comments for final revisions (Attachment 4):

- *Bayside Light Detail - the detail is to indicate that a concrete base is to be installed with a reveal of 2"-4" above the sidewalk elevation*
- *Handicap Ramp - Note 2 is to be modified that Detectable Warning is to be full width and 24" depth of ramp (not full depth of ramp)*
- *Indoor bike rack specifications were provided in the Documents folder. These should be provided on a Detail sheet.*

The applicant is proposing to encroach on the City's ROW with a number of habitable bay windows over both Franklin and Federal Streets. The Planning Staff and Corporation Counsel do not support building proposals that occupy City property, especially when the building overhangs a public walkway. In the case of this project, the overhangs on Franklin Street do not occupy sidewalk space. In the case of Newbury and Hampshire Street, the overhangs are somewhat consistent with bays found within the context but should be designed to minimize dripping onto the public sidewalk which is a problem with balconies that overhang the public right-of-way in other projects. If the Planning Board approves the plan as presented, then the applicant must seek approval from the City Council. This is included as a condition of approval.

Public Transit Access - No transit shelter is required.

Parking – The zoning requires 27 parking spaces for the residential project. 60 spaces are proposed, 43 of which are for the residents of 56 Hampshire and includes three tiers of mechanical parking including one (1) required ADA space accommodated with a parked loading/unloading space adjacent to the lobby entrance. The parking is provided in a combination of structured, covered, and surface spaces (Plan P6). See the Zoning Analysis regarding the drive aisle within the 35' setback for surface parking. Furthermore, staff would like the condo documents to require structured parking spaces be associated with condo units and may not be sold separately.

The applicant intends to provide 17 residential surface parking spaces on-site for the neighboring apartment building. While the building is cantilevered over the spaces, the parking spaces are considered open surface parking spaces and ventilation is not required.

The new retail space is under 2,000 sf and does not require parking per the ordinance. It is unclear whether any retail parking spaces will be provided as part of this project.

The City proposes to re-assign and re-stripe the on-street parking on Federal Street allowing for one-hour parallel spaces on both sides of the street. Staff suggest that one on-street parking space on Hampshire Street be designated a 15-minute space or a commercial loading space. These have been indicated on the Site Plan (Plan P6).

- *A second 1-hour parking sign will be required on the north side of Federal Street near the corner of Hampshire Street. I would also suggest that No Parking signs be installed in the area west of the project driveway to ensure vehicles do not impact Dead End circulation movements. Lastly, there will be a period of time after the project is completed where temporary signs reinforcing the change from perpendicular to parallel parking on the south side of Federal Street will be required. The Applicant shall be responsible for all final and temporary parking/regulatory signs.*

Staff now support the requested waivers. The Traffic Engineering Reviewer has also noted the following regarding parking design (Attachment 3):
The Applicant has revised the plans to comply with outcomes of the parking maneuver simulation study. In general, I find the layout to be acceptable with the following Final comments:

- *Given the outcome of the Simulation Study, and that all vehicles can circulate on-site without backing onto Federal Street, I support a waiver from City Technical Standards for Aisle Width.*
- *A condition shall be placed on the project that backing maneuvers into Federal Street be prohibited (it is not a significant concern under current dead-end conditions, but safety concerns become problematic when Federal Street is reconnected to Franklin Street in the future).*
- *The Applicant has been coordinating handicap parking requirements with Bruce Hyman and it is my understanding the project meets ADA requirements for both mechanical parking facilities and the accessibility to 312 Congress Street.*
- *The Motorcycle/Snow Storage area shall include pavement markings that reinforce vehicles are prohibited from parking in that area.*
- *Several of the parking spaces do not meet Technical Standards for width and depth dimensions (some are wider/longer and some narrower/shorter). Given site constraints, vehicle turning template information, the results of the Simulation Study, and that vehicles have on-site circulation opportunities, I support a waiver for the size of the non-compliant parking spaces.*
- *The Plans have been revised and I find conditions to be acceptable. The Applicant has noted site constraints in the provision of a 16-foot wide driveway (18 feet is the minimum standard). Given anticipated low traffic volumes, I support a waiver from City Technical Standards*

Snow Storage – Shown against fence within surface parking area and out of the circulation path for cars. Additional snow storage has been added and the plans shall be revised to show the motorcycle and snow storage spaces marked with pavement markings.

Transportation Demand Management – Not applicable

Landscape Preservation / Site Landscaping and Screening – There are no significant landscape or natural features to preserve. The applicant shows landscape and fence screening between Franklin Street and the surface parking as well as the neighboring residential properties and the surface parking.

- The corner condition between the building and Congress Street has landscape and site improvements as a public amenity given that no building will be built on that corner
- The street-facing fence was revised to metal as appropriate facing a major, multi-modal street.
- Fence is now provided as screening between the surface parking and the neighboring residential properties

Landscape Plan – The applicant proposes substantial landscape improvements around the property including improvements to the public land between the building and Franklin Street and at the end of Federal Street. Landscape and screening are required at the surface parking both between the street and the neighboring residential properties (Plan P12). There is an existing solid wooden fence (on the residential parcels) that separates the existing parking lot from the adjoining residences. This fence will be re-installed after construction and a second wooden fence is proposed on the development site for further screening of the parking lot. Jeff Tarling has reviewed and approved the landscape plan as proposed but requests that as many existing street trees attempt to be saved as possible. If the trees cannot be saved, replacement plan as shown currently on the Landscape Plan is acceptable. There will need to be conditions of approval addressing the following:

- Condominium documents shall describe the condo association responsibility of maintenance of landscape improvements on public land (special pavers, understory plantings, and granite blocks).
- Landscape Plan shall be revised to describe or identify the landscape areas within the public right-of-way to be maintained by the condo association (special pavers, understory plantings, and granite blocks). The City will maintain the street trees within the right-of-way.
- The City Arborist evaluated the proposal to remove six (6) healthy street trees (Attachment 5). Revise the Construction Management Plan to reflect existing street trees to remain with appropriate measures. If trees cannot be saved, they will be replaced as shown in the current landscape/site plan.

- Thirty (30) trees are required, thirteen (13) are provided or existing = 17 trees x $400 = **$6,800 contribution to the Street Tree Fund**

Water quality, Stormwater Management and Erosion Control - Staff do not have significant concerns – see comments from Civil Engineer (Attachment 2). The project is achieving a height bonus by providing 50% pervious lot coverage and a green roof. Additional calculations are needed to show the runoff detention of the green roof meeting the expected public benefit in exchange for the height increase. As a condition of approval, the green roof must meet Chapter 32 and the applicant must provide a Stormwater Maintenance Agreement to be recorded with the Registry of Deeds.

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

The final submission was evaluated for the lighting and safety especially on the surface parking areas, Federal Street, and the landscaped area at the corner. The standards for illumination levels, cut-off fixtures, and fixture height are met. Visibility and sight lines in these areas are also maintained. Staff and the applicant discussed whether building lighting should be included on the side yard on Hampshire Street and determined that lighting was not needed – the side yard is lit at the street and then gated further back and will be inaccessible with a fence and landscaping. Not providing lighting in this location will also prevent light trespass onto the neighboring residential properties.

Fire Prevention and Public Utilities – Applicant has provided the letter from the Water District and Department of Public Works showing capacity to serve (Attachments P and W). Previous questions from Fire Prevention have been addressed by the applicant.

Massing, Ventilation and Wind Impact and Shadows: Generally addressed in the Design Review. The neighboring residential properties on Hampshire Street have expressed concern about the shadow impact from the 6 stories on their living and yard space. This is a concern, however, the project is currently meeting the zoning height requirements.

Historic Resources – The project is not within the historic district and not within 100' of a historic landmark.

Exterior Lighting incl Street Lighting – The photometric plan shows site lighting that meets the Technical Manual requirements. The Building lighting cut sheets meet the cut off requirement provided only the downlight options are used. One new street light will be provided on Federal Street and matches the lights installed elsewhere in the India Street neighborhood (Eastern Waterfront medium). Franklin Street will continue to have the cobra head fixtures existing to be replaced by the City with LED fixtures.

Noise and Vibration – The final submission shows a condensing unit facing the abutting residential property which does not meet the standard. In addition, the rooftop appurtenances are not shown in the elevations and renderings – staff would like a condition of approval that states no additional rooftop appurtenances shall be allowed beyond what was conveyed in the elevations and renderings and reviewed in this Site Plan application. Revisions to the roof forms or roof top appurtenances would need to be submitted for review either as a de minimis change or a Site Plan amendment.

Construction Management Plan – The final plan and narrative will need to be reviewed and approved as a condition of approval. The plan should include measures for preserving existing street trees and address staff comments on traffic management.

E. DESIGN STANDARDS

Figure 1 Preferred Hampshire Street façade composition with two bays

The site is located within the IS-FBC zone, Franklin Street is the UT subdistrict, Hampshire and Federal Streets are in the UN subdistrict. The UT subdistrict takes over on Federal Street 50' past the corner. Planning Board members discussed the importance of the Congress Street corner of the building conveying a gateway character without walling off the neighborhood; the character and façade composition on Hampshire Street; and the character of the fence on Franklin Street being too residential. The board commented that the grey brick was acceptable as a material choice.

Design review concluded that the building design generally meets overall intent of the zone with a few outstanding points regarding materials and character, garage ground floor design, and composition details (Attachment 1).

Revisions: The façade composition on Hampshire Street was revised to better relate in rhythm, proportion, and scale to the neighboring context. Canopies were also added to the commercial space to provide a human-scaled enclosure. The Hampshire Street mass was further differentiated from the Franklin Street mass through a break in the materials and a change in the bay window patterns. The applicant is requesting feedback on two façade composition alternatives – one bay window or two. The Federal Street façade has introduced a canopy at the residential entrance, and removed two of the utility doors. On Franklin and Congress Streets, the massing and form of the "grey box" was better defined by modifying the height and placement of the bay windows. Generally, the bays were revised to have a more consistent rational in their placement and to further the design concept of the bays being a dynamic element against the grey box. The character of the fence was also revised per comment. The Congress Street approach was revised to emphasize that hard edge of the grey box making the bay window more of an articulation element and providing a more clearly defined form. The applicant is requesting feedback on the top floor design as it appears from Congress Street – a more transparent, recessive approach versus a grey brick to continue the character of the building below. Detail and articulation was added to the ground floor garage wall. The project also adds some publicly accessible open space on the corner of Congress and Franklin. This space is an amenity for the neighborhood residents and visitors as well as providing a more attractive gateway feature.

Staff Analysis: The surrounding built context could be divided into the low-rise historic residential structures of the narrow Hampshire Street and the newer, large-scale development on the wide Franklin Street. The design priorities for new construction in this neighborhood are buildings that maintain the urban street wall, engage the public realm, and respect and fit into the established context. The design successfully creates interesting forms and massing, and maintains the street walls. The proposal orients the residential entrance and appropriately, the taller mass, to Federal and Franklin Street. The three-story mass on Hampshire Street is contextually sensitive in scale and provides an active ground floor with commercial use. **Staff support the revisions as proposed including the rhythm, scale, proportion of the façade, the addition of canopies. Staff strongly prefer the façade composition with two bays - staff felt the façade design should be more symmetrical to tie into that street context and convey a "front" or primary façade on Hampshire Street creating more of a secondary façade on Federal, again, referential of building orientation in the existing fabric.**

The view of the building from Congress Street creates a varied mass and roofline but **staff and Planning Board were concerned that this prominent view corner feels eroded rather than a strong, gateway presence. The revisions more clearly define the "grey box" massing with the bays as secondary, articulation elements. Staff see the advantages of both alternatives provided. One strategy, with the glass, is to make that top floor as recessive as possible bringing a stronger line to the primary grey box mass of the building. In this case, staff strongly recommend that the top floor also be physically stepped back from the building face to more successfully make it a recessive element. The alternative approach is to make the top floor adopt the visual language of the primary grey box form and provide a more solid substrate onto which the bays attach. The disadvantage with this approach is the 5th floor roof line becomes less clear for the primary building mass and form.** Visual interest is brought through massing variation, façade plane changes of the bay windows, and varied roof lines. There is a regular pattern of vertical proportioned windows, consistent with the traditional patterns. Materials: The grey brick and metal panel on the bays were supported by the Planning Board. **Staff request that samples of the metal be provided. Staff raise concern about the level of fiber cement panel on the building which is actually quite visible from much of the India Street neighborhood, effectively treating it like a back façade.**

Staff request Board feedback about:

- Congress Street design – massing, bonus story placement and materials (including consideration of a stepback of the top floor), relationship to the corner
- Hampshire Street façade composition – staff strongly prefer the option showing two bays on Hampshire Street
- Material selection - use of fiber cement panel on neighborhood-facing elevation

Figure 2 Option A

Figure 3 Option B

V. INCLUSIONARY ZONING CONDITIONAL USE

The applicant is required by Division 30, Section 14-487 to provide 3 workforce housing units (on-site or off-site) or pay the fee-in-lieu. The applicant has proposed to provide one (1) of these units off-site at 42 Hampshire Street as a three-bedroom. The remaining two (2) units will be accounted for through the fee-in-lieu. Several conditions of approval are proposed as part of this approval. The Housing Program Manager has the following comments (Attachment 6):

- *The Applicant has elected to **provide one (1) unit off-site at 42 Hampshire Street consisting of one (1) three-bedroom unit,** and **pay a fee-in-lieu of $209,398** into the City's Housing Trust Fund in-lieu of the creation of two units of workforce housing. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required. The designated Workforce unit will be restricted to households earning up to 100% of Area Median Income (AMI). As such, the project has met the minimum requirements set forth in Sec. 14-487.*
- *Staff recommends the developer **provide a Capital Needs Assessment** for the building located at 42 Hampshire Street that would document capital needs for the foreseeable future and a plan to provide sufficient reserves to meet those capital needs. This assessment and plan for reserves shall be approved by the Planning Authority, who would retain the right to review the development to ensure that its capital needs are being met consistent with the approved Assessment.*
- *The Inclusionary Zoning Implementation Guidelines for Developers of Homeownership Housing requires all off-site units to be sufficient. Insufficient units that are run down or show signs of substantial wear and deterioration shall not be accepted as off-site units. Staff also recommends **the following improvements for the building located at 42 Hampshire Street** prior to issuance of the certificate of occupancy for 56 Hampshire Street:*
    - *Replace the boarded basement window with glass or a permanent, durable infill material;*
    - *Clean-up of the side yard and removal of plant overgrowth next to the building in the side yard and on Hampshire Street;*
    - *Repair of siding material in a way that is visually integrated with the existing siding.*

VI. STAFF RECOMMENDATIONS

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed subdivision, site plan, and conditional use for the Verdante development.

VII. 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 September 11, 2018 for application #2017-294 (Verdante) 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] that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual *Section 1.7.2.3 minimum driveway width*. The Planning Board [waives/does not waive] the *Technical Manual* standard (Technical Manual Section 1.7.2.3) to allow a driveway width of 16'0" to serve the new development as shown on Plan C3.0, and subject the requirement that no backing maneuvers shall be allowed onto Federal Street.
2. The Planning Board [finds/does not find] that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.14 *Parking Lot and Parking Space Design*. The Planning Board [waives/does not waive] the *Technical Manual* standard (Technical Manual Section 1.14) to allow the parking aisle widths within the parking structure to be narrower than the required 24 feet width, as shown on Site Plan C3.0.
3. The Planning Board [finds/does not find] that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.14 *Parking Lot and Parking Space Design*. The

Planning Board [**waives/does not waive**] the *Technical Manual* standard (Technical Manual Section 1.14) to allow some non-compliant parking stall dimensions within the parking structure to vary from the required 9'x18', as shown on Site Plan C3.0.

B. INCLUSIONARY ZONING

The Planning Board finds that the proposed development **is/is not** in conformance with the standards of the land use code and **approves/does not approve** the application subject to the following conditions:

PRIOR TO ISSUANCE OF BUILDING PERMIT for 56 Hampshire Street

1. That the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) as described in the memorandum from Housing Program Manager dated August 9, 2018;

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY for 56 Hampshire Street

2. That the Affordable Housing Agreement (AHA) be filed as covenant to the 42 Hampshire Street property's deed with the Cumberland County Registry of Deeds;
3. That the fee-in-lieu of $209,398 will be paid into the City's Housing Trust Fund;
4. That a Capital Needs Assessment for the building located at 42 Hampshire Street be submitted for review and approval by the Planning Authority as described in the memorandum from Housing Program Manager dated August 9, 2018;
5. That the following improvements be completed for the building located at 42 Hampshire Street:
    - Replace the boarded basement window with a durable and visually cohesive material;
    - Clean-up of the side yard and removal of plant overgrowth next to the building in the side yard and on Hampshire Street;
    - Repair of siding material in a way that is visually integrated with the existing siding.

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 11, 2018 for application #2017-294 (Verdante) 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 and **approves/does not approve** the application, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. **Subdivision Plat:** That the Subdivision Plat shall be finalized to the satisfaction of the Planning Authority, Department of Public Works and Corporation Counsel prior to signature by the Planning Board, to include references residential unit counts; on and off site parking requirements, stormwater management and green roof requirements, waste collection, Condominium Association documents and other relevant conditions and information.
2. **Easements and Licenses:** That other easement and licenses shall be finalized to the satisfaction of the Planning Authority, Department of Public Works, and Corporation Counsel prior to the Planning Board signature of the subdivision plat:
    i. Pedestrian access easement for the areas of the sidewalk that are not in the public right-of-way;
    ii. City Council approval of occupied building overhangs into the public right-of-way with associated fee. If approval is not granted, then the subdivision plat will be revised accordingly.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

3. **Traffic Impact Fee:** The Applicant shall contribute $14,300 towards implementation of improvements to the Franklin Street transportation influence area.

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

4. **Condominium Association Documents**: That the Condominium Association documents shall be revised to include references to the Stormwater Management Plan (inspection and reporting requirements), green roof zoning requirements, maintenance responsibilities of landscape and pavers within the public right-of-way in accordance with the landscape plan, and shall be finalized to the satisfaction of the Planning Authority, Department of Public Works, and Corporation Counsel.
5. **Storm Water Management:** The developer/contractor/subcontractor must comply with conditions of the submitted storm water management plan and sediment and erosion control plans. The owner/operator of the approved stormwater management system, and all assigns. shall comply with the City standards and state guidelines, including conditions of Chapter 32 Storm water including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.
    a. A Stormwater Maintenance Agreement for the stormwater drainage system and green roof shall be submitted for review by Planning Staff and 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.

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 11, 2018 for application 2017-294 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 and **approves/does not approve** the application, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The landscape plan shall be revised to note the landscape features to be maintained by the condominium association.
2. The applicant shall submit documentation as to how the existing street trees are to be saved under the Technical Manual standard, section 4.3 Preservation of Existing Vegetation and tree save measures shall be defined and located in the field as part of the preconstruction meeting.
3. The mechanical equipment should be located to the interior of the site, away from abutting residential properties and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof. No additional rooftop appurtenances shall be allowed beyond what is shown in the elevations and renderings and reviewed in this Site Plan application. Revisions to the roof forms or roof top appurtenances can be submitted for review either as a de minimis change or a Site Plan amendment for review and approval by the Planning Authority.
4. The final plans shall be revised to reflect staff comment regarding sidewalk design and details, bicycle parking details, pavement markings, and on-street parking signs.
5. The Applicant shall coordinate with the Department of Public Works that the dead end condition of Federal Street will accommodate truck turnaround for Operations vehicles.
6. The final architectural drawings shall be revised per Planning Board discussion and City Council decision regarding the building overhangs for review and approval by the Planning Authority.

PRIOR TO THE ISSUANCE OF A BUILDING PERMIT

7. Due to site constraints preventing the planting of required street trees in the right of way, the thirty street trees as required in Section 14-526(2)(b)(iii) of the Site Plan Ordinance cannot be met; the applicant shall contribute to the tree fund of $400 per tree for seventeen (17) trees for a total of $6,800.
8. Applicant shall submit to the Planning Authority and Building Authority for review and approval the final Construction Management Plan (CMP).

ON-GOING CONDITIONS

9. Backing maneuvers into Federal Street shall be prohibited.

ATTACHMENTS:

Attachments to Memorandum

1. Zoning and Design Checklist
2. Civil and Stormwater
3. Traffic Engineering
4. Transportation & Sidewalk
5. City Arborist
6. IZ Conditional Use

Public Comments

PC4 Judith Allen 4.23.18
PC5 Bill Stauffer 4.24.18
PC6 Judith Allen 7.17.18

Applicant's Submittal

A. Application
B. Right, title and Interest
C. Development Description
D. State & Federal Permits
E. Land Ordinance Review
F. Easements
G. Technical & Financial Capacity
H. Natural Features
I. Stormwater Management
J. Consistency with Master Plans
K. Utilities
L. Solid Waste
M. Fire Safety
N. Design Standards Review
O. HVAC Equipment
P. Water Capacity
Q. Details – Mechanical Parking
R. Details – Exterior Building Lighting Specifications
S. Details – Roof Garden Specifications
T. Details – Bike Hanger Specification
U. Construction Management Plan
V. Neighborhood Meeting Package
W. Wastewater Capacity
X. Condominium Documents Draft
Y. Parking and Traffic Information

Plans

P1 Cover Sheet
P2 General Notes
P3 Boundary Topographic Survey

P4 Recording Plat
P5 Existing and Demolition Plan

P6 Site Plan
P7 Grading Drainage, and Erosion Plan
P8 ESC Notes
P9 Utility Plan
P10 Site Details
P11 Utility & Drainage Details
P12 Landscape Plan
P13 Photometrics Lighting Plan
P14 1st Floor Plan
P15 2nd Floor Plan
P16 3rd Floor Plan
P17 4th Floor Plan
P18 5th Floor Plan
P19 6th Floor Plan
P20 Roof Plan
P21 Elevations
P22 Elevations
P23 Perspectives
P24 Diagram Pervious Surface Calculation
P25 Roof Garden Details

Development Review Checklist

IS-FBC

Level I / Level II / Level III / Master Plan
Project Name:__Verdante_____
Address:__56 Hampshire Street_____
Description: Alteration / Addition / New Construction
Date Received:__8/27/18_____ Prelim / Final
Planner:__Caitlin Cameron_____
Subdistrict UN / UT / UA

	Complies	More Info	Does Not Comply	N/A	Comments
PURPOSE					8/27/18 comment
General Guiding Principles	☒	☐	☐	☐	
Subdistrict Intent	☒	☐	☐	☐	UT Federal + Franklin; UN Hampshire/Federal
GENERAL DEV. STANDARDS					
(a) Prohibited Uses	☒	☐	☐	☐	Residential/retail
(b) Siting Standards					
Mid-Block Permeability	☐	☐	☐	☒	
Frontage Req. – Additional Building Length	☒	☐	☐	☐	UN Hampshire = 50' (bays exceed 50') UT Federal = 82' UN Federal = 50' UT Franklin = 157' with structured parking
Setbacks	☒	☐	☐	☐	No special conditions; 10' setbacks
Small Lot < 35'	☐	☐	☐	☒	
Side Yard less than 5'	☐	☐	☐	☒	
Special corner treatment	☐	☐	☐	☒	
Attached Buildings	☐	☐	☐	☒	
Landscaping & Screening					
Surface Parking	☒	☒	☐	☐	Screened by fence
1st Lot Layer - Height	☒	☐	☐	☐	6' max height
1st Lot Layer – Perm.	☒	☐	☐	☐	Visual permeability required above 2'
Other Lot Layer - Height	☒	☐	☐	☐	Fences in side and rear not to exceed 8' – fences above 6' require building permit

	Complies	More Info	Does Not Comply	N/A	Comments
(c) Height Standards					
Height Bonus - Eligible?	☒	☐	☐	☐	UT eligible streets – 1 bonus story allowed; Height not to exceed 77' from average grade
Height Bonus – Conditions Green Roof + Pervious = 50% lot	☒	☒	☐	☐	Staff are still reviewing green roof details, area calculations. If the floor plan changes as a condition of approval, updated pervious diagram needed. Exactly 50% of roof area (6,909sf) proposed as green roof (50% roof area required) Exactly 50% of lot area shown as pervious (9,683sf) (50% lot area required). See Civil comments for further info.
(d) Parking Standards	☒	☐	☐	☐	27 spaces required, 60 spaces provided (+17 for neighbor, 43 residential); Not all Tech Manual standards met – see Traffic Comments, Additional information requested
SUBDISTRICT DIMS REQ.					
Siting Standards					
Orientation	☒	☐	☐	☐	UT principal façade; UN retail facade
Corner Condition	☐	☐	☐	☒	
Lot Coverage	☐	☒	☐	☐	71%
Frontage Requirements					
Building Length	☐	☒	☐	☐	
Additional Bldg Length	☒	☐	☐	☐	Franklin and Federal complies; Hampshire Street not seeking additional building length
Fenestration Req. (UA)	☐	☐	☐	☒	
Setbacks					
Principal Building					
Front Yard	☒	☐	☐	☐	0' - front yards; Increased front yard on Federal at Hampshire permitted to maintain maximum building length req on Hampshire
Side Yard	☒	☐	☐	☐	At least 10' on all side yards
Side Yard	☒	☐	☐	☐	
Exceptions?	☐	☐	☐	☒	

Rear Yard	☐	☐	☐	☒	No rear yards
	Complies	**More Info**	**Does Not Comply**	**N/A**	**Comments**
Building Entries					
Frequency	☒	☐	☐	☐	Hampshire = 1 required, 1 provided; Federal = 1 required within UN, 1 provided; Federal = 1 required within UT, 1 door provided; Franklin = 1 required, 1 provided
Principal Entry Orientation	☒	☒	☐	☐	Principal entry on Federal; 1 retail entry on Hampshire; Building Code may not approve entry opening into public ROW on Franklin
Principal Entry Elevation	☒	☐	☐	☐	All entries (4) at grade
Height Standards					
Principal Building					
Height	☒	☐	☐	☐	Hampshire/Federal = UN 45'max; Federal/Franklin = UT 77' max
Stories	☒	☐	☐	☐	3 stories on Hampshire; 6 stories on Franklin.
Stepbacks (UT, bonus)	☒	☐	☐	☐	For UT building, 10' stepbacks required after 45' height for side yards adjacent to UN property.
Accessory Building(s)	☐	☐	☐	☒	
Parking Standards					
Surface Parking Location	☒	☐	☐	☐	Only minimum driveway needed to access surface parking allowed to encroach the 35' setback – more pavement than reasonably necessary should be eliminated and will be interpreted as surface parking area not meeting the setback.
Garage Door Setback	☒	☐	☐	☐	1st lot layer determined by façade plane, door is setback from building façade
Garage Door Opening	☒	☐	☐	☐	16' door

IS-FBC: Building Design Standards (BDS)

	Complies	More Info	Does Not Comply	N/A	Comments
BUILDING DESIGN STANDARDS (BDS)					Review (8/27/18) Caitlin Cameron, Deb Andrews
1. Neighborhood Context					
Intent	☒	☐	☐	☐	Staff and PB raised some question about the building relationship to the Congress/Franklin Street corner approach. This prominent corner should have a more "gateway" feel to the building viewed from this approach. Recommended adjustments include: 1) stepping the top floor away from the principal mass to become clearly recessive. Staff support the revisions to the Hampshire Street façade as having a more contextual relationship in rhythm, scale, and proportion. Staff strongly prefer the façade composition with two bays - staff felt the façade design should be more symmetrical to tie into that street context and convey a "front" or primary façade on Hampshire Street creating more of a secondary façade on Federal, again, referential of building orientation in the existing fabric. Landscape improvements at the corner address relationship of building to open space/ corner and to create street wall activity.
Guidelines	☒	☐	☐	☐	The bays are an appropriate, contextual element that help tie the project into the built forms of the context, but their placement is more contemporary. The ground floor height is much taller than surrounding context . This is especially apparent on Hampshire and Federal Streets – canopy or other adjustments were added to relate that ground floor to the context scale.

2. Massing & Proportion					
Intent	☒	☐	☐	☐	The building is creating a new context on Federal Street but must relate to an existing, smaller, and more traditional fabric on Congress, Hampshire, and Federal streets. See comments about adding scale elements to Hampshire/Federal ground floor.
Guidelines	☐	☒	☐	☐	Two options are proposed for the Congress St façade. The revisions more clearly define the "grey box" massing with the bays as secondary, articulation elements. Staff see the advantages of both alternatives provided. One strategy, with the glass, is to make that top floor as recessive as possible bringing a stronger line to the primary grey box mass of the building. In this case, staff strongly recommend that the top floor also be physically stepped back from the building face to more successfully make it a recessive element. The alternative approach is to make the top floor adopt the visual language of the primary grey box form and provide a more solid substrate onto which the bays attach. The disadvantage with this approach is the 5th floor roof line becomes less clear for the primary building mass and form.
Standard 2.1	☐	☐	☐	☒	
3. Articulation & Composition					
Intent	☒	☐	☐	☐	The bays are an appropriate, contextual element that help tie the project into the built forms of the context, but their placement is more contemporary. Staff strongly support the Hampshire St façade with two bay, symmetrical composition. The bays were revised to provide visual alignment and consistency.
Guidelines	☒	☐	☒	☐	Ground floor facing Hampshire is tall compared with context. Bays do not meet the guidelines and overhang public ROW.
Standard 3.1: 3 required	☒	☐	☐	☐	Each façade uses: bays, balconies, material change; Federal and Franklin include canopies at entries. Canopies were added to the commercial frontage to give a sense of enclosure and scale.

Standard 3.2	☒	☐	☐	☐	Detail and corbeled brick were added to the less active garage facades.
Standard 3.3: Blank Wall	☒	☐	☐	☐	
4. Fenestration					
Intent	☒	☐	☐	☐	The commercial use is clearly distinguished from the residential use in its design and fenestration. Bays were revised to have a more consistent treatment and clear rationale.
Guidelines	☒	☐	☐	☐	
Standard 4.1 (UA only)	☐	☐	☐	☒	
Standard 4.2	☒	☐	☐	☐	
Standard 4.3	☐	☒	☐	☐	What is VT of glass? Ribbed glass proposed.
Standard 4.4	☒	☐	☐	☐	

	Complies	More Info	Does Not Comply	N/A	Comments
5. Building Materials					
Intent	☒	☒	☐	☐	Brick is primary material – Staff review found that the grey brick is appropriate on Franklin Street where the context is more contemporary – PB commented they are supportive of grey brick. Staff also support the bay windows using a consistent material – provide samples. However, staff not supportive of the level of fiber cement panel on the elevations facing the neighborhood and Hampshire Street.
Guidelines	☒	☒	☐	☐	
6. Building Entries					
Intent	☒	☐	☐	☐	Entries provided on all street facades.
Guidelines	☒	☐	☒	☐	Bike room door could include sidelight or windows to make more active/distinguish from mechanical room door.
Standard 6.1	☒	☐	☐	☐	Principal entrance faces Federal Street.
Standard 6.2 (UA only)	☐	☐	☐	☒	
Standard 6.3	☒	☐	☐	☐	
Standard 6.4	☒	☐	☐	☐	
Standard 6.5	☒	☐	☐	☐	
Standard 6.6	☒	☐	☐	☐	Slight setback
Standard 6.7: Frequency	☒	☐	☐	☐	At least one entry is required on each façade; 2 on Federal (1 UN, 1 UT)
7. Roof Lines					
Intent	☒	☐	☐	☐	Circulation towers are integrated and minimized in the design. The design was modified to better define the 5th floor as the primary roof line.
Guidelines	☒	☐	☐	☐	
Standard 7.1	☒	☒	☐	☐	The rooftop systems do not appear in the elevations or renderings. In order to minimize the complexity of the roof form,

					staff do not support additional rooftop systems above what is shown in the application.
Standard 7.2	☒	☐	☐	☐	
8. Structured Parking					
Intent	☒	☐	☐	☐	The impact of the garage is minimized by a full wall; active street level is addressed by windows (with reeded glass, an active door and canopy).
Guidelines	☒	☐	☐	☐	The structured parking is integrated into the ground floor of the building using the same material palette as the rest of the building.
Standard 8.1	☒	☐	☐	☐	Façade includes: bays, balconies, change in material, canopy
Standard 8.2	☒	☐	☐	☐	Cars are fully concealed by wall and reeded glass will diffuse glare from headlights.
Standard 8.3	☒	☐	☐	☐	
Standard 8.4	☒	☐	☐	☐	

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire

Lauren Swett <lswett@woodardcurran.com> Fri, Aug 31, 2018 at 10:00 AM
To: Caitlin Cameron <ccameron@portlandmaine.gov>

Hi Caitlin,

For the 56 Hampshire project, what they have proposed for their stormdrain/sewer connections with oil water separators for the parking areas is acceptable.

They have provided design drawings and specifications for the green roof, and the pervious area/green roof area plan has been updated. As you noted, they have not provided the actual storage volume/depth provided by the green roof, but I think that could be a condition, as that will likely be driven by final design for construction.

If you have any questions, or need any other information, let me know.

Thanks!

Lauren

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

41 Hutchins Drive

Portland, Maine 04102

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

(800)426-4262 (office)

Email: lswett@woodardcurran.com

*Licensed in Maine and Wisconsin

Commitment & Integrity Drive Results

www.woodardcurran.com

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire Street - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Fri, Aug 31, 2018 at 10:39 AM
To: Caitlin Cameron <ccameron@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Caitlin – I have reviewed the project application materials and offer the following Final traffic comments.

- The Applicant shall conduct a trip generation analysis for the project for the weekday PM peak hour for assessing monetary contribution requirements for the implementation of Franklin Street improvements. The Applicant shall conduct the estimate for all land uses (an estimate was provided for the residential portion of the project only) and provide supporting calculations.

Status: The Applicant has conducted a trip generation estimate according to the Institute of Transportation Engineers (ITE). I find the estimate to be reasonable. As estimated, the project is expected to generate 22 weekday PM peak hour trips. Based upon trip generation estimates provided by the applicant, the applicant shall contribute $14,300 towards implementation of adopted improvements to Franklin Street.

Final Status: Based upon trip generation estimates provided by the Applicant, the Applicant shall contribute $14,300 towards implementation of improvements to the Franklin Street transportation influence area.

- The location of the proposed driveway shall consider future Franklin Street improvement conditions (particularly that a new intersection of Federal Street and Franklin Street will be created – with possible traffic signal control). Current plans indicate the driveway separation to Franklin Street will be 29 feet, which does not meet City standards. I continue to review this issue and will provide feedback in the future.

Status: Following a review of the Franklin Street Improvement Plan concept and the low number of vehicles entering and exiting the site, I find the driveway location to be acceptable.

Final Status: I have no further comment.

- Truck deliveries are proposed on Federal Street, but circulation in and out of the space will be difficult given the dead-end street condition. Hampshire Street may be a more suitable location and additional review is required.

Status: The Applicant has noted that the 15-minute parking space on Hampshire Street would accommodate delivery vehicles. Currently there is one 15-minute parking space and given closure of an existing driveway, additional on-street parking can be provided. It is suggested that the added parking space be designated as 1-hour. Additionally, the new on-street parking on the north side of Federal Street shall be designated as 1-hour parking. The Applicant shall be responsible for installation of signs and proposed locations shall be depicted on the site plan.

Final Status: The plans have been revised to address this comment. A second 1-hour parking sign will be required on the north side of Federal Street near the corner of Hampshire Street. I would also suggest that No Parking signs be installed in the area west of the project driveway to ensure vehicles do not impact Dead End circulation movements. Lastly, there will be a period of time after the project is completed where temporary signs reinforcing the change from perpendicular to parallel parking on the south side of Federal Street will be required. The Applicant shall be responsible for all final and temporary parking/regulatory signs.

- Parking aisle widths do not comply with City Technical standards and the Applicant shall provide technical/site information in support of a waiver.

Status: A parking maneuver simulation was conducted on August 16, 2018 and based upon the outcome parking space #12 shall be eliminated and adjacent spaces widened. Backing maneuvers will be required to enter some parking spaces. I find this condition to be acceptable given on-site space is available to adequately circulate. I would note that a condition shall be placed on the project that backing maneuvers into Federal Street be prohibited (it is not a significant concern under current dead-end conditions, but safety concerns become problematic when Federal Street is reconnected to Franklin Street in the future). As noted, vehicles will be able to turnaround on-site and thus avoid backing onto Federal Street. Lastly, it is my understanding that the handicap parking spaces are being redesigned and I will provide comments in the future.

Final Status: The Applicant has revised the plans to comply with outcomes of the parking maneuver simulation study. In general, I find the layout to be acceptable with the following Final comments:

- **Given the outcome of the Simulation Study, and that all vehicles can circulate on-site without backing onto Federal Street, I support a waiver from City Technical Standards for Aisle Width.**
- **A condition shall be placed on the project that backing maneuvers into Federal Street be prohibited (it is not a significant concern under current dead-end conditions, but safety concerns become problematic when Federal Street is reconnected to Franklin Street in the future).**
- **The Applicant has been coordinating handicap parking requirements with Bruce Hyman and it is my understanding the project meets ADA requirements for both mechanical parking facilities and the accessibility to 312 Congress Street.**
- **The Motorcycle/Snow Storage area shall include pavement markings that reinforce vehicles are prohibited from parking in that area.**
- **Several of the parking spaces do not meet Technical Standards for width and depth dimensions (some are wider/longer and some narrower/shorter). Given site constraints, vehicle turning template information, the results of the Simulation Study, and that vehicles have on-site circulation opportunities, I support a waiver for the size of the non-compliant parking spaces.**

- The driveway width on Federal Street appears to be narrower than City Technical Standards. The Applicant shall provide technical/site information in support of a waiver.

Status: The Applicant has noted site constraints in the provision of a 16-foot wide driveway (18 feet is the minimum standard). Given anticipated low traffic volumes, I support a waiver from the technical standards. I would note that the driveway width at the gutter line is not acceptable and should be narrowed. It is my understanding the driveway is being redesigned and I will provide comments in the future.

Final Status: The Plans have been revised and I find conditions to be acceptable. The Applicant has noted site constraints in the provision of a 16-foot wide driveway (18 feet is the minimum standard). Given anticipated low traffic volumes, I support a waiver from City Technical Standards

- All of the mechanical parking spaces do not meet City parking space dimensional standards. The spaces appear to be slightly narrower and slightly longer. I continue to review the details, but likely support a waiver from the City's Technical Standards.

Status: Given the parking manufacturer technical specifications provided by the Applicant, the system would be expected to function adequately. I find the system to be acceptable with the assumption that vehicle wait times are less than one minute and the system is designed to accommodate vehicles expected to be parking on-site. I have no further comment.

Final Status: I have no further comment.

- The Applicant shall provide information regarding how vehicles will be managed during wait periods for the mechanical parking system.

Status: The Applicant has noted that wait times are expected to be less than one minute. Given low traffic volumes, I do not expect vehicle backups onto Federal Street to be an issue. I have no further comment.

Final Status: I have no further comment.

- The Applicant shall provide information on how the eight tandem parking spaces (#9 through #16) will be managed.

Status: This comment is no longer relevant as the parking layout has been modified.

Final Status: I have no further comment.

- It appears the project is formalizing a Federal Street cross-section that results in a curb-to-curb width of 43 feet within a 66-foot right-of-way. A linear curb line shall be provided along the frontage (eliminate the pull-out area). The perpendicular parking spaces on the south side will likely be converted to parallel spaces. Further assessment of the cross-section is required.

Status: The plans have been revised and I have no further comment.

Final Status: I have no further comment.

- The Applicant should note pedestrian routing and access easement provisions between the parking spaces allocated to the abutting property and building entrances.

Status: The Applicant has noted that the route will be between 312 and 316 Congress Street. The proposed parking lot includes a handicap parking space and the Applicant shall confirm that ADA accessibility standards have been met. No response is provided as it relates to an access easement.

Final Status: The Applicant has coordinating handicap parking requirements with Bruce Hyman and it is my understanding the project meets ADA requirements for 312 Congress Street.

- The parking area servicing spaces #1 through #4 shall be designed to minimize pavement surface and comply with minimum aisle width requirements (24 feet). The plan shall be sufficiently detailed.

Status: The Applicant has provided vehicle turning information and has modified the plan. I find it to be acceptable and have no further comment.

Final Status: I have no further comment.

- The Applicant has provided a Construction Management Plan and my initial comments are noted below:
  - Specific details on material deliveries and associated traffic management shall be provided.
  - It seems very likely that some impact to Franklin Street will occur. Accordingly, the Applicant shall provide a Construction Management Plan addressing impacts to Franklin Street.
  - A temporary sidewalk is proposed on Hampshire Street adjacent to the project site. Greater detail is required on ADA compliance and end point transition.
  - Specific details on Contractor parking shall be provided.
  - The Contractor shall be responsible for snow removal on Federal Street between Hampshire Street and the end of the street.
  - Further review is required by the City as it related to the temporary closure of Hampshire Street.

Final Status: I would suggest a Condition of Approval include the final development of an approved Construction Management Plan (CMP) prior to issuance of any City permits. The revised CMP indicates the Franklin Street sidewalk is to be closed and greater detail on need and duration of this is required. Also, many of the above comments have not been addressed.

- Staff needs to coordinate with DPW as it relates to dead end conditions and truck turnaround for Operations vehicles.

Final Status: DPW is reviewing this item and will be providing a response.

If you have any questions, please contact me.

Best regards,

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

"One Vision, One Company"

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

PEX 2017-294 - Verdante: Street/Public ROW Comments

Bruce Hyman <bhyman@portlandmaine.gov> Thu, Aug 30, 2018 at 3:05 PM
To: Caitlin Cameron <ccameron@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>, Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>

Good afternoon, Caitlin,

The following are my comments on the latest project submittals for Verdante, 56 Hampshire Street.

C 6.0 Site Details

- Bayside Light Detail - the detail is to indicate that a concrete base is to be installed with a reveal of 2"-4" above the sidewalk elevation
- Handicap Ramp - Note 2 is to be modified that Detectable Warning is to be full width and 24" depth of ramp (not full depth of ramp)

C 3.0 Site Plan

- No further comments. Indoor bike rack specifications were provided in the Documents folder. These should be provided on a Detail sheet.

Please don't hesitate to contact me if you or the applicant have any questions on my comments.

Best regards,

Bruce
--
Bruce Hyman
Transportation Program Manager
Transportation Division

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

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

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire 2017-294 - prelim comments

Jeff Tarling <jst@portlandmaine.gov> Tue, Feb 20, 2018 at 12:59 PM
To: Caitlin Cameron <ccameron@portlandmaine.gov>

Hi Caitlin -

Street-trees:

The proposed 56 Hampshire Street project plans to remove 5 existing mature Honeylocust trees along Franklin Street. The project next door removed 3 Locusts two years ago significantly altering the continuous allee effect of the Honeylocust rows, planted in the 1970's, that stretch from Marginal Way to Commercial Street.

Unfortunately, 'Tree-Save' options are limited due to the canopy width interfering with proposed building structure. This project unlike the one next door does replace the lost street-trees with new upright version of Basswood, a native cousin to the European Linden. The 'American Sentry' Linden is an excellent choice to restore the Franklin Street boulevard due to its upright form.

Federal Street, Hampshire street-tree(s) - The project does not propose street trees on either Hampshire or Federal Streets. Depending on future overhead utilities there appears to be room along Federal Street for two street trees, likely using an upright shaped tree in a tree planter would be a good option. Currently we have one street-tree on Hampshire Street along the project frontage. Would recommend that the Hampshire Street tree be replaced if sidewalk width allows for adequate pedestrian passage.

Additional landscape planting in the area shown as 'loam & seed' could provide space for shade loving planting. This could include Striped Maple, Stewartia, Viburnum, and herbaceous landscape planting. The shade between the existing and proposed buildings along with orientation is likely to result in a space challenging to maintain good turf. We would recommend revisiting landscape planting options for this area, this space could include small patio garden for residents. It is a small space that could have some contributing benefit to the future residents...

Project 'street-tree' requirements - The project frontage is along three city streets offering opportunities for planting to closer meet the standards. Limitations that prevent on street planting would trigger contribution to the Tree Fund to support additional tree planting near the project. The recent oridinace change in regards to Street-trees also requires a per tree removal cost to remove healthy street-trees. A quick check notes five (5) street trees lost on Franklin and one (1) street tree lost on Hampshire Street.

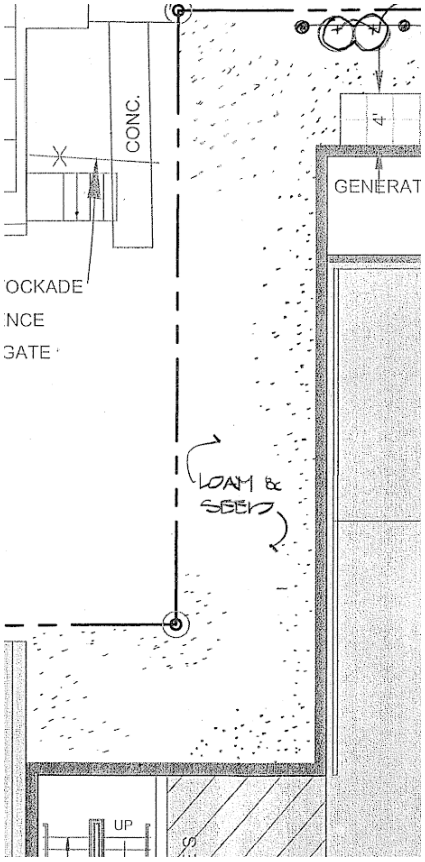
The project proposes a contemporary style wooden fence for screening where landscape planting space is limited.

Overall, the project proposes to make best use of placing trees and landscape planting with the Anthony Muench design landscape. The plant pallet is up to date and functional for this location. A second look at the tree & landscape review comments above is recommended.

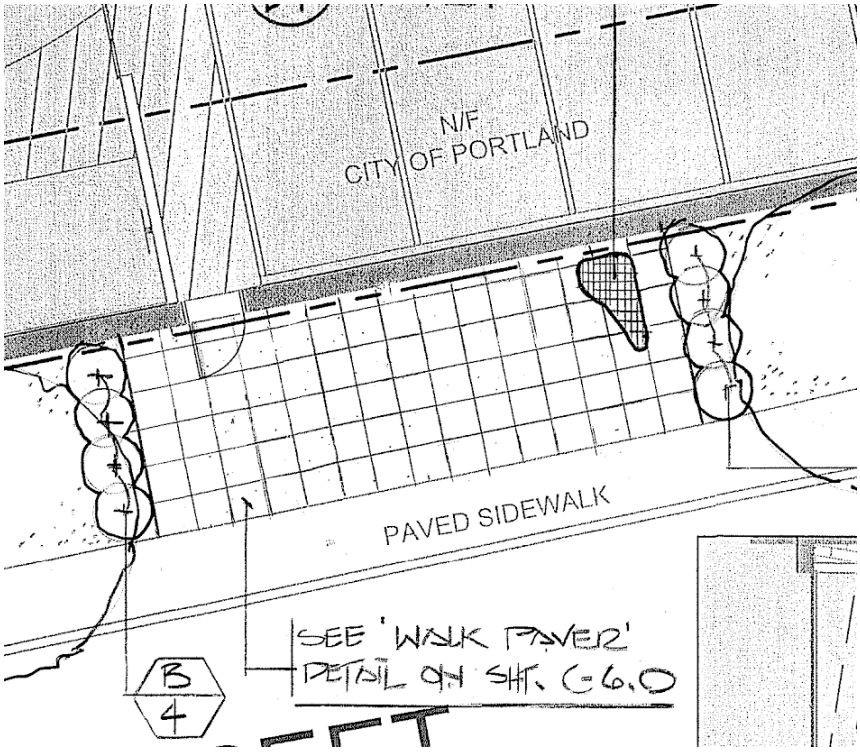
Thanks,

Jeff Tarling

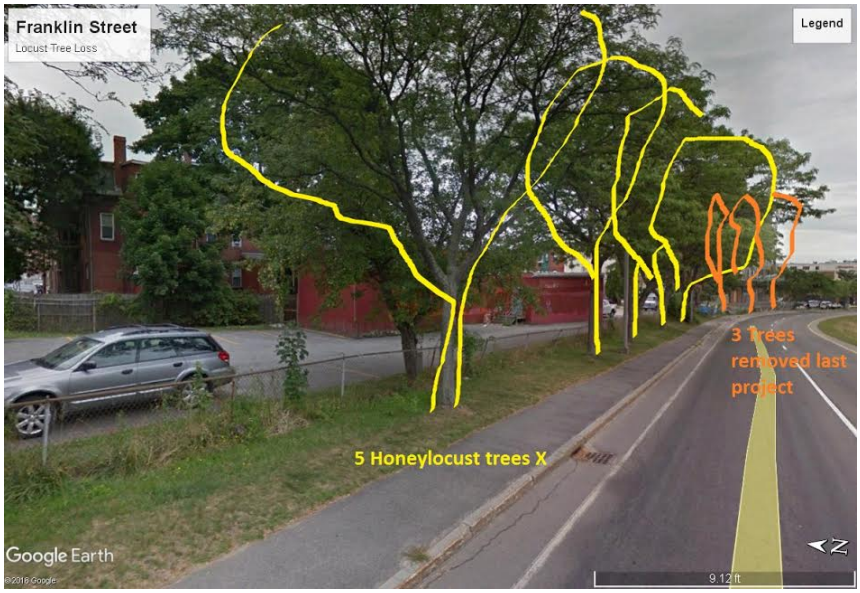
"Open" landscape space off Hampshire Street shown as 'loam & seed', a second look is recommended to see if the space could have a better use...



Project proposes sidewalk pavers to meet up with the existing sidewalk along Franklin Street. The width of the proposed walk could be narrowed slightly to allow for regular tree spacing and to reduce impact to the root zone of the new street trees.



Franklin Street tree loss, Yellow proposed, Orange trees lost in last project next door.



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
[Quoted text hidden]

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

To: Caitlin Cameron Planner, Planning & Urban Development Department

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: August 9, 2018

Subject: 56 Hampshire– Inclusionary Zoning Conditional Use

All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487, 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. 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.

As an alternative to providing workforce housing units, developers shall pay a fee-in-lieu of some or all of the units. 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. The in-lieu fee shall be 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 development located at 56 Hampshire Street proposes the creation of 30 units of owner-occupied housing consisting of nine (9) one-bedroom units, nine (9) two-bedroom units, and twelve (12) three-bedroom units. Based on the requirements outlined in Section 14-487, the development is required to provide a minimum of three (3) two-bedroom workforce units or pay a fee in lieu of some or all of the units. The Applicant has elected to provide one (1) unit off-site at 42 Hampshire Street consisting of one (1) three-bedroom unit, and pay a fee-in-lieu of $209,398 into the City's Housing Trust Fund in-lieu of the creation of two units of workforce housing. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required. The designated Workforce unit will be restricted to households earning up to 100% of Area Median Income (AMI). As such, the project has met the minimum requirements set forth in Sec. 14-487.

The Inclusionary Zoning Implementation Guidelines for Developers of Homeownership Housing requires all off-site units to be sufficient. Insufficient units that are run down or show signs of substantial wear and deterioration shall not be accepted as off-site units. Items for review include: heating systems, appliances, plumbing, roofing, siding, flooring, common areas, windows, landscaping/hardscape electrical wiring and fixtures, kitchen/bath countertops, fixtures and cabinets, bath/shower, or other typical elements of a unit or building that are nearing the end of their expected life cycle and may soon need replacement or maintenance. If other amenities, such as air conditioning, dishwasher or washer and dryer are provided for the new market rate units than comparable amenities shall be provided for the off-site Workforce unit.

Off-site units shall be delivered safe in accordance with all federal, state, and local environmental regulations pertaining to lead paint, asbestos, mold. Radon, and any other hazardous conditions common to residential structures. All reasonable tests, including but not limited to lead paint tests and radon tests shall be completed prior to the sale or lease of a unit.

Developers of condominium projects providing off-site Workforce units may choose to provide the off-site Workforce units for rent at 100% AMI with City approval. The City will only grant approval if there is a management plan in place that provides for stable and capable long term management of the Workforce units by the developer or agreed upon third party. These units will have the same restrictions typical of Workforce Rental units.

Staff recommends the developer provide a Capital Needs Assessment for the building located at 42 Hampshire Street that would document capital needs for the foreseeable future and a plan to provide sufficient reserves to meet those capital needs. This assessment and plan for reserves shall be approved by the Planning Authority, who would retain the right to review the development to ensure that its capital needs are being met consistent with the approved Assessment.

Staff also recommends the following improvements for the building located at 42 Hampshire Street prior to issuance of the certificate of occupancy for 56 Hampshire Street:

Replace the boarded basement window with a durable and visually cohesive material;
Clean-up of the side yard and removal of plant overgrowth next to the building in the side yard and on Hampshire Street;
Repair of siding material in a way that is visually integrated with the existing siding.

Staff recommends the agreed upon fee-in-lieu of $209,398 will be paid into the City's Housing Trust Fund prior to issuance of the certificate of occupancy for 56 Hampshire Street.

Staff recommends the Board Approve this Conditional Use provided the Applicant complies with all staff recommendations as detailed in this memo, and the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) before a Building Permit may be issued. The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Unit and will be filed as covenant to the property's deed with the Cumberland County Registry of Deeds prior to issuance of the certificate of occupancy for 56 Hampshire Street.

Sincerely,

Victoria Volent
Housing Program Manager

Level III – Preliminary and Final Site Plans
Development Review Application
Portland, Maine

Planning and Urban Development Department
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

Level III: Site Plan Development includes:

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14), Design Manual and Technical Manual.

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719
planning@portlandmaine.gov

Office Hours
Monday thru Friday
8:00 a.m. – 4:30 p.m.

I. Project Information (Please enter n/a on those fields that are not applicable)

Project Name:	Verdante at Lincoln Park
Proposed Development Address:	56 Hampshire Street, Portland, ME 04101
Project Description:	6-story, 31-unit residential condominium development with ground floor retail
Chart/Block/Lot:	Map 28, Block C, Lots 13 & 18, and 12' wide City of Portland owned easement
Preliminary Plan	X
Final Plan	

II. Contact Information (Please enter n/a on those fields that are not applicable)

APPLICANT

Name:	Chip Newell
Business Name:	NewHeight Group
Address:	118 Congress Street, Unit 401
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-633-4328
Home #:	
Cell #:	
Fax #:	
E-mail:	chip@newheightgroup.com

OWNER

Name:	NewHeight Group
Address:	118 Congress Street, Unit 401
City/State:	Portland, ME
Zip Code:	04101
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Michael Tadema-Wielandt, P.E., Terradyn Consultants, LLC
Address:	565 Congress Street, Suite 310
City/State:	Portland, ME
Zip Code:	04101
Work #:	
Home #:	
Cell #:	207-632-9010
Fax #:	
E-mail:	mtw@terradynconsultants.com

BILLING (to whom invoices will be forwarded to)

Name:	NewHeight Group
Address:	118 Congress Street, Unit 401
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-633-4328
Home #:	
Cell #:	
Fax #:	
E-mail:	erin@newheightgroup.com

ENGINEER

Name:	Michael Tadema-Wielandt, P.E., Terradyn Consultants, LLC
Address:	565 Congress Street, Suite 310
City/State:	Portland, ME
Zip Code:	04101
Work #:	
Home #:	
Cell #:	207-632-9010
Fax #:	
E-mail:	mtw@terradynconsultants.com

SURVEYOR

Name:	Randy R. Loubier, Owen Haskell, Inc.
Address:	390 U.S. Route One
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	207-774-0424
Home #:	
Cell #:	
Fax #:	
E-mail:	rloubier@owenhaskell.com

ARCHITECT

Name:	David Lloyd, Archetype, P.A.
Address:	48 Union Wharf
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Zip Code:	04101
Work #:	207-772-6022
Home #:	
Cell #:	
Fax #:	
E-mail:	lloyd@archetypepa.com

ATTORNEY

Name:	
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Michael Tadema-Wielandt, Terradyn Consultants
E-mail:	mtw@terradynconsultants.com
Name:	Adrienne Fine, Terradyn Consultants
E-mail:	adrienne@terradynconsultants.com
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

☐	Less than 50,000 sq. ft.	$750.00
☑	50,000 – 100,000 sq. ft.	$1,000.00
☐	100,000 – 200,000 sq. ft.	$2,000.00
☐	200,000 – 300,000 sq. ft.	$3,000.00
☐	Over 300,000 sq. ft.	$5,000.00
☐	Parking lots over 100 spaces	$1,000.00
☐	After-the-fact Review	$1,000.00 + applicable application fee above

PLAN AMENDMENTS (check applicable review)

☐	Planning Staff Review	$250.00
☐	Planning Board Review	$500.00

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☐	Stormwater Quality	$250.00
☑	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [31] x $25.00 each	$ 775.00
☐	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 1,775.00

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

V. PROJECT DATA (Please enter n/a on those fields that are not applicable)

TOTAL AREA OF SITE	18,685	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	18,685	sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	16,555	sq. ft.
Impervious Area (Total Proposed)	9,304	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	5,118	sq. ft.
Building Footprint (Total Proposed)	12,755	sq. ft.
Building Floor Area (Total Existing)	approx. 5,118	sq. ft.
Building Floor Area (Total Proposed)	62,025	sq. ft.
ZONING		
Existing	IS-FBC	
Proposed, if applicable	IS-FBC	
LAND USE		
Existing	Commercial	
Proposed	Residential and Retail	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	0	
# of Residential Units (Total Proposed)	31	
# of Lots (Total Proposed)	31	
# of Affordable Housing Units (Total Proposed)	0 on-site	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	0	
# of One-Bedroom Units (Total Proposed)	8	
# of Two-Bedroom Units (Total Proposed)	15	
# of Three-Bedroom Units (Total Proposed)	8	
PARKING SPACES		
# of Parking Spaces (Total Existing)	14 striped	
# of Parking Spaces (Total Proposed)	62	
# of Handicapped Spaces (Total Proposed)	2	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	13	
ESTIMATED COST OF THE PROJECT	$12,950,000	

VI. APPLICANT SIGNATURE

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a ***legal signature*** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:	Erin Corcoran, NewHeight Group
Date: 12.19.17	

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
X		1	Completed Application form
X		1	Application fees
X		1	Written description of project
X		1	Evidence of right, title and interest
X		1	Evidence of state and/or federal approvals, if applicable
X		1	Written assessment of proposed project's compliance with applicable zoning requirements
X		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
X		1	Written requests for waivers from site plan or technical standards, if applicable.
X		1	Evidence of financial and technical capacity
X		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
X		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
X		Proposed grading and contours;	
X		Existing structures with distances from property line;	
X		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
X		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
X		Preliminary infrastructure improvements;	
X		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
X		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
X		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
X		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
X		Exterior building elevations.	

2. Right, Title and Interest

2.1 OVERVIEW

The applicant is NewHeight Group. The project site is made up of three parcels that the applicant controls through ownership or purchase & sale agreements, as summarized in the table below. Copies of the property deed and agreements are attached in attachment 2-A.

Parcel	Map-Block-Lot	Owner	Applicant Interest
1	28-C-13	Rebeco, LLC	Purchase & Sale Agreement
2	28-C-18	Clark Box, LLC	Purchase & Sale Agreement
3	12’ wide parcel between Parcel 1 and Franklin Street	NewHeight Ventures II, LLC	Ownership

2.2 ATTACHMENTS

Attachment 2-A – Property Deed and Purchase and Sale Agreements

ATTACHMENT 2-A

Title, Right, or Interest Documentation

QUITCLAIM DEED WITHOUT COVENANT

CITY OF PORTLAND, a body corporate and politic and Maine municipal corporation ("Grantor"), FOR CONSIDERATION PAID, releases to **NEWHEIGHT VENTURES II, LLC** a Maine limited liability company having a mailing address of 118 Congress Street, Portland Maine 04101 ("Grantee"), certain real property, together with any improvements thereon, located on Federal Street, in the City of Portland, County of Cumberland and State of Maine (the "Property"), more particularly described on Exhibit A attached hereto and made part hereof.

MAINE REAL ESTATE TAX PAID

Meaning and intending to describe a portion of the premises conveyed to the Grantor by virtue of a Warranty Deed granted by P&J Corporation dated July 24, 1967, recorded in the Cumberland County Registry of Deeds, Book 3005, Page 375, and a portion of the premises conveyed to Grantor by virtue of a Warranty Deed from Hazel E. Montefusco dated October 24, 1967, recorded in the Cumberland County Registry of Deeds, Book 3017, Page 259.

By acceptance of this Deed, Grantee covenants and agrees to indemnify, defend, and hold Grantor harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Grantee or Grantor and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Property. The obligations set forth in this paragraph are intended to be and shall be considered covenants that run with the Property herein conveyed and shall bind all subsequent owners of the Property.

Signature page follows.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed on its behalf by Jon P. Jennings, its City Manager, duly authorized, on this 14 day of November, 2017.

WITNESS:

CITY OF PORTLAND

Jon P. Jennings
Its City Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

November 14, 2017

Personally appeared the above-named Jon P. Jennings, City Manager of the City of Portland, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity, and the free act and deed of said City of Portland.

Before me,

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

SONIA T. BEAN
NOTARY PUBLIC
State of Maine
My Commission Expires
April 8, 2024

Exhibit A

Federal Street

A certain lot or parcel of land on the northerly side of Franklin Street and the westerly side of Federal Street, in the City of Portland, County of Cumberland and State of Maine as shown on "Boundary & Topographic Survey at #56 Hampshire Street, Portland, Maine, made for The Newheight Group" by Owen Haskell, Inc. Dated January 27, 2017. Revised through June 27, 2017. OHI Job#2017-008P, bounded and described as follows:

Beginning on the westerly sideline of Federal Street at the southeasterly corner of land now or formerly of Rebeco, LLC recorded in Deed Book 27634, Page 128;

Thence, S 47°59'51" W along the westerly sideline of said Federal Street 12.81 feet to the northerly sideline of Franklin Street;

Thence, N 62°27'23" W along the northerly sideline of said Franklin Street 120.92 feet to the southeasterly corner of land now or formerly of Clark Box, LLC described as the second parcel in Deed Book 31943, Page 126;

Thence, N 38°10'37" E along the easterly line of land of said Clark Box, LLC 12.21 feet to land now or formerly of said Rebeco, LLC;

Thence, S 62°27'23" E along the southerly line of land of Rebeco, LLC 123.14 feet to the point of beginning. Containing 1,464 S.F. or 0.03 acres, more or less.

This conveyance is made subject to the covenants, agreements, and rights of others described in a certain access easement to use the land herein conveyed for purposes of travel by vehicles and pedestrians as set forth in a deed from the City of Portland to Ernest B. Woodard dated October 2, 1972 and recorded in the Cumberland County Registry of Deeds, Book 3554, Page 57, and the covenants, agreements, and rights of others described in a certain access easement to use the land herein conveyed for purposes of travel by vehicles and pedestrians as set forth in a deed from the City of Portland to Ralph J. Taliento and John J. Taliento dated January 6, 1972 and recorded in the Cumberland County Registry of Deeds, Book 3208, Page 82.

Received
Recorded Register of Deeds
Nov 16,2017 09:56:52A
Cumberland County
Nancy A. Lane

PURCHASE AND SALE AGREEMENT

THIS AGREEMENT made and entered into this 15th day of December, 2017, by and between **CLARK BOX, LLC**, a Maine limited liability company with a mailing address of 251 Danforth Street, Portland, ME 04102 ("Seller") and **NEWHEIGHT VENTURES II, LLC**, a Maine limited liability company having a mailing address of 118 Congress Street, #401, Portland, Maine 04101("Buyer")

WITNESSETH:

1. Premises. Seller agrees to sell and Buyer agrees to buy a certain parcel of land, located on the easterly side of Franklin Street, Cumberland County, Maine, consisting of approximately .128 acres of vacant land, as further described as the second parcel in the deed to Seller recorded in the Cumberland County Registry of Deeds in Book 31934, Page 126 (the "Premises"). Buyer intends to construct a building on a portion of the Premises and land which is adjacent to the Premises (the "Project").

2. Purchase Price. Subject to the adjustments and prorations hereinafter described, and in consideration of the other undertakings of the Buyer under this Agreement, Buyer agrees to pay for the Premises the sum of One Dollar ($1.00), which is to be paid at closing.

3. Title. Seller shall convey the Premises to Buyer at the closing in fee simple with good and marketable title, free and clear of all liens, claims and encumbrances. In the event that Seller is unable to convey title as aforesaid, upon written notice from Buyer, Seller shall use diligent efforts to remedy all title defects. In the event that said defects are not remedied within thirty (30) days from the date of such notice, then Seller's and Buyer's obligations hereunder, will terminate. Buyer may, at Buyer's option, elect to close notwithstanding such defects as may exist.

4. Closing. The closing of this transaction shall take place at the offices of Buyer's counsel upon fifteen (15) days' notice by Buyer to the Seller, but in no event later than June 30, 2018. At the Closing, Seller shall execute and deliver to Buyer, a Quitclaim Deed with Covenant to the Premises. In addition, Seller shall execute and deliver a seller's affidavit for title insurance purposes, a FIRPTA affidavit, an underground storage tank notification and disclosure form, REW forms, a document evidencing the termination of the Prior Access Easement (as defined in Section 10), and such other customary transfer documents as Buyer may reasonably request.

5. Risk of Loss, Damage, Destruction and Insurance. Prior to the Closing, the Premises shall be the sole responsibility of Seller and Seller shall bear the risk of any loss to the Premises whether by fire or otherwise. Seller agrees to maintain liability insurance upon the Premises.

6. Due Diligence. At all reasonable times during the term hereof, Buyer shall have the right to enter the Premises and perform such building inspections, engineering tests, soil tests, boundary surveys, hazardous waste investigations, water tests, or other inspections as

Buyer deems necessary or appropriate, all to be done at Buyer's sole cost and expense provided any testing done under this Section does not interfere with Seller's use of the Premises. Seller agrees to provide such information about the Premises as Seller has in its possession. Buyer agrees to return the Premises as nearly as possible to its original condition after all of such tests and inspections. Buyer shall complete all inspections no later than the Closing (the "Inspection Period"). If the results of any inspection done pursuant to this Paragraph are unsatisfactory to Buyer, Buyer shall have the right during the Inspection Period to terminate this Agreement by written notice. If at any time after the expiration of the Inspection Period the condition of the Premises changes materially and adversely, due to no action or fault of the Buyer, then Buyer may terminate this Agreement by written notice.

7. Representations and Warranties. Seller makes the following representations and warranties, upon which Buyer is expressly relying, notwithstanding Paragraph 6 above:

(a) There are no pending, or to the best of Seller's knowledge, threatened boundary disputes, violations of building codes or zoning ordinances or litigation with respect to the Premises or Seller's ownership thereof.

(b) To the best of Seller's knowledge after due inquiry, there are no hazardous or toxic materials, wastes or substances in or on the Premises in any amounts that would violate or require reporting or remedial or responsive action under any federal, state or local law or ordinance. Seller has received no notices from any federal, state or municipal body alleging a violation of any environmental laws.

(c) Seller is a validly created limited liability company in good standing under the laws of Maine and, has, or will have prior to Closing, all necessary power and authority to enter into this Agreement and to transfer the Premises to Buyer as provided hereunder.

8. Possession. Seller shall deliver the Premises to Buyer at closing free and clear of all leases, tenancies and occupancies by any person.

9. Adjustments, Proration and Closing Costs. Real estate taxes and assessments and all utilities shall be prorated as of the Closing on the basis of the latest available tax bill. The Maine real estate transfer tax shall be paid by Seller and Buyer. The recording fee for the deed and any expenses relating to Buyer's financing will be paid for by Buyer.

10. Seller's Prior Access Easement. At or prior to Closing, by instrument in form and substance satisfactory to Buyer, Seller agrees to terminate its rights to use the 12 foot strip of land, which is currently owned by the City of Portland and is being purchased by Buyer, as an access easement (the "Prior Access Easement"), and which is further described in Grantor's deed to the Premises. In that deed the right to use such strip of land is erroneously granted to Congress Street Properties, LLC when it should have been granted to Seller. Seller shall if necessary cause Congress Street Properties LLC to join in the termination of the Prior Access Easement, as determined in Buyer's sole discretion.

11. Buyer's Agreements. At or before Closing, Buyer agrees to provide Seller with the following:

(a) Buyer shall via an instrument to be recorded at Closing agree to provide Seller with the exclusive use of the area depicted on the plan attached as Exhibit A (the Exclusive Area) upon completion of (the "Parking Area"). Buyer and Seller agree that seller shall have the right to use the Exclusive Area for parking in any manner it chooses. Buyer agrees that its building will include a privacy wall shielding the Exclusive Area from Franklin Avenue. The privacy wall shielding the Exclusive Area from Franklin Avenue will be at least 6' in height, running the length of the Parking Area.

(b) Buyer shall provide Seller with a view easement, which shall prohibit Buyer from constructing any structure on the Premises which is located to the north of the line drawn on the attached Exhibit A. Buyer and Seller agree that the specific location of such line shall be mutually agreed upon prior to Closing.

(c) Buyer shall provide Seller with an easement or other instrument which provides for vehicular access to the Parking Area, through the ground-level parking garage for the Project. The exact dimensions and location of such access easement shall be determined by Buyer as part of its overall development plan. It is the intention of the parties that such easement shall replace the Prior Access Easement. Such easement shall be limited to vehicular access for tenants in Seller's apartment building at 312 Congress Street (together, "Seller's Tenants"), Seller, and Seller's maintenance staff member. Seller shall provide Buyer with the names and contact information for all Seller's Tenants who require parking, and the Buyer shall provide each such tenant, Seller, and Seller's maintenance staff member with electronic access to and from the Project's garage. The rights granted to Seller in such instrument shall not include the right to install utilities.

(d) Buyer shall provide Seller with fifteen (15) temporary parking spaces (the "Temporary Spaces") to be used by the Seller's Tenants during construction of the Project. The location of the Temporary Spaces shall be agreed upon by the parties prior to Closing. Seller agrees that the Temporary Spaces will not be located on the Premises but shall be located as near to the Premises as is reasonably possible. Buyer's obligation to provide the Temporary Spaces shall expire when the Parking Area is made available to Seller's Tenants.

(e) Buyer shall give J. Daniel Hoffman, Manager of Seller, the option to invest a minimum of $100,000.00 into the Project, such investment to be subject to reasonable terms and conditions including mutually satisfactory buy out provisions.

(f) Subsequent to completion of the Project, Buyer agrees to plow and maintain the Parking Area at its sole expense.

(g) No later than the Closing, Buyer agrees to pay Seller the amount of $5,000.00, to be used by Seller to paint the northwest side of Seller's building located at 312 Congress Street.

(h) Buyer agrees to pay Seller the total amount of $18,000.00 to cover Seller's loss in rents during construction of the Project, to be paid in monthly installments of $1,500.00 for twelve months during construction of the Project.

(i) During any period of time between Closing and commencement of construction on the Project, Seller and Buyer shall enter into a lease, in a form which is reasonably acceptable to both parties, under which Buyer shall lease the Premises to Seller for the sum of $1.00 per year. During the term of such lease, Seller shall be free to operate the Premises as it has prior to Closing, and Seller shall be responsible for all costs associated therewith.

(j) Buyer shall provide Seller a copy of the proposed condominium documents as they pertain to parking, the Parking Area and Seller's access to the Parking Area.

The provisions set forth in this Section 11 are intended by the parties to survive the closing.

12. Buyer's Conditions Precedent. Buyer's obligation to close hereunder and to perform its obligations under Section 11 above are subject to satisfaction of the following conditions at or before Closing:

(a) As of the date hereof, and as of the date of closing, all of Seller's representations and warranties shall be true and correct in all material respects.

(b) Buyer shall have received a written, recordable instrument, in a form which is acceptable to Buyer and which can be recorded at Closing, evidencing Seller's termination of the Prior Access Easement.

(c) Buyer shall have received a written recordable instrument, in a form which is acceptable to Buyer and which can be recorded at Closing, evidencing Congress Street Properties, LLC's termination of its rights under the Option to Lease Real Estate recorded in said Registry in Book 31943, Page 128.

(d) As of the date of Closing, there shall have been no material adverse change in the Premises.

If any of the foregoing conditions is not satisfied as of the date specified, or if no date is specified, by the Closing, Buyer shall have the right to terminate this Agreement, whereupon Buyer shall be relieved of all obligations under this Agreement, including, without limitation, those set forth in Section 11.

13. Seller's Conditions Precedent. Seller's obligation to close hereunder is subject to satisfaction of the following condition at Closing:

(a) Seller shall have received written documents, the forms of which are reasonably acceptable to Seller, evidencing the items set forth in Section 11(a)-(f).

If the foregoing condition is not satisfied by the Closing, Seller shall have the right to terminate this Agreement.

14. Default and Remedies. In the event of default hereunder, both parties shall have available all remedies at law and in equity.

15. Brokers. The parties represent to each other that neither has had any dealings with any real estate broker in connection with this transaction. Each party agrees to indemnify the other from and against the claims of any brokers arising from this transaction, which indemnity shall survive the closing and shall include reasonable costs of collection, including reasonable attorneys' fees.

16. Miscellaneous. Time is of the essence of this Agreement. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the recipient at the address set forth at the beginning of this Agreement. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein. Seller's representations and warranties, and Buyer's obligations under Section 11 above, shall survive the closing. All documents and instruments called for under this Agreement shall be prepared using commercially reasonable terms and conditions, and the parties shall negotiate the same in good faith, including negotiating in good faith any commercially reasonable, mutually acceptable changes that may be required as a result of the approval process for the Project. This Agreement will inure to the benefit of and bind the respective successors and assigns of Seller and Buyer. This Agreement may not be assigned by Buyer without the written consent of Seller. This Agreement may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, but all of which together shall constitute one and the same instrument. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of the masculine shall include, where appropriate, the feminine and neuter. This Agreement shall be governed by and construed in accordance with the laws of Maine. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

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

WITNESS:

CLARK BOX, LLC, Seller

By: J. Daniel Hoffman, its Manager

NEWHEIGHT VENTURES II, LLC, Buyer

By: _____
Erin Cooperrider, its Managing Member

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Exhibit A

HAMPSHIRE STREET
65 HAMPSHIRE
60-62 HAMPSHIRE
312 CONGRESS
RETAIL B 960 GSF
RETAIL A 666 GSF
GENERATOR
WATER HEATER ROOM
LOBBY
MAIL
TRASH
BIKES
ELEC.
16 ADA
MECHANICAL PARKING 2 LEVELS - 19 SPACES OR 3 LEVELS - 29 SPACES
48 OR 65 PARKING SPACES 1 OF WHICH IS A TANDEM SPACE
BIKE S
MECHANICAL PARKING 2 LEVELS - 13 SPACES OR 3 LEVELS - 20 SPACES
SPRINK
15 ADA
14
13
1 2 3 4 5 6 7 8 9 10 11 12
COMP
COMP
RAMP UP
10' REAR AND SIDE SETBACK
15' BONUS FLOOR STEPBACK
AREA CALCULATIONS
1ST FLOOR 12,173 GSF
2ND FLOOR 12,600 GSF 9 UNITS
3RD FLOOR 12,558 GSF 9 UNITS
4TH FLOOR 9,723 GSF 5 UNITS
5TH FLOOR 9,168 GSF 5 UNITS
6TH FLOOR 5,957 GSF 3 UNITS
62,179 GSF
31 UNITS
2 RETAIL SPACES
48 OR 65 PARKING SPACES
UP 50 FT PARALLEL TO HAMPSHIRE 45' HEIGHT LIMIT
UP HEIGHT LIMIT 65' + 12' BONUS
FEDERAL STREET
FRANKLIN STREET
SIDEWALK
30'-0"
50'-0"
1 1ST FLOOR
1/8" = 1'-0"
Exclusive Area
Prepared For: NewHeight Group
Consultant:
Architect: ARCHETYPE architects 48 Union Wharf Portland, Maine 04101
Project: VERDANTE Hampshire Street Portland, Maine
Revisions:
Date: DEC 4, 2017
Scale: 1/8" = 1'-0"
FIRST FLOOR
A1.1

PURCHASE AND SALE AGREEMENT

THIS AGREEMENT made and entered into this 21 day of December, 2017 by and between **REBECO, LLC**, a Maine limited liability company with a mailing address c/o Caremi Partners, Ltd, 888 East Las Olas Blvd, Suite 710, Fort Lauderdale, FL 33301 ("Seller") and **VERDANTE CONDOMINIUM, LLC**, a Maine limited liability company with a mailing address of c/o NewHeight Ventures II, LLC, 118 Congress Street, #401, Portland, Maine 04101 ("Buyer").

W I T N E S S E T H:

1. PREMISES. Seller agrees to sell and Buyer agrees to buy the land situated at 56 Hampshire Street, Maine and more particularly described in the deed recorded in the Cumberland County Registry of Deeds in Book 27634, Page 128 (the "Premises").

2. PURCHASE PRICE. The Purchase Price shall be Nine Hundred Thousand Dollars ($900,000.00), to be paid at the closing by Buyer to Seller in a form and manner reasonably satisfactory to both parties.

3. TITLE. Seller shall convey the Premises to Buyer at the closing in fee simple with good and marketable title, subject to easements, privileges, restrictions, agreements and like matters of record. In the event that Seller is unable to convey title as aforesaid, Seller shall be given a reasonable period of time, after notice in writing, in which to remedy any title defects. In the event that said defects cannot be corrected or remedied or in the event that Seller elects not to remedy same, Seller's and Buyer's obligations hereunder will terminate. Buyer may, at Buyer's option, elect to close notwithstanding such defects as may exist without any reduction in the purchase price.

4. CLOSING. The closing of this transaction shall take place on January 31, 2018, at the offices of Curtis Thaxter LLC, One Canal Plaza, Portland, Maine, or, if the Buyer and the Seller shall mutually agree in advance and in writing, at another time and place. At the closing, Seller shall execute and deliver to Buyer a Quitclaim Deed with Covenant to the Premises (the "Deed").

5. RISK OF LOSS, DAMAGE, DESTRUCTION AND INSURANCE. Prior to the closing, the Premises shall be the sole responsibility of Seller and Seller shall bear the risk of any loss to the Premises whether by fire or otherwise.

6. CONDITION OF PREMISES. Buyer has made a physical examination of the Premises and agrees to accept the same in the condition they were in at the time of examination, reasonable wear and tear excepted. Seller has not made and does not make in this Agreement any representation or warranty as to the condition of the Premises.

7. POSSESSION. Seller shall deliver possession of the Premises to the Buyer free and clear of all leases, tenancies and occupancies by any person.

8. ADJUSTMENTS, PRORATION AND CLOSING COSTS. Real estate taxes and assessments shall be prorated as of the closing on the basis of the latest available tax bill. The Maine real estate transfer tax shall be paid by Seller. The recording fee for the Deed will be paid for by Buyer.

9. DEFAULT AND REMEDIES. In the event that either party defaults hereunder, the non-defaulting party shall have available all remedies at law and in equity.

10. MISCELLANEOUS. Time is of the essence of this Agreement. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the address set forth in the first paragraph hereof. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein. The rights of Buyer under this Agreement may not be assigned in whole or in part without written consent of Seller. This Agreement is subject to the Limited Liability Company Agreement of Buyer dated December 14, 2017 (the "LLC Agreement"), and if there are any discrepancies between it and this Agreement, the LLC Agreement shall control. This Agreement will inure to the benefit of and bind the respective successors and assigns of Seller and Buyer. This Agreement may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, but all of which together shall constitute one and the same instrument. The electronic signature of any party hereto shall be as binding as the original signature of such party for all purposes; and the copy of any party's signature to this Agreement delivered by facsimile, e-mail, or such other electronic means shall be as binding and enforceable as such party's original signature to this Agreement. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of the masculine shall include, where appropriate, the feminine and neuter. This Agreement shall be governed by and construed in accordance with the laws of Maine without regard to principals of conflicts of laws, including all matters of construction, validity, and performance. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

[Signature Page Follows]

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

WITNESS:

VERDANTE CONDOMINIUM, LLC, Buyer

By: NewHeight Ventures II, LLC, its Managing Member

_____

_____

By: _____
S.P. Newell, its Managing Member

REBECO, LLC, Seller

_____

By: _____
Ophir Barone, its Manager

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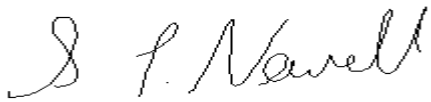
IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement as of the date first written above.

WITNESS:

VERDANTE CONDOMINIUM, LLC, Buyer

By: NewHeight Ventures II, LLC, its Managing Member

_____



_____

S.P. Newell, its Managing Member

REBECO, LLC, Seller

_____ By: _____

Ophir Barone, its Manager

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1. DEVELOPMENT DESCRIPTION

1.1 OVERVIEW

NewHeight Group intends to construct a 6-story, 31-unit residential building with commercial space on the first floor on an 18,685 square foot project site located at 56 Hampshire Street in Portland, Maine. The site is comprised of three separate parcels identified as lots 13 & 18, Block C, on the City of Portland Assessors' Map 28, and a 12' wide strip of land located between Lot 13 and Franklin Street, formerly owned by the City of Portland. The site is currently developed with two existing structures and paved parking.

1.2 PROJECT PURPOSE AND NEED

The proposed project includes redevelopment of a previously developed lot in an area that has utility infrastructure in place and will provide residential units that are compatible with the existing neighborhood. The proposed Verdante at Lincoln Park residences will be designed for young urban residents; some are expected to be first time homebuyers and some working professionals and Baby Boomers/Empty Nesters seeking a city home.

The unit designs focus on meeting the desires of these buyers by offering floor plans that match their varied lifestyles and use space as efficiently as possible. Included in the plans is a fitness room, a guest room, shared outdoor space and storage for gear such as bicycles. The building is designed to complement but not duplicate Luminato Condominiums, recently completed to the south of the proposed development.

Verdante's location in the increasingly vibrant East End will provide easy access to the neighborhood amenities, the arts and cultural experiences of Portland, and proximity to parks and recreation that city dwellers seek. Parking for the development will be located within the enclosed garage and on an existing surface lot at the north end of the site. The ground floor is also designed to include space for owner storage units, bicycle storage, and trash/recycling. Two retail units are also located on the ground floor along the Hampshire Street frontage.

1.3 EXISTING CONDITIONS

The existing site includes two non-residential structures and paved parking and vehicle access surround the buildings. Nearly the entire site is covered with impervious surface. Underground utilities in Hampshire Street include water, gas, sewer, and storm drain. Overhead power and telecom services are on poles located on the west side of Hampshire Street.

Brick sidewalks with granite curb exist along the site's Hampshire Street and Federal Street frontages, and limited on-street parking is available on both streets. Cobra-head style street lights are located on two utility poles on Hampshire Street in front of the site. Four cobra-head style street lights are located along Franklin Street southwest of the site.

Hampshire Street and commercial uses abut the site to the north, Federal Street and residential uses abut the site to the east, Franklin Street abuts the site to the south, and residential uses and City owned land abut the site to the west.

The site is currently accessed from Hampshire Street, Federal Street, and across the 12' wide easement that benefits both Lots 13 and 18. The street conditions in the vicinity of the Project Site are:

Street Name	Description	On-street Parking	Sidewalk	Notes
Hampshire Street	Approximately 25' wide paved way with two-way traffic in a 40' wide public ROW.	Yes. Parallel parking on one side of the street in front of the site.	Brick	
Federal Street	Approximately 43' wide paved way with two-way traffic in a 66' wide public ROW.	Yes. Pull-in parking on one side of the street across from the site.	Brick	Federal Street is a dead end at Franklin Street in front of the site.

The site has an elevation change of less than 10' across the approximately 240' long parcel. It generally slopes to the southeastern property boundary. Photographs of the existing site are provided in Attachment A-1.

1.4 PROPOSED DEVELOPMENT

The development program includes the following components:

1.4.1 ON-SITE

A new six-story building with a footprint of 12,755 square feet will be constructed on the site. The first floor will feature two retail spaces, utility rooms, a lobby for the residential units, and covered parking. The second and third floors will each feature 9 residential condominium units, the fourth and fifth floors will each feature 5 residential condominium units, and the sixth floor will feature 3 residential condominium unit. The residential units will be between 700 and 2,300 square feet in size and will include designs for one to three bedrooms. The total number of residential units in the building is 31. The total building floor area is 62,025 square feet. The proposed building is within both the Urban Transitional (UT) and Urban Neighborhood (UN) subdistricts of the India Street Form Based Code (IS-FBC) zone. Within the Urban Neighborhood subdistrict the building will be 3 stories, approximately 40' tall. Within the Urban Transitional subdistrict the building will be 6 stories, approximately 77' tall. Elevation views and perspective renderings of the proposed building are provided in Attachment 1-B.

The retail spaces on the first floor will be on the Hampshire Street frontage and gain access from this street. One retail space is 960 s.f. and the other is 868 s.f.. A lobby for the residential units, bicycle storage, solid waste area, and mail room will all be located on the first floor between the retail spaces and covered parking.

1.4.2 OFF-SITE IMPROVEMENTS

The applicant is proposing improvements to the area between the end of Federal Street and Franklin Street, similar to those recently constructed at the end of Newbury Street, including a pedestrian connection between Federal and Franklin Streets. The applicant is also proposing landscaping improvements to the city owned park on the corner of Franklin and Congress Streets. This park is immediately adjacent to the proposed project.

1.5 TRAFFIC

The 31-unit condominium project is expected to generate between 16 and 17 vehicle trips during the PM peak hour and approximately 182 vehicle trips on a weekday. The relatively small amount of traffic that will be generated by the project is not expected to have a significant effect on the surrounding street network.

1.6 PARKING

The proposed project is required to have twenty-eight (28) parking spaces per ordinance requirements, as summarized in the following table:

USE	RATE REQUIRED	# OF SPACES
31 Residential Units	1 space per unit, first 3 units exempt is IS-FBC	28 Spaces
2 Retail Units each less than 2,000 sf	1 space per 200 sf of retail in excess of 2,000 sf	0 Spaces
	TOTAL	28 Spaces Required

The project includes 47 parking spaces for use by residents on the first floor of the building. Resident parking is provided in two - three level automated mechanical parking structures and two surface ADA parking spaces (labeled spaces 16 & 17 on the Site Plan).

Additionally, the applicant's Purchase & Sale Agreement with the owner of Lot 28-C-9 requires the applicant to provide access and exclusive use of the surface parking area at the north end of the parcel. This area is expected to include approximately 15 parking spaces, as shown on the Site Plan.

The developer currently intends that acquiring parking spaces will be an option in addition to the purchase price of the units, so that purchasers will be aware of the "true" cost of urban parking and decide if it is necessary for their lifestyle. This will materially lower the price of smaller units, making them more affordable to a wider group of wage earners. All buyers will have the option of purchasing one or two parking spaces.

1.7 UTILITIES AND STORMWATER

The proposed project will include the installation of new utility services to the building. All new utility services will be provided from the existing utilities available within Hampshire and Federal Streets. The proposed locations of the new utility services are shown on the

Utility Plan (Sheet C-5.0). More information on proposed utility services is provided in Section 11 of this application.

Post-development stormwater runoff will closely follow existing runoff patterns. Runoff from the building and parking will be collected in proposed subsurface drainage infrastructure that will convey stormwater to the existing subsurface drainage system in Federal and Hampshire Streets. The proposed project results in a decrease in impervious area. More information on stormwater runoff from the site is provided in Section 9 of this application.

1.8 ATTACHMENTS

Attachment 1-A – Existing Site Photographs
Attachment 1-B – Building Elevation Views & Renderings

ATTACHMENT 1-A

Existing Site Photographs

PHOTO 1 – STANDING ACROSS FEDERAL STREET, FACING WEST

PHOTO 2 –STANDING ALONG THE WESTERN PROPERTY BOUNDARY LOOKING INTO THE SITE, FACING SOUTHEAST

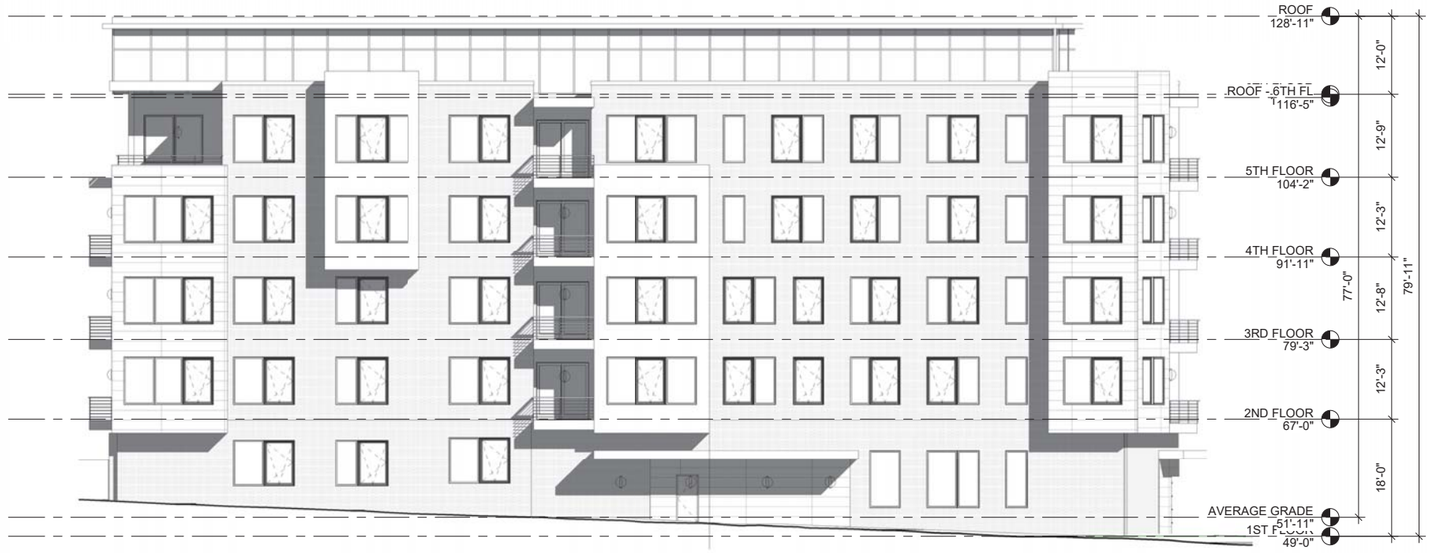
PHOTO 3 –STANDING ALONG HAMPSHIRE STREET AT THE NORTHERN PROPERTY BOUNDARY, FACING SOUTHWEST

Photos taken on 8/19/2017 by Michael Tadema-Wielandt of Terradyn Consultants, LLC

ATTACHMENT 1-B

Building Elevation Views & Perspective Renderings

1 CONGRESS ST. ELEVATION
3/32" = 1'-0"



2 FRANKLIN ST. ELEVATION
3/32" = 1'-0"

3 FEDERAL ST. ELEVATION
3/32" = 1'-0"

4 HAMPSHIRE ST. ELEVATION
3/32" = 1'-0"

VERDANTE

Federal Street Portland, Maine

DEC 22, 2017

A2.1

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

ONLY
DO NOT
ENTER

3. STATE AND FEDERAL PERMITS

The development is subject to Site Plan and Subdivision approval by the City of Portland and Building Permit(s) are also required. No additional State or Federal Permits are required.

4. LAND ORDINANCE REVIEW

4.1 OVERVIEW

The property currently lies within the City of Portland India Street Form-Based Code Zone (IS-FBC). The property frontage along Hampshire Street and the eastern portion of Federal Street is within the Urban Neighborhood Subdistrict (UN), and the property frontage along Franklin Street and the western portion of Federal Street is within the Urban Transitional Subdistrict (UT). The following Space and Bulk requirements apply to the IS-FBC Zone, UN – Urban Neighborhood Subdistrict:

	IS-FBC Zone Summary Dimensional and Parking Requirements Applied to 56 Hampshire Street		
Zoning Requirements	IS-FBC UN Zoning Standard	IS-FBC UT Zoning Standard	Project Site
Minimum Lot Size	None	None	18,685 s.f. *
Minimum Lot Area per Dwelling Unit	None	None	602 s.f.
Maximum Building Length	50 feet	100 feet	59’ / 132’ **
Front Yard	Min: 0 feet Max: 5 feet	Min: 0 feet Max: 10 feet	Approx. 1 foot
Minimum Side Yard	5 feet	10 feet	10 feet
Minimum Rear Yard	10 feet	10 feet	10 feet
Maximum Impervious Surface	90%	90%	50%
Maximum Building Height	45 feet	65 feet + 12 foot bonus floor	40 feet in UN 77 feet in UT ***
Parking Residential Use Adjacent Residence	1 space per unit, first 3 units exempt = 28 spaces 15 parking spaces for residential building at 312 Congress Street		62 on-site spaces (47 for Verdante, 15 for 312 Congress Street)

*The project site lot size includes the approximately 11,632 s.f. parcel identified as Lot 13 Block N on Tax Map 29, the approximately 5,589 s.f. parcel identified as Lot 18 Block N on Tax Map 29, and the adjoining 12’ wide parcel formerly owned by the City of Portland for a total of 18,685 s.f..

**The proposed maximum building length in the UN subdistrict is 59 feet, which meets the IS-FBC standards to allow additional building length by utilizing ground floor partitions and providing 2 retail spaces. The proposed maximum building length in the UT subdistrict is 132 feet, which meets the IS-FBC standards to allow additional building length by utilizing the structured parking exception.

***The portion of the proposed building in the UT Subdistrict will be 77 feet in height, which meets the IS-FBC maximum building height standard through the height bonus provisions. The frontage with the bonus height is along a UT Street so the building is eligible for a height bonus of one additional story up to 12' for implementing a green roof. The proposed green roof will cover more than 50% of the building roof, and a total of at least 50% of the cumulative lot area will be pervious (9,343 s.f.). Approximately 1,905 s.f. of vegetated area surrounds the building and driveway on the site, and there is a 7,440 s.f. green roof (59% of the total roof area) for a total of 9,345 s.f. of pervious area on the lot, which meets the requirements for the height bonus provisions. The total impervious area on site is 9,340 s.f., or approximately 50% of the site.

4.2 SHORELAND ZONING

The site is not located within the Shoreland Zoning District.

5. EASEMENTS OR OTHER BURDENS

5.1 OVERVIEW

Owen Haskell, Inc. completed a boundary survey of the site in January of 2017. A 12' wide easement benefitting both lots 13 and 18, across the land previously owned by the City of Portland, exists along the southwestern property boundary and connects to Federal Street. The existing easement will be terminated when the applicant purchases lots 13 & 18.

A new access easement will be created benefitting lot 28-C-4 and allowing residents of 312 Congress Street to access the surface parking at the north end of the project site.

6. TECHNICAL AND FINANCIAL CAPACITY

6.1 TECHNICAL CAPACITY

The applicant has assembled a highly qualified team of professionals to plan, permit, and develop construction documents for the project. The Team is working under the direction of Erin Cooperrider and Chip Newell of NewHeight Group as Project Developers. The Team services will be provided by the following companies and their respective team leaders:

6.2 CONSULTANT TEAM

Civil Engineer	Michael Tadema-Wielandt, P.E. Terradyn Consultants, LLC 565 Congress Street Portland, ME 04101 (207) 632-9010 – Cell (207) 221-1317 – Fax mtw@terradynconsultants.com
Surveyor	Randy Loubier Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, Maine 04105 (207) 774-0424 – Work (207) 774-0511 – Fax rloubier@owenhaskell.com
Architect	David Lloyd Archetype, PA 48 Wharf Street Portland, ME 04101 (207) 772-6022 – Work (207) 772-4056 – Fax lloyd@archetypepa.com
Electrical	Will Bennett, Jr. Bennett Engineering P.O. Box 297 Freeport, ME 04032 (207) 865-9475 – Work (207) 865-1800 – Fax

6.3 EXPERIENCE OF PROJECT TEAM

The team of consultants retained by the Developer has expertise and experience in the design of similar projects. Resumes of key personnel for the development team can be provided upon request.

The applicant, NewHeight Group, has significant experience in the development and management of large residential projects. NewHeight Group is a Maine-based real estate development and services firm with decades of experience in the residential, hotel, office, and retail industries. More than a company, it's a group of people committed to elevating lifestyles, transforming communities, and, ultimately, making Maine an even better place to live. The NewHeight Group team offers decades of experience that span all aspects of development including site acquisition, zoning and permitting, financing, design and construction, and marketing and sales.

NewHeight Group has a proven track record in condo design, construction, and community building in Portland, Maine. Most recently they completed two successful residential condominium projects on the East End of Portland, 118 On Munjoy Hill in 2015, and Luminato in 2017, both of which sold out quickly.

6.4 FINANCIAL CAPACITY

The applicant has the capacity to finance the proposed project. A letter of financial capacity for the project is contained in Attachment 6-A.

6.5 CONSTRUCTION COST ESTIMATE

The project has an overall construction cost estimate of $12,950,000. This construction cost value is considered preliminary and subject to change as building design and project layout is refined, etc.

6.6 ATTACHMENTS

Attachment 6-A – Letter of Financial Capacity

ATTACHMENT 6-A

Letter of Financial Capacity

SACO & BIDDEFORD SAVINGS INSTITUTION

MAILING ADDRESS · 50 Industrial Park Rd, Saco, ME 04072 · 1-877-SACO-BID

City of Portland
389 Congress Street
Portland, ME 40101

Re; Verdante Condominiums

December 21, 2017

To Whom It May Concern:

I am writing this letter on behalf of NewHeight Group (NHG) in reference to the development of the upcoming Verdante Condominiums at 56 Hampshire Street in Portland.

Saco & Biddeford Savings Institution (SBSI) has an ongoing lending relationship with NewHeight Group. SBSI is currently the lender for the construction of NHG's Luminato Condominiums. To date, NHG has proven to be a highly qualified, effective and professional development team.

SBSI is aware of the Verdante Condominiums development and would be pleased to entertain financing requests from NHG for that project and for other future developments.

Should you have any question, please contact me at (207) 602-7652

Best Regards,

James M Whelan
Vice President
Commercial Loan Officer
Saco & Biddeford Savings Institution

8.0 NATURAL FEATURES

8.1 OVERVIEW

The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

9. STORMWATER MANAGEMENT

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-526(b)(3).

9.1 OVERVIEW

The existing project site is entirely developed and relatively flat. Stormwater runoff from most of the project site drains overland across the eastern property boundary towards Federal Street. The Federal Street right of way generally drains east toward Hampshire Street and an existing city stormwater system located in Federal and Hampshire Streets. A small portion of the existing paved parking lot on the northwestern portion of the site drains towards Franklin Street over a vegetated median. There are no known areas of erosion or flooding on or adjacent to the site.

Post development stormwater runoff will generally follow existing patterns. Runoff from the proposed paved parking to the northwest of the building will continue to drain towards Franklin Street over a vegetated median. Run-on to the proposed paved parking beneath the building will drain to a proposed stormdrain system within the garage that connects to the existing stormdrain system in Federal and Hampshire Streets, as it does today. Runoff from the proposed building will drain to a roof drain system that outlets to an existing catch basin structure in front of the site in Federal Street. The roof will be made up of a 7,440 sf green roof that stores stormwater, and 5,167 sf of impervious roof surface. The green roof reduces stormwater runoff from the roof through retention or slowing of stormwater, and is considered pervious for zoning impervious calculations.

The existing project site contains approximately 16,555 square feet of impervious surface. Redevelopment of the project site will result in a decrease of approximately 7,215 square feet of impervious area and a total impervious surface of 9,340 square feet. Therefore, the project is not required to meet the General or Flooding Standards.

The project is not expected to cause ponding, flooding, or erosion problems on or downstream of the site. The relatively small amount of runoff entering the city’s storm drain network is not expected to overburden the system.

10. CONSISTNECY WITH CITY MASTER PLANS

10.1 OVERVIEW

Our office is not aware of any applicable Master Plans created for the project site.

11. UTILITIES

11.1 OVERVIEW

The proposed project will involve installation of new utility services to the building. All new utility services will be provided from the franchise utilities available within Federal and Hampshire Streets. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-5.0).

11.2 WATER SUPPLY

The proposed project will receive its water supply from the Portland Water District's (PWD) public water supply system. Separate fire and domestic services will be installed to the building from PWD's existing main in Federal Street. Terradyn Consultants submitted an ability to serve request to PWD on December 6, 2017. A response from PWD was not received at the time of submission, but will be provided when it is received.

11.2.1 Total Project Water Usage

The total average daily water demand for the proposed project is estimated to be 5,868 gallons per day, based on design flows published in the State of Maine Subsurface Wastewater Disposal Rules.

8 x 1 Bedroom Residential Units at 120 gpd/unit	= 960 gpd
15 x 2 Bedroom Residential Units at 180 gpd/unit	= 2,700 gpd
8 x 3 Bedroom Residential Units at 270 gpd/unit	= 2,160 gpd
2 x Retail Unit with 2 Employees at 12 gpd/employee	= 48 gpd
	Total = 5,868 gpd

11.3 WASTEWATER DISPOSAL

The proposed project will be connected to the Portland Water District's and City of Portland's wastewater collection and conveyance systems. The City of Portland Wastewater Capacity Application has been completed and forwarded to Mr. Brad Roland.

The overall project is anticipated to generate an average daily flow of approximately 5,868 gpd. Based on the existing sewer system in the area, there appears to be adequate capacity to handle these projected flow amounts.

11.4 ELECTRICITY SUPPLY

CMP currently maintains overhead and underground utilities in the area. The existing overhead electric and communication utilities along Hampshire Street will be installed underground to a new electric vault proposed beneath the Federal Street sidewalk in front of the proposed building. Electricity will be fed from this vault to the proposed building and other adjacent properties including the recently constructed Luminato condominiums.

11.5 ATTACHMENTS

Attachment 11-A – Correspondence with Utilities

ATTACHMENT 11-A

Correspondence with Utilities

TERRADYN
CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

1728

December 6, 2017

MEANS
means@pwd.org
Portland Water District
225 Douglass Street
Portland, ME 04104

Request for Ability to Serve Letter
31-Unit Residential Development
with First Floor Retail Space
56 Hampshire Street, Portland, Maine

Dear Sir or Madam:

Terradyn Consultants LLC has been retained by The NewHeight Group to assist with site design and permitting for a proposed 31-unit condominium development project located at 56 Hampshire Street in Portland, Maine. We are writing to request a letter confirming the Portland Water District's ability to serve the proposed development.

The 18,685 square foot parcel is identified as Block C, Lots 13 and 18 on the City of Portland Tax Map 28, and a 12' wide easement owned by the City of Portland. The site is at the corner of Hampshire and Federal Streets. Two existing non-residential structures are located on the site.

The proposed project includes the construction of a 12,272 square foot, 6-story building, including 31 condominium units and first floor retail space. Covered parking will also be provided on the ground level. Public water and sewer utilities will be installed to serve the project. It is anticipated that a new 6" fire protection water service and a new 4" domestic water service will be installed for the new building.

Attached are a site location figure showing the property delineated on a USGS map and a preliminary site utility plan of the project, showing how the development may be served with water. A spreadsheet showing the total number of proposed plumbing fixtures is provided in a separate document.

Please provide our office with confirmation that the Portland Water District has the ability to serve the proposed development. As the design is refined, we will provide more detailed drawings of the project for your review.

If you have any questions or need more information to make your determination on ability to serve, please contact me at (207) 322-1223 or adrienne@terradynconsultants.com.

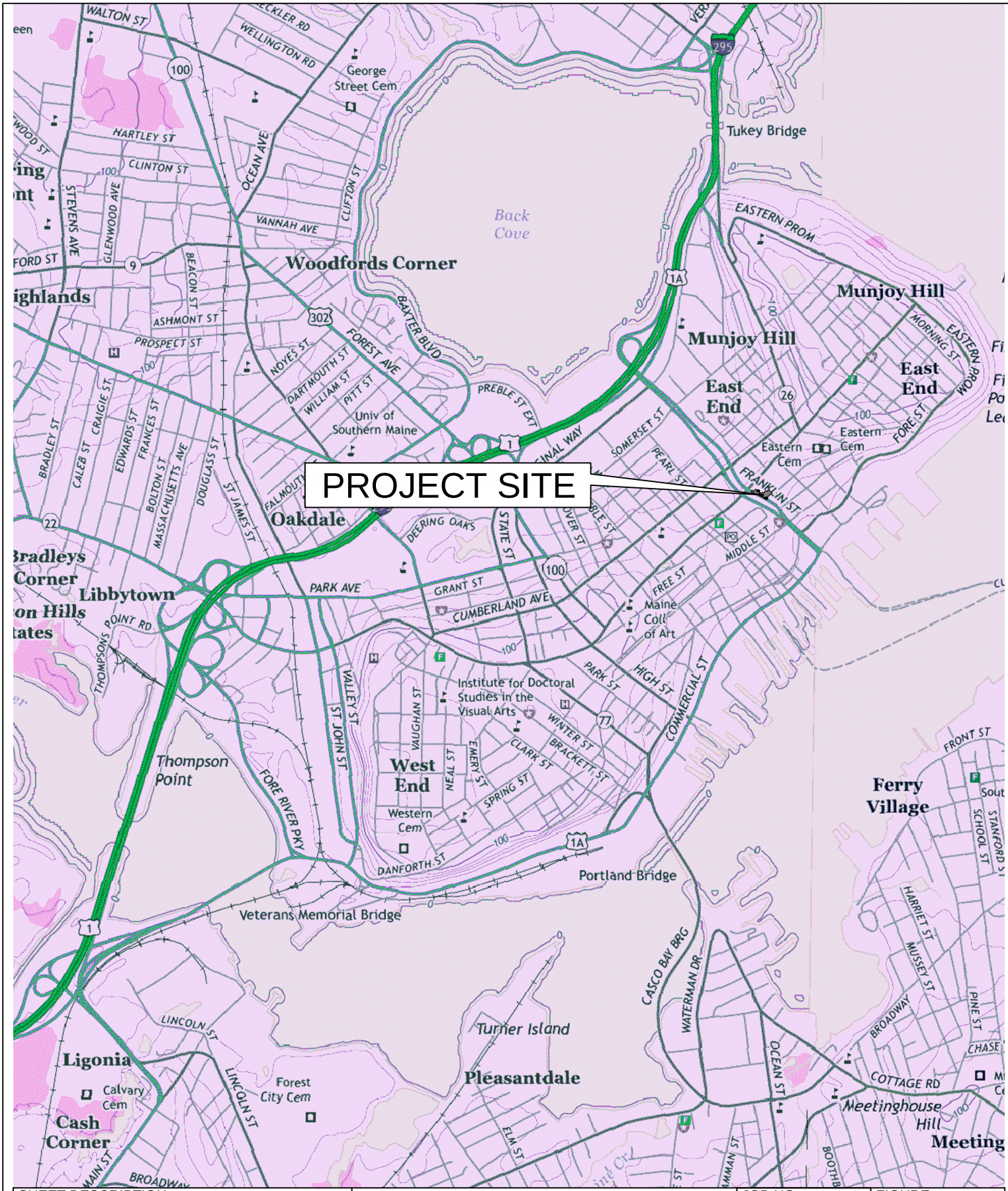
Sincerely,

TERRADYN CONSULTANTS LLC

Adrienne Fine, P.E.
Design Engineer

cc: Susan Morris, Chip Newell, Erin Cooperrider, Tom Federle, The NewHeight Group
David Lloyd, Archetype

Enc.



SHEET DESCRIPTION L2 U.S.G.S. QUADRANGLE MAP PORTLAND WEST AND PORTLAND EAST	TERRADYN CONSULTANTS, LLC P.O. Box 339 111 Elderberry Lane New Gloucester, ME 04260 Office: (207) 926-5111 Fax: (207) 221-1317 www.terradynconsultants.com Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting	JOB NO. 1728 DATE 9/6/2017 SCALE 1"=2,000'	FIGURE 1 OF 2
PREPARED FOR THE NEWHEIGHT GROUP 118 CONGRESS STREET, #401 PORTLAND, MAINE 04101			

SHEET DESCRIPTION
L2
AERIAL PHOTOGRAPH (2012)

PREPARED FOR
THE NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, MAINE 04101

TERRADYN
CONSULTANTS, LLC

P.O. Box 339
111 Elderberry Lane
New Gloucester, ME 04260
Office: (207) 926-5111
Fax: (207) 221-1317
www.terradynconsultants.com

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

JOB NO.
1728

DATE
9/6/2017

SCALE
1"=60'

FIGURE
2

OF
2

12. SOLID WASTE

12.1 OVERVIEW

The project will generate solid waste both during construction and on an on-going basis after construction is complete. Estimates of solid waste generation, recycling rates, and procedures for the transport and disposal of solid waste that will be generated by the operation of the proposed development are provided below.

The following amount of solid waste associated with the construction and operation of the development have been estimated:

- 414 cubic yards of construction debris related to the new building construction activities (excluding volume of recycled materials).

- 1,054 pounds per week of solid waste will be generated by the operation of the development. Assuming that 50% of the waste is recycled, it is estimated that the project will generate 13.7 tons of recyclable waste and 13.7 tons of non-recyclable waste per year.

12.2 SOLID WASTE GENERATED DURING THE BUILDING CONSTRUCTION

Approximately 414 cubic yards of construction debris is expected to be generated during construction. Assuming that 80% of construction debris is recycled, construction of the project will generate approximately 83 c.y. of non-recyclable waste.

The waste stream will be transported and disposed of at the following locations:

Hazardous Materials:	WMI Crossroads Facility in Norridgewock, Maine
Mixed Construction Material:	Riverside Recycling Facility in Portland, Maine; WMI Crossroads Facility in Norridgewock, Maine or Juniper Ridge in Old Town, Maine (Contractor option)
Separated Wood Construction Debris:	KTI Biofuels in Lewiston, Maine
Separated Metal/Ferrous Material:	One Steel Recycling Inc. in Arundel or Oakland, Maine

The collection, transfer, disposal, and payment of all fees for solid wastes shall be the responsibility of the Contractor, with all waste transferred by a licensed non-hazardous waste transporter.

12.3 SOLID WASTE GENERATED FROM THE OPERATION OF THE DEVELOPMENT

Approximately 1,054 pounds of solid waste and recyclable material is expected to be generated every week by the residents of the project. The operational solid waste and recyclable material will be collected by the City of Portland in accordance with Chapter 12 of the City Code.

12.4 ATTACHMENTS

Attachment 12-A – Computations of Types and Volumes of Solid Wastes for Construction Project

ATTACHMENT 12-A

Computations of Types of Volumes of Solid Wastes

ATTACHMENT 12-A

SOLID WASTES COMPUTATIONS AND DISPOSAL

A. NEW BUILDING CONSTRUCTION:

Basis of Estimate: 10 c.y./1,500 s.f. of finished space

Area: Approximately 62,025 square feet of finished space

Solid Waste: Approximately 414 c.y.

Other Wastes Associated with Other Site Construction: Cardboard from packaging etc.: Limited Quantity

Total: 414 c.y. before recycling

Net: 83 c.y. if 80% of the material is recycled

Disposition:
Assume 10 percent is concrete which can be sent to the approved aggregate recycling facilities operated by Shaw Bros. or R.J. Grondin and Sons for processing into recycled aggregate.

Assume 70 percent is wood or metal which can be transported to KTI Biofuels in Lewiston (for wood) or One Steel Recycling in Oakland, Maine for metals.

Approximately 83 cubic yards of mixed construction debris that will be hauled to the Riverside Recycling Facility in Portland, WMI Crossroads facility in Norridgewock, Maine or the Juniper Ridge Facility in Old Town, Maine.

The contractor should provide dumpsters designated by material type and identify recycling methods and disposal sites prior to construction. All haulers must have a current non-hazardous waste haul license.

B. OPERATIONAL SOLID WASTE:

RESIDENTIAL USE:

Basis of Estimate: 17 pounds/wk per individual. Estimate of 2 individuals per residential unit. From Table 14-1 of the CEQR Technical Manual from January 2014 Edition; Source: New York City Department of Sanitation.

Number of individuals: 62

Solid Waste: Approximately 1,054 pounds/week

13. FIRE SAFETY

13.1 OVERVIEW

The applicant and project team will provide the Portland Fire Department with the information required in the PFD Site Review Checklist, as well as a basic review of NFPA 1 and City of Portland Technical Standards related to public safety.

The project site will be accessed from Hampshire Street and Federal Street, which are improved with a 25’ wide paved surface and a 43’ wide paved surface respectively. A 6” cast iron water main owned by the Portland Water District currently exists in Federal Street, and the closest fire hydrant is located on the southeast side of Federal Street at the intersection of Hampshire and Federal Streets.

Three sides of the proposed building will be fully accessible from Hampshire, Federal, and Franklin Streets. The proposed building will be fully sprinkled in compliance with all applicable codes.

14. CONFORMITY WITH APPLICABLE DESIGN STANDARDS

14.1 OVERVIEW

This project conforms to all applicable Site Plan Standards of Section 14-526 of the city's Land Use Ordinance as described in the following narrative.

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The project will not have a significant impact on the surrounding street system. Vehicles will access the site and parking areas from existing access points and the estimated number of new vehicle trips generated by the project is insignificant compared to existing trips on surrounding streets.

2. Access and Circulation:

   a. Site Access and Circulation

      (i) Pedestrian access to the site will be provided via the re-constructed existing sidewalks along Hampshire and Federal Streets. There will also be a pedestrian entrance into the building along Franklin Street. A proposed walkway along the northern side of the building will also provide pedestrian access to the building. Door controlled access will be provided at each of the building entry locations.

      (ii) The project will use existing points of access.

      (iii) Drive up features are not proposed

      (iv) Site access has been designed so as not to impede potential future connection to adjacent streets.

   b. Loading and Servicing

      (i) Delivery or service vehicles are expected to be infrequent and may temporarily use on-street parking on Hampshire or Federal Streets.

   c. Sidewalks.

      (i) The existing sidewalks along the Hampshire and Federal Street frontages will be reconstructed as part of this project. All sidewalk improvements shall conform to the City of Portland Technical Manual as shown on the project drawings.

(ii) The sidewalk ramp at the proposed site entrance drive, and at the corner of Hampshire and Federal Streets will be constructed in accordance with City of Portland Technical Design Standards.

(iii) The proposed walkway along the northern side of the proposed building will connect directly to the existing city sidewalk on Hampshire Street. The proposed walkway from the southwesterly side of the proposed building will connect to the sidewalk along the easterly side of Franklin Street.

3. Public Transit Access:

Metro Bus Route 8 runs west on Congress Street in the proximity of the project site. The nearest bus stop to the project is at the corner of Congress Street and Franklin Street, approximately 150' northwest of the site. The project does not meet the minimum threshold to require a new transit facility.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

(i) The project requires one parking space per unit after the first 3 units, or 28 total spaces. Fourty-seven (47) spaces will be provided on site in a covered parking lot at the 1st floor level beneath the building, and will be accessed from Federal Street. Two of the on-site spaces will be ada accessible, and the remaining 26 spaces will be provided by a mechanical automated parking system.

The surface parking area at the northern end of the project site will be reserved for use by the residents of 312 Congress Street.

(ii) A parking study is not required for this project.

(iii) The dimensions of the 45 spaces in the mechanical parking structures are dictated by the mechanical parking structure construction. One of the two ada accessible spaces will meet the dimensional requirements for a van accessible space (8' x 18' space with an adjacent 8' x 18' accessible aisle), and the other ada accessible space will be an 8' x 21' parallel space with a 5' wide accessible aisle.

(iv) The proposed on-site parking area will be paved with bituminous concrete.

b. Location and Required Number of Bicycle Parking Spaces:

(i) The project requires 2 bicycle parking spaces for every 5 dwelling units, or 13 spaces. Bicycle parking spaces will be provided in a bike room

adjacent to the residential unit lobby and accessed from Federal Street. Additional surface bike parking will be provided in the garage.

c. Motorcycles and Scooter Parking:

(i) Dedicated motorcycle/scooter parking is not provided.

d. Snow Storage:

(i) Approximately half of the parking spaces will be either all or partially uncovered, with the other half located entirely beneath the building. A paved snow storage area is provided for the snow removal of the uncovered spaces to the northwest of the proposed parking area serving 312 Congress Street.

(ii) Snow will not be stored in parking areas, and no bio-retention is proposed.

5. Transportation Demand Management (TDM):

a. A TDM plan is not required for this project.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

a. The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

b. Not applicable
c. Not applicable

2. Landscaping and Landscaping Preservation:

a. Landscape Preservation.

(i) Ten trees are located along the southern property line adjacent to Franklin Street. One tree is located along the northern property line, just north of the existing on-site garage building. One tree is located in the Hampshire Street sidewalk in front of the site. One tree is located at the northern corner of the existing on-site building. Three of the trees along Franklin Street will be preserved. The remaining 10 trees surrounding the site are located within 10’ of the proposed building and will be removed as part of the project. New trees will be provided as shown on the Landscape Plan.

(ii) The existing trees are not within required setback areas

(iii) Not applicable.

(iv) Waiver: 7 of the trees to be removed along Franklin Street are overgrown street trees that would have a negative impact on the proposed structures, and are encroaching upon public infrastructure. These trees will be replaced with appropriate street trees as specified by the landscape architect. The tree at the northern corner of the existing building is a smaller tree that will be removed. This area of the site will be landscaped to the extent practicable while allowing emergency and maintenance access to the northern side of the building.

In the event that 13 replacement trees cannot be planted on the site, the applicant will pay the required cost of required replacement trees to the City of Portland Tree Fund, as detailed in Section 4 of the Technical Manual.

(v) The project is not in the Shoreland Zone

b. Site Landscaping.

(i) Landscaped Buffers:

(a) Not applicable.

(b) Not applicable.

(c) Not applicable.

(d) Vegetated buffers between the proposed building and surrounding residential development is specified on the Landscape Plan.

(ii) Parking Lot Landscaping:

(a) Not applicable. The majority of the onsite parking area is below the proposed building. Landscaping and screening from adjacent lots and roadways will be provided along the edge of the portion of the parking lot that is uncovered.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable

(e) Not Applicable

(iii) Street Trees

(a) Street trees are proposed along the Franklin Street frontage to replace trees being removed. The trees will be located between the existing Franklin Street sidewalk and the site property line.

(b) Not Applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

The existing project site contains approximately 16,555 square feet of impervious surface. Redevelopment of the project site will result in a decrease of approximately 7,215 square feet of impervious area and a total impervious surface of 9,340 square feet. Therefore, the project is not required to meet the General or Flooding Standards.

Post development stormwater runoff will follow existing patterns. Runoff from the proposed parking lot and the proposed building will drain to a proposed stormdrain system in the garage below the proposed building and in Federal Street, and connect to the existing stormdrain system in Federal and Hampshire Streets.

(i) The project will not result in flooding of adjacent lots.

(ii) Runoff volumes and rates will not increase onto adjacent lots.

(iii) Volumes and rates of stormwater runoff into the Federal Street and Hampshire Street rights of way are expected to decrease. The project will not create ponding, flooding, or other drainage problems within Federal Street or Hampshire Street.

(iv) Volumes and rates of stormwater runoff into the city's storm drain network are expected to be similar to existing volumes and rates. The project will not create problems downstream or exceed the capacity of the system.

b. The project will result in a decrease in impervious surface and is not required to meet the General or Flooding Standards.

c. Not Applicable. The project is not located in a watershed of an urban impaired stream.

d. Not applicable.

e. The project will be served by both a public wastewater system and public drainage system. The project will not pose a risk of groundwater contamination.

f. Wastewater will flow to the public sewer system, which is adequately sized for the project flows.

(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 of Portland Land Use Ordinance and off-premises infrastructure.

b. Not applicable.

2. Public Safety and Fire Prevention:

a. The site has been designed to promote safety and security for residents and their guests. Access to the residential lobby and parking area will utilize keyed entry. Site lighting will provided added security.

b. Emergency vehicle access will be via Hampshire Street (26’ wide paved surface) and Federal Street (43’ wide paved surface).

c. An existing fire hydrant is located on the southeast side of Federal Street at the Federal and Hampshire Street intersection. The proposed building will also feature sprinklers for fire suppression.

3. Availability and Adequate Capacity of Public Utilities:

a. The project will be served by new water, sewer, and storm drain utilities. An ability to serve request has been sent to the Portland Water District, and a Wastewater Capacity Application has been forwarded to Brad Roland at the City of Portland.

b. Overhead electrical and telecommunications utilities exist along Hampshire and Federal Streets. The project site will be served by underground utilities. A new electrical vault will be installed along Federal Street to service the proposed project and the recently completed Luminato condominiums. The electrical utilities in the vicinity of the project will be moved underground.

c. All new utility infrastructure will meet the provisions of the Technical Manual.

d. The project will be connected to the public sewer system within Hampshire Street.

e. The sanitary sewer and stormwater collection systems were designed to comply with City standards.

f. Solid waste storage areas will be provided in the ground level of the building with access from the parking area.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:

a. The bulk, location and height of the proposed building will not result in adverse impacts to abutting properties.

b. The bulk, location and height of the proposed building will not substantially reduce the value or utility of adjacent structures.

c. HVAC systems will be located on the roof of the proposed building. Venting is proposed to be directed away from public spaces and adjacent residential sites.

2. Shadows:

a. The project is not expected to cause shadows on publically available open space, or have an adverse effect on vegetation as a result of shadows cast from the proposed building.

3. Snow and Ice Loading:

a. The proposed building will have a flat roof. Accumulated snow and ice will not fall onto adjacent properties or public ways.

4. View Corridors:

a. The project site is located outside of any protected view corridors.

5. Historic Resources:

a. The development is not within a designated historic district and does not affect designated landmarks.

b. Not Applicable

c. There are no known archaeological resources on the site.

6. Exterior Lighting:

a. Site Lighting

(i) Exterior site lighting will be provided by building mounted lights along sidewalks and in parking areas. All fixtures will feature full cut-off optics to prevent unintended light pollution. Proposed lighting is shown on the Lighting Photometric Plan (Sheet P-1).

b. Architectural and Specialty Lighting:

(i) No architectural or specialty lighting is proposed.

(ii) No up-lighting is proposed.

c. Street Lighting

(i) No street lighting is proposed

7. Noise and Vibration:

Noise levels are expected to meet the permitted levels for the IS-FBC Zone.

a. HVAC and Mechanical Equipment

(i) HVAC equipment will be located on the roof of the proposed building and will meet all applicable state and federal emissions requirements. The units will not be visible from Hampshire, Federal, or Franklin Streets or adjacent sites.

(ii) The emergency generator is proposed adjacent to the ground level parking and shall meet the City of Portland noise and operation requirements.

8. Signage and Wayfinding:

a. All 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 subject to a Certificate of Appropriateness.

(ii) Not applicable. No commercial or directional traffic signage is proposed as part of the project.

(iii) Not applicable. No on-site directional traffic signage is proposed as part of the project.

(iv) Not applicable. No waiver is required.

9. Zoning Related Design Standards:

a. The project is not located within a historic zone.

15. VERIFICATION OF PROPOSED HVAC EQUIPMENT

15.1 OVERVIEW

The following manufacturer cut sheets verify that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

15.2 ATTACHMENTS

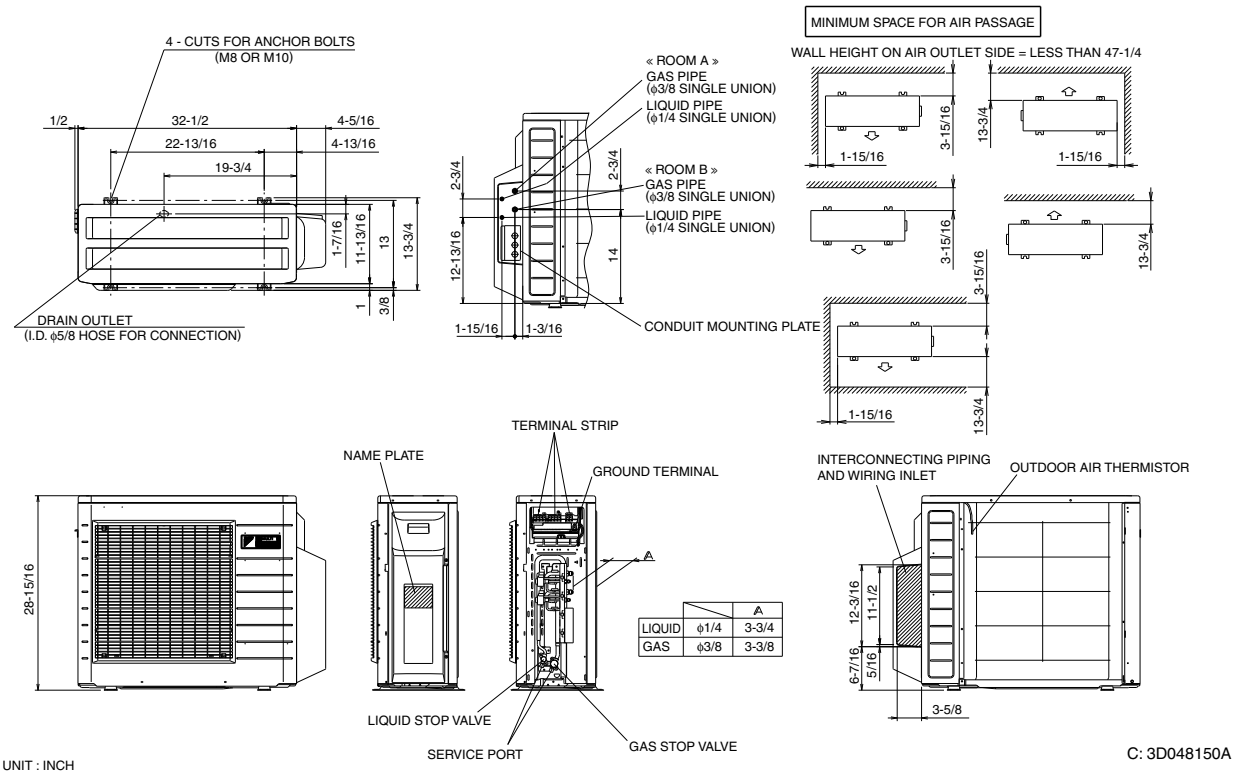
Attachment 15-A – HVAC Equipment Cut Sheets

ATTACHMENT 15-A

HVAC Equipment Cut Sheets

4.2 Outdoor Unit

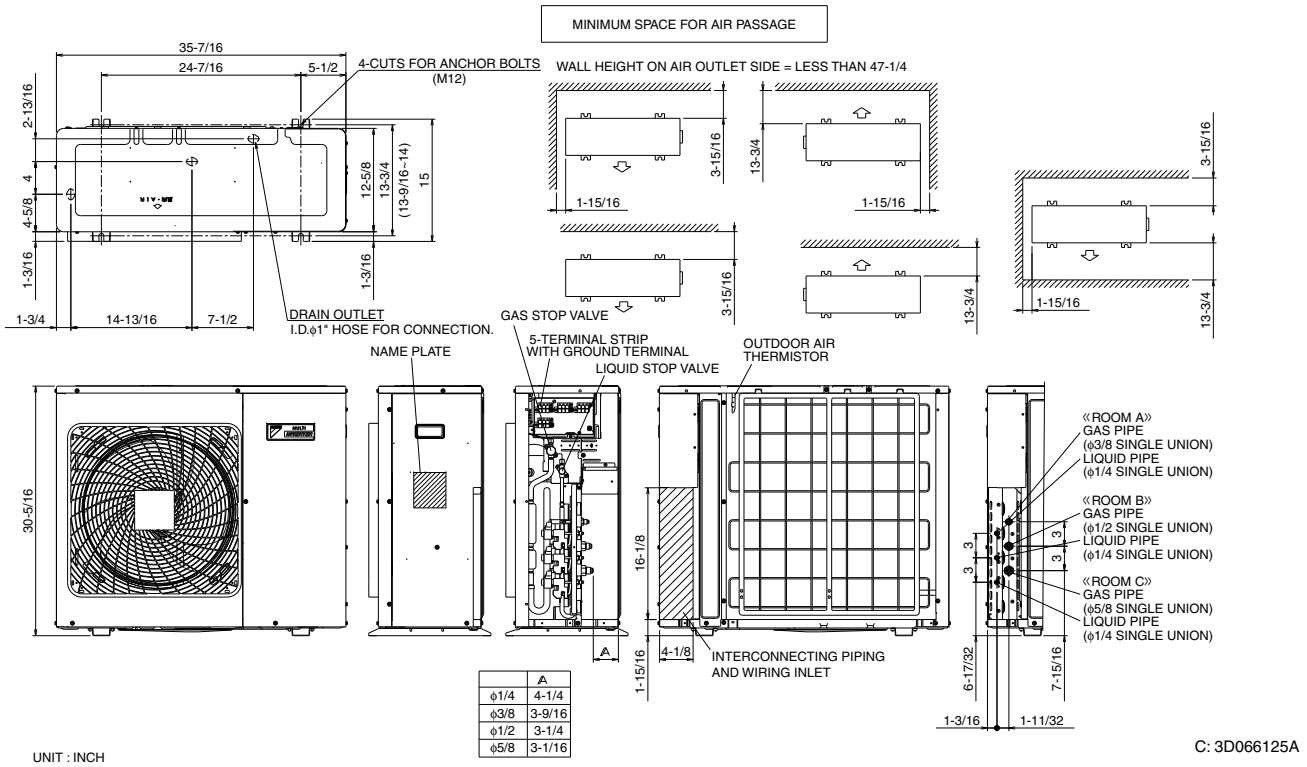
2MXS18GVJU



UNIT : INCH

C: 3D048150A

3MXS24JVJU

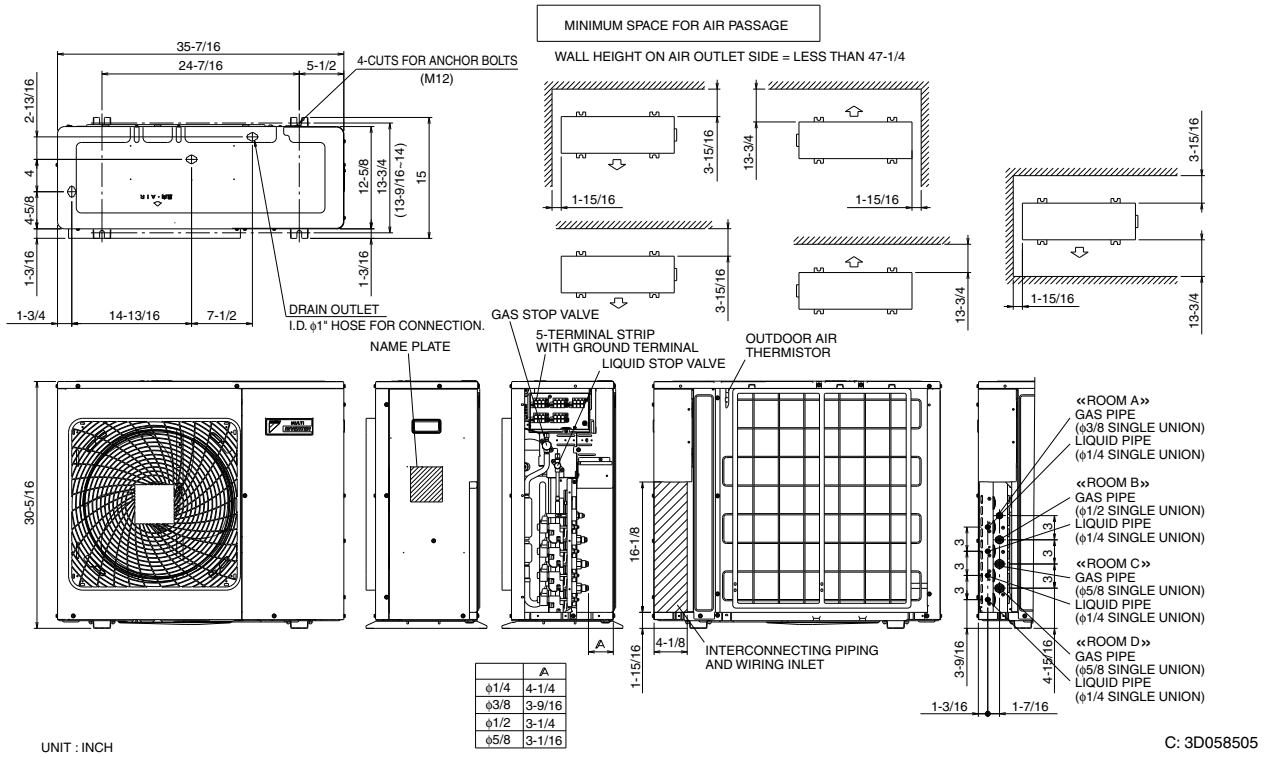


UNIT : INCH

C: 3D066125A

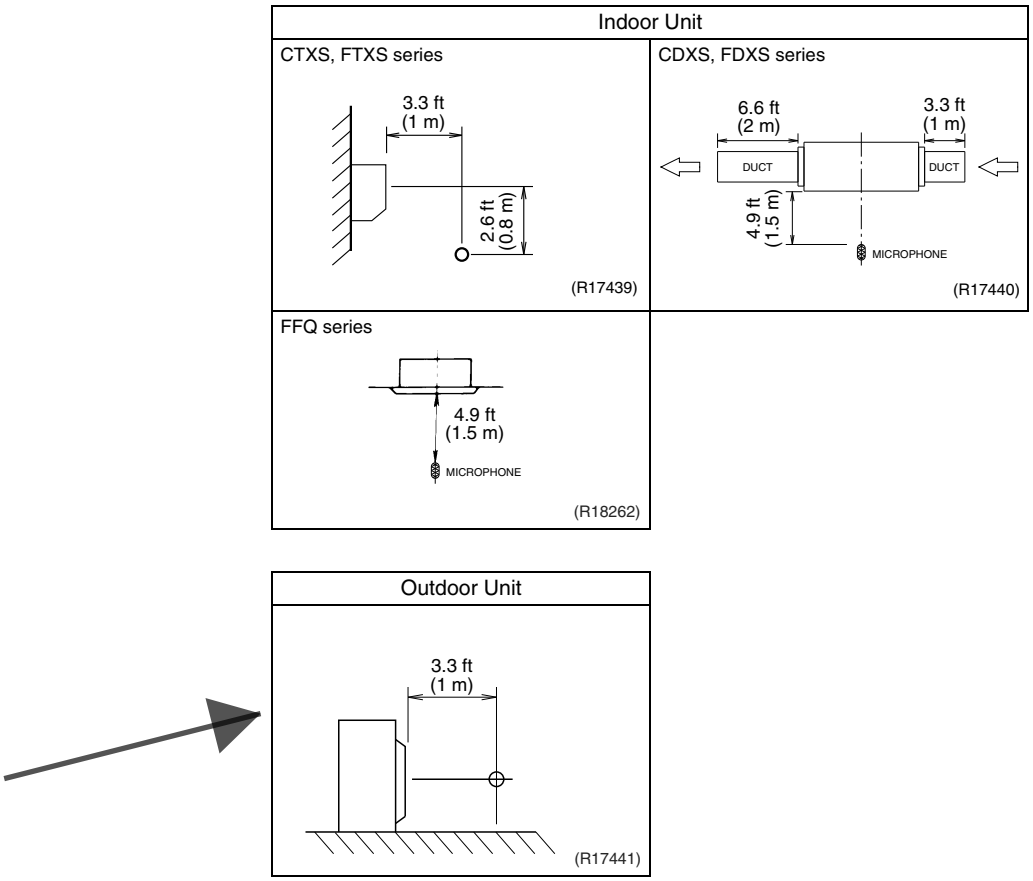
1

4MXS32GVJU



10. Sound Level

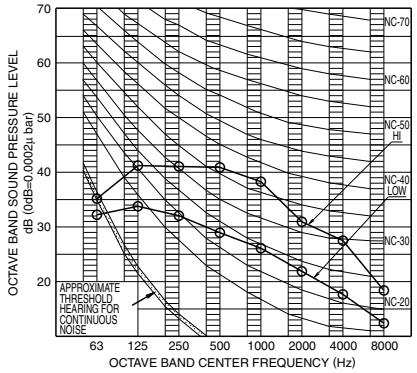
10.1 Measuring Location



Note: 1. Operation sound is measured in an anechoic chamber.
2. The data are based on the conditions shown in the table below.

Cooling	Heating	Piping Length
Indoor ; 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB) Outdoor ; 95°FDB (35°CDB) / 75°FWB (24°CWB)	Indoor ; 70°FDB (21°CDB) / 60°FWB (15.6°CWB) Outdoor ; 47°FDB (8.3°CDB) / 43°FWB (6°CWB)	16.4 ft (5 m)

FFQ15LVJU



OVER ALL (dB)

SCALE	HI	LOW
A	42.5	31.5

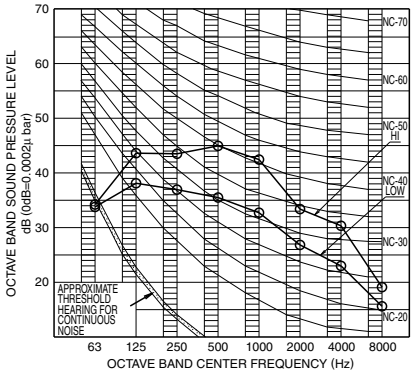
(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V, 60Hz
STANDARD CONDITION (JIS)	
4 DIRECTION DISCHARGE	

4D080698

FFQ18LVJU



OVER ALL (dB)

SCALE	HI	LOW
A	46.0	37.5

(B.G.N IS ALREADY RECTIFIED)

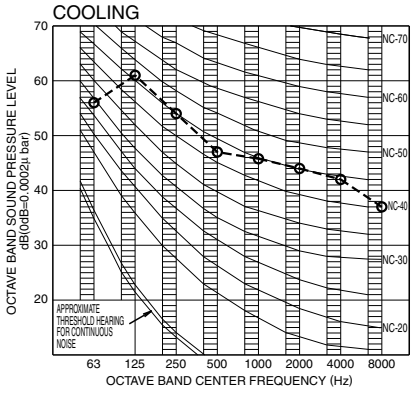
OPERATING CONDITIONS

POWER SOURCE	208/230V, 60Hz
STANDARD CONDITION (JIS)	
4 DIRECTION DISCHARGE	

4D080699

10.2.2 Outdoor Unit

2MXS18GVJU



OVER ALL (dB)

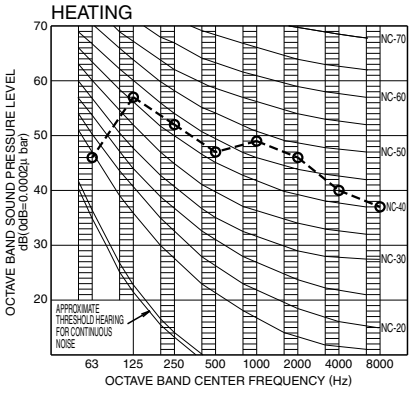
SCALE	60Hz 208/230V(H)
A	50

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Cooling



OVER ALL (dB)

SCALE	60Hz 208/230V(H)
A	51

(B.G.N IS ALREADY RECTIFIED)

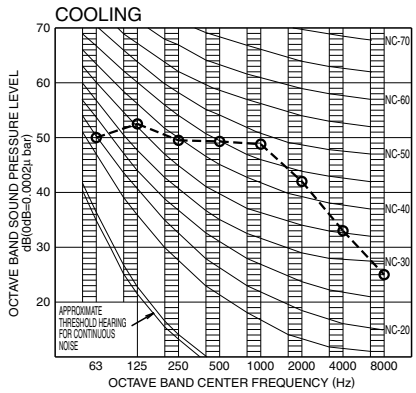
OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Heating

3D048472A

3MXS24JVJU, 4MXS32GVJU



OVER ALL (dB)

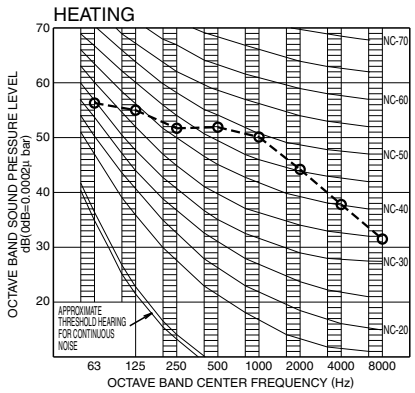
SCALE	60Hz 208/230V
A	52

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Cooling



OVER ALL (dB)

SCALE	60Hz 208/230V
A	54

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz
JIS STANDARD	(JIS9612)

Heating

3D058787A

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

August 7, 2018

Adrienne Fine
Terradyn Consultants
565 Congress Street Suite 310
Portland, ME 04102

Re: 56 Hampshire Street, PO
Ability to Serve with PWD Water

Dear Ms. Fine:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on December 7, 2017. Based on the information provided per plans dated July 2, 2018, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire and 2-inch domestic service may be installed from the water main in Federal Street. The service should enter through the properties frontage on Federal Street at least 10-feet from any side property lines.

- Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- The existing building is currently served with a 1-inch domestic water service; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site does currently have existing water service. A 1-inch diameter copper domestic service line provides water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 6-inch diameter cast iron water main in Federal Street and a public fire hydrant located approximately 125 feet from the site. The most recent static pressure reading was 86 psi on May 25, 2017.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Robert A. Bartels, P.E.
Senior Project Engineer

Data Sheet Wöhr Combilift 543-2,6

Suitable for condominium and office buildings.
For permanent use only!*

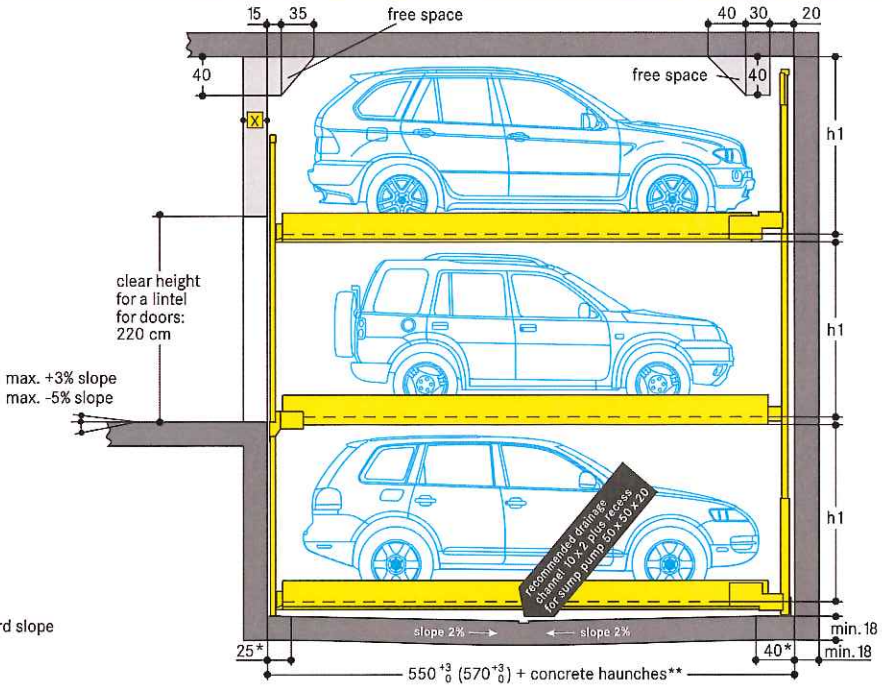
* In case of short time user (e.g. for offices, hotels, a.s.o.) technical adjustments are required. Please contact WÖHR!

Platforms are in horizontal position to drive on.

Load per platform max. 2600 kg (load per wheel max. 650 kg)

X = to be clarified with door supplier.

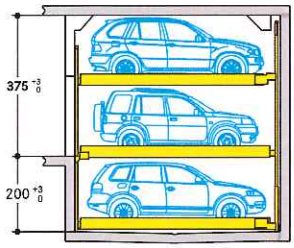
Dimensions in cm



* in this zone, 0% of downward/upward slope in longitudinal and cross direction

** see notes, point 5

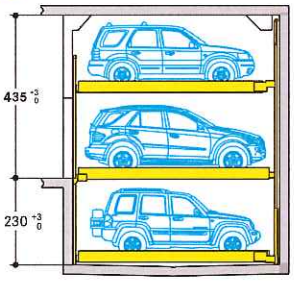
Comfort type 543 · 2600 kg



	car height	distance
UL	Cars/Vans/SUVs up to 175 cm	h1 = 180
EL	Cars/Vans/SUVs up to 175 cm	h1 = 180
LL	Cars/Vans/SUVs up to 175 cm	h1 = 180

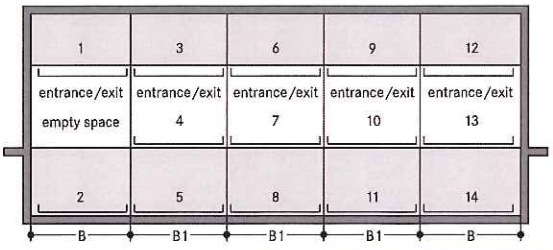
UL = upper level, EL = entrance level, LL = lower level

Premium type 543 · 2600 kg



	car height	distance
UL	Cars/Vans/SUVs up to 205 cm	h1 = 210
EL	Cars/Vans/SUVs up to 205 cm	h1 = 210
LL	Cars/Vans/SUVs up to 205 cm	h1 = 210

Width dimensions



Space required B	B1	gives clear platform width
280	270	250
290	280	260
300	290	270

One entry/exit is required on entrance level for each grid.

Notes

1. Pits must always be protected by a sliding shutterdoor (even in underground garages).
2. Arrangements start with 2 grids for 5 cars, 3 grids for 8 cars.
3. Installation length of 550 cm for car length of a max. of 500 cm. Clear platform width of 250 cm for car widths of 190 cm. For large touring sedans we recommend a clear platform width of at least 260–270 cm.
4. For large touring sedans an installation length of 570 cm is recommended. This length offers larger safety distances for potential future developments or projects with short term parkers such as hotels or similar.
5. It is not possible to have channels or undercuts and/or concrete haunches along the pit's rear and front floor-to-wall joints. In the event that channels or undercuts are necessary, the pit length needs to be increased based on the dimensions of said channels or undercuts.
6. The manufacturer reserves the right to construction or model modifications and/or alterations. Furthermore, the right to any subsequent part modification and/or variations and amendments in procedures and standards due to technical and engineering progresses in the art or due to environmental regulation changes, are also hereby reserved.

The solution for Sport Utility Vehicles (SUV), Minibuses, Jeeps and other heavy cars up to 2,6 to

Combilift 543-2,6 | 05.2016 | C027-5223 | © Otto Wöhr GmbH

Otto Wöhr GmbH
Auto-Parksysteme
Ölgrabenstrasse 14
71292 Friolzheim | Germany
Fon +49 [0] 7044 46-0
Fax +49 [0] 7044 46-149
www.woehr.de
info@woehr.de

We compact parking space

Doors

According EN 14010, the Combilift 543 must be closed with shutterdoors. The door controls are integrated in the overall system. That means:

a) The doors are electro-mechanically interlocked.

b) The doors can only be opened when the selected parking place has reached the entry/exit position.

c) Any pits are closed in the entrance area.

Local requirements for electrical doors regarding the technology, maintenance and revision are not subject of our delivery. These matters have to be observed and carried out by the customer, according to the local regulations.

Door types:

Manually operated sliding shutterdoors

- for underground garages with galvanised barred metal panelling
- above ground with powder coated metal sheets (RAL 7030)

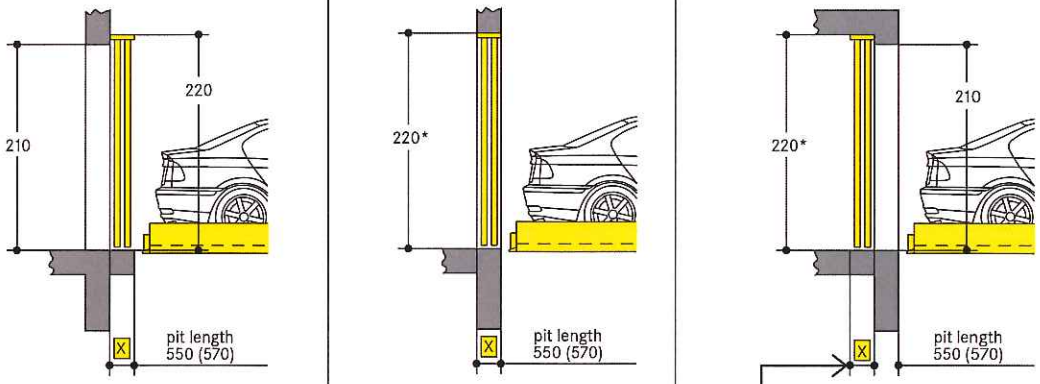
Alternatively, sliding shutterdoors can be supplied with electrical drive.

Installation:
Behind the building pillars with door offset

Installation:
Below the lintel between the building pillars

Installation:
In front of the building pillars

Section

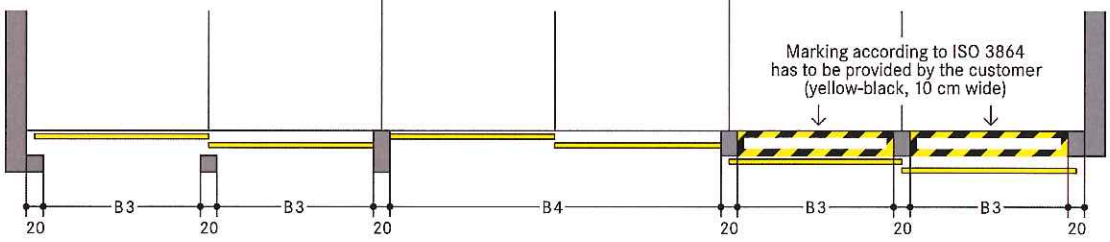


X = 25 cm for manually operated sliding shutterdoors

X = 35 cm for automatic shutterdoors

With installation in front of the pillars, the driving aisle is measured from the door.

Ground plan



Space required B3	B4	Gives clear platform width
250	520	250
260	540	260
270	560	270

* The lintel of 220 cm is absolutely necessary. With differing heights, additional fixings are required at a surcharge. If no lintel is provided, the gates need to be fitted onto a steel frame (subject to surcharges).

Sliding door floor guides in underground garages

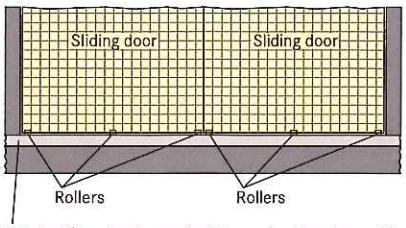
The evenness or flatness of the floor in the bottom floor guide section is required to comply with the DIN 18202, Table 3, line 3, standard requirements.

The bottom floor guides are constituted by plastic rollers, locked down onto floor mounted base plates.

Dowel borehole depth to be approx. 9 cm.

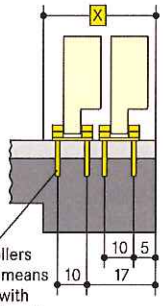
Note: In the event that floor filling needs to be laid into the door section to the purpose of reaching the required floor evenness, the borehole depth needs to be increased by the thickness of the floor fill (for a max of 4 cm).

Front view



Finished floor level compliant to DIN 18353, floor evenness compliant to DIN 18202 table 3, line 3.

Section



Locking down of the rollers onto the base plate by means of an adhesive anchor with an M8 internal screw thread.

Sliding door floor guides in above ground garages

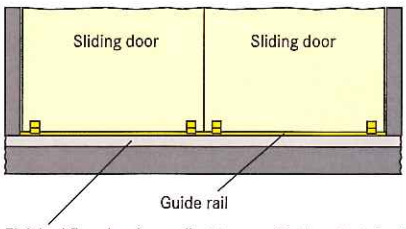
The evenness or flatness of the floor in the bottom floor guide section is required to comply with the DIN 18202, Table 3, line 3, standard requirements.

The bottom floor guides are constituted by guide rails, locked down onto the floor.

Dowel borehole depth to be approx. 8 cm.

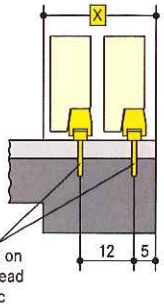
Note: In the event that floor filling needs to be laid into the door section to the purpose of reaching the required floor evenness, the borehole depth needs to be increased by the thickness of the floor fill (for a max of 4 cm).

Front view



Finished floor level compliant to DIN 18353, floor evenness compliant to DIN 18202 table 3, line 3.

Section

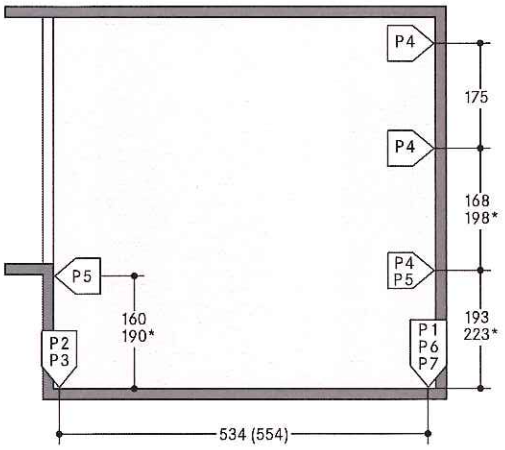


Guide rails to be fixed on using S 10 hexagon head wood bolts and plastic expansion dowels.

Width dimensions and statics

All dimensions shown are minimum. Constructional tolerances must be taken into consideration. **All dimensions in cm.**

Section



( ) dimensions in brackets for longer units

* dimensions for premium type

P1 = +80,0 kN [1]
P2 = +70,0 kN
P3 = +35,0 kN
P4 = ± 5,0 kN
P5 = ± 2,5 kN
P6 = ±30,0 kN
P7 = ±15,0 kN

[1] all static loadings include the weight of the car

Bearing loads are transmitted by wall plates with min. 30 cm² surface and to the floor by base plates with min. 350 cm² surface.

Wall and base plates to be fixed by heavy duty anchor bolts to a drilling depth of 10-12 cm. When fixing to the waterproof concrete floors chemical anchors are employed (to be advised by WÖHR).

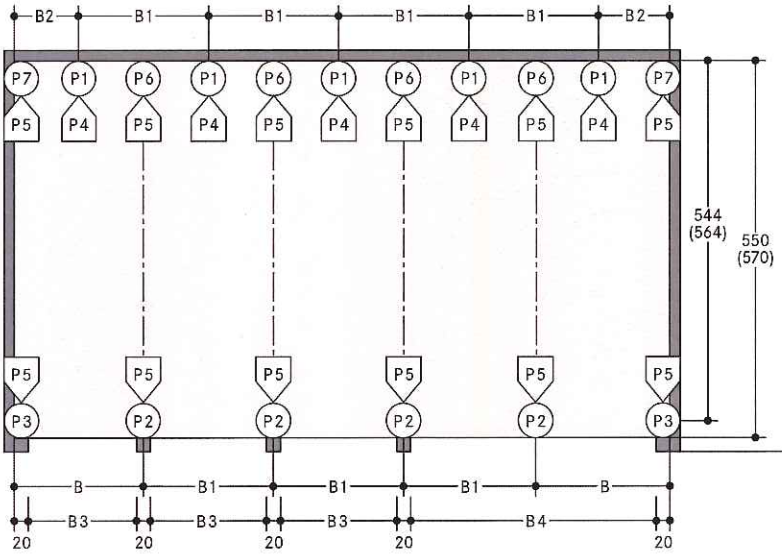
Base plate thickness minimum 18 cm. Rear wall and base plate must be formed of concrete and must have a flat surface without protrusions.

Concrete quality according to the static building requirements, however for the dowel fixing concrete quality of min. C20/25 is required.

The specified lengths to the support points are mean values. Please contact WÖHR Agent for exact positions for any variations on the standard units.

Please contact WÖHR Agent for clarify the door widths/widths of columns. Grid width of 270 /280/290 cm must be observed.

Ground plan



The driving aisle width to be compliant with country regulations locally in force.

Space required					gives clear
B	B1	B2	B3	B4	platform width
280	**270**	**145**	**250**	**520**	**250**
290	**280**	**150**	**260**	**540**	**260**
300	**290**	**155**	**270**	**560**	**270**

Notice:

If the width of the pillars is more than 20 cm, than the width of the drive through will be reduced accordingly to the above mentioned width dimensions. In order to avoid this, we recommend to extend the measures between the pillars (B3 and B4) accordingly. Please contact WÖHR.

Hydraulic power packs

For the accommodation of the hydraulic power packs an additional space is required which will be determined during the verifications of the drawings, e.g. in a wall recess.
Dimensions:
length = 100 cm
height = 140 cm
depth = 35 cm

Electrical data

Circuit connections 230/400V, 50 Hz, 3 phases. Max power consumption 3.0 kW.
Circuit breaker or 3 x 16A time-lag fuse automatic circuit breaker unit (compliant to the DIN VDE 0100 standard requirements) and a 3 phase + N + PE feed cable, compliant to the prescriptions set forth by the local facilities supply company up to the electric controls cabinet, further to the installation of the feed cables into the electric controls cabinet, to be performed basically on-site. In compliance with the DIN EN 60204 standard provisions, all systems must be connected directly on site with an earthed equipotential bonding. The lead-out connection must be at a 10 m distance!

Switch cabinet

1. Main switch is installed well accessible at driveway in a height of 160 cm to 190 cm.
2. The switch cabinet must be installed visible and near by the system. Area for installation has to be provided by the customer. The size of the switch cabinet is 80 x 110 x 21 cm.
3. The wall opening of 15 cm diameter is required between the switch cabinet and the system itself. Please contact WÖHR Agent to clarify.
4. The control is designed to operate between +5° and +40°C. Atmospheric Humidity: 50% at +40°C. If the local circumstances differ from the above please contact WÖHR (if necessary, the switch cabinet has to be provided with a heating).
5. If the system is installed outside the switch cabinet needs to be inside a sun-/water-/wind proof box. In front of the switch cabinet an area of 100 cm is required to work.

General product information

The entrance level parking place row has one place less than the upper and lower level. This empty space always stays on entrance floor level.
The platforms at the entrance floor level are shifted sideways by one space so that the empty space is above the lower level platform to be raised, or below the upper floor platform to be lowered.
This movement is initiated automatically when the desired place is selected via keyboard.

Hotel garage

If used by hotel guests, the installation requires special planning and construction. Please ask for details.

Noise protection

Basis is the German DIN 4109 "Noise protection in buildings".

With the following conditions required 30 dB (A) in rooms can be provided:

- noise protection package from our accessory
- insulation figure of the construction of min. $R'_w = 57$ dB
- walls which are bordering the parking systems must be done as single wall and deflection resistant with min. m'= 300 kg/m²
- solid ceiling above the parking systems with min. m'= 400 kg/m²

At differing constructional conditions additional sound absorbing measures are necessary.

The best results are reached by separated sole plates from the construction.

Increased noise protection:

If increased noise protection must be provided planning has to be confirmed on a project basis by WÖHR.

Temperature

The installation is designed to operate between +5°and +40°C. Atmospheric Humidity: 50% at +40°C. If the local circumstances differ from the above please contact WÖHR.

Conformity test

All our systems are checked according to EC machinery directive 2006/42/EC and EN 14010.

Illumination

Illumination has to be considered acc. to local requirements by the customer.

Numbering of the parking spaces

1. The empty space of the Combilift is always on the left in the entrance level.
2. The numbering is as follows:

UL	1	3	6	9	12
EL		4	7	10	13
LL	2	5	8	11	14

3. The numbering for each system starts with 1 as above.
4. Different numbering of parking spaces is possible at a surcharge (software changes are necessary).

Free spaces

Special drawings for free spaces to accommodate air ducts or other pipes can be requested at WÖHR Agent!

Railings

If walkways are arranged directly to the side or behind the systems, railings have to be provided by the customer acc. to local requirements, height min. 200 cm – this is applicable during the construction phase too.

Drainage

We recommend providing gutter in the pit centre and connecting the gutter either to a gully or a drainage pit 50 x 50 x 20 cm. If the pump sump is not accessible for manual drainage, the client must provide a pump on site to empty the pump sump. Lateral slope only within the gutter.

To prevent hazards for the ground water, we recommend giving the pit floor an oil-resistant coating as a means of protecting the environment.
If this is to be connected to the sewage system, it is advisable to provide oil and/or petrol seperators.

Maintenance

WÖHR and its foreign partners have an assembly and customer network. Annual maintenance is performed at conclusion of a maintenance contract.

Protection against corrosion

Independent of a maintenance workings has to be carried out acc. to WÖHR Cleaning and Maintenance Instruction regularly.

Clean up galvanized parts and platforms of dirt and road salt as well as other pollution (corrosion danger)!

Pit must always be ventilated and dearated well.

Parking place width

We recommend a clear platform width of at least 250 cm.

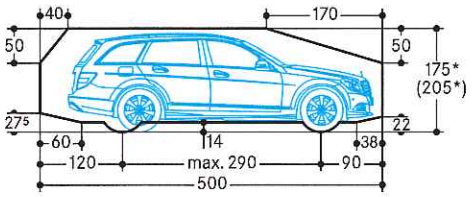
Dimensions

All dimensions shown are minimum. Construction tolerances must be taken into consideration. All dimensions in cm.

Fire safety

Each and every fire safety requirement and all possible mandatory item(s) and equipment(s) (fire extinguishing systems and fire alarm systems, etc.) are to be provided by the customer.

Clearance profile (standard saloon/estate car)



* The total car height includes roof rail and antenna fixture and must not exceed the mentioned max. height dimension.

Notes

We recommend providing wiring conduits leading to operating panels, particularly in above-ground garages.

The wiring conduits should placed 120 cm above entrance level in a support in the middle of the area.

Combilift 543-2,6 | 05.2016 | C027-5223 | © Otto Wöhr GmbH | Vehicle drawings © creativ collection Verlag GmbH/www.covision.de

CIRQUE WALL/CEILING

Cirque Large Wall Sconce show in charcoal. Turbo Path shown in charcoal.

Beautiful for its simplicity, Cirque indoor or outdoor LED light fixture features a thick, round, pressed-glass shade with polished surface suspended from a die-cast base. The fixture has a sleek, modern design and offers installation versatility as a flush mount on the ceiling or as a sconce on the wall.

SPECIFICATIONS

DELIVERED LUMENS	Cirque Small: 472.2 LED	Cirque Large: 1143 LED
WATTS	Cirque Small: 12 LED	Cirque Large: 22.1 LED
VOLTAGE	120V, 277V (LED Only)	
DIMMING	ELV	
LIGHT DISTRIBUTION	Symmetric	
MOUNTING OPTIONS	Wall or Ceiling	
CCT	3000K or 4000K	
CRI	80+	
COLOR BINNING	3 Step	
BUG RATING	Cirque Small: B1-U3-G1	Cirque Large: B1-U3-G1
DARK SKY	Compliant (Ceiling)	
WET LISTED	IP65	
GENERAL LISTING	ETL, Title 24	
START TEMP	-30°C	
FIELD SERVICEABLE LED	No	
CONSTRUCTION	Aluminum	
HARDWARE	Stainless Steel	
FINISH	Marine Grade Powder Coat	
LED LIFETIME	L70; 70,000 Hours	
WARRANTY*	5 Years	

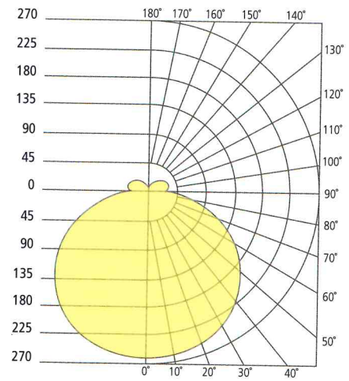
* Visit techlighting.com for specific warranty details.

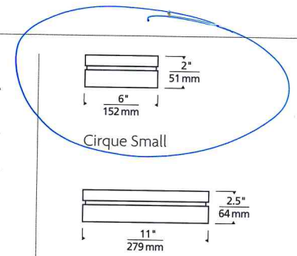
CIRQUE SMALL
shown in bronze

CIRQUE LARGE
shown in charcoal

CIRQUE LARGE

Total Lumen Output:	1143
Total Power:	22.1
Luminaire Efficacy:	51.5
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U3-G1





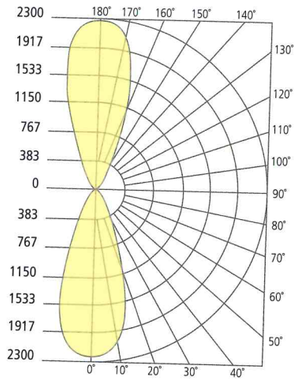
CIRQUE WALL / CEILING

700OWCQ	SHAPE	CRI/CCT	FINISH	VOLTAGE
	L LARGE - 9"	**830** 80 CRI, 3000K	**Z** BRONZE	**120** 120V
	S SMALL - 6"	**840** 80 CRI, 4000K	**H** CHARCOAL	**277** 277V
		INC INCANDESCENT*		

*120V ONLY

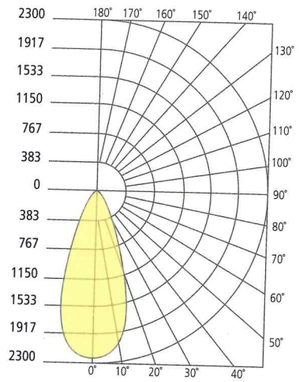
TEGEL 12 UP/DOWN

Total Lumen Output:	2346
Total Power:	29.2
Luminaire Efficacy:	80.2
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U5-G0



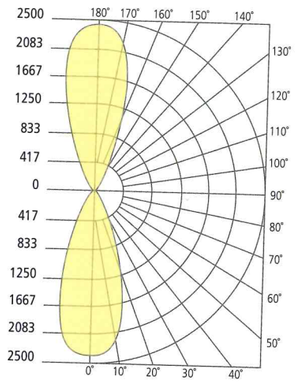
TEGEL 12 DOWN

Total Lumen Output:	1212
Total Power:	15.6
Luminaire Efficacy:	77.7
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U0-G0



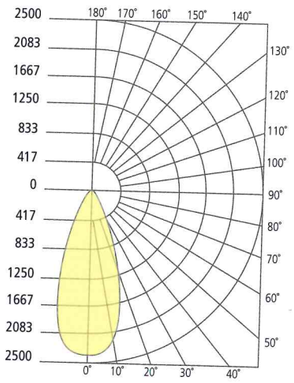
TEGEL 18 UP/DOWN

Total Lumen Output:	2419
Total Power:	29.9
Luminaire Efficacy:	80.6
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U5-G0



TEGEL 18 DOWN

Total Lumen Output:	1212
Total Power:	15.6
Luminaire Efficacy:	77.7
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U0-G0

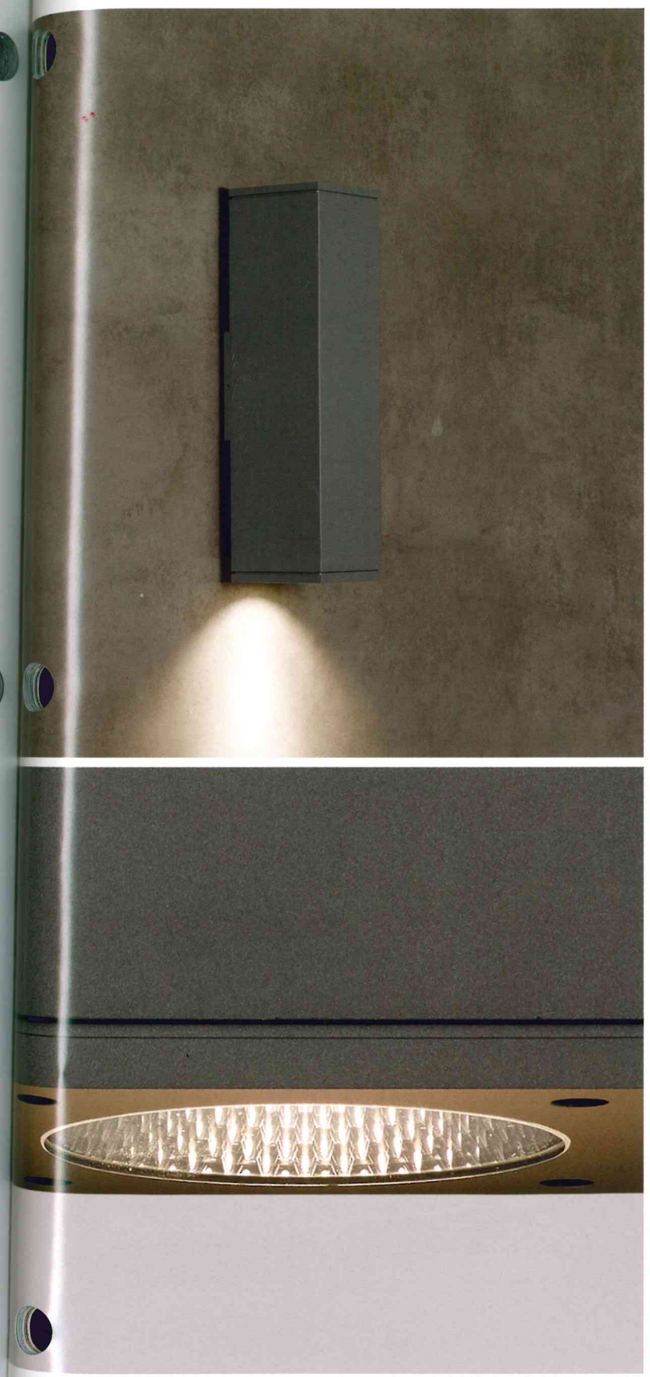


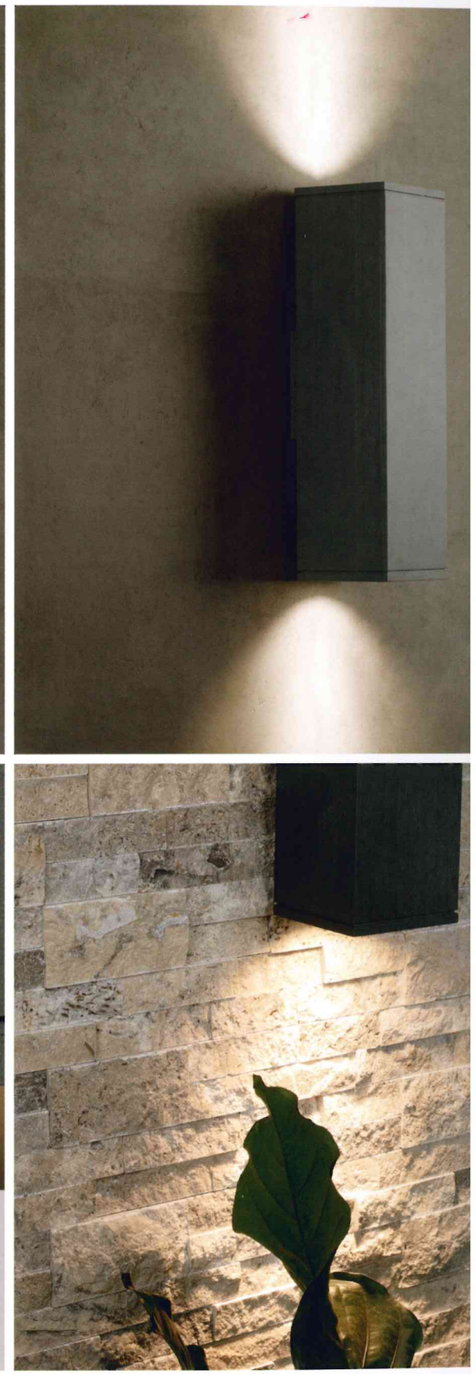
TEGEL WALL

700WTEG

CRI/CCT		LENGTH		BEAM SPREAD*		LENS	FINISH		FUNCTION		VOLTAGE	OPTIONS	
830	80 CRI, 3000K	**12**	12"	**N**	10° NARROW	**C**	CLEAR	**Z**	BRONZE	**DO**	DOWNLIGHT ONLY	**UNV**	120V–277V		NONE
840	80 CRI, 4000K	**18**	18"	**W**	36° WIDE			**Y**	GRAY	**UD**	UPLIGHT / DOWNLIGHT			**PC**	BUTTON PHOTOCONTROL
				NN	10° UP AND DOWN			**H**	CHARCOAL					**LF**	IN-LINE FUSE
				WW	36° UP AND DOWN									**SP**	SURGE PROTECTION
				NW	10° AND 36°									**PCLF**	BUTTON PHOTOCONTROL & IN-LINE FUSE
														PCSP	BUTTON PHOTOCONTROL & SURGE PROTECTION
														LFSP	IN-LINE FUSE & SURGE PROTECTION
														PCLFSP	BUTTON PHOTOCONTROL, IN-LINE FUSE & SURGE PROTECTION

*N, W = DOWNLIGHT ONLY (DO); NN, WW, NW = UP AND DOWNLIGHT ONLY (UD)





McGraw-Edison

DESCRIPTION

The TopTier™ parking garage, canopy and low-bay luminaire is an innovative solution that delivers an unparalleled combination of performance and visual comfort. The patented WaveStream™ optical technology blocks the line of sight from the LED light sources to the observer, while extracting the maximum amount of light on task. This approach results in a high level of uniformity and vertical footcandles that enhances safety in the application environment. The TopTier luminaire is UL/cUL listed for wet locations, IP66 and 3G vibration rated.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Construction
One-piece, low copper die-cast aluminum housing provides a clean and symmetric housing. Formed aluminum top is sloped to prevent bird nesting. Metal electrical tray allows for easy electrical access for field servicing.

Optics
Unique optical distributions are accomplished using various combinations of reflective backing plates and WaveStream optical technology. The optical Waveguide is manufactured using precision injection molded acrylic. The optics contain features that form a repeatable and redundant pattern to direct light in a precisely prescribed distribution. The drive lane distribution is specifically designed for locations with one direction of travel to optimally direct light in the same direction of travel for maximum glare control. For additional glare control and visual comfort with the Wide distribution, specify the SG option which adds a Solite® glass lens that works in combination with the Waveguide lens and reflective backing plate.

Offered standard in 4000K (+/-275K) CCT, optional 3000K, 5000K and 6000K. Minimum 70 CRI. Optional uplight feature provides a dedicated light engine (17W) to maintain consistent output across fixtures and reduces cave effect. Nominal uplight output is 800 lumens and ranges from 10%-30% total light output depending on the lumen package.

Electrical
LED driver(s) are mounted to metal electrical tray for optimal thermal performance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming driver(s), specify 5LTD for Fifth Light DALI driver(s). Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. Greater than 90% lumen maintenance expected at 60,000 hours, based off LM-80 test data and TM-21. Suitable for ambient temperature applications from -40°C (-40°F) to 40°C (104°F). For 50°C (122°F) applications, specify the HA high ambient option. IP66 rated against the ingress of dust and water.

Mounting
Standard fixture mounts to a square or octagonal 4" surface or recessed j-box via heavy-gauge quick mount bracket. Optional mounting methods include trunnion mount and wall mount. With the addition of a field supplied wet location j-box, the luminaire can be pendant mounted using the factory supplied decorative pendant mount kit or a suitable field supplied pendant.

Finish
Housing finished in white super durable TGIC polyester powder coat paint with 2.5 mil nominal thickness for superior protection against fade and wear. Optional colors include black, bronze, grey, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty
Five-year warranty.

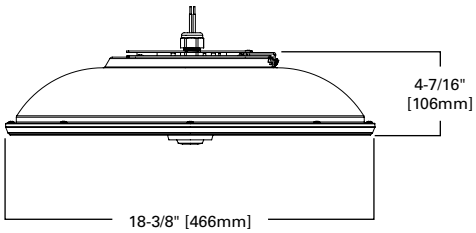
TT TOPTIER LED

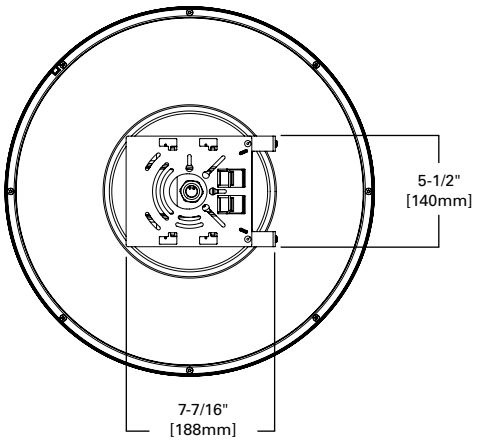
Solid State LED

PARKING GARAGE/ CANOPY/ LOW-BAY LUMINAIRE

DIMENSIONS

SURFACE OR PENDANT MOUNT





powered by fifthlight technology

CERTIFICATION DATA

UL/cUL Wet Location Listed
3G Vibration Rated
LM79 / LM80 Compliant
IP66 Rated
ISO 9001
DesignLights Consortium® Qualified*

ENERGY DATA

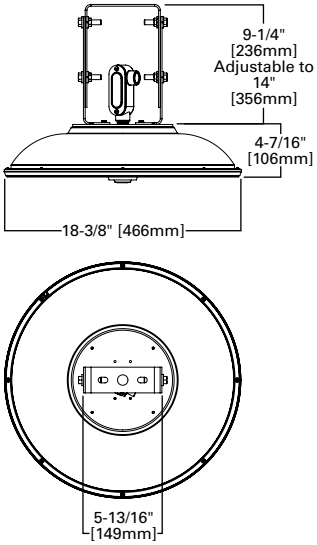
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

SHIPPING DATA

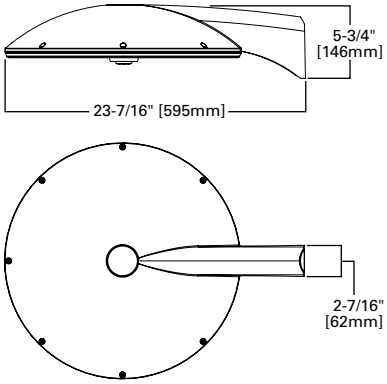
Approximate Net Weight:
16 lbs. (7.2 kgs.)

ADDITIONAL MOUNTING OPTIONS

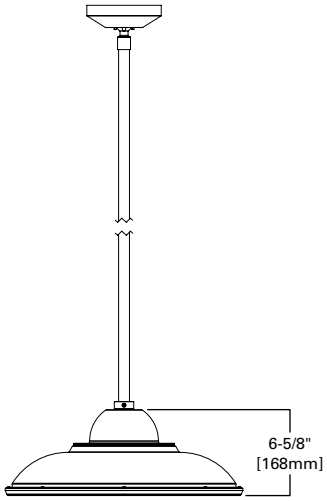
TRUNNION MOUNT



WALL MOUNT

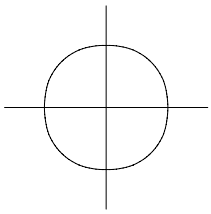


DECORATIVE PENDANT MOUNT

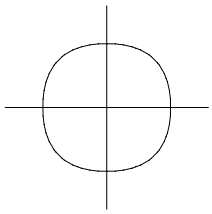


OPTICAL DISTRIBUTIONS

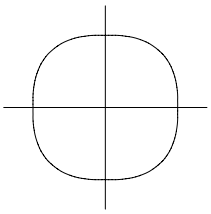
CQ (Concentrated)



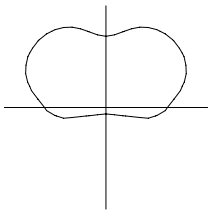
MQ (Medium)



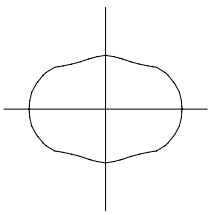
WQ (Wide)



DL (Drive Lane)



RW (Rectangular Wide)



LUMEN MAINTENANCE

Ambient Temperature	Lumen Maintenance				
	25,000 Hours	50,000 Hours	60,000 Hours TM-21 Rating	100,000 Hours	Theoretical L70 (Hours) Per TM-21 Data
C1 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 96%	> 94%	> 94%	> 93%	> 500,000
50°C	> 95%	> 94%	> 93%	> 93%	> 400,000
C2 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 95%	> 94%	> 93%	> 91%	> 500,000
50°C	> 95%	> 93%	> 92%	> 90%	> 400,000
C3 Lumen Package					
25°C	> 96%	> 93%	> 93%	> 89%	> 300,000
40°C	> 95%	> 91%	> 90%	> 85%	> 240,000
50°C	> 95%	> 90%	> 89%	> 83%	> 200,000
C4 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 95%	> 92%	> 92%	> 88%	> 300,000
50°C	> 94%	> 91%	> 90%	> 85%	> 250,000
C5 Lumen Package					
25°C	> 96%	> 93%	> 92%	> 88%	> 300,000
40°C	> 94%	> 90%	> 89%	> 83%	> 200,000
C6 Lumen Package					
25°C	> 95%	> 92%	> 90%	> 86%	> 250,000
40°C	> 95%	> 92%	> 91%	> 86%	> 250,000

POWER AND LUMENS

Lumen Package			**C1**	**C2**	**C3**	**C4**	**C5**	**C6**
Power (Wattage)			28	34	45	58	77	108
Current @ 120V (A)			0.26	0.31	0.41	0.52	0.69	0.95
Current @ 277V (A)			0.13	0.14	0.19	0.24	0.30	0.41
3000K CCT	Lumens	CQ Concentrated	3,293	3,997	5,256	5,486	7,107	9,084
	Lumens per Watt		118	118	117	95	92	84
	BUG Rating		B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1
	Lumens	MQ Medium	3,357	4,074	5,357	5,591	7,243	9,259
	Lumens per Watt		120	120	119	96	94	86
	BUG Rating		B2-U0-G1	B2-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2
	Lumens	WQ Wide	3,101	3,764	4,949	5,165	6,691	8,554
	Lumens per Watt		111	111	110	89	87	79
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3
	Lumens	RW Rectangular Wide	2,726	3,308	4,350	4,540	5,882	7,519
	Lumens per Watt		97	97	97	78	76	70
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3
	Lumens	DL Drive Lane / Type 4	2,440	2,938	4,152	--	--	--
	Lumens per Watt		73	71	62	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--
4000K CCT	Lumens	CQ Concentrated	3,848	4,670	6,141	7,273	9,423	12,046
	Lumens per Watt		137	137	136	126	123	111
	BUG Rating		B2-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens	MQ Medium	3,922	4,760	6,259	7,413	9,604	12,277
	Lumens per Watt		140	140	139	128	125	114
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	WQ Wide	3,623	4,397	5,782	6,848	8,872	11,342
	Lumens per Watt		129	129	128	118	115	105
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3
	Lumens	RW Rectangular Wide	3,185	3,865	5,082	6,019	7,799	9,969
	Lumens per Watt		114	114	113	104	101	92
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	DL Drive Lane / Type 4	3,235	3,895	5,506	--	--	--
	Lumens per Watt		98	95	83	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--
5000K CCT	Lumens	CQ Concentrated	3,645	4,424	5,817	7,204	9,334	11,932
	Lumens per Watt		130	130	130	124	121	110
	BUG Rating		B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens	MQ Medium	3,716	4,509	5,929	7,343	9,513	12,161
	Lumens per Watt		133	133	132	127	124	113
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	WQ Wide	3,433	4,166	5,478	6,783	8,788	11,235
	Lumens per Watt		123	123	122	117	114	104
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	RW Rectangular Wide	3,017	3,662	4,815	5,962	7,725	9,875
	Lumens per Watt		108	108	107	103	100	91
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	DL Drive Lane / Type 4	3,205	3,858	5,454	--	--	--
	Lumens per Watt		96	93	82	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--

NOTE: Nominal data with 70 CRI for 4000K and 5000K, 80 CRI for 3000K. Wattage values not valid for drive lane optic. For configurations that include the drive lane optic, glass, uplight or occupancy sensor options refer to the specific IES files for wattage, BUG rating and lumen output data.

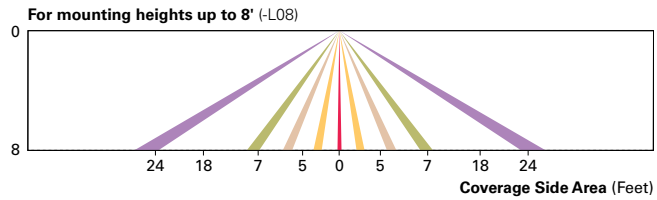
CONTROL OPTIONS

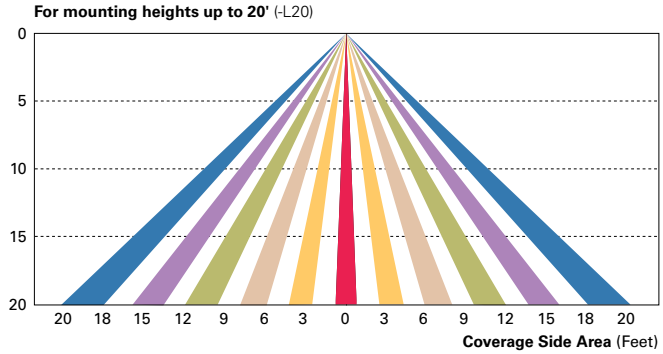
0-10V
This fixture is offered standard with 0-10V dimming driver(s). External 0-10V dimming wire leads are provided for use with a lighting control panel or other control methods except when PER7, 5LTD, MS/DIM or LWR is specified.

Dimming Occupancy Sensor (MS/DIM-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes.

These occupancy sensors include an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting. The factory preset is OFF. Please refer to the supplemental guide to understand limitations of product use regarding specific applications. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

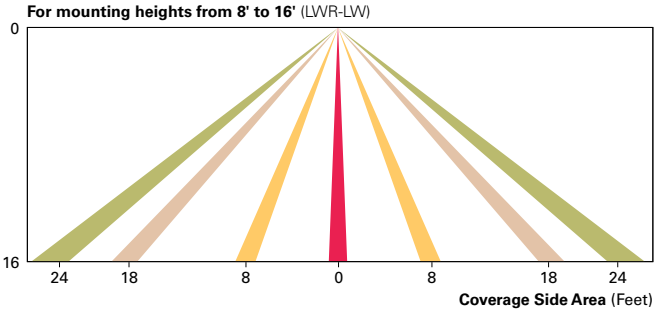
A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 8’-40’.

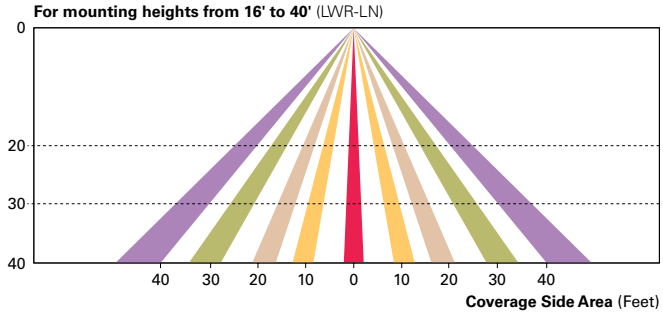




LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.





ORDERING INFORMATION

Sample Number: TT-C2-LED-E1-WQ-AP

Product Family	Lumen Package	Lamp Type	Voltage	Distribution	Mounting	Color
TT=TopTier [1]	**C1**=Nominal 3,500 Lumens **C2**=Nominal 4,500 Lumens **C3**=Nominal 6,000 Lumens **C4**=Nominal 7,500 Lumens **C5**=Nominal 9,500 Lumens **C6**=Nominal 12,000 Lumens	**LED**=Solid State Light Emitting Diodes	**E1**=Electrical (120-277V) **347**=347V **480**=480V [2]	**CQ**=Concentrated **MQ**=Medium **WQ**=Wide **RW**=Rectangular Wide **DL**=Drive Lane / Type 4 [3]	**[BLANK]**=Surface or Pendant Mount **TMB**=Trunnion Mount with Connection Box **WM**=Wall Mount **DPM**=Decorative Pendant Mount [4]	**[BLANK]**=White **AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic

Options (Add as Suffix)	**Accessories** (Order Separately)
8030=80 CRI / 3000K **7060**=70 CRI / 6000K **7050**=70 CRI / 5000K **UPL**=Uplight [5, 6] **30L**=30" Wire Leads [7] **HA**=50°C High Ambient [8] **CG**=Clear Glass [9] **SG**=Solite® Glass [10] **TR**=Tamper Resistant Hardware **X**=Driver Surge Protection Only **5LTD**=Fifth Light DALI Drivers [7, 11] **IBP**=Integral Battery Pack [12] **ICP**=Integral Cold Weather Battery Pack [12] **MS/DIM-L08**=Dimming Occupancy Sensor (<9' Mounting) [13, 14] **MS/DIM-L20**=Dimming Occupancy Sensor (9' - 20' Mounting) [13, 14] **LWR-LW**=LumaWatt Wireless Sensor, Wide Lens 8' - 16' Mounting Height [14, 15] **LWR-LN**=LumaWatt Wireless Sensor, Narrow Lens 16' - 40' Mounting Height [14, 15]	**FSIR-100**=Wireless Configuration Tool for Occupancy Sensor **MA1252**= Replacement 10kV Circuit Module **TT/WG**=Wire Guard **TT/BG-XX**=Bird Guard [16, 17] **DPMS36-XX**=36" Pendant Mount Stem [16] **DPMS48-XX**=48" Pendant Mount Stem [16] **DPMS96-XX**=96" Pendant Mount Stem [16]

NOTES:

1. DesignLights Consortium®Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
3. C1-C3 lumen packages only.
4. Order stem kit accessory.
5. Extended lead times apply.
6. Additional 17W. Provides 800 nominal lumens. Available in 3000K and 4000K with the C1-C4 lumen packages at a 25°C maximum ambient temperature. Not available with 347, 480, TMB, WM, HA, 5LTD, IBP or ICP.
7. Not available with TMB or DPM mounting.
8. HA not available with C5 and C6 lumen packages or 5LTD, IBP and ICP options. Also not available with LWR* options in C3 or C4 lumen packages.
9. Not available with CQ.
10. Standard with CQ, option available with WQ only.
11. Replace E1 with specific voltage (120, 208, 240, 277V available). Not available with C6 lumen package, HA, IBP, ICP or sensor options. Multiply published IES file by .95 when used with the C5 lumen package.
12. Replace E1 with specific voltage (120V and 277V available). 0°C minimum with IBP, -20°C minimum with ICP, 25°C maximum ambient temperature. Not available with WM, DPM, 5LTD or HA.
13. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
14. Includes integral photocell.
15. LumaWatt wireless sensors are factory installed only requiring network components in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
16. Specify color in place of XX.
17. Designed for use with pendant mounting only.

Roof Garden System

PART I - GENERAL

1.01 DESCRIPTION

The Carlisle Roof Garden System incorporates an adhered membrane waterproofing system with a Roof Garden Assemblies installed above.

The waterproofing system utilizes one of Carlisle"s adhered roofing assemblies; EPDM, TPO, PVC, FleeceBACK or AFX products installed over a structural deck or tapered insulation and cover board.

Above the waterproofing system is utilizing various components including Root Barrier, Polystyrene Insulation, MiraDRAIN G4 Drainage Composite, Carlisle Engineered Growth Media and Carlisle Vegetation. These components are installed above the membrane dependant on desired planting schedule, allowable loads and the climatic region of the project.

As an alternative to the traditional, planted-in-place Roof Garden system, Carlisle offers the modular Green Grid tray system, which incorporates a protection fabric and pre-planted modules over the adhered waterproofing system.

1.02 Roof Garden Definition

Ultra-Extensive Roof Garden System

Roof Garden System (growth media depth 2.5" to 4") is ideally suited for areas likely to receive little maintenance. Recommended plants include sedums, herbs and grasses. The anticipated weight above the membrane assembly is generally between 4.8 and 6 pounds per square foot, per inch of system depth, in a saturated state.

1.03 DESIGN GUIDELINES

The Roof Garden Waterproofing assemblies will incorporate a minimum 60-mil thick Sure-Seal EPDM. Membrane will be adhered with appropriate adhesive to tapered insulation with an acceptable cover board. To facilitate drainage, a minimum roof slope of 1/4" in 12" must be provided at the waterproofing membrane level.

1.04 QUALITY ASSURANCE

A. This Roof Garden Waterproofing System must be installed by a Carlisle Authorized Roofing Applicator in compliance with shop drawings as approved by Carlisle. There must be no deviations made from Carlisle's specifications or the approved shop drawings without the **PRIOR APPROVAL** of Carlisle.

B. A **pre-installation meeting** should be coordinated by the specifier and attended by the roofing applicator, membrane manufacturer"s representative and other trades working on the roof system both before and after membrane installation. The purpose of this meeting is to discuss the necessity of ensuring proper membrane protection during all phases of installation and to review other applicable requirements or unusual field conditions.

C. Upon request by the Authorized Applicator, an inspection will be conducted by a Field Service Representative of Carlisle to ascertain that the membrane roofing system has been installed according to Carlisle's specifications and details. This **inspection** shall be coordinated **prior to installing the "above membrane roof garden components"** so access to the membrane is not impaired.

D. Flood testing or other leak detection means is **required** to check the waterproof integrity of the membrane prior to installing any above membrane components.

E. An in-progress inspection may be scheduled after the initial inspection (after the membrane installation is completed) to ensure proper protection procedures are being followed to prevent possible damage to the membrane during the installation of Roof Garden components.

Note: The roofing applicator must notify Carlisle at least 3 weeks in advance of the applicable inspection dates for coordination purposes.

1.05 SUBMITTALS

A. To ensure compliance with Carlisle's warranty requirements, **all projects should be forwarded to Carlisle for review** prior to installation.

B. A dimensioned layout of all field splices shall be included along with the project submittals (shop drawing and Request for Warranty).

C. For all projects, prior to project inspection by Carlisle, a final shop drawing must be approved by Carlisle.

1.06 WARRANTY

A. **10, 15 or 20-year** System Warranty is available for a charge on commercial buildings and applies only to **products manufactured or marketed by Carlisle SynTec Incorporated**. The membrane system is defined as membrane, flashings, adhesives, sealants and other Carlisle brand products utilized in this installation..

When Carlisle Roof Garden components are specified and installed, for a nominal charge, a 10, 15 or 20-year Overburden Warranty can be added. The warranty covers all Carlisle Roof Garden components above the membrane limited to the protection fabric, polystyrene, drainage products, moisture retention mat, growth media, and Carlisle Roof Garden Plants. In the event of a leak, Carlisle is responsible for overburden removal, roof repair, and replacement of the overburden.

If a 20-year **No Dollar Limit** warranty including overburden is desired, a Sustainable Roofing Alliance Consultant must be utilized on the project during the design and construction phases. The SRA consultant shall be on site to monitor the installation.

B. **Access for warranty service**

If a 10, 15 or 20-year Overburden Warranty is not obtained or if the owner chooses to use overburden by others, it shall be the owner's responsibility to expose the waterproofing membrane assembly in the event warranty service or investigation is necessary.

C. The formation or presence of mold or fungi in a building is dependent upon a broad range of factors including, but not limited to, the presence of spores and nutrient sources, moisture, temperatures, climatic conditions, relative humidity, and heating/ventilating systems and their maintenance and operating capabilities. These factors are beyond the control of Carlisle and Carlisle shall not be responsible for any claims, repairs, restoration or damages relating to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in any building or in the air, land, or water serving the building.

1.07 JOB CONDITIONS

Material Safety Data Sheets (MSDS) must be on location at all times during transportation, storage, and application of materials. The applicator shall follow all safety regulation as recommended by OSHA and other agencies having jurisdiction.

A. Coordination between various trades is essential to avoid unnecessary rooftop traffic over sections of the roof and to prevent damage to the membrane. Heavily traveled areas must be protected by placing temporary protection courses to prevent damage to the membrane.

B. The use of a vapor retarder to protect insulation and reduce moisture accumulation within an insulated roofing assembly should be investigated by the specifier. Consult the latest publications by ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.) and NRCA (National Roofing Contractors Association) for specific information.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the job site in the original, unopened containers labeled with the manufacturer's name, brand name and installation instructions.

B. Job site storage temperatures in excess of 90° F (32° C) may affect shelf life of curable materials (i.e., sealants, cleaners, primers, adhesives, SecurTAPE, Pourable Sealer, Pressure-Sensitive Flashing and uncured flashing).

C. When liquid adhesives and sealants are exposed to lower temperatures, restore to a minimum of 60° F

(16° C) before use. Do not store containers with opened lids due to loss of solvent that will occur from flash off.

D. Sure-Seal and Sure-Weld FleeceBACK and AFX Membrane, when specified, should be stored in its original plastic wrap or be covered to protect from moisture. Any moisture absorbed by the fleece backing must be removed by using a wet-vac system, prior to membrane application.

E. Membranes that have been exposed to the elements for approximately 7 days must be prepared with Weathered Membrane Cleaner prior to hot air welding. Refer to Carlisle"s Sure-Weld Specifications, Part II, Application, for applicable requirements.

F. Insulation, Dens Deck Prime, Securock, and base sheets, when specified, must be stored so they are kept dry and are protected from the elements. Store insulation, Dens Deck Prime, and Securock on a skid and completely cover with a breathable material such as tarp or canvas. If the insulation is lightweight, it should be weighted to prevent possible wind damage.

G. Carlisle Engineered Growth Media should be stored under cover whenever possible to avoid direct sunlight exposure to the SuperSacks in which the material is delivered and excessive moisture absorption. Care should be taken not to damage the packaging to avoid leakage when hoisted to the rooftop.

H. Carlisle Roof Garden Plants, when specified, should be planted promptly after delivery to the jobsite. Sedum cuttings should be used within 12 hours of arrival. Plugs should be unpacked immediately upon arrival and planted within three (3) days. Vegetated Sedum Tiles and Mats should be unpacked and installed within 36 hours. Unused plugs and tiles should be stored in an outdoor location with access to at least four (4) hours per day of direct sunlight.

PART II - PRODUCTS

2.01 GENERAL

The components of this roofing system are to be products of Carlisle. The installation, performance or integrity of products by others is not the responsibility of Carlisle and is expressly disclaimed by the Carlisle Warranty.

2.02 MEMBRANE

Sure-Seal® (black) EPDM, Sure-Seal® AFX-Plus, FleeceBACK® EPDM or Sure-Weld® TPO membrane can be used with this system. Refer to Paragraph 1.03, Design Guidelines for required membrane thickness that is dependent upon the type of Roof Garden and warranty selected. For membrane physical properties, refer to the appropriate Carlisle Technical Data Bulletins or Product Data Sheets.

2.03 RELATED CARLISLE MATERIALS FOR WATERPROOFING

A. Sure-Seal Products

Sure-Seal Bonding Adhesive, Low VOC Bonding Adhesive, FAST Adhesive, Cold Applied Adhesive, AquaBASE 120 Adhesive, SecurTAPE, HP-250 Primer, Low VOC EPDM Primer, Splicing Cement, In-Seam Sealant™, Lap Sealant, Universal Single-Ply Sealant, Weathered Membrane Cleaner, Cured EPDM Flashing, Cured Cover Strip, Pressure-Sensitive Overlayment Strip, Elastoform Flashing, Termination Bars, Fasteners/Plates Water Cut-Off Mastic, Pourable Sealer, Walkway Pads/Rolls, Pre-Molded Pipe Seals, and Pressure-Sensitive Inside/Outside Corners are used depending on the waterproofing assembly.

B. Sure-Weld Products

Sure-Weld Flashing, Sure-Weld Bonding Adhesive, Low VOC Bonding Adhesive, FAST Adhesive, Cold Applied Adhesive, AquaBASE 120 Adhesive, Cut-Edge Sealant, Water Cut-Off Mastic, Universal Single-Ply Sealant, TPO Molded Pocket Sealant, Weathered Membrane Cleaner, Pressure-Sensitive Cover Strip, Coated Metal, Heat Weldable Walkway Rolls, Pre-Molded Accessories, TPO Primer, Low VOC TPO Primer, Termination Bars, and Fasteners/Plates are used depending on the waterproofing assembly.

C. Sure-Flex Products

Sure-Flex PVC Bonding Adhesive, Sure-Flex PVC non-reinforced Flashing, Sure-Flex PVC “T” Joint Cover, Sure-Flex PVC Cut-Edge Sealant, Water Cut-Off Mastic, Universal Single-Ply Sealant, PVC One-Part Pourable Sealer, Foil Grip Aluminum Tape, PVC Membrane Cleaner, Sure-Flex PVC Coated Metal, Sure-

Flex PVC Heat Weldable Walkway Rolls, Sure-Flex PVC Inside/Outside Corners and Sure-Flex Pre-Molded accessories are used depending on the waterproofing assembly.

D. Other Carlisle products, such as insulation and edgings/copings, are also required when such components are to be included as part of the System Warranty.

2.04 CARLISLE ROOF GARDEN COMPONENTS

A. **MiraDRAIN G4 Drainage Composite** consists of a high impact polystyrene core with “cups” and high-flow overflow drains. A non-woven 100% post-consumer recycled polyester combination filter fabric and green moisture retention mat is bonded to the retention side of the molded core to prevent passage of particles into the water reservoirs. Designed to filter and retain water in all Roof Gardens while allowing excess water to quickly reach the drainage system. Drainage composite is 1.21” thick and holds up to 0.32” of rainfall (0.2 Gallons) per square foot. Packaged in 4' x 50' rolls weighing 70 pounds.

B. **Carlisle Engineered Growth Media** – A lightweight FLL-approved growth media used for roof garden applications. Applied at the specified depth on Carlisle Roof Garden assemblies.

Depth: **3 ¼”**

Bulk Media Blend: **Lightweight Extensive**

Bulk Density (dry weight): **35.8 lbs/ft3**

Bulk Density (saturated weight): **57.5 lbs/ft3**

Total Pore Volume: **78.0 Vol%**

Maximum Water Holding Capacity: **37.0 Vol%**

Air-Filled Porosity (at max. WHC): **41.0 Vol%**

Water Permeability: **0.48 cm/s**

Water Permeability: **11.4 in/min.**

pH: **7.4**

Soluble Salts (water, 1:10, m:v): **0.4 mmhos/cm**

Soluble Salts (water, 1:10, m:v): **1.3 g (KC1)/L**

Organic Matter Content: **7.0 mass %**

C. **Carlisle Roof Garden Plants**

Vegetated Sedum Mats – Carlisle"s Vegetated Sedum Mats are available in 21.25 or 25 square foot rolls. Mats enable full vegetative coverage on the day of installation with the fastest possible installation time. Carlisle"s Vegetated Sedum Mats weigh approximately 5.5 pounds per square foot in a saturated state and are planted with seven to nine varieties of sedum**. Refer to Roof Garden Attachment V for more information.**

D. **Polystyrene Insulation (available from Carlisle)**

Insulfoam DB is a minimum 40 psi compressive strength**,** moisture resistant, closed cell expanded polystyrene with ¼” x ¼” drainage channels every 2” O.C. Installed directly over the roof membrane in Intensive (deep) garden assemblies. Available in 4"x 4" and 4" x 8" board sizes with a thickness of 1" to 40”. Readily available in custom lengths and widths.

E. **Carlisle Aluminum Roof Garden Edge** – a 0.080" thick extruded aluminum edge used to separate roof garden assemblies from adjacent walkways or perimeter stone ballast. The edging comes in 10" lengths and 4” high with a 3” flange or 8” high with a 6” flange. Additional heights are available from Carlisle.

F. **Carlisle Aluminum Roof Garden Drain Box** – a 0.125” thick extruded aluminum drain box that is 12” x 12” with a welded 4-1/2” flange to keep the drain areas clear of stone ballast or growth media. The drain box is available in 4” or 8” heights. Drainage holes are pre-punched around the sides. Access to the drain is provided by a removable lid. Custom sized Drain Boxes are available from Carlisle.

G. **Carlisle Modified Base Sheet** – A tough, glass fiber, reinforced, SBS-modified asphalt, base sheet (nominal 39” wide by 50" long) that meets or exceeds the requirements for ASTM D 6163 Type I, Grade S for SBS-modified bituminous sheet materials. The Carlisle Modified Base Sheet is used directly under AFX-Plus Membrane.

PART III EXECUTION

3.01 GENERAL

When feasible, begin the application at the highest point of the highest roof level and work to the lowest point to prevent moisture infiltration and minimize construction traffic on completed sections. This will include completion of all flashings and terminations.

3.02 ROOF DECK CRITERIA

Proper decking shall be provided by the building owner. The building owner or its designated representative must ensure that the building structure is investigated by a registered engineer to assure its ability to withstand the total weight of the specified roofing system, as well as construction loads and live loads, in accordance with all applicable codes. The specifier must also designate the maximum allowable weight and location for material loading and storage on the roof.

3.03 SUBSTRATE REQUIREMENTS

The substrate must be dry, relatively smooth and free of protrusions, debris, sharp edges or foreign materials and must be free of accumulated water, ice and snow. Cracks or voids in the substrate greater than 1/4" (6 mm) must be filled with a suitable material.

3.04 WATERPROOFING INSTALLATION

Before beginning installation, refer to the applicable Material Safety Data Sheets, OSHA safety requirements, and Technical or Product Data Bulletins for cautions and warnings.

A. **Insulation Attachment**

1. Base layer of insulation can be mechanically attached with acceptable Carlisle Fasteners and Insulation Plates, Refer to applicable Adhered Application section for acceptable decks and the Carlisle Fasteners.

2. Fastening density is determined from insulation type and thickness. Refer to appropriate insulation attachment details in Sure-Seal/Sure-White Adhered Application Details, Sure-Weld Adhered Application Details or the Sure-Flex Specification.

3. As an alternate to mechanically attaching the base layer of insulation, Carlisle FAST Adhesive can be used. Refer to Sure-Seal/Sure-White Adhered Application – Attachment III, Sure-Weld Adhered Application – Attachment IV, or the Sure-Flex Adhered Specification Section 602116, paragraph 3.04.

4. Top layer of insulation must be an acceptable cover board adhered with FAST Adhesive. Refer to Sure-Seal/Sure-White Adhered Application – Attachment III or Sure-Weld Adhered Application – Attachment IV for application procedure. Cover boards shall be minimum ½-inch thick Dens-Deck Prime or Securock.

B. **Membrane Installation**

1. FleeceBACK Membranes either Sure-Seal EPDM or Sure-Weld TPO may be adhered with the appropriate adhesive directly over sloped structural concrete or wood roof decks. Direct application over cellular or perlite lightweight insulating concrete substrate may also be specified (contact Carlisle for acceptable lightweight insulating concretes).

2. Follow Carlisle‟s applicable Adhered Roofing System Specifications for insulation types, surface preparation procedures, membrane positioning, and adhesive application requirements.

C. **Membrane Splicing**

1. Refer to appropriate splicing procedures published in Sure-Seal EPDM or Sure-Weld TPO Adhered Application Specification.

2. **In addition to the standard splice procedure all field splices shall be overlaid with the appropriate 6" EPDM or TPO Pressure-Sensitive Cover Strip.**

3. Prior to Pressure-Sensitive Cover Strip application, the splice area must be primed with Sure-Seal HP-250 or Low VOC EPDM or Low VOC TPO Primer.

D. **Flashing**

1. Walls, curbs, skylights and all other penetrations through the membrane must be flashed in accordance with Carlisle"s published specifications/details for the applicable membrane specified.

2. Flashing heights shall be greater in height than the specified depth of the Roof Garden assembly (Drainage composite, growth media, etc.).

3. Vertical field splices at walls, curbs, etc., must be overlaid in the same fashion as the field splices.

E. **Roof Drains**

1. Roof garden drains should be covered with Carlisle Aluminum Drain Box or a perforated drain box by others with removable lid for inspection purposes. 1-1/2" nominal diameter rounded river washed gravel is applied around the drain box a minimum 18" to promote drainage.

2. A standard cast iron compression ring clamping with 1-1/2" nominal diameter rounded river washed gravel applied around the drain sump area (minimum 18" in width) for drainage.

3.05 ROOF GARDEN INSTALLATION

A. **Prior to installation of Roof Garden Components**

1. Limit foot traffic over completed waterproofing system. Heavily traveled areas (staging areas, corridors used to transport roof garden components) must be protected using ½" thick plywood or other sheathing.

2. Perform a Flood Test to ensure the watertight integrity of the waterproofing system. Testing should take place after the membrane and flashings have been in place a minimum of 24 hours. Plug drains and provide necessary barriers to contain water.

3. "Flood Test" the membrane surface with water for 48 hours at a minimum depth of 2". Inspect for leaks and repair membrane if damage to waterproofing assembly is found. Retest after repairs have been made.

4. Sweep the surface of the membrane to remove all debris and loose or foreign material.

B. **Ultra-Extensive Roof Garden Installation**

1. **MiraDrain G4 Drainage Composite**

   a. Unroll the drainage composite and flip over so green or white moisture retention mat is facing upwards.

   b. Place drainage composite directly over the waterproofing membrane with the built-in overlapping flap facing the direction of the slope.

   c. Position additional drainage composite rolls next to each other with green moisture retention mat butted against the long side. Once in place, flip 6" retention mat flap over the first drainage composite. For runs of MiraDRAIN G4 exceeding 50 feet in length, peel back both fabrics approximately 3" on the adjacent ends of the rolls and insert two rows of the MiraDRAIN "cups" into the cups of the abutting roll. This locks the MiraDRAIN rolls together and does not allow for passage of growth media directly onto the waterproofing membrane.

   d. Continue with placement of drainage component until the designated roof garden area is covered.

2. **Carlisle Engineered Growth Media**

   a. Hoist growth media in SuperSacks by crane to the roof area that is receiving the Roof Garden.

   b. Distribution of the Carlisle Engineered Growth Media shall be directly over the MiraDRAIN G4 Drainage Composite from SuperSacks that are lowered by crane 2" to 4" above the drainage composite.

   c. Slit the bottom of the sack with a knife or other cutting device to dispense the growth media directly over the drainage composite or into wheelbarrows for transportation to hard to access areas.

      Caution: Location points for distribution of growth media must not overload the structural capacity of building.

   d. Coverage rate per sack for a shallow assembly is approximately 150 square feet for a 4" depth.

      Caution: Care must be taken when distribution of Carlisle Growth Media is during windy conditions to limit potential scouring of media. If growth media is not used on the day of arrival, product should be stored under a trap or other opaque cover to prevent direct exposure to sunlight and moisture.

      Note: As an alternative to super sacks, growth media may be purchased in bulk and blown to the roof using a blower truck. For information please contact Carlisle.

3. **Carlisle Roof Garden Vegetated Mats**

   a. Lift the 48" x 75" mats from the pallets and unroll the mats directly over the growth media.

   b. Unroll Vegetated Mats adjacent to each other with edges butted together to within ¼".

   c. Continue with placement of vegetated mats until the designated roof garden area is covered.

   d. Water the Roof Garden assembly by hand or sprinkler(s) until the system is saturated.

C. **After installation of Roof Garden Components**

1. Irrigate the Roof Garden with a lawn sprinkler, hand sprayer, or with a designed irrigation system until saturation to the point of runoff.
2. Refer to **Roof Garden Attachment VI** for maintenance schedule.

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Carlisle SynTec Incorporated, P.O. Box 7000, Carlisle, PA 17013-0925
800-479-6832
http://www.carlisle-syntec.com
http://www.CarlisleRoofGardens.com

Roof Garden
"Attachment V"
Carlisle Vegetated Sedum Mats

June 2010

A. Vegetated Sedum Mats – Carlisle"s Vegetated Sedum Mats are well suited for high slope applications and are pre-grown with a large variety of sedums. Each mat is available in 21.25 – 25 square foot rolls weighing approximately 80 pounds. Vegetated coverage after installation is 85% or greater. Vegetated Sedum Mats can be specified for US Hardening Zones 3 through 8. For Hardening Zones 9 and 10, please contact Carlisle for guidance. For US Hardening Zone Map refer to Roof Garden Attachment III.

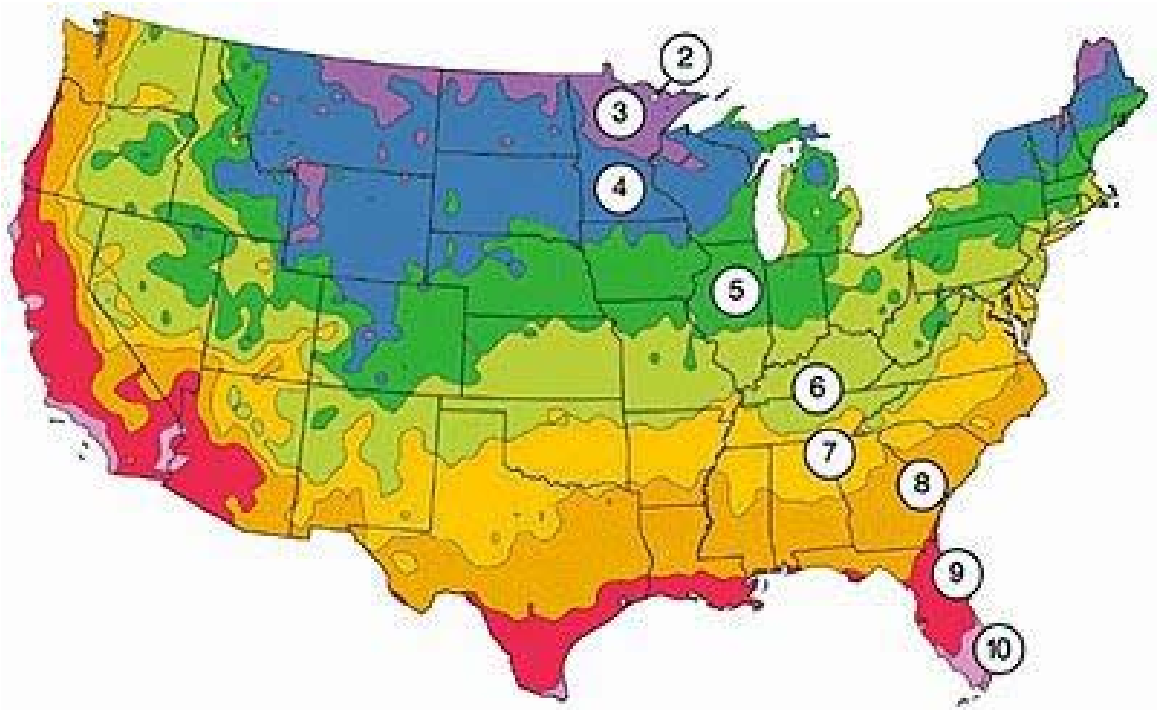
B. Sedum Mat Varieties

Carlisle"s Vegetated Sedum Mats are planted with a minimum of 7 different varieties of sedum to achieve a mix of colors and textures. Sedum varieties consist of:

- Sedum Acre
- Sedum Album
- Sedum Ellacombianum
- Sedum Kamtschaticum
- Sedum Pulchellum
- Sedum Reflexum „Blue Spruce"
- Sedum Spurium „Fuldaglut"
- Sedum Spurium „Dragons Blood"
- Sedum Spurium „John Creech"
- Sedum Spurium „Red Carpet"
- Sedum Spurium „Tricolor"
- Sedum Sexangular

C. Installation - Remove the Sedum Mats from the pallets with care. Simply place the Sedum Mats over a minimum 2.5" of Carlisle Growth Media, leaving 1/8"-1/4" gap between the Mats. Water the Roof Garden assembly to the point of system saturation and water begins to leave the assembly.

Plant Varieties by Hardening Zones



United States Hardening Zones 2 through 10

Zone 2

- Arenaria Montana
- Cerastium tomentosum
- Saponaria ocymoides
- Thymus praecox 'Purple Carpet'
- Veronica liwanensis

Zone 3

- Achillea 'Appleblossom'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Arenaria montana
- Armeria maritima 'Alba'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Cerastium tomentosum
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum „W. Gold"
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Veronica liwanensis

Zone 4

- Achillea 'Appleblossom'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'

Plant Varieties Cont.

- Achillea x lewisii 'King Edward'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum „W. Gold"
- Sedum kamtschaticum k. varigatum
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 5

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Plant Varieties Cont.

Zone 6

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum reflexum „Blue Spruce"
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 7

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Arenaria montana
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Cerastium tomentosum
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Phlox subulata 'Candystripe'
- Phlox subulata 'Crimson Beauty'
- Phlox subulata 'Drummons Pink'
- Phlox subulata 'Emerald Blue'
- Phlox subulata 'Fort Hill'
- Phlox subulata 'Red Wing'
- Phlox subulata 'White Delight'
- Potentilla nepalensis 'Miss Wilmot'
- Saponaria ocymoides
- Scabiosa columbaria 'Pink Mist'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum reflexum „Blue Spruce"

Plant Varieties Cont.

- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 8

- Achillea 'Appleblossom'
- Achillea x lewisii 'King Edward'
- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine'
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Armeria maritima 'Alba'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Aurinia saxatilis 'Gold Dust'
- Aurinia saxatilis 'Summit'
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Lavandula angustifolia 'Hidcote'
- Sedum acre „Gold Moss"
- Sedum album „Coral Carpet"
- Sedum hispanicum „Purple Form"
- Sedum kamtschaticum
- Sedum kamtschaticum k. varigatum
- Sedum kamtschaticum „W. Gold"
- Sedum reflexum „Blue Spruce"
- Sedum rupestre „Angelina"
- Sedum sexangular
- Sedum sieboldii
- Sedum spurium „Fuldaglut"
- Sedum spurium „John Creech"
- Sedum spurium „Red Carpet"
- Sedum spurium „Tricolor"
- Sempervivum 'Black'
- Sempervivum 'Cobweb Buttons'
- Thymus praecox 'Bressingham'
- Thymus praecox 'Purple Carpet'
- Thymus pseudolanuginosus 'Wooly Thyme'
- Thymus serpyllum 'Albus' ('Album')
- Thymus serpyllum 'Coccineum'
- Thymus serpyllum 'Elfin'
- Veronica liwanensis

Zone 9

- Achillea millefolium 'Summer Pastels'
- Achillea millefolium 'Summer Wine"
- Achillea 'Moonshine'
- Achillea 'Paprika'
- Achillea 'Terra Cotta'
- Agastache 'Blue Fortune'
- Armeria maritima 'Dusseldorfer Stolz'
- Armeria maritima 'Splendens'
- Artemisia stelleriana 'Silver Brocade'
- Delosperma cooperi
- Delosperma nubigenum
- Dianthus deltoides 'Brilliant'
- Dianthus 'Spangled Star'
- Sedum kamtschaticum k. varigatum
- Sedum reflexum „Blue Spruce"
- Sedum sieboldii
- Sempervivum 'Black

Zone 10 – Please contact Carlisle for plants suitable to Zone 10.

Roof Garden
"Attachment VI"
Roof Garden Maintenance

November 2011

Immediately After Planting

1. Water/irrigate the roof to the point of run-off.
2. Inspect drains for any foreign debris that may hinder their performance.

Irrigation Requirements

1. W ater the system two to three times a week in the mid-morning for at least the first month.
2. During extremely hot, dry, drought type conditions, regularly check your Roof Garden system for signs of stress. If the plants seem to be thirsty where they are wilted, you must irrigate the system. During these times, irrigation should be done twice a week in the morning or evenings.
3. If the Roof Garden was installed in an area that receives less than 35 inches of rainfall per year, a permanent irrigation system is required.

First Season

1. One month after planting, all weeds and non-specified plant material must be pulled from the growth media and removed from the rooftop. A minimum of two weed removal events should occur during the first season. Little to no weeding should be necessary.
2. During weed removal events, all drains must be inspected. If Carlisle Roof Garden Drain Boxes are utilized, remove the four Phillips head screws on the lid and remove to visually inspect the drain internals.
3. After the local trees have dropped their leaves, a final Autumn inspection must be performed. All debris must be removed from the Roof Garden and drains must be given a final inspection for the season.

Second Season

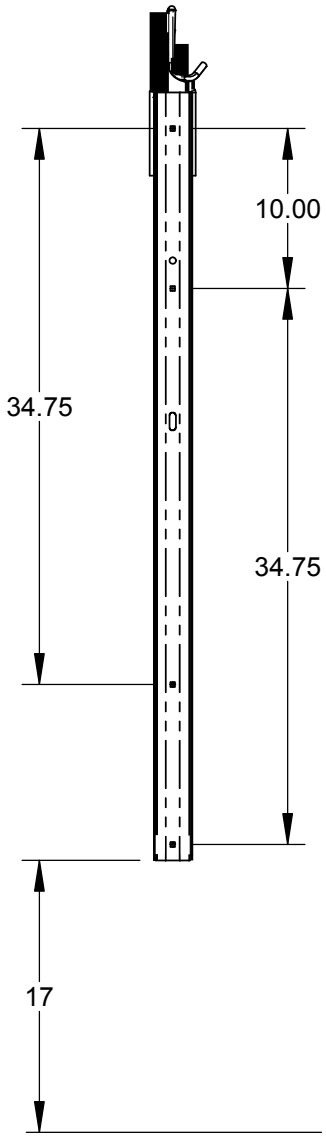
1. If in USDA climate 7 or above, a Spring fertilizer application may be given. Granular **organic** fertilizer can be used at the full rate recommended on the packaging. Petrochemical-based time-release fertilizer (Osmocote, Miracle-Gro, etc.) can be used at **half** the rate recommended on the packaging. Organic fertilization will result in a lower water requirement for the plants. On all-sedum roofs, fertilization should not be needed.
2. A mid-Spring weed removal and drain inspection event must occur. A total of two weed removal and drain inspection events should occur during the second season
3. If Carlisle"s Sedum Mats are used, neither watering nor weeding should be required.
4. After the local trees have dropped their leaves, a final Autumn inspection must be performed. All debris must be removed from the Roof Garden and drains must be given a final inspection for the season.

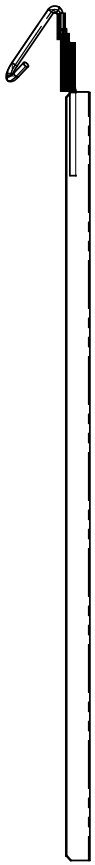
Third season

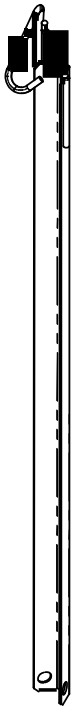
1. A Spring fertilizer application may be given, if needed.
2. One weed removal event must occur, in the mid-Spring
3. During the Autumn maintenance event, all foreign debris must be removed from the roof

If possible, monitor your Carlisle Roof Garden by visual examination at least once a month to make sure that the plants appear healthy. Should your roof garden experience any health-related issues, contact Carlisle SynTec Inc. for support. Once established, your Carlisle Roof Garden should provide you with decades of beautiful and trouble-free service.

Specifications for Item 116-1039







NOTE:

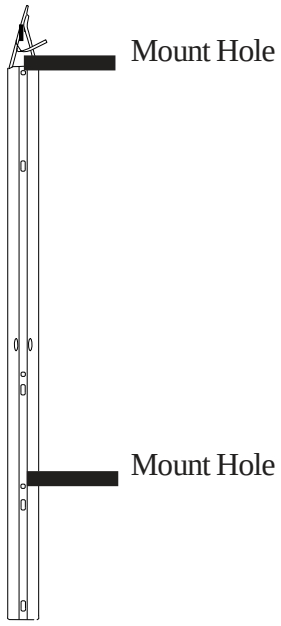
1. DO NOT SCALE DRAWING.
2. INTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

HIGHLAND
PRODUCTS GROUP LLC
3350 NW Boca Raton Blvd., Suite B2 Boca Raton, FL, 33431
Phone: 561.620.7878 Fax: 561.620.8668

Bike Trac Parking System

Item 116-1039 Mounting Instructions

Mounting Bike Trac

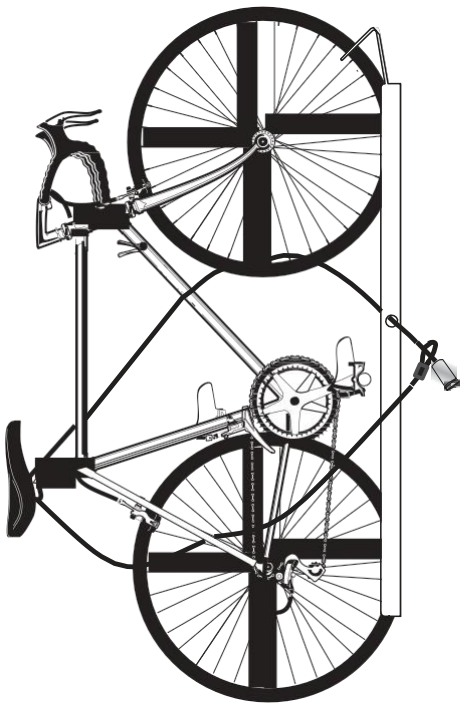


Bike Trac can be mounted to any wall, corner, pillar, or post strong enough to hold the bikes. Each unit comes with two pan head screws which work for mounting the Bike Trac to wooden studs. If mounting to any other surface consult your local hardware store for applicable hardware. Use mounting holes as shown in illustration. **Note:** *To protect wheel, slide rubber sleeve onto wheel hook of Bike Trac.*

Bike Trac Placement

Option 1: Stagger tops of the Bike Tracs (High, Low, High). Approx. space between each 12-15".
Option 2: Level tops of Bike Tracs, hanging every other bike by rear tire. Approx. space between each 15-18".
Option 3: Level tops of Bike Tracs, hanging all bikes by front tire. Approx. space between each 18-21".

Note: Be sure to leave enough room between each Bike Trac so that the bike's handlebars do not interfere with each other. Optimum distance between Tracs will depend on make and model of bike.



Locking Bike To Bike Trac (Item 116-1039)

In most cases the locking cable is long enough to thread through your seat, frame, front and rear wheel. Thread cable through desired parts of the bicycle and then pass the metal end of the cable through the hole punched into the Bike Trac. **Note**: *Locking cable is only a intended to be a theft deterrent. Loss of bicycle is not covered under warranty.*

Parts List

Qty	Description
1	Bike Trac Assembly
2	5/16" Washer
2	1" Slotted Pan Head Screw
1	Wheel Hook Rubber Sleeve

Locking Model Only (116-1035)

Qty	Description
1	Locking Cable

HIGHLAND PRODUCTS GROUP LLC
3350 NW Boca Raton Blvd., Suite B2 Boca Raton, FL, 33431
Phone: 561.620.7878 Fax: 561.620.8668

Construction Management Plan

[Wright-Ryan Construction – Verdante Condominiums]

The following is the Construction Management Plan for the Verdante Condominium building located at the intersection of Hampshire Street and Federal Street in Portland, Maine. This building will be a new condominium building containing 31 units over 5 floors. First floor will be parking for the tenants and a retail space with the upper floors including the condominium units.

This building is located on a tight urban site which will involve a phased approach to construction management:

- Phase 1 will include foundations and steel erection in the area shown on the plan. This phase will also include all street openings for utilities.
- Phase 2 will include foundations and steel erection in the area shown on the plan.
- Phase 3 will complete the steel erection and will last until final completion of the project.

A. Construction Management Principles

All phases of the proposed Construction Management Plan are configured to lessen the impact of the construction activities on Hampshire and Federal Streets, abutters, and the surrounding neighborhood. Below is a list of control measures being taken:

- A temporary construction site fence will be used to control pedestrian access to the site for the safety of pedestrians and workers alike. The temporary fence will remain during all phases of construction management. Signage will be utilized to inform pedestrians to cross the street as the sidewalk will be closed during the construction of this building.
- Traffic control during Phase 1 will be crucial.
    - We are assuming that we can enclose parking spots and one lane of Federal Street for the duration of this project to allow for construction. We will also require that the parking spots on the South side of Federal Street be used as a travel lane for access to Luminato Condominiums. Signage will be provided to direct traffic accordingly.
    - We are assuming that we will be able to close a section of Hampshire Street to facilitate the install of underground gas, sewer and electrical. This street closing would last approximately 2 weeks. Detour signage will be provided to direct traffic around the closing.
    - Other trenching activities in Federal Street will have traffic control on an individual basis, and none of these will last longer than a week

B. Development Review of Construction Management Plan

Wright-Ryan will submit this construction management plan which outlines the logistics and safety measures being taken to protect the city and its residents as well as the workers during construction of this building.

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

1. **Street Opening Permit:** A street opening permit will be needed for the hook up of domestic water, sprinkler, sanitary, storm water, electrical, and gas. These will happen at different areas on Hampshire and Federal Streets. Please refer to the plan for specific locations and durations.

2. **Street Occupancy Permit:** A street occupancy permit will be required for Federal Street for the duration of the project and for Hampshire Street for 2 weeks to facilitate utility hookups. We will apply for these when needed.
3. **Blasting:** Blasting will not be required for this project.

D. Construction Administration and Communication

Wright-Ryan Construction will work diligently to ensure that communication with all parties involved is paramount. We intend to assist the developer in conversations with abutters before and during construction to inform them of the work that is happening and make sure that they are being affected as little as possible during the construction of this building. We will also provide construction signage with the contact information of our company so we can be contacted should any issues arise. For city use, we propose the following contact persons for this project:

1. Project Manager: Tyler Durkee – (207)245-2319
2. Project Superintendent: Millard Nadeau – (207)253-9119

Note: These are subject to change based on Wright-Ryan personnel availability, but the final construction management plan will be up to date with the actual persons of contact. Also, until this project reaches the construction phase, contact should be limited to the Wright-Ryan Preconstruction Department which can be reached at 207-773-3625.

E. Construction Schedule

1. The preliminary timeline for this project is as follows:
   a. Proposed Construction Start: October 2018
   b. Proposed Final Completion: January 2020
2. Hours of construction are currently foreseen as being limited to 7:00am to 5:00pm, Monday-Friday. No weekend work is anticipated at this time, but if it is needed during the project, it will be limited to the hours allowed by the City of Portland.
3. Extended hours or night work are not foreseen at this time, but the city will be notified if these are required at any point during construction.
4. Material deliveries will take place at the main entrance of the construction project and directed to a laydown area on site or at our satellite laydown area on Newbury Street.

F. Security & Public Safety

1. The construction management plan drawings show where temporary construction fences will be located during all phases of construction. These fences will both secure the site as well as protect pedestrians from the construction equipment and work.
2. This construction project will be operated in accordance with all OSHA regulations.
3. A Fire Safety Program will be developed and adhered to during construction of this building.

G. Construction Permitting and Traffic Control Plans

1. <u>Construction Activity in Public Streets:</u> Construction activity in public streets will have traffic control in place during working hours. This includes for any open excavations or construction equipment/vehicles temporarily parked on the side of the

road. If open excavations will be left overnight, these excavations will be covered with steel plates and signage will alert drivers and pedestrians of the work.

We are not anticipating any deliveries that will be received on Franklin St. However, if it is needed, deliveries will be scheduled in early morning hours before rush hour. One lane of Franklin Street will be closed and flaggers will control traffic. After delivery is complete, the lane will be opened to allow for traffic to flow normally.

2. Sewer: Sewer will need to be hooked up to city services for this project. Applicable street opening and work permits will be pulled prior to the start of this work.

3. Traffic Control Plans: See above for specific traffic control plans.

H. Site Management and Controls

This construction site will have dumpsters stored near the construction entrance and will be changed out on a normal basis.

Noise will be confined to normal work hours. This noise will consist of normal vehicle traffic, a crane for erecting the building, and normal construction noises such as banging and the sounds of power tools. This should not disturb the surrounding neighborhood.

Wright-Ryan will be responsible for snow removal inside of the construction site and any closings of streets. We will rely on the city to plow all accessible public roads.

I. Erosion Control and Preservation of Trees

1. Erosion control measures and protection of trees is not foreseen for this site.
2. We will use sediment control measures to prevent dirt and dust from our site from flowing into storm drains during inclement weather or melting.

J. Construction Staging Area

Staging for vehicle overload and excess material will be in place at our satellite lot on Newbury Street which has been secured by the owner for use during this construction project only.

K. Parking During Construction

1. Construction Parking: Parking will be made available at our satellite lot on Newbury Street for construction vehicles.
2. Truck Routes and Volumes: The expected truck route will be from Franklin Street, left onto Congress Street and right onto Hampshire Street. During the closing of Hampshire Street, detour signs will direct construction and normal traffic to India Street and right onto Federal Street.

Title: CM Plan - Phase 1
Project: Verdante Condominiums
Date: 6/7/18

Wright-Ryan

GRID NORTH

Street opening to hook up underground electrical service, gas, sanitary - street closed - 1 week

Sidewalk Closed - Cross Here

HAMPSHIRE STREET

PAVED - Street Closed Sign)' WIDE

APPROXIMATE LOCATION OF EXISTING 1" WATER SERVICE. RETIRE EXISTING 1" SERVICE

CONNECT 6" SEWER SERVICE TO EXISTING 8" MAIN APPROX. INV. = 39.07'

ADJUST CATCH BASIN REPLACE FRAME & GRATE

6" ROOF DRAIN INV. IN TO EXISTING STORM DRAIN= 42.85'

ABANDON EXISTING SEWER SERVICE

RIM=47.46
(A) 15" INV. IN=38.36
(B) 12" INV. IN=38.56
(C) 12" INV. IN=41.76
(D) 12" INV. IN=38.44
(E) 15" INV. IN=41.64
(F) 15" INV. OUT=41.54

RIM=47.14
INV. IN=43.34
INV. OUT=43.14

APPROX. TRAVEL WAY 27'

EXISTING HYDRANT

RIM=47.47
INV. IN=38.17
INV. OUT=38.07

8" PVC

EXISTING AIR RELEASE VALVE, TYP.

CORE NEW INVERT IN FOR 12" SE

Sidewalk Closed - Cross Here

GATE VALVE, TYP.

No Parking This Side of Street

ALTER & ADJUST CATCH BASIN REPLACE FRAME & GRATE

RIM=47.13
INV. IN=42.83
INV. OUT=42.73

EXISTING REDUCER

Street opening to hook up underground electrical - traffic control during daytime, road plates at night - 1 week

FEDERAL STREET
PAVED PUBLIC - 66' WIDE

Construction Trailer

ABANDONED UNDERGROUND UTILITY

Street opening to hook up sanitary drains - traffic control during the day, street plates at night - 2 weeks

2" CURB STOP INSTALLED 6" PRIOR TO PROPERTY LINE

2" TAPPING SADDLE

6" SWIVEL TEE AND GATE VALVE

DMH-2
RIM ELEV 48.72
INV IN (12") 43.85
INV OUT 43.75

Street opening to hook up water lines - jersey barriers used to block traffic from open excavations - 1 week

REMOVE EXIS REDUCER ANL INSERT 8" GATE VALVE

Construction Site Fence and Gate

Dumpsters and Toilets

Sidewalk Closed Sign

Sidewalk Closed Sign

BRICK

EM

GM

PAVED

BUILDING

1"IPF 0.6'

CONC.

STOCKADE FENCE w/GATE

6" SAN. SERVICE

GAS SERVICE

RETAIL
1535 SF
1721 GSF

LOBBY

GENERATOR

WATER HEATER ROOM

ELEV.

UP

DN

MAIL

TRASH

BIKES

ELECTRICAL VAULT

ELEC.

SPRINK.

2" DOMESTIC WATER SERVICE

6" FIRE WATER SERVICE

MECHANICAL PARKING WITH PIT

OIL WATER SEPERATOR

Crane Pad

DMH-
RIM E
INV IN
INV IN
INV IN
INV O

12" SD
L=64', S=0.01

MECHANICAL PARKING WITH PIT

CB-1
RIM ELEV 50.09
INV OUT 45.09

12" SD
L=50', S=0.01

STAIRS DOWN

CONCRETE

PORCH

STOCKADE FENCE

BIKES

PATIO

PAVED SIDEWALK

Area of Steel Erection

Laydown Area

FRANKLIN STREET
PAVED - PUBLIC - VARIABLE WIDTH

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NO. 12101
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 05-31-2018

NO.	DATE	REVISIONS	BY
5	05-31-2018	REVISED PER COMMENTS AND RE-SUBMITTED	MTW
4	04-09-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS	MTW
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	APVD

TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
565 CONGRESS STREET SUITE 310 PORTLAND, ME 04102
P.O. BOX 339 111 ELDERBERRY LANE NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

SHEET DESCRIPTION
UTILITY PLAN

VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101

PREPARED FOR
NEWHEIGHT GROUP
119 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-5.0

Title: CM Plan - Phase 2
Project: Verdante Condominiums
Date: 6/7/18
WR
Wright-Ryan
HAMPSHIRE STREET
PAVED - PUBLIC - 40' WIDE
FEDERAL STREET
PAVED - PUBLIC - 66' WIDE
FRANKLIN STREET
PAVED - PUBLIC - VARIABLE WIDTH
Laydown Area
Crane Pad
Construction Trailer
Area of Steel Erection
Sidewalk Closed - Cross Here
Sidewalk Closed Sign
No Parking This Side of Street
Construction Site Fence and Gate
Dumpsters and Toilets
RETAIL
1535 SF
1721 GSF
GENERATOR
WATER HEATER ROOM
ELEV.
MAIL
TRASH
BIKES
ELEC.
ELECTRICAL VAULT
ABANDONED UNDERGROUND UTILITY
CONNECT 6" SEWER SERVICE TO EXISTING 8" MAIN APPROX. INV. = 39.07'
ADJUST CATCH BASIN REPLACE FRAME & GRATE
6" ROOF DRAIN INV. IN TO EXISTING STORM DRAIN= 42.85'
ABANDON EXISTING SEWER SERVICE
APPROXIMATE LOCATION OF EXISTING 1" WATER SERVICE. RETIRE EXISTING 1" SERVICE
ALTER & ADJUST CATCH BASIN REPLACE FRAME & GRATE
CORE NEW INVERT IN FOR 12" SD
EXISTING HYDRANT
EXISTING AIR RELEASE VALVE, TYP.
GATE VALVE, TYP.
EXISTING REDUCER
APPROX. TRAVEL WAY
2" CURB STOP INSTALLED 6" PRIOR TO PROPERTY LINE
2" TAPPING SADDLE
6" SWIVEL TEE AND GATE VALVE
DMH-2
RIM ELEV 48.72
INV IN (12") 43.85
INV OUT 43.75
OIL WATER SEPERATOR
MECHANICAL PARKING WITH PIT
CB-1
RIM ELEV 50.09
INV OUT 45.09
12" SD
L=50', S=0.01
REMOVE EXISTING REDUCER AND INSERT 8" GATE VALVE
EXISTING PAVED PARKING
BUILDING
PAVED
PORCH
CONCRETE
STAIRS DOWN
STOCKADE FENCE
STOCKADE FENCE w/GATE
PATIO
PAVED SIDEWALK
GRID NORTH
GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.
PRELIMINARY - NOT FOR CONSTRUCTION
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NO. DATE REVISIONS APP'D BY
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SCALE: 1"=10'
DESIGNED: ARF
JOB NO: 1728
FILE: 1728 BASE.DWG
SHEET C-5.0

Title: CM Plan - Phase 3
Project: Verdante Condominiums
Date: 6/7/18

Wright-Ryan

GRID NORTH

HAMPSHIRE STREET
PAVED - PUBLIC - 40' WIDE

FEDERAL STREET
PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET
PAVED - PUBLIC - VARIABLE WIDTH

Sidewalk Closed - Cross Here

Sidewalk Closed Sign

Laydown Area

Area of Steel Erection

Crane Pad

Construction Trailer

Construction Site Fence and Gate

Dumpsters and Toilets

No Parking This Side of Street

CONNECT 6" SEWER SERVICE TO EXISTING 8" MAIN APPROX. INV. = 39.07'

ABANDON EXISTING SEWER SERVICE

APPROXIMATE LOCATION OF EXISTING 1" WATER SERVICE. RETIRE EXISTING 1" SERVICE

ADJUST CATCH BASIN 8" DI REPLACE FRAME & GRATE

6" ROOF DRAIN INV. IN TO EXISTING STORM DRAIN= 42.85'

ALTER & ADJUST CATCH BASIN REPLACE FRAME & GRATE

CORE NEW INVERT IN FOR 12" SD

EXISTING HYDRANT

EXISTING AIR RELEASE VALVE, TYP.

GATE VALVE, TYP.

EXISTING REDUCER

6" SAN. SERVICE

GAS SERVICE

RETAIL

LOBBY

GENERATOR

WATER HEATER ROOM

ELEV.

MAIL

BIKES

TRASH

ELEC.

ELECTRICAL VAULT

SPRINK.

ABANDONED UNDERGROUND UTILITY

2" CURB STOP INSTALLED 6" PRIOR TO PROPERTY LINE

2" DOMESTIC WATER SERVICE

6" FIRE WATER SERVICE

2" TAPPING SADDLE

6" SWIVEL TEE AND GATE VALVE

REMOVE EXISTING REDUCER AND INSERT 8" GATE VALVE

DMH-1
RIM ELEV 49.50
INV IN (12") 44.59
INV IN (SUMP PUMP) 45.50
INV IN (SUMP PUMP) 45.50
INV OUT 44.49

12" SD L=64', S=0.01

OIL WATER SEPERATOR

MECHANICAL PARKING WITH PIT

DMH-2
RIM ELEV 48.72
INV IN (12") 43.85
INV OUT 43.75

CB-1
RIM ELEV 50.09
INV OUT 45.09

12" SD L=50', S=0.01

12" SD L=121', S=0.045

RIM=47.46
(A) 15" INV. IN=38.36
(B) 12" INV. IN=38.35
(C) 12" INV. IN=41.76
(D) 12" INV. IN=41.11
(E) 12" INV. IN=41.11
(F) 15" OUT=39.26

RIM=47.14
INV. IN=43.34
INV. OUT=43.14

RIM=47.47
INV. IN=38.17
INV. OUT=38.07

BUILDING

BRICK

PAVED

CONC.

STOCKADE FENCE w/GATE

STOCKADE FENCE

STAIRS DOWN

CONCRETE

PORCH

PATIO

PAVED SIDEWALK

PAVED SIDE

EXISTING PAVED PARKING

UGE

UGI

EM

GM

S

D

MH

1"IPF 0.6'

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12101
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
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JOB NO:	1728
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SHEET	C-5.0

NEIGHBORHOOD MEETING CERTIFICATION

I, Erin Cooperrider, hereby certify that a neighborhood meeting was held on Friday, March 2nd at Cloudport, 63 Federal Street E, Portland at 5:30 p.m.

I also certify that on February 19, invitations were mailed to the following:

1. All addresses on the mailing list provided by the City of Portland Planning Division which includes property owners within 500 feet of the proposed development.
2. Residents on the "interested parties" list.
3. A digital copy of the notice was also provided to the Planning Division and the assigned planner to be forward to those on the interested citizen list who receive e-mail notices.
4.

Signed,

Erin Cooperrider, Managing Member, NewHeight Ventures II, LLC

Date: 03/30/18

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-In sheet
3. Meeting minutes

A R C H E T Y P E

February 13, 2018

Dear Neighbor:

Please join us for a neighborhood meeting as we share plans for the construction of a six story 31-unit condominium building located at 56 Hampshire Street, Portland Maine.

Meeting Location: Cloudport, 63 Federal St, Portland, ME 04101
Meeting Date: Friday March 2, 2018
Meeting Time: 5:30 PM

(The City code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone changes) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated, and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.)

If you have any questions, please email Erin Cooperrider at erin@newheightgroup.com.

Sincerely,

David Lloyd
Maine Licensed Architect

Note:
Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plans was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street Portland, ME 04101 or by email: to bab@portlandmaine.gov

48 Union Wharf, Portland, Maine 04101 (207) 772-6022 • Fax (207) 772-4056

56 Hampshire Street, Verdante Condominiums Neighborhood Meeting Signin Sheet, March 2, 2018

Name	Address	Phone	Email	Own or Rent?
Priscilla Slack	62 Hampshire St.			
JUDITH ALLEN	62 HAMPSHIRE ST	207 618-2652	judithallen65@yahoo.com	OWN
Tim Robinson	" "	207 332 2299	schivastar@aol.com	own
Ellen Seidman	167 Newbury St	301-518-0272	ellenseidman@gmail.com	Own
Deborah + Bel-Cummings	22 HANCOCK	207-808-850	dbell03@gmail.com	OWN
Marc Ouellette	69 Hampshire St	2074613007	Marc.R.Ouellette@gmail.com	Own
Brent Heller	52 Federal	518 7038	brentheller@gmail	own
Sally Oldham	Vaughan St	899-1192	oldhamsa@gmail.com	own
TED OLDHAM	VAUGHAN ST	899 1192	tholdham@aol.com	Own

Cerridwen Aker	100 Federal St. Unit 1	207 479 3753	cerridwen.elektra@gmail.com	Rent
Josh Deane	100 federal st un. 1	978-621-6571	josh.s.deane@gmail.com	Rent
Derek Veilleux	167 Newbury St. UNIT 306	207 378 0187	dveilleux@mac.com	own.
Heather Holbor	33 HAMPSHIRE ST	908 591 1166	hostelheather@gmail.com	own
Michelle Polacsek	167 Newbury ST. #406	207 486-1630	mpolacsek@une.edu	own

Verdante Neighborhood Meeting
Cloudport
63 Federal Street E, Portland, ME 04101
March 2, 2018, 5:30 – 7:00 PM

Formal presentation by Development Team began at 5:35.
22 people were present, 3 more arrived during the presentation

Chip Newell of NewHeight Group and David Lloyd of Archetype presented the proposed project to the gathering. The presentation included a discussion of the neighborhood planning process that lead to the creation of the India Street Form Based Code. Chip asked whether anyone in attendance had had been involved in the city's process. Judith Allen and Tim Robinson, abutters, as well as others acknowledged they had been active participants in that process. Following the presentation, attendees voiced the following questions and comments.

Q: During construction, where will the construction workers park? Would the city allow you to use the center of Franklin Arterial?
A: Workers are responsible for finding their own, legal parking spaces. It is highly unlikely the City would allow use of the median on Franklin for parking or any other construction-related purpose. The construction team will create a construction management plan. Some spaces will be onsite and some will need to be purchased off-site.

Comments and **questions** from Judith Allen, resident at 62 Hampshire Street:

Our building was built in 1867, at the same time as Lincoln Park, and is a designated contributing building in the historic district. The bricks and mortar of our building will be completely in the shadows of this building. Our bricks and mortar have had light and air on them for more than 100 years. I believe this shadow will be very detrimental to our building.

I am very against having commercial units on Hampshire Street. We don't need more commercial on Hampshire, it should be along Franklin. Most commercial spaces are food related. We don't need more food related businesses on Hampshire Street. If we have a bar next to us, it will kill us. I am concerned about noise and parking requirements that might result from a bar. Why not have a beautiful townhouse on Hampshire street rather than the commercial space?

You need to work around the tree at 56 Hampshire. You are obligated to plant more trees. The trees on the corner of Hampshire cost $200 each and in my conversation with the arborist he said there is 1 tree required per unit?

I do really like you are using brick. I would like red better. Grey kind of looks like cinderblock.

I am very concerned about traffic and parking. We are a neighborhood of affordable housing. I am going to recommend that you don't get any residential parking on the street. Do you only have 28 parking spaces for 31 units?

I know from 18 years of renting, the only people who didn't have cars, are Section 8. I don't think you are going to have any of those people in here.

It would be more appropriate if the whole building was all four story.

Hampshire cannot handle the traffic, you should enter from Franklin Street. The upper part of Hampshire should not be two ways.

I don't like the "mud lot" on the corner of Newbury and Hampshire from the Luminato building and want the back of the building at Luminato to be covered.

Response: Shade will happen. I cannot comment on its effect on brick and mortar. Different people have different attitudes about commercial, but the condominium documents prevent cooking in the commercial spaces. Verdante will have 61 parking spaces on site which includes parking for Dan Hoffman's building; there will be 46 spaces for 31 units in the Verdante building. We don't believe that anyone at Luminato parks on the street, and don't expect anyone at Verdante will park on the street. We are providing affordable housing. As far as reconnecting Federal and Franklin, we would love to see it happen. At a recent meeting with the City, they spoke more about this connection than they ever have. There will be trees planted, the number of trees planted will be determined in accordance with what is able to be planted given utility requirements and other uses of the ground. The "mud lot" referred to is not a part of the 167 Newbury St property. The landscaping at 167 Newbury has not yet been completed because of limitations from weather at the end of last year. It will be completed in the spring.

Comments and **questions** from Tim Robinson, husband of J. Allen, and resident at 62 Hampshire Street:

Q: Parking for Dan Hoffman's building. That is going to be on the surface. How do they access the parking, do they go under your building?
A: Yes.

I have some concerns, some have already been addressed.

Q: Construction hours, can they be limited from 6 to 6?
A: City ordinance governs the days and hours of work, and they are limited.

We may lose tenants, who lose their view of the park. It may be detrimental to our buildings and we may lose tenants.

Q: Off-site affordable housing, where did you supply that for Luminato? Where will you provide it for this project? Is there a restriction on how far away it can be?
A: At 42 Hampshire Street, we don't know yet where it will be for Verdante. Yes, we believe it must be located within a 1,500-foot radius.

Q: Is there any way that this building might come down by one story to make it more compatible with the buildings in the neighborhood? Are you familiar with the buildings going up across from Micucci's, could you go that height?

Judith Allen comments and adds to the question:

Four floors would definitely make a difference. You are blocking every ray of sun on our building. I don't know how you can get away with that. I am concerned about the effect on the bricks from potential mildew.

Q: Where are people going to park if they want to shop? How it is that the Lawrence French [sic] building is four stories, and you're saying that six stories is allowed? The City didn't give you a variance on the code?
A: No. One can argue that the City is asking us to do this. The concept is similar to Connecticut Avenue in DC where there are taller buildings along the major street and the height steps down from there. The India Street FBC allows, and in effect encourages, greater height along Franklin as a transition from the downtown core to the neighborhood.

You got the City to push back the Urban Transition Zone in relation to where the line is drawn.

A: No, we just worked with the city to correct the location of the UT line along Federal. Our building will be built in accordance with the zoning.

Q: What is the length of the building on Franklin street, compared to Luminato?
A: David Lloyd said he didn't know, but would have the information for future meetings.

We would support extending the sidewalk to continue to Franklin Street.

Q: Is Franklin shrinking to one lane?
A: A study and plan have been created that, if implemented, would narrow the Franklin corridor by shrinking the median, not the number of lanes, I believe.

Comment from Derek Veilleux, resident at 167 Newbury Street:

I would encourage you to look at site from the opposite side of Federal Street, with the building as a transitional element between Franklin and Federal. It could use more finesse to respond to the scale of the buildings across the street. Subtle brick detail would help the grey brick not look so much like CMU. Contrasting mortar might also help.

Response: David Lloyd said the Devil is in the details, and we haven't yet reached this level of detail.

Tim Robinson asked:

Q: Is there are plan for the generator? A location?
A: There is a requirement for a generator. Code requires it to run life safety systems.

Judith Allen asked:

Q: Will the fire department check that the ladders will fit?
A: Yes, the fire department will review the plans.

The meeting ended at 6:44 p.m.
The meeting notice and sign in sheet are attached.

Portland, Maine — Yes. Life's good here.

Christopher C. Branch, P.E.
Director of Public Works

Date: June 1, 2018 Revised August 9, 2018

Re: Wastewater Capacity Authorization

Address: 56 Hampshire Street
Applicant: New Height Group

Planner: Caitlin Cameron

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Proposed flow				
Employees at place of employment with no showers	# Employees	2	12 GPD/Employee	24
Multiple Family Dwelling Units	1-Bedroom	9	120	1080
Multiple Family Dwelling Units	2-Bedroom	9	180	1620
Multiple Family Dwelling Units	3-Bedroom	12	270	3240
			Net Change	**+ 5,964**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

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

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

Sincerely,
CITY OF PORTLAND

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

CC:
Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland
Stuart O'Brien, Planning Director, Department of Planning and Urban Development, City of Portland
Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland

Keith Gray, City Engineer/Engineering Manager, Portland Department of Public Works

Nancy Gallinaro, Water Resources Manager, Portland Department of Public Works
Ben Pearson, Compliance Coordinator, Portland Department of Public Works
John Emerson, Wastewater Coordinator, Portland Department of Public Works

Lauren Swett, Woodard & Curran, DPW Development Review
Scott Firmin, Director of Wastewater, Portland Water District
Charlene Poulin, Wastewater Chief Operator – Systems

VERDANTE CONDOMINIUM, LLC
DECLARATION OF CONDOMINIUM

Verdante Condominium, LLC, a Maine limited liability company with a principal place of business located at 118 Congress Street, Unit 401, Portland, Maine 04101 (hereinafter with its successors and assigns, referred to as the "Declarant"), being the owner of that certain real property located in Portland, Cumberland County, Maine, as more fully described hereinafter, by duly executing and recording this Declaration, does hereby submit said land, together with the buildings and improvements now or to be hereafter erected thereon, and all easements, rights and appurtenances belonging thereto, except such rights and interests reserved by and to the Declarant hereunder (hereinafter collectively called the "Property"), to the provisions of Title 33 Maine Revised Statutes, Chapter 31, §§ 1601-101, *et seq.,* as now and as may be hereinafter amended (hereinafter referred to as the "Condominium Act"), and does hereby declare and create, with respect to the Property, a condominium governed by and subject to the provisions of the Condominium Act. To that end, the Declarant does hereby declare and provide as follows:

1. **Name of the Condominium: Defined Terms.** The name of the condominium created shall be Verdante Condominium, LLC (hereinafter sometimes referred to as the "Condominium" or “Verdante Condominium”). Capitalized terms used herein, if not defined herein, shall have the meanings defined in the Condominium Act or in the Association's By- Laws.

2. **Description of the Condominium: Common Elements Allocated as Limited Common Elements: Plats and Plans: and Buildings.** The Land portion of the Property comprising the Condominium (the "Land") is that certain parcel of land situated in Portland, Cumberland County, Maine, being described on **Schedule A** attached hereto. The Land is subject to such rights, easements, restrictions and encumbrances recited in **Schedule A**; and the rights and easements established or referenced herein. The Land is additionally subject to such rights, interests and easements as may be herein reserved to the Declarant, which rights, interests and easements shall, in all instances, be exercisable by the Declarant and its successors or assigns.

The Condominium is comprised of the Land and includes:

A. Twenty-eight (28) to-be-built residential units located in a single building with the units numbered 201, 202, 203, 204, 205, 206, 207, 208, 209, 301, 302, 303, 305, 306, 307, 308, 309, 401, 402, 403, 404, 405, 501, 502, 503, 504, 505, and 600 the "Units"); and

B. One (1) to-be-built commercial unit numbered C1 located in the same building as the residential units.

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All twenty-nine (29) Units herein described are hereby created. The Units are listed on Schedule B attached hereto along with each Unit's appurtenant undivided percentage interest (the "Undivided Interest") in the common elements of the Condominium (the "Common Element

The 29 Verdante Units shall be located in a single to-be-built building consisting of five residential stories serviced by an elevator, all above a steel and concrete pedestal (the "Verdante Building"). Below the Verdante Units is a steel and concrete indoor parking garage with mechanical and surface parking spaces, lobby, elevator lobby, stairways, a sprinkler room, a mailroom, a trash/recycling room, bike storage, a water heater room, a general storage room and an electrical room, all as shown on the Floor Plans. One of the 29 Verdante Units is a commercial unit located on the first floor.

The Condominium includes 46 enclosed parking spaces and 17 located on an exterior surface lot accessed through the garage. One of the enclosed spaces is located at grade in the garage and 45 spaces are located in a puzzle mechanical parking system in the garage. The garage will be accessed from Federal Street. Forty-six (46) of the parking spaces in the Condominium are available to be sold by the Declarant as an appurtenance (or "limited common element") to a Unit, and 17 of the spaces, located on the exterior surface lot, are leased for 99 years at $1 per year to Clark Box LLC, the owner of the adjacent apartment building located at 312 Congress Street.

Recorded herewith is a certain plat (the "Condominium Plat"), depicting the Land and the location and dimension of the improvements thereon. Also recorded herewith are certain plans (the "Floor Plans") depicting the Units, their designated Unit numbers, horizontal Unit boundaries with reference to established datum, the location and dimensions of vertical Unit boundaries, the Parking Garage, and exterior surface parking leased to Clark Box LLC, Common Elements and Limited Common Elements, including without limitation balconies, mechanical and surface parking spaces inside the building, a fitness center, guest room, roof deck, hallways, stairwells, elevator, lobbies, mail room, water heater room, bike storage, electrical room, trash/recycling room, sprinkler room and storage closets.

3. **Descriptions of the Units and Their Boundaries.** Units in the Condominium are defined as those physical portions of the Condominium designated for separate ownership hereunder, or in any amendment hereto. The Units, their respective boundaries and the appurtenances thereof are as hereinafter delineated:

A. Boundaries of the Units. The boundaries of each of the Units with respect to the floors, ceilings, and the walls, doors and windows thereof are as follows:

(i) Floors: The upper surface of the slab or structural joists below the sub-flooring of the Unit or the Unit's floor.

(ii) Ceiling: The lower plane of the slab or structural joists supporting the next level above the Unit.

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(iii) Exterior and Demising Walls: Vertical (perimetric) Boundaries of each Unit shall be the internal surface of the walls (i.e., the inner surface of the sheetrock or other finished wall surface) bounding the Unit extended to intersections with each other and with the horizontal or inclined boundaries. All paneling, tiles, wallpaper, paint, sheetrock, flooring finish and any other materials constituting any part of the finished surfaces of the ceilings, walls or floors are a part of the Unit, and all other portions of the walls, floors or ceilings are a part of the Common Elements.

(iv) Doors and Windows: As to doors leading to the interior of a Unit, the exterior surface of the door and of the door frame; as to windows, the exterior surface of the glass (and screens if any) and of the window frame.

(v) Pipes, Wires, Conduits, etc. If any chute, flue, duct, wire, pipe, conduit, bearing wall, bearing column 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.

B. Alteration of Units. Unit owners, including Declarant, may alter, combine and/or subdivide Units, and/or relocate the boundaries between adjoining Units, provided, however, that: (1) the terms and provisions of Sections 1602-111, 1602-112 and/or 1602- 113 of the Condominium Act (as applicable) are complied with, (2) the advance written consent of the Executive Board is obtained, which consent shall not be unreasonably withheld, (3) any reasonable conditions imposed by the Executive Board are complied with in all respects, and (4) any such alterations do not conflict with any municipal ordinances or approvals granted for the Condominium.

4. **Description of Common Elements and Limited Common Elements, Maintenance of Common Elements and Units.**

A. Description of the Common Elements. The common elements of the Condominium (the "Common Elements") consist of the entire Property described in Schedule A exclusive of the Units, all as hereinbefore described and defined (and exclusive of any and all rights, interests and/or easements reserved by the Declarant).

The Common Elements shall be subject to the provisions hereof and of the By-Laws and the Rules and Regulations as may be promulgated thereunder with respect to the use and maintenance thereof.

Notwithstanding the foregoing, the Common Elements shall exclude the exclusive rights, interests and easements reserved to the Declarant by law or by the

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Declarant in this Declaration.

The Common Elements shall exclude the 17 parking spaces located on the exterior surface lot, which are leased for 99 years at $1 per year to Clark Box LLC, the owner of the adjacent apartment building located at 312 Congress Street.

B. The Roof Deck, the Guest Room, and the Fitness Center are Common Elements subject to the applicable provisions of the Condominium Bylaws and Rules and Regulations.

C. Limited Common Elements.

a. If any chute, flue, duct, wire, pipe, conduit, bearing wall, bearing column 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 of the Verdante Building serving more than one Unit or any portion of the Limited Common Elements is a part of the Common Elements; and

b. All windows or other fixtures designed to serve a single Unit, but located outside the Unit's boundaries, are Limited Common Elements allocated exclusively to that Unit.

c. The Floor Plans depict various private balconies with access thereto from adjacent Units. Such private balconies are Limited Common Elements for the exclusive use by the occupants of such adjacent Units subject to the terms of this Declaration and the Condominium Bylaws and Rules and Regulations.

d. The Floor Plans depict parking spaces, storage closets, and mailboxes as Limited Common Elements. These Limited Common Elements will be allocated by Declarant to Units, or reserved by Declarant for future allocation to Units, all as set forth below.

5. **Allocation of Parking Spaces, Storage Closets, and Mailboxes; Use of Parking Spaces.** The Declarant hereby reserves the development right to allocate the exclusive right to use certain Limited Common Elements not already allocated herein to the owner(s) of certain Units, which Limited Common Elements shall be appurtenant to the Unit(s) to which they are allocated. Such Limited Common Elements include, or may include, without limitation, the following:

(i) The mechanical and surface parking spaces (the “Parking Spaces”) in the Condominium’s garage (the “Garage”)

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(ii) The storage closets located in the Garage and on the residential floors;

(iii) the mailboxes.

Such allocations by the Declarant of Limited Common Elements may be carried out in any Unit deed or other recorded instrument from the Declarant. The Declarant may, in the future, allocate additional Limited Common Elements (for additional Parking Spaces and/or storage areas, for example) by Special Amendment to this Declaration, and the Declarant hereby retains and reserves the exclusive right to so establish future Limited Common Elements.

Parking spaces not allocated as a Limited Common Elements to any specific Unit may be leased by the Declarant to Unit owners at the Declarant's sole discretion, and may be subsequently allocated by Declarant to a specific Unit owner.

The Declarant, as one of its Development Rights, hereby retains and reserves the right to establish and thereafter use, allocate, convey and assign an exclusive right to use each of the Parking Spaces as they are shown on the Floor Plans recorded herewith, as well as those shown on any new or amended Floor Plan(s) which may be hereafter recorded.

Subject to the terms and provisions of the Condominium Act, the Parking Spaces (i) may only be used by the Declarant, or its licensees or lessees, and by occupants of the Condominium and their guests, and (ii) may thereafter be transferred to other Unit Owners pursuant to Section 1602-108(b) of the Condominium Act.

The following additional restrictions and regulations shall apply to the use and occupancy of the mechanical or surface Parking Spaces:

(i) The Parking Spaces shall be used only for the parking of registered and operational private automobiles, motorcycles, and noncommercial vans and trucks and recreational vehicles. No trucks (except non-commercial pickup trucks), boats, trailers (whether capable of independent operation or attached to an automobile or other vehicle), commercial vehicles, and the like, may be parked in the Parking Spaces except with the written consent of the Executive Board. Any storage of personal property in or on the Parking Spaces shall only be in storage facilities built by the Declarant or approved in writing, in advance, by the Executive Board.

(ii) All vehicles shall be parked wholly within their respective Parking Spaces.

(iii) A Parking Space holder may permit any tenant or guest the right to use a Parking Space which said holder is entitled to use, but all parties using said Parking Space shall comply with the provisions relating to such use and occupancy contained in this Declaration, the Condominium By-Laws, Rules and Regulations.

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(iv) A Parking Space holder who permits any tenant or guest to use a Parking Space to which said holder is entitled to use shall be responsible for the compliance by such other user with provisions of this Declaration, the Condominium By-Laws, Rules and Regulations, to the extent the same may be applicable. A Parking Space holder may not lease or rent or otherwise grant rights of use of a Parking Space to any non-Unit owner other than the Parking Space Holder's tenant or guest.

(v) In instances where vehicles using the Parking Spaces and other facilities of the Condominium do not comply with this Declaration, the Executive Board is authorized to allow the towing of the offending vehicles at the expense of the

owners of such vehicles and the Parking Space holder.

(vi) Since the Parking Garage is a relatively confined area, any user thereof may do so only in a cautious manner, and any Owner(s) or other party holding the right to use a Parking Space, by acceptance of their Deed or other right to use, thereby agrees to both release and indemnify the Declarant, the Condominium Association, its Executive Board from and against any and all claims, losses, costs, expenses or damages said parties may incur (including, without limitation, reasonable attorneys' fees and costs) or be hereafter subjected to and arising from the acts or omissions of the Owner or other party holding the right to use such Parking Spaces, unless arising from the indemnified party's gross negligence, willful misconduct or violation of the terms and provisions of this Declaration, the Condominium's By-Laws, Rules or Regulations.

6. **Maintenance and Repair of Units and Common Elements.** Except as otherwise provided in the Condominium Act or this Declaration, the Association is responsible for carrying out maintenance, repair and replacement of the Common Elements. Each Unit Owner is responsible for the maintenance, repair and replacement of his or her Unit and any associated Limited Common Element. Notwithstanding the foregoing, the following shall apply:

a. The Association shall be responsible for complying with the stormwater maintenance agreement and stormwater inspection and maintenance plan approved by the City of Portland including the responsibility to hire a qualified stormwater inspector to inspect the stormwater system annually and to take whatever corrective action is required. On or before the 30th day of June of every year the qualified inspector shall file a report with the City of Portland's Department of Public Service noting the system's condition and any maintenance or corrective action that has taken place.

b. The Association shall be responsible for landscape maintenance in accordance with its landscape plan approved by the City of Portland

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including the maintenance and care of approved street trees and their granite planting beds and any other plantings in the city's right of way.

c. The Association shall be responsible for ensuring the safe condition and maintenance of the entrances on Franklin, Hampshire, and Federal Streets, and shall be responsible for ensuring the safe condition and maintenance of the access way off of Federal Street leading into the parking garage.

d. The Association shall be responsible for ensuring that pedestrians and other users of the sidewalks along Hampshire, Federal and Franklin Streets are safe from snow, ice or other debris that could fall from decks and ensuring that Unit owners store objects on balconies or on rooftop decks in a manner so as to provide for the safety of persons below.

e. Unit Owners shall keep their appurtenant balconies and allocated Parking Spaces in a safe, clean and neat condition.

f. The Association shall maintain, repair and replace any portion of a Unit in the Building that consists of exterior window and doors, structural wall, exterior siding or cladding, exterior trellises or "green walls" or other structural element, or exterior wall. As such, Unit Owners shall not maintain, repair, replace or alter such elements in any manner.

g. The cost of any maintenance, repair or replacement of any area or component of the Common Elements necessitated or arising from the act or omission of a Unit Owner (or his or her tenant, guest, invitee or licensee) may be assessed exclusively to such Unit Owner.

h. If the Executive Board shall at any time, in its reasonable judgment, determine that any Unit may be in such need of maintenance or repair that the Common Elements may be adversely affected, or that the market value or reasonable enjoyment of one or more other Units may be adversely affected, or that the condition of a Unit or fixtures, furnishings, facility or equipment therein may be or may become hazardous to any Unit or the occupants, the Executive Board may request in writing that the Unit Owner perform the needed maintenance, repair or replacement or to correct the hazardous condition, and in case such work shall not have been commenced within fifteen (15) days (or such reasonable shorter period in case of emergency as the Executive Board shall determine) of such request and thereafter diligently brought to completion, the Executive Board shall be entitled to have the work performed for the account of the Owner(s) of such Unit and to enter upon and have access to such Unit for that purpose. The cost of such work shall be reimbursed by the Unit Owner and constitute a lien upon such Unit and the Owner(s) of such Unit shall be personally liable therefore.

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i. The Association shall be responsible for causing the sidewalks surrounding the Verdante Building to be cleared of snow in accordance with the City of Portland's snow removal ordinance, the cost of which shall be a borne by the Association.

j. The Association shall be responsible for engaging a private trash hauler to pick up trash generated by the Units, the cost of which service shall be borne by the Association; no unit owner in the Verdante Building shall attempt to utilize curb-side trash pick-up services provided by the City of Portland, and the City has no intention or obligation to provide such service.

k. The Association shall be responsible for maintaining the "Green Roof" and all landscaping and hardscaping.

l. The Association shall be responsible for maintenance of all exterior lighting in accordance with the City's Technical Standard 12 "Site Lighting" Section 12.4.

7. **Undivided Interests.** Each Unit shall have an Undivided Interest in the Common Elements allocated to the Verdante Units, in the percentages set forth in Schedule B, which have been rounded to obtain a one hundred percent total for the 28 Units.

8. **Organization of Owners.** The organization through which the Unit Owners will manage and regulate the condominium is the Verdante Condominium Association, a Maine non-profit corporation governed by Bylaws of even date. Said By-Laws are not incorporated into this Declaration and therefore may be amended pursuant to the terms of the By-Laws and without complying with the requirements for amending this Declaration by its terms or pursuant to the Maine Condominium Act.

Said By-Laws establish an association of which all Owners of units in the Verdante Building shall be members and in which such Owners shall have a membership interest for voting, assessment, and all other purposes in proportion to the percentage of Undivided Interest in the Common Elements to which they are entitled hereunder, all as set forth herein and in accordance with the provisions of the Condominium Act. The names of the original Declarant-appointed members of the Association's Executive Board are as follows:

Nadia Saliba
Erin Cooperrider
S. P. Newell

The Declarant hereby reserves the right to control the Executive Board of the Association for a period of time, as follows: during the period from the date of the first conveyance of a Unit to a third party other than the Declarant until 60 days after the conveyance to third- party purchasers by the Declarant of twenty (20) Units, or if

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sooner, seven (7) years from the date of the first conveyance of a Unit to a third party other than the Declarant (the "Transition Date"). There shall be three (3) Board Members so appointed by the Declarant,
its successors or assigns. Upon any vacancy existing in such Board, its or their successor(s) prior to the Transition Date shall be appointed solely by the Declarant, its successor or assigns. On or before the Transition Date, a special meeting of the Unit Owners shall be held for the purpose of electing five (5) Board Members, as described in the By-Laws.

9. **Other Matters Relating to Condominium Association.**

a. Allocation of Undivided Interests. In the Verdante Building each Unit's percentage of the Undivided Interests set forth herein have been, and will be, determined based upon each such Unit's floor area (as measured in square feet), in relation to the aggregate floor area of all Units in the Verdante Building. Such Undivided Interests shall be used in determining each Unit's Common Expense assessments, voting weight on Association matters for which Unit Owners have a right to vote, distribution of surplus assets, and certain other Association-related matters, all as described more fully in the Association's By-Laws and the Condominium Act.

b. Common Expense Assessments.

i. Assessments for Common Expenses shall be levied as per the terms and provisions of the relevant sections of the Condominium Act and the Association's By-Laws, the terms and provisions of which are incorporated into this Declaration by reference. Such assessments, as well as any late charges, interest, collection costs, attorneys' fees (whether a legal action is filed or not), service fees, charges and fines shall constitute, until paid in full, both the personal obligation of the Unit Owner and a lien against the Unit pursuant to Section 1603-116 of the Condominium Act.

ii. If any Common Expense is caused by the misconduct of any Unit

Owner, the Association may assess that expense exclusively against him or her, and his or her Unit.

c. Executive Board's Power to Act on Behalf of Association. Except as expressly limited by the Condominium Act, this Declaration or the Association's By-Laws, the Executive Board shall be empowered to act on behalf of the Association as described in the By-Laws and Condominium Act, including (without limitation) the power and authority to assign its right to collect future Common Expense assessments and other income as security for debt(s) of the Association, and the power to

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assess common expenses benefiting fewer than all the Units exclusively against the Units benefited.

d. Notice of Matters Affecting the Condominium. Notice of matters relating to the Condominium shall be given to Unit Owners by the Executive Board by first class U.S. Mail, postage prepaid, at the Unit (unless the Unit owner has provided an alternate mailing address in writing to the Association), or by such other means as may be required by law. Notices relating to Condominium meetings shall be provided as set forth in the Condominium By-Laws.

10. **Encroachments.** If any portion of the Common Elements now encroaches upon any Unit, or if any Unit now encroaches upon any other Unit or upon any portion of the Common Elements, or if any such encroachment shall occur hereafter as a result of (a) alteration or repair to the Common Elements made by the Declarant, or by or with the consent of the Executive Board, or (b) settling of all or any portion of the Building(s), or (c) repair or restoration of the Building(s) or any Unit after damage by fire or other casualty, or (d) condemnation or eminent domain proceedings or (e) immaterial deviations from the Floor Plans, a valid easement shall exist for such encroachment and for the maintenance of the same.

11. **Intended Use and Restrictions on Use of the Buildings and Units.**

The purposes for which the Building, the Units, and the Common Elements, and the Limited Common Elements are intended to be used are as follows:

The Residential Units may be used only for residential purposes; provided, however, that the Residential Units may be used by the Declarant for other purposes pursuant to the provisions of Section 13 below. This restriction shall not be construed to prohibit Unit Owners from leasing their Units provided that Units may not be leased more than two times per year, and provided that such leases are for an initial term of at least three (3) months and require any lessees to adhere to the provisions of this Declaration, the Association's By-Laws and the Rules and Regulations, and any lessees do so occupy and use the leased premises in accordance with the provisions of the Declaration, the Association and the Rules and Regulations. The Residential Units may also be used for home office purposes, so long as such use is secondary and incidental to the residential use, and provided further that no commercial signage is used in connection therewith and no customers, clients or business associates regularly visit the Condominium.

The Commercial Unit may be used for any commercial purpose that is not specifically prohibited by the Bylaws.

The Units and the Limited Common Elements shall be subject to the restrictions that:

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(i) Subject to prior written approval by the Executive Board of the plans and specifications related thereto, which approval shall not be unreasonably withheld, conditioned or delayed, the owner of a Unit may, at his sole cost and expense, if the rights of any other Unit Owner are not materially and adversely affected, and if the structural walls, supports and other structural aspects of the Building are not adversely affected, change or add to the interior partitioning thereof, by adding, modifying, removing or installing non-load bearing walls lying wholly within such Unit; provided, however, that the Executive Board may impose reasonable conditions on such work, and any and all work shall be done in a good and workmanlike manner, pursuant to a building permit validly issued therefor (if required by law).

(ii) The maintenance, keeping, boarding and/or raising of animals, livestock, poultry or reptiles of any kind, regardless of number, shall be and is prohibited within any Unit or upon any part of the Condominium Property, except that the keeping of orderly domestic pets (e.g. dogs, cats, caged birds) and aquarium fish is permitted subject to the limitation that no Unit Owner shall keep or maintain in excess of two (2) orderly domestic pets and, subject to the Rules and Regulations adopted by the Board of Directors. Pets shall not be permitted upon the Common Elements unless accompanied by a responsible person and unless carried or leashed. Any Unit Owner who keeps or maintains any pet upon any portion of the property shall be deemed to have indemnified and agreed to hold the Association, each Unit Owner and the Declarant free and harmless from any loss, claim or liability of any kind or character whatever arising by reason of keeping or maintaining such pet within the Condominium. All pets shall be registered with the Board of Directors and shall otherwise be registered and inoculated as required by law. Each pet owner shall be required to clean up any and all excrement caused by his pet on any portion of the Condominium Property. The Board of Directors shall have the right to order any person whose pet is a nuisance to remove such pet from the Condominium.

(iii) No Unit Owner shall alter his Unit in such a way as to cause unreasonable levels of sound, vibration, light or odors to be transmitted to other Units, the Common Elements or neighboring buildings.

(iv) If any governmental license or permit (other than a Certificate of Occupancy, or a license or permit applicable to the Building as a whole and required in order to render lawful the operation of the Building) shall be required for any particular improvement or construction in any particular Unit, and if failure to secure such license or permit would in any way affect any other Unit or the Owner thereof or the Association, the Owner of such particular Unit, at such Owner's expense, shall procure and maintain such license or permit, submit the same to inspection by the Executive Board, and comply with all terms and conditions thereof.

(v) A Unit Owner shall not place or cause to be placed in or on any of the Common Elements any furniture, packages, bicycles, carriages, or personal

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property of any nature whatsoever; provided, however, that the Unit Owners have the right to use any bicycle storage facilities, dumpster, trash compactors or trash barrels, if any, located on the Common Elements, but only for ordinary household trash.

(vi) All use and maintenance of the Units shall be conducted in a manner consistent with the reasonable comfort and convenience of the occupants of other Units.

(vii) The Limited Common Elements allocated to individual Units shall be used only for the purposes for which they are reasonably suited and which are incident to the use and occupancy of Units.

(viii) No nuisances shall be allowed on or in the Condominium, nor shall any use or practice be allowed which is a source of unreasonable annoyance to Unit Owners or which interferes with the reasonable peaceful possession or proper use of the Units by their occupants.

(ix) No unlawful use shall be made of the Condominium, or any part thereof, and all valid laws, zoning ordinances and regulations of all governmental bodies having jurisdiction thereof shall be observed by the Unit Owners and the Association. Violations of laws, orders, rules, regulations or requirements of any governmental agency having jurisdiction thereof, relating to any Unit or Limited Common Element allocated to that Unit shall be eliminated by and at the sole expense of the Unit Owner of said Unit and those relating to Common Elements shall be eliminated by the Executive Board unless caused by a Unit Owner in which case the Executive Board may either order the Unit Owner to eliminate the violation at the Owner's expense or eliminate the violation itself and bill the Unit Owner for all reasonable expenses incurred by the Association.

(x) No pictures, advertisements, signs or posters of any kind shall be erected, posted or attached on the exterior of Units except those approved in writing by the Executive Board, provided, however, this restriction shall not apply to pictures, advertisements, signs or posters utilized by the Declarant or its agents in selling or leasing the Units.

(xi) No Unit Owner shall allow an air conditioning unit or other machine or equipment, pipe, wire, or other item which protrudes through the walls or the roof of the Building or is otherwise visible on the exterior of the Building.

(xii) No activity shall be done or maintained in any Unit which will materially increase the rate of insurance on any Unit or the Common Elements or result in the cancellation of insurance thereof, provided, however, that any use or activity which will increase the rate of insurance maintained by the Executive Board for the Condominium or by any individual Unit Owner

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may be permitted by the Executive Board, in the sole discretion of the Executive Board, if the Unit Owner conducting such use or allowing such use to be conducted agrees to conform to any special rules or regulations promulgated by the Executive Board with respect to such use and agrees to pay any and all additional costs associated therewith, including without limitation the increase in the insurance premiums paid by the Executive Board on behalf of the Condominium as a result thereof.

(xiii) Portions of any Unit window treatments visible from the outside of the Building

shall be white in color, and shall be of a material and style approved in writing by the Executive Board, such approval not to be unreasonably withheld, conditioned or delayed.

(xiv) Owners of Units on the third floor or higher shall be required to cover at least 75% of the floor area of the Units (not including kitchens or bathrooms) with rugs or carpeting, or to take other reasonable measures to be defined by the Executive Board aimed at lessening sound transmission to Units below.

D. Notwithstanding anything to the contrary contained herein, the Declarant may, until all of said Units have been sold by said Declarant, (a) lease Units which have not been sold on terms and conditions determined by the Declarant; or (b) use any Units owned by the Declarant as models for display, as offices and/or as storage areas or for any other uses which it deems necessary or desirable in connection with redecoration and construction of the Units or Limited Common Elements, or the sale or leasing of units.

12. INTENTIONALLY OMITTED

13. **Development Rights and Other Rights Reserved to the Declarant.**

13.1 The Declarant hereby expressly reserves to itself, its successors and assigns, any and all Special Declarant Rights as defined in the Condominium Act or as set forth in this Declaration, and/or in the Association's By-Laws and Declarant hereby expressly reserves Development Rights to create limited common elements (e.g., parking spaces, storage rooms, mailboxes) and allocate such portions of the common elements to particular unit(s) as limited common elements, the right to relocate the boundaries between units, and the right to combine units.

13.2 The Declarant, for itself and its successors and assigns, hereby reserves certain exclusive rights and easements to enter onto the Land made part of this Condominium now or in the future, to complete construction thereon, along with all improvements, utility lines, driveways, wires, pipes, conduits, walkways, and drainage lines to service the Units

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constructed on the Condominium Land.

13.3 In addition to all other rights of Declarant hereunder, Declarant reserves unto itself and its agents, servants, employees, independent contractors, workmen, work crews, successors and assigns the right and easement to use, occupy, and alter, for construction purposes, all areas of the Property, other than Units and Limited Common Elements already conveyed, for all purposes necessary or desirable in order to develop and/or manage the Property and to market the Units. The Declarant further reserves for itself and its successors and assigns the exclusive right to grant easements across all of the Property for the installation of utilities and the right to grant easements to others to use the Property for vehicular and pedestrian traffic.

Without limiting the generality of the foregoing and in furtherance thereof, the Declarant hereby reserves unto itself and its agents, servants, employees, independent contractors, workmen, work crews, successors and assigns, the following rights over all of the Land and Building subject to this Declaration: the right of access, ingress, and egress over and upon the Land and the Limited Common Elements of the Condominium, including that deemed by the Declarant to be necessary for marketing purposes and for the work of construction, reconstruction, rehabilitation, improvement, and other work in progress or contemplated by Declarant; the right to lay, maintain, repair and replace, construct, and install and connect (or connect with and make use of) all utilities, utility lines, poles, tanks, walls, ducts, conduits, and similar facilities to serve any or all of the building and/or Units and the Limited Common Elements, and all conduits, ducts, plumbing, wiring, and other facilities for the furnishing of power, gas, light, master antenna, satellite antenna, cable television, water, air and all sewer and drainage pipes to serve any or all of the buildings and/or Units and the Limited Common Elements and facilities; to pass and repass by foot and vehicle over all driveways, roadways, accessways, parking areas and walkways, whether now existing or to be constructed in the future, for all purposes for which driveways, roadways, accessways, parking areas and walkways are commonly used, including the transportation of construction materials, equipment, and personnel for the purposes of construction; to construct buildings and improvements on the Land, and to engage in all activities necessary or appropriate to accomplish the same, including without limitation the exclusive right to grant to others including any public utility or authority, easements for the installation and maintenance of utilities; to store construction materials, equipment, and supplies in those portions of the Limited Common Elements; to restrict (for periods of not more than eight (8) hours at any time during any day) the use by owners of any Limited Common Elements to facilitate construction or for purposes of safety (provided, of course, no Owner shall be denied at least one means of access to his or her Unit during such periods of restriction); to leave debris resulting from construction in the Limited Common Elements and facilities, provided the same do not endanger safety; to reasonably interrupt for brief intervals of time, water, gas, electric, and other utilities and service provided by such utility lines, pipes, tanks, wells, wires, cables, conduits, and septic and drainage lines in order to facilitate construction or in order to facilitate the installation of appliances or fixtures in the Buildings, Units or Limited Common

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Elements under construction without liability for such interruption of service, provided however that the Declarant shall use reasonable efforts to minimize any such interruption of service; to park vehicles used in connection with the construction work or incident thereto in parking areas; and, in general, the right to do all things necessary or desirable in order to construct and complete all of the Buildings and/or Units and the Limited Common Elements and facilities in connection therewith.

The Declarant further reserves the exclusive right to use any office area, sitting area, guest room, or storage area located in the Verdante Building and not necessary to serve the Units already sold by the Declarant, as well as any Unit owned by the Declarant, for storage or as a model, for display, as an office, for purposes of facilitating sales, as well as the right to park and use one or more vehicles or trailers, as well as the right to lease any unsold unit upon terms at Declarant's discretion, for as long as the Declarant owns any Units or holds any Development Rights or Special Declarant Rights.

13.4 The rights and easements reserved by the Declarant in this Section 13 shall be in addition to and not in limitation of, the rights and easements allowed in the Condominium Act, reserved by the Declarant in other sections of this Declaration, in the By-Laws, or in any prior- recorded instrument.

13.5 The rights and easements reserved by the Declarant for itself and its successors and assigns in this Declaration shall survive the sale of all of the Units, and are to be deemed to be fully transferable, running with the land.

13.6 Each Executive Board Member, as well as each Owner and mortgagee of an individual Unit, by the acceptance and recordation of a deed or mortgage, shall thereby have consented to the granting or exercise of any right or easement described in this Declaration without the necessity of securing any further consent or execution of any further documents by such Board Member, Owner or mortgagee.

13.7 The Declarant, by deed or by separate assignment, shall be entitled to assign, sell, grant or mortgage, any and all of its interests, rights and easements owned by it or reserved herein and in the By-Laws, at any time, and from time to time, to any mortgage holder, person, trust, firm, or entity as may be determined by Declarant. Each Board Member, as well as each Owner and mortgagee of an individual Unit, by acceptance and recordation of a deed or mortgage, shall be deemed to have thereby consented to any such assignment, sale, grant or mortgaging of the Declarant's said interests, rights and easements without the necessity of securing any further consent or execution of any further documents by such Board Member, owner or mortgagee. The Condominium Board and Owners, at Declarant's request, shall execute whatever confirmatory instruments which Declarant deems appropriate or necessary in order to perfect, carry out, or effectuate the rights and easements reserved by the Declarant in this Declaration and in the Condominium By-Laws. The foregoing shall not apply to any mortgagee of the Declarant.

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14. **Title to Units.** Title to Units may be taken in the name of an individual, corporation, company, trust or partnership, or in the name of two (2) or more individuals, as tenants in common, joint tenants, or tenants by the entirety or in the name of a fiduciary.

15. **Units Subject to Declaration and Condominium By-Laws.** All present and future Owners, tenants, visitors, invitees, licensees and occupants of Units shall be subject to, and shall comply with, the provisions of this Declaration, the By-Laws, and the Rules and Regulations promulgated pursuant thereto, as they may be amended from time to time, and the instruments of record affecting title to the Property including, but not limited to, those instruments of record listed in the Schedules to this Declaration. The acceptance of a deed or conveyance of a Unit or the entering into occupancy of any Unit shall constitute an agreement that the provisions of this Declaration, By-Laws, and the Rules and Regulations promulgated pursuant thereto, as they may be amended from time to time, and the said instruments of record affecting title to the Property, are accepted and ratified by such Owner, tenant, visitor, invitee, licensee 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, conveyance, or lease thereof. A violation of the provisions of this Declaration, the Deed, the By-Laws, or the Rules and Regulations promulgated pursuant thereto by any such person shall be deemed a substantial violation of the duties and obligations of an Owner, which shall entitle the Executive Board and any Owner the right to recovery of damages and/or injunctive relief.

16. **Amendment of Declaration.**

A. Declarant's Consent. Notwithstanding any contrary or inconsistent provision in this Declaration, for so long as Declarant owns one or more Units in the Condominium or holds any Development Rights or Special Declarant Rights, any amendment to the Declaration which affects a right reserved to the Declarant hereunder or imposes an additional obligation or duty upon the Declarant must be signed by the Declarant and/or its successors and/or assigns.

B. General Amendments. Amendments to this Declaration are governed generally by Section 1602-117 of the Condominium Act, this Section 16 of the Declaration, and Section 17 below. Except as may be inconsistent with the Condominium Act, and except as otherwise provided in Section 17 below or in Subsections A or C of this Section 16, this Declaration may be amended by the vote or agreement of Unit Owners representing 67% or more of the Undivided Interests in the Condominium.

C. Special Amendments. Notwithstanding the foregoing, this Declaration may also be amended by Special Amendment as follows: The Declarant, without the consent

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of any Unit Owner or mortgagee, may execute and record, as long as it owns any Units or holds any Development Rights or Special Declarant Rights, Special Amendments in order to (i) correct any errors and/or omissions in this Declaration, provided no such correcting amendment shall materially and adversely affect the rights of any Unit Owner or mortgagee; or (ii) to make this Declaration comply with the provisions of the Condominium Act, any other law, code, permit or approval, or the requirements or guidelines of the Federal National Mortgage Association ("FNMA"), the Federal Home Loan Mortgage Corporation ("FHLMC") or any other insurer or guarantor of Unit mortgages.

Special Amendments may also be executed and recorded as described above in connection with the combination, subdivision, and/or alteration of Units.

D. Effective Date. Amendments to this Declaration shall be effective upon recording in the Registry of Deeds. As to General Amendments, the recorded version thereof need not include the signatures of Unit Owners agreeing thereto, but rather the recorded instrument need only be signed by an Officer of the Association, as long as such Officer certifies that the required consents described above have been obtained and will be retained with the Association's records for a period of at least two (2) years after recording.

17. **Provisions Protecting Rights of Secured Lenders.** Subject to the limitations set forth in Section 1602-I 19(a) of the Condominium Act, the following shall apply with respect to the protection of rights of holders of first mortgages on Units ("First Mortgagees") and "Eligible Mortgage Holders" (meaning First Mortgagees who have delivered written notice to the Association by prepaid certified U.S. Mail, return receipt requested, or by delivery in-hand securing a receipt therefore, which notice states the First Mortgagee's name and address, the Unit upon which it holds first mortgage, the Unit Owner's name and address, and that it holds a first mortgage on such Unit).

A. Notwithstanding anything in this Declaration or in the By-Laws to the contrary, the following provisions shall apply for the protection of First Mortgagees, and shall be enforceable by any First Mortgagee:

(a) In the event that the Unit Owners shall amend this Declaration or the By- Laws to include therein any right of first refusal in connection with the sale of a Unit, such right of first refusal shall not impair the rights of a First Mortgagee to: Foreclose or take title to a Unit pursuant to the remedies provided in its mortgage; or

(b) Accept a deed (or assignment) in lieu of foreclosure in the event of default by a Unit Owner, or

(c) Sell or lease a Unit acquired by the First Mortgagee through

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the procedures described in subparagraphs (a) and (b) above.

(2) As to any conveyance whereby a party takes title to a Unit through either a deed in lieu of foreclosure or a foreclosure sale duly conducted by a First Mortgagee, such conveyance shall be exempt from any such right of first refusal adopted by the Unit Owners and incorporated in this Declaration or the Condominium By-Laws, and the ownership of the Unit by such party shall be exempt from any leasing restrictions set forth therein but only for such party's period of ownership.

B. Any First Mortgagee who obtains title to a Unit by foreclosure shall not be liable for such Unit's unpaid common expenses or other amounts which accrued prior to the acquisition of title to such Unit by such First Mortgagee, except to the extent that such common expenses and/or other amounts are entitled to priority over such First Mortgage under the Condominium Act. Liens for any and all Common Expenses, assessments and charges that may be levied by the Association shall be subordinate to the rights of any First Mortgagee pursuant to its mortgage to the extent permitted by applicable Maine law.

C. A lien for Common Expenses assessments shall not be affected by any sale or transfer of a Unit, except that a sale or transfer pursuant to a foreclosure of a First Mortgage shall extinguish a subordinate lien for assessments which became payable prior to such sale or transfer. Any such sale or transfer pursuant to a foreclosure (1) shall not relieve the prior Unit Owner of a personal liability for any unpaid assessments or other sums owed to the Association, and (2) shall not relieve the purchaser or transferee from liability for, nor the Unit from the lien of, any assessments made thereafter.

D. As provided in Section 1602-119 of the Condominium Act, the Association shall send reasonable prior written notice by prepaid U.S. Mail to Eligible Mortgage Holders of the consideration by the Association of any of the following proposed actions:

(1) The termination of the Condominium pursuant to Section 1602-118 of the Condominium Act;

(2) A change in the percentage of Undivided Interest of a Unit, a change in the boundaries of a Unit, or a subdivision of a Unit, unless carried out by the Declarant pursuant to the terms of this Declaration;

(3) The merger or consolidation of the Condominium with another condominium;

(4) The conveyance or subjection to a security interest of any portion of the Common Elements;

(5) The proposed use of any proceeds of hazard insurance required to be maintained by the Association under Section 1603-113, subsection (a) of the Condominium Act

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for purposes other than the repair or restoration of the damaged property;

(6) The adoption of any proposed Budget by the Executive Board and of the date of the scheduled Unit Owners' meeting to consider ratification thereof with a summary of the proposed Budget to accompany such ; and

(7) Any default in the performance or payment by a Unit Owner of any obligation under the Condominium Declaration or By-Laws including, without limitation, default in the payment of common expense liabilities (notice shall be sent only to the Eligible Mortgage Holder for the subject Unit).

In the event of any proposed actions described in Subsection D., paragraphs (1), (2), (3), (4) or (5) immediately above, Eligible Mortgage Holders 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 of the Unit Owner prior to or at the time of the taking of the proposed action, which notice shall be sent by prepaid certified 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 form exercising such right. In the event of any default described in Subsection D., paragraph (7) 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 Subsection D., paragraphs (1) to (6) above.

E. In addition to the statutory rights of Eligible Mortgage Holders summarized in Subsection D above, and subject in all events to the provisions of the Condominium Act, unless Unit Owners representing at least two-thirds (2/3) of the Undivided Interest hereunder (or such larger percentage as may be required by law) and at least two-thirds (2/3) of the First Mortgagees holding mortgages on the individual Units of the Condominium have given their prior written approval, neither the Owners nor the Executive Board shall be entitled to:

(1) By act or omission, seek to abandon or terminate the Condominium except in the event of substantial destruction of the Condominium premises by fire or other casualty or in the case of taking by condemnation or eminent domain;

(2) Change the percentage of Undivided Interest or obligation of any individual Unit for the purpose of: (a) levying assessments or charges or allocating distributions of hazard insurance proceeds or condemnation awards, or (b)

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determining the voting interest of each Unit;

(3) Partition any Unit (other than in connection with the subdivision of Units as permitted herein, which shall not require First Mortgagee consent);

(4) By act or omission, seek to abandon, partition, subdivide, encumber, sell or transfer the Common Elements; provided, however, that the granting of easements for purposes not inconsistent with the intended use of the Common Elements by the Condominium and the exercise of other actions with respect to granting of special rights of use of Limited Common Elements contemplated herein or in the Condominium By- Laws shall not be deemed an action for which any prior approval of a First Mortgagee shall be required under this Subsection;

(5) Use hazard insurance proceeds for losses to any property of the Condominium (whether of Units or Common Elements) for other than the repair, replacement or reconstruction of such property of the Condominium, except as provided by statute; or

(6) Terminate professional management and establish self-management of the Condominium.

F. In no case shall any provision of the Declaration or the By-Laws give an Owner or any other party priority over any rights of a First Mortgagee pursuant to its mortgage in the case of a distribution to such Owner of insurance proceeds or condemnation awards for losses to or a taking of such Unit and/or the Common Elements of the Condominium.

G. In addition to the statutory rights of Eligible Mortgage Holders summarized in Subsection D above, First Mortgagees, upon request to the Executive Board, will be entitled to:

(1) Written notification from the Executive Board of any default by its borrower who is the Owner of a Unit with respect to any obligation of such borrower under this Declaration or the provisions of the By-Laws which is not cured within sixty (60) days;

(2) Inspect the books and records of the Association at all reasonable times;

(3) Receive (at its own expense) an audited annual financial statement of the Condominium Association within ninety (90) days following the end of any fiscal year of the Association;

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(4) Receive written notice of all meetings of the Association and be permitted to designate a representative to attend all such meetings;

(5) Receive prompt written notification from the Executive Board of any damage by fire or other casualty to a material portion of the Condominium or the Unit upon which the First Mortgagee holds a mortgage or proposed taking by condemnation or eminent domain of said Unit or the Common Elements of the Condominium;

(6) Receive written notice of any lapse, cancellation or material modification of any insurance policy maintained by the Association; and

(7) Receive written notice of any action which requires the consent of a specified percentage of Eligible Mortgage Holders.

H. No amendment of a material nature to this Declaration will be made unless such is agreed to by Eligible Mortgage Holders who represent at least fifty-one percent (51%) in number of the First Mortgages on the Units that are subject to mortgages held by Eligible Mortgage Holders. A change to any provisions governing the following shall be considered material, unless done in connection with the exercise of the Declarant's Development Rights or Special Declarant Rights:

(1) Voting;

(2) Assessments, assessment liens or subordination of such liens;

(3) Reserves for maintenance, repair and replacement of the common areas;

(4) Insurance;

(5) Rights to use of the Common Elements;

(6) Responsibility for maintenance and repair of the several portions of Property;

(7) Expansion or contraction of the Condominium or the addition, annexation or withdrawal of property to or from the Condominium;

(8) Boundaries of any Unit;

(9) The apportionment of Undivided Interests in the Common Elements;

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(10) Convertibility of Units into Common Elements or of Common Elements into Units;

(11) Leasing of Units;

(12) Imposition of any right of first refusal or similar restriction on the right of a Unit Owner to sell, transfer, or otherwise convey his/her/their Unit estate; and

(13) Any provisions which are for the express benefit of First Mortgagees, Eligible Mortgage Holders or insurers or guarantors of first mortgages on Units.

The Declarant intends that the provisions of this Section 17 and all other provisions of this Declaration comply with the requirements of FHLMC and FNMA with respect to condominium mortgage loans and, except as otherwise required by the provisions of Condominium Act, all questions with respect thereto shall be resolved consistent with that intention. In the event of any conflict between the approval requirements of FNMA, FHLMC, other sections of the Declaration and the Condominium Act with respect to any action or non-action to be taken or omitted by the Unit Owners or Executive Board, or with respect to any other matter, the greatest percentage requirement shall control. This Section 17 may be amended only with prior written approval of First Mortgagees representing 67% in number and Undivided Interest of the mortgaged Units in the Condominium and 67% in Undivided Interest of the Unit Owners in the Condominium.

Except as otherwise provided in the Condominium Act, any consent of an Eligible Mortgage Holder or First Mortgagee herein provided for shall be deemed given if such mortgagee fails to submit a response to any written proposal for an amendment within sixty (60) days after it received proper notice of the proposal, provided the notice was delivered by certified mail, return receipt requested.

18. **Common Expenses.**

Until such time as the Association makes a Common Expense assessment, the Declarant shall pay all Common Expenses, as provided in Section 1603-115(a) of the Condominium Act. Once a Common Expense assessment is made, Unit Owners shall be liable for Common Expenses as provided in this Declaration, as amended. The Declarant shall be responsible for payment of Common Expenses assessments allocated to unsold Units

Notwithstanding anything herein to the contrary, for so long as the Declarant shall have the right to appoint Members to the Board of Directors of the Unit Owners Association pursuant to Section 1603-103 of the Condominium Act, the Declarant

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shall have the right in lieu of assessing all Units for Common Expenses, to assume all responsibilities for the maintenance of the Common Elements for such period of time as is determined by Declarant.

19. **Insurance**. The Association shall obtain and maintain, to the extent reasonably available, the following insurance policies:

A. Casualty Insurance. The Executive Board shall obtain and maintain, to the extent reasonably obtainable at reasonable costs and permitted by applicable law, so- called master policies of insurance providing fire-with-extended-coverage and so-called all risk coverage insurance, insuring the Condominium, including, without limitation, the Common Elements, all of the Units with all fixtures therein, all heating and cooling equipment and other service machinery, apparatus, equipment and installations comprising the Common Elements or Units, and also all such portions normally deemed to constitute part of the building and customarily covered by such insurance, but not including any personal property belonging to and owned by individual Unit Owners or tenants, in an amount equal to not less than one hundred percent (100%) of the full replacement value thereof, exclusive of foundations, land and other items normally excluded therefrom without deduction for depreciation, but subject to a reasonable deductible as the Executive Board may determine, and which shall include, if available, so-called Agreed Amount, Inflation Guard, Construction Code and Replacement Cost Endorsements. Any insurance deductible shall be deemed a Common Expense, unless such amount may lawfully be allocated or assessed to one or more individual Unit Owner(s). In determining full replacement value, the Executive Board may reasonably rely upon the advice of the insurer or insurance agent. The name of the insured under such policy shall be stated in form, substance and effect similar to the following: "Verdante Condominium Association and its Unit Owners and mortgagees as their interests may appear." Such insurance shall name the Executive Board as Insurance Trustee(s) for the use and benefit of all Unit Owners and their mortgagees as their interests may appear, with losses payable to and adjusted by the Executive Board as Insurance Trustee(s) in accordance with the provisions of these By-Laws and the Condominium Act. The Executive Board may insure against such other hazards or risks of casualty as the Executive Board from time to time in its discretion shall determine to be appropriate, including, but not limited to, vandalism, malicious mischief, windstorm and water damage, earthquake, flood and machinery explosion or damage.

B. Liability Insurance. The Executive Board shall obtain and maintain, to the extent reasonably obtainable at reasonable costs and/or applicable, master policies of insurance with respect to the Common Elements for the benefit and protection of the Association and all Unit Owners for: (i) comprehensive general liability insurance in such limits as the Board may, from time to time, determine but in no case less than $1,000,000/$1,000,000 in coverage, covering the Association, the Executive Board, the Property Manager, if any, and each Unit Owner with respect to liability arising out of ownership, maintenance or repair of the Common Elements and structural and exterior wall portions of the Units, such insurance containing a

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"severability of interest" endorsement which shall preclude the insurer from denying the claim of a Unit Owner because of negligent acts of the Association, the Executive Board, the Unit Owner or other Unit Owners, and other provisions commonly referred to as a "Special Condominium Endorsement" or its equivalent; (ii) workmen's compensation and employee's liability insurance; (iii) boiler and machinery insurance in such limits as the Executive Board may, from time to time, determine; and (iv) such other liability insurance as the Executive Board may from time to time deem appropriate and desirable.

C. Fidelity Coverage. The Executive Board shall obtain fidelity coverage against dishonest acts on the part of the Executive Board, the Property Manager, if any, employees or volunteers responsible for handling funds belonging to Association or administered by the Executive Board.

D. Directors' and Officers' Liability Insurance. The Executive Board may obtain as a Common Expense, Directors' and Officers' Liability Insurance in such amounts and upon such terms as they deem appropriate.

E. Executive Board as Insurance Trustee(s). The Executive Board (i) shall have exclusive authority to negotiate all losses as herein provided for, (ii) shall collect and receive all loss insurance proceeds, and (iii) shall hold, use, apply and disburse the same in accordance with the applicable provisions of the Declaration, these By-Laws and the Maine Condominium Act for the benefit of the Owners and their respective mortgagees. With respect to losses which affect portions or elements covered by such insurance of more than one Unit and/or the Common Elements to different extents, the proceeds relating thereto shall be used, applied and disbursed by the Executive Board in their judgment in a fair and equitable manner, primarily based upon the relative losses.

F. Additional Requirements. Insurance policies obtained pursuant to the above shall also provide that:

(i) 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;

(ii) The insurer waives its right to subrogation under the policy against any Unit Owner or members of his household;

(iii) 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

(iv) 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.

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In the event that any insurance coverage described above is not reasonably available, the Association shall cause notice of that fact to be sent to all Unit Owners, as required by Section 1603-113(c) of the Maine Condominium Act.

20. **Rebuilding, Restoration and Condemnation.**

A. Casualty Loss. Except as provided in Section 1603-113(h) of the Condominium Act, and subject to such statutory provisions, in the event of damage to or destruction of the Condominium as a result of fire or any other casualty, the Executive Board, acting as Insurance Trustee(s) designated herein, shall promptly adjust and collect the loss and disburse the master policy insurance proceeds in appropriate progress payments with appropriate retainage, so as to facilitate and ensure the repair and restoration of the Unit or Units or Common Elements so damaged or destroyed.

The Executive Board may perform emergency work essential to the preservation and safety of the property or the safety of persons, or required to avoid the suspension of any essential service to the Condominium without having first adjusted the loss or obtained proceeds of insurance or otherwise having complied herewith. The cost of repair or replacement in excess of insurance proceeds and reserves shall be a Common Expense. If there shall have been a repair or restoration pursuant to the foregoing and the amount of insurance proceeds shall have exceeded the cost of such repair or restoration, then the excess of such insurance proceeds, if any, shall be added to the Association's capital expense reserve account or shall be, at the option of the Executive Board, divided among the Owners in proportion to their respective Undivided Interests; provided, however, that no provision herein shall be deemed to give an Owner or any other party priority over any rights of the holder of a first mortgage (if any) on such Owner's Unit pursuant to such mortgage in the case of a distribution to such Owner of insurance proceeds for losses to Units and/or Li m i t ed Common Elements. First Mortgagees of Units will be entitled to priority with respect to any insurance proceeds distributed to their mortgagors.

B. Eminent Domain. In the event of a total or partial taking under the powers of eminent domain, the Owners shall be represented by the Condominium acting through the Executive Board. Eminent domain proceedings and awards shall be governed by Section 1601- 107 of the Condominium Act.

21. **Rules, Regulations, Restrictions and Requirements.** The use and occupancy of the Condominium and each Unit shall be restricted to and shall be in accordance with the provisions of this Declaration, the By-Laws and such Rules and Regulations as the Executive Board may adopt, and all applicable laws, zoning ordinances, rules, regulations and requirements of all governmental bodies having jurisdiction over the Condominium or the use and occupancy thereof.

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The Executive Board shall have the right at any time and from time to time to adopt, amend and rescind Rules and Regulations governing the operation, appearance and use of the Common Elements and the occupancy of Units.

This Declaration, the By-Laws and the Rules and Regulations, as from time to time amended, may be enforced by the Executive Board, in its discretion. The Executive Board may eliminate any violation, and the cost and expense, including but not limited to attorneys' fees (whether or not a legal action is filed), of eliminating such violation may be chargeable to the Unit Owner who himself or whose family, servants, employees, agents, visitors, lessees, tenants, licensees, or pets are responsible for such violation. Otherwise, the cost of so eliminating a violation shall be a Common Expense. The Executive Board may also levy reasonable fines against the Owner for such violations if any such violation is not cured immediately, and such fine shall constitute a portion of such Unit Owner's Common Expenses which shall be payable by the Owner upon demand and enforceable as a Common Expense.
For each day a violation continues after notice it may, in the discretion of the Executive Board, be considered a separate violation.

In enforcing this Declaration, the By-Laws or the Rules and Regulations, the Executive Board may proceed against the Owner, any tenant, or both as the Executive Board, in its sole discretion, may determine.

22. **Unit Owner Responsibility.** Except as may be otherwise specifically provided in this Declaration, a Unit Owner shall be fully responsible for the acts and omissions, feasance, malfeasance and misfeasance, and all other conduct of his family members, servants, agents, employees, invitees, lessees, tenants, licensees, guests, pets or others upon the property at the behest of the Unit Owner.

23. **Enforcement of Charges, Fines, Obligations.** Any charge, fine, interest, attorneys' fees or other financial obligation to, of or on any Unit Owner shall constitute a lien upon such Unit and be enforceable to the same manner and extent as for Common Expenses.

24. **Attorneys' Fees and Costs.** In such case as it is necessary for the Executive Board to engage the services of an attorney, or attorneys, for the purpose of enforcing (whether a legal action is filed or not) against an Owner, tenant, occupant, or other person bound thereby, any provision of the Declaration, the By-Laws, the Rules and Regulations, or obligations thereunder, and/or for the purpose of defending any action brought by such person(s), said Unit Owner, tenant, occupant or other such person shall be liable for, in addition to any other liability, the fees and costs of such attorneys in so proceeding thereto, including the fees of all

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experts engaged in connection therewith. As to Unit Owners, the amount of such fines, fees, interest and costs and attorneys' fees shall constitute a lien upon the Unit enforceable to the same manner and extent as a lien for Common Expenses, and the Unit Owner shall be personally liable therefor.

25. **Conflicting Provisions.** If any provisions of this Declaration shall be invalid or shall conflict with the Condominium Act, as amended, or if any provision of this Declaration conflicts with any other provision thereof or with any provision of the By- Laws, then the following rules of construction shall be used:

A. In the event of a conflict between the Declaration and said Condominium Act, as amended, the provisions of the Condominium Act shall control; and

B. In the event of a conflict between this Declaration and the By-Laws, this Declaration shall control.

26. **Invalidity.** The invalidity of any provision 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.

27. **Waiver.** No provision contained in this Declaration shall be deemed to have been abrogated or waived by reason of any failure to enforce the same, irrespective of the number of violations or breaches which may occur.

28. **Captions.** The captions herein are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of this Declaration nor the intent of any provision hereof. Terms of gender shall be interchangeable, as shall be terms reflecting the singular and plural.

29. **Declarant.** The term declarant shall include the Declarant and its successors and assigns. Successors and assigns shall include, but not be limited to, those succeeding to the Declarant's interest by foreclosure, deed in lieu of foreclosure, deed, grant or assignment. Successors and assigns shall not include individual Unit Owners. All rights of the Declarant contained in this Declaration, the By-Laws and Rules and Regulations shall pass to the successors and assigns of the Declarant. This Declaration, the By-Laws and Rules and Regulations may not be amended to affect the rights of the Declarant and its mortgagee(s), successors and assigns without the written consent of the Declarant and its mortgagee(s), successors and assigns.

Witness the execution hereof under seal this_day of_____, 20___.

DRAFT

VERDANTE CONDOMINIUM, LLC

By: NewHeight Ventures II LLC Its: Managing Member

By:_____
Erin Cooperrider
Its: ManagingMember

State of Maine
Cumberland
County

_____, 2018

Personally appeared the above-named Erin Cooperrider, Managing Manager of New Height Ventures II LLC, the Managing Member of Verdante Condominium, LLC as aforesaid, and acknowledged the foregoing to be her free act and deed and the free act and deed of said limited liability company.

_____
Notary Public/Attorney at Law

Print name:

DRAFT

TRAFFIC AND PARKING

Trip Generation

The proposed project includes 30 residential units and one approximately 1,535 SF retail unit. Trip generation data was taken from the ITE Trip Generation Manual for the proposed uses. Calculations for the proposed project are found below:

Residential Condominium:

- 5.86 trips/unit on an average weekday * 30 units = 175.8 trips/weekday
- 0.52 trips/unit during the PM peak hour = 15.6 trips/PM peak hr

Retail (specialty retail center):

- 44.32 trips/1,000 SF on an average weekday * 1,535 SF = 68.0 trips/weekday
- 5.02 trips/1,000 SF during the PM peak hour * 1,535 SF = 7.7 trips/PM peak hr

General Office Use (in place of retail):

- 11.01 trips/1,000 SF on an average weekday * 1,535 SF = 16.9 trips/weekday
- 1.49 trips/1,000 SF during the PM peak hour * 1,535 SF = 2.3 trips/PM peak hr

According to the ITE Manual, the proposed residential and retail uses will generate 244 trips/weekday and 23 trips in the PM peak hour. If the retail space is converted to an office use then the project would generate less traffic at 193 trips/weekday and 18 trips in the PM peak hour.

The number of trips estimated from the ITE Manual likely overstates the amount of traffic that will be generated by the project due to the expected demographic of the residents and the sale of parking spaces separately from units. The developers expect the residents of this project will drive less than typical due to the buildings proximity to downtown, amenities, and offices. Many residents may work from home, walk to work, or commute by bicycle.

Parking

The proposed project includes 30 residential units and one approximately 1,535 SF retail unit. Parking also needs to be provided for the abutting residence at 312 Congress Street:

- 1 space/unit, first 3 units exempt = 27 spaces
- Retail is < 2,000 SF so none required
- 15 spaces for 312 Congress Street

Total Required = 42 spaces
Total Provided = 62 spaces

56 Hampshire Street for the April 24th public meeting.

judith allen <judithallenefs@yahoo.com> Apr 23, 2018 5:44 PM
Posted in group: **Planning Board**

To Planning Board **planningboard@portlandmaine.gov**

RE: Written Comments and Concerns regarding Verdante Proposed Condominium Project at 56 Hampshire Street for the April 24th public meeting.

From Judith Allen owner of 62 Hampshire St.

In my March letter to Deb Andrews I requested that the August 8, 2017 Planning Board decision concerning UT zone re-alignment be reviewed and amended in light of the potential serious negative consequences to our historic building at 60/62 Hampshire St. The August 8 vote extended the UT zone on Federal Street much deeper than the UT zone on Congress Street. At that meeting the historic buildings on Federal Street were considered, but the effect on our building was not even mentioned. This change in UT allows for the Verdante design that would encloses our historic Victorian building completely on the south and west sides, making this possibly the only historic building in Portland enclosed within the L shape of a looming 129ft building. Our building would be completely in the Shadow of the Verdante building and blocked from all direct sunlight to the brick walls of our building. This would have a very adverse effects on the bricks, mortar and structure of our building and would increase dampness to the structure that has had sunlight and air on its brick walls since it was built in 1867. If the UT zone were the same as on the corner of Congress and Franklin Streets, the Verdante building would rise to the 129 foot height much further back from Hampshire Street, leaving a narrow corridor of sunlight and circulating air to reach the walls of our building. This request was forwarded to Caitlin Cameron. We have not heard further on this matter and hope the planning board will address our urgent concerns on this issue

I hope the planning Board will also consider and request the following

- A **red brick-faced building** (such as the new 4-story, brick-faced construction on India St.) more appropriate building for this historic, residential neighborhood.

- **13 trees** removed in proposed construction be replaced on Hampshire/Franklin/Newberry St. not elsewhere in the city

- **No residential parking allowed for Verdante building** since they have parking provided where other older residential buildings on Hampshire and Federal depend on the very limited residential street parking for tenants.

- The **commercial spaces should be on the Franklin St. side of Verdante (urban commercial designation) rather than on Hampshire St (designated as urban residential)**

- Review the **UT** on Federal St.

www.judithallenstudios.com judithallenefs@yahoo.com

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

Application ID# 2017-294 Vicinity of 56 Hampshire Street

Bill Stauffer <bstauffer@eco-story.com> Tue, Apr 24, 2018 at 3:29 PM
To: ccameron@portlandmaine.gov

Dear Caitlin, I wanted to state our support and concern for the proposed 30 residential condominium units per the above. We are happy to see that the developer is planning a good number of parking spots for the building which will help alleviate the street parking congestion.

With that said, we also wanted to express our hope that the City will do more to limit the impact that we have felt from the other condo projects close to us (India Street, Franklin, Hampshire, etc). For nearly two years the nearly 20 businesses that operate at 145 Newbury Street have been dealing with reduced parking due to the construction companies buying up most of the spaces, loud construction noise, and an abundance of construction trash, cigarette butts, and other trash. We have tried working with Landry French and some of the other construction companies with little success on these issues. The thought of having to deal with all this for another year to two seems unfair to the businesses that have operated here for decades. Thank you,

Bill Stauffer

PH: (207) 699-5727 x11

FX: (207) 699-2321

Storrey Property Management, LLC

145 Newbury Street
Portland, ME 04101

USA

Judith Allen, resident and owner, 62 Hampshire St. and registered voter
District 1

Written comments and 2 questions regarding proposed Verdante building project at 56 Hampshire St. to the Portland Planning Board For July 17th meeting

The proposed site of the Verdante project is located in the beautiful corridor of historic buildings between Federal St. and Congress Street that runs from East End Cemetery to City Hall, a corridor consisting of entirely historic buildings and the beautiful Lincoln Park. The residence of the Verdante building with have a wonderful view of this historic corridor and I hope the Verdante building, as the only contemporary building in this corridor, could, in some way, reflect some of the historic elements of Lincoln park and surrounding historic buildings for the tourists and residence of Portland walking down Congress St to the East End.
At the June public meeting concerning the proposed Verdante building as well as at the earlier neighborhood meeting developers stated their aim for the Verdante design was a contemporary building mirroring the recently constructed Luminato building on Franklin St. rather than including any elements of the surrounding historic buildings of the Congress/ Federal St corridor and Lincoln Park.
I would like to strongly suggest that the designers of the Verdante building and landscaping also take into consideration it's location in one of the most important historic corridors in Portland and include some historic elements in their contemporary design (i.e. red rather than gray bricks).

As a result of zoning changes to the UT on Federal St. (made August 8 2017) the Verdate building is aloud to rise from 3 to 6 stories closer to Hampshire St. than the former zoning would have allowed. This change allows the proposed Verdante design to enclose the historic Victorian building at 60/62 Hampshire St, completely on two sides, making this possibly the only historic building in Portland in the shade of an L shape of a 6-story building on the sunny, south east sides of the building, blocking all direct sunlight to the back of our building. The resulting dampness from lack of direct sunlight will have a negative effect on the bricks, mortar and structure of our building. There is already a building on the west side of our building, so that with this proposed construction our building would be enclosed in a U shape (open only the north side of the building).

The Planning Board and City Council adopted the India Street Historic District in 2015, certain properties, within the district, including our building, are protected and include review by the Historic Preservation standards. As owners of a building identified as *Of Historic Interest* we have accepted responsibilities to protect the building. We also understand that the City of Portland, in designating our building as *Of Historic Interest*, has some responsibility in protecting historic building from damage resulting from, for example, changes in code such as the UT decision of August 8, 2017. If the UT had been kept to the same distance as the UT on Congress St in the Hampshire St. block, or the old methodology of property lines our building would have a narrow corridor to allow air to circulate and some direct sun light

on the back of our building and our building would not be completely in the shadow of 6 story building

Two questions to the Historic Preservation Board, City Designer and Panning Board:

1. Why is the UT on Newbery St (to Hampshire St) so much deeper than on Congress (to Hampshire St)? What is the justification?
2. Was the effect of the UT zoning change on our Historic building at 60/62 ever reported on by the Historic Preservation Board or considered in the long process, plans and voting on the UT zoning change of Federal St to Hampshire St.? (Simple Yes or No)

Note: at the Aug 8 meeting the effect on the change on 2 historic buildings on Newbery St. was reported by the Historic Preservation Board but there was no mention of our building.

I first questioned the UT decision of 50 ft. at the Aug 8 meeting and followed up in writing, but have still not had direct yes or no answers to the above questions. As a taxpayer, registers voter and long-term residence and property owner of property affected by zoning change decisions, I would at least, after almost a year, respectfully request direct answers to the above questions.

SITE DEVELOPMENT PLANS
FOR
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET - PORTLAND, MAINE
AUGUST 2018
PERMIT DOCUMENTS

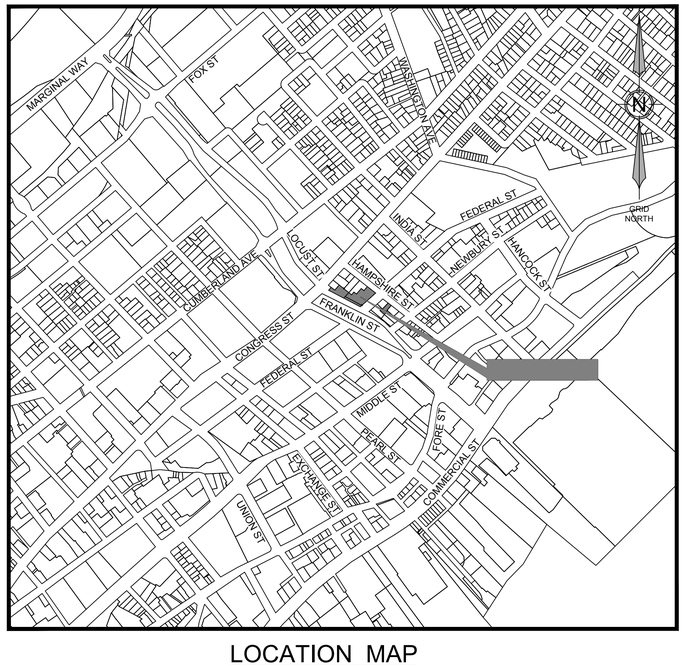
APPLICANT/OWNER:
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, MAINE 04101

PROJECT PARCEL SITE
CITY OF PORTLAND TAX ASSESSOR'S MAP, BLOCK, & LOT NUMBERS

MAP	BLOCK	LOTS
28	C	13 & 18

SHEET INDEX

C-1.0	COVER SHEET
C-1.1	GENERAL NOTES & LEGEND
C-2.0	BOUNDARY & TOPOGRAPHIC SURVEY
C-2.1	RECORDING PLAT
C-2.2	EXISTING CONDITIONS & DEMOLITION PLAN
C-3.0	SITE PLAN
C-4.0	GRADING, DRAINAGE & EROSION CONTROL PLAN
C-4.1	EROSION & SEDIMENT CONTROL NOTES
C-5.0	UTILITY PLAN
C-6.0	SITE & PLANTING DETAILS
C-6.1	UTILITY & DRAINAGE DETAILS
C-7.0	PARKING MOVEMENT DIAGRAM 1
C-7.1	PARKING MOVEMENT DIAGRAM 2
C-7.2	PARKING MOVEMENT DIAGRAM 3
C-7.3	PARKING MOVEMENT DIAGRAM 4
C-7.4	PARKING MOVEMENT DIAGRAM 5
C-7.5	PARKING MOVEMENT DIAGRAM 6
C-7.6	PARKING MOVEMENT DIAGRAM 7
C-7.7	PARKING MOVEMENT DIAGRAM 8
L-1	LANDSCAPE PLAN
P-1	LIGHTING PHOTOMETRIC PLAN



LOCATION MAP
SCALE: 1"=500'

PERMITS

TYPE OF PERMIT	GOVERNING BODY	STATUS
SITE PLAN/SUBDIVISION APPROVAL	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL, 389 CONGRESS STREET PORTLAND, ME 04101 TEL. 207.874.8722	SUBMITTED 04/09/2017
BUILDING PERMIT	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL, 389 CONGRESS STREET PORTLAND, ME 04101 TEL. 207.874.8900	TO BE SUBMITTED BY BUILDING CONTRACTOR
UTILITY / STREET OPENING	CITY OF PORTLAND PUBLIC SERVICES DIVISION 55 PORTLAND STREET PORTLAND, ME 04101 TEL. 207.874.8801	TO BE FILED BY SITE CONTRACTOR

UTILITIES

SEWER/STORM
CITY OF PORTLAND
PUBLIC SERVICES DIVISION
55 PORTLAND STREET
PORTLAND, MAINE 04102
207.874.8850

WATER
PORTLAND WATER DISTRICT
22 DOUGLASS STREET
P.O. BOX 3553
PORTLAND, MAINE 04104
207.774.5961

ELECTRIC
CENTRAL MAINE POWER COMPANY
162 CANCO ROAD
PORTLAND, ME 04103
(207) 842-2367

TELEPHONE
FAIRPOINT COMMUNICATIONS
5 DAVIS FARM ROAD
P.O. BOX 11560
PORTLAND, MAINE 04103
888.984.1515

NATURAL GAS
UNITIL
376 RIVERSIDE INDUSTRIAL PARKWAY
PORTLAND, MAINE 04103
866.933.3821

DIG SAFE SYSTEM, INC.
TEL. 1-888-DIG-SAFE (344-7233)
WWW.DIGSAFE.COM

PREPARED BY:

CIVIL ENGINEER:
TERRADYN CONSULTANTS, LLC
565 CONGRESS STREET, SUITE 310
PORTLAND, MAINE 04101
207.926.5111
CONTACT: MICHAEL TADEMA-WIELANDT

ARCHITECT:
ARCHETYPE ARCHITECTS
48 UNION WARF
PORTLAND, ME 04101
207.772.6022
CONTACT: DAVID LLOYD

SURVEYOR:
OWEN HASKELL, INC.
309 U.S. ROUTE ONE, UNIT 10
FALMOUTH, MAINE 04105
207.774.0424
RANDY LOUBIER

ELECTRICAL/MECHANICAL ENGINEER:
BENNETT ENGINEERING
P.O. BOX 297
FREEPORT, MAINE 04032
207.865.9475
CONTACT: WILLIAM BENNETT

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12111
LICENSED PROFESSIONAL ENGINEER
Michael E Wielandt

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 08-21-2018

NO.	DATE	REVISIONS	APP'D BY
11	08-21-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
10	08-17-2018	PRICING SET - AUG 17, 2018	MTW
9	08-09-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
8	07-27-2018	REVISED UNIT COUNT AND ADDED EASEMENT #4	MTW
7	07-20-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS	MTW
6	07-03-2018	PRICING SET - JULY 3, 2018	MTW
5	06-11-2018	REVISED PER COMMENTS AND RE-SUBMITTED	MTW
4	04-09-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS	MTW
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102

P.O. BOX 339
111 ELDERBERRY LANE
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
COVER SHEET

VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	AS NOTED
DESIGNED:	ARF
JOB NO:	1728
FILE: 1728 COVER.DWG	
SHEET	C-1.0

PRELIMINARY - NOT FOR CONSTRUCTION

GENERAL NOTES:

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF ALL REGULATIONS ADMINISTERED BY THE LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXITS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS.
3. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-888-DIGSAFE). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT NO EXTRA EXPENSE TO THE OWNER.
5. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
6. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
7. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO PROJECT CONTRACT SPECIFICATIONS, AND THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS, WHICHEVER IS MORE STRINGENT.
8. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. BENCHMARK = HYDRANT BONNET BOLT ON NORTHEASTERN SIDE OF HAMPSHIRE STREET, ELEVATION 49.30, NGVD 1929 DATUM.
9. FEMA MAP COMMUNITY PANEL NUMBER 230051 0014 B. THE SITE IS LOCATED IN A C ZONE.
10. THE PROPERTY SHOWN ON THIS PLAN MAY BE DEVELOPED AND USED ONLY AS DEPICTED IN THIS APPROVED PLAN. ALL ELEMENTS AND FEATURES OF THE PLAN AND ALL THE PROPERTY WHICH APPEARS IN THE RECORD OF THE PLANNING BOARD PROCEEDINGS ARE CONDITIONS OF THE APPROVAL. NO CHANGE FROM THE CONDITIONS OF APPROVALS IS PERMITTED UNLESS AN AMENDED PLAN IS FIRST SUBMITTED TO AND APPROVED BY THE PLANNING AUTHORITY.
11. ALL SIGNAGE SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION AND REFLECTIVITY SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL CURB SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS NOTED ON THE PLANS: GRANITE CURB SHALL MEET THE REQUIREMENTS OF MaineDOT SPECIFICATIONS 609.03 AND CITY OF PORTLAND TECHNICAL STANDARDS.
13. ALL DIMENSIONING UNLESS OTHERWISE NOTED IS TO THE FACE OF CURB OR FACE OF BUILDING.
14. THE FACILITY IS SERVICED BY PUBLIC WATER, SEWER, AND UNDERGROUND POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SERVICE. SEE SITE ELECTRICAL PLANS FOR DETAILS.
15. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CITY OF PORTLAND PUBLIC WORKS INSPECTION SERVICES DIVISION (874-8300 EXT. 8838), CODE ENFORCEMENT OFFICE AND DEVELOPMENT REVIEW COORDINATOR IN WRITING THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING MAY BE REQUIRED TO INCLUDE THE PUBLIC WORKS AUTHORITY OR DEVELOPMENT REVIEW COORDINATOR.
16. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
17. WARNING SIGNS, MARKERS, BARRICADES OR FLAGMEN MUST BE EMPLOYED ON ADJACENT STREETS AS NECESSARY. THE CONTRACTOR SHALL COORDINATE AND SEEK APPROVAL FROM THE PUBLIC SERVICE DIVISION FOR THE PLACEMENT/PARKING OF EQUIPMENT WITHIN THE PUBLIC RIGHT OF WAY.
18. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED AND DISPOSED OF IN ACCORDANCE WITH THE CITY OF PORTLAND'S SOLID WASTE ORDINANCE CHAPTER 12. ALL DEMOLITION MATERIAL FROM THE PROJECT SITES SHALL BE TAKEN TO THE RIVERSIDE RECYCLING FACILITY OR AS OTHERWISE DIRECTED PENDING THE RESULTS OF A HAZARDOUS BUILDING MATERIALS SURVEY AS AUTHORIZED AND COORDINATED BY THE OWNER. ALL SALVAGED MATERIAL WITHIN THE PUBLIC R.O.W.(SIDEWALKS, BRICKS, GRANITE CURB) NOT REUSED SHALL BE DISPOSED OF AS DIRECTED BY THE PORTLAND PUBLIC SERVICES DEPARTMENT AT NO EXTRA COST TO THE OWNER.
19. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
20. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AT ALL TIMES DURING CONSTRUCTION TO INSURE INTEGRITY. IF DISTURBED THEY SHALL BE REPLACED BY A SURVEYOR REGISTERED IN THE STATE OF MAINE AT THE CONTRACTOR'S EXPENSE.
21. THE OWNER SHALL BE RESPONSIBLE TO COORDINATE THE PERFORMANCE OF A HAZARDOUS MATERIALS INSPECTION OF THE PROPERTY.
22. A STREET OPENING PERMIT MUST BE OBTAINED FROM THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED IN CONFORMANCE TO THE CITY'S RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN PUBLIC RIGHT OF WAYS.
23. CONTRACTOR MUST MAINTAIN THROUGH TRAFFIC ON ADJACENT STREETS AT ALL TIMES.
24. ALL METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS IDENTIFIED HEREIN SHALL CONFORM TO THE CITY OF PORTLAND CONSTRUCTION AND TECHNICAL STANDARDS AND SPECIFICATIONS AND/OR CURRENT MaineDOT STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
25. SITE WORK FOR BUILDING SHALL INCLUDE GRADING THE BUILDING PAD AREA (DEFINED AS THE BUILDING FOOTPRINT PLUS 5'-0" BEYOND THE EXTERIOR WALL) TO A GRADE 18" BELOW THE GROUND FLOOR FINISH ELEVATION. ALL WORK SHALL INCLUDE EXCAVATION (INCLUDING ROCK REMOVAL AND EXISTING FOUNDATION DEMOLITION) AND BACKFILL OF ALL FOOTINGS AND FOUNDATIONS, INSTALLATION OF PERIMETER FOUNDATION DRAINS, EXCAVATION AND BACKFILL OF ALL UNDERSLAB UTILITIES AND PLACEMENT OF ALL AGGREGATES BELOW THE FLOOR SLAB AND ADJACENT FOUNDATION WALLS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL DETAILS PERTAINING TO ANY BUILDING RELATED FOUNDATION WORK).
26. RECORD DRAWINGS MUST INCLUDE ALL BURIED UTILITIES INCLUDING, BUT NOT LIMITED TO, BENDS, APPURTENANCES, AND OTHER FEATURES, TO BE LOCATED IN THE FIELD BY GIS AND RECORDED AS AN AS-BUILT PLAN BY THE CONTRACTOR AT THE END OF THE PROJECT. THIS PLAN SHALL ALSO BE PROVIDED TO THE OWNER.
27. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS PREPARED BY ARCHETYPE ARCHITECTS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE POINTS.
28. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
29. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST THREE (3) BUT NOT MORE THAN 30 (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A.

GRADING AND DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF n = 0.013 OR LESS. UNLESS A SPECIFIC PIPE MATERIAL IS CALLED FOR ON THE CONTRACT DRAWINGS. PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT.
2. SLOPE PROTECTION IS TO BE PROVIDED PER THE DESIGN PLANS AND MAY INCLUDE RIPRAP, SOD OR MULCH.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT DISTURBANCE TO ANY STEEP SLOPE AREAS ARE MINIMIZED TO THE EXTENT PRACTICABLE.
4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
5. ALL PAVING WITHIN THE PUBLIC R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF PORTLAND RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC R.O.W.
6. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
7. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
8. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES AND PHYSICAL FEATURES THAT ARE OUTSIDE THE SCOPE OF WORK. THE CONTRACTOR SHALL MAINTAIN SITE STABILITY DURING CONSTRUCTION TO AVOID EROSION AND SEDIMENT TRANSPORT. CONTRACTOR SHALL RESTORE ALL AREAS TO A FINAL STABILIZED CONDITION AS DIRECTED BY DESIGN DRAWINGS.
9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
10. EXTERIOR GRADES AROUND PROPOSED STRUCTURE SHALL BE COORDINATED WITH FINAL BUILDING PLANS AND PROVIDE FOR ALL ACCESS OPENINGS.
11. SUBGRADE FILL PLACED BENEATH ALL PERMANENT PAVEMENT, SIDEWALK OR CONCRETE SURFACES EXCLUDING ANY BUILDING AREAS, SHALL BE GRANULAR BORROW. SUBGRADE FILL PLACED BENEATH ALL LANDSCAPE AREAS EXCEPT THOSE ADJACENT THE FOUNDATION SYSTEMS MAY BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUBGRADE CONSTRUCTION. EXCAVATED ON-SITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. EXCAVATED ONSITE MATERIALS MAY NOT BE USED AS COMPACTED STRUCTURAL FILL BENEATH THE BUILDING AREAS OR AS FOUNDATION BACKFILL. GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH MaineDOT SPECIFICATIONS.
12. ALL FILLS SHALL BE PLACED IN LAYERS NOT MORE THAN 12" LOOSE DEPTH AND COMPACTED BY HEAVY COMPACTION EQUIPMENT. MINIMUM COMPACTION SHALL BE 95% OF MAXIMUM DENSITY ASTM 1557, MODIFIED AND FIELD DENSITY ASTM D2922 (NUCLEAR METHODS).
13. 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.

CONSTRUCTION MANAGEMENT NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH 2009 NFPA 1 CHAPTER 16 SAFE GUARDS DURING BUILDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS.
2. ANY CUTTING AND WELDING WORK PERFORMED ONSITE SHALL REQUIRE A "HOT WORK" PERMIT FROM THE PORTLAND FIRE DEPARTMENT.
3. THE GENERAL CONTRACTOR SHALL POST EMERGENCY CONTACT INFORMATION ON THE PROJECT SITE PROPERTY DURING CONSTRUCTION IN THE EVENT OF AN AFTER HOURS EMERGENCY. THIS CONTACT INFORMATION SHALL ALSO BE PROVIDED TO THE PORTLAND FIRE DEPARTMENT.
4. IF THE SITE IS SECURED BY TEMPORARY OR PERMANENT FENCING WITH LOCKED GATES, THEN THE APPLICANT OR ASSIGNED REPRESENTATIVE SHALL PURCHASE A KNOX PADLOCK FROM THE PORTLAND FIRE DEPARTMENT TO ALLOW ACCESS BY THE PORTLAND FIRE DEPARTMENT.
5. STREETS SHALL MAINTAIN A 20' WIDTH FOR FIRE DEPARTMENT ACCESS AT ALL TIMES.
6. FIRE HYDRANTS SHALL NOT BE BLOCKED OR ENCLOSED BY FENCING. A 3' CLEARANCE SHALL BE MAINTAINED AT ALL TIMES AROUND FIRE HYDRANTS.

UTILITY NOTES:

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED BETWEEN THE SITE WORK CONTRACTOR AND DIVISION 22/26 CONTRACTOR(S). THE SITE WORK CONTRACTOR SHALL BE RESPONSIBLE TO EXTEND ALL PROPOSED UTILITIES TO WITHIN FIVE (5) FEET OF THE BUILDING TO A LOCATION COORDINATED WITH THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS. THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES WITHIN FIVE (5) FEET AND INSIDE THE BUILDING OR UNDER SLAB.
2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH FAIRPOINT COMMUNICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.
3. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER, THE TELECOMMUNICATIONS SERVICE WITH FAIRPOINT COMMUNICATIONS, AND THE CABLE SERVICE WITH TIME WARNER CABLE. ALL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS OR UTILITY COMPANY STANDARDS, WHICHEVER IS MORE STRINGENT.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
6. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
7. 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.
8. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. A 12 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.
9. THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOBSITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER, AND AFFECTED BUSINESSES.
10. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL SERVICES IN CONDUIT TO SITE LIGHTING, COMPLYING WITH APPLICABLE CODES. COORDINATE WITH OWNER, SITE ELECTRICAL, ARCHITECTURAL AND CMP PLANS.
11. ALL SANITARY SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT. ALL SANITARY SERVICES AND APPURTENANCES TO BE ABANDONED SHALL BE PROPERLY RECORDED WITH PORTLAND PUBLIC WORKS ENGINEERING DEPARTMENT. A DIGITAL VIDEOTAPE SHALL BE MADE OF SANITARY SEWER SYSTEMS TO BE UTILIZED PRIOR TO CONSTRUCTION; UPSTREAM PIPES INTENDED FOR ABANDONMENT SHALL BE INSPECTED TO VERIFY THAT THEY NO LONGER SERVE OTHER FACILITIES.

PERMITTING NOTES:

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE SITE PLAN REVIEW PERMIT FROM THE CITY OF PORTLAND WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS. THE CONSTRUCTION WILL BE GOVERNED BY THE ZONING ORDINANCES WHICH ARE AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.

DIMENSIONAL REQUIREMENTS (IS-FBC ZONE)			
STANDARD	UN SUBDISTRICT REQUIRED	UT SUBDISTRICT REQUIRED	PROVIDED
MIN. LOT SIZE	NONE	NONE	19,366 SF
MIN. LOT AREA PER DWELLING UNIT	NONE	NONE	645 SF
LOT COVERAGE	90% MAX	90% MAX	71%
FRONT YARD	MIN: 0 FT, MAX: 5 FT	MIN: 0 FT, MAX: 10 FT	APPROX. 1 FT ON HAMPSHIRE ST, VARIES ON FEDERAL ST 0 - 9 FT
MIN. SIDE YARD	5 Ft	10 FT	10 FT
MIN. REAR YARD	10 Ft	10 FT	10 FT
MAX. STRUCTURE HEIGHT	45 FT	65 FT + 12 FT BONUS	40 FT IN UN, 77 FT IN UT
MAX. IMPERVIOUS SURFACE	90%	90%	50%
PARKING	1 SPACE PER UNIT, FIRST 3 UNITS EXEMPT (27 SPACES)		60 ON-SITE SPACES 43 SPACES FOR VERDANTE + 17 SPACES FOR 312 CONGRESS STREET
BICYCLE PARKING	2 SPACES FOR EVERY 5 UNITS (12 SPACES)		12 SPACES IN BIKE TRAC PARKING SYSTEM IN GARAGE + 2 SPACES AT FEDERAL STREET BIKE HITCH

LEGEND

EXISTING PROPERTY LINE
PROJECT SITE BOUNDARY
EXISTING SETBACK LINE
PROPOSED EASEMENT
124 EXISTING MINOR CONTOUR
124 EXISTING MAJOR CONTOUR
124 PROPOSED CONTOUR
SD EXISTING STORMDRAIN
SD PROPOSED STORMDRAIN
S EXISTING SANITARY SEWER
S PROPOSED SANITRY SEWER
W EXISTING WATER LINE
W PROPOSED WATER LINE
UD EXISTING UNDERDRAIN
UD PROPSED UNDERDRAIN
OHE EXISTING OVERHEAD ELECTRIC & TELEPHONE
OHE PROPOSED OVERHEAD ELECTRIC & TELEPHONE
UGE EXISTING UNDERGROUND ELECTRIC & TELEPHONE
UGE PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
EXISTING EDGE OF PAVEMENT
PROPOSED EDGE OF PAVEMENT
EXISTING EDGE OF GRAVEL
PROPOSED EDGE OF GRAVEL
EXISTING CURB
PROPOSED CURB
PROPOSED FENCE
SF SILT FENCE
TP-A TEST PIT
EXISTING VALVE
PROPOSED VALVE
EXISTING HYDRANT
EXISTING LIGHT POLE
PROPOSED LIGHT POLE
EXISTING UTILITY POLE
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING DRAIN MANHOLE
PROPOSED DRAIN MANHOLE
EXISTING SEWER MANHOLE
PROPOSED SEWER MANHOLE
+30.20 EXISTING SPOT GRADE
30.20 PROPOSED SPOT GRADE
SURVEY CONTROL POINT
EXISTING MONUMENT
EXISTING IRON PIPE
EXISTING SIGN
PROPOSED SIGN
EXISTING BUILDING
PROPOSED BUILDING
PROPOSED CONCRETE
PROPOSED PAVEMENT
PROPOSED BRICK

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 11567
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 08-27-2018

NO.	DATE	REVISIONS	APP'D BY
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TERRADYN CONSULTANTS, LLC
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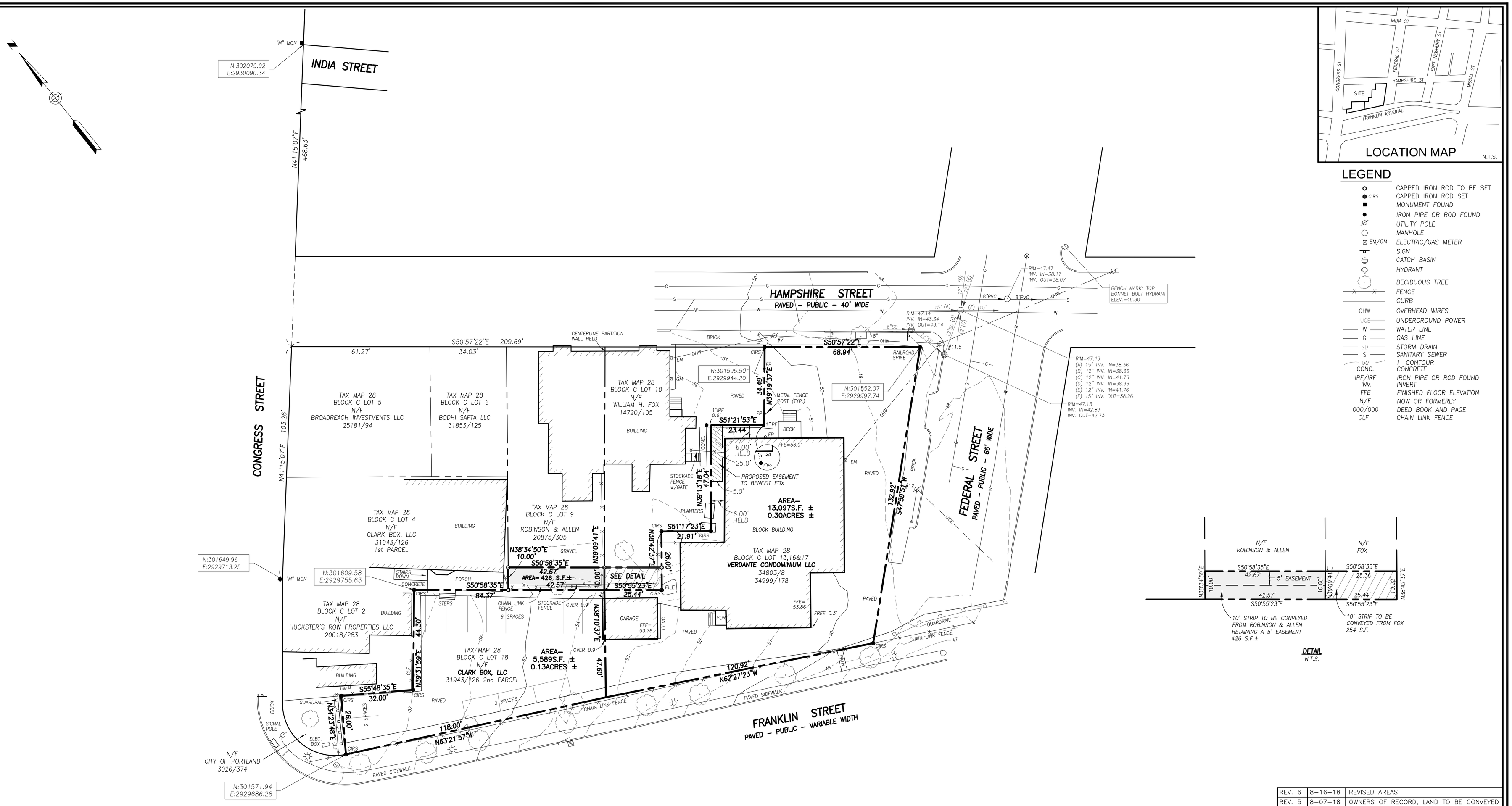
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
GENERAL NOTES & LEGEND

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	AS NOTED
DESIGNED:	ARF
JOB NO:	1728
FILE: 1728-COVER.DWG	
SHEET	C-1.1

PRELIMINARY - NOT FOR CONSTRUCTION



LEGEND

○	CAPPED IRON ROD TO BE SET
● CIRS	CAPPED IRON ROD SET
■	MONUMENT FOUND
●	IRON PIPE OR ROD FOUND
⌀	UTILITY POLE
○	MANHOLE
⊠ EM/GM	ELECTRIC/GAS METER
	SIGN
	CATCH BASIN
	HYDRANT
	DECIDUOUS TREE
X X	FENCE
	CURB
OHW	OVERHEAD WIRES
UGE	UNDERGROUND POWER
W	WATER LINE
G	GAS LINE
SD	STORM DRAIN
S	SANITARY SEWER
50	1' CONTOUR
CONC.	CONCRETE
IPF/IRF	IRON PIPE OR ROD FOUND
INV.	INVERT
FFE	FINISHED FLOOR ELEVATION
N/F	NOW OR FORMERLY
000/000	DEED BOOK AND PAGE
CLF	CHAIN LINK FENCE

DETAIL
N.T.S.

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.

GRAPHIC SCALE

0 10' 20' 40' 80'

PLAN REFERENCES

1. *"EXISTING CONDITIONS SURVEY AT 290 CONGRESS STREET, PORTLAND, MAINE MADE FOR CASCO BAY ENGINEERING" MAY 6, 2014 BY OWEN HASKELL, INC.*
2. *"LAND TITLE SURVEY ON CONGRESS ST., HAMPSHIRE ST., FEDERAL ST., PORTLAND, MAINE FOR OAK LEAF TERRACE CO." SEPT. 28, 1995 REV. 1 3-17-02 BY OWEN HASKELL, INC.*
3. *"CITY OF PORTLAND PUBLIC WORKS DEPARTMENT CONTRACT DRAWINGS HAMPSHIRE STREET RECONSTRUCTION BRATTLE STREET RECONSTRUCTION PROJECT NO. 210-3100-430" DATED 11/16/01. ON FILE AT THE CITY OF PORTLAND.*
4. *"PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR RALPH J. TALIENTO & JOHN J. TALIENTO" DATED MARCH 24, 1978 BY H.I. & E.C. JORDAN COMPANY, PLAN FILE #77.*
5. *"ALTA/ACSM LAND TITLE SURVEY ON LAND LOCATED AT 316-316A CONGRESS STREET IN PORTLAND, MAINE" DATED 7/13/2000 BY NADEAU & LODGE, INC.*

GENERAL NOTES

1. *OWNERS OF RECORD:* *VERDANTE CONDOMINIUM LLC*
   TAX MAP 28 BLOCK C LOTS 13,16&17
   C.C.R.D. BOOK 34803 PAGE 8
   BOOK 34999 PAGE 178

   CLARK BOX, LLC
   TAX MAP 28 BLOCK C LOT 18
   C.C.R.D. BOOK 31943 PAGE 126
2. *BEARINGS AND COORDINATES ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83. ELEVATIONS ARE BASED ON CITY DATUM. HORIZONTAL AND VERTICAL CONTROL DATA PROVIDED BY THE CITY OF PORTLAND AND TAKEN FROM PLAN REFERENCE 3.*
3. *HAMPSHIRE STREET AND FEDERAL STREET LINES ARE BASED ON MARKERS FOUND ON PLAN REFERENCE 3 AND CITY BLUE SHEETS. FRANKLIN STREET LINE WAS BASED ON COURSES AND DISTANCES IN THE LOCUS DEEDS.*

CERTIFICATE

TO: THE CITY OF PORTLAND, MAINE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

8/16/18
DATE

RANDY R. LOUBIER, PLS NO. 2407

STATE OF MAINE
RANDY R. LOUBIER 2407
PROFESSIONAL LAND SURVEYOR

REV. 6	8-16-18	REVISED AREAS
REV. 5	8-07-18	OWNERS OF RECORD, LAND TO BE CONVEYED FROM ABUTTERS & EASEMENTS
REV. 4	5-23-18	ELIMINATED LAND TO BE CONVEYED FROM FOX
REV. 3	4-20-18	ADDED LAND TO BE CONVEYED FROM FOX AND ROBINSON & ALLEN
REV. 2	6-27-17	ADDED LAND TO BE CONVEYED FROM CITY
REV. 1	2-17-17	ADD TM 28 BLOCK C LOT 18

BOUNDARY & TOPOGRAPHIC SURVEY

AT

#56 HAMPSHIRE STREET, PORTLAND, MAINE

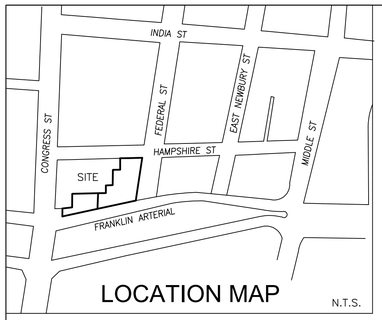
MADE FOR

THE NEWHEIGHT GROUP

118 CONGRESS STREET, #401, PORTLAND, MAINE

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207)774-0424

Drawn By RS	Date JANUARY 27, 2017	Job No. 2017-008P
Trace By JLW	Scale 1" = 20'	Drwg. No. 1
Check By RRL		
Book No. FILE		



LOCATION MAP N.T.S.

GENERAL NOTES:

1. OWNERS OF RECORD: REBECO, LLC
   TAX MAP 28 BLOCK C LOTS 13,16&17
   BOOK 27634 PAGE 128

   CLARK BOX, LLC
   TAX MAP 28 BLOCK C LOT 18
   BOOK 31943 PAGE 126

   ROBINSON & ALLEN
   PORTION OF TAX MAP 28 BLOCK C LOT 9
   BOOK 20875 PAGE 305

   NEWHEIGHT VENTURES II, LLC
   BOOK 34464 PAGE 281
2. APPLICANT: NEWHEIGHT GROUP
   118 CONGRESS STREET #401
   PORTLAND, ME 04101
3. CIVIL ENGINEER: TERRADYN CONSULTANTS, LLC
   565 CONGRESS STREET, SUITE 310
   PORTLAND, ME 04101
4. ARCHITECT: ARCHETYPE ARCHITECTS
   48 UNION WARF
   PORTLAND, ME 04101
5. SURVEYOR: OWEN HASKELL, INC.
   390 US ROUTE ONE, SUITE 310
   FALMOUTH, ME 04105
6. ZONING DISTRICT: INDIA STREET FORM BASED CODE DISTRICT (IS-FBC)
   SUBDISTRICTS: URBAN NEIGHBORHOOD (UN)
   URBAN TRANSITIONAL (UT)
7. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. BENCHMARK = HYDRANT BONNET BOLT ON NORTHEASTERN SIDE OF HAMPSHIRE STREET, ELEVATION 49.30, NGVD 1929 DATUM.
8. BEARINGS AND COORDINATES ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83. ELEVATIONS ARE BASED ON CITY DATUM. HORIZONTAL AND VERTICAL CONTROL DATA PROVIDED BY THE CITY OF PORTLAND AND TAKEN FROM PLAN REFERENCE 3.
9. HAMPSHIRE STREET AND FEDERAL STREET LINES ARE BASED ON MARKERS FOUND ON PLAN REFERENCE 3 AND CITY BLUE SHEETS. FRANKLIN STREET LINE WAS BASED ON COURSES AND DISTANCES IN THE LOCUS DEEDS.
10. FEMA MAP COMMUNITY PANEL NUMBER 230051 0014 B. THE SITE IS LOCATED IN A C ZONE.
11. THE FACILITY IS SERVICED BY PUBLIC WATER, SEWER, AND UNDERGROUND POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SYSTEM. SEE SITE ELECTRICAL PLANS FOR DETAILS.
12. THE ENTIRE SITE SHALL BE DEVELOPED AN/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.

WAIVERS:

1. ALLOW PARKING AISLES LESS THAN 24' IN WIDTH (TECHNICAL MANUAL SECTION 1.14)
2. ALLOW DRIVEWAY WIDTH LESS THAN 20' (TECHNICAL MANUAL SECTION 1.7.2.3)
3. ALLOW PARKING SPACES SMALLER THAN 9'W X 18'L (TECHNICAL MANUAL SECTION 1.14)

CONDITIONS OF APPROVAL:

1. TBD

PLAN REFERENCES:

1. "EXISTING CONDITIONS SURVEY AT 290 CONGRESS STREET, PORTLAND, MAINE MADE FOR CASCO BAY ENGINEERING" MAY 6, 2014 BY OWEN HASKELL, INC.
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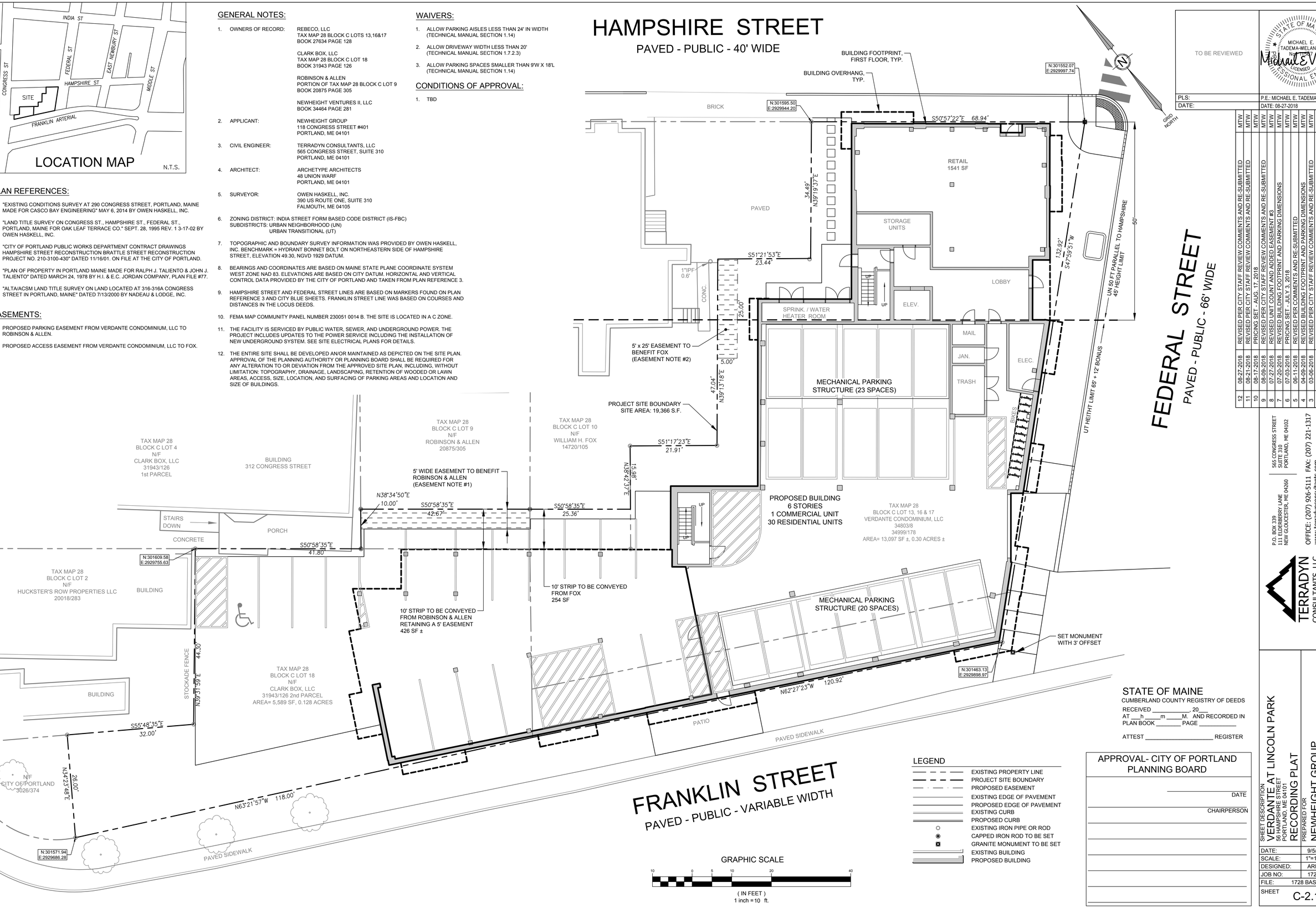
EASEMENTS:

1. PROPOSED PARKING EASEMENT FROM VERDANTE CONDOMINIUM, LLC TO ROBINSON & ALLEN.
2. PROPOSED ACCESS EASEMENT FROM VERDANTE CONDOMINIUM, LLC TO FOX.



LEGEND

- EXISTING PROPERTY LINE
- PROJECT SITE BOUNDARY
- PROPOSED EASEMENT
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING CURB
- PROPOSED CURB
- EXISTING IRON PIPE OR ROD
- CAPPED IRON ROD TO BE SET
- GRANITE MONUMENT TO BE SET
- EXISTING BUILDING
- PROPOSED BUILDING

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

STATE OF MAINE
CUMBERLAND COUNTY REGISTRY OF DEEDS
RECEIVED _____, 20___
AT ___h ____m ____M. AND RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST _____ REGISTER

APPROVAL- CITY OF PORTLAND PLANNING BOARD

_____ DATE
_____ CHAIRPERSON

TO BE REVIEWED

STATE OF MAINE · MICHAEL E. TADEMA-WIELANDT · 10121 · REGISTERED PROFESSIONAL ENGINEER

PLS: P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: DATE: 08-27-2018

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SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
RECORDING PLAT

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-2.1

HAMPSHIRE STREET
PAVED - PUBLIC - 40' WIDE

FEDERAL STREET
PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET
PAVED - PUBLIC - VARIABLE WIDTH

REMOVE AND REPAIR PAVEMENT, SEE DETAIL

APPROXIMATE LOCATION OF EXISTING 1" WATER SERVICE. RETIRE EXISTING 1" SERVICE

REMOVE EXISTING SEWER SERVICE. CAP AND ABANDON PORTION OF SEWER SERVICE REMAINING IN HAMPSHIRE STREET

ALTER AND ADJUST CATCH BASIN

RIM=47.46
(A) 15" INV. IN=38.36
(B) 12" INV. IN=38.36
(C) 12" INV. IN=41.76
(D) 12" INV. IN=38.36
(E) 12" INV. IN=41.76
(F) 15" INV. OUT=38.26

RIM=47.14
INV. IN=43.34
INV. OUT=43.14

MODIFY EXISTING STORM DRAIN TO INSTALL NEW DMH

REMOVE UTILITY POLE

ALTER AND ADJUST CATCH BASIN

RIM=47.13
INV. IN=42.83
INV. OUT=42.73

REMOVE BRICK SIDEWALK AND CURB, TRENCH FOR UNDERGROUND UTILITIES, TYP.

RELOCATE EXISTING OVERHEAD UTILITIES UNDERGROUND

REMOVE UTILITY POLE

REMOVE METAL FENCE POSTS, TYP. OF 3

REMOVE ALL ON-SITE PAVEMENT

SAWCUT ALONG PROPERTY LINE AND REMOVE PAVEMENT FROM LOT 13

REMOVE OVERHEAD UTILITIES AND METER

REMOVE AND REPLACE STOCKADE FENCE

REMOVE UTILITY POLE, TYP. OF 3

MOVE PLANTERS, COORDINATE WITH ABUTTER

REMOVE AND REPLACE STOCKADE FENCE

REMOVE CHAIN LINK FENCE, 42 LF

RELOCATE STEPS

REMOVE CHAIN LINK FENCE, 44 LF

REMOVE GUARDRAIL

REMOVE CHAIN LINK FENCE, 297 LF

REMOVE TREES, TYP. OF 10

REMOVE GUARDRAIL

ABANDON EXISTING UGE SERVICE IN PLACE

PERPENDICULAR PARKING ALONG FEDERAL STREET WILL CHANGE TO PARALLEL PARKING WITH 1 HR TIME LIMIT

TAX MAP 28
BLOCK C LOT 5
N/F
BROADREACH INVESTMENTS LLC
25181/94

TAX MAP 28
BLOCK C LOT 6
N/F
BODHI SAFTA LLC
31853/125

TAX MAP 28
BLOCK C LOT 4
N/F
CLARK BOX, LLC
31943/126
1st PARCEL

TAX MAP 28
BLOCK C LOT 9
N/F
ROBINSON & ALLEN
20875/305

TAX MAP 28
BLOCK C LOT 10
N/F
WILLIAM H. FOX
14720/105

TAX MAP 28
BLOCK C LOT 2
N/F
HUCKSTER'S ROW PROPERTIES LLC
20018/283

TAX MAP 28
BLOCK C LOT 13, 16 & 17
VERDANTE CONDOMINIUM

N/F
CITY OF PORTLAND
3026/374

BUILDING
312 CONGRESS STREET

BUILDING

BLOCK BUILDING

RAZE BUILDING

RAZE BUILDING
GARAGE
FFE= 53.76

DECK

FFE=53.91

FFE= 53.86

6.00' HELD

6.00' HELD

OVER 0.9'

OVER 0.9'

FREE 0.3'

SEE NOTE 3

1"IPF 0.6"

1"IPF

METAL FENCE POST (TYP.)

STOCKADE FENCE w/GATE

CHAIN LINK FENCE

AREA= 426 SF ±

STOCKADE FENCE

AREA= 254 SF ±

AREA= 13.0

PLANTER

PLANTERS

PILE

STAIRS DOWN

CONCRETE

PORCH

STERS

9 SPACES

3 SPACES

2 SPACES

PAVED

PAVED SIDEWALK

CHAIN LINK FENCE

GUARDRAIL

PATH

BRICK

CONC.

POR.

ELEC. BOX

UTIL

"M" MON

8" DI

8" PVC

6" CAST

12" (G)

12" (E)

12" SD (B)

12" (C)

15" (A)

(F) 15"

OHW

UGE

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 10121
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 08-21-2018

NO.	DATE	REVISIONS	APP'D BY
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW
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TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
P.O. BOX 339
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NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
EXISTING CONDITIONS & DEMOLITION PLAN

PREPARED FOR
NEWHEIGHT GROUP
119 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-2.2

HAMPSHIRE STREET

PAVED - PUBLIC - 40' WIDE

FEDERAL STREET

PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET

PAVED - PUBLIC - VARIABLE WIDTH

GRID NORTH

1 HR ON STREET PARALLEL PARKING SPACES

VERTICAL GRANITE CURB

26'

ONE 15 MINUTE ON STREET PARALLEL PARKING SPACE

RECONSTRUCT BRICK SIDEWALK AND RE-SET GRANITE CURB; MATCH EXISTING CURB LINE. RE-USE THE BEST PIECES OF GRANITE CURB FROM HAMPSHIRE AND FEDERAL STREETS.

CROSSWALK STRIPING, TYP.

RELOCATE STOP SIGN & 15 MIN. PARKING SIGN

7' TIPDOWN

7' WIDE BRICK SIDEWALK

BRICK

1 HOUR PARKING SIGN

8'R

FLUSH GRANITE CURB

24" WIDE CAST IRON DETECTABLE WARNING STRIP

"NO OUTLET" STREET SIGN

7' TIPDOWN

STREET LIGHT

RECONSTRUCT BRICK SIDEWALK & SET NEW VERT. GRANITE CURB.

1 HR ON STREET PARALLEL PARKING ALONG FEDERAL ST NORTH & SOUTH

TREE WELL

UN 50 FT PARALLEL TO HAMPSHIRE 45' HEIGHT LIMIT

50'

BIKE HITCH

11.9'

UT HEITHT LIMIT 65' + 12' BONUS

BUILDING MOUNTED LIGHT, TYP.

1 HOUR PARKING SIGN

7' TIPDOWN

PERPENDICULAR PARKING ALONG FEDERAL STREET WILL CHANGE TO PARALLEL PARKING WITH 1 HR TIME LIMIT

43'

OVERHEAD DOOR

1' WIDE BITUMINOUS STRIP WITH 1" LIP

20.0'

6.9'

18.4'

RAMP LANDING AREA

6.5'

5.0'

TWO 5' LONG RAMPS WITH THREE LANDING AREAS

RAMP LANDING AREA

31'

9.8'

BUILDING OVERHANG OR DECK ON UPPER FLOORS, TYP.

15'

PAVED SIDEWALK

8.0'

2'X2' PAVERS

PATIO

28'

PAVED SIDEWALK

24" SQUARE CONCRETE PAVERS, SEE DETAIL

PAVED

10' WIDE GATE

4' WIDE GATE

RETAIL 1541 SF

STORAGE UNITS

LOBBY

UP

ELEV.

SPRINK. / WATER HEATER ROOM

MAIL

JAN.

TRASH

ELEC.

12 HANGING BIKE RACKS, 21" O.C.

DROP-OFF/PICK-UP PARKING SIGN

MECHANICAL PARKING 3 LEVELS - 23 SPACES

MECHANICAL PARKING SPACE, TYP.

MECHANICAL PARKING PIT, TYP.

60 PARKING SPACES

MECHANICAL PARKING 3 LEVELS - 20 SPACES

BRICK

BUILDING

1"IPF 0.6'

CONC.

10' SETBACK

10' SETBACK

10' SETBACK

10' SETBACK

TAX MAP 28
BLOCK C LOT 5
N/F
BROADREACH INVESTMENTS LLC
25181/94

TAX MAP 28
BLOCK C LOT 6
N/F
BODHI SAFTA LLC
31853/125

TAX MAP 28
BLOCK C LOT 9
N/F
ROBINSON & ALLEN
20875/305

TAX MAP 28
BLOCK C LOT 10
N/F
WILLIAM H. FOX
14720/105

TAX MAP 28
BLOCK C LOT 4
N/F
CLARK BOX, LLC
31943/126
1st PARCEL

BUILDING
312 CONGRESS STREET

PROPOSED 6' HIGH CEDAR STOCKADE FENCE

RETAINING WALL

BARRIER FREE PARKING SIGN

STAIRS DOWN

RELOCATE STEPS

CONCRETE

PORCH

SNOW STORAGE

MOTOR-CYCLE PARKING

TAX MAP 28
BLOCK C LOT 13, 16 & 17
VERDANTE CONDOMINIUM, LLC
34803/8
34999/178
AREA= 13,097 SF ±, 0.30 ACRES ±

TAX MAP 28
BLOCK C LOT 2
N/F
HUCKSTER'S ROW PROPERTIES LLC
20018/283

BUILDING

1 2 3 4 5 6 7 8 9 COMP. 10 COMP. 11 COMP.

8.5' 11.7' 18.0' 9.0' 9.0' 9.0'

12.6' 9.3' 9.3'

OVERHEAD DOOR

13.2'

11.7'

5.0'

9.5'

10.3'

18.4'

16 17

35' SURFACE PARKING SETBACK LINE

8.0' 8.0' 8.5' 8.5'

14.8'

10.0' 9.4' 9.4' 9.4'

12 13 14 15

18.5'

TAX MAP 28
BLOCK C LOT 18
N/F
CLARK BOX, LLC
31943/126 2nd PARCEL
AREA= 5,589 SF, 0.128 ACRES

BUILDING

STOCKADE FENCE

35'

11'

SNOW STORAGE

BUILDING COLUMN, TYP.

15' BONUS FLOOR BUILDING STEPBACK

PROPOSED FENCE LOCATION, SEE LANDSCAPE PLAN

N/F
CITY OF PORTLAND
3026/374

PAVED SIDEWALK

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12141
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

DATE: 08-27-2018

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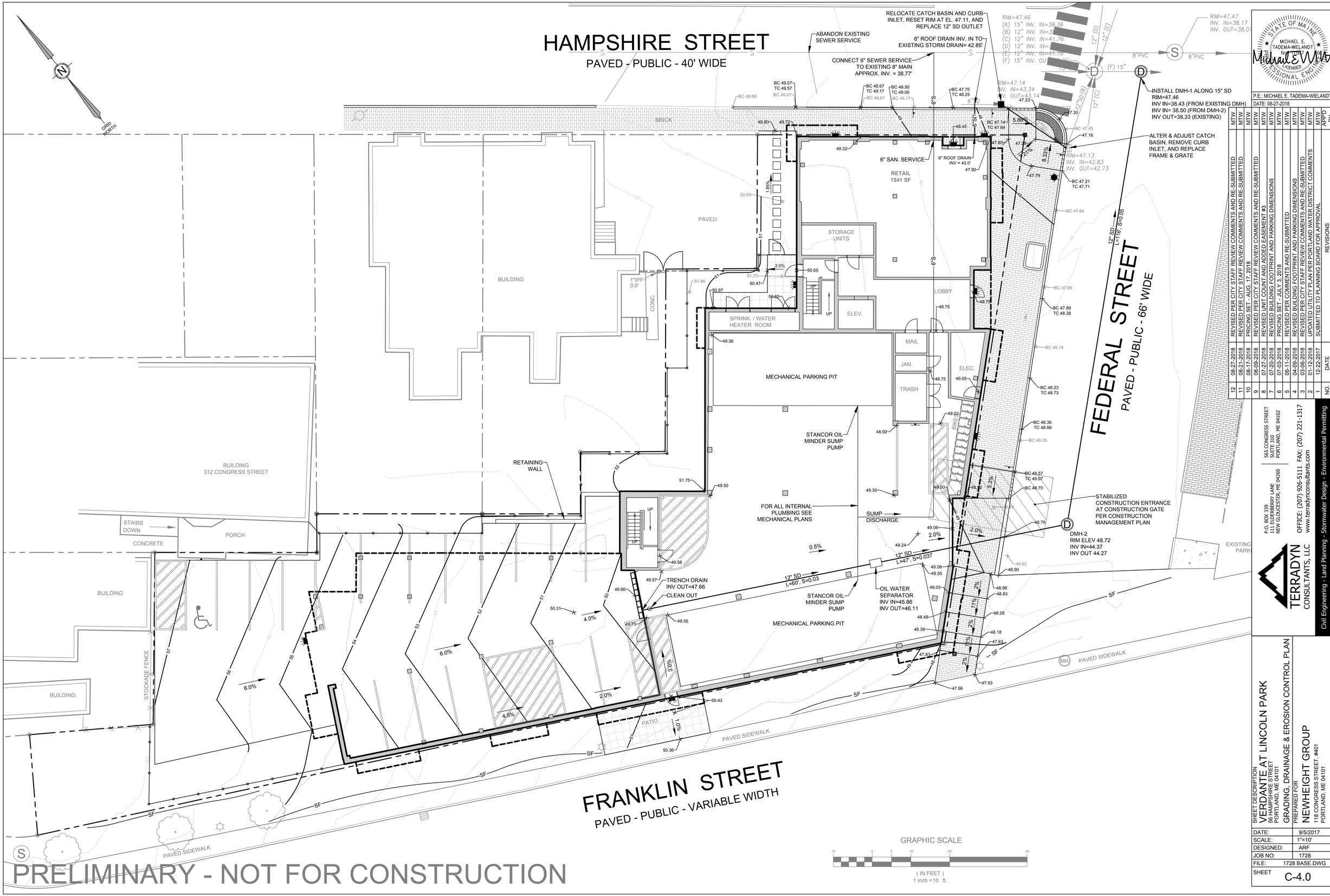
TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
565 CONGRESS STREET SUITE 310 PORTLAND, ME 04102
P.O. BOX 339 111 ELDERBERRY LANE NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
SITE PLAN

PREPARED FOR
NEWHEIGHT GROUP
119 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-3.0



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STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 12101
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 08-27-2018

565 CONGRESS STREET
SUITE 310
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TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101

GRADING, DRAINAGE & EROSION CONTROL PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-4.0

EROSION AND SEDIMENT CONTROL PLAN

Pre-Construction Phase

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 mrsa § 480-b. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

BMP Construction Phase

A. Sediment barriers. Prior to the beginning of any construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the proposed disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

B. Construction entrance: Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

C. Riprap: Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum delay. Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate. Maintain temporary riprap, such as temporary check dams until the disturbed area is permanently stabilized.

D. Temporary stabilization. Stabilize with temporary seeding, mulch, or other non-erodable cover any exposed soils that will remain unworked for more than 14 days except, stabilize areas within 100 feet of a wetland or waterbody within 7 days or prior to a predicted storm event, whichever comes first. If hay or straw mulch is used, the application rate must be 2 bales (70-90 pounds) per 1000 sf or 1.5 to 2 tons (90-100 bales) per acre to cover 75 to 90% of the ground surface. Hay mulch must be kept moist or anchored to prevent wind blowing. An erosion control blanket or mat shall be used at the base of grassed waterways, steep slopes (15% or greater) and on any disturbed soil within 100 feet of lakes, streams and wetlands. Grading shall be planned so as to minimize the length of time between initial soil exposure and final grading. On large projects this should be accomplished by phasing the operation and completing the first phase up to final grading and seeding before starting the second phase, and so on.

E. Vegetated waterway. Upon final grading, the disturbed areas shall be immediately seeded to permanent vegetation and mulched and will not be used as outlets until a dense, vigorous vegetative cover has been obtained. Once soil is exposed for waterway construction, it should be immediately shaped, graded and stabilized. Vegetated waterways need to be stabilized early during the growing season (prior to september 15). If final seeding of waterways is delayed past september 15, emergency provisions such as sod or riprap may be required to stabilize the channel. Waterways should be fully stabilized prior to directing runoff to them.

Permanent stabilization defined

A. Seeded areas. For seeded areas, permanent stabilization means an 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.

B. Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

C. Permanent mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

D. Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

E. Agricultural use. For construction projects on land used for agricultural purposes (e.G., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

F. Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

G. Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well-graded riprap, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow. There must be no evidence of slumping of the lining, undercutting of the banks, or down-cutting of the channel.

General Construction Phase

The following erosion control measures shall be followed by the contractor throughout construction of this project:

A. All topsoil shall be collected, stockpiled, seeded with rye at 3 pounds/1,000 sf and mulched, and reused as required. Silt fencing shall be placed down gradient from the stockpiled loam. Stockpile to be located by designation of the owner and inspecting engineer.

B. The inspecting engineer at his/her discretion, may require additional erosion control measures and/or supplemental vegetative provisions to maintain stability of earthworks and finish graded areas. The contractor shall be responsible for providing and installing any supplemental measures as directed by the inspecting engineer. Failure to comply with the engineer's directions will result in discontinuation of construction activities.

C. Erosion control mesh shall be applied in accordance with the plans over all finish seeded areas as specified on the design plans.

D. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are adequately stabilized.

E. All erosion, and sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved erosion and sediment control plan.

F. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.

G. Areas shall be scarified to a minimum depth of 3 inches prior to placement of topsoil.

H. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or codes.

I. All fills shall be placed and compacted in layers not to exceed 8 inches in thickness.

J. Except for approved landfills or non-structural fills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory lifts.

K. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.

L. Fill shall not be placed on a frozen foundation.

M. Seeps or springs encountered during construction shall be handled appropriately.

N. All graded areas shall be permanently stabilized immediately following finished grading.

O. Remove any temporary control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

Permanent vegetation

Permanent vegetative cover should be established on disturbed areas where permanent, long lived vegetative cover is needed to stabilize the soil, to reduce damages from sediment and runoff, and to enhance the environment.

Seedbed preparation

A. Grade as feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.

B. Apply limestone and fertilizer according to soil tests such as those offered by the university of maine soil testing laboratory. Soil sample mailers are available from the local cooperative extension service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 800 pounds per acre or 18.4 pounds per 1,000 square feet using 10-20-20 (n-p2o5-k2o) or equivalent. Apply ground limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of 3 tons per acre (138 lb. Per 1,000 sq. Ft).

C. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow or other suitable equipment. The final harrowing operation should be on the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared. All but clay or silty soils and coarse sands should be rolled to firm the seedbed wherever feasible.D. Remove from the surface all stones 2 inches or larger in any dimension. Remove all other debris, such as wire, cable, tree roots, concrete, clods, lumps or other unsuitable material.

E. Inspect seedbed just before seeding. If traffic has left the soil compacted; the area must be tilled and firmed as above.

F. Permanent seeding should be made 45 days prior to the first killing frost or as a dormant seeding with mulch after the first killing frost and before snowfall. When crown vetch is seeded in later summer, at least 35% of the seed should be hard seed (unscarified). If seeding cannot be done within the seeding dates, mulch according to the temporary mulching bmp and overwinter stabilization and construction to protect the site and delay seeding until the next recommended seeding period.

G. Following seed bed prepartation, swale areas, fill areas and back slopes shall be seeded at a rate of 3 lbs./1,000 s.F. With a mixture of 35% creeping red h. Fescue, 6% red top, 24% kentucky bluegrass, 10% perennial ryegrass, 20% annual ryegrass and 5% white dutch clover.

I. Areas which have been temporarily or permanently seeded shall be mulched immediately following seeding.

J. Areas which cannot be seeded within the growing season shall be mulched for over-winter protection and the area should be seeded at the beginning of the growing season.

Winter construction phase

If an area is not stabilized with temporary or permanent measures by november 15, then the site must be protected with additional stabilization measures.

A. Permanent stabilization consists of at least 90% vegetation, pavement/gravel base or riprap.

B. Do not expose slopes or leave slopes exposed over the winter or for any other extended time of work suspension unless fully protected with mulch.

C. Apply hay mulch at twice the standard rate (150 lbs. Per 1,000 sf). The mulch must be thick enough such that the ground surface will not be visible and must be anchored.

D. Use mulch and mulch netting or an erosion control mulch blanket or all slopes greater than 8 % or other areas exposed to direct wind.

E. Install an erosion control blanket in all drainageways (bottom and sides) with a slope greater than 3 %.

F. See the vegetation measures for more information on seeding dates and types.

G. Winter excavation and earthwork shall be completed so that no more than 1 acre of the site is without stabilization at any one time.

H. An area within 100 feet of a protected natural resource must be protected with a double row of sediment barrier.

I. Temporary mulch must be applied within 7 days of soil exposure or prior to any storm event, but after every workday in areas within 100 feet from a protected natural resource.

J. Areas that have been brought to final grade must be permanently mulched that same day.

K. If snowfall is greater than 1 inch (fresh or cumulative), the snow shall be removed from the areas due to be seeded and mulched.

L. Loam shall be free of frozen clumps before it is applied.

M. All vegetated ditch lines that have not been stabilized by november 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the department.

Maintenance and inspection phase

A. Minimum erosion control measures will need to be implemented and the applicant will be responsible to maintain all components of the erosion control plan until the site is fully stabilized. However, based on site and weather conditions during construction, additional erosion control measures may need to be implemented. All areas of instability and erosion must be repaired immediately during construction and need to be maintained until the site is fully stabilized or vegetation is established. A construction log must be maintained for the erosion and sedimentation control inspections and maintenance

B. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: bmps that need to be maintained; location(s) of bmps that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional bmps are needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

Dewatering

A dewatering plan is needed to address excavation de-watering following heavy rainfall events or where the excavation may intercept the groundwater table during construction. The collected water needs treatment and a discharge point that will not cause downgradient erosion and offsite sedimentation or within a resource. Please follow the details of such a plan.

Housekeeping

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

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

2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

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

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

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

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

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

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

   (a) Discharges from firefighting activity;

   (b) Fire hydrant flushings;

   (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);

   (d) Dust control runoff in accordance with permit conditions and Section 3 above;

   (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;

   (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;

   (g) Uncontaminated air conditioning or compressor condensate;

   (h) Uncontaminated groundwater or spring water;

   (i) Foundation or footer drain-water where flows are not contaminated;

   (j) Uncontaminated excavation dewatering (see requirements in Section 5 above);

   (k) Potable water sources including waterline flushings; and

   (l) Landscape irrigation.

7. Unauthorized non-stormwater discharges . The following non-stormwater discharges are prohibited:

   (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;

   (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;

   (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and

   (d) Toxic or hazardous substances from a spill or other release.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 03-06-2018

NO.	DATE	REVISIONS	APP'D BY
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

TERRADYN CONSULTANTS, LLC
P.O. BOX 339
111 ELDERBERRY LANE
NEW GLOUCESTER, ME 04260
565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

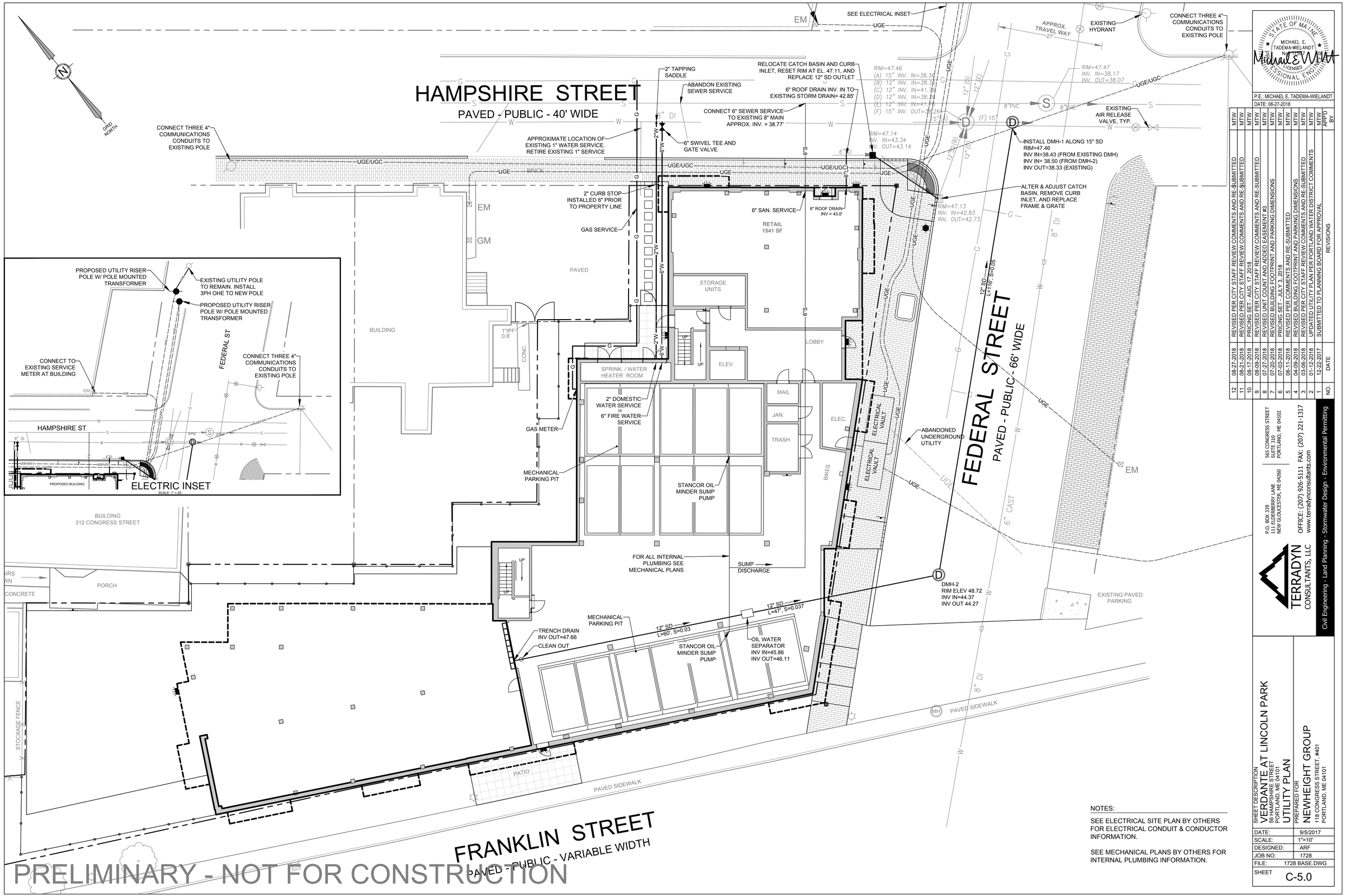
SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
EROSION & SEDIMENT CONTROL NOTES

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	N.T.S.
DESIGNED:	ARF
JOB NO:	1728

FILE: 1704-DETAILS.DWG

SHEET C-4.1



PRELIMINARY - NOT FOR CONSTRUCTION

NOTES:

SEE ELECTRICAL SITE PLAN BY OTHERS FOR ELECTRICAL CONDUIT & CONDUCTOR INFORMATION.

SEE MECHANICAL PLANS BY OTHERS FOR INTERNAL PLUMBING INFORMATION.

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 9041
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 08-27-2018

NO.	DATE	REVISIONS	APP'D BY
12	08-27-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-$UBMITTED	MTW
11	08-21-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-$UBMITTED	MTW
10	08-17-2018	PRICING SET - AUG 17, 2018	MTW
9	08-09-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
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www.terradynconsultants.com
565 CONGRESS STREET
SUITE 310
PORTLAND, ME 04102

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
UTILITY PLAN

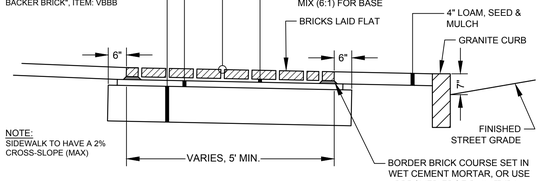
PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-5.0

BRICKS TO BE USED:

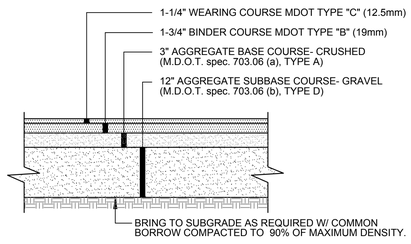
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK, MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. "VERMONT BACKER BRICK", ITEM: VBBB



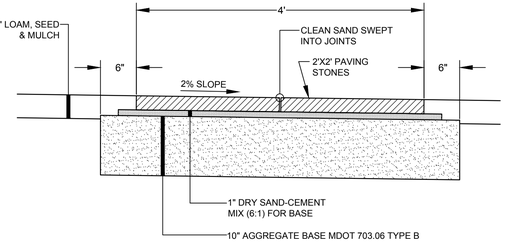
NOTE:
SIDEWALK TO HAVE A 2% CROSS-SLOPE (MAX)

BRICK SIDEWALK WITH BITUMINOUS BASE
NOT TO SCALE



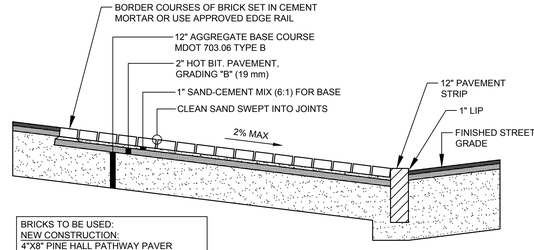
NOTES:
1. MDOT TYPE D AGGREGATE GRADATION SHALL BE MODIFIED FOR A MAXIMUM 4" STONE AND LIMIT #200 SIEVE TO 5% PASSING.

TYP. DRIVEWAY PAVEMENT SECTION
NOT TO SCALE



PAVER NOTES:
PAVING STONES: LEXINGTON PARK TILE BY GENESTE CONCRETE.
COLOR: GRANITE BLEND
LAYING PATTERN: STACK BOND

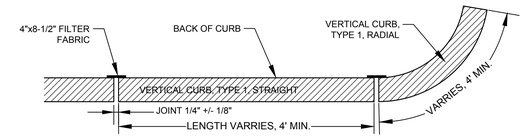
PAVER WALKWAY
NOT TO SCALE



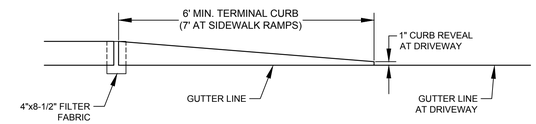
BRICKS TO BE USED:
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK MFG. BY PINE HALL BRICK CO., MADISON, NC, LACHANCE ITEM # 193623

REPAIR/MAINTENANCE TO EXISTING:
VERMONT BACKER BRICK, SUPPLIED BY GAGNE & SONS, ITEM # VBBB

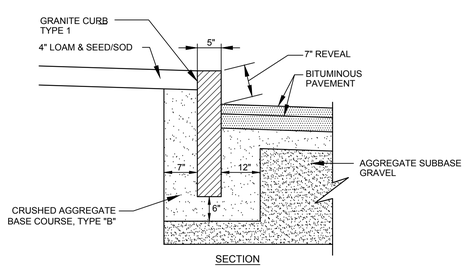
BRICK DRIVEWAY APRON
NOT TO SCALE



PLAN VIEW



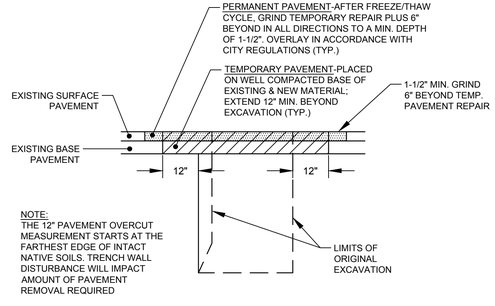
TERMINAL CURB PROFILE



SECTION

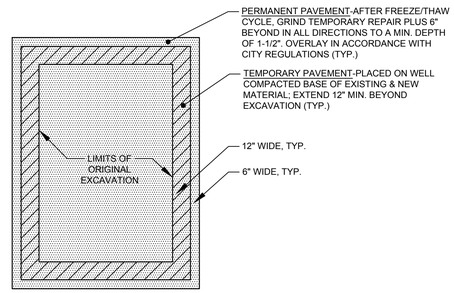
NOTES:
1. MIN. LENGTH OF STRAIGHT CURB STONES: 4', MAX. LENGTH: 8'
2. CIRCULAR CURB REQ. FOR RADIUS LESS THAN 50'
3. BASE GRAVEL SHALL BE COMPACTED TO A FIRM EVEN SURFACE PRIOR TO SETTING OF CURB.

VERTICAL GRANITE CURB
NOT TO SCALE



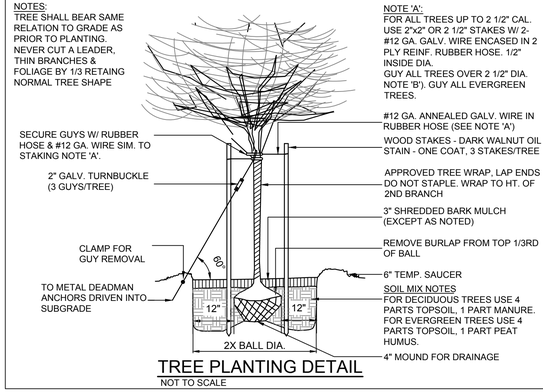
NOTE:
THE 12" PAVEMENT OVERCUT MEASUREMENT STARTS AT THE FARTHEST EDGE OF INTACT NATIVE SOILS. TRENCH WALL DISTURBANCE WILL IMPACT AMOUNT OF PAVEMENT REMOVAL REQUIRED

TYP. EXCAVATION IN CITY RIGHT OF WAY
NOT TO SCALE



PLAN VIEW OF MINOR EXCAVATION PAVEMENT REPAIR
NOT TO SCALE

NOTES:
TREE SHALL BEAR SAME RELATION TO GRADE AS PRIOR TO PLANTING. NEVER CUT A LEADER, THIN BRANCHES & FOLIAGE BY 1/3 RETAING NORMAL TREE SHAPE



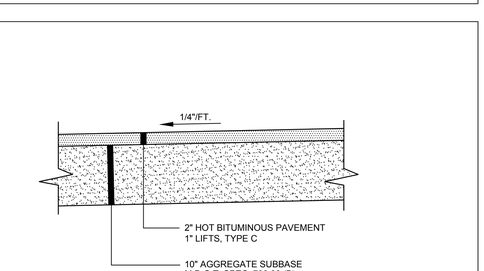
TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
1. DETECTABLE WARNING PLATES TO BE DURALAST® AS MANUFACTURED BY EJ.
2. PLATES SHALL HAVE A NATURAL FINISH
3. PLATE SHALL BE ORIENTED SO THAT THE DOMES ARE PARALLEL AND PERPENDICULAR TO THE PRIMARY DIRECTION OF TRAVEL
4. RADIAL PLATES SHALL BE USED WHERE APPLICABLE.

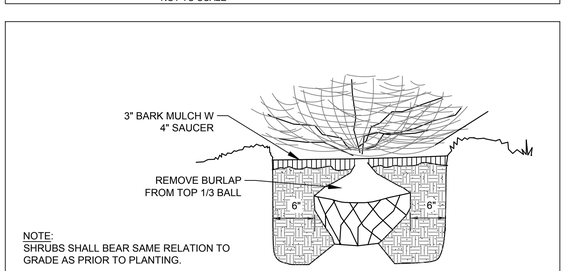
DETECTABLE WARNING PLATE DETAIL
NOT TO SCALE

NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
2. ALL RAMPS SHALL HAVE DETECTABLE WARNINGS THE FULL DEPTH AND WIDTH OF THE RAMP PER SECTION 4.29 OF THE ADA.
3. A TACTILE WARNING STRIP IS REQUIRED WHERE RAMP ABUTS AN AREA USED BY VEHICLES.

HANDICAP RAMP AT ROAD INTERSECTION
NOT TO SCALE



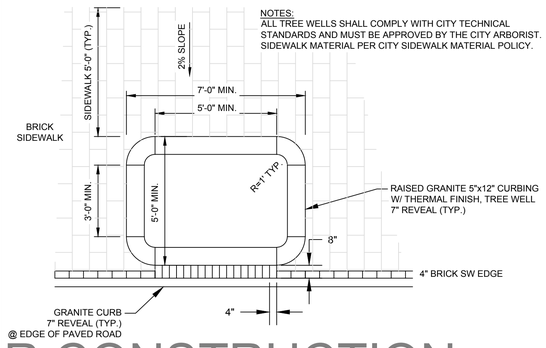
BITUMINOUS SIDEWALK
NOT TO SCALE



NOTE:
SHRUBS SHALL BEAR SAME RELATION TO GRADE AS PRIOR TO PLANTING.

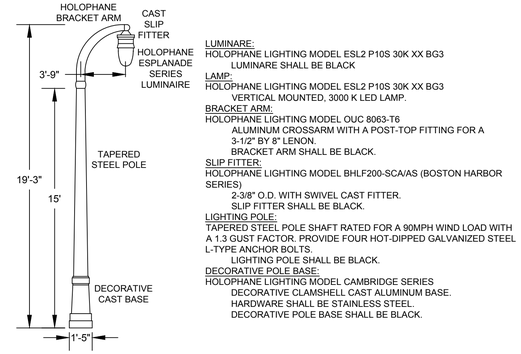
SOIL MIX NOTES:
1. EVERGREEN: 4 PARTS TOPSOIL, 1 PART HUMUS
2. DECIDUOUS: 4 PARTS TOPSOIL, 1 PART MANURE

SHRUB PLANTING DETAIL
NOT TO SCALE



NOTES:
ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

TREE WELL DETAIL
NOT TO SCALE



LUMINARE:
HOLOPHANE LIGHTING MODEL ESL2 P10S 30K XX BG3
LUMINARE SHALL BE BLACK

LAMP:
HOLOPHANE LIGHTING MODEL ESL2 P10S 30K XX BG3
VERTICAL MOUNTED, 3000 K LED LAMP.

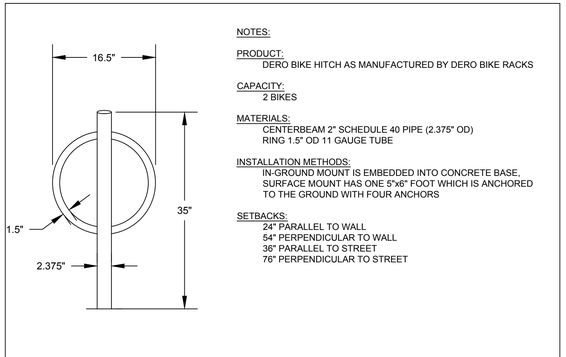
BRACKET ARM:
HOLOPHANE LIGHTING MODEL OUC 8063-T6
ALUMINUM CROSSARM WITH A POST-TOP FITTING FOR A 3-1/2" BY 8" LENON.
BRACKET ARM SHALL BE BLACK.

SLIP FITTER:
HOLOPHANE LIGHTING MODEL BHLF200-SCA/AS (BOSTON HARBOR SERIES)
2-3/8" O.D. WITH SWIVEL CAST FITTER.
SLIP FITTER SHALL BE BLACK.

LIGHTING POLE:
TAPERED STEEL POLE SHAFT RATED FOR A 90MPH WIND LOAD WITH A 1.3 GUST FACTOR. PROVIDE FOUR HOT-DIPPED GALVANIZED STEEL L-TYPE ANCHOR BOLTS.
LIGHTING POLE SHALL BE BLACK.

DECORATIVE POLE BASE:
HOLOPHANE LIGHTING MODEL CAMBRIDGE SERIES
DECORATIVE CLAMSHELL CAST ALUMINUM BASE.
HARDWARE SHALL BE STAINLESS STEEL.
DECORATIVE POLE BASE SHALL BE BLACK.

BAYSIDE DISTRICT MEDIUM SCALE RESIDENTIAL LIGHT DETAIL
NOT TO SCALE



NOTES:

PRODUCT:
DERO BIKE HITCH AS MANUFACTURED BY DERO BIKE RACKS

CAPACITY:
2 BIKES

MATERIALS:
CENTERBEAM 2" SCHEDULE 40 PIPE (2.375" OD)
RING 1.5" OD 11 GAUGE TUBE

INSTALLATION METHODS:
IN-GROUND MOUNT IS EMBEDDED INTO CONCRETE BASE. SURFACE MOUNT HAS ONE 5"x6" FOOT WHICH IS ANCHORED TO THE GROUND WITH FOUR ANCHORS

SETBACKS:
24" PARALLEL TO WALL
54" PERPENDICULAR TO WALL
36" PARALLEL TO STREET
76" PERPENDICULAR TO STREET

BIKE HITCH
NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 08-21-2018

NO.	DATE	REVISIONS	APP'D BY
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SITE & PLANTING DETAILS

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	N.T.S.
DESIGNED:	ARF
JOB NO:	1728
FILE: 1728 DETAILS.DWG	

SHEET C-6.0

NOTES:

1. A FLEXIBLE PIPE TO MANHOLE CONNECTOR SHALL BE EMPLOYED IN THE CONNECTION OF ALL PIPE TO MANHOLE JUNCTIONS.

2. THE CONNECTOR SHALL BE KOR-N-SEAL AS MANUFACTURED BY NPC SYSTEMS, INC., OF MILFORD, NH OR EQUAL.

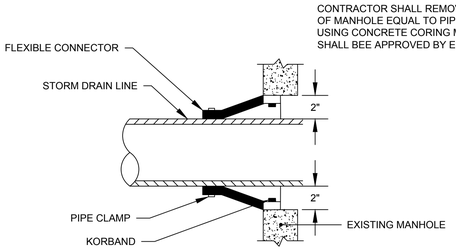
3. THE CONNECTOR SHALL BE THE SOLE ELEMENT RELIED ON TO ASSURE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO MANHOLE, NO ADHESIVES OR LUPRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTORS TO THE MANHOLE. THE RUBBER FOR THE CONNECTOR SHALL COMPLY TO ASTM C923 AND CONSIST OF EPDM AND ELASTOMERS KNOWN TO BE RESISTANT TO OZONE, WEATHER ELEMENTS, CHEMICALS, INCLUDING ACIDS, ALKALIS, ANIMAL AND VEGETABLE FATS, OILS AND PETROLEUM PROCUCTS FROM SPILLS.

4. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 304 STAINLESS, EXCLUDING THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND SHALL BE TORQUED BY A BREAK-AWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET AT 60/70 IN./LBS.

5. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER.

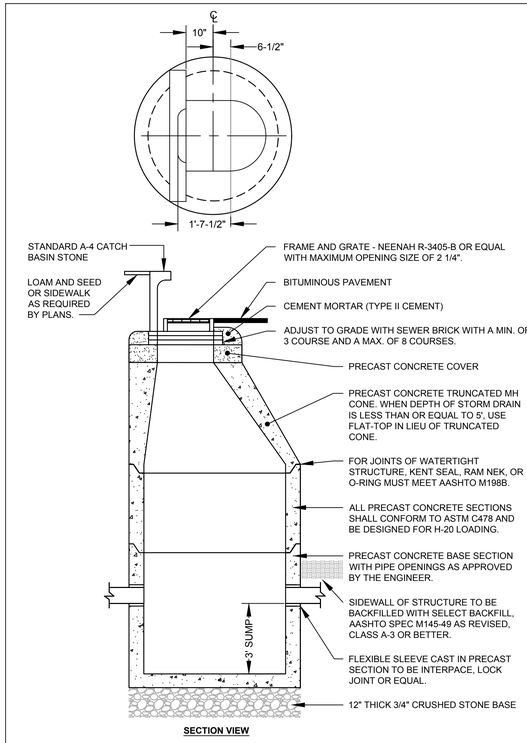
6. THE CONNECTOR SHALL BE OF A SIZE SPECIFICALLY DESIGNED FOR THE PIPE MATERIAL AND SIZE BEING UTILIZED ON THE PROJECT.

7. ALL CONNECTORS WHICH ARE CAPPED AWAITING PIPE INSTALLATION AT A LATER DATE MUST BE RESTRAINED.



CORE AND SEAL CONNECTION TO EXISTING STORM DRAIN MANHOLE

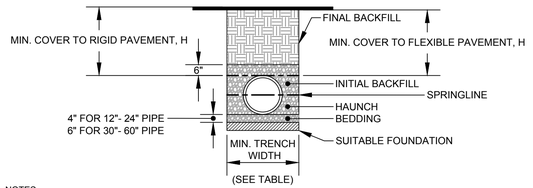
NOT TO SCALE



SECTION VIEW

CATCH BASIN - CURB INLET

NOT TO SCALE



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

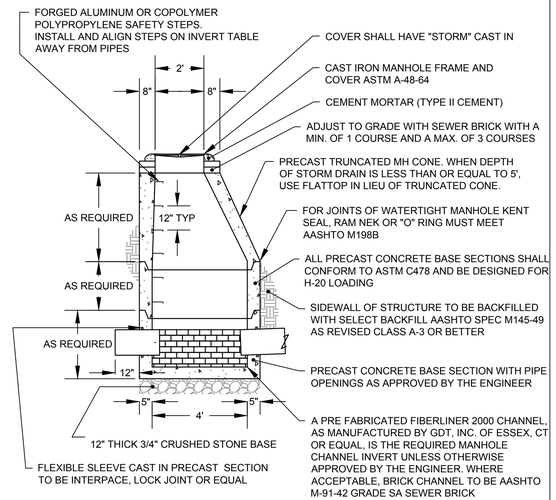
* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

7. INSULATION: RIGID INSULATION SHALL BE PROVIDED FOR PIPES WITH LESS THAN 4' OF COVER IN ACCORDANCE WITH THE FOLLOWING TABLE:

COVER OVER PIPE	INSULATION THICKNESS
12" - 24"	3"
24" - 36"	2"
36" - 48"	1"
48"+	NONE

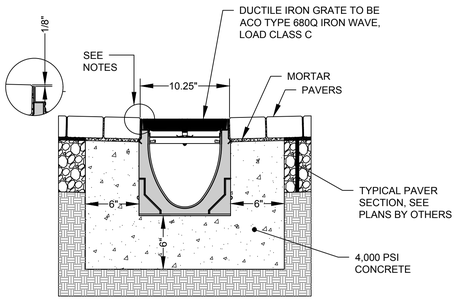
TYPICAL TRENCH DETAIL

NOT TO SCALE



4' DIAMETER PRECAST STORM DRAIN MANHOLE

NOT TO SCALE



GENERAL NOTES:

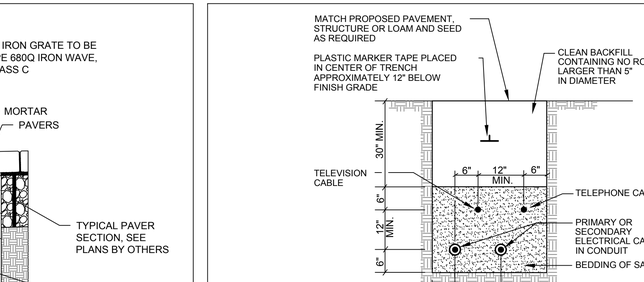
1. THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE K200 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.
2. SYSTEM SHALL BE MINIMUM LOAD CLASS B
3. THE SYSTEM SHALL BE 8" (200mm) NOMINAL INTERNAL WIDTH WITH A 10.2" (260mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.
4. CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 'QUICKLOK' BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
5. CHANNEL SHALL TERMINATE AT THE DOWNSTREAM END IN AN IN-LINE CATCH BASIN, ACO TYPE 902G.

INSTALLATION NOTES:

1. MINIMUM CONCRETE STRENGTH OF 4,000 PSI. VIBRATE CONCRETE TO ELIMINATE AIR POCKETS.
2. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND.
3. THE FINISHED LEVEL OF THE PAVER SURROUND MUST BE 1/8" ABOVE THE TOP OF THE CHANNEL EDGE.
4. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS.
5. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

CHANNEL DRAIN DETAIL

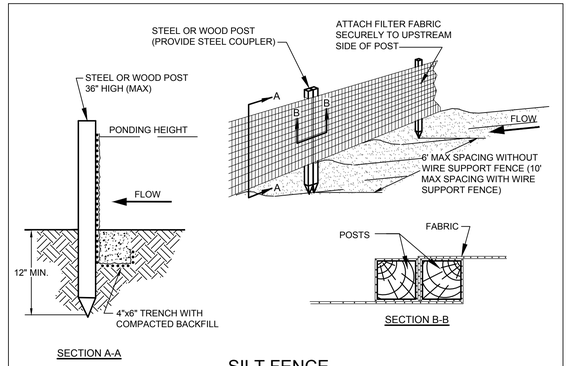
NOT TO SCALE



CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

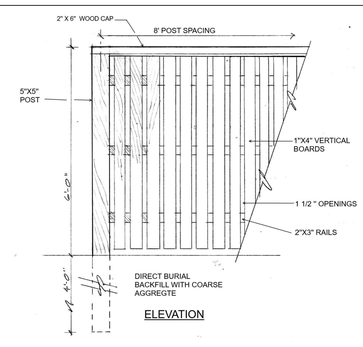
TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE



SILT FENCE

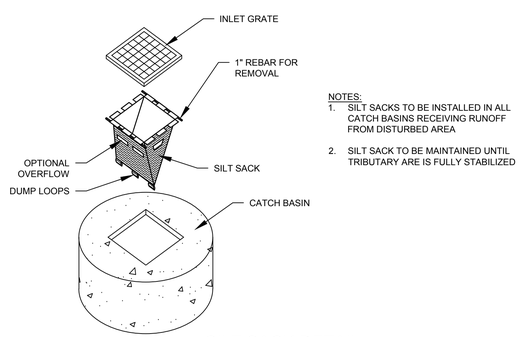
NOT TO SCALE



ELEVATION

WOOD FENCE DETAIL

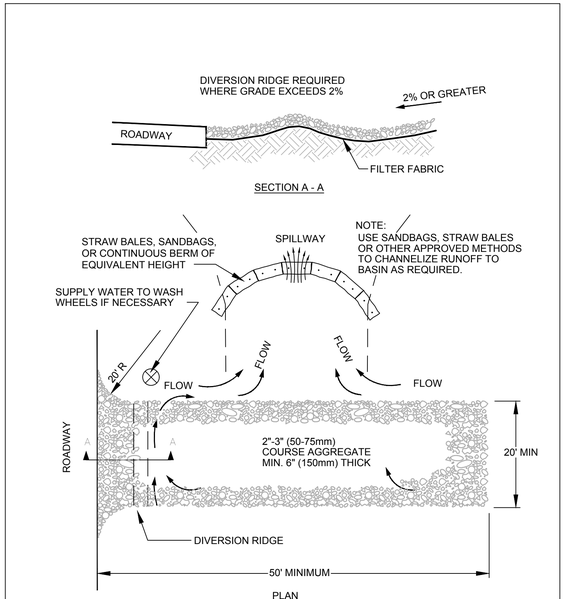
NTS



NOTES:
1. SILT SACKS TO BE INSTALLED IN ALL CATCH BASINS RECEIVING RUNOFF FROM DISTURBED AREA
2. SILT SACK TO BE MAINTAINED UNTIL TRIBUTARY ARE IS FULLY STABILIZED

SILT SACK DETAIL

NOT TO SCALE



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE — MICHAEL E. TADEMA-WIELANDT — LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

DATE: 08-09-2018

NO.	DATE	REVISIONS	APP'D BY
9	08-09-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
8	07-27-2018	REVISED UNIT COUNT AND ADDED EASEMENT #3	MTW
7	07-20-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS	MTW
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5	06-11-2018	REVISED PER COMMENTS AND RE-SUBMITTED	MTW
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3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

555 CONGRESS STREET
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TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
UTILITY & DRAINAGE DETAILS

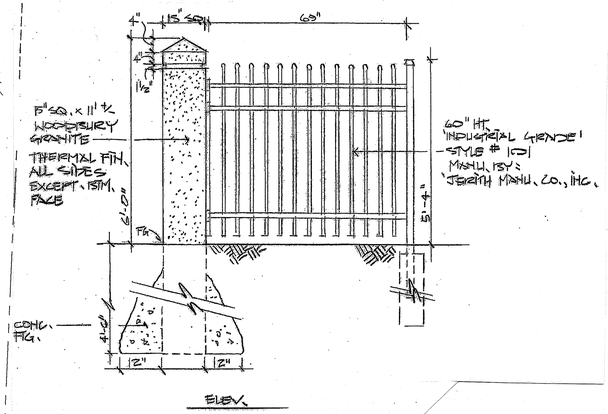
PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	N.T.S.
DESIGNED:	ARF
JOB NO:	1728
FILE: 1728 DETAILS.DWG	

SHEET C-6.1

N

CONGRESS STREET



METAL FENCE DETAIL

1/2" = 1'-0"

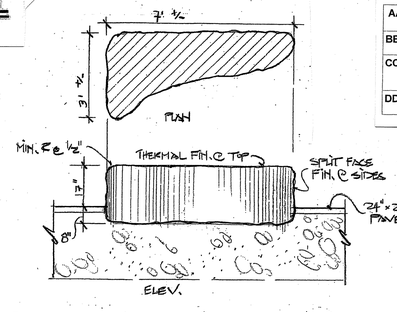
PLANT LIST

TREES & SHRUBS

KEY	COMMON & BOTANICAL NAME	SIZE	ROOT	QTY	NOTES
A	STREETKEEPER HONEYLOCUST G. TRIACANTHOS Var. 'Inermis' 'Streetkeeper'	2 ½ " Cal.	B&B	7	Trim for 8' clear under branches
C	SHASTA VIBURNUM V. PLICATUM Var. TOMENTOSUM 'SHASTA'	3'-4' HT.	B&B	9	
D	CORNELIAN CHERRY CORNUS MAS	4' HT.	B&B	2	
E	NORTHERN BAYBERRY M. PENSYLVANICA	18-24" HT.	PTD	8	
F	FRAGRANT SUMAC RHUS AROMATICA 'Gro-Low'	#2	CONT	37	
G	SHASTA VIBURNUM V.PLICATUM VAR. Tomentosum 'Summer Snowflake'	#5	B&B	6	
H	GREEN CARPET JUNIPER J. SABINA	#3	CONT	10	
I	CLETHRA CLETHRA ALNIFOLIA 'Hummingbird'	#2	CONT.	6	
J	SHADBLOW AMELANCHIER X GRANDIFLORA 'Autumn Brilliance'	6'-7' HT.	B&B	3	2 Trunk

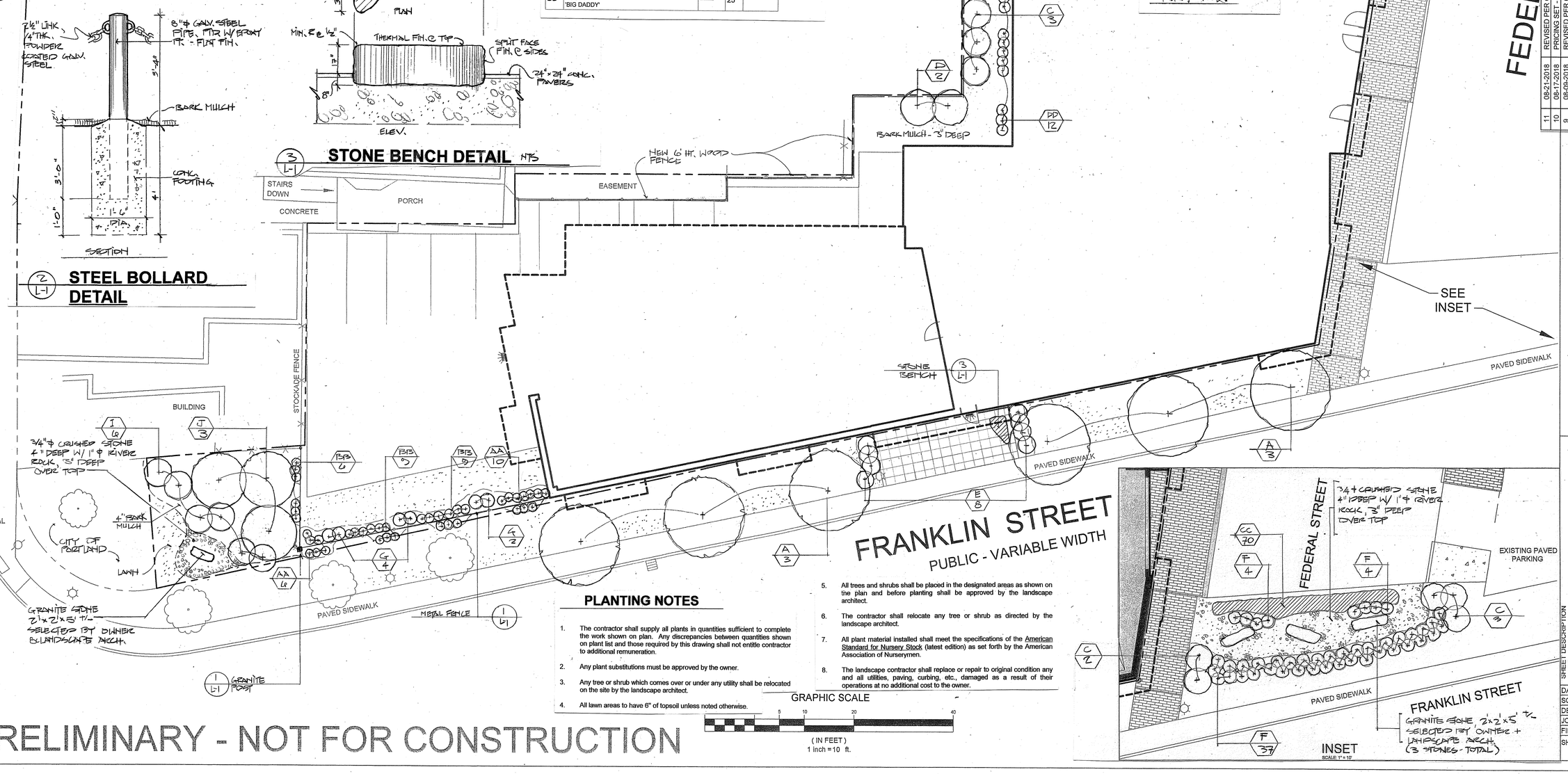
PERENNIALS

AA	SWITCH GRASS PANICUM VIRGATUM 'Cheyenne sky'	——	16	@18" O.C.
BB	SWITCH GRASS PANICUM VIRGATUM ' Shenandoah'	——	24	"
CC	DAYLILY VAR. HEMEROCALLIS	PTD	70	BLOOM IN JULY THRU SEPT. 18" O.C.
DD	HOSTA 'BIG DADDY'	——	25	



STONE BENCH DETAIL NTS

STEEL BOLLARD DETAIL



PLANTING NOTES

1. The contractor shall supply all plants in quantities sufficient to complete the work shown on plan. Any discrepancies between quantities shown on plant list and those required by this drawing shall not entitle contractor to additional remuneration.
2. Any plant substitutions must be approved by the owner.
3. Any tree or shrub which comes over or under any utility shall be relocated on the site by the landscape architect.
4. All lawn areas to have 6" of topsoil unless noted otherwise.
5. All trees and shrubs shall be placed in the designated areas as shown on the plan and before planting shall be approved by the landscape architect.
6. The contractor shall relocate any tree or shrub as directed by the landscape architect.
7. All plant material installed shall meet the specifications of the American Standard for Nursery Stock (latest edition) as set forth by the American Association of Nurserymen.
8. The landscape contractor shall replace or repair to original condition any and all utilities, paving, curbing, etc., damaged as a result of their operations at no additional cost to the owner.

GRAPHIC SCALE

5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

REGISTERED LANDSCAPE ARCHITECT
ANTHONY M. BENCH
No. 7
5-9-18
State of Maine

DATE: 08-08-2018

NO.	DATE	REVISIONS	APP'D BY
11	08-21-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
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556 CONGRESS STREET
SUITE 305
PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
LANDSCAPE PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	L-1

LIGHT FIXTURE TABLE

LABEL	LIGHT FIXTURE	MANUFACTURER	MANUFACTURERS ID	NUMBER OF LIGHTS	MOUNTING HEIGHT	MOUNTING LOCATION
A	LNC-9L LED	HUBBELL	LNC-9L-U-3K-4	1	11'	WALL
B	TEGEL 12 WALL SCONCE	TECH LIGHTING	700WTEG-830-12-N-C-H-DO-UNV	7	10'	WALL
C	ESPLANADE/MEMPHIS LED	HOLOPHANE LIGHTING	ESL2/MPL2 P10S 30K XX BG 3	1	19'-3"	POLE
D	EXISTING RSW LED MEDIUM	CREE LED LIGHTING	RSWM-A-HT-3ME-9L-30K7-UL-GY-N	4	30'	POLE

NOTES:
1. LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE
2. ONLY PROPOSED LIGHTING FIXTURES AND EXISTING FIXTURES ON FRANKLIN STREET ARE MODELED
3. DEPRECIATION FACTOR FOR LED IS 0.90

GRID NORTH

RETAIL
1541 SF

STORAGE UNITS

LOBBY

SPRINK. / WATER HEATER ROOM

ELEV.

MAIL

JAN.

TRASH

ELEC.

BIKES

PAVED

BUILDING

1"IPF
0.6'

CONC.

BUILDING
312 CONGRESS STREET

STAIRS DOWN

CONCRETE

PORCH

BUILDING

STOCKADE FENCE

BUILDING

PATIO

PAVED SIDEWALK

PAVED SIDEWALK

EXISTING P
PARKIN

FEDERAL STREET
PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET
PAVED - PUBLIC - VARIABLE WIDTH

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 08-27-2018

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SUITE 310
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SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
PHOTOMETRICS LIGHTING PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
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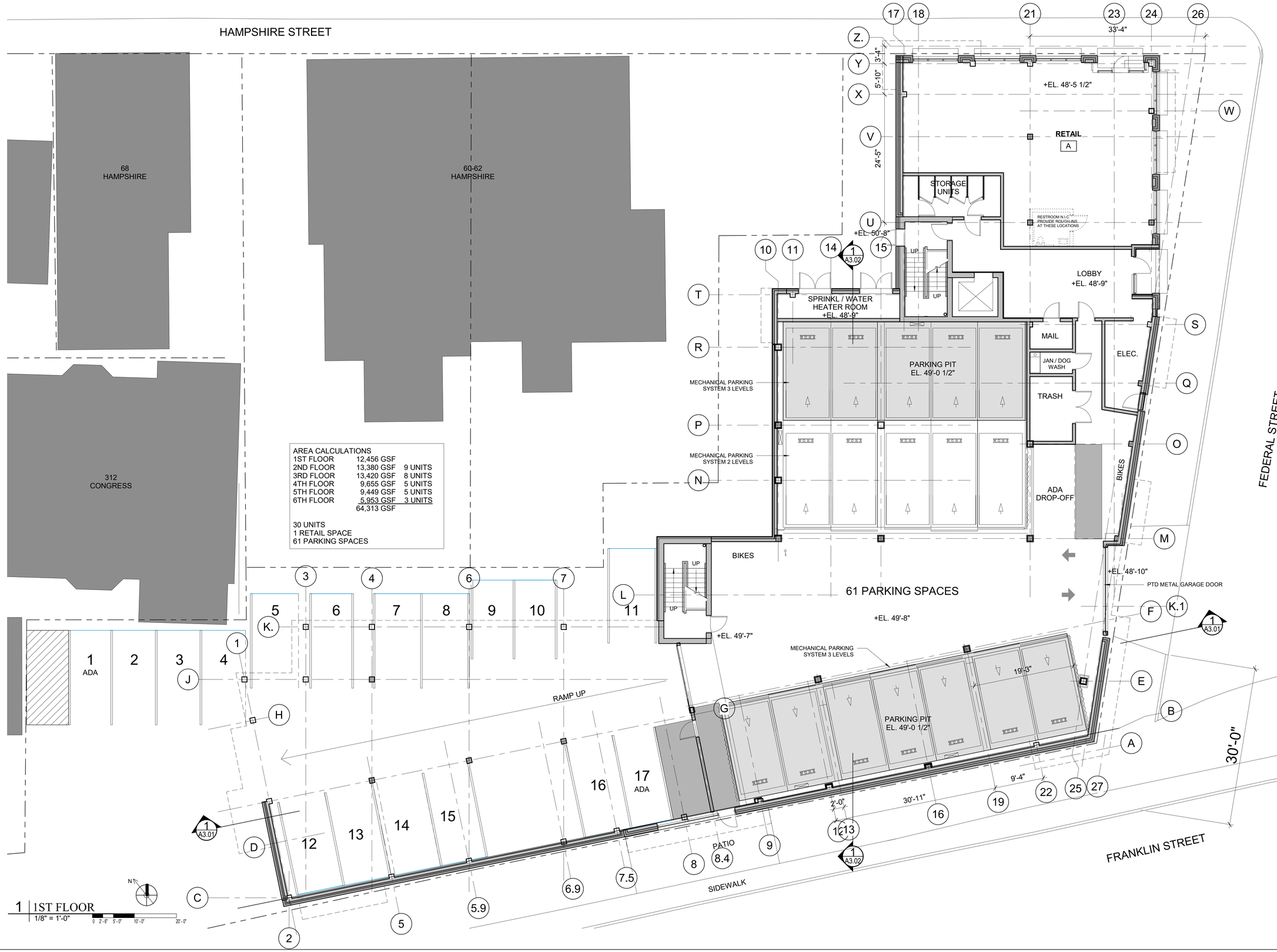
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728-Photometrics.DWG
SHEET	P-1



Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: AUG. 24, 2018

FIRST FLOOR

A1.01

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

SIDEWALK

DECK

UNIT 201

UNIT 202

UNIT 203

UNIT 204

UNIT 205

UNIT 206

UNIT 207

UNIT 208

UNIT 209

11'-10 13/16"

4'-11 5/8"

6'-2"

6' 1/4"

10'-1"

11'-1"

FITNESS RM. 352 GSF

STORAGE UNITS

DEN

MUD ROOM

1 TYPICAL FLOOR
1/8" = 1'-0"
0 2'-0" 4'-0" 8'-0" 16'-0"

Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: JULY 20, 2018

SECOND FLOOR

A1.02

1 | 3RD FLOOR
1/8" = 1'-0"

0 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
Federal Street Portland, Maine

Revisions:

Scale:
1/8" = 1'-0"

Date:
JULY 20, 2018

THIRD FLOOR

A1.03

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

COMMON DECK
588 SF

GREEN ROOF
935 SF

GENERATOR

MECHANICAL SCREEN
CONDENSING UNITS

PRIVATE DECK
309 SF

PRIVATE DECK
262 SF

UNIT 405

UNIT 401

GREEN ROOF 425 SF

MECHANICAL SCREEN
CONDENSING UNITS

PRIVATE DECK
130 SF

GREEN ROOF
366 SF

DECK

UNIT 404

UNIT 403

UNIT 402

DECK

DECK

1 4TH FLOOR
1/8" = 1'-0"

0 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: JULY 20, 2018

FOURTH FLOOR

A1.04

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

ROOF BELOW

UNIT 505

UNIT 501

UNIT 504

UNIT 503

UNIT 502

DECK

DECK

DECK

DW

W/D

1 | 5TH FLOOR
1/8" = 1'-0"

0 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
Federal Street Portland, Maine

Revisions:

Scale:
1/8" = 1'-0"

Date:
JULY 20, 2018

FIFTH FLOOR

A1.05

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

ROOF BELOW

UNIT
PH A
1,427 GSF

PRIVATE
DECK
369 SF

GREEN
ROOF
352 SF

PRIVACY
SCREEN

UNIT
PH B
1,390 GSF

PRIVATE
DECK
353 SF

PRIVATE
DECK
111 SF

PRIVACY
SCREEN

GREEN
ROOF
1327 SF

UNIT
PH C
1,959 GSF

PRIVATE
DECK
508 SF

DW

DN

1 A3.02

6 A3.11

1 A3.11

1 A3.01

1 6TH FLOOR
1/8" = 1'-0"
0 2'-0" 4'-0" 8'-0"

Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
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Project:
VERDANTE
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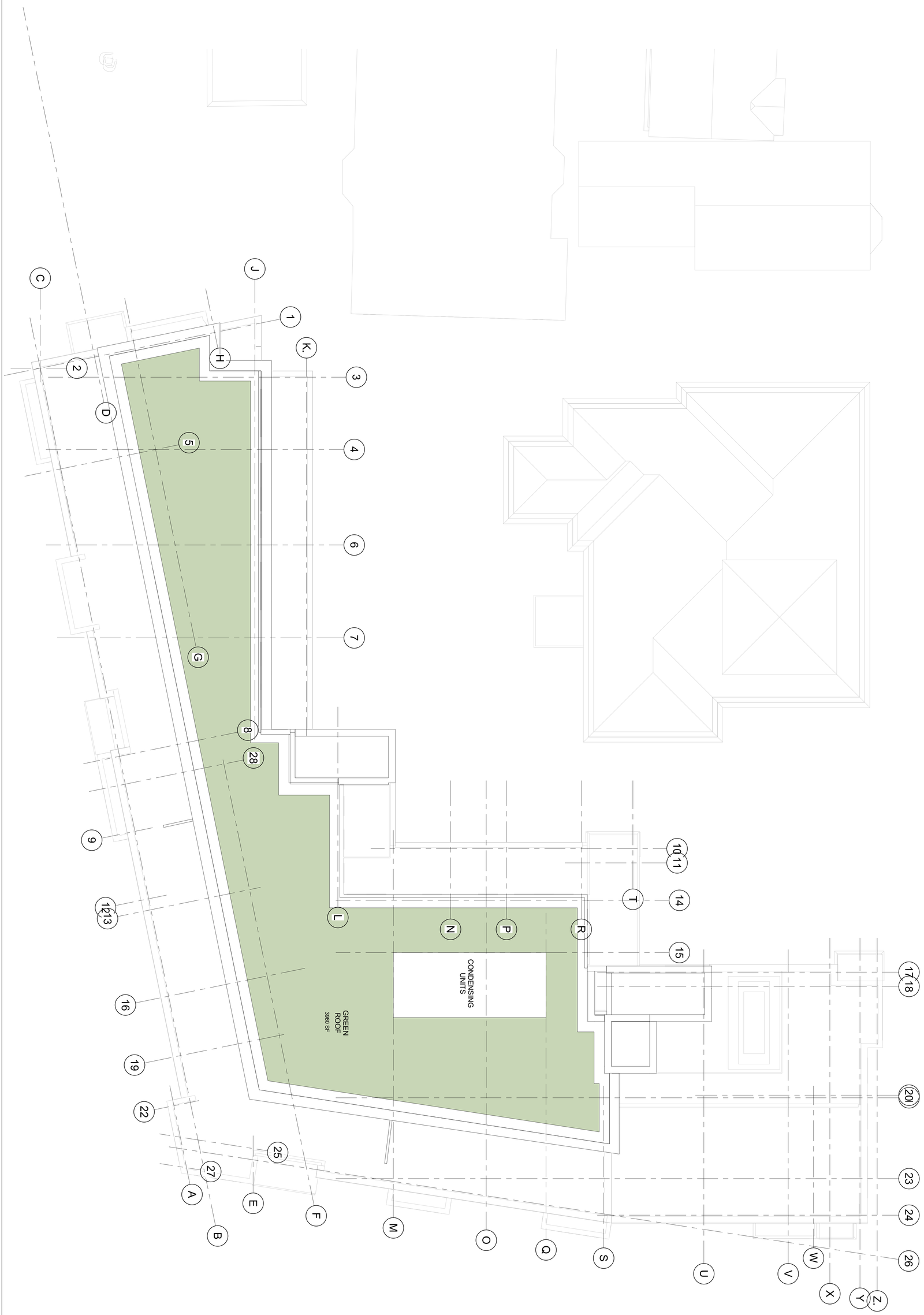
Revisions:

Scale: 1/8" = 1'-0"

Date: JULY 20, 2018

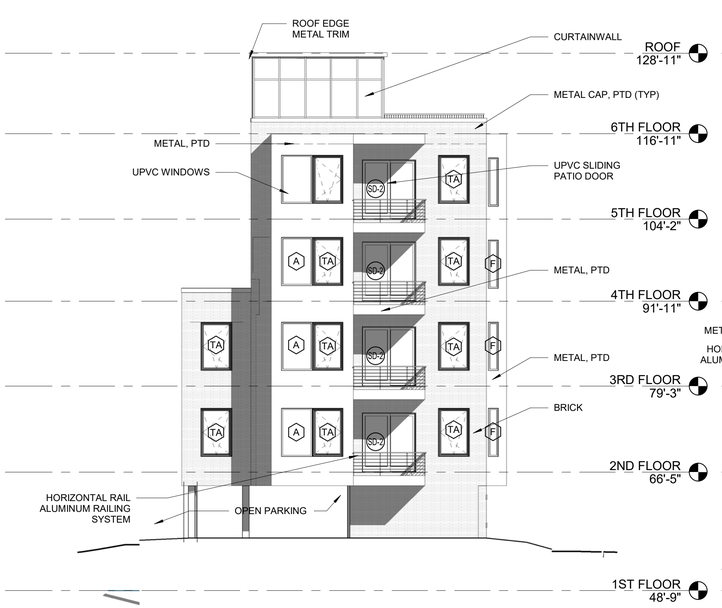
SIXTH FLOOR

A1.06

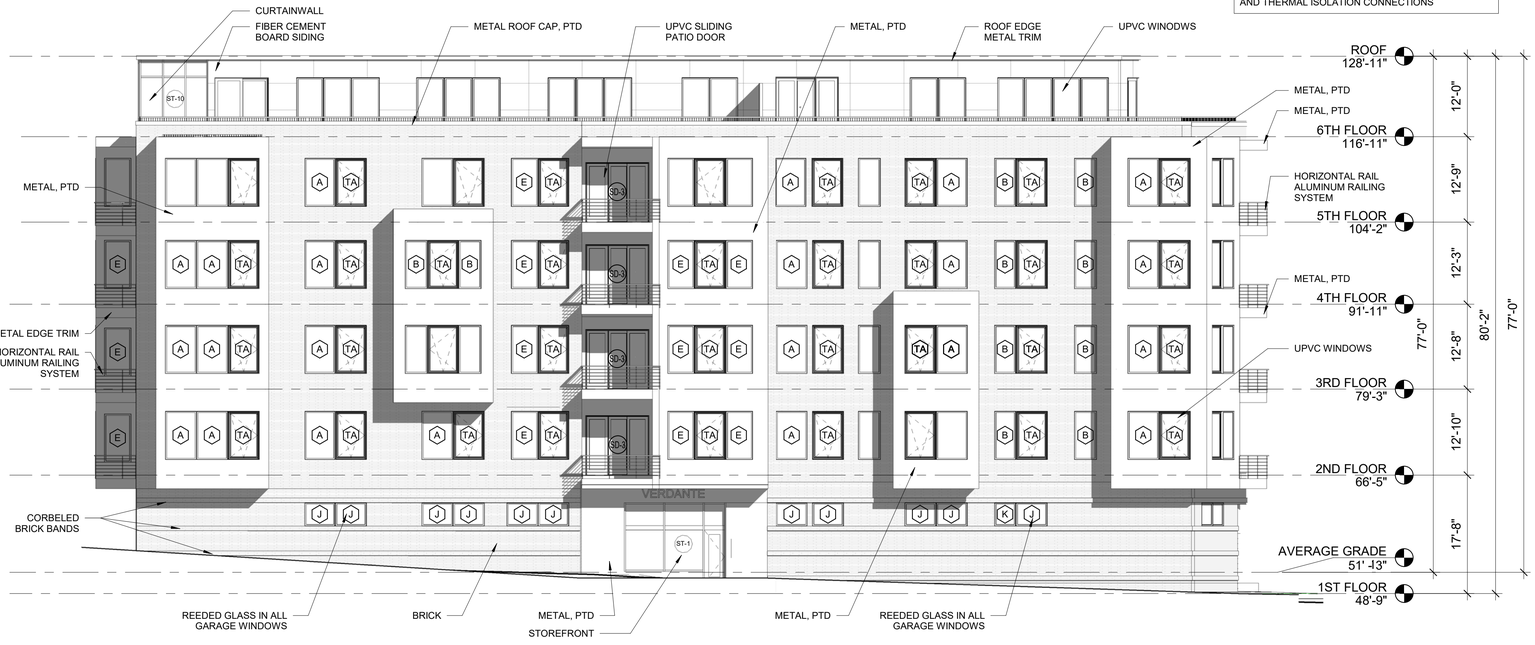


A1.07	Date: JULY 20, 2018	Scale: 1/8" = 1'-0"	Revisions:	Project: VERDANTE	Architect: ARCHETYPE architects 48 Union Wharf Portland, Maine 04101 (207) 772-6022 Fax (207) 772-4056	Consultant:	Prepared For: NewHeight Group
	ROOF PLAN			Federal Street Portland, Maine			118 Congress Street #401 Portland, Maine

GENERAL NOTE:
* WINDOW PANS AND JAMB FLASHING AT ALL WINDOWS AND EXTERIOR DOORS
* SOUND ISOLATION FOR ALL BUILDING MOUNTED HEAT PUMPS
* ANY THROUGH WALL STEEL TO BE SQUARE TUBE AND THERMAL ISOLATION CONNECTIONS



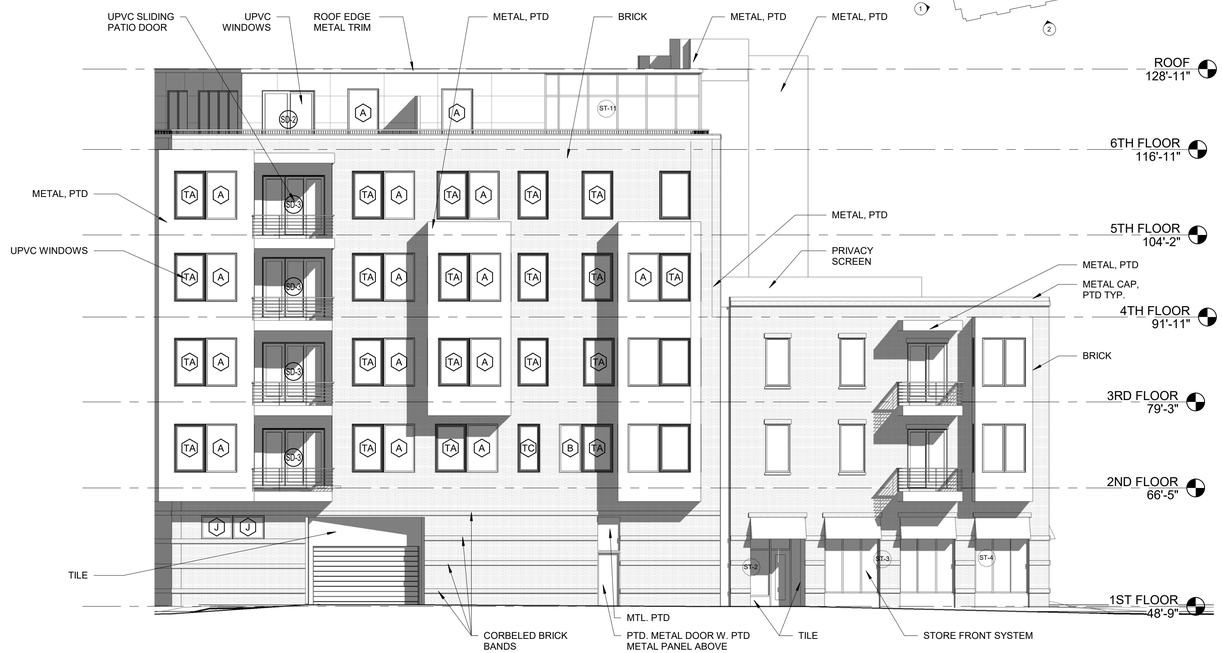
1 CONGRESS ST. ELEVATION
3/32" = 1'-0"



2 FRANKLIN ST. ELEVATION
3/32" = 1'-0"

GENERAL NOTES:
1. AVERAGE GRADE BY DEFINITION: GRADE TAKEN AT THE FIVE (5) BUILDING CORNERS DIVIDED BY FIVE (5) -
49'-9" + 47'-11" + 49'-0" + 54'-6" + 55'-3"= 256'-5" /5 = 51'- 2"

2. BUILDING HEIGHT: THE VERTICAL MEASUREMENT FROM AVERAGE GRADE TO HIGHEST POINT OF THE ROOF BEAMS = 77' - 0"



3 FEDERAL ST. ELEVATION
3/32" = 1'-0"

4 HAMPSHIRE ST. ELEVATION
1/8" = 1'-0"

Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
Federal Street Portland, Maine

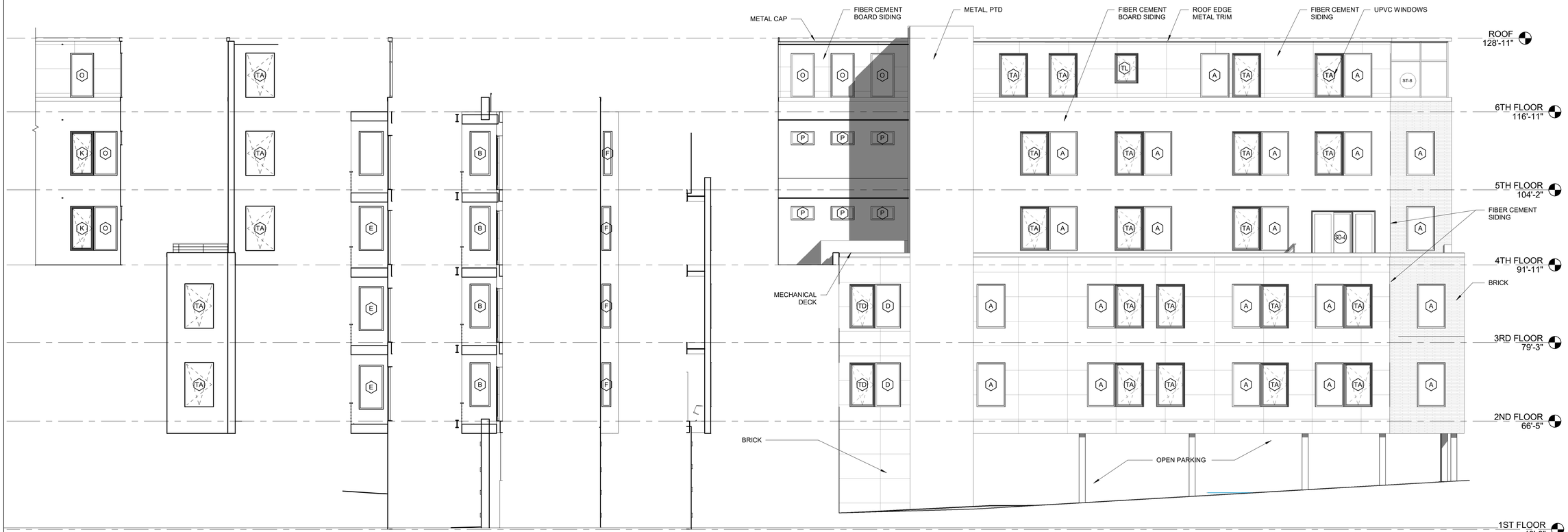
Revisions:

Scale: As indicated

Date: AUG. 24, 2018

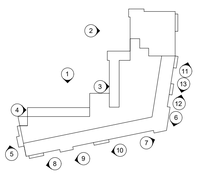
ELEVATIONS

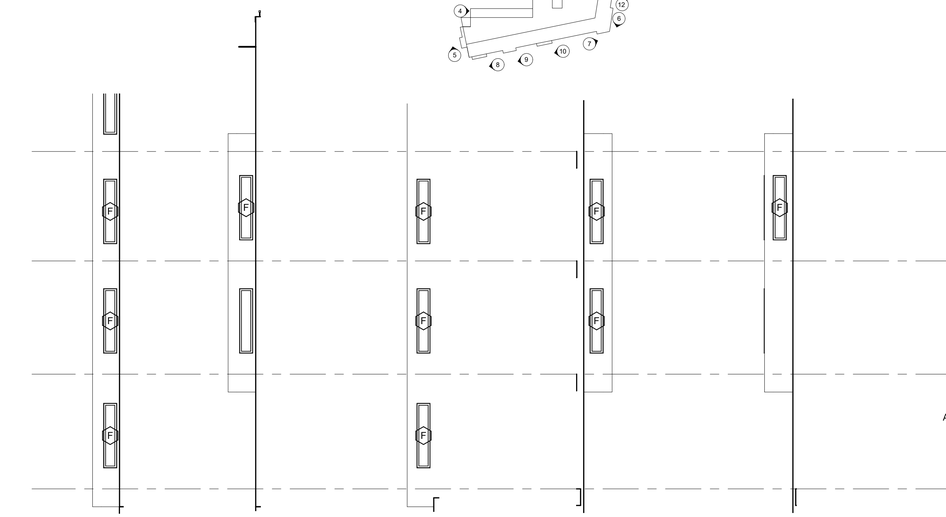
A2.01



3 Behind NW Stair 1/8" = 1'-0" | 4 Congress Angle 1/8" = 1'-0" | 5 Bumpout G-S 1/8" = 1'-0" | 6 Bumpout F-NE 1/8" = 1'-0" | 7 Bumpout F-NW 1/8" = 1'-0" | 11 Bumpout E-SW 1/8" = 1'-0"

1 HAMPSHIRE ST. BACK 1/8" = 1'-0"





8 Bumpout A-SE 1/8" = 1'-0" | 9 Bumpout B-SE 1/8" = 1'-0" | 10 Bumpout C-SE 1/8" = 1'-0" | 12 Bumpout D-SW 1/8" = 1'-0" | 13 Bumpout D-NE 1/8" = 1'-0"

2 CONGRESS ST. BACK 1/8" = 1'-0"

Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
Federal Street Portland, Maine

Revisions:

Scale: As indicated

Date: AUG. 24, 2018

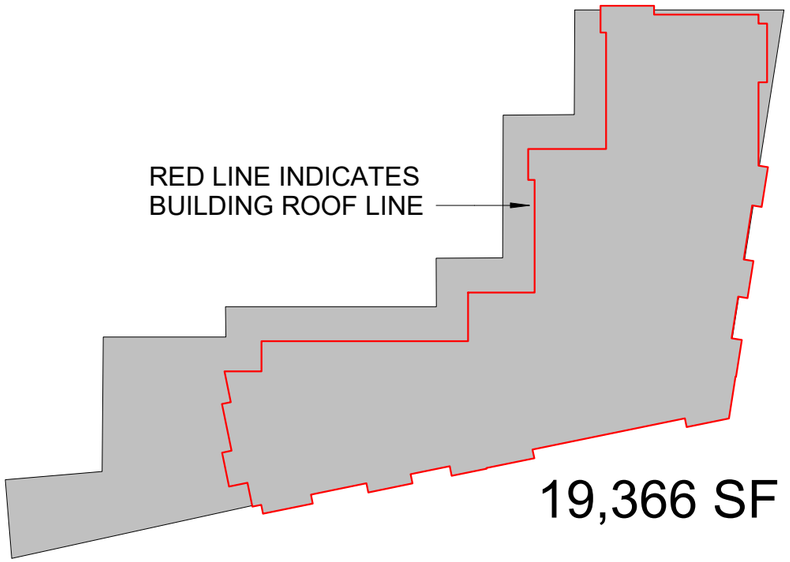
ELEVATIONS

A2.02

ONLY
TURNING TRAFFIC YIELD TO PEDESTRIANS
DO NOT ENTER

ONLY

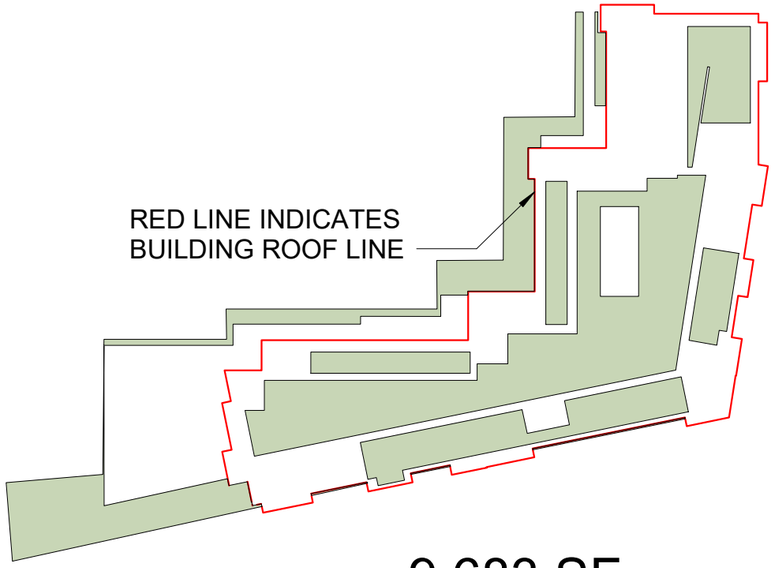
STOP



19,366 SF

1 LOT AREA

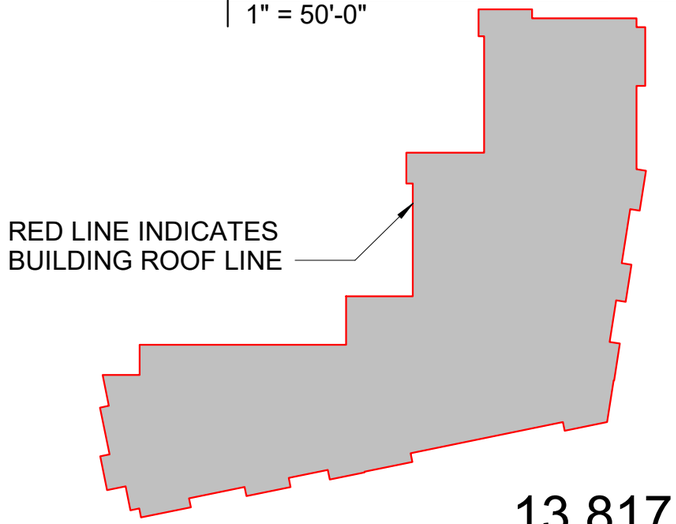
1" = 50'-0"



9,683 SF

2 PERVIOUS AREA

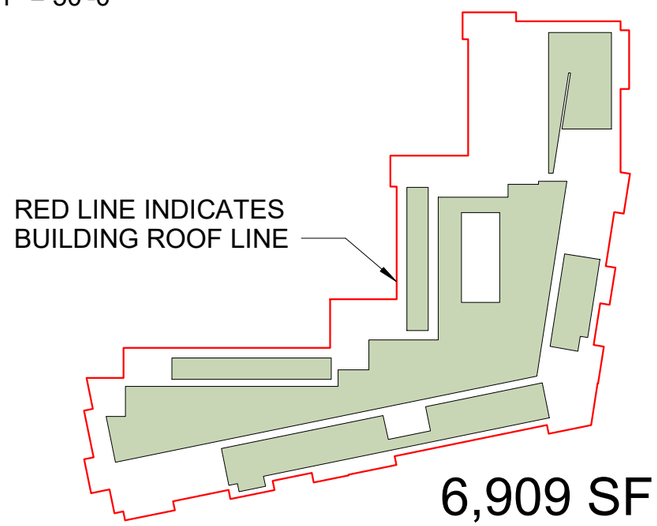
1" = 50'-0"



13,817 SF

3 COMBINED ROOF AREA

1" = 50'-0"



6,909 SF

4 GREEN ROOF AREA

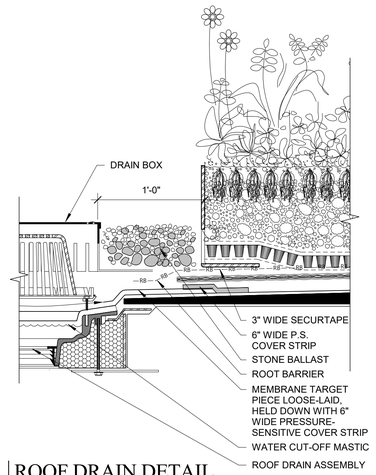
1" = 50'-0"

VERDANTE

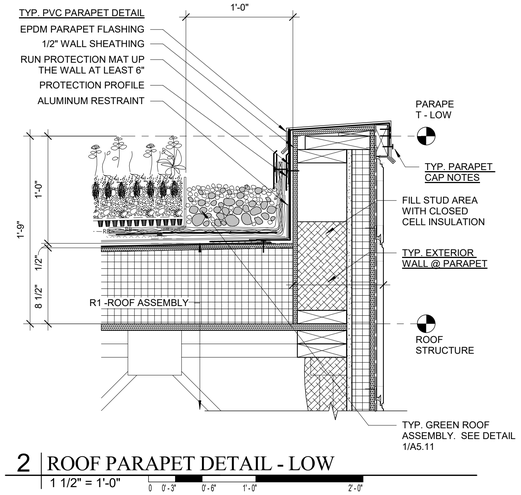
Federal Street Portland, Maine

AUG. 7, 2018

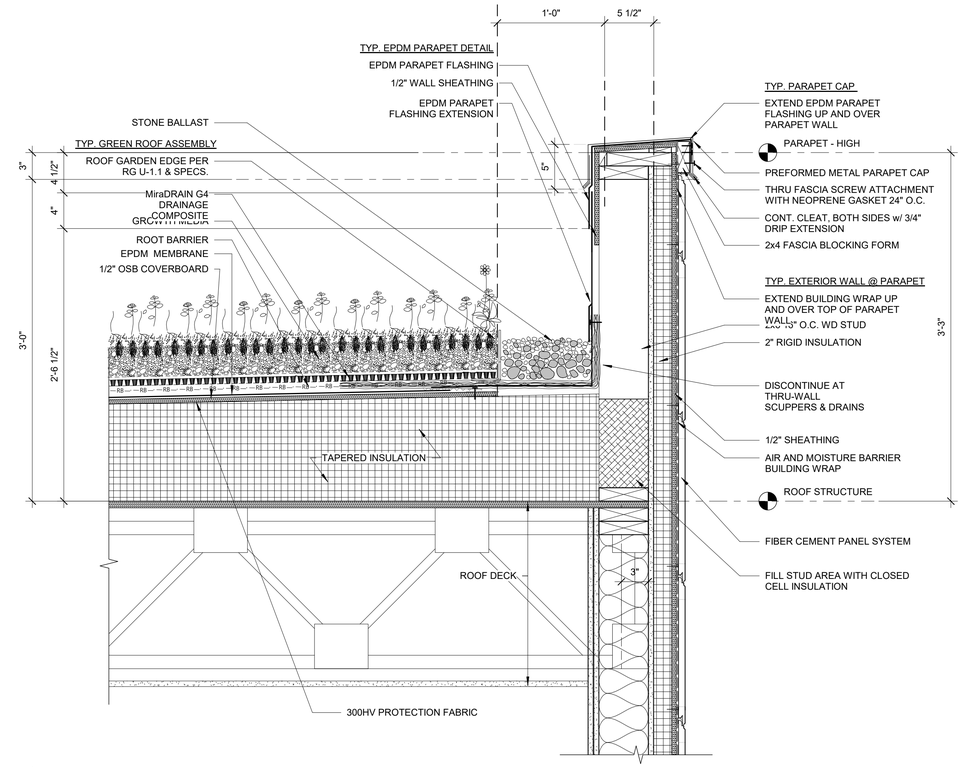
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101



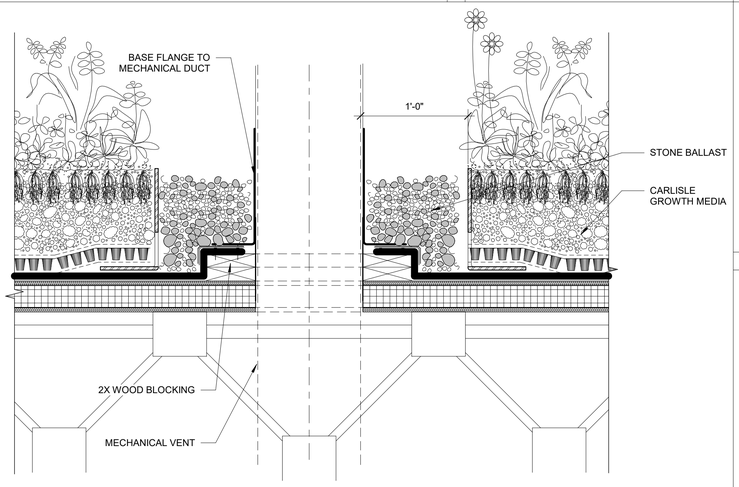
4 | ROOF DRAIN DETAIL
1 1/2" = 1'-0"



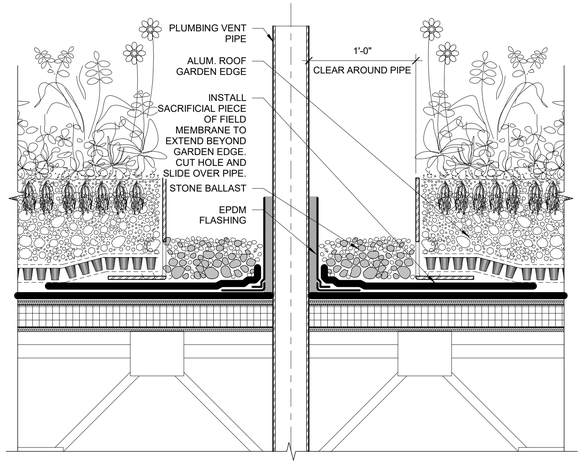
2 | ROOF PARAPET DETAIL - LOW
1 1/2" = 1'-0"



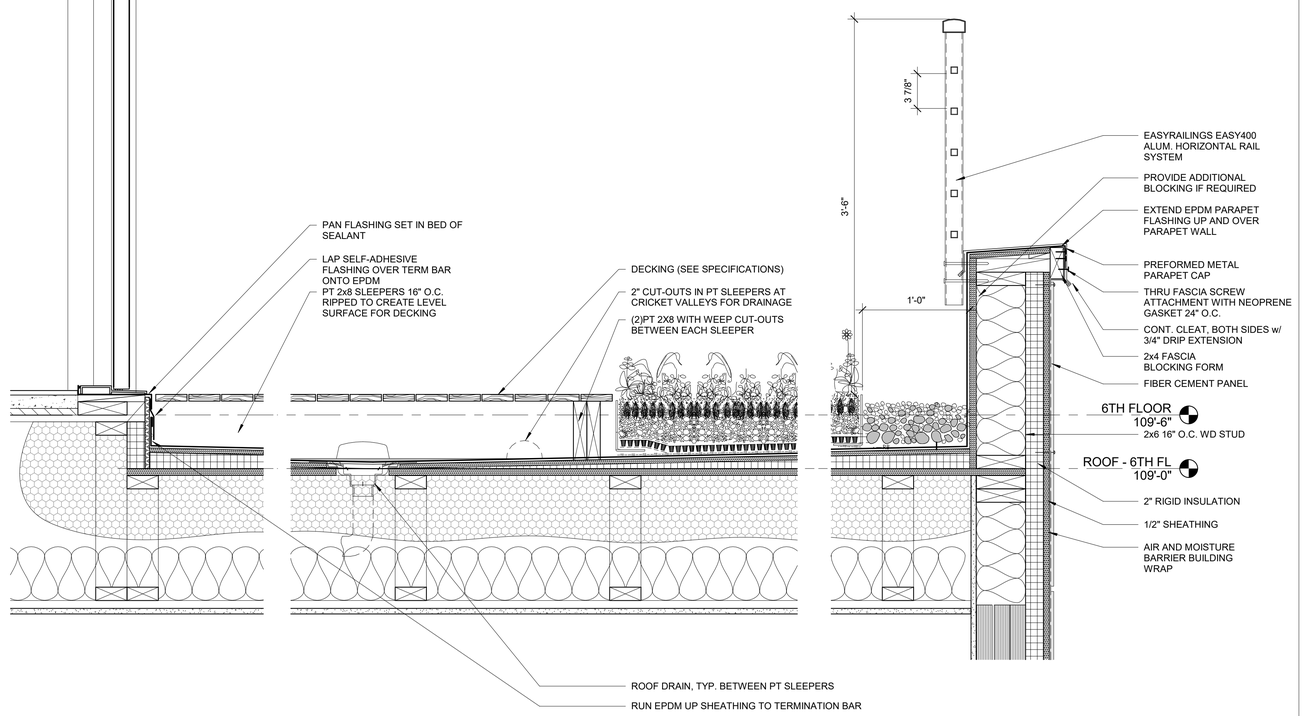
1 | ROOF PARAPET DETAIL - HIGH
1 1/2" = 1'-0"



6 | TYP. ROOF PENETRATION - MECH DUCT
1 1/2" = 1'-0"



7 | TYP. ROOF PENETRATION - PLUMBING PIPE
1 1/2" = 1'-0"



8 | GREEN ROOF DETAIL AT 6TH FLOOR DECK
1 1/2" = 1'-0"

LICENSED ARCHITECT
DAVID LLOYD
NO. 936
STATE OF MAINE

Prepared For:
NewHeight Group
118 Congress Street, Unit 401
Portland, Maine

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
LUMINATO
167 Newbury Street Portland, Maine

Revisions:

Scale: 1 1/2" = 1'-0"

Date: AUG. 25, 2016

DETAILS - ROOF

A5.11

PUBLIC COMMENT: Verdante 56 Hampshire Street Level III Site Plan/Subdivision; IOZ Conditional Use 2017-294 NewHeight Group, LLC, Applicant

George Rheault <george.rheault@gmail.com> Sep 10, 2018 7:03 PM
Posted in group: **Planning Board**

I oppose the current iteration of the proposed condo complex being presented to the Planning Board on September 11, 2018 which is being marketed under the completely generic (both geographic and literal) and unimaginative name "VERDANTE" (was "Shangri-La" or "Kaliflower" already taken?)

My objections fall into both procedural and substantive categories as follows:

1) The applicant should not be allowed to be before the Planning Board for a 9-11-18 public hearing without explaining in detail the reason for its two prior back-to-back postponements (Procedural).
2) The applicant's materials and the staff memo accompanying them are incomplete and do not sufficiently and clearly inform the public and the Board itself of what is before them and how it has changed from the initial April 24, 2018 workshop materials (Procedural/Substantive).
3) The project's completely auto-centric design orients itself almost exclusively to the failed city-destroying Franklin Arterial and should be rejected under the India Street Form-Based Code requirements (Substantive).
4) The applicant's overall degradation of the streetscape/neighborhood in the vicinity of the project from its previous project ("Luminato") should be prejudicial to the approvals being sought by the applicant (Substantive).

[ONE]

A great deal has been said in the last few years by the staff of the Planning Department (in the media and in city proceedings) about how busy they have been and how Planning Board time has been booked solid well into the future. So it was somewhat surprising that the Planning Board and the city staff that serve it (and effectively are responsible for everything put before it) seemed to be quite accommodating to the string of postponements the applicant caused to occur on the Board's calendar this summer.

As the Board members know, getting onto the Planning Board calendar requires a great deal of effort since it requires, at a minimum, addressing the lengthy public notice process requirements (as well as having applications sufficiently complete to be "ripe" for final approval). Other applicants waiting in the Planning Board "queue" (assuming a "queue" exists vs. staff simply picking favorites for calendar appointments) cannot simply jump into a sudden vacancy caused by a postponement because of those notice requirements.

Thus a time slot postponed after the deadline for public notice passes is lost forever and since time is money to most projects, the fact that a single applicant was able to soak up two distinct slots without penalty or sanction or even explanation is an insult to the public and to those other applicants patiently waiting for their time before the Planning Board.

The applicant should be required to explain in writing what was behind each of the two postponements and to the extent it was attributed to the actions of external third parties (city staff objections, negotiations with outside parties, etc.), proof of such extenuating circumstances beyond the applicant's control should be attached and made a part of the official record.

Ideally, the Planning Board should have a policy that should an applicant attempt to "rush" a project prematurely onto the Planning Board's calendar, it may jeopardize its place in line should it abruptly postpone and impact the Planning Board's work load. While I am all in favor of planning staff facilitating projects and reasonably greasing the wheels for applicants operating in good faith in a business always fraught with unexpected delays, there should be penalties for applicants who "hog and clog" the schedule to the detriment of others.

It should be said that in a small market like Portland, the 56 Hampshire Street applicant may very well have gained a real competitive advantage from its postponements by delaying other applicants seeking to obtain approvals to bring similar product to market. The Planning Board should NOT be allowing itself to be party to anti-competitive behavior.

[TWO]

The staff memo seems rushed, poorly reasoned and incomplete. Few new supporting/explanatory materials have been provided by the applicant. One could also use the word "sloppy" to describe this state of affairs when one considers this is a review of a $12+million project and far smaller projects have been expected to provide a much greater level of detail and documentation including expensive contextual elevations showing the new building from multiple neighborhood vantage points. The memo fails to even slow down enough to note the date of the initial workshop. The public must claw through other public records to find that piece of information (April 24, 2018).

The first paragraph of the memo ends with the following (poorly drafted) sentence: "Note that since the workshop, the scope of this project to increase the property boundary, revise the number of residential units and parking spaces, and enlarge the building footprint." Nowhere is the precise nature of any of these indicated changes clearly set forth in the memo or in anything provided by the applicant (who has not even been required to submit a revised project cover letter setting forth the changes and how they differ from the original application). It is also an inaccurate statement since the affordable housing compliance has also been altered from the initial workshop presentation and nowhere is that made clear.

The public should not have to hunt and peck through voluminous materials from different Planning Board sessions to identify basic information and then toggle back and forth in order to compare and contrast simply to make sense of the latest application. Many staff memos provide helpful charts and side-by-side comparisons that clearly establish "original" vs. "revised" details but this was not done here. The fact that this was not done for the 56 Hampshire Street application suggests that perhaps the staff itself did not have time to appreciate the changes and it makes one wonder whether the Board members fully appreciate what is different from what was last before them in April 2018.

Planning staff in general should be very careful to make sure that ALL applications are reviewed with the same care and attention and to NOT ensure this reflects very poorly on the Planning Board as it gives off the appearance that some applicants are being given a lighter, freer hand than other applicants and that different standards are applied to "most-favored" applicants or projects that have received higher-level political blessings.

The only way to prevent this is by the Planning Board not being afraid to send projects back, literally, to the drawing board, when it appears that "I's" have not been dotted and "T's" not crossed including any work being done at the staff level.

Just to give a flavor of what is missing from the staff analysis, here are some obvious and non-exhaustive examples:
(a) What "neighboring" building is obtaining parking spaces from the new project and how is that parking being provided within the new project (under what "category" (structured, surface, mechanical?) and where precisely in the project and will users be segregated in any way from internal users)? Is it legitimate for the unidentified "neighboring" building to obtain this parking and is this somehow running afoul of previous parking commitments made by the "neighboring" building to the planning authority or city officials? How can the public expect this arrangement to evolve over time and how will the City keep abreast of it? Is a copy of the parking sharing agreement being made public and is the revenue important to the new project's upkeep and/or financing? Is this a good precedent to set considering all the sturm and drang around parking issues in this area?
(b) Page 6 of the staff memo has this statement: "The survey further shows a potential 5’ easement to benefit 60 Hampshire Street." What is a "potential easement" and what should the public understand about the implications of this "potential easement"?
(c) When must the Applicant contribute the $14,300 "towards implementation of improvements to the Franklin Street transportation influence area" and when would this money actually be spent to mitigate the project's traffic impacts? Is it being joined with other monies to produce a concrete result or will the money sit unspent for a long period of time?
(d) What is the track record of the mechanical parking system (where else has it been successfully installed in New England and other cold climates (with heavily salted roads) and what is its estimated life-span/replacement cycle (including salt intrusion mitigation) and what recourse does the City have in the event that the condo association at some point decides this system is to be discontinued or removed altogether in the event its operation or eventual replacement becomes cost-prohibitive to members of the condo association and/or the neighboring building that may rely upon it (it is not clear whether the parking mix can be altered in the future without any review or recourse by the City)? The loss of the mechanical parking system could have significant impacts on adjacent on-street parking availability and even if the system is well-maintained and functional, users may still find it more convenient to park on-street more often so as to avoid the hassle of getting in and out of the mechanical system (will building users be prohibited from obtaining on-street parking privileges to ensure the mechanical system is the default rather than a last resort?).
(e) If service truck deliveries on Federal Street are cited as being problematic by the Traffic Engineering Reviewer, what about maneuvering for Fire/EMS and snow plows/street-sweeping?
(f) Have indoor bike wall-mounted rack solutions been allowed in any other project in recent memory (last 7 years) and if so, where, and is the present solution comparable to the product solution(s) previously allowed?
(g) How does one "minimize dripping" from an overhang and can the public be shown what this solution would look like?
(h) Where is the documentation of the parking maneuver simulation? Considering the hoops that the recent 30 Fox Street applicant had to jump over with respect to parking maneuvers, the public should at least see what was involved in the parking maneuver study for this project rather than just take Mr. Errico's word for it and the full study should be entered into the record.
(i) Why aren't ADA/Handicap parking space approvals made a condition of approval?
(j) Who at the staff level determines whether the off-site affordable unit is "sufficient" and has comparable amenities to those new units in the on-site project? Is this done via visual inspection or merely on the basis of representations made by the applicant? What City employee/dept is tasked with that review/approval?
(k) How will the Congress Street parklet "public amenity" be managed and what design elements are planned to ensure crime/vandalism is deterred and public safety maximized since it is unlikely few people will want to linger here with so many cars whizzing by all the time making self-policing less likely and will private security be included to police the area routinely including deciding when someone is enjoying the space vs. merely "loitering" (which often falls into unfair profiling)? Since this parklet will likely become an unloved wind-swept no-man's-land, what could the City do to encourage a full and complete build-out of this corner so that the project could truly take advantage of this land and provide a true "gateway" design that doesn't look eroded or like a sad compromise?

(l) What happens if the 42 Hampshire Street building containing the off-site affordable unit gets redeveloped (it is adjacent to a newly enlarged vacant lot due to a recent demolition of 32 Hampshire Street)?

[THREE]

The project is basically a generic anywhere development (parking podium with apartments above (governed via condo ownership vs. a centralized apartment owner/manager)). It is an auto-centric project that does little to encourage mass transit or non-auto use (the green roof is a nice touch but does little to diminish the project's inherent fossil-fuel underpinnings especially since a high percentage of owners are likely to have second or third homes requiring jet fuel, etc.). Worse, the project proudly advertises utilitarian blight from its upper stories (frankly the elevator shafts appear as obscene gestures to those looking west of the project) from the India Street side of the project (much like its Luminato cousin) and its primary public face is entirely focused on its most auto-centric side (where many viewers of it will merely be zooming by on Franklin Street INSIDE their automobiles).

So it is impossible to understand how the staff can approve this project under the UN standards. The previous staff memo stated that "Hampshire and Federal streets are designated as Urban Neighborhood (UN) zoning subdistricts which emphasizes small-scale, private frontage with the intent of maintaining a private, small street character." Unfortunately much of the Federal Street is blank wall practically shouting for graffiti and not at all reproducing any of the 19th-century streetscape feeling that is all the rage among Portland NIMBYs trying to impede development. It is strange that the urban design standards for this project can be so expansively interpreted here whereas they are stringently applied by city staff to much smaller projects in other nearby streetscapes.

It is also frustrating that "new" non-historic additions to the area are quickly absorbed into the staff's interpretation of neighborhood context when this exact approach has been openly rejected in the recent Munjoy Hill "neighborhood character" squabbling where anything post-1920 is literally considered irrelevant no matter how much of it there is in the surrounding vicinity. To allow buildings of late 20th-century or brand-new vintage to define the physical character and streetscape allows this applicant to receive discretionary allowances from the staff that other applicants a short distance away from the project are being explicitly denied and those allowances are worth a great deal.

[FOUR]

32 Hampshire Street, behind Luminato, was recently demolished. This building once did a very nice job of anchoring the corner of Hampshire & Newbury. It is gone as are three other traditional buildings that anchored that former streetscape (all of which existed until very recently having previously escaped the Franklin Arterial gouging). The looming presence of the newly built Luminato does a terrible job of reproducing any of the intimate street-scape feelings that these previous buildings achieved. No one at the planning staff level seems to be acknowledging that loss or encouraging any meaningful mitigation. In fact, it is more than likely that 42 Hampshire is probably slated for the wrecking ball along with the small homes south of Luminato along Hampshire towards Middle Street. From these vacant lots will likely spring larger projects much more similar to Luminato and Verdante but the planning staff with a straight face writes that "Buildings on this site will be part of historic streetscapes of Federal and Hampshire streets and the zoning and design standards emphasize contextuality in order to create a congruent and cohesive streetscape." while providing zero proof that this is in fact being done in the case of the new project or that these goals were successfully achieved with Luminato.

There is a real sense that one small part of Portland has had its development guidelines loosened to benefit a tiny class of developers who can quickly build things that are flat-out prohibited elsewhere (either explicitly or through a bruising discretionary and ultimately arbitrary review process) but then these India Street district projects are then used as examples of "what-not-to-do" and further impede development elsewhere. It is a vicious cycle. We should have a much more uniform set of design, height and zoning principles operating across the entire City rather than giving special privileges to a few in one or two special enclaves while starving everyone else from taking advantage of market forces and pent-up demand for new housing.

On this basis, the Planning Board should make sure to get this project "right" and ensure higher standards are being met even if it increases costs (decreases profits) for this extremely high visibility project that the City of Portland will have to live with for a long time to come.

PLANNING BOARD REPORT
PORTLAND, MAINE

R-3 Residential Map Amendment
0 Hope Avenue
Zoning Map Amendment Application
ZN-000208-2018
Estelle Estates, LLC, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: September 11, 2018	Prepared by: Matthew Grooms, Planner Date: September 7, 2018

I. INTRODUCTION

Estelle Estates, LLC has submitted a request to rezone a previously unzoned 14-acre tract of land, located at 0 Hope Avenue in the North Deering neighborhood to R-3 Residential. This property entered into the City of Portland in 2001 as part of a land conveyance from the Town of Falmouth. Negotiations at that time between then property owners (Lloyd Wolf and Robert Adam) and the City of Portland and Portland Trails, resulted in the creation of the Presumpscot River Preserve and the formalization of multiple land development agreements. The proposal before the Planning Board is derived from one such agreement, wherein the City agreed to assist the developer in establishing a new contract zone to permit fifty-five (55) clustered and age-restricted residential units. While the written agreement specified a contract zone, the City in recent years has discouraged the creation of new contract zones, and in discussions with the applicant, recommended that they pursue a zone change to R-3 Residential. This zone permits Planned Residential Unit Developments (PRUDs) as well as a unit-density in line with the development outlined in the written agreement. This approach was further endorsed by the Planning Board at the August 14th Planning Board workshop.

Figure 1: Proposed Development Site

Notices were sent to sixty (60) residents and the interested citizen list. The notice also appeared in the Portland Press Herald on August 31st and September 3rd 2018. As of the writing of this memo, no written public comments have been received, and the required neighborhood meeting was held on Tuesday, August 7th 2018.

Applicant and Property Owner: Peter Bouchard, Estelle Estates, LLC
Agents: Chris DiMatteo, Gorrill Palmer; Doug Reynolds, P.E., Gorrill Palmer

II. PROJECT DATA

Existing Zoning	Not Zoned
Proposed Zoning	Residential R-3
Existing Use	Undeveloped, primarily woodlands
Proposed Use	PRUD w/ 54 residential units arrayed in 27 duplex buildings
Parcel Size	14 acres

III. BACKGROUND

In 2002, the City of Portland purchased a 48-acre parcel along the Presumpscot River from Lloyd Wolf and Bob Adam. Commonly known as the Presumpscot River Preserve, it was purchased for open space and land conservation purposes. As part of the property agreement, the City Council agreed to rezone (at a later date) an abutting 23-acre parcel as a conditional zone for residential development. It is the conditional zoning agreement for the 14-acre Adam parcel that is the subject of the proposed map amendment (Attachment A). This parcel was previously located in the town of Falmouth, but was annexed by Portland through state legislature action in 2002.

Figure 2: Property in blue represents land conveyed to and developed by Lloyd Wolf and Robert Adam. Presumpscot River Preserve is outlined in green, subject property in red.

The annexation of the land from Falmouth, the protection of sensitive land along the Presumpscot River and the conditional zone are interrelated. The Wolf-Adam property was landlocked from Falmouth (Presumpscot River and I-295) with no practical roadway access except through Portland. Annexation of the property to Portland was the only feasible manner to develop the property and provide municipal services. Conservation of upland shore frontage along the Presumpscot River was an important resource to protect and public ownership was viewed as critical. A conditional zone for the development parcel would allow the property to be developed within reasonable limits and address the developers' goals of developing age-restricted housing for those fifty-five (55) years of age or older.

In 2005, an amendment to remove the age-restricted clause of the conditional zoning agreement was approved for the portion of land owned by Lloyd Wolf, though not Robert Adam. The remaining section controlled by Adam (multi-family) was to be processed as a separate conditional zone but Mr. Adam did not submit a rezoning application at that time. Mr. Wolf and Mr. Adam developed the 30-lot Presumpscot River Place subdivision, which constitutes lots located along Hope Avenue east of Basket Lane.

For development purposes, the Wolf property was split into three phases. Phase one consisted of one lot (#17) on Hope Avenue while phase two consisted of 6 lots (lot 18 to lot 23) which included the creation of a new public street, Basket Lane. The final phase, consisting of 16 lots, was approved by the Planning Board in February of 2018, and resulted in the creation of another new street, Brandy Lane.

Robert Bouchard, of Estelle Estates, LLC, has entered into a purchase and sale agreement with AJS Family Limited Partnership (Robert Adam Estate), to purchase a 14-acre parcel located just west of the Basket Lane subdivision. In discussions with City staff, the applicant indicated that they would pursue development of fifty-four (54) age-restricted residential units, housed in twenty-seven (27) duplex buildings as outlined under the 2001 agreement. In

recent years, the City has pushed to reduce the number of new contract zones and staff suggested instead that the applicant pursue a zoning map amendment to rezone the parcel to R-3 Residential. This zone permits PRUD style developments, necessary for the completion of this project, and permits a lot area per dwelling unit of 6,000 square feet, necessary to achieve the density required. In the event that the standards of the R-3 Residential zone prove prohibitive to the development outlined in the 2001 agreement, the applicant reserves the right to pursue a contract zoning agreement.

IV. EXISTING CONDITIONS

The subject property consists of three separate parcels totaling fourteen (14) acres of undeveloped woodlands that is bounded by the Presumpscot River Preserve to the north, east and west, the Basket Lane Subdivision to the southeast, and Hope Avenue to the south. The property has a high degree of relief in topography due to a transecting stream running approximately east-west along the southerly property boundary, and a consistent slope towards the Presumpscot River. Other property constraints include extensive wetlands, located throughout the site. Of the fourteen (14) total acres, just over twelve (12.2) acres are suitable for development.

Figure 3: Existing condition of the property

In looking at the surrounding context, this area of the North Deering neighborhood is predominantly low-density single-family housing, with the majority of properties being zoned R-2 Residential. Under the 2001 agreement between the City of Portland and both Lloyd Wolf and Robert Adam, certain properties conveyed to Mr. Wolf and Mr. Adam became subject to the C-40 Contract Zone. This zone, encompassing the Brandy and Basket Lane subdivisions, permits smaller lot sizes and increased density when compared with the R-2 Residential zone, as well as additional requirements intended to facilitate access to the Presumpscot River Preserve, such as requirements for trail parking. Immediately to the west of the proposed development site is a property zoned RPZ Resource Protection zone, which contains a 135' wide easement held by Central Maine Power.

Figure 4: View of the property in its existing condition. Note the house visible is located in the Basket Lane Subdivision, and the utility line is located within the 135' foot CMP easement described.

V. PROPOSED DEVELOPMENT

The applicant is proposing to develop a compact residential development consisting of twenty-seven (27) duplexes accessed by a private loop road with extensive open space designated at the center and along the riparian area to the southeast. This site will be well-screened from the public view, with proposed buildings being no closer than 350' feet from Hope Avenue, and approximately 200' feet from the nearest residential lots (located within the Brandy Lane Subdivision). The private loop road, measuring just 20' feet in width, would be privately maintained, and is not proposed to be built to city standards. The preliminary site plan shows a 5' foot sidewalk and 5' foot esplanade along both sides of the private street and eleven additional on-street parking spaces. The duplex units themselves will each contain two parking spaces, with a one car garage, and driveway space for one car.

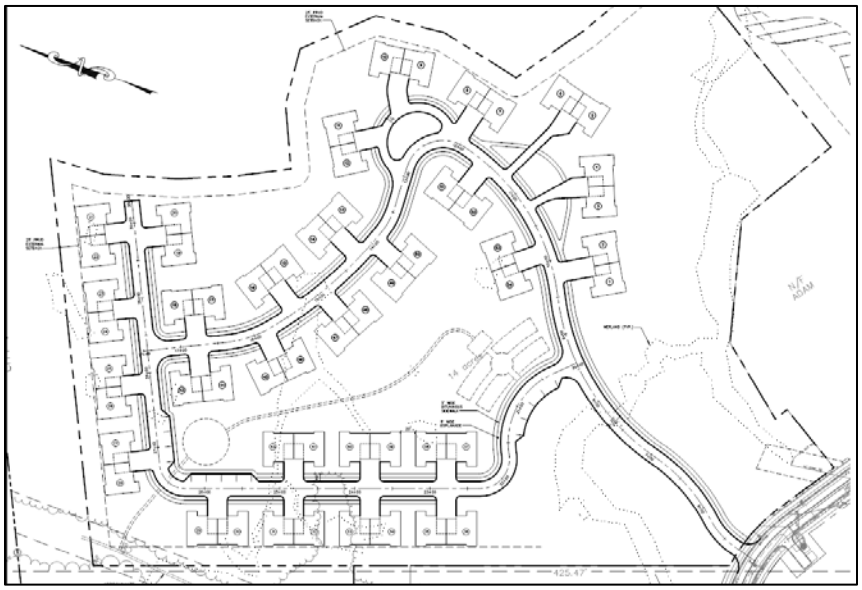


Figure 5: Proposed site layout

REVIEW OF PRELIMINARY PROPOSAL

Although the request submitted by the applicant does not include a site plan or subdivision review, city staff reviewed the preliminary proposal against existing utility and traffic information in an effort to flag clearly visible concerns. Based upon this level of review, the staff offer the following comments.

Traffic (Attachment 1)

- I have reviewed the application materials as it relates to the Zoning Map Amendment and do not expect the change will have a significant impact on traffic mobility and safety in the project area. I would note that a full review of site plan standards will be required and the concept plan provided will need a comprehensive review (this zoning review should not be considered an approval for the concept site plan).

Life Safety (Attachment 3)

- The site plan does not include a hammerhead turn around within the dead end. The technical manual requires that every dead-end roadway more than one hundred fifty (150') feet in length provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5 of the Technical Manual).
- No inside turning radius shall be less than twenty-five (25') feet, and no outside turning radius shall be less than one hundred (100') feet.
- Two fire hydrants will need to be installed within the complex.

Utility Capacity (Attachment 2)

- There is an existing sewer and stormdrain, however the Alice Street pump station is not sized adequately to accommodate the new development, which provides less than half of the required capacity. The City would seek an investment by the developer to bring this facility up to sufficient capacity.

VI. PUBLIC COMMENT & NEIGHBORHOOD MEETING

As of the writing of this report, no written public comments have been submitted to the Planning Division. The applicant held their required neighborhood meeting on August 7th at Lyman Moore Middle School, which was attended by two members of the public and the District 5 City Councilor. At the meeting, those in attendance asked general questions regarding the difference between the R-2 and R-3 Residential districts, and a specific question about use of an easement for access between this site and nearby Alice Street (Attachment B).

VII. POLICY CONSIDERATIONS

A. Proposed Development Under Residential R-2 and R-3 Zone:

The following chart illustrates the comparison between the current R-2 zone and R-3 zones, showing the purpose statements, permitted uses, and dimensional requirements of each zone. The minimum lot size varies in the R-2 and R-3 zones with R-2 having the largest minimum lot size of 10,000 square feet. Generally, the R-3 has more flexible dimensional requirements than the R-2, and permits increased residential unit density. The intent of the rezone is to provide the proposed project a medium density residential development, which can be accomplished with the R-3 zone.

	R-2 Zone	R-3 Zone
Purpose Statements	To provide for low-density residential development characterized by single-family homes on individual lots in outlying areas of the city and along traffic corridors with limited additional traffic capacity.	To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels. Such development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.
Permitted Uses	**Residential:** Single family; Handicapped family unit; Single-family, multiple-component manufactured housing; Single-family single-component manufactured housing; **Other** Parks; Agriculture; Accessory uses; Home occupation; Municipal uses; Wind energy systems	**Residential:** Single family; PRUD; Handicapped family unit; Single-family, multiple-component manufactured housing; Single-family single-component manufactured housing; **Other:** Parks; Accessory uses; Home occupation; Municipal uses; Wind energy systems
Conditional Uses	**Residential:** Sheltered Care group homes; adding one accessory dwelling unit; **Institutional:** Schools; Long term and extended care facilities; places of assembly; College, university, trade school **Other:** Utility substations; Cemeteries; Raising of domestic animals for noncommercial; day care or home babysitting services; temporary wind anemometer towers; wind energy systems.	**Residential:** Sheltered Care group homes; adding one accessory dwelling unit; **Institutional:** Schools; Long term and extended care facilities; intermediate care facilities; places of assembly; hospital; **Other:** Off-street parking; utility substations; day care or home babysitting services; temporary wind anemometer towers; wind energy systems.
Dimensional Requirements		
Minimum Lot Size	10,000 SF	6,500 SF, 3 acres (PRUD)
Street Frontage	50 feet	50 feet
Front Yard (Min)	25 feet	25 feet
Rear Yard	25 feet	25 feet
Side Yard	14 feet for 2-story building	14 feet for 2-story building

Structure Height	35 feet	35 feet
Lot Coverage (max)	20%	35%
Parking	Two parking spaces for each dwelling unit.	Two parking spaces for each dwelling unit.
Maximum # of Units in Building (PRUD)	N/A	5 acres or more = 6 units Less than 5 acres = 5 units
Max Building Length (PRUD)	N/A	Buildings w/o garages = 100 feet Building w/ garages = 140 feet
Min Building Setback from External Subdivision Line (PRUD)	N/A	3 or fewer units in building = 25 feet 4 or more units in building = 35 feet
Minimum distance between detached PRUD dwelling unit	N/A	16 feet
Min Recreation Open Space Per Unit (PRUD)	N/A	300 square feet, with minimum contiguous area of 6,000 square feet, and minimum width of 50 feet, not to be located closer than 25 feet from dwelling unit.
Habitable Space (PRUD)	N/A	No habitable space to be located below grade, except basements in units with above ground space

As indicated in the narrative provided with this application, the proposed development could not meet the dimensional requirements of the R-2 district, given that the minimum lot area per dwelling unit is 10,000 square feet, as compared with the 9,846 square feet associated with the proposed plan, and that the R-2 does not permit PRUD style developments. Given that PRUDs are not permitted within the R-2 district, it is difficult to compare the proposed development against the R-2 standards, as they are explicitly intended for single-family homes on individual lots. Based upon these parameters and when only considering non-contract zoning districts within the city, the R-3 is best-suited for this proposed development.

An alternative to either the R-2 or R-3 zone would be a contract zone based upon the 2001 land conveyance agreement. As indicated previously, the City is not in favor of this approach, and has discouraged property owners from pursuing contract zones to the extent practicable. The rationale for this, is that it is more difficult to administer, with 62 contract zones now in existence. While these zones do provide greater predictability in development form, they also (does the city have an official position on why we don't want to pursue a contract zone). Assuming the map amendment being sought is approved, the applicant would not be beholden to the 2001 agreement, and could develop their site to the maximum extent permitted under the R-3 zone. Based upon the total lot size of 14 acres, this equates to a maximum of ninety-three (93) units, assuming that all other dimensional requirements are being met. This density is highly unlikely, given existing site constraints. As stated in their application, the total buildable area of the site is in fact 12.2 acres, which would equate to eighty-one (81) units. Under this application, fifty-four (54) units are identified.

VIII. PLANNING BOARD WORKSHOP – AUGUST 14, 2018

The Planning Board held a workshop to weigh in on the proposed map amendment to R-3 Residential for the 14-acre parcel at 0 Hope Avenue. The Board was generally favorable to the approach, and in particular, rezoning to R-3 Residential as opposed to a new contract zone. The Board raised a few questions regarding density permitted under the R-3 zone, and it was stated that eighty-one (81) units would be the maximum permissible under a PRUD style development. The Board unanimously recommended that the proposal move forward to a public hearing, and no members of the public spoke.

IX. COMPREHENSIVE PLAN ANALYSIS

The applicant has submitted their analysis of the projects conformance with the Comprehensive Plan (refer to Attachment C). The staff has identified the additional goals and policies which are relevant to the proposed housing development and finds the proposal in conformance with the Comprehensive Plan. As stated the purpose of the R-3 Residential Zone is:

> *To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels. Such development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.*

Portland's Plan 2030: Below are a list of state and local goals, as well as future strategies that are being met under this proposal.

A. Environment: A Healthy City

State Goals:

- To protect the quality and manage the quantity of the State's water resources, including lakes, aquifers, great ponds, estuaries, rivers and coastal areas
- To protect the State's other critical natural resources, including without limitation: wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas, and unique natural areas.

Local Goals:

- Identify and protect Portland's critical natural resources
- Restore impaired waterbodies through local efforts in collaboration with regional partners.
- Support agricultural, forest, and scenic resources appropriate to our urban context

Goals from Future Strategies:

1. Improve Water Quality
    - Collaborate with local non-profits, research organizations, private property owners, and surrounding communities to achieve cleaner waters

2. Support Agricultural and Forest Resources
    - Increase the urban tree canopy by 15% above current canopy coverage to benefit air quality, local climate, CO_2 absorption and aesthetics

Staff Discussion: In looking at this proposal, it is important to discuss the 2001 land conveyance agreement, that brought this property into the City of Portland, and formalized protection of 48 acres of undeveloped woodlands and riparian ways along the Presumpscot River. This agreement has provided essential buffer along the river which helps to maintain water quality of the Presumpscot River, and protects one of Portland's most significant tracts of remaining undeveloped land. This is an important resource for both local wildlife and Portland's residents. In exchange for this land, the City granted the applicant increased development rights for their property.

B. Housing: A Livable City

State Goals: To encourage and promote affordable decent, housing opportunities for all Maine citizens

Local Goals:

- Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households.
- Encourage additional contextually-appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.
- Pursue policies to enable people who work in Portland to have the option to live in Portland.
- Encourage quality, sustainable design in new housing development.

Goals from Future Strategies:

1. *Remove Housing Barriers*
    - Evaluate whether current zoning allows for new development consistent with historic patterns of form, density and/or use, as well as whether it allows for priority growth areas.
    - Allow for a range of housing models in City codes, whether small units, co-housing, or others that may suit changing needs and demographics.

2. *Adopt Affordable Housing*
    - Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.
3. Support Age Friendly Housing Options
    - Create, promote, and facilitate safe, affordable and practical housing solutions that will meet the evolving needs of Portland residents as they age.

Staff Discussion: This project is unique in its ability to provide increased housing density, and alternative housing forms in a location proximate to relatively low-density single-family housing, while still being contextually sensitive. The site is sufficiently sized to provide extensive vegetated buffers around the exterior, which better integrates the proposed development into the neighborhood. This development also provides increased housing opportunities for Portland's residents as they age.

C. *Recreation & Open Space: An Active City*

State Goals: To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters.

Local Goals: Portland commits to sustain and build our system of parks, trails, and open spaces to enhance our quality of life, protect our environment, and promote the economic well-being of our remarkable city by the sea. We will:

- Provide high quality, well-designed, well-maintained, safe and integrated parks, trails, public open spaces, and recreational opportunities to all residents.
- Strengthen connections between open spaces
- Preserve the intrinsic values of the park and open space system, including historic resources, vistas, healthy ecosystem functions and biological diversity

Goals from Future Strategies

1. Maintain Existing Facilities
    - Maintain trails, sports fields, courts and playgrounds and other amenities such as seating and landscaping, in good condition.

2. *Ensure Equity*

- Pursue opportunities, in collaboration with partners, to create new open spaces in areas that are currently underserved
- Pursue opportunities for new and enhanced walking and biking trails as a means of filling existing gaps, and investigate paper streets, vacant land, medians, and other often overlooked areas for the potential for park linkages, trails and other improvements to the urban landscape.

3. Connect to the Waterfront
    - Encourage physical and visual access to Portland's waterfront – Casco Bay, Back Cove, and the Stroudwater, Presumpscot, and Fore Rivers – as a "blueway" network and an extension of public space for local and regional recreation and transportation needs.

Staff Discussion: As previously stated, the proposed map amendment is integrally connected to the 2001 land conveyance agreement that formalized the creation of the Presumpscot River Preserve, a 48-acre public preserve with extensive opportunities for outdoor recreation, including hiking trails with vistas of the Presumpscot River and portage for canoes and kayaks. This system provides connections to other publicly accessible open spaces in the vicinity, including Oat Nuts Park and Presumpscot Falls Park.

D. Future Land Use

The future land use map, identifies this area of Portland as continuing to be residential in nature, though does not go into greater detail regarding the specific future of this site or neighborhood. Generally speaking, the comprehensive plan recommends increased residential density to accommodate Portland's changing demographics, household characteristics and growing population. The proposed development speaks to all of these points by providing increased housing density in a contextually sensitive manner that targets a growing sector of Portland's population, those who would seek age restricted housing.

X. STAFF RECOMMENDATION

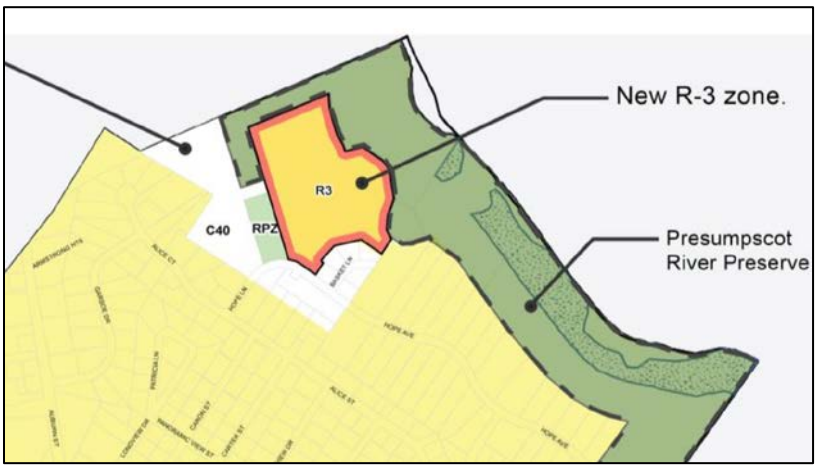
Staff is recommending to the Planning Board a positive recommendation to City Council to adopt the map amendment as presented. This includes three parcels encompassing 0 Hope Avenue (CBLs 448-A-002, 448-A-001, 390-A-001) and to the centerline of the adjoining Hope Avenue right-of-way.

XI. PLANNING BOARD MOTIONS

On the basis of plans and materials submitted by the applicant, the City of Portland Zoning Code, Portland's Comprehensive Plan, public comment, the information provided in public hearing on September 11, 2018 for the project PL-000220-2018 (0 Hope Avenue), and/or other findings as follows:

1. The Planning Board finds that the proposed rezoning to the Residential R-3 zone for the property located at 0 Hope Avenue, as shown on the map below [**is**/**is not**] consistent with the Comprehensive Plan for the City of Portland; and

    Therefore, the Planning Board [recommends/does not recommend] to the City Council adoption of the zoning map amendment for 0 Hope Avenue to the Residential R-3 zone for the area shown on the map below.



XII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Traffic Review (Tom Errico)
2. Utility Capacity Review
3. Life Safety Review

APPLICANT'S SUBMITTALS

A. Zoning Map Amendment Narrative
B. Neighborhood Meeting Certification

PLANS

Plan 1 Zoning Map Amendment Plan
Plan 2 Preliminary Site Layout Plan

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

0 Hope Avenue - Traffic Review Comments

Tom Errico <thomas.errico@tylin.com> Tue, Aug 7, 2018 at 10:13 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Matt – I have reviewed the application materials as it relates to the Zoning Map Amendment and do not expect the change will have a significant impact on traffic mobility and safety in the project area. I would note that a full review of site plan standards will be required and the concept plan provided will need a comprehensive review (this zoning review should not be considered an approval for the concept site plan).

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
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Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

FW: Hope Ave/Ln utility question

Lauren Swett <lswett@woodardcurran.com> Thu, Aug 9, 2018 at 10:09 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt,

See below for some information on the existing sewer utilities for 0 Hope Avenue. There is existing sewer and stormdrain, however the pump station that pumps back to Alice St (see the purple forcemain on the GIS figure attached) is not sized adequately to accommodate the new development as Brad notes below. The Applicant would be required to contribute to the replacement of the existing pump station to accommodate the load they are adding to the system.

If there are any questions, let me know.

Thanks,

Lauren

[Quoted text hidden]

Hope Ave 2018-07-25.pdf
802K

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

0 Hope Ave

Robert Thompson <rmt@portlandmaine.gov> Wed, Jul 18, 2018 at 10:09 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt,

There plan isn't showing the hammerhead turn around at the dead end. The technical manual requires every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be deisgned to facilitate futrue street connectivity and shall always be designed to the right (refer to Figure I-5 of the Technical Manual).

Also in the Technical Manual, no inside turning radius shall be less than twenty-five (25') feet, and not outside turning radius shall be less than one hundred (100') feet.

The will also have to install two fire hydrants in the complex. I'll have to review my comments in UI, and probably update them to reflect the number and location hydrants. I'll email you if there is a change in hydrant numbers or locations.

Thanks,
Mike
[Quoted text hidden]
--
Robert M. Thompson
Division Fire Chief
Portland Fire Department
(207) 874-8400
rmt@portlandmaine.gov

GORRILL PALMER

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

June 21, 2018

PORTLAND ZONING MAP AMENDMENT
FOR LAND OFF HOPE AVE. SOUTH OF THE PRESUMPSCOT RIVER

INTRODUCTION

The subject parcel is approximately 14 acres located off Hope Avenue abutting the Presumpscot River Preserve at the north end of the City. Peter Bouchard, Estelle Estates, LLC currently is under contract to purchase the land to create a residential development that was identified as part of a 2001 Agreement between the City of Portland and former owners Robert Adam and AJS Family Limited Partnership (ATT-1). The Agreement anticipates such development to be allowed *under contract zoning* (Sect. 4(c)). After consultation with Planning Staff, the current City Planning Director Tuck O'Brien recommended a zoning map amendment rather than a conditional/contract zone amendment to facilitate the planned development previously agreed upon in 2001. The proposed zoning map amendment seeks to expand the R-3 zone to include the subject property. Subsequent to the zoning amendment, the development plans will be submitted to the City for subdivision and site plan review and approval.

BACKGROUND AND EXISTING CONDITIONS

In 2001 the subject property (CBL 448-A00-1001; 449-A-2; and 390-A-1) was part of a larger parcel that remained from a land conveyance (approximately 48 acres) to the City of Portland that included property located in the Town of Falmouth. As a condition of the City of Portland accepting this land, an agreement was made between the City and the landowners, that a portion of the land adjacent to the River would become part of the Portland Trails system and be preserved. In exchange for this preservation land, the City agreed to work with the landowners on creating a contract zone amenable to both parties. The Agreement allows for the development of up to 80 age restricted residential dwellings, 55 of which to be constructed as "clustered" or multifamily/duplex units. The 25 single family units were constructed as part of a conditional zone agreement (C-40) approved in July 2005. The remaining 55 units (only 54 currently proposed) are planned for the subject property after the proposed re-zoning.

The applicant submits this application while expressly reserving all of its rights under the 2001 Agreement, including, without limitation, the right to pursue contract zoning in the event the R-3 zone proves to be inadequate to implement the objectives of the 2001 Agreement.

The subject property is undeveloped and is bounded by the Presumpscot River Preserve to the west, north and east. It fronts Hope Avenue to the south and abuts residential properties located on Basket Lane and further down on Hope Avenue. The property has a high degree of relief in topography due to a transecting stream to south and land falling away to the northeast towards the Presumpscot River resulting in a development envelope of less than ten acres in size of the 14 total acres. In locations

where the property is not abutting public open space, it is adjacent to a well-established residential neighborhood.

The property is depicted on the City's Zoning Map as zoned Residential - R-2, however, it is the applicant's understanding that zoning for the property was never adopted by the City Council and remains not zoned. Preliminarily, City Staff have stated that this appears to be the case, though they have not completed their review.

PROPOSED AMENDMENT

The map amendment proposed is simple and straight forward. The objective is to expand the R-3 zone to include the subject property as depicted on the attached plan exhibit (ATT-2). The R-3 zone allows for Planned Residential Unit Developments (PRUDs) which is the regulatory use and review required for the type of development planned for the property and agreed to in the 2001 Agreement. There are no text amendments proposed to the City's Land Use ordinance, Chapter 14, only an amendment to the Zoning Map.

PROPOSED DEVLOPMENT

The attached Sketch Plan (ATT-3) depicts a compact residential development consisting of 27 duplexes accessed by a private loop road with open space designated at the center and along the riparian area to the southeast. The property's net residential area (gross parcel area less watercourses, wetlands, steep slopes, etc.…) is approximately 12.2 acres. The density, when considering the proposed 54 dwelling units planned is 1 dwelling per 9,846± square feet. The R-2 Zone allows for a maximum density of 1 dwelling per 10,000 s.f. while the R-3 is 1 dwelling per 6,500 s.f.

CONFORMANCE WITH THE COMPREHENSIVE PLAN

Allowing the Residential R-3 zone in this portion of the City is consistent with the Comprehensive Plan for these reasons:

The Comprehensive Plan identifies this northern portion of the City as having a population density of up to 10 people per acre. Considering this, the 14-acre subject property might have as many as 140 people. The Plan also indicates the average people per household for this area of the City is between 2.51 and 3 people. Considering this statistic and that the proposed housing is age-restricted (55 years of age and over), household size is likely to be on the lower end of the scale. At 2.51people per 54 proposed dwelling units, there would be approximately 136 residents living at the 14-acre subject property, less than the current population density for this part of the City.

The current Plan looks to encourage an increase in housing throughout the City to help meet its objective to *accommodate 75% of the current daytime population, or approximately 72,000 people*, providing housing opportunities for Portland's current non-resident workforce. A total of 2,557 new housing units over the next 10 years is the estimated need to meet this objective. The zone change

would allow a development that would have a meaningful contribution (>20%) to City's annual goal of more than 255 new dwelling units per year.

The Plan's Future Land Use chapter does not identify anything that can be construed as inconsistent with the proposed zone change in this area of the City. The Plan maintains residential use for this general locale of the City. The proposed zoning amendment is consistent with this, where the R-3 residential zone has very few differences with the adjacent R-2 zone, and those differences would result in modest changes in development.

CONCLUSION

The proposed Zoning Map amendment is appropriate for this part of the City, especially when considering the proposed amendment maintains a residential use and that the difference between the R-2 and R-3 is primarily a modest increase in density and a change in method of development, single-family versus duplexes and multi-family, where the latter is not applicable since the development proposal is for 27 duplexes.

The density limit for the R-2 is 1 dwelling unit per 10,000 square feet, while the R-3 allows for 1 dwelling unit per 6,500 square feet. While on face value these numbers appear to be a significant departure, the actual proposal for development and limit of the total number of dwelling units that can be realized on the subject property amounts to a density just shy of the R-2 density limit. This combined with the likely population for the subject property being within the range of what is the current population density for this part of the City, underscores the modest change that would be anticipated from the zoning map amendment.

With consideration of the above discussion, the Portland Planning Board and City Council should find the proposed map amendment to change the land located north of Hope Avenue that includes the subject property to be appropriate in character and consistent with the Comprehensive Plan.

AGREEMENT BETWEEN

CITY OF PORTLAND

AND

ROBERT L. ADAM AND

AJS FAMILY LIMITED PARTNERSHIP

AGREEMENT made this 21st day of September, 2001 by and between the **CITY OF PORTLAND**, a body politic and corporate, located in Cumberland County and State of Maine (hereinafter "**CITY**") and **ROBERT L. ADAM** and **AJS FAMILY LIMITED PARTNERSHIP**, a Maine Limited Partnership (hereinafter "**DEVELOPER**")

WITNESSETH:

WHEREAS, DEVELOPER is proposing a housing development of up to thirty (30) single family homes along Eagle Avenue, in Portland, as limited herein, known as Presumpscot River Place Phase 3A (hereinafter "**PROJECT**"); and

WHEREAS, application for PRP3 approval is presently pending before the Planning Board; and

WHEREAS, application for **PROJECT** will be submitted; and

WHEREAS, the **CITY** by and through its City Council has determined that it is in the public interest to obtain a portion of property owned by **DEVELOPER** for purposes of passive recreation and access to the Presumpscot River with no vehicular access or use; and

WHEREAS, the **CITY** has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose by agreement the following conditions or restrictions in order to insure that the public interest is protected and as conditions to purchase of the **PROPERTY**; and

WHEREAS, the **CITY** authorized the execution of this Agreement on September 19, 2001;

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

1(a) **DEVELOPER** agrees to sell the property, shown on Exhibit A, attached hereto and incorporated herein by reference, to **CITY** and **CITY** agrees to purchase said property in accordance with the provisions hereof. **DEVELOPER** agrees that the total amount of property conveyed to **CITY** shall be approximately 48 acres. **CITY** agrees said area shall remain undeveloped and/or used for passive recreational purposes.

(b) **CITY** will pay **DEVELOPER** the sum of [redacted] as consideration for the **PROPERTY**. CITY expects that payment shall be from the following sources: [redacted] from the State Land for Maine's Future Program; [redacted] from private fund-raising or other non-profit sources.

In the event that **CITY** does not receive the [redacted] from the Land for Maine's Future Program by November 6, 2001, **CITY** may, at its election, terminate this agreement upon written notice to **DEVELOPER** no later than 5:00 p.m. on November 6, 2001.

(c) Title to **PROPERTY** shall be conveyed to **CITY** by warranty deed free and clear of liens and encumbrances with the exception of a utility transmission line easement and Portland Water District easement, acceptable to **CITY** and with marketable title, with title being insurable by a standard title insurance policy.

(d) Full possession of the **PROPERTY** shall be given at the transfer of title.

Real estate taxes for the fiscal year shall be prorated at closing.

(e) Closing shall be scheduled upon agreement of the parties.

Payment to **DEVELOPER** and closing on the sale of the transfer of **PROPERTY** shall be structured as follows:

(1.) Providing that **CITY** receives funding from the Land for Maine's Future Program by November 6, 2001, closing shall occur within ninety (90) days from the submission by **DEVELOPER** to the Planning Board of the amendment to PRP3 or sixty (60) days from receipt of Planning Board approval for PRP3A, whichever come later.

(2.) At the time of closing, **CITY** shall have the option to tender either the full purchase price to **DEVELOPER**, or a combination of cash and a promissory note with a term of one (1) year, at the prevailing interest rate paid on municipal bonds; the promissory note shall be secured by a mortgage on the property.

2. **DEVELOPER** shall be authorized to develop **PROJECT** substantially in accordance with the site plan shown on Exhibit A.

3(a) **DEVELOPER** shall be authorized to construct up to thirty (30) single family homes along the proposed Eagle Avenue contingent on Planning Board approval. Lots will extend from the western boundary of Presumpscot River Place 3A (PRP3A) to the buffer adjacent to the ravine. House lots will not cross the ravine and will be no closer than five hundred (500) feet from the Presumpscot River, as shown on Exhibit A.

(b) **CITY** will consider the application for additional house lots to bring the total number of lots to thirty (30) in the PRP3A as an amendment to the site plan PRP3 presently pending before the Planning Board, and **CITY** shall not require a new application for said amendment. The no cut restriction on PRP3A shall be same as those on PRP3.

(c) **DEVELOPER** shall not be required to build the Overset Road connection in PRP4 or the Pratt Road Connection in PRP3.

4(a) **CITY** will use reasonable efforts to secure emergency approval of the Maine Legislature for the realignment of the **PROPERTY** line between Falmouth and **CITY** in such a manner as to allow the lot shown on Exhibit B to be brought into the City of Portland (hereinafter "Falmouth Land").

(b) **CITY** will use reasonable good faith efforts to assist **DEVELOPER** in obtaining Planning Board approval for PRP3A and continue to make a good faith effort to facilitate **DEVELOPER**'s approval necessary for the development of PRP3A and Falmouth.

(c) Provided the Falmouth land is brought into Portland and within its legal boundaries, **CITY** agrees that under contract zoning, it will allow up to eighty (80) age-restricted housing units to be developed as compactly as possible but in any event on no more than

twenty (20) acres of developable land. These eighty (80) units will consist of a minimum of fifty five (55) clustered units and a maximum of twenty five (25) single family units (clustered shall be defined as two or more units with common walls).

(d) **CITY** agrees to assist **DEVELOPER** in the building of Hope Road including water and sewer lines, from the Falmouth/Portland property line at PRP3A to the existing Hope Road in Portland at such time as required by Planning Board conditions such that the timing of the completion of the road will not delay the obtaining of building permits and certificates of occupancy by the buyers. Parties shall cooperate in good faith to accomplish road development in such a way as to facilitate future development. The **CITY** shall pay **DEVELOPER** and/or **DEVELOPER**'s contractor the sum of [redacted] for said road and utility construction. Payment shall be made within thirty (30) days of receipt of invoice by **CITY**. **DEVELOPER** agrees to be responsible for the costs required to complete construction of said road and utilities, if any. Construction shall be completed by a contractor of **DEVELOPER**'s choice.

DEVELOPER agrees to deed to **CITY** land required to build said road if said conveyance is required for use of **CITY** funding.

5. **CITY** and **DEVELOPER** shall equally split the cost of the pump stations required for lot development in PRP3A up to a maximum contribution of [redacted] by **CITY**. Costs of constructing the pump station(s) in excess of the total cost of [redacted] shall be born by **DEVELOPER**. Payment shall be made by **CITY** within thirty (30) days from receipt of invoice from **DEVELOPER**, which invoice shall be generated after installation of the Pump Station.

6. **CITY** shall have the option to purchase lots 15 and 16 as shown on Exhibit A. The option to purchase shall be open for thirty (30) days from the pricing of said lots by **DEVELOPER**, but in any event no sooner than the date of the Planning Board approval. In the event that **CITY** exercises this option, lots 15 and 16 may only be used for buffering unless resold. Lots shall not be used for parking of any type of vehicle. **CITY** may resell the lots solely for housing, with conditions in the deeds that houses built on said lots must comply with all standards conditions of construction imposed on lot owners in PRP3A, including approval of building plans by **DEVELOPER**; **CITY** shall have a deed restriction that provides no public access across the Lots.

7. **DEVELOPER** shall provide an easement along the easterly sideline on lot #21 as shown on Exhibit A, a minimum of ten (10) feet in width for purposes of pedestrian access through said lot as shown in Exhibit A.

8. Any amendments required to this Agreement shall be negotiated in good faith by the parties and shall be in writing.

9. In the event a dispute arises under the terms of this Agreement, the parties agree to submit the dispute to binding arbitration. The arbitrator shall be chosen by agreement of

the parties, with each party bearing half of the cost of the arbitration. Arbitration shall be conducted according to the rules of the American Arbitration Association.

10. **CITY** acknowledges that **DEVELOPER** wishes to exchange the **PROPERTY**, as part of a tax-free exchange transaction, for other property of like kind and qualifying use as provided in Section 1031 of the Internal Revenue Code of 1986, as amended, and the Regulations promulgated thereunder. **CITY** agrees to cooperate with **DEVELOPER** in structuring the sale as such an exchange; provided however (i) in no event will **CITY** or its principals be required to incur any obligation or liability with respect to such transaction, (ii) in no event will the closing be delayed as a result of such transaction, and (iii) in no event will such exchange structure result in **CITY** being required to take title to any property other than **PROPERTY**. **DEVELOPER** agrees to indemnify and hold **CITY** harmless from and against any and all loss, damage and claims to or against **CITY** arising from **CITY**'s involvement in such exchange.

11. **CITY** will obtain approval through a contract zone for **DEVELOPER** to stockpile fill on a temporary basis on lots to be identified in PRP3, which lots to be identified in PRP3, which lots shall be as near as practicable to Falmouth lots. The stockpiled fill shall be used to build roads in **PROJECT**. Fill shall be brought in according to a reasonable schedule to be agreed to by the parties.

The above stated restrictions, provisions and conditions are an essential part of the site plan approval of PRP3A and shall run with the subject premises, shall bind **DEVELOPER** and **CITY**, their successors and assigns, as permitted by this Agreement, of said property or any part thereof or interest therein, and any party in possession or occupancy of said property or any part thereof, and shall inure to the benefit of and be enforceable by the **CITY**, by and through its duly authorized representatives.

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

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

PRP3.AGR.DMK.CON.3
9.21.01

WITNESS

CITY OF PORTLAND

By: Joseph E. Gray, Jr.
Its: City Manager

STATE OF MAINE
CUMBERLAND, ss.

September 21, 2001

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

Before me,

Notary Public/Attorney at Law

AJS FAMILY
LIMITED PARTNERSHIP

WITNESS: By: **LLOYD WOLF**

WITNESS: Its: Authorized Partner
ROBERT L. ADAM

STATE OF MAINE
CUMBERLAND, ss. 9-21, 2001

Personally appeared the above-named Lloyd Wolf and acknowledged the foregoing instrument to be his free act and deed.

Before me,

~~Notary Public~~/Attorney at Law
Terry N. Snow

STATE OF MAINE
CUMBERLAND, ss. 9-21, 2001

Personally appeared the above-named Robert L. Adam and acknowledged the foregoing instrument to be his free act and deed.

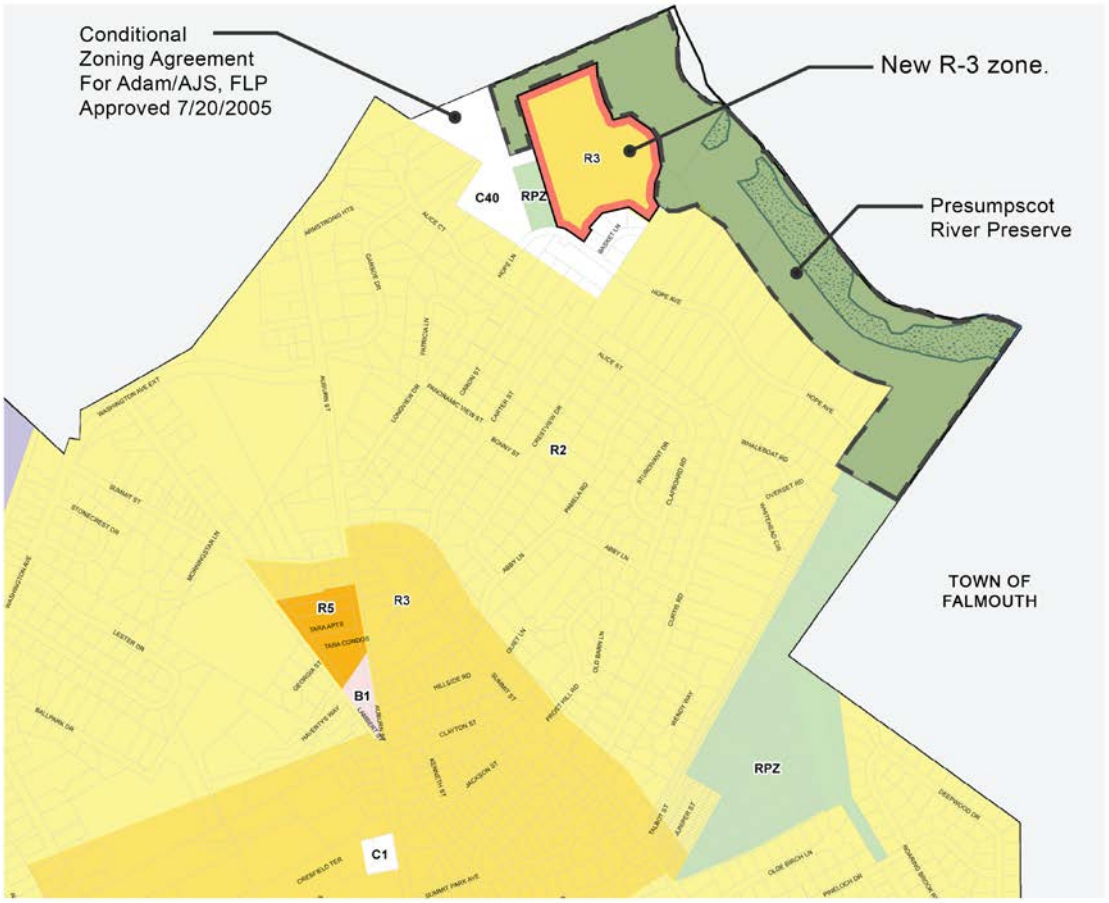
Before me,

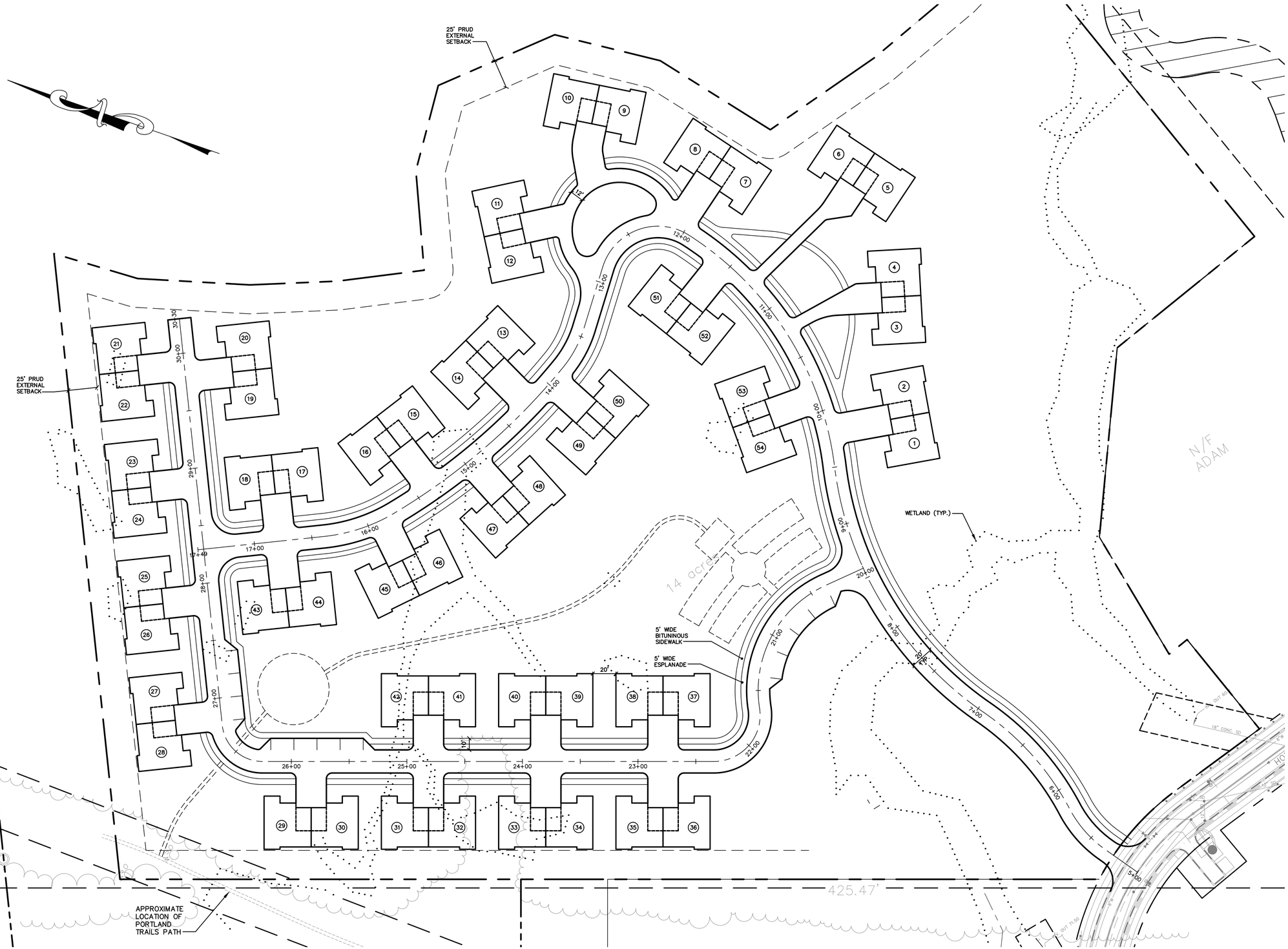
~~Notary Public~~/Attorney at Law
Terry A. Sabra

ATT-2

PROPOSED ZONING MAP AMENDMENT

City of Portland, Hope Avenue Locale





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

Rev.	Date	Revision

Issued For	Date	By

Design: DJG	Draft: CG	Date: MARCH 2018
Checked: DER	Scale: 1"=40'	Job No.: 3356
File Name: 3356-SP_R-3ALT.dwg		

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207.772.2515

Drawing Name:	Sketch Plan
Project:	**Residential Subdivision** Hope Avenue, Portland, ME
Client:	**Estelle Estates, LLC** 39 Darling Ave, South Portland, ME 04106

Drawing No.
C101

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GORRILL PALMER

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

Neighborhood Meeting Certification

I, Chris DiMatteo of Gorrill Palmer, hereby certify that a neighborhood meeting was held on August 7, 2018 at the Lyman Moore Middle School Library at 5:00pm.

I also certify that on Thursday, July 26, 2018, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

Signed,

Chris DiMatteo, Agent of Applicant

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting notes

GORRILL PALMER

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

July 27, 2018

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our application for a Zoning Map Amendment for property located along the northerly side of Hope Avenue.

Meeting Location: Lyman Moore Middle School Library; 171 Auburn Street, Portland
Meeting Date: Tuesday, August 7, 2018
Meeting Time: 5:00 pm-6:00 pm

(The City code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone changes) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.)

If you have any questions, please call (207) 772-2515.

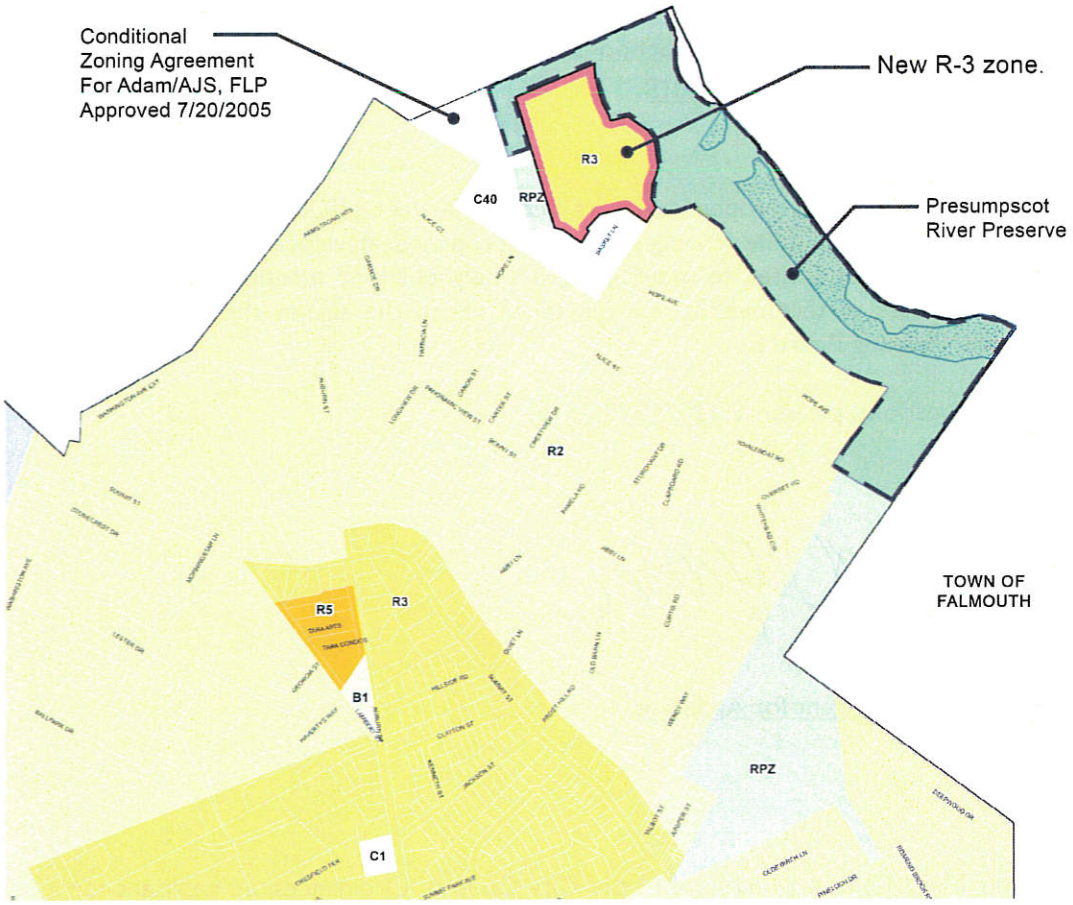
Sincerely,

Christopher Di Matteo, Agent for Applicant

Note:
Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plans were not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street Portland, ME 04101 or by email: to bab@portlandmaine.gov

PROPOSED ZONING MAP AMENDMENT

City of Portland, Hope Avenue Locale



Hope Ave- Zoning Map Amendment
Lyman Moore Library, Portland, ME
JN 3356

Neighborhood Meeting
Sign-In Sheet
8/7/18 @ 5:00PM
Page ___ of ___

Name:	Address:	Tel #:	Email:
Wendy Masan	17 Basket Ln	536 1694	Wlmason @ sbcglobal.net
Will Czaja	26 Basket Lane	217 8678	william.p.czaja@gmail.com
Peter Bouchard	Norman, Hanson + DeTroy	———	→
Kim Cook	City Council Dist 5		Kcook@portlandmaine.gov
CHRIS DiMatteo	GORRILL PALMER		

GORRILL PALMER

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

Neighborhood Meeting Notes

Meeting held at the Lyman Moore Middle School Library and started at 5:03 pm.

Chris DiMatteo, with Gorrill Palmer provided a brief overview of the zoning map amendment application. Peter Bouchard, with Norman, Hason and DeTroy, developer, provided history of the property's contract with the City.

The attendees had general questions regarding the R-2 and R-3 zones and about the proposed residential development. It was stated that while the R-3 zone allows for a higher density, the proposed development is only slightly higher in density than what is allowed in the R-2 Zone.

There was a specific question on the use of an existing easement for access between the property and neighboring Alice Street. It was stated that it can be looked into when the proposed development is reviewed for Site and Subdivision plan regulations, after the zoning map amendment process is completed.

Time line and next steps were discussed and it was conveyed that there will be a first meeting with the planning board on 8/14. After the Planning Board reviews the proposed zoning map amendment and makes a recommendation for adoption, there will be additional meetings with the City Council. All meetings will have an opportunity for public input.

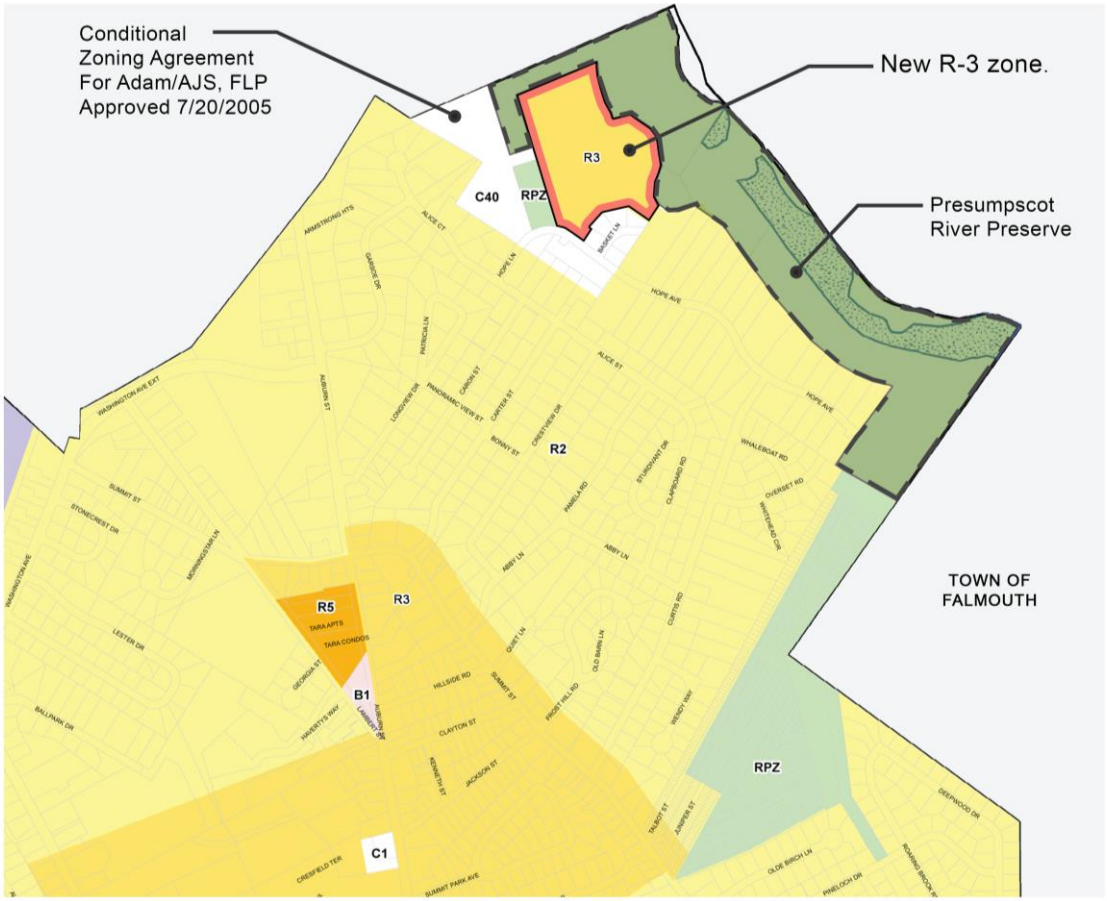
There was general discussion on the type of development that will be constructed with the zone change.

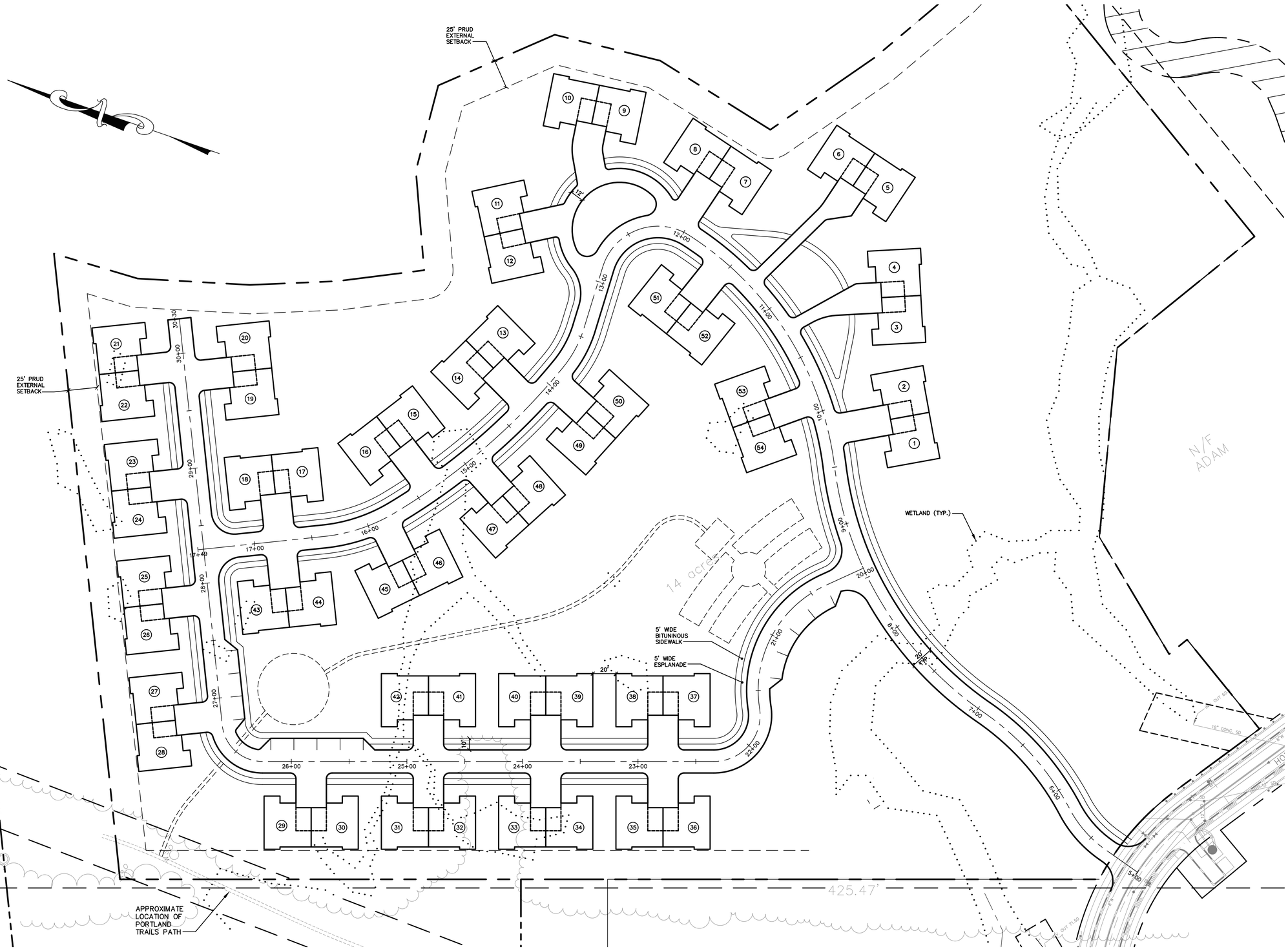
Meeting adjourned at approximately 6:00 pm.

ATT-2

PROPOSED ZONING MAP AMENDMENT

City of Portland, Hope Avenue Locale





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Drawing Name:	Sketch Plan
Project:	**Residential Subdivision** Hope Avenue, Portland, ME
Client:	**Estelle Estates, LLC** 39 Darling Ave, South Portland, ME 04106

Drawing No.
C101

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PLANNING BOARD REPORT
PORTLAND, MAINE

ScrubaDub Car Wash – New Convenience Store
1185 Forest Avenue
Level II Site Plan and Conditional Use Applications
PL-000113-2018, PL-000120-2018
B & D MEREALTY, LLC, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: September 11, 2018	Prepared by: Matthew Grooms, Planner Date: September 7, 2018

I. INTRODUCTION

B & D MEREALTY, LLC has submitted a Level II site plan and conditional use application for their property at 1185 Forest Avenue (ScrubaDub Car Wash), with the intent of relocating and expanding the convenience store, adding additional parking and reconfiguring the existing canopy layout. This property is located in both the B-2 Community Business and I-L Low Impact Industrial zoning districts, with the B-2 occupying roughly the front half of the site (closer to Forest Avenue) and the I-L occupying the rear half of the site. The proposed convenience store would be located entirely within the B-2 zone. Retail, when combined with gasoline or fuel sales, is considered an 'auto service station', and is defined as a conditional use in the B-2 zone, subject to the zone-specific conditional use standards, Section 14-183 and general conditional use standards, Section 14-474. Conditional use applications, when submitted in conjunction with a Level II site plan, are required to go before the Planning Board for review and approval.

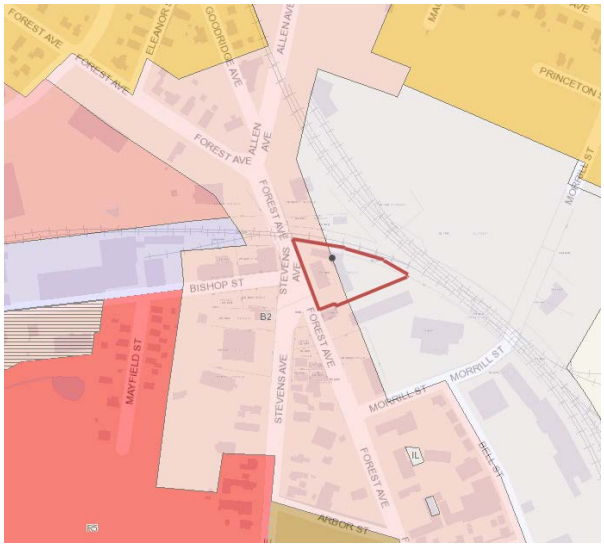

Figure 1: Project location with zoning context

A total of seventy-five (75) notices were sent to property owners within 500 feet of the site and interested party list. A legal ad ran on the August 31st and September 3rd, 2018 editions of the Portland Press Herald. As of the writing of this report, no public comments have been received by the Planning Office.

Applicant Name: Daniel E. Paisner, B & D MEREALTY, LLC
Consultants: Tom Saucier, P.E., Site Design Associates; Mark Chaloupecky, Port City Architecture; AMEC Foster Wheeler, Surveyor

II. PROJECT DATA

Existing Zoning	B-2 Community Business, I-L Low Impact Industrial zones
Existing Use	Auto Service Center with fuel sales, retail, auto detailing and car wash
Proposed Use	Same, with expanded retail, additional parking

	Existing	Proposed	Net Change
Building Footprint	542 SF	1,333 SF	791 SF
Building Floor Area	542 SF	1,333 SF	791 SF
Impervious Surface Area	49,693 SF	49,693 SF	0 SF
Parking Spaces (on site)	19	25	6
Bicycle Parking Spaces	0	0	0
Estimated Cost of Project	$250,000		

III. PROPOSED PROJECT DESCRIPTION

A. Existing Conditions

The subject property is located at Morrill's corner in close proximity to the intersections of Forest Avenue with both Stevens Avenue and Allen Avenue. Within this immediate vicinity uses include retail, food services, medical and substance abuse facilities and low-impact industrial activities. Forest Avenue itself experiences very high traffic volumes, which has influenced review of this proposal due to the difficulty of either entering or exiting the subject site.

Figure 2: View of the site through the central curb cut. Note, the 'food mart' structure and portion of the canopy directly overhead is to be removed.

In its current configuration, the site features a large canopy under which is located two (2) pump islands with eight (8) fueling positions and a small 542 square foot convenience store. This canopy is located towards the front of the property, and separated from Forest Avenue via a two-way drive aisle of approximately twenty-eight (28) feet and a narrow four (4) foot wide box planter. To the south and east of the fuel canopy are vacuum stations, housed either beneath a brick open-air structure or as stand-alone stations. To the north of the fuel canopy is the drive-through car-wash, which can be accessed via a queuing lane that begins at the southerly most entrance and runs along the perimeter of the property.

At present, three separate curb cuts and driveways provide access to the site, with the northerly most driveway serving as the exit from the drive through car wash. With approximately 96% impervious surface, the property features very limited site landscaping and is arrayed so as to provide maneuvering space and stations for vehicle detailing along with seven (7) off-street parking spaces.

B. Proposal

The proposal involves demolition of a portion of the existing fuel canopy (approximately 1,200 square feet) as well as demolition of the small 542 square foot convenience store. This work will free up space at the northwesterly corner of the site which under this proposal would be converted to seven (7) additional off-street parking spaces. Adjacent to the existing car wash, the applicant is proposing to construct a 1,330

square foot addition that would house an expanded convenience store.

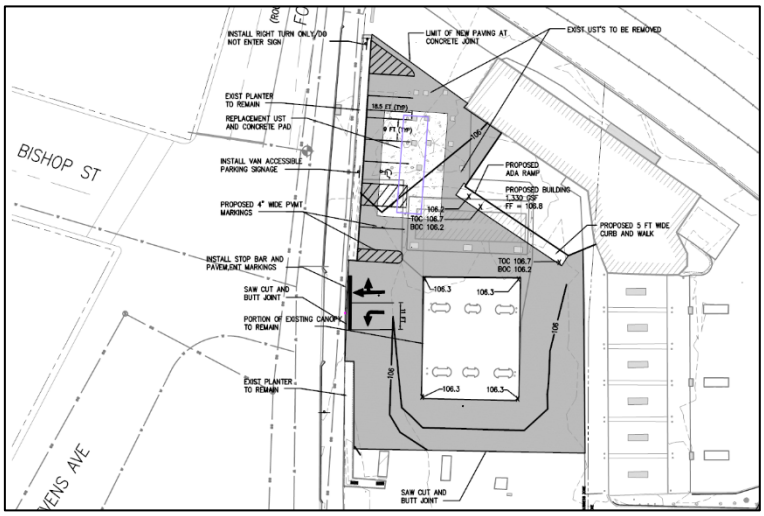

Figure 3: Proposed site plan with additional parking, reconfigured canopy and convenience store addition

The design of the addition features a largely transparent store-front with a prominent entrance identified by a canopy and placement of the wall sign. The use is clearly identifiable as retail and features building materials that are complimentary to the existing structure and other nearby uses. Materials include a red brick matched with the brick of the car wash and open-air vacuum structure, metal vertical siding tinted red, and larger metal façade panels tinted black. The structure gains further visual interest through use of a curved, asymmetrical roofline over approximately two-thirds of the proposed addition.

Aside from the improvements previously described, other proposed site work is very minimal. The applicant will be installing wall mounted LED lighting on the proposed building addition and will make minor improvements to landscaping within the existing planter areas along the property's frontage.

C. Morrill's Corner Realignment

Maine DOT, in conjunction with the City of Portland, has begun preliminary discussions regarding realignment of Morrill's Corner, with the intent of creating a more efficient and safe intersection between Bishop Street, Forest Avenue and Stevens Avenue. The preliminary concept, completed as part of the Portland-South Portland Smart Corridor Plan, conducted in 2017 (which has not been formally adopted by the City Council as an approved Master Plan), shows Stevens Avenue being realigned with the southerly driveway for the site, and a new traffic signal that would control the intersection between Stevens Avenue, Forest Avenue and this site. This realignment, according to the applicant would dramatically impact access to their site.

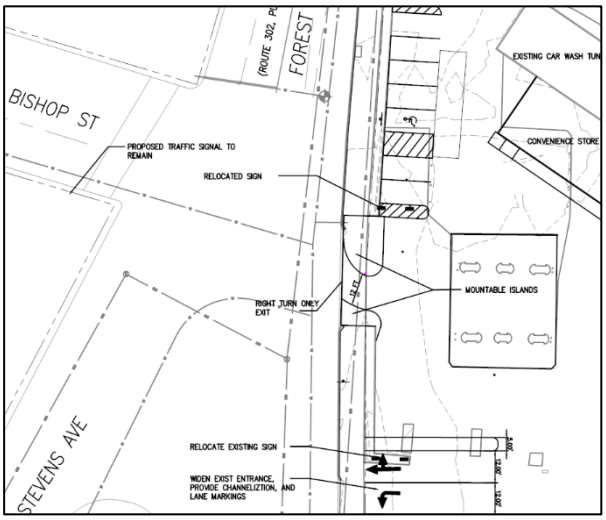

Figure 4: Conceptual Plan Developed by Applicant for Morrill's Corner Redevelopment. Note, middle driveway is reduced to single-lane exit only with mountable curb.

Initially, city staff requested that the center curb cut be closed, given that just two curb cuts are permitted per site. In response, the applicant stated that the northerly and center driveways are required for truck deliveries, and closing of that center curb-cut would be detrimental to site circulation. Additionally, under the current intersection configuration, adding additional traffic to the northerly driveway would exacerbate traffic congestion along Forest Avenue, that typically backs up to this entrance.

Due to these projected conditions, the applicant has requested that all three curb-cuts and driveways be maintained in their current condition, with the understanding that the applicant would work with MaineDOT and the City in redeveloping this intersection at a later date.

The staff are satisfied with this approach, and have encouraged the applicant to develop a conceptual reconfiguration based upon the draft concept plan, which has been provided. This plan shows the center driveway being reduced to a right-only exit with no entry, and mountable curbing for truck use.

For the reference of the Board and members of the public, other improvements to Morrill's Corner under this concept plan would be as follows:

- Creating a higher quality pedestrian environment and streetscape with street trees and other plantings that screen parking
- Relocation of the traffic signal at Bishop Street to Stevens Avenue, which would move the signal-controlled driveway movements from opposite Bishop Street (where they currently are) to opposite Stevens Avenue
- Creating bicycle lanes through the intersection

IV. PUBLIC COMMENT

As of the writing of this report, no public comments have been received by the Planning Division. Further, since this is a Level II Site Plan, no neighborhood meeting was required.

V. RIGHT, TITLE & INTEREST

The applicant has provided a deed demonstrating ownership of the subject property (Attachment F).

VI. FINANCIAL AND TECHNICAL CAPACITY

The estimated cost of the project is $250,000, and the owner has indicated that proposal will be self-financed (Attachment G). In terms of technical capacity, the applicant has provided a profile of architectural and engineering consultants working on the project (Attachment H).

VII. ZONING ANALYSIS

A. Dimensional Requirements:
Given that this proposal involves redevelopment of an existing site, it is not required that all dimensional requirements of the zone be met, only that their level of non-conformity not be increased. For example, the proposal does not meet pavement setbacks required under the I-L zone or impervious surface requirements for either the B-2 or I-L zones. Respectively, the proposed pavement setback is between three (3) and four (4) feet whereas the requirement is fifteen (15) feet, and the amount of impervious surface is measured at 96%, whereas the requirement is 80% for the B-2 zone and 60% for the I-L zone. Aside from these two standards, the proposal was found to meet all other applicable dimensional requirements.

B. Conditional Use Review:
As stated in the introduction, the expansion of the 'auto service station' use, triggers a conditional use review by the Planning Board of compliance with the zone-specific conditional use standards, Section 14-183, and the general conditional use standards, Section 14-474.

a. Section 14-183(a) – Auto-Oriented Conditional Uses in the B-2

i. Standard - A landscape buffer, no less than 5 feet wide, shall be located along street frontages (excluding driveways). The buffer shall consist of a variety of plantings in accordance with the City of Portland Technical Manual

1. Applicant Response: An existing buffer in the form of a raised planter which may be slightly less than 5 feet in width, runs along the street frontage.

2. Staff Discussion: Given site constraints and maneuvering requirements for delivery vehicles, the staff is satisfied with a limited vegetative buffer, though the staff have suggested more substantial and permanent plantings along the property's frontage. A draft condition of approval to this effect has been included in the Planning Board motion.

ii. Standard – Car washes shall be designed to avoid tracking of residual waters into the street.

1. Applicant Response: A trench drain is located northeasterly of the car wash exit to collect residual car wash water and minimize tracking into the street.

2. Staff Discussion: Staff understand that the redevelopment of Morrill's corner will likely require upgrades to existing stormdrain infrastructure for the site, including this trench drain. Based upon this fact and the applicant's assertion that the drain is operating effectively, the staff are satisfied that this standard is being met.

b. Section 14-474 – General Conditional Use Standards

i. Standard – The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone

1. Applicant Response: Trip generation for a convenience store with fuel pumps is based on an average of the trip generation for the convenience store and the trip generation for the fueling positions. In this case, there is also a car wash located on the site, but because the car wash will remain as is, with no expansion, the trip generation estimate for the store was based on the fueling positions and car wash square footage. Based on the ITE trip generation manual, 9th addition:

Existing Site		
	AM Peak Hour	**PM Peak Hour**
542 sf convenience store	22	28
8 fueling positions	133	153
Average Trips	75	91
Total Existing Trips	**75**	**91**
Proposed Site		
1,333 sf convenience store	55	68
8 fueling positions	133	153
Average Trips	94	111
Total Proposed Trips	**94**	**111**

As noted, AM and PM peak hour trips are estimated to increase 19 and 20 trips respectively. Neither estimated increase will significantly impact the surrounding streets or driveway operations.

Hours of operation will remain unchanged as a result of the improvements, there will be no increase in the pavement area, and the number of parking spaces required are not significantly greater than existing, nor is the number significantly greater than surrounding or other permitted uses.

The provision of formal parking spaces on the site, along with improved circulation due to the relocation of the existing store and removal of a portion of the canopy, both enhance site circulation.

2. Staff Discussion: The City's Traffic consultant, Tom Errico, reviewed the proposal and was satisfied that the proposed expansion would not have a detrimental impact on the surrounding street-scape, and would be comparable to other uses within the vicinity. Mr. Errico has requested several alterations to the plan that would facilitate better site access and circulation. (for more details please see discussion under site plan review standards (Attachment 1)). These alterations have been drafted as conditions of approval.

   The staff acknowledge that hours of operation are not to change, that the pavement is not to expand and that parking space counts are not dramatically increasing nor out of context with surrounding uses.

   Assuming that the changes requested by Mr. Errico are implemented, the staff find that this conditional use standard has been met.

ii. Standard – The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting or litter.

   1. Applicant Response: The proposed use will remain relatively unchanged from the existing use in size and scope. The new store will be connected to the existing water and sewer services. No new activities impacting the existing noise levels, lighting, odor, glare, dust, litter or emissions are proposed.

   2. Staff Discussion: The staff agrees with the applicant's assessment and finds this standard to have been met.

iii. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

   1. Applicant Response: The design and operation of the proposed use will remain relatively unchanged from existing conditions, including but not limited to

landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and material storage and therefore will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

2. Staff Discussion: The staff agrees with the applicant's assessment and in review of this project, requested that more substantial buffer plantings be provided to screen this site, which has been made a draft condition of approval. Assuming this condition is met, the staff finds the project to be in compliance with this standard.

VIII. SITE PLAN REVIEW

Due to the scope of this project, the proposal before the Board is a Level II Site Plan, typically reviewed at the administrative level. However, given that the conditional use component of this project requires Planning Board review, the staff are also having the Planning Board review the plan for compliance with the city's site plan standards. A list of those standards and discussion of compliance can be seen below.

A. Transportation Standards

a. Impact on Surrounding Street Systems
As stated under the conditional use review section, the proposal involves the addition of nineteen (19) AM and twenty (20) PM Peak Hour trips, which according to Mr. Errico, will not have a detrimental impact on roadway capacity. In addition, the staff acknowledge that additional site improvements will be required at the time of the Morrill's Corner realignment project occurs, and is satisfied that street integration at present, given that this is an existing site being only partially redeveloped.

b. Access and Circulation
To improve site access and circulation, Mr. Errico is requesting that the following improvements be made, which have been drafted as conditions of approval (Attachment 1):
   i. An entry arrow shall be installed for the main middle driveway
   ii. A right-turn exit arrow shall be installed for the northerly driveway
   iii. An entry arrow shall be installed for the southerly driveway. A "Do Not Enter" sign shall be installed reinforcing the entry only condition.

c. Public Transit Access
The proposed project is located less than a quarter mile from the nearest transit stop as required by the site plan ordinance.

d. Parking
Per Division 20, the city's off-street parking standards, no parking is required for retail uses under 2,000 square feet in area. The proposed convenience store totals just 1,330 square feet, and a total of fifteen (15) parking spaces are being provided, including those located at fuel pumping stations.

e. Transportation Demand Management (TDM)
A TDM plan is not required.

B. Environmental Quality Standards

a. Preservation of Significant Natural Features

There are no known significant natural features on the site.

b. Landscaping and Landscape Preservation
With an impervious surface area of approximately 96%, there is extremely limited on-site landscaping. Jeff Tarling, the City Arborist, has reviewed the proposal and made the following recommendation to augment on-site landscaping (Attachment 4). The recommendation has been incorporated into the updated landscaping plan.

i. Recommendations for the 1185 Forest Avenue project would be to add into the landscape 3 groups of ornamental grasses that would give the landscape more of a 3-season appeal and help screen or buffer the site without causing a hinderance to traffic movements or security. The three beds would likely contain 6 or 7 plants each, 3 gallon size.

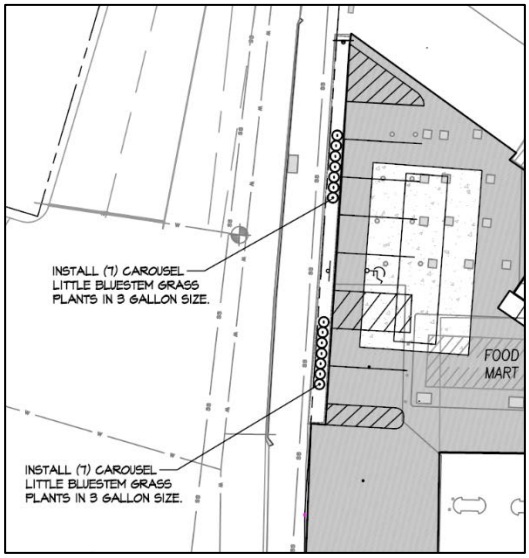

Figure 5: Updated Plan showing placement of ornamental grasses.

We like the Little Bluestem Grasses, there are a number of cultivars, 'Carousel' is one of the recommended types.

c. Water Quality/Storm Water Management/Erosion Control
The proposal before the Board involves a zero-net gain in impervious surface, and as such, the applicant was not required to meet Maine DEP Chapter 500 Flooding or General Standards. Further, given that the total non-roof redevelopment consists of fewer than 5,000 square feet, the applicant is not required to meet the Maine DEP Chapter 500 Redevelopment standard. The Basic Standard, which pertains to erosion and sedimentation control, has been met by the applicant (Attachment 2).

C. Public Infrastructure and Community Safety Standards

a. Consistency with Related Master Plans
While not an approved Master Plan, the 'Portland-South Portland Smart Corridor Study' conducted in 2017 has influenced discussions pertaining to this project. Initially, the staff suggested closing the middle curb-cut, in line with the city's transportation/traffic standards. However, after discussing site constraints with the applicant and uncertainty surrounding future improvements to Morrill's Corner, the staff are no longer pursuing closure of this curb cut at this time. A concept plan was drafted by the applicant showing a potential reconfiguration based upon the draft corridor study (Plan 7).

b. Public Safety and Fire Prevention
Chief Thompson with the Portland Fire Department has reviewed the proposal and has indicated that he is satisfied with the proposal as shown.

c. Availability and Capacity of Public Utilities

The staff have requested 'ability to serve' letters from the Portland Water District and Central Maine Power to confirm adequate utility capacity. Submission of these letters has been drafted as a condition of approval.

D. Site Design Standards

a. Massing, Ventilation and Wind Impact
The proposal is not anticipated to have adverse impacts related to massing, ventilation or wind.

b. Shadows
No shadow impacts on publicly accessible open spaces are anticipated

c. Snow and Ice Loading
Based upon the roof design, the staff is not concerned with snow or ice loading, as accumulated snow and ice is directed away from pedestrian areas, and is not within the vicinity of adjacent properties or public rights of way.

d. View Corridors
The site is not located within an established view corridor and is not anticipated to cause adverse impacts to view protection areas within the city.

e. Historic Resources
The site is not located within or near an established historic district.

f. Exterior Lighting
According to the applicant, site lighting levels should actually be reduced from the existing condition. New lighting will consist of wall pack LED lighting attached to the convenience store and intended for low-level lighting of the building's convenience store entrance (Attachment I).

The staff is recommending a condition of approval that a lighting plan for the building mounted and canopy lights be submitted for review and approval against the city's technical standards.

g. Noise and Vibration
The proposal is not expected to result in adverse impacts related to noise or vibration.

h. Signage and Wayfinding
A wall-sign is proposed over the convenience store entrance that is complimentary to existing signage and the size and scale of the building. The applicant is aware that a separate sign permit will be required and that approval of this application does not constitute approval of the sign illustrated on the building's elevations.

i. Zoning Related Design Standards
The project at 1185 Forest Avenue was reviewed by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Shukria Wiar, Planner, against the B-2 Commercial Business Zones Standards (Section (d) of the City of Portland Design Manual).

Design Review Comments (Attachment 3): (Questions and unmet standards in red)

(d) B-2 Commercial Business Zones

Standard (1) a. Urban Street Wall – Proposal is an addition to an existing building set away from the street; many blocks within this context do not establish a strong street wall. The building, though not at the street, does extend towards the street and improves the existing condition. Staff would like to see a more permanent and durable planter edge or landscape with height that provides screening and holds this edge between the sidewalk and property – existing conditions are low, wood timber edges that do not screen, are not urban in character.

Standard (1) b. Mixed Uses – Not applicable

Standard (1) c. Building Entrances – The addition provides a new, more visible entrance into the store portion of the building oriented towards the street. Door is emphasized with an awning, glass, and signage.

Standard (1) d. Windows – Windows are provided along street frontage as required – high level of fenestration, .7 VT transparent glass required.

Standard (1) e. Façade Character – The addition is creating a more active portion of the building with high transparency of the storefront windows – oriented towards the street but not adjacent given the existing conditions.

Standard (1) f. Building Design – Building design conveys its commercial nature and uses a curved roof to add dynamic, commercial character to a one-story building. Though this form does not copy the existing building forms, staff found it to be compatible given the varied character found in the context and also considering that the building is set back from the street and an addition to an existing, one-story building.

Standard (1) g. Building Materials – The project uses brick to match existing, metal panel with storefront, and a standing seam metal roof. The surrounding context is varied in materials, quality, and character but often with low-rise, traditional brick or clapboard and some industrial and commercial buildings. Staff review found that the building is sufficiently compatible using the existing brick to fit into the existing building and surrounding context with the metal being appropriate for the kind of building and reflecting the commercial use in a neighborhood that has many materials used.

Standard (1) h. Building Scale – Not applicable

Standard (1) i. Landscaping and Buffers – Site includes fences on property edges. Low planters exist between site and sidewalk, however, staff would like to see understory plantings that provide screening between the sidewalk and site to meet this standard. Neighboring uses are rail line and storage – not sensitive uses.

Based upon the comments from the City's Urban Designer, the staff have drafted a condition of approval requiring that an updated landscape plan be submitted, showing more substantial and permanent buffer plantings that provide a suitable edge for the site and adequate screening of the site.

Figure 6: Proposed Building Elevation

IX. STAFF RECOMMENDATIONS

The Planning Division recommends approval of the Level II Site Plan and Conditional Use application with the recommended conditions of approval listed under the proposed Planning Board motion.

VI. PROPOSED MOTIONS

A. Development Review

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on September 11, 2018 for application PL-000113-2018 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 applying for a Building Permit

1. The applicant shall provide 'ability to serve' letters from the Portland Water District and Central Maine Power for the proposed expansion.
2. The location of building and canopy mounted light fixtures shall be shown on the site plan, and an accompanying photometric plan shall be provided which demonstrates compliance with Section 12 of the City's Technical Manual. All proposed lighting shall be full cut off.
3. The applicant shall submit an updated site plan that addresses Tom Errico's comments dated September 7, 2018, which request the following improvements:
    a. An entry arrow shall be installed for the main middle driveway
    b. A right-turn exit arrow shall be installed for the northerly driveway
    c. An entry arrow shall be installed for the southerly driveway. A "Do Not Enter" sign shall be installed reinforcing the entry only condition.
4. Per Design Review comments dated August 27, 2018, the applicant shall submit an updated landscape plan to be reviewed and approved by the City Arborist and Urban Designer. The plan shall include a more substantial planter that provides an appropriate edge along the site and offers additional site buffering.
5. The applicant shall provide bicycle parking at a ratio of one bicycle parking space for every ten (10) vehicle spaces, for a total requirement of five (5) bicycle parking spaces.

Prior to Issuance of a Building Permit

6. The applicant shall continue to coordinate with the Department of Public Works on the development of a construction management plan.

Ongoing Conditions of Approval

7. The number, location and configuration of future driveway locations will be determined in conjunction with the redesign of Morrill's Corner.
8. The configuration of future parking and required landscape buffering/screening will be determined in conjunction with the redesign of Morrill's Corner.

B. Conditional Use Review

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for application PL-000120-2018 relevant to the conditional use standards as listed under Sections 14-183(a) and 14-474 of the land use code; and the testimony presented at the planning board hearing, the Planning Board finds that the plan **[is** or **is not]** in conformance with the conditional use standards of the land use code.

VII. ATTACHMENTS

STAFF REVIEW

1. Final Traffic Review Comment
2. Final Stormwater and Utility Review Comments
3. Final Design Review Comments
4. Landscaping Comment

APPLICANT'S SUBMITTAL

A. Cover Letter with Technical Assessment
B. Site Plan Application
C. Checklist for Level II and III Site Plan
D. Conditional Use Application
E. Checklist for Conditional Use
F. Right, Title & Interest
G. Financial Capacity
H. Technical Capacity
I. Lighting Cut Sheet
J. Zoning Analysis
K. Response Letter 07.24.2018
L. Response Letter 08.22.2018
M. Response Letter – Landscape Comments
N. Portland Water District Correspondence
O. Construction Management Plan

PLANS

Plan 1 Boundary Survey
Plan 2 Existing Conditions Plan
Plan 3 Site Plan
Plan 4 Architectural Elevations and Renderings
Plan 5 Landscape Plan
Plan 6 Erosion Control Plan & Details
Plan 7 Concept Site Plan – Morrill's Corner Redevelopment Scenario

Portland Maine | Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Fwd: 1185 Forest Avenue - Final Traffic Comments

1 message

Barbara Barhydt <bab@portlandmaine.gov> Thu, Sep 6, 2018 at 4:34 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress Street 4th Floor
Portland, ME 04101
(207) 874-8699
Fax: (207) 756-8256
bab@portlandmaine.gov

---------- Forwarded message ----------
From: **Tom Errico** <thomas.errico@tylin.com>
Date: Thu, Sep 6, 2018 at 3:47 PM
Subject: 1185 Forest Avenue - Final Traffic Comments
To: Barbara Barhydt <bab@portlandmaine.gov>
Cc: Shukria Wiar <shukriaw@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Barbara – I have reviewed the revised plan and offer the following final traffic comments.

- An entry arrow shall be installed for the main middle driveway.
- A right-turn exit arrow shall be installed for the northerly driveway.
- An entry arrow shall be installed for the southerly driveway. A “Do Not Enter” sign shall be installed reinforcing the entry only condition.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

1185 Forest Avenue

1 message

Lauren Swett <lswett@woodardcurran.com> Fri, Sep 7, 2018 at 1:23 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt,

I took a look back through my prior comments and their responses, and can provide the following.

Their letter response on July 24 adequately addresses the redevelopment and basic standard questions that I had originally posed. They do not meet the threshold of 5,000 SF of redeveloped non-roof impervious surface, and I also agree with their stance that the repaving of the parking lot where the tank is being replaced is maintenance, not redevelopment. Their note for erosion control is adequate. As the site is mostly impervious to start, their biggest task for erosion control will be to ensure that tracking of sediment onto the City street is minimized.

They have uploaded their correspondence with PWD, which indicates that the water district will be providing them with an ability to serve notice once the Water District's review is complete. That will need to be provided to the City when it is available. There is no change to service, but PWD still reviews.

The response letter from August 22, as a follow-up to the meeting we had with the Applicant, notes that there are no known issues associated with the trench drain that connects to the stormdrain in Forest Avenue. They are not proposing to change any of the stormwater systems on the site at this time, and they manage the carwash runoff within the carwash building. It is my understanding that design is underway for Forest Avenue in this area. At the time that work is completed, the driveway entrances may be reconfigured. The utilities in the street may also be impacted. At that time, the trench drain may need to be replaced and drainage reconfigured.

Please let me know if you have any other questions on this one.

Thanks,

Lauren

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

41 Hutchins Drive

Portland, Maine 04102

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

(800)426-4262 (office)

Email: lswett@woodardcurran.com

*Licensed in Maine and Wisconsin

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www.woodardcurran.com

Planning and Urban Development Department
Planning Division

Subject:	B-2 Design Review – 1185 Forest Avenue
Written by:	Caitlin Cameron, Urban Designer
Date of Review:	Friday, August 3 2018 (revised August 27)

The project at 1185 Forest Avenue was reviewed by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Shukria Wiar, Planner, against *the B2 Commercial Business Zones Standards* (Section (d) of *the City of Portland Design Manual*).

Design Review Comments: *(questions and unmet standards in red)*

(d) B-2 Commercial Business Zones

Standard (1) a. Urban Street Wall – Proposal is an addition to an existing building set away from the street; many blocks within this context do not establish a strong street wall. The building, though not at the street, does extend towards the street and improves the existing condition. Staff would like to see a more permanent and durable planter edge or landscape with height that provides screening and holds this edge between the sidewalk and property – existing conditions are low, wood timber edges that do not screen, are not urban in character.

Standard (1) b. Mixed Uses – Not applicable

Standard (1) c. Building Entrances – The addition provides a new, more visible entrance into the store portion of the building oriented towards the street. Door is emphasized with an awning, glass, and signage.

Standard (1) d. Windows – Windows are provided along street frontage as required – high level of fenestration, .7 VT transparent glass required.

Standard (1) e. Façade Character – The addition is creating a more active portion of the building with high transparency of the storefront windows – oriented towards the street but not adjacent given the existing conditions.

Standard (1) f. Building Design – Building design conveys its commercial nature and uses a curved roof to add dynamic, commercial character to a one-story building. Though this form does not copy the existing building forms, staff found it to be compatible given the varied character found in the context and also considering that the building is set back from the street and an addition to an existing, one-story building.

Standard (1) g. Building Materials – The project uses brick to match existing, metal panel with storefront, and a standing seam metal roof. The surrounding context is varied in materials, quality, and character but often with low-rise, traditional brick or clapboard and some industrial and commercial buildings. Staff review found that the building is sufficiently compatible using the existing brick to fit into the existing building and surrounding context with the metal being appropriate for the kind of building and reflecting the commercial use in a neighborhood that has many materials used.

Standard (1) h. Building Scale – Not applicable

Standard (1) i. Landscaping and Buffers – Site includes fences on property edges. Low planters exist between site and sidewalk, however, staff would like to see understory plantings that provide screening between the sidewalk and site to meet this standard. Neighboring uses are rail line and storage – not sensitive uses.

Portland Maine | Yes. Google's good here.

Barbara Barhydt <bab@portlandmaine.gov>

Re: 1185 Forest Ave Comments

1 message

Jeff Tarling <jst@portlandmaine.gov> Wed, Aug 15, 2018 at 8:20 AM
To: Tom Saucier <tsaucier@sitedesignassociates.biz>
Cc: Shukria Wiar <shukriaw@portlandmaine.gov>, Mark Chaloupecky <mark@portcityarch.com>, Barbara Barhydt <bab@portlandmaine.gov>

The revised plan looks good as shown.

The plants should be available in the local nursery trade and we can help find them if needed.

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

On Tue, Aug 14, 2018 at 9:32 AM, Tom Saucier <tsaucier@sitedesignassociates.biz> wrote:

> Hi Jeff
>
> Any comments on this?
>
> Thanks
>
> Tom
>
> Tom Saucier, P.E.
>
> Site Design Associates
>
> 23 Whitney Way
>
> Topsham, Maine 04086
>
> 207-449-4275
>
> ---
>
> **From:** Tom Saucier <tsaucier@sitedesignassociates.biz>
> **Sent:** Wednesday, August 8, 2018 11:48 AM
> **To:** 'Jeff Tarling' <jst@portlandmaine.gov>

Cc: 'Shukria Wiar' <shukriaw@portlandmaine.gov>; 'Mark Chaloupecky' <mark@portcityarch.com>; 'Barbara Barhydt' <bab@portlandmaine.gov>
Subject: RE: 1185 Forest Ave Comments

Hi Jeff

Can you please let us know if this addresses your comments below?

Thanks

Tom

Tom Saucier, P.E.

Site Design Associates

23 Whitney Way

Topsham, Maine 04086

207-449-4275

---------- Forwarded message ----------
From: **Jeff Tarling** <jst@portlandmaine.gov>
Date: Wed, Aug 1, 2018 at 4:21 PM
Subject: Re: 1185 Forest Ave Comments
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Hi Shukria -

Recommendations for the 1185 Forest Avenue project would be to add into the landscape 3 groups of ornamental grasses that would give the landscape more of a 3-season appeal and help screen or buffer the site without causing a hinderance to traffic movement or security. The three beds would likely contain 6 or 7 plants each, 3 gallon size.

We like the Little Bluestem Grasses, there are a number of cultivars, 'Carousel' is one of the recommended types.

See:

http://www.chicagolandgrows.org/downloads/carousel_bluestem.pdf

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

On Wed, Aug 1, 2018 at 3:16 PM, Shukria Wiar <shukriaw@portlandmaine.gov> wrote:

> Good Afternoon:
>
> Below are notes from our meeting today. Please review and add anything that I might have missed and/or is need from the applicant.
>
> Landscaping
>
> · Need some relief from pavement with landscaping
>
> · More consideration for screening
>
> · Jeff Tarling to meet on site with Tom Saucier re: type of species of grass to be used for landscaping
>
> Access Circulation
>
> · No right turn only for trucks.
>
> · Mountable island at southern driveway entrance for truck movements
>
> · Submit a plan that shows what is being proposed now and future (when the State project comes through)
>
> · It would be helpful to have striping on site.
>
> Stormwater and Utilities
>
> · Utilities connections need to be shown on the plan- also show what is existing on site.
>
> · Trench drains- Doug Roncarati of DPW Water Resources expressed concerns- plans do not show the drainage connection. What is going on with the drainage on site? If there are issues, this will be the time to fix them.
>
> · Erosion Control- how is this being handled as part of the project.
>
> Thank you.
>
> Shukria
>
> --
>
> Shukria Wiar, Planner
> Planning Division
>
> City of Portland 389 Congress Street
>
> Portland, ME 04101
> Ph: 207.756.8083
> Fax: 207.756.8258

--

Shukria Wiar, Planner
Planning Division

City of Portland 389 Congress Street

Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

--

Shukria Wiar, Planner
Planning Division

City of Portland 389 Congress Street

Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

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Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

FW: 1185 Forest Avenue - "Future Conditions - Conditions of Approval"

1 message

Tom Errico <thomas.errico@tylin.com> Fri, Sep 7, 2018 at 9:13 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

From: Bruce Hyman <bhyman@portlandmaine.gov>
Sent: Tuesday, September 4, 2018 10:04 AM
To: Barbara Barhydt <bab@portlandmaine.gov>; Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>; Jeremiah Bartlett <jbartlett@portlandmaine.gov>; Keith Gray <kgray@portlandmaine.gov>
Subject: 1185 Forest Avenue - "Future Conditions - Conditions of Approval"

Traffic and Transportation:

- The number, location and configuration of future driveway locations will be determined in conjunction with the redesign of Morrill's Corner.
- The configuration of future parking and required landscape buffering/screening will be determined in conjunction with the redesign of Morrill's Corner.

These are the two topics I said I would address. I don't know if there needs to be some pre-amble like "we find the Future Layout provided to be generally compatible with the future redesign of Morrill's Corner but further changes in the number, location and configuration of driveways will be required."

Tom was going to say something about striping the southerly entrance with In/Out arrows as well as tweaks to the middle driveway so it wasn't as offset (based on detection at the intersection).

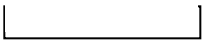
Bruce

--

Bruce Hyman
Transportation Program Manager
Transportation Division

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

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



Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

Planning and Urban Development Department
Planning Division

Subject: B-2 Design Review – 1185 Forest Avenue

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, June 26 2018

The project at 1185 Forest Avenue was reviewed by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Shukria Wiar, Planner, against *the B2 Commercial Business Zones Standards* (Section (d) of *the City of Portland Design Manual*).

Design Review Comments*: (questions and unmet standards in red)*

(d) B-2 Commercial Business Zones

Standard (1) a. Urban Street Wall – Proposal is an addition to an existing building set away from the street; many blocks within this context do not establish a strong street wall. The building, though not at the street, does extend towards the street and improves the existing condition.

Standard (1) b. Mixed Uses – Not applicable

Standard (1) c. Building Entrances – The addition provides a new, more visible entrance into the store portion of the building oriented towards the street. Door is emphasized with an awning, glass, and signage.

Standard (1) d. Windows – Windows are provided along street frontage as required – high level of fenestration. VT of .7 or greater is required.

Standard (1) e. Façade Character – The addition is creating a more active portion of the building with high transparency of the storefront windows – again, they are oriented towards the street but not adjacent given the existing conditions.

Standard (1) f. Building Design – Building design conveys its commercial nature and uses a curved roof to add dynamic, commercial character to a one-story building. Though this form does not copy the existing building forms, staff found it to be compatible given the varied character found in the context and also considering that the building is set back from the street and an addition to an existing, one-story building.

Standard (1) g. Building Materials – The project uses brick to match existing, metal panel with storefront, and a standing seam metal roof. Metal panel on façade should not be corrugated metal. The surrounding context is varied in materials, quality, and character but often with low-rise, traditional brick or clapboard and some industrial and commercial buildings. Staff review found that the building is sufficiently compatible using the existing brick to fit into the existing building and surrounding context with the metal being appropriate for the kind of building and reflecting the commercial use in a neighborhood that has many materials used.

Standard (1) h. Building Scale – Not applicable

Standard (1) i. Landscaping and Buffers – Site includes fences on property edges. Low planters exist between site and sidewalk. Neighboring uses are rail line and storage – not sensitive uses. A landscape plan is required.

Site Design Associates
Consulting Engineering and Land Planning

May 14, 2018

Ms. Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress St., Fourth Floor
Portland, ME 04101

RE: B & D MEREALTY LLC
1185 Forest Avenue
Convenience Store Reconstruction
Site Plan & Conditional Use Application

Dear Barbara:

On behalf of B & D MEREALTY LLC, Site Design Associates (SDA) is pleased to submit a Level 2 Site Plan Application and a Conditional Use Application for the referenced project.

The project involves the demolition of the existing convenience store, construction of an addition to the car wash for the new convenience store, removal of a portion of the existing canopy, installation of new dispensers and a concrete pad under the existing canopy, striping of additional parking spaces on the site, and paving and minor regrading to improve the site drainage. The work is planned to take place during the scheduled removal of the existing underground storage tanks (UST), and installation of a new UST, as mandated by state regulations.

This submission contains the following information:

- Level 2 Site Plan Application
- Conditional Use Application
- Deeds
- Financial Capacity Letter
- Construction Management Plan
- Lighting Information
- The following project drawings:
  - C-100 Existing Conditions
  - Boundary Survey
  - C-101 Site Plan
  - C-300 Erosion & Sedimentation Control Notes and Site Details
  - Architectural Elevations and Floor Plan

23 Whitney Way – Topsham, Maine 04086
Phone: (207) 449-4275 email: info@sitedesignassociates.biz

The site is bisected by a zone line with the front 100 feet of the site located in the B-2 Community Business Zone and the rear portion of the site located in the I-L Industrial Zone. The existing 542 s.f. convenience store is located in the B-2 zone where a general retail use is permitted. The proposed 1,333 s.f. convenience store will also be located in the B-2 zone.

The existing and proposed uses include eight fueling positions and two pump islands. No major changes are proposed as a result of the project. The only proposed change is the relocation and expansion of the convenience store. Given the relatively minor expansion of the convenience store footprint (791 s.f.) we expect no major impacts on traffic or infrastructure due to this project.

Following a pre-application meeting with city staff to discuss the project, the code enforcement office ruled that in addition to a Level 2 site plan review by staff, the convenience store reconstruction requires a conditional use permit from the planning board. This is because the Land Use Code definition of "retail" includes a provision that retail combined with gasoline, diesel or propane fuel sales shall be considered a single use for zoning purposes and shall constitute a major or minor auto service station. Major or minor auto service stations are a conditional use in the B-2 zone.

The site use is defined as a major auto service station only because there are an existing car wash and vacuums on site, even though the number of fueling positions and the size of the car wash remain unchanged.

Land Use Code Section 14-474. (c)2. States:

> 1. The Board shall, after review of required materials, authorize issuance of a conditional use permit, upon a showing that the proposed use, at the size and intensity contemplated at the proposed location, will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zoning district. The Board shall find that this standard is satisfied if it finds that:
>
> a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and
>
> b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and
>
> c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading,

deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

In response to these findings necessary for approval we offer the following discussion for the board's consideration:

1.a. Trip generation for a convenience store with fuel pumps is based on an average of the trip generation for the convenience store and the trip generation for the fueling positions. In this case, there is also a car wash located on the site, but because the car wash will remain as is, with no expansion, the trip generation estimated for the store was based on the fueling positions and car wash s.f. Based on the ITE trip generation manual, 9th edition:

Existing Site		
	AM Peak Hour	**PM Peak Hour**
542 sf convenience store	22	28
8 fueling positions	133	153
Average Trips	75	91
Total Existing Trips	**75**	**91**
Proposed Site		
1,333 sf convenience store	55	68
8 fueling positions	133	153
Average Trips	94	111
Total Proposed Trips	**94**	**111**

As noted, AM and PM peak hour trips are estimated to increase 21 and 20 trips respectively. Neither estimated increase will significantly impact the surrounding streets or driveway operations.

Hours of operation will remain unchanged as a result of the improvements, there will be no increase in the pavement area, and the number of parking spaces required are not significantly greater than existing, nor is the number significantly greater than surrounding or other permitted uses.

The provision of formal parking spaces on the site, along with improved circulation due to the relocation of the existing store and removal of a portion of the canopy, both enhance site circulation.

1.b. The proposed use will remain relatively unchanged from the existing use in size and scope. The new store will be connected to the existing water and sewer services, no new activities impacting the existing noise levels, lighting, odor, glare, dust, litter or emissions are proposed.

1.c. The design and operation of the proposed use will remain relatively unchanged from existing conditions, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage and therefore will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

In addition to the above standards, conditions specific to a major auto service station in the B-2 zone outlined in section 14-183.3. of the land use code require a landscaped buffer 5 ft in width along the street frontage and a car wash design which avoids tracking of water into the street. An existing buffer in the form of a raised planter which may be slightly less than 5 feet in width, runs along the street frontage, and a trench drain is located northeasterly of the car wash exit to collect residual car wash water and minimize tracking into the street.

In addition to conditional use approval, the project will also require Level 2 Site Plan approval. Given the relatively minor nature of the project, there will be minimal impact on the approval standards, as noted below:

(a) Transportation Standards

As noted above, the proposed convenience store reconstruction is projected to result in a very minimal increase in trip generation. Existing driveways will be utilized for site access. No new driveways are proposed. Stacking capacity for the car wash bays and automated car wash will not be impacted by the project. The project will result in additional formalized parking on the site. Sidewalks exist along the site frontage. Adequate snow storage is available on the site.

(b) Environmental Quality Standards

There are no significant features impacted by the proposed project. No existing trees will be removed. An existing vegetated buffer will be maintained along the street frontage. No new impervious area will be created as a result of the project. Existing drainage patterns will be maintained.

(c) Public Infrastructure and Community Safety Standards

We believe the existing site is currently consistent with the city master plan, and no changes that would impact a city master plan are proposed. Adequate emergency vehicle access is available. Public utilities currently serve the existing site, and those services will be maintained.

(d) Site Design Standards

The massing of the building will be similar to the existing building. No falling snow and ice will impact existing properties or the street. No view corridors or

historic resources will be impacted. Existing site lighting will be maintained and with the removal of a portion of the canopy, lighting levels should actually be reduced. New lighting will consist of 12w wall packs on the building. Noise levels will not be impacted. Existing signage and wayfinding will remain as it exists, other than new building signage.

In summary, the project is a relatively straightforward project with minimal impacts, if any, associated with it. We believe that it complies with the conditional use and site plan criteria to the extent practicable, given that it is an existing site. We are in hopes that you can place these applications on the next available Planning Board agenda.

We look forward to meeting with staff and the Planning Board to discuss this project. Please contact me with any questions or comments.

Sincerely,

Site Design Associates

Tom Saucier, P.E.
President

I. Project Information (Please enter n/a on those fields that are not applicable)

Project Name:	Proposed Convenience Store Reconstruction
Proposed Development Address:	1185 Forest Avenue
Project Description:	Demolition of existing c-store and construction of a new c-store
Chart/Block/Lot:	152 B002001
Preliminary Plan	x
Final Plan	x

II. Contact Information (Please enter n/a on those fields that are not applicable)

APPLICANT

Name:	Daniel E. Paisner, Mgr.
Business Name:	B & D MEREALTY LLC
Address:	172 Worcester Street
City/State:	Natick, MA
Zip Code:	01760
Work #:	508-650-1155 xt 229
Home #:	n/a
Cell #:	617-797-4110
Fax #:	n/a
E-mail:	danny@scrubadub.com

OWNER

Name:	Applicant
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Tom Saucier, P.E. Site Design Associates
Address:	23 Whitney Way
City/State:	Topsham, MA
Zip Code:	04086
Work #:	207-449-4275
Home #:	n/a
Cell #:	207-756-0068
Fax #:	n/a
E-mail:	tsaucier@sitedesignassociates.biz

BILLING (to whom invoices will be forwarded to)

Name:	Applicant
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

ENGINEER

Name:	Agent
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

SURVEYOR

Name:	AMEC Foster Wheeler
Address:	511 Congress Street
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-772-4762
Home #:	n/a
Cell #:	n/a
Fax #:	n/a
E-mail:	n/a

ARCHITECT

Name:	Mark Chaloupecky – Port City Architecture
Address:	65 Newbury Street
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-761-9000
Home #:	n/a
Cell #:	n/a
Fax #:	n/a
E-mail:	n/a

ATTORNEY

Name:	n/a
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Tom Saucier – Site Design Associates
E-mail:	tsaucier@sitedesignassociates.biz
Name:	
E-mail:	
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL II DEVELOPMENT (check applicable review)

X	☐	Less than 10,000 sq. ft.	$400.00
	☐	After-the-fact Review	$1,000.00 + applicable application fee above

OTHER REVIEWS (check applicable review)

	☐	Traffic Movement	$1,500.00
	☐	Stormwater Quality	$250.00
	☐	Site Location	$3,500.00
		# of Site Location Lots x $200.00 (per lot)	$
	☐	Change of Use	
	☐	Flood Plain	
	☐	Shoreland	
	☐	Design Review	
		Housing Replacement	
	☐	Historic Preservation	
TOTAL APPLICATION FEE DUE:			$

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($52.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

V. PROJECT DATA (Please enter n/a on those fields that are not applicable)

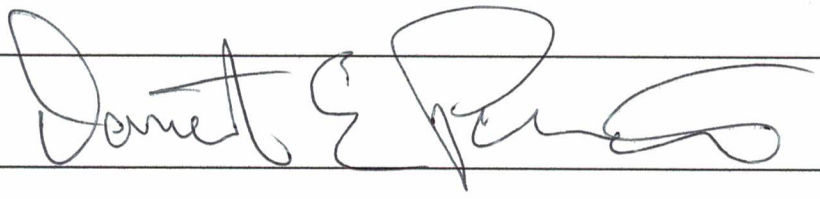
TOTAL AREA OF SITE **PROPOSED DISTURBED AREA OF THE SITE**	50, 943 sq. ft. 4700 SF +/- sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.	
IMPERVIOUS SURFACE AREA Impervious Area (Total Existing) Impervious Area (Total Proposed)	 49,693 sq. ft. 49,693 sq. ft.
Building Ground Floor Area and Total Floor Building Footprint (Total Existing)	 542 sq. ft.
Building Footprint (Total Proposed)	1,333 sq. ft.
Building Floor Area (Total Existing) Building Floor Area (Total Proposed)	542 sq. ft. 1,333 sq. ft.
ZONING	
Existing	B-2 and IL
Proposed, if applicable	Same
LAND USE Existing Proposed	 Major Auto Service Station Major Auto Service Station
RESIDENTIAL, IF APPLICABLE	n/a
# of Residential Units (Total Existing)	
# of Residential Units (Total Proposed) # of Lots (Total Proposed) # of Affordable Housing Units (Total Proposed)	
PROPOSED BEDROOM MIX	
# of Efficiency Units (Total Proposed)	
# of One-Bedroom Units (Total Proposed)	
# of Two-Bedroom Units (Total Proposed) # of Three-Bedroom Units (Total Proposed)	
PARKING SPACES	
# of Parking Spaces (Total Existing)	19 incl fueling positions, vacuum stations, and wash bays
# of Parking Spaces (Total Proposed)	25 incl fueling positions, vacuum stations, and wash bays
# of Handicapped Spaces (Total Proposed)	1
BICYCLE PARKING SPACES # of Bicycle Spaces (Total Existing)	
# of Bicycle Spaces (Total Proposed)	
ESTIMATED COST OF THE PROJECT	**$250,000**

VI. APPLICANT SIGNATURE

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a ***legal signature*** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:	
Date:05-01-18	

FINAL PLAN - Level II Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Completed Application form
		1	* Application fees
X		1	* Written description of project
X		1	* Evidence of right, title and interest
N/A		1	* Evidence of state and/or federal permits
X		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
X		1	* Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site
X		1	* Evidence of financial and technical capacity
X		1	Construction Management Plan
N/A		1	A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.
N/A		1	Written summary of significant natural features located on the site (Section 14-526 (b) (a))
N/A		1	Stormwater management plan and stormwater calculations, including description of project, hydrology and impervious area.
N/A		1	Written summary of project's consistency with related city master plans
N/A		1	Evidence of utility capacity to serve
N/A		1	Written summary of solid waste generation and proposed management of solid waste
N/A		1	A code summary referencing NFPA 1 and all Fire Department technical standards
X		1	Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual
N/A		1	Manufacturer’s verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST** **(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
		1	**Final Site Plans including the following:**
X			Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);
X			Existing and proposed structures on parcels abutting site;
X			All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;
X			Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;
X			Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;
N/A			Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;
N/A			Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;
X			Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;
X			Location of all snow storage areas and/or a snow removal plan;
N/A			A traffic control plan as detailed in Section 1 of the Technical Manual;
N/A			Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);
N/A			Location and proposed alteration to any watercourse;
N/A			A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;
N/A			Proposed buffers and preservation measures for wetlands;
N/A			Existing soil conditions and location of test pits and test borings;
X			Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;
N/A			A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;
X			Grading plan;
N/A			Ground water protection measures;
N/A			Existing and proposed sewer mains and connections;
N/A			Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;
N/A			Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;

- Continued on next page -

X		Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;
X		Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;
X		Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;
N/A		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
N/A		A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;
N/A		Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;
N/A		An exterior lighting plan in accordance with Section 12 of the Technical Manual;
X		A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;
N/A		Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Submit each Tab as one PDF file and bookmark the items as noted below

Please confirm by electronically checking the boxes to the left

Tab 1 – 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.

Submit each Tab as one PDF file and bookmark the items as noted below

Tab 2 - 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

Tab 3 - 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

Tab 4 - 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

Tab 5 - 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

Tab 6 - 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
Tab 7 - 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

☑ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

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

☑ Existing Conditions

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

☑ Proposed Site Plan

- Ground floor area, and grade elevations for all buildings

☑ Access, Circulation, and Parking

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

☑ Site Considerations

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

☑ **UTILITY PLAN** including:

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

☑ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☑ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☑ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☐ RECORDING PLAT, if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☑ ARCHITECTURAL PLANS & 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

PROJECT NAME:

CONVENIENCE STORE RECONSTRUCTION

PROPOSED DEVELOPMENT ADDRESS:

1185 FOREST AVENUE

CHART/BLOCK/LOT (s): 152 B002001 **Applicable Zone**: B-2 AND I-L

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Daniel E. Paisner, Mgr. Business Name, if applicable: B & D MEREALTY LLC Address: 172 Worcester Street City/State : Natick, MA Zip Code: 01760	**Applicant Contact Information** Work # (508) 650-1155 x229 Home# Cell # (617) 797-4110 Fax# e-mail: danny@ScrubaDub.com
Owner – (if different from Applicant) Name: Same as applicant Address: City/State : Zip Code:	**Owner Contact Information** Work # Home# Cell # Fax# e-mail:
Billing Information Name: Applicant Address: City/State : Zip Code:	**Billing Information** Work # Cell # Fax# e-mail:

Designated person/person(s) for uploading to e-Plan:

Name: Tom Saucier, P.E.
e-mail: tsaucier@sitedesignassociates.biz

Name:
e-mail:

Name:
e-mail:

RIGHT, TITLE OR INTEREST:

Deeds attached

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

VICINITY MAP: (Please attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use.)

EXISTING USE: Describe the existing use of the subject property.

Existing convenience store, retail fuel sales, and car wash. - Major Auto Service Station per code definition

PROPOSED USE: Describe the proposed use of the subject property

Proposed convenience store, retail fuels sales, and car wash. - Major Auto Service Station per code definition

TYPE OF CONDITIONAL USE PROPOSED (Refer To Specific Provisions Of Land Use Code Authorizing The Proposed Conditional Use).

Expansion and reconstruction of the convenience store portion of the "Major Auto Service Station".

Existing store is 542 sf and proposed store is 1333 S.f.

SITE PLAN: Submit a separate site plan application for the proposal that provides a site plan for the property, showing existing and proposed improvements, which meets the submission requirements of the applicable level of site plan review.

CONDITIONAL USE STANDARDS AND CONDITIONS – 14-474

Address the following criteria in your written application and any applicable conditional use standards contained in the zoning code for the specific use. Upon showing that a proposed use is a conditional use under this article, a conditional use permit shall be granted unless the Board determines that:

a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and

c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

CONDITIONAL USE AUTHORIZED BY: SECTION 14- 183

Address any specific conditional use standards for the specific use contained in the zoning code in the written submission.

APPLICATION FEES:

x Conditional Use Review ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

Please refer to the application checklist (attached) for a detailed list of submission requirements.

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:
   Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.
   Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions
   Tab 3 - Preparing and uploading revised drawings and documents

   Applying Online Instructions

5. When ready, upload your files and documents into the following folders:
   "Application Submittal – Drawings"
   "Application Submittal – Documents"

6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

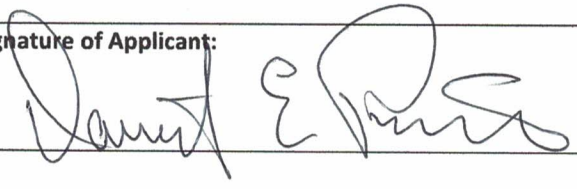
Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST
X		1	Completed Application Form
X		1	Cover letter stating the nature of the project.
X		1	Evidence of right, title and interest.
X		1	Written Submittals that address the conditional use standards of Sec. 14-474.
X		1	Written submittals that address any applicable standards of review contained in the zoning code for the specific use.
X		1	A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet and containing the information required for the applicable level of site plan review.
X		1	An accompanying site plan application, as applicable.

APPLICANT SIGNATURE:

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a ***legal signature*** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Conditional Use. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:	Date:
	05-01-18

Portland, Maine | Yes. Life's good here.

Planning & Urban Development Department

CONDITIONAL USE APPLICATION FOR PLANNING BOARD REVIEW

Submit each Tab as one PDF file and bookmark the items as noted below
Please confirm by electronically checking the boxes to the left

Conditional uses are listed in the Zoning Ordinance for each zone and these proposed uses must address the criteria contained in Section 14-474 in the written application. In addition to the criteria in Section 14-474, each application must address any applicable conditional use standards contained in the applicable zone for the proposed use.

CONDITIONAL USE AND SUPPLEMENTAL DOCUMENTATION, AS APPLICABLE

TAB 1 – GENERAL APPLICATION DOCUMENTS

Checklist	Items to be Provided
Yes NA Plan ✔	PROJECT DESCRIPTION • Cover Letter with detailed project description
Yes NA Plan ✔	COMPLETED CHECKLIST - CONDITIONAL USE
Yes NA Plan	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements

Tab 2 – CONDITIONAL USE STANDARDS AND CRITERIA

Checklist	Items to be Provided
Yes NA Plan	TRAFFIC • Address volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the zone
Yes NA Plan	ENVIRONMENTAL IMPACTS • Address use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.
Yes NA Plan ✔	DESIGN AND OPERATION • Address the design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generations, arrangement of structures, and materials storage will not have a substantially greater effect; impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.
Yes NA Plan	ZONE SPECIFIC CRITERIA • Cite and address zone specific conditional use standards for the proposed use.

WARRANTY DEED

FILL-IT-UP, PLEASE, a Maine corporation, FRANCIS X. DOWNEY and BRENDA S. DOWNEY, all with a mailing address of P.O. Box 703, Portland, Maine 04112, for consideration paid, GRANTS to B & D MEREALTY LLC, a Massachusetts limited liability company with a mailing address of 172 Worcester Road, Natick, Massachusetts, with WARRANTY COVENANTS, that certain lot or parcel of land situated in the City of PORTLAND, County of CUMBERLAND and State of MAINE, and more particularly described in EXHIBIT A attached hereto and made a part hereof.

Being the same premises described in a deed to Francis X. Downey and Brenda Downey a/k/a Brenda S. Downey by virtue of a deed from Richard A. Ross and Rita M. Ross dated October 17, 1988, recorded at the Cumberland County Registry of Deeds in Book 8517, Page 85 (Parcel 1), and deed from Philip R. White and Pamela A. White dated October 18, 1988, recorded in Book 8523, Page 328 (Parcel 2); Fill-It-Up, Please, a Maine corporation, by virtue of a deed from Sylmor Corp., dated September 25, 1970 and recorded in the Cumberland County Registry of Deeds in Book 3145, Page 430 (Parcel 3).

IN WITNESS WHEREOF, the said FILL-IT-UP, PLEASE, on its behalf by Francis X. Downey, its duly authorized President, and FRANCIS X. DOWNEY AND BRENDA S. DOWNEY individually, have signed this instrument on the 23 day of June, 2005.

FILL-IT-UP, PLEASE

By: Francis X. Downey
Francis X. Downey
Its President

Francis X. Downey
FRANCIS X. DOWNEY

Brenda S. Downey
BRENDA S. DOWNEY

STATE OF MAINE
COUNTY OF CUMBERLAND

June 23, 2005

Personally appeared the above named Francis X. Downey in his capacity as President of FILL-IT-UP, PLEASE and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of FILL-IT-UP, PLEASE.

Before me,

~~Notary Public~~/Attorney-at-Law
Printed Name: Jacob A. Manheimer

STATE OF MAINE
COUNTY OF CUMBERLAND

June 23, 2005

Personally appeared the above-named FRANCIS X. DOWNEY and acknowledged the foregoing instrument to his free act and deed.

Before me,

~~Notary Public~~/Attorney-at-Law
Printed Name: Jacob A. Manheimer

STATE OF MAINE
COUNTY OF CUMBERLAND

June 23, 2005

Personally appeared the above-named BRENDA S. DOWNEY and acknowledged the foregoing instrument to his free act and deed.

Before me,

~~Notary Public~~/Attorney-at-Law
Printed Name: Jacob A. Manheimer

Exhibit A - Property Description

Parcel 1:

A certain lot or parcel of land, with the buildings thereon, situated on the easterly side of Forest Avenue in said Portland, County of Cumberland and State of Maine and being premises 1171, 1173, 1175 Forest Avenue and bounded northerly by land now or formerly of one Morgan; easterly and southerly by land of Nelson T. Fox et al and westerly by said Forest Avenue, together with a right of way in common with others as described in deed from Fidelity Trust Company, Trustee u/w/o Charles L. Goodridge to Charles E. Fox et al dated June 24, 1927, recorded in the Cumberland County Registry of Deeds, Book 1268, Page 220. Said property is more particuarly described as follows:

BEGINNING on said easterly side of Forest Avenue at the northwesterly corner of land now or formerly conveyed by Fidelity Trust Co., Trustee to Charles E. Fox and Nelson T. Fox; thence northerly by said Forest Avenue 85.72 feet, more or less, to a point in the division line between the lot hereby conveyed and land now or formerly of one Morgan; thence easterly 70.28 feet by said Morgan land to said Fox land; thence southerly by an excluded angle of 90° 5' 24.35 feet to a point, said point being marked by an iron hub; thence southwesterly by an included angle of 135° 21' 24.49 feet to a point marked by an iron hub; thence southerly on an excluded angle 135° 2' and parallel with 12 feet distant from the westerly face of a brick building now or formerly used as a boiler house 44.63 feet; thence westerly by included angle of 91° 30' 52.73 feet to the easterly side line of Forest Avenue and the point of beginning.

Also conveying the right to the use in common with others of the right of way described in said deed from said Fidelity Trust Company, Trustee u/w/o Charles L. Goodridge to Charles E. Fox et al.

Excepting and reserving from the above described parcel a parcel of land conveyed by William L. Beecher to Andre P. Lestage and Raymond D. Caron by deed dated July 16, 1971, and recorded in said Registry of Deeds in Book 3182, Page 55, and subject to a 5 foot right of way contained therein.

Parcel 2:

A certain lot or parcel of land, situated to the east of Forest Avenue, in the City of Portland, County of Cumberland, State of Maine, and being a northerly portion of a deed recorded in the Cumberland County Registry of Deeds in Book 1520, Page 486. Said parcel being more particularly bounded and described as follows:

BEGINNING at an iron pipe to be set at northeasterly corner of land now or formerly of Richard A. Ross, as described in Book 5083, Page 80; thence N 89° 25' 18" E, 198.26 feet to an iron pipe found on the westerly side line of the Portland Terminal Company; thence in a southeasterly direction along a curve to the right, having a radius of 1223.74 feet and an arc length of 82.66 feet to an iron pipe to be set on said westerly sideline of the Portland Terminal Company; thence S 89° 25' 18" W, through land now or formerly of N.T. Fox Co., Inc., 269.39 feet to an iron pipe to be set on the easterly sideline of land now or formerly of Frank T. Pierobello; thence N 1° 02' 52" W, along said land of Pierobello and said Ross, 20.84 feet to a point; thence N 43° 55' 08" E, along land of Ross, 21.49 feet to a point; thence N 1° 59' 00" W, along land of Ross, 23.84 feet to the point of beginning.

All bearings are based on magnetic north as observed in October, 1987.

The above described parcel includes a portion of a right of way for pedestrian and vehicular travel, more particularly described in deed to N.T. Fox Co., Inc. recorded in Book 1520, Page 486. Said right of way is 12 feet in width and abuts the easterly lines of land now or formerly of Frank T. Pierobello, and described in Book 7999, Page 1, and a portion of land now or formerly of Richard A. Ross described in Book 5083, Page 80.

Parcel 3:

A certain lot or parcel of land, with the buildings thereon, situated on the easterly side of Forest Avenue in Portland, in the County of Cumberland and State of Maine, and being the same premises described in two deed to Alfred J. Morgan, the first from Oliver B. Howard and Ellen M. Howard, dated May 2, 1866, and recorded in the Cumberland County Registry of Deeds in Book 342, Page 300, and the second from Mahala C. Wilson and Julia C. Wilson dated May 4, 1867 and recorded in said Registry of Deeds in Book 351, Page 389. The will of Alfred J. Morgan has been duly probated in Cumberland County Probate Court, an abstract of said will, being recorded in said Registry of Deeds in Book 1191, Page 103.

Said premises also being described as bounded on the west by Forest Avenue; on the northeast by land now or formerly of Portland Terminal Company; and on the south by land now or formerly of N. T. Fox Co., Inc, and being roughly a triangular shaped premises and shown as Parcel 2 in Block B on the Tax Map 152 for tax year 1972 on file in the City of Portland Tax Assessor's office, Portland, Maine.

Received
Recorded Register of Deeds
Jun 24,2005 02:25:52P
Cumberland County
John B OBrien

MAINE REAL ESTATE TAX PAID

RELEASE DEED

PORTLAND TERMINAL COMPANY, a corporation duly organized and existing under the laws of the State of Maine, with offices at Iron Horse Park, North Billerica, Middlesex County, Massachusetts (the "Grantor") in consideration of Thirty Six Thousand and 00/100 ($36,000.00) Dollars paid to it by **B&D MEREALTY LLC**, with a mailing address of 172 Worcester Road, Natick, Massachusetts 01760 (the "Grantee") hereby grants to the Grantee all the Grantor's right, title and interest, without any warranties or covenants of title whatsoever, in a certain parcel of land, and the buildings, bridges, structures, crossings, fixtures and improvements thereon, if any, situated in Portland, County of Cumberland, State of Maine (the "Premises") described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND
MADE A PART HEREOF BY THIS REFERENCE.

This conveyance is subject to the following reservations, conditions, covenants and agreements:

1. This conveyance is made without granting any right of way, either by necessity or otherwise, over any remaining land or location of the Grantor.

2. ~~The Grantor hereby reserves an exclusive, permanent right of way and easement in, on, over, under, across and through the Premises for the purpose of accessing, constructing, installing, operating, maintaining, modifying, repairing, replacing, relocating and removing a telecommunications system or other system for transmission of intelligence or information by any means, whether now existing or hereafter devised, including such poles, pipes, wires, fibers, fiberoptic cables, repeater stations, attachments, appurtenances, structures or other equipment and property of any description necessary or useful for the same (the "Telecommunications Easement"). The Grantor further reserves the right to freely lease, license, mortgage, assign, pledge and otherwise alienate the Telecommunications Easement. The Grantee hereby covenants with the Grantor to recognize the Telecommunications Easement and, without the payment of any further consideration, to execute, acknowledge and deliver such instruments~~

~~suitable for recording with the registry of deeds as the Grantor may reasonably require to acknowledge title to the Telecommunications Easement in the Grantor. The Grantor covenants to reasonably repair and restore the surface of the easement area after any work.~~

3. ~~The Grantor excepts from this conveyance any and all railroad tracks, railroad track materials (including, but not limited to, ties, connections, switches and ballast) and/or related equipment of any description located in whole or in part within the Premises (the "Trackage") and this conveyance is subject to the right of the Grantor to enter the Premises from time to time and at any and all times within the ninety (90) day period commencing with and subsequent to the date of delivery of this deed, with such men, equipment and materials as, in the reasonable opinion of the Principal Engineering Officer of the Grantor, are necessary for the removal of the Trackage. Days during the months of December, January, February and March shall not be included in the aforesaid ninety (90) day period. If the Trackage is not removed from the Premises by the expiration of said ninety (90) day period, the Trackage shall be deemed abandoned by the Grantor and shall then become the property of the Grantee.~~

4. ~~The Grantor excepts from this conveyance any and all advertising signs and/or billboards located upon the Premises which are not owned by the Grantor. Furthermore, this conveyance is subject to the right of the owners of said signs and/or billboards to go upon the Premises and remove them within ninety (90) days from the date of delivery of this deed.~~

5. By the acceptance of this deed and as part consideration therefor, the Grantee hereby assumes any and all agreements, covenants, obligations and liabilities of the Grantor in respect to any underground facilities, drainage culverts, walls, crossings and/or other structures of any nature and description located in whole or in part within the Premises.

6. By the acceptance of this deed and as part consideration therefor, the Grantee agrees to irrevocably waives, gives up and renounces any and all claims or causes of action against the Grantor in respect of claims, suits and/or enforcement actions (including any administrative or judicial proceedings and any remedial, removal or response actions) ever asserted, threatened, instituted or requested by any person and/or governmental agency on account of: (a) any release of oil or hazardous materials or substances of any description on, upon or into the Premises in contravention of any ordinance, law or statute (including, but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. Section 9601, et seq., as amended); and (b) any and all damage to real or personal property, natural resources and/or harm or injury to persons alleged to have resulted from such release of oil or hazardous materials or substances.

7. By the acceptance of this deed and as part consideration therefor, the Grantee hereby agrees to build and forever maintain fences (together with any necessary gates), suitable to the Principal Engineering Officer of the Grantor and in accordance with local ordinances, along the boundaries of the Premises which are common to remaining land or location of the Grantor (the "Fences"), if Fences are ever required in the sole and reasonable opinion of said Principal Engineering Officer, but only so long as said remaining land of the Grantor is used as a railroad or similar use.

8. This conveyance is subject to the following restriction for the benefit of other land or location of the Grantor, to wit: that from the date of delivery of this deed, the Grantor shall not be liable to the Grantee or any lessee or user of the Premises (or any part thereof) for any damage to any buildings or property upon them caused by fire, whether communicated directly or indirectly by or from locomotive engines of any description upon the railroad operated by the Grantor, or otherwise.

9. By the acceptance of this deed and as part consideration therefor, the Grantee hereby agrees to make no use of the Premises which, in the sole and reasonable opinion of the Principal Engineering Officer of the Grantor, adversely affects, increases or decreases drainage to, from, upon or in any remaining land or location of the Grantor. The Grantee agrees to indemnify and save the Grantor harmless from and against any and all loss, cost, damage or expense including, but not limited to, the cost of defending all claims and/or suits for property damage, personal injury or death arising out of or in any way attributable to any breach of the foregoing covenant.

~~10. The Grantor excepts from this conveyance any and all overhead, surface or underground signal and communication line facilities of the Grantor located within the limits of the Premises and this conveyance is subject to the Grantor's use of any such facilities in their present locations and entry upon the Premises from time to time to maintain, repair, replace, renew, relay or remove such facilities.~~

11. Whenever used in this deed, the term "Grantor" shall not only refer to the **PORTLAND TERMINAL COMPANY**, but also its successors, assigns and affiliates and the term "Grantee" shall not only refer to the above-named Grantee, but also the Grantee's successors, assigns and grantees, as the case may be.

12. The several exceptions, reservations, conditions, covenants and agreements contained in this deed shall be deemed to run with the land and be binding upon the Grantee forever. In addition to the acceptance and recording of this deed, the Grantee hereby signifies assent to the said several exceptions, reservations, conditions, covenants and agreements, by joining in its execution.

IN WITNESS WHEREOF, the said **PORTLAND TERMINAL COMPANY** has caused this release deed to be executed in its name and its corporate seal to be hereto affixed by David A. Fink, its President, thereunto duly authorized this 31st day of July, 2013.

GRANTOR:
PORTLAND TERMINAL COMPANY

SEAL

Witness

By David A. Fink
David A. Fink, President

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss. July 31, 2013

On this 31st day of July, 2013, before me, the undersigned notary public, personally appeared David A. Fink, President as aforesaid, proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Notary Public
My Commission Expires:

ROLAND L. THERIAULT
Notary Public
Commonwealth of Massachuse
My Commission Expires
August 5, 2016

GRANTEE:
B&D MEREALTY LLC

Witness

By: _____
Daniel E Paisner Manager
B+D MEREALTY LLC

COMMONWEALTH OF MASSACHUSETTS

MIDDLESEX, ss. 08/08/, 2013

On this 08 day of AUG., 2013, before me, the undersigned notary public, personally appeared DANIEL E PAISNER, MANAGER. as aforesaid, proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

DEVDATT SENJIT
Notary Public
Massachusetts
Commission Expires Sep 12, 2019

_____
Notary Public
My Commission Expires:

EXHIBIT "A"

PORTLAND TERMINAL COMPANY
TO
B & D MEREALTY, LLC

A certain lot or parcel of land with any buildings or improvements thereon, located on the easterly side of Forest Avenue (Route 302), in the City of Portland, Cumberland County Maine, being bounded and described as follows;

Beginning at a point on the northerly sideline of the Grantee and the southerly sideline of the Grantor, located perpendicular to Station 139 + 50.48 and southerly 49.50 (left) feet from a centerline baseline of a side spur as shown on Val Plan V. S. 1A Map 3 made for the Portland Terminal Company (Station 105 + 60 to Station 158 + 40), and being in the vicinity of Parcel Number 5 of said Val Plan;

Thence, N 59°-32'-24" E, 25.00 feet to a point on the southerly sideline of said Portland Terminal Company being perpendicular to said baseline 139 + 39.33 and offset southerly 27.00 feet;

Thence, in a northwesterly direction along a curve to the left having a radius of 1634.08 feet and an arc length of 175.63 feet to a point on the easterly sideline of Forest Avenue, being perpendicular to said baseline 141+17.87, and offset southerly 27.16 feet, with a chord bearing of N 59°-12'-57" W, 175.55 feet;

Thence, N 01°-14'-27" E, along the easterly sideline of Forest Avenue 2.75 feet to a point being perpendicular to said baseline 141+19.12 and offset southerly 24.69 feet;

Thence, in a southeasterly direction along a curve to the right having a radius of 1358.15 feet and an arc length of 248.57 feet to a point being perpendicular to said baseline 138+66.75, and offset southerly 26.94 feet with a chord bearing of S 57°-24'-51" E, 248.22 feet;

Thence, in a southeasterly direction along a curve to the right having a radius of 1652.73 feet and an arc length of 69.33 feet to a point being perpendicular to said baseline 137 + 96.27, and offset southerly 26.86 feet with a chord bearing of S 52°-25'-54" E, 69.33 feet;

Thence, in a southeasterly direction along a curve to the right having a radius of 22.50 feet and an arc length of 10.90 feet to a point being perpendicular to said baseline 137 + 85.61, and offset southerly 29.40 feet with a chord bearing of S 37°-19'-46" E, 10.79 feet;

Thence, in a southeasterly direction along a curve to the right having a radius of 233.30 feet and an arc length of 55.80 feet to a point being perpendicular to said baseline 137 + 29.53, and offset southerly 38.48 feet with a chord bearing of S 40°-25'-50" E, 55.67 feet;

Thence, S 42°-03'-28" E, 43.81 feet to a point on the southerly sideline of said Portland Terminal Company being perpendicular to said baseline 136 + 84.87 and offset southerly 43.08 feet;

Thence, S 41°-16'-05" W, 10.36 feet to a point on the most easterly corner of land of the Grantee being perpendicular to said baseline 136 + 84.61 and offset southerly 53.43 feet;

Thence, in a northwesterly direction along the Grantee and along a curve to the left having a radius of 1223.74 feet and an arc length of 85.81 feet to a point being perpendicular to said baseline 137 + 73.06, and offset southerly 49.50 feet with a chord bearing of N 46°-11'-47" W, 85.80 feet;

Thence, in a northwesterly direction along land of the Grantee and along a curve to the left having a radius of 1611.58 feet and an arc length of 172.13 feet with a chord bearing of N 53°-24'-29" W, 172.05 feet to the point of beginning;

The above-described parcel contains 5,402 square feet, more or less.

Bearings are based on Magnetic north observation dated 1987.

Further reference is made to a plan entitled "Portland Terminal Company Conveyance, for Scrubadub Auto Car Wash Centers, Inc., 1185 Forest Avenue in Portland, Maine" dated June, 2013 and to be recorded herewith.

Received
Recorded Register of Deeds
Aug 12,2013 02:00:55P
Cumberland County
Pamela E. Lovley

ScrubaDub
Auto Wash Centers, Inc.

Executive Office:
172 Worcester Road
Natick, MA 01760
T: 508-650-1155
F: 508-655-9261
www.ScrubaDub.com

Massachusetts
235 Market Street
Brighton, MA 02135

143 Harvard Street
Brookline, MA 02446

25 W. Howell Street
Dorchester, MA 02125

216 Maple Street
Marlboro, MA 01752

172 Worcester Road
Natick, MA 01760

565 American Lgn. Hwy.
Roslindale, MA 02131

507 Boston Turnpike Road
Shrewsbury, MA 05145

295 Mishawum Road
Woburn, MA 01801

980 Grafton Street
Worcester, MA 01604

11 Jennings Street
Worcester, MA 01604

575 Park Avenue
Worcester, MA 01603

143 Shrewsbury Street
Worcester, MA 01604

Maine
102 Elm Street
Biddeford, ME 04005

1185 Forest Avenue
Portland, ME 04103

425 Gorham Road
So. Portland, ME 04106

New Hampshire
113 North Broadway
Salem, NH 03079

Rhode Island
1390 Bald Hill Road
Warwick, RI 02886

April 19, 2018

City Of Portland
389 Congress Street
Portland, ME 04101

RE: 1180 Forest Ave, Proposed Facility Upgrade

To whom it may concern,

The proposed upgrade to the ScrubaDub car wash and gas facility located at 1180 Forest Ave. will be self-financed out of capital reserves. If you have any questions or concerns, I may be reached at danny@scrubadub.com or 508-650-1155 ext.229.

Sincerely,

Danny Paisner
President
ScrubaDub Auto Wash Centers
Manager B & D MEREALTY LLC

PROFILE OF SITE DESIGN ASSOCIATES

23 Whitney Way
Topsham, Maine 04086
Tel: (207) 449-4275
Email: info@sitedesignassociates.biz

Site Design Associates is a full service civil engineering firm located in Topsham, Maine, established by Tom Saucier, P.E. **Site Design Associates** provides master planning, environmental and regulatory permitting, stormwater management, site engineering, landscape architectural, and construction phase services to clients in Maine and New Hampshire.

Site Design Associates assists clients in all facets of land development; conceptual designs, site planning, design of roadways and streets, parking, sidewalks and walkways, stormwater management systems, water distribution facilities, utilities, construction monitoring, and municipal engineering.

Site Design Associates also provides on call town engineering and peer review services for the town of Topsham.

Site Design Associates is currently assisting in the design and environmental permitting for a new $25M dining commons at the University of New England in Biddeford, for several new convenience store locations for a major Maine based chain, and for residential and commercial development projects located in the town of Brunswikc.

Lumark

DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Construction
Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical
Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K, 4000K and 3000K CCT.

Electrical
LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

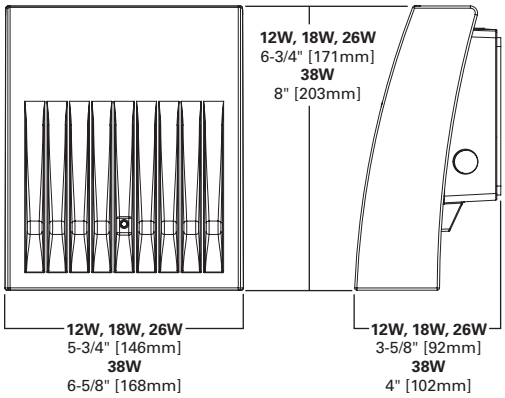
Finish
Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.

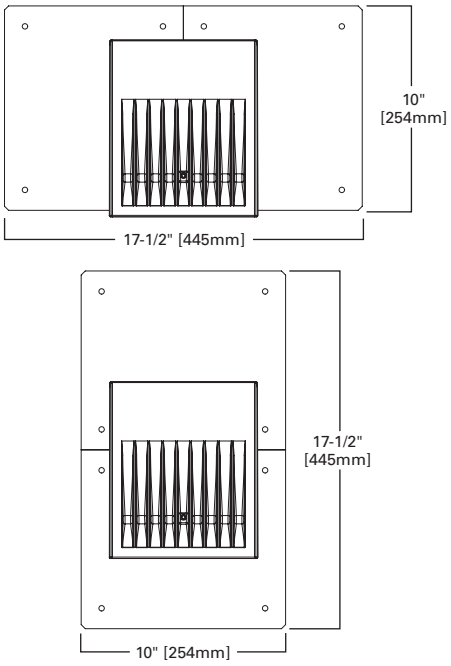
XTOR
CROSSTOUR LED

APPLICATIONS:
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingressed Protection Rated
Title 24 Compliant
DesignLights Consortium® Qualified*

TECHNICAL DATA
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

EPA
Effective Projected Area (Sq. Ft.):
XTOR1B, XT0R2B, XT0R3B=0.34
XTOR4B=0.45

SHIPPING DATA:
Approximate Net Weight:
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

*www.designlights.org

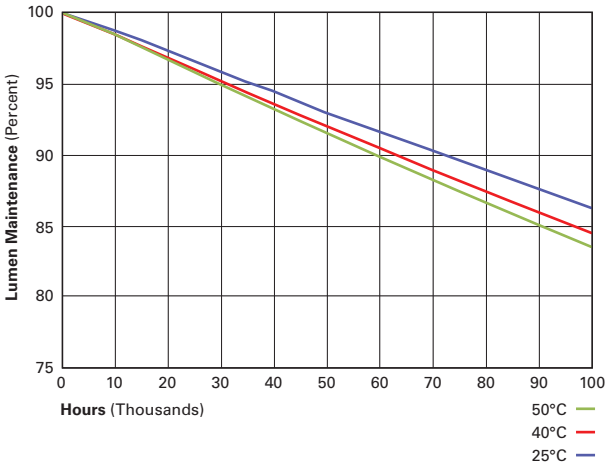
POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR1B	XTOR1B-W	XTOR1B-Y	XTOR2B	XTOR2B-W	XTOR2B-Y	XTOR3B	XTOR3B-W	XTOR3B-Y	XTOR4B	XTOR4B-W	XTOR4B-Y
Delivered Lumens (Wall Mount)	1,418	1,396	1,327	2,135	2,103	1,997	2,751	2,710	2,575	4,269	4,205	3,995
Delivered Lumens (With Flood Accessory Kit) [1]	1,005	990	940	1,495	1,472	1,399	2,099	2,068	1,965	3,168	3,121	2,965
B.U.G. Rating [2]	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0
CCT (Kelvin)	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	18W	18W	18W	26W	26W	26W	38W	38W	38W

NOTES: 1 Includes shield and visor. **2** B.U.G. Rating does not apply to floodlighting.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR1B Model		
25°C	> 90%	255,000
40°C	> 89%	234,000
50°C	> 88%	215,000
XTOR2B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR3B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR4B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000
50°C	> 87%	184,000



CURRENT DRAW

Voltage	Model Series			
	XTOR1B	XTOR2B	XTOR3B	XTOR4B
120V	0.103A	0.15A	0.22A	0.34A
208V	0.060A	0.09A	0.13A	0.17A
240V	0.053A	0.08A	0.11A	0.17A
277V	0.048A	0.07A	0.10A	0.15A
347V	0.039A	0.06A	0.082A	0.12A

ORDERING INFORMATION

Sample Number: XTOR2B-W-WT-PC1

Series [1]	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)	**Accessories** (Order Separately)
XTOR1B=Small Door, 12W **XTOR2B**=Small Door, 18W **XTOR3B**=Small Door, 26W **XTOR4B**=Medium Door, 38W	**[Blank]**=Bright White (Standard), 5000K **W**=Neutral White, 4000K **Y**=Warm White, 3000K	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **BZ**=Bronze **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**PC1**=Photocontrol 120V [2] **PC2**=Photocontrol 208-277V [2,3] **347V**=347V [4] **HA**=50°C High Ambient [4]	**WG/XTOR**=Wire Guard [5] **XTORFLD-KNC**=Knuckle Floodlight Kit [6] **XTORFLD-TRN**=Trunnion Floodlight Kit [6] **XTORFLD-KNC-WT**=Knuckle Floodlight Kit, Summit White [6] **XTORFLD-TRN-WT**=Trunnion Floodlight Kit, Summit White [6] **EWP/XTOR**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTOR-WT**=Escutcheon Wall Plate, Summit White

NOTES:
1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
2. Photocontrols are factory installed.
3. Order PC2 for 347V models.
4. Thru-branch wiring not available with HA option or with 347V. XTOR3B not available with HA and 347V or 120V combination.
5. Wire guard for wall/surface mount. Not for use with floodlight kit accessory.
6. Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

STOCK ORDERING INFORMATION

12W Series	**18W Series**	**26W Series**	**38W Series**
XTOR1B=12W, 5000K, Carbon Bronze	**XTOR2B**=18W, 5000K, Carbon Bronze	**XTOR3B**=26W, 5000K, Carbon Bronze	**XTOR4B**=38W, 5000K, Carbon Bronze
XTOR1B-WT=12W, 5000K, Summit White	**XTOR2B-W**=18W, 4000K, Carbon Bronze	**XTOR3B-W**=26W, 4000K, Carbon Bronze	**XTOR4B-W**=38W, 4000K, Carbon Bronze
XTOR1B-PC1=12W, 5000K, 120V PC, Carbon Bronze	**XTOR2B-WT**=18W, 5000K, Summit White	**XTOR3B-WT**=26W, 5000K, Summit White	**XTOR4B-WT**=38W, 5000K, Summit White
XTOR1B-W=12W, 4000K, Carbon Bronze	**XTOR2B-PC1**=18W, 5000K, 120V PC, Carbon Bronze	**XTOR3B-PC1**=26W, 5000K, 120V PC, Carbon Bronze	**XTOR4B-PC1**=38W, 5000K, 120V PC, Carbon Bronze
XTOR1B-W-PC1=12W, 4000K, 120V PC, Carbon Bronze	**XTOR2B-W-PC1**=18W, 4000K, 120V PC, Carbon Bronze		**XTOR4B-W-PC1**=38W, 4000K, 120V PC, Carbon Bronze

ZONING ANALYSIS Relevant Zone(s) B-2 and I-L; Addition is in B-2

All Projects:

	Required	Proposed
Lot Size	None	50,943 sf
Area Per Dwelling Unit	NA	
Minimum Street Frontage	20 ft	261.36 ft
Front Yard Minimum	None	31 ft exist.
Front Yard Maximum	10	NA
Rear Yard	10	NA
Yard Right	None	81.2 ft +/-
Yard Left	None	14.3 ft +/-
Side Street Setback	None	NA
Step Back	NA	
Maximum Lot Coverage	NA	
Minimum Lot Coverage	NA	
Maximum Height	45	16.5 +/-
Open Space	NA	
Maximum Impervious Area	80%	96% +/- exist
Pavement Setback	5 ft front	3-4 ft exist
Floor Area Ratio	NA	
Off Street Parking Spaces	Retail 0 or 7?	15 incl canopy
Loading Bays	0	0
Other 1		
Other 2		
Other 3		

Site Design Associates
Consulting Engineering and Land Planning

July 24, 2018

Shukria Wiar
Planning Division
389 Congress St., Fourth Floor
Portland, ME 04101

RE: B & D MEREALTY LLC
1185 Forest Avenue
Convenience Store Reconstruction
Site Plan & Conditional Use Application

Dear Shukria:

On behalf of B & D MEREALTY LLC, Site Design Associates (SDA) is pleased to submit this response to staff comments related to the above referenced application submitted to the city on May 14, 2018. Comments from Caitlin Cameron dated June 26, 2018, and Lauren Swett dated July 19, 2018 are addressed below.

Revisions to the building floor plan and elevation drawing at staff's request include:

- Added a note on the visible light transmittance for the storefront glazing (0.7 max)
- Called out the actual panel systems on the elevations (these were obtained from the construction drawings of the location in Chelsea, MA)
- Updated the Code Review to 2015 from 2009.
- Added the maximum length of travel to the floor plan.
- An additional design review comment from Caitlin suggested that a landscape plan is required. Based on our discussion at the staff review meeting on July 17, 2018, it is our understanding from you that the existing landscaping shown on the site plan will be adequate until such time as the contemplated intersection improvements are designed and implemented.

Lauren Swett's July 19, 2018 comments and responses:

- *Comment: The plans should clearly show all utilities on the site. Existing utilities are shown within Forest Avenue, however the connection of those utilities to the existing and proposed portions of the site are not shown. Water, sewer, and electrical connections for the proposed building, either directly or*

23 Whitney Way – Topsham, Maine 04086
Phone: (207) 449-4275 email: info@sitedesignassociates.biz

- *through the existing structure, should be shown on the plans, and verification of the utilities' ability to serve should be provided.*

  Response: The site is existing and the plans reflect available information relative to utilities on and adjacent to the site. As noted, a two inch water service feeds the site. A service card obtained from the Portland Water District indicates that a ¾" service also exists at the site to serve the existing convenience store, although the location of the shutoff is unclear. We are unaware of any capacity issues in either the water or sewer systems and do not expect any significant increase in water consumption or wastewater disposal rates due to the proposed project. Existing utilities will be located prior to obtaining building permits and we will coordinate tying the new store into the existing utilities with the appropriate service providers. If city staff feels that ability to serve letters are necessary for the existing site with no anticipated significant increase in utilization of those services, we request that the planning board and staff consider this as a condition of approval.

- *Comment: The Applicant should clarify site drainage relative to the carwash. What appears to be an existing trench drain is shown near the driveway, and it is not clear where this discharges. No other stormwater systems are provided. Per Sec. 14-183 (a) 3.b. of the City's Land Use Code, car washes shall be designed to avoid the tracking of residual waters into the street.*

  Response: As noted in the comment, and as described in the original application, a trench drain exists in the existing car wash exit drive. We are unaware of any issues with tracking of residual waters into the street.

- *Comment: The City of Portland requires that all Level II Site Plan applications 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 (Technical Manual, Section 5. II. Applicability in Portland. C. a. and City of Portland Code of Ordinances Sec. 14-526. Site plan standards. (b). 3. b.). Erosion and sedimentation details have been provided in accordance with the Basic Standard, however locations of erosion and sedimentation control systems should be shown on the plan. The project is not resulting in an increase in impervious surface, so it is not required to meet the Flooding Standard. The project is also not required to meet the General Standard, but may be required to provide treatment in accordance with the City's Redevelopment standard – if greater than 5,000 SF of redeveloped, non-roof impervious surface is created (including conversion of roof to pavement, and regrading of existing pavement), 50% of that area requires treatment.*

  Response: As noted above, no new impervious area is being created as a result of the convenience store project. The majority of the new paving

shown on the site plan will be a result of tank maintenance required under state law, not the proposed convenience store construction, and therefore is not considered redevelopment. Existing grades and drainage patterns will be maintained. The tank work includes the excavation and removal of the existing UST's, piping, under canopy slab piping, and dispensers, and the installation of a new UST, piping, dispensers, and a slab under the canopy. This work must be carried out regardless of whether a new convenience store is constructed, and we do not believe this work is subject to site plan review. Redeveloped areas associated directly with the convenience store construction include 1330 sf of pavement converted to roof, and approximately 1300 sf of redeveloped paved areas and a sidewalk, for a total of 2630 sf. Utility note 10 has been added to the site plan to clarify contractor responsibilities relative to erosion control.

In addition to the formal staff comments, you requested at our meeting on July 17 that we provide a narrative which addresses the conditional use requirements of section 14-183.(a) of the land use code, as applicable.

1. Signs: Signs shall not adversely affect visibility at intersections or access drives. Such signs shall be constructed, installed and maintained so as to ensure the safety of the public. Such signs shall advertise only services or goods available on the premises.

   Response: No changes are proposed to the existing signage other than on the new building. We are unaware of any impact of existing signs on visibility or the safety of the public.

2. Circulation: No ingress and egress driveways shall be located within thirty (30) feet from an intersection. No entrance or exit for vehicles shall be in such proximity to a playground, school, church, other places of public assembly, or any residential zone that the nearness poses a threat or potential danger to the safety of the public.

   Response: Driveways are existing and no changes are proposed at this time. We understand from our discussion on July 14, 2018 that a conceptual level plan has been developed for the intersection adjacent to the site, which may impact our site driveways at some point in the future.

3. Conditions specific to major or minor auto service stations, car washes and automobile dealerships:

   a. A landscaped buffer, no less than 5 feet wide, shall be

located along street frontages (excluding driveways). The buffer shall consist of a variety of plantings in accordance with the City of Portland Technical Manual; and

b. Car washes shall be designed to avoid the tracking of residual waters into the street.

Response: Section 14-183.(a).3. was addressed in the original application materials.

Recall that at our meeting last week, staff indicated that a conceptual level plan has been developed for the Morrill's Corner area. That plan includes the potential elimination of the center access into our site at some point in the future, removal of the signal across from this access, and relocation of the traffic signal further south on Forest Avenue. Under the plan, Stevens Avenue would be realigned with the southerly site driveway and the new traffic signal would control that driveway, along with the adjacent roads.

Staff suggested that customers refueling at the canopy and wishing to leave northbound on Forest Avenue could use the existing car wash tunnel exit. Historically, this exit gets backed up due to traffic on Forest Avenue, with cars sometimes backing up to the car wash tunnel exit. Adding additional traffic to this exit would exacerbate this situation and would result in very poor on site circulation.

Staff also questioned how transport tractor trailers access the site. The owner has indicated that the transports access the site via the northerly car wash access, off load the fuel, and exit via the center access.

At the meeting staff requested that we undertake additional site planning to see how the proposed changes might affect our site. Based on further analysis, we have concluded that with no center access drive transport access will be an issue, on site vehicular circulation will be poor, and the proposed changes likely will negatively impact the business.

As a result of the site planning and development of a conceptual plan, we reached the conclusion that converting the center access to a right turn only exit, with no entry, may be a reasonable compromise. The design would need to include a mountable island to allow transports to continue to exit at this location.

Further, the proposed relocation of the traffic signal would result in the need to relocate our major site signage adjacent to the southerly access, along with the two existing vacuum stations southerly of the canopy. We would be amenable to working with the city to accommodate such a change, but would expect that the site signage would

be grandfathered if it is currently non-conforming and must be relocated as a result of actions by the city and MDOT.

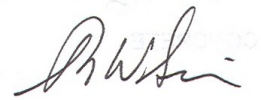
Lastly, at our meeting, Mark Chaloupecky indicated that the entire site would be closed during construction. In fact, it is the intent of the owners to maintain access to the car wash and keep that open during construction if possible. Barricades would be used to segregate car wash traffic and keep the circulation at the site perimeter. Construction access would me mainly through the existing center curb cut.

We are in hopes that we can meet with staff as soon as possible to further discuss these issues, and work toward a mutually beneficial solution prior to the planning board meeting on August 14. Please advise us a date that will work for staff and we can make ourselves available to review the conceptual plan we developed.

We look forward to meeting with you, staff, and the Planning Board to discuss this project. Please contact me with any questions or comments.

Sincerely,

Site Design Associates



Tom Saucier, P.E.
President

Cc: Danny Paisner, President, Scrubadub Auto Wash centers

Site Design Associates
Consulting Engineering and Land Planning

August 22, 2018

Shukria Wiar
Planning Division
389 Congress St., Fourth Floor
Portland, ME 04101

RE: B & D MEREALTY LLC
1185 Forest Avenue
Convenience Store Reconstruction
Site Plan & Conditional Use Application

Dear Shukria:

On behalf of B & D MEREALTY LLC, Site Design Associates (SDA) is pleased to submit this response to staff comments related to the above referenced application provided verbally when we met on August 1, 2018 to discuss our July 24, 2018 submission and respond to follow up emails from Jeff Tarling and Shukria Wiar.

Revisions to the building floor plan and elevation drawing at staff's request include (previously submitted July 24):

- Added a note on the visible light transmittance for the storefront glazing (0.7 max)
- Called out the actual panel systems on the elevations (these were obtained from the construction drawings of the location in Chelsea, MA)
- Updated the Code Review to 2015 from 2009.
- Added the maximum length of travel to the floor plan.

Lauren Swett requested:

1) That an ability to serve letter be obtained from Portland Water District:

Follow-up response: The site is existing and the plans reflect available information relative to utilities on and adjacent to the site. As noted, a two inch water service feeds the site. Portland Water District confirmed that the site was served by the single two inch service. PWD requested flow data for the existing and new stores, which was provided. We expect an ability to serve letter to be issued soon. See the attached email correspondence. We are unaware of any capacity issues in either the water or sewer systems and do not expect any significant increase in water consumption or wastewater disposal rates due to the proposed project.

2) That we attempt to clarify where the existing trench drain at the end of the car wash tunnel drive outlets:

Follow up response: It appears the existing trench drain outlets to the system in Forest Avenue. We are unaware of any issues with tracking of residual waters into the street.

3) Provide a description of how erosion control will be managed on site.

Follow up response: Note 10 on the site plan refers the contractor to drawing C-300 for erosion control details and specifications.

Jeff Tarling requested a planting plan for supplemental plantings in the raised planting beds along the Forest Avenue frontage. A planting plan was prepared and submitted to Jeff for review, and was approved. A copy of the plan is included in this submission.

Tom Errico suggested that some pavement markings including lane markings could be added to the plan along with signage to clarify site circulation. Lane markings have been added at the center access aisle. The northerly access is exit only for vehicles other than transports. We have added the installation of a right turn only sign with a do not enter sign on the reverse side of the sign support. The southerly entrance is entrance only and it is painted as such.

We discussed a conceptual level plan that has been developed for the Morrill's Corner area which includes the potential elimination of the center access into our site at some point in the future, removal of the signal across from this access, and relocation of the traffic signal further south on Forest Avenue. Under the plan, Stevens Avenue would be realigned with the southerly site driveway and the new traffic signal would control that driveway, along with the adjacent roads. Staff suggested that under such a plan, customers refueling at the canopy and wishing to leave northbound on Forest Avenue could use the existing car wash tunnel exit. Historically, this exit gets backed up due to traffic on Forest Avenue, with cars sometimes backing up to the car wash tunnel exit. Adding additional traffic to this exit adjacent to the railroad crossing would exacerbate this situation and would result in very poor on site circulation.

Staff also questioned how transport tractor trailers access the site. The owner has indicated that the transports access the site via the northerly car wash access, off load the fuel, and exit via the center access.

Based on further analysis, we have concluded that with no center access drive, transport access will be an issue, on site vehicular circulation will be poor, egress from the site will be poor, and the proposed changes will negatively impact the business.

As a result of the site planning and development of a conceptual plan, we reached the conclusion that converting the center access to a right turn only exit, with no entry, would be a compromise and a very significant concession by the applicant. The design would need to include mountable islands to allow transports to continue to exit at this

location. We would expect that the signal controlling the exit would remain under this concept.

Additionally, the proposed relocation of the traffic signal to align with the southerly site entrance would result in the need to relocate our major site signage adjacent to the southerly access, along with the two existing vacuum stations southerly of the canopy. We would be amenable to working with the city to accommodate such a change, but would expect that the site signage would be grandfathered if it is currently non-conforming and must be relocated as a result of actions by the city and MDOT. We have shown the relocation on Drawing SK-101 included with this submission.

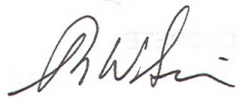
It is our understanding from staff that the existing access points can remain with no modifications until such time as the intersection improvements are implemented.

Since our August 1 meeting, we have discussed the center access issue with Tom Errico to verify that he fully understands the negative ramifications of such future action on the business. We want to be clear that if the planning board agrees with a possible staff recommendation that the center curb cut should be eliminated when/if the intersection modifications are made in the future, and the board is inclined to consider such a recommendation as a condition of approval of the current site plan for the new store, the applicant will need to reconsider whether to move forward with the site improvement project. It would make little sense to make a significant investment in the property knowing future improvements are planned which would negatively impact the business.

We hope that when/if the intersection improvements are implemented at some point in the future, that we can work cooperatively with the city and MDOT to reach a mutually beneficial final design of the site driveways, which does not harm the business.

We can be available to meet with staff to further discuss any remaining issues, including the center access, and hopefully reach a resolution prior to the planning board meeting on September 11. We look forward to meeting with you, staff, and the Planning Board to discuss this project. Please contact me with any questions or comments.

Sincerely,
Site Design Associates



Tom Saucier, P.E.
President

Cc: Danny Paisner, President, Scrubadub Auto Wash centers

Portland Maine | Yes. Google's good here.

Barbara Barhydt <bab@portlandmaine.gov>

Re: 1185 Forest Ave Comments

1 message

Jeff Tarling <jst@portlandmaine.gov> Wed, Aug 15, 2018 at 8:20 AM
To: Tom Saucier <tsaucier@sitedesignassociates.biz>
Cc: Shukria Wiar <shukriaw@portlandmaine.gov>, Mark Chaloupecky <mark@portcityarch.com>, Barbara Barhydt <bab@portlandmaine.gov>

The revised plan looks good as shown.

The plants should be available in the local nursery trade and we can help find them if needed.

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

On Tue, Aug 14, 2018 at 9:32 AM, Tom Saucier <tsaucier@sitedesignassociates.biz> wrote:

> Hi Jeff
>
> Any comments on this?
>
> Thanks
>
> Tom
>
> Tom Saucier, P.E.
>
> Site Design Associates
>
> 23 Whitney Way
>
> Topsham, Maine 04086
>
> 207-449-4275
>
> ---
>
> **From:** Tom Saucier <tsaucier@sitedesignassociates.biz>
> **Sent:** Wednesday, August 8, 2018 11:48 AM
> **To:** 'Jeff Tarling' <jst@portlandmaine.gov>

Cc: 'Shukria Wiar' <shukriaw@portlandmaine.gov>; 'Mark Chaloupecky' <mark@portcityarch.com>; 'Barbara Barhydt' <bab@portlandmaine.gov>
Subject: RE: 1185 Forest Ave Comments

Hi Jeff

Can you please let us know if this addresses your comments below?

Thanks

Tom

Tom Saucier, P.E.

Site Design Associates

23 Whitney Way

Topsham, Maine 04086

207-449-4275

---------- Forwarded message ----------
From: **Jeff Tarling** <jst@portlandmaine.gov>
Date: Wed, Aug 1, 2018 at 4:21 PM
Subject: Re: 1185 Forest Ave Comments
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Hi Shukria -

Recommendations for the 1185 Forest Avenue project would be to add into the landscape 3 groups of ornamental grasses that would give the landscape more of a 3-season appeal and help screen or buffer the site without causing a hinderance to traffic movement or security. The three beds would likely contain 6 or 7 plants each, 3 gallon size.

We like the Little Bluestem Grasses, there are a number of cultivars, 'Carousel' is one of the recommended types.

See:

http://www.chicagolandgrows.org/downloads/carousel_bluestem.pdf

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

On Wed, Aug 1, 2018 at 3:16 PM, Shukria Wiar <shukriaw@portlandmaine.gov> wrote:

> Good Afternoon:
>
> Below are notes from our meeting today. Please review and add anything that I might have missed and/or is need from the applicant.
>
> Landscaping
>
> · Need some relief from pavement with landscaping
>
> · More consideration for screening
>
> · Jeff Tarling to meet on site with Tom Saucier re: type of species of grass to be used for landscaping
>
> Access Circulation
>
> · No right turn only for trucks.
>
> · Mountable island at southern driveway entrance for truck movements
>
> · Submit a plan that shows what is being proposed now and future (when the State project comes through)
>
> · It would be helpful to have striping on site.
>
> Stormwater and Utilities
>
> · Utilities connections need to be shown on the plan- also show what is existing on site.
>
> · Trench drains- Doug Roncarati of DPW Water Resources expressed concerns- plans do not show the drainage connection. What is going on with the drainage on site? If there are issues, this will be the time to fix them.
>
> · Erosion Control- how is this being handled as part of the project.
>
> Thank you.
>
> Shukria
>
> --
>
> Shukria Wiar, Planner
> Planning Division
>
> City of Portland 389 Congress Street
>
> Portland, ME 04101
> Ph: 207.756.8083
> Fax: 207.756.8258

--

Shukria Wiar, Planner
Planning Division

City of Portland 389 Congress Street

Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

--

Shukria Wiar, Planner
Planning Division

City of Portland 389 Congress Street

Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

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Tom Saucier

From: Heather Smith <hsmith@pwd.org> on behalf of AMaP MEANS <means@pwd.org>
Sent: Friday, August 17, 2018 11:07 AM
To: 'Tom Saucier'
Subject: RE: 1185 Forest avenue Scrub a dub car wash

Thank you Tom. I will forward this information on to our engineer and he will reach out to you if he has further questions and will send the Ability to Serve to you via email once the review has been complete.

Please don't hesitate to contact us in the meantime with further questions.

~Heather Smith

MEANS Group
Main Extensions and New Services
Portland Water District
225 Douglass Street
Portland, ME 04104-3553
P:(207)774-5961 Ext. 3199
F:(207)761-8307
MEANS@pwd.org

Heather Smith
Asset Management Technician
Portland Water District
Phone: 207-774-5961 ext.3130
E-mail: hsmith@pwd.org
http://www.pwd.org

From: Tom Saucier <tsaucier@sitedesignassociates.biz>
Sent: Friday, August 17, 2018 10:58 AM
To: AMaP MEANS <means@pwd.org>
Subject: RE: 1185 Forest avenue Scrub a dub car wash

CAUTION:This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Heather

I spoke with the owners, who operate several of these facilities. They are all served by 2" water services.

They estimate that the peak is approximately 56 gpm.

Again, essentially nothing is really changing with the construction of the new store that would significantly impact the district's ability to serve this project, which they currently serve.

Thanks
Tom

Construction Management Plan

B & D MEREALTY LLC
CONVENIENCE STORE REPLACEMENT
1185 FOREST AVENUE

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that the B & D Realty, LLC has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, B & D Realty, LLC shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.
2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

C. Construction Administration and Communication

B & D Realty, LLC will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan shall provide for the following:

1. Contact Person and contact information for the B & D Realty, LLC is Daniel E. Paisner, Mgr. (617) 797-4110
2. Construction Signage posted on the site with Contact Information for Contractor
3. All construction site signage is temporary and shall be removed at project completion.

D. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing.

2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

E. Security & Public Safety

1. The Construction Management Plan will depict all proposed fencing or other barriers and access gates (with knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program. An overall construction of demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting rom previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

F. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects are required to submit a satisfactory 'maintenance of traffic" (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

   Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for n the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic
   - Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
   - In some situations, flaggers may be required.
   - Police details may be required at lighted intersections and may be requested by the City's transportation engineer or his designee.

   All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

   - Traffic control of bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
   - Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
   - ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

G. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or sight lines with the piles of snow.
    3) Clear all walks & ramps with the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage to help snow melt
    6) This would include Monday-Friday Sat/Sunday/Holidays

H. Erosion Control and Preservation of Trees

1. The [contractor] shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. The [contractor] shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan (Exhibit) within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

I. Construction Staging Area

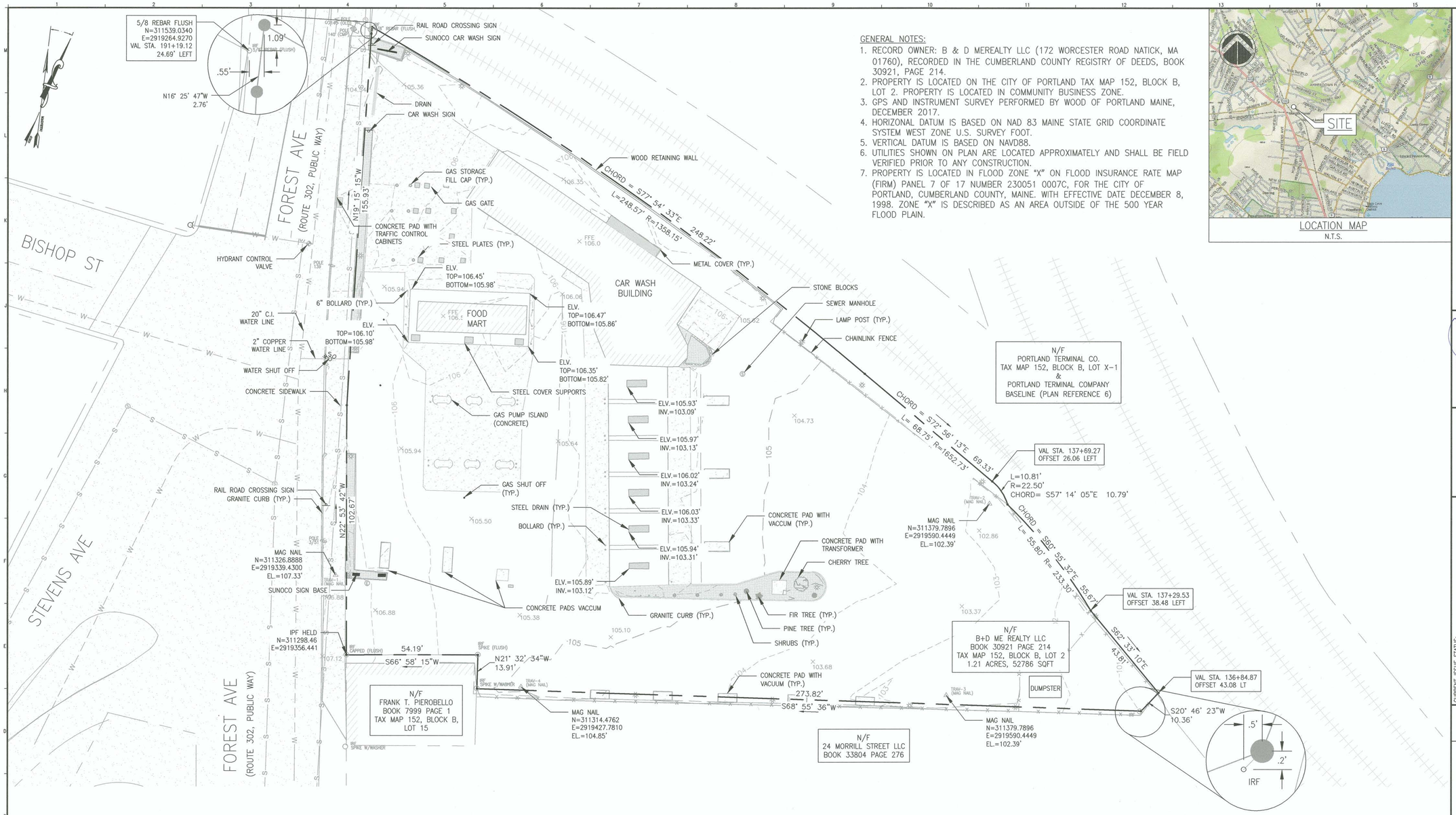
1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. On days when the construction

activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.

3. Delivery Truck Holding Areas Off-Site: In the event that adequate on-site area for holding of trucks is not available, an off-site marshalling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan.

J. Parking During Construction

1. Construction Parking: Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements shall be included in the construction management plan.
2. Parking: Where existing facilities are remaining in operation during construction, the construction management plan shall identify how the parking for employees and others shall be managed.
3. Truck Routes and Volumes: The Construction Management Plan shall address the designated truck routes and expected truck volumes.



GENERAL NOTES:

1. RECORD OWNER: B & D MEREALTY LLC (172 WORCESTER ROAD NATICK, MA 01760), RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, BOOK 30921, PAGE 214.
2. PROPERTY IS LOCATED ON THE CITY OF PORTLAND TAX MAP 152, BLOCK B, LOT 2. PROPERTY IS LOCATED IN COMMUNITY BUSINESS ZONE.
3. GPS AND INSTRUMENT SURVEY PERFORMED BY WOOD OF PORTLAND MAINE, DECEMBER 2017.
4. HORIZONAL DATUM IS BASED ON NAD 83 MAINE STATE GRID COORDINATE SYSTEM WEST ZONE U.S. SURVEY FOOT.
5. VERTICAL DATUM IS BASED ON NAVD88.
6. UTILITIES SHOWN ON PLAN ARE LOCATED APPROXIMATELY AND SHALL BE FIELD VERIFIED PRIOR TO ANY CONSTRUCTION.
7. PROPERTY IS LOCATED IN FLOOD ZONE "X" ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 7 OF 17 NUMBER 230051 0007C, FOR THE CITY OF PORTLAND, CUMBERLAND COUNTY, MAINE. WITH EFFECTIVE DATE DECEMBER 8, 1998. ZONE "X" IS DESCRIBED AS AN AREA OUTSIDE OF THE 500 YEAR FLOOD PLAIN.

LOCATION MAP
N.T.S.

LEGEND:

- SEWER LINE
- WATER LINE
- PROJECT PROPERTY LINE
- FENCLINE
- ABUTTER PROPERTY LINE
- BUILDING
- UTILITY POLE
- LIGHT POLE
- IRF IRON ROD FOUND
- SEWER MANHOLE
- MANHOLE ELECTRIC
- FIRE HYDRANT

PLAN REFERENCES:

1) "PLAN OF PROPERTY FILL-IT-UP-PLEASE" FOREST AVE.-PORTLAND, ME. MADE FOR FRANCIS X. DOWNEY-DATED OCTOBER, 1987 BY OEST ASSOCIATES, INC. OF SOUTH PORTLAND, MAINE.

2) "STANDARD BOUNDARY SURVEY OF N.T. FOX PROPERTY"-24 MORRILL ST.-PORTLAND , ME. MADE FOR PHILIP WHITE-DATED JANUARY 13,1988 BY SEBAGO TECHNICS, INC.-WESTBROOK, ME.

3) "FILL-IT-UP-PLEASE-EXPANSION TO AUTOMATIC CAR WASH"-EXISTING CONDITIONS PLAN-FOREST AVE. PORTLAND, ME. DATED JULY, 1988 BY OEST ASSOCIATES, INC. OF SOUTH PORTLAND, ME.

4) "EXPANSION TO AUTOMATIC CAR WASH REVISED SITE & GRADING PLAN" MADE FOR FILL-IT-UP-PLEASE, FOREST AVE., PORTLAND, ME. DATED JULY, 1988. BY OEST ASSOCIATES, INC. OF SOUTH PORTLAND, ME.

5) "FILL-IT-UP, PLEASE, 1185 FOREST AVE. PORTLAND, MAINE, ALTA/ACSM LAND TITLE SURVEY" MADE FOR SCRUBADUB AUTO CAR WASH CENTERS, INC., DATED 6-2-2005, BY OEST ASSSOCIATES, INC. OF SOUTH PORTLAND, MAINE.

6) "RIGHT OF WAY AND TRACK MAP, PORTLAND TERMINAL CO. STA 105+60 TO STA 158+40, DATED JUNE 30, 1916.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

STATE OF MAINE
CUMBERLAND COUNTY SS. REGISTRY OF DEEDS

RECEIVED _____

AT ___H___M. AND RECORDED

INSTRUMENT NO. _____

FILE _____ NO. _____
ATTEST

_____
REGISTER

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

JEROME B. WATTS P.L.S. #1245

STATE OF MAINE JEROME B. WATTS No. 1245 PROFESSIONAL LAND SURVEYOR

amec foster wheeler
511 Congress St., Suite 200, Portland ME 04101
P: (207) 775-5401 F: (207) 772-4762 www.amec.com

PLEASE NOTE: THIS DOCUMENT MAY NOT ACCURATELY REPRESENT THE FINAL DOCUMENT. ONLY AN ENGINEER, ARCHITECT OR SURVEYOR SIGNED, SEALED AND DATED PAPER COPY, PROVIDED BY THIS OFFICE, MAY BE UTILIZED FOR BIDING OR CONSTRUCTION PURPOSES.

STATE OF MAINE JEROME B. WATTS No. 1245 PROFESSIONAL LAND SURVEYOR 1/15/18

CURRENT ISSUE STATUS: **ISSUED 1/15/18**

PROJECT: Existing Conditions - Boundary Survey
Scrubadub Auto Car Wash Centers, Inc.
1185 Forest Avenue, Portland, Maine

	DATE	REVISION ISSUE DESCRIPTION
B	1-15-18	FINAL ISSUED FOR REVIEW
A	12-28-17	
REV		

PROJECT NUMBER:	361813249
PROJECT MANAGER:	JBW
A/E OF RECORD:	JBW
DRAWN BY:	JMF
CAD FILE:	LT-1
SCALE:	AS NOTED
GRAPHIC SCALE:	0" 1"
TITLE:	LOT CONVEYANCE
DRAWING NO:	LT-1
SHEET:	1 OF 1

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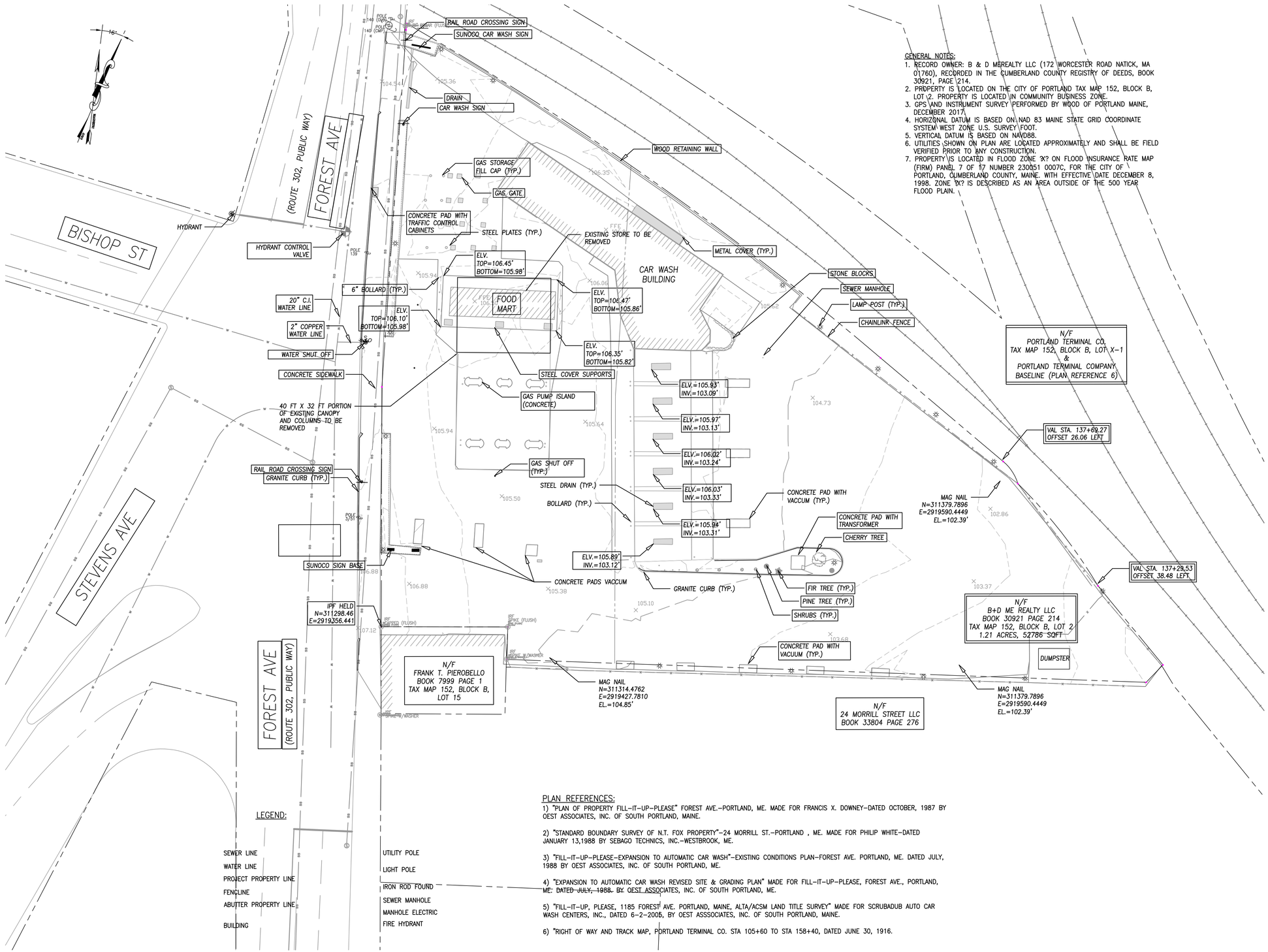

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EXISTING CONDITIONS AND DEMOLITION NOTES:

1. THE CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO ANY DEMOLITION AND CONSTRUCTION ACTIVITIES.
2. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, AND REPAIR EXISTING UTILITIES AS REQUIRED TO COMPLETE THE WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
4. ANY EXISTING PROPERTY DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED TO MATCH ITS ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO CHARGE TO THE OWNER OR ENGINEER.
5. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, UTILITIES, LANDSCAPE AND PAVEMENT ON THE SITE WITHIN THE AREAS DESIGNATED FOR DEMOLITION UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE, BUT ARE NOT LIMITED TO PAVEMENT, CURBING, LIGHT POLES & BASES, CONCRETE PADS, STAIRS, RETAINING WALLS, MANHOLES, MONITORING WELLS, SIGNAGE AND LANDSCAPING.
6. ALL MATERIALS DESIGNATED FOR REMOVAL/DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS, ORDINANCES AND CODES.
7. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR THE CONTRACTORS CONVENIENCE ONLY. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR SHALL VERIFY FULL LIMITS OF PAVEMENT PRIOR TO BIDDING.
8. THE CONTRACTOR SHALL COORDINATE THE REMOVAL, RELOCATION AND DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
9. THE CONTRACTOR SHALL VERIFY THAT ABATEMENT OF THE EXISTING BUILDING AREAS TO BE DEMOLISHED HAS BEEN COMPLETED PRIOR TO DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS AND TECHNIQUES TO COMPLETE THE BUILDING DEMOLITION.
10. ALL MATERIALS DESIGNATED FOR STOCKPILING OR RELOCATION SHALL BE CLEANED, STOCKPILED AND PROTECTED IN AN AREA APPROVED BY THE ARCHITECT UNTIL RELOCATION TAKES PLACE.
11. SAWCUT AND REMOVE PAVEMENT ONE FOOT OFF PROPOSED EDGE OF PAVEMENT OR CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT TO REMAIN.
12. SCREENED IMAGES REPRESENT EXISTING CONDITIONS.

LEGEND:

SEWER LINE
WATER LINE
PROJECT PROPERTY LINE
FENCLINE
ABUTTER PROPERTY LINE
BUILDING
UTILITY POLE
LIGHT POLE
IRON ROD FOUND
SEWER MANHOLE
MANHOLE ELECTRIC
FIRE HYDRANT

PLAN REFERENCES:

1) "PLAN OF PROPERTY FILL-IT-UP-PLEASE" FOREST AVE.-PORTLAND, ME. MADE FOR FRANCIS X. DOWNEY-DATED OCTOBER, 1987 BY OEST ASSOCIATES, INC. OF SOUTH PORTLAND, MAINE.

2) "STANDARD BOUNDARY SURVEY OF N.T. FOX PROPERTY"-24 MORRILL ST.-PORTLAND , ME. MADE FOR PHILIP WHITE-DATED JANUARY 13,1988 BY SEBAGO TECHNICS, INC.-WESTBROOK, ME.

3) "FILL-IT-UP-PLEASE-EXPANSION TO AUTOMATIC CAR WASH"-EXISTING CONDITIONS PLAN-FOREST AVE. PORTLAND, ME. DATED JULY, 1988 BY OEST ASSOCIATES, INC. OF SOUTH PORTLAND, ME.

4) "EXPANSION TO AUTOMATIC CAR WASH REVISED SITE & GRADING PLAN" MADE FOR FILL-IT-UP-PLEASE, FOREST AVE., PORTLAND, ME. DATED ~~JULY, 1988.~~ BY OEST ASSOCIATES, INC. OF SOUTH PORTLAND, ME.

5) "FILL-IT-UP, PLEASE, 1185 FOREST AVE. PORTLAND, MAINE, ALTA/ACSM LAND TITLE SURVEY" MADE FOR SCRUBADUB AUTO CAR WASH CENTERS, INC., DATED 6-2-2005, BY OEST ASSSOCIATES, INC. OF SOUTH PORTLAND, MAINE.

6) "RIGHT OF WAY AND TRACK MAP, PORTLAND TERMINAL CO. STA 105+60 TO STA 158+40, DATED JUNE 30, 1916.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SITE DESIGN ASSOCIATES, ANY ALTERATIONS, OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SITE DESIGN ASSOCIATES.

REV.	DATE	STATUS	BY	CHKD.	APPD.
A	05/07/18	FOR LEVEL 2 AND CONDITIONAL USE REVIEW	TWS	TWS	TWS

STATE OF MAINE
THOMAS W. SAUCIER
NO. 6088
LICENSED
PROFESSIONAL ENGINEER
05-04-18

Site Design Associates
Consulting Engineering & Land Planning
23 Whitney Way Topsham, Maine 04086 Tel: (207) 449-4275

CLIENT:
PORT CITY ARCHITECTURE
65 NEWBURY STREET PORTLAND, MAINE

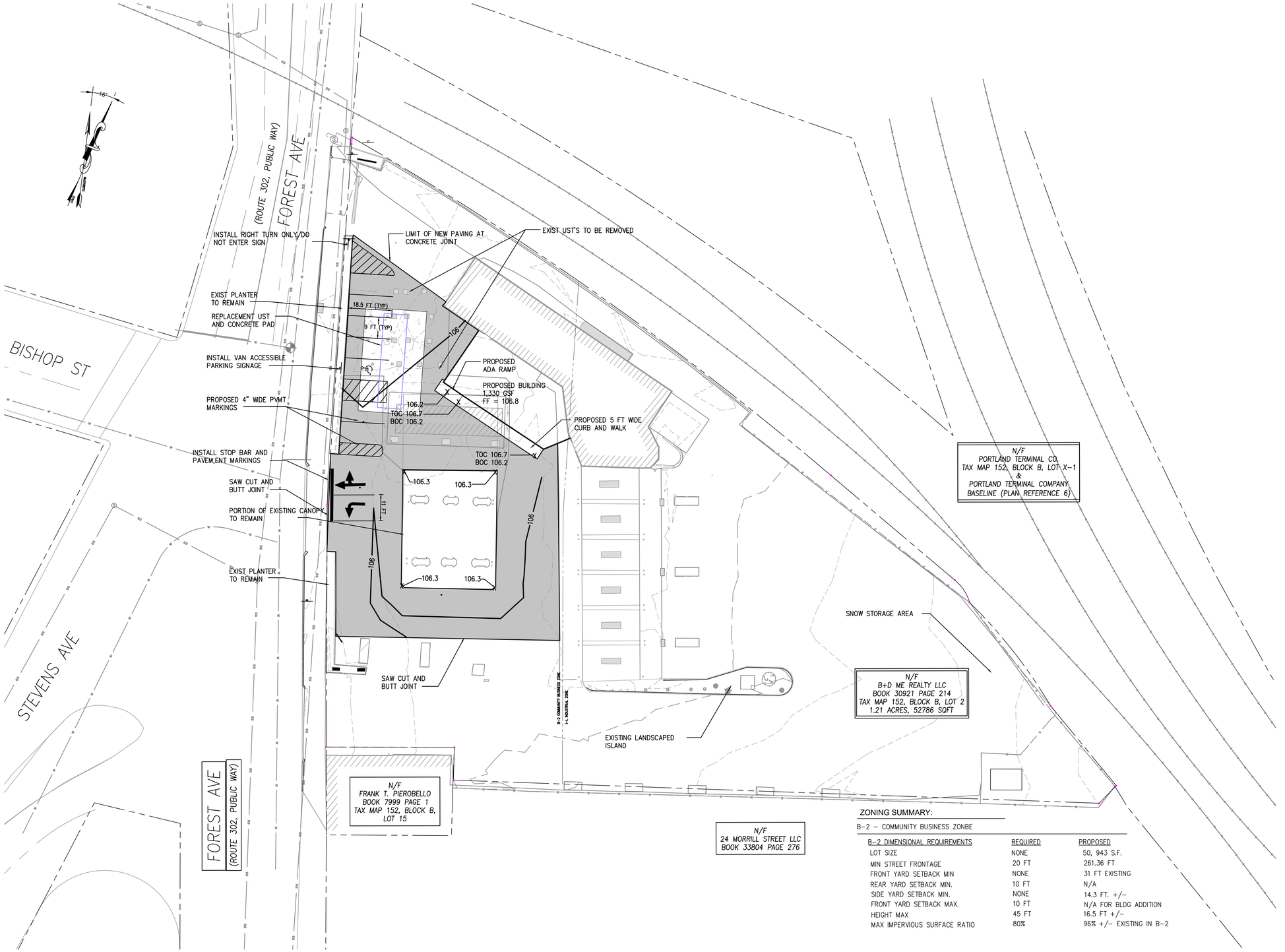
DESIGN: DEPT.	
DRAWN: DEPT.	
CHKD: TWS	
DATE: JAN 2018	PROJ. NO. 17-203-00
SCALE: 1" = 20 FT	DWG. NO. C-100

PROJECT:
CONVENIENCE STORE RECONSTRUCTION
1185 FOREST AVE PORTLAND, MAINE

EXISTING CONDITIONS PLAN

REV. A

Drawing Name: N:\2017 Projects\17-203-00 South A Dr\A\DWG\pln Plot: 05-04-18 | Plot Date / Time: May 4, 18 / 1:35 PM



SITE LAYOUT AND MATERIALS NOTES:

1. ALL DIMENSIONS ARE PERPENDICULAR UNLESS OTHERWISE NOTED.
2. WALK DIMENSIONS ARE SHOWN FROM FACE OF CURB.
3. DO NOT SCALE DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE.
4. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION / DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED AT NO COST TO THE OWNER.
6. MDOT STANDARD DETAILS SHALL BE USED FOR ALL WORK PERFORMED IN THE CITY AND STATE RIGHTS OF WAY.
7. ALL SIGNAGE AND PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE MUTCD STANDARDS.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL STAKE THE LAYOUT FOR APPROVAL BY THE OWNER PRIOR TO CONSTRUCTION.
9. A DIGITAL AUTOCAD FILE WILL BE SUPPLIED TO THE CONTRACTOR FOR LAYOUT PURPOSES UPON REQUEST.

UTILITY NOTES:

1. TOPOGRAPHIC SURVEY AND EXISTING UTILITY INFORMATION PROVIDED BY AMEC FOSTER WHEELER. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF NEW UTILITIES WITH THE APPROPRIATE UTILITY COMPANY.
3. ALL UTILITY WORK SHALL BE IN CONFORMANCE WITH THE INDIVIDUAL UTILITY COMPANY STANDARDS RESPECTIVELY.
4. CONTRACTOR SHALL EXCAVATE TEST PITS AT ALL POINTS WHERE PROPOSED UTILITIES ARE TO CROSS EXISTING UTILITIES. THIS INFORMATION SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL PROVIDE CONDUIT OF SUITABLE SIZE WITH PULL LINES FOR ALL UNDERGROUND WIRING. SEE ELECTRICAL DRAWINGS FOR CONDUIT REQUIREMENTS.
6. SHADED AREA REPRESENTS ANTICIPATED AREA OF FULL DEPTH PAVEMENT RECONSTRUCTION. FINAL FULL DEPTH LIMITS TO BE APPROVED BY OWNER.
7. SAWCUT AND BUTT JOINT ALL AREAS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
8. CONNECT TO EXISTING UTILITIES AS REQUIRED.
9. OWNER OF RECORD IS B & D MEREALTY LLC, 172 WORCESTER STREET, NATICK, MA 01760.
10. CONTRACTOR IS RESPONSIBLE FOR INSTALLING EROSION CONTROL MEASURES IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS SHOWN ON DRAWING C-300.

ZONING SUMMARY:

B-2 – COMMUNITY BUSINESS ZONBE

B-2 DIMENSIONAL REQUIREMENTS	REQUIRED	PROPOSED
LOT SIZE	NONE	50, 943 S.F.
MIN STREET FRONTAGE	20 FT	261.36 FT
FRONT YARD SETBACK MIN	NONE	31 FT EXISTING
REAR YARD SETBACK MIN.	10 FT	N/A
SIDE YARD SETBACK MIN.	NONE	14.3 FT. +/–
FRONT YARD SETBACK MAX.	10 FT	N/A FOR BLDG ADDITION
HEIGHT MAX	45 FT	16.5 FT +/–
MAX IMPERVIOUS SURFACE RATIO	80%	96% +/– EXISTING IN B-2

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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REV.	DATE	STATUS	BY	CHKD.	APPD.
C	08/17/18	ADDED PAVEMENT MARKINGS	TWS	TWS	TWS
B	07/24/18	RESPONSE TO CITY COMMENTS	TWS	TWS	TWS
A	05/07/18	FOR LEVEL 2 AND CONDITIONAL USE REVIEW	TWS	TWS	TWS

STATE OF MAINE — THOMAS W. SAUCIER NO. 6086 — LICENSED PROFESSIONAL ENGINEER
08-17-18

Site Design Associates
Consulting Engineering & Land Planning
23 Whitney Way Topsham, Maine 04086 Tel: (207) 449-4275

CLIENT:
PORT CITY ARCHITECTURE
65 NEWBURY STREET PORTLAND, MAINE

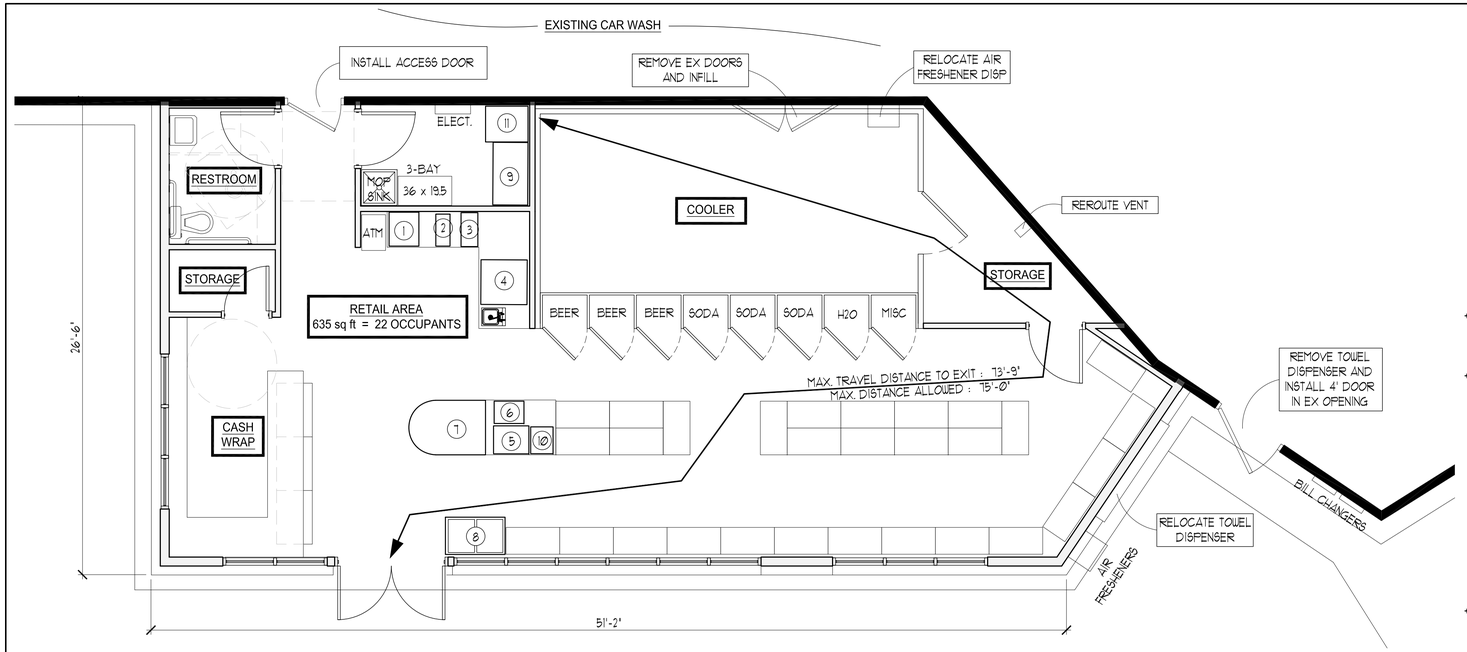
DESIGN: DEPT.
DRAWN: DEPT.
CHKD: TWS
DATE: APRIL 2018
SCALE: 1" = 20 FT

PROJECT: CONVENIENCE STORE RECONSTRUCTION
1185 FOREST AVE PORTLAND, MAINE

SITE PLAN

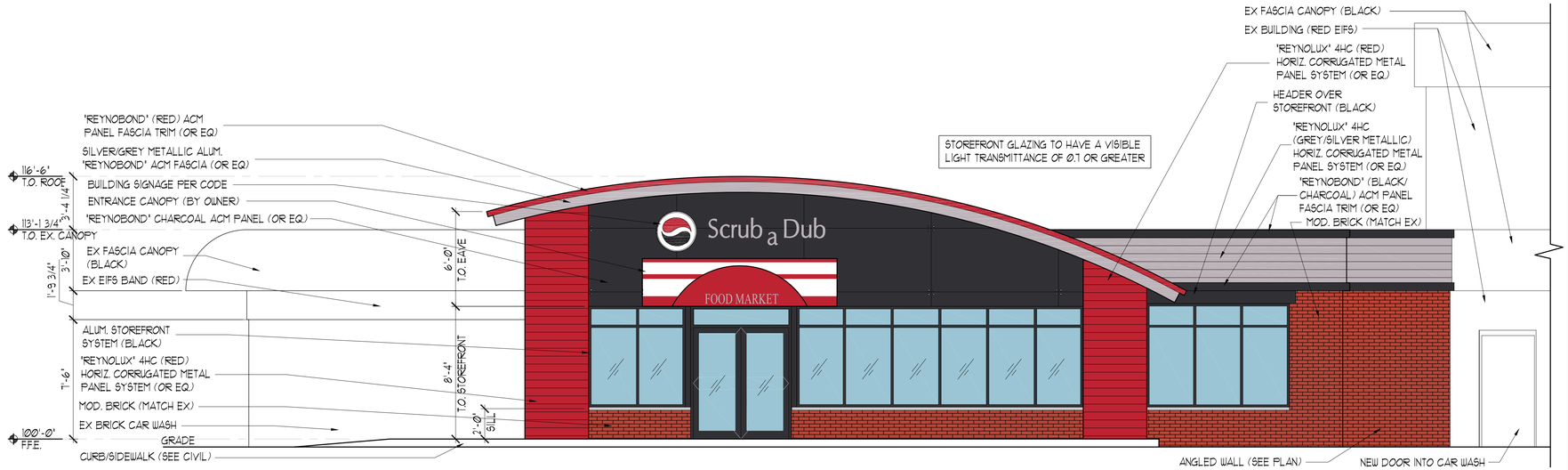
PROJ. NO. 17-203-00 REV. C
DWG. NO. C-101

Drawing Name: N:\2017 Projects\17-203-00 Scrub A Dub\DWG\site Plan 08-22-18 | Plot Date / Time: Aug 22, 18 / 7:45 PM



Floor Plan

Side Elevation



Front Elevation

Code Information

GENERAL INFORMATION:

BUILDING USE:
EXISTING: CAR WASH (B - BUSINESS)
NEW: CONVENIENCE STORE (M - MERCANTILE)

SPRINKLED: NO

FIRE ALARM: NO

PORTABLE FIRE EXTINGUISHERS: YES

BUILDING AREA:
EXISTING CAR WASH: 4,940 SF
FIRST FLOOR: 3,220 SF
SECOND FLOOR: 1,720 SF
EXISTING OPEN SELF-SERVE WASH BAYS: 2210 SF
EXISTING FOOD MART (REMOVED): 550 SF
NEW CONVENIENCE STORE: 1,330 SF

Code Review - IEBC 2015

Chapter 11 - Additions

Section 1102.3 - Per IBC Figure 903.2, there are no fire areas greater than 12,000 sf and a sprinkler system is not required. Per IBC Figure 907.2, the occupant load does not exceed 500 and a fire alarm system is not required.

Section 1105.1 - The new convenience store shall be accessible.

Code Review - IBC 2015

Chapter 3 - Use and Occupancy Classification

Section 309 - The convenience store is classified as Use Group M (Mercantile).

Chapter 5 - General Building Heights and Areas

Table 504.3 - For Construction Type 5B, the building is allowed 40' maximum height. If a Construction Type 2B is selected, the building is allowed a maximum height of 55'. (Height is limited to 50' by zoning requirements).

Table 506.2 - For Construction Type 5B, the building is allowed 9,000 sf. If a Construction Type 2B is selected, the building is allowed a maximum of 12,500 sf.

Table 508.4 - A fire separation is not required between the existing car wash (Business) and the new c-store (Mercantile) per this table.

Chapter 6 - Types of Construction

Table 601 - It is anticipated that the new addition will be constructed in Type 2B or Type 5B.

Chapter 7 - Fire and Smoke Protection Features

Table 705.8 - The fire separation distance is greater than 30' and there is no limit to the amount of openings in the exterior walls.

Chapter 9 - Fire Protection Systems

Figure 903.2 - The fire area is less than 12,000 sf and a sprinkler system is not required.

Figure 907.2 - The total occupant load is under 500 and a fire alarm system is not required.

Chapter 10 - Means of Egress

Table 1004.1.2 - The occupant load of the new c-store shall be 26 (22 retail area / 2 storage area / 2 employees).

Table 1006.3.2(2) - One exit is allowed out of the c-store as it is under the occupant load of 50 and has maximum common path of travel of 75'. (Note: The existing car wash has at least two exits).

Chapter 11 - Accessibility

Section 1103.1 - The new c-store shall be accessible.

Code Review - NFPA 101 (Life Safety) 2009

Chapter 43 - Building Rehabilitation

Section 43.2.2.1.7 - Per this section, the project is defined as an "Addition".

Section 43.8.1 - The new convenience store shall comply with Chapter 36 for New Mercantile Occupancies. The existing car wash shall comply with Chapter 39 for Existing Business Occupancies.

Section 43.8.3 - Per Section 36.3.5 and 38.3.5, no sprinklers are required.

Chapter 36 - New Mercantile Occupancy

Section 36.1.4.2.1 - The new convenience store is classified as a "Class C" Mercantile occupancy.

Section 36.1.7 - The occupant load (per Table 7.3.1.2) shall be 26 occupants (22 retail area / 2 storage area / 2 employees).

Section 36.2.4.3 - A single means of egress is permitted for the convenience store as the travel distance to the exit is under 75'.

Section 36.3.4.1 - A fire alarm system is not required.

Section 36.3.5.1 - A sprinkler system is not required.

Section 36.3.5.3 - Portable fire extinguishers are required.

Chapter 39 - Existing Business Occupancy

Section 39.1.7 - The occupant load for the existing car wash is difficult to determine. Most of the space is taken up with the equipment and the actual car wash run. The car wash can accommodate approximately 4 cars, and has approximately 3-4 employees at any one time.

Section 39.2.4.3 - Two exits have been provided for the car wash.

Section 39.2.4 - The common path of travel is not limited.

Section 39.2.6.2 - Travel distance to an exit shall not exceed 200'.

Section 39.3.4.1 - A fire alarm system is not required.

Section 36.3.5 - A sprinkler system is not required. Portable fire extinguishers are required.

Scrub-a-Dub

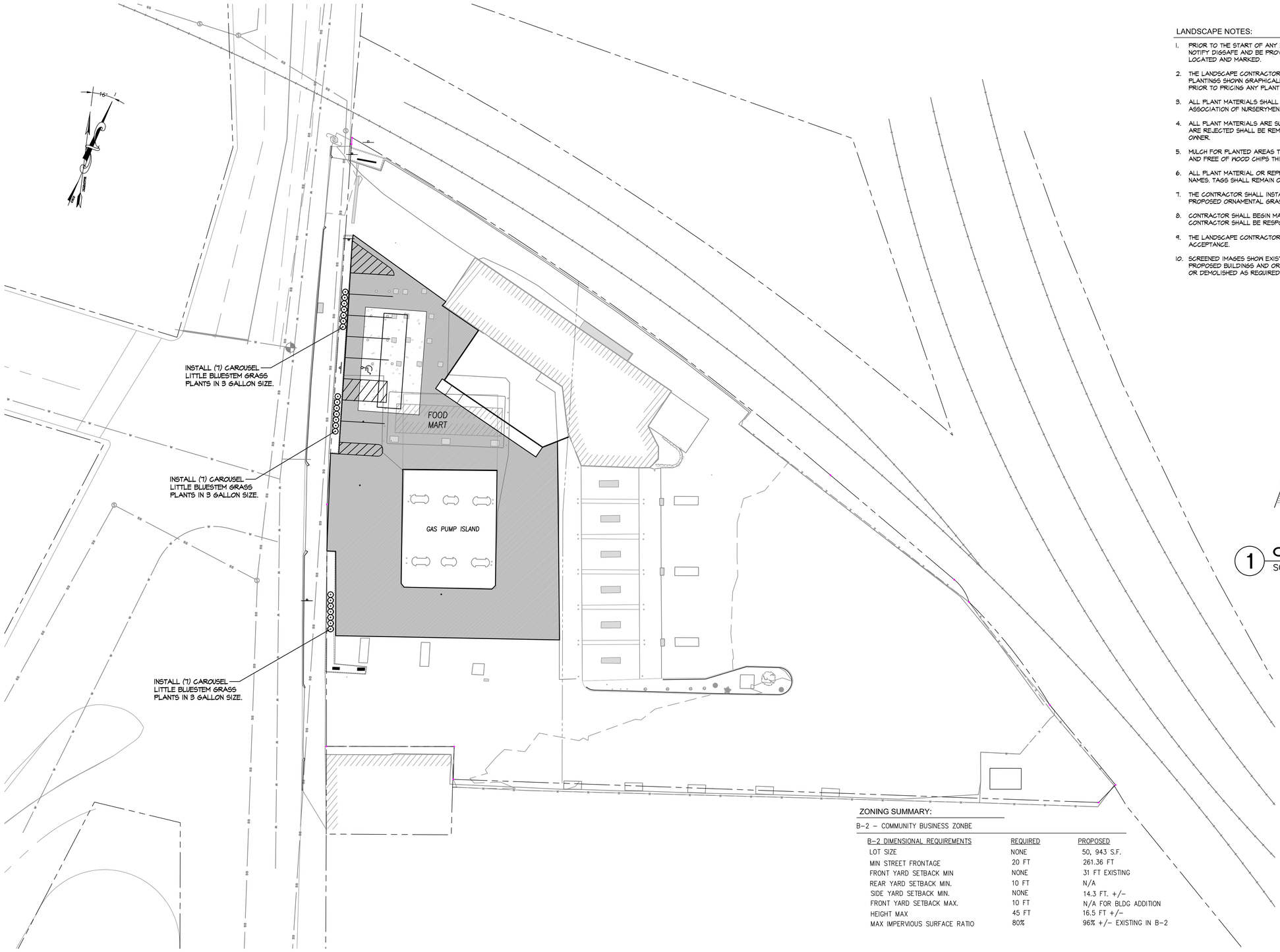
Portland, Forest Ave.

PORT CITY ARCHITECTURE

Proposed Floor Plan & Elevations

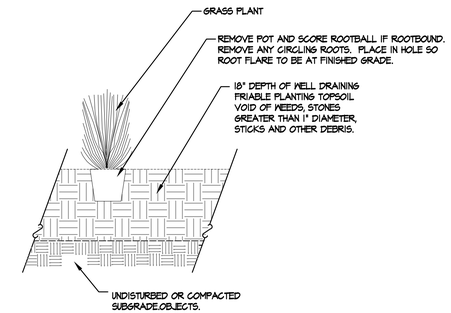
April, 2018

ARCHITECT:
PORT CITY ARCHITECTURE
65 NEWBURY STREET
PORTLAND, MAINE 04101
(207) 761-9000
attn: MARK CHALOUPECKY
mark@portcityarch.com



LANDSCAPE NOTES:

1. PRIOR TO THE START OF ANY EXCAVATION FOR THE PROJECT BOTH ON AND OFF THE SITE, THE CONTRACTOR SHALL NOTIFY DIGSAFE AND BE PROVIDED WITH A DIGSAFE NUMBER INDICATING THAT ALL EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED.
2. THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE ALL PLANTINGS SHOWN GRAPHICALLY ON THIS DRAWING. CLARIFY ANY DISCREPANCIES WITH THE LANDSCAPE ARCHITECT PRIOR TO PRICING ANY PLANT MATERIAL.
3. ALL PLANT MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S "AMERICAN STANDARD OF NURSERY STOCK".
4. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE AT THE SITE. PLANTS WHICH ARE REJECTED SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. MULCH FOR PLANTED AREAS TO BE AGED SPRUCE AND FIR BARK, PARTIALLY DECOMPOSED, DARK BROWN IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.
6. ALL PLANT MATERIAL OR REPRESENTATIVE SAMPLES SHALL BE LEGIBLY TAGGED WITH PROPER COMMON AND BOTANICAL NAMES. TAGS SHALL REMAIN ON THE PLANTS UNTIL FINAL ACCEPTANCE.
7. THE CONTRACTOR SHALL INSTALL AN 18" DEPTH OF PLANTING SOIL IN THE PLANTERS PRIOR TO THE INSTALLATION OF THE PROPOSED ORNAMENTAL GRASS PLANTS.
8. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND WILL CONTINUE UNTIL FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF WATERING AND MAINTENANCE.
9. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF FINAL ACCEPTANCE.
10. SCREENED IMAGES SHOW EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER OR ARE IMPINGED UPON BY PROPOSED BUILDINGS AND OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND OR CAPPED OR DEMOLISHED AS REQUIRED.



1 **ORNAMENTAL GRASS INSTALLATION**
SCALE: NTS

ZONING SUMMARY:

B-2 – COMMUNITY BUSINESS ZONBE

B-2 DIMENSIONAL REQUIREMENTS	REQUIRED	PROPOSED
LOT SIZE	NONE	50, 943 S.F.
MIN STREET FRONTAGE	20 FT	261.36 FT
FRONT YARD SETBACK MIN	NONE	31 FT EXISTING
REAR YARD SETBACK MIN.	10 FT	N/A
SIDE YARD SETBACK MIN.	NONE	14.3 FT. +/-
FRONT YARD SETBACK MAX.	10 FT	N/A FOR BLDG ADDITION
HEIGHT MAX	45 FT	16.5 FT +/-
MAX IMPERVIOUS SURFACE RATIO	80%	96% +/- EXISTING IN B-2

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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REV.	DATE	STATUS	BY	CHKD.	APPD.
A	08/06/18	SUBMITTED TO THE CITY OF PORTLAND FOR REVIEW	PBB	PBB	TWS

LICENSED LANDSCAPE ARCHITECT
PETER B. BIEGEL
No. 2624
STATE OF MAINE
8/6/18

Site Design Associates
Consulting Engineering & Land Planning
23 Whitney Way Topsham, Maine 04086 Tel: (207) 449-4275

CLIENT:
PORT CITY ARCHITECTURE
65 NEWBURY STREET PORTLAND, MAINE

DESIGN: DEPT.
DRAWN: DEPT.
CHKD: TWS
DATE: APRIL 2018
SCALE: 1" = 20 FT

PROJECT: **CONVENIENCE STORE RECONSTRUCTION**
1185 FOREST AVE PORTLAND, MAINE

LANDSCAPE PLAN

PROJ. NO. 17-203-00
DWG. NO. C-103
REV. A

EROSION AND SEDIMENTATION CONTROL NOTES & DETAILS

TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCE, SEDIMENT BARRIER, EROSION CONTROL MIX, STONE CHECK DAMS, HAY BALE BARRIERS, CATCH BASIN INLET BARRIERS, CATCH BASIN SEDIMENT COLLECTION BAGS, EROSION CONTROL BLANKET, AND TEMPORARY SEEDING AND MULCHING AS REQUIRED. PERMANENT DEVICES INCLUDE THE USE OF RIP RAP AT EXPOSED STORM DRAIN AND CULVERT INLETS AND OUTLETS, RIP RAPPED SLOPES, AND PERMANENT VEGETATION.

A. GENERAL

1. IT IS ANTICIPATED THAT CONSTRUCTION WILL BEGIN AS SOON AS POSSIBLE FOLLOWING RECEIPT OF NECESSARY PERMITS.
2. THE PROJECT SHALL CONFORM TO THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MAY 2003, OR AS CURRENTLY REVISED.
4. ANY ADDITIONAL EROSION AND SEDIMENTATION CONTROL DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERSONNEL AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.
5. 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.
6. 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 ACCEPTABLE PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:
   - A. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90 DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
   - B. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
   - C. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
   - D. FOR AREAS STABILIZED WITH RIP RAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIP RAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIP RAP. STONE MUST BE SIZED APPROPRIATELY.
   - E. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.
   - F. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIP RAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN CUTTING OF THE CHANNEL.

B. EROSION AND SEDIMENTATION CONTROL MEASURES

1. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. IT IS THE INTENT THAT SEDIMENT BARRIERS BE INSTALLED DOWN GRADIENT OF ALL DISTURBED AREAS OF THE SITE. SEDIMENT BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS WILL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE SEDIMENT BARRIERS. THIS SEDIMENT WILL BE SPREAD AND STABILIZED IN AREAS OF THE SITE NOT SUBJECT TO EROSION. SEDIMENT BARRIERS SHALL BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, THEY WILL BE REPLACED WITH A TEMPORARY CRUSHED STONE CHECK DAM.
2. ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED DURING CONSTRUCTION. INSPECT & CLEAN OUT AS NECESSARY. LEGALLY DISPOSE OF SEDIMENT & REMOVE FLOATABLES WITH OIL ABSORBENT PAD AS APPLICABLE.
3. REMOVAL OF SOD, TREES, BUSHES AND OTHER VEGETATION AND SOIL DISTURBANCE WILL BE KEPT TO A MINIMUM WHILE ALLOWING PROPER SITE DEVELOPMENT.
4. GRUBBINGS AND ANY UNUSABLE TOPSOIL SHALL BE STRIPPED AND REMOVED FROM THE PROJECT SITE AND DISPOSED OF IN AN APPROVED MANNER.
5. ANY SUITABLE TOPSOIL WILL BE STRIPPED AND STOCKPILED FOR REUSE IN FINAL GRADING. TOPSOIL WILL BE STOCKPILED IN A MANNER SUCH THAT NATURAL DRAINAGE IS NOT OBSTRUCTED AND NO OFF-SITE SEDIMENT DAMAGE WILL RESULT. IF A STOCKPILE IS NECESSARY, THE SIDE SLOPES OF THE TOPSOIL STOCKPILE WILL NOT EXCEED 2:1. TOPSOIL STOCKPILES WILL BE TEMPORARILY SEEDED WITH AROOSTOOK RYE, ANNUAL OR PERENNIAL RYE GRASS (DEPENDING ON DATE SEEDED) WITHIN 7 DAYS OF FORMATION, OR TEMPORARILY MULCHED IF SEEDING CANNOT BE DONE WITHIN THE RECOMMENDED SEEDING DATES.
6. TEMPORARY DIVERSION BERMS AND DRAINAGE SWALES SHALL BE CONSTRUCTED AS NECESSARY.
7. TEMPORARY STABILIZATION SHALL BE CONDUCTED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS, PRIOR TO ANY RAIN EVENT, AND PRIOR TO ANY WORK SHUT DOWN LASTING MORE THAN ONE DAY. TEMPORARY STABILIZATION INCLUDES SEED, MULCH, OR OTHER NON-ERODABLE COVER. AREAS WITHIN 75 FEET OF WETLANDS SHALL BE TEMPORARILY STABILIZED WITHIN 48 HOURS OR PRIOR TO RAIN EVENT.
8. APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRE, AND ANCHOR AS NECESSARY.
9. TEMPORARY SEEDING SPECIFICATIONS. WHERE THE SEEDBED HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 4 INCHES BEFORE APPLYING FERTILIZER, LIME, AND SEED. APPLY LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND 10-10-10 (N-P205-K20) FERTILIZER AT A RATE OF 600 LBS. PER ACRE (13.8 LB. PER 1,000 SQUARE FEET). UNIFORMLY APPLY SEED AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRE, AND ANCHOR AS NECESSARY.

   RECOMMENDED TEMPORARY SEEDING DATES AND APPLICATION RATES ARE AS FOLLOWS:

   AROOSTOOK RYE: RECOMMENDED SEEDING DATES: 8/15 – 10/1
   APPLICATION RATE: 112 LBS./ACRE

   ANNUAL RYE GRASS: RECOMMENDED SEEDING DATES: 4/1 – 7/1
   APPLICATION RATE: 40 LBS./ACRE

   PERENNIAL RYE GRASS: RECOMMENDED SEEDING DATES: 8/15 – 9/15
   APPLICATION RATE: 40 LBS./ACRE
10. 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 RIP RAP. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS. AMEND AREAS OF DISTURBED SUBSOIL WITH TOP SOIL OR OTHER ORGANIC AMENDMENTS, PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY EROSION CONTROL BLANKETS, AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC. EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT.
11. PERMANENT SEEDING SPECIFICATION. IF A LANDSCAPE PLAN HAS BEEN PREPARED FOR THE PROJECT, SOIL PREPARATION AND SEEDING OF THAT PLAN SHALL SUPERSEDE THESE GENERAL PERMANENT SEEDING SPECIFICATIONS. IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND AUGUST 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDED WITH AROOSTOOK RYE OR MULCHED AT RATES PREVIOUSLY SPECIFIED. SEE WINTER CONDITIONS NOTES FOR SEEDING STABILIZATION AFTER NOVEMBER 1.
    - A. APPLY TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES. MIX TOPSOIL WITH THE SUBSOIL TO A MINIMUM DEPTH OF 6 INCHES.
    - B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND GRANULAR, COMMERCIAL-GRADE, 10-10-10 (N-P205-K20) FERTILIZER AT A RATE OF 800 LBS. PER ACRE (18.4 LBS. PER 1,000 SQUARE FEET).
    - C. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRE, AND ANCHOR AS NECESSARY.
    - D. THE SEED MIXTURE FOR LAWN AREAS SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:
      10 % CREEPING RED FESCUE
      30 % KENTUCKY BLUEGRASS
      60 % PERENNIAL RYE GRASS
    - E. THE SEED MIXTURE FOR WET AREAS SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:
      50 % REED CANARY GRASS
      25 % RED TOP
      15 % CREEPING RED FECUE
      10 % PERENNIAL RYE GRASS
12. MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE.
13. DITCH LININGS, STONE CHECK DAMS, AND RIP RAP INLET AND OUTLET PROTECTION SHALL BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR INSTALLATION OF CULVERT.
14. RIP RAP REQUIRED AT CULVERTS AND STORM DRAIN INLETS AND OUTLETS SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. STONES SHALL WEIGH FROM 10 LBS. TO 200 LBS. AND 50% OF THE STONES BY VOLUME SHALL EXCEED A UNIT WEIGHT OF APPROXIMATELY 50 LBS.
15. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1, IN THE BASE OF DITCHES NOT OTHERWISE PROTECTED, AND ANY DISTURBED AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE (E.G. WETLANDS AND WATER BODIES). EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
16. TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

C. WINTER CONDITIONS

"WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF AREAS WITHIN THE CONSTRUCTION ACTIVITY 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. NO MORE THAN ONE ACRE OF THE SITE MAY BE WITHOUT STABILIZATION AT ONE TIME.

2. AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS.
3. HAY MULCH SHALL BE APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.
4. AFTER NOVEMBER 1 OR THE FIRST KILLING FROST FOR THE REGION AND BEFORE SNOW FALL, ALL EXPOSED AND DISTURBED AREAS NOT TO UNDERGO FURTHER DISTURBANCE ARE TO HAVE DORMANT SEEDING. THE DORMANT SEEDING METHOD: PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED PERMANENT SEED MIXTURE AT DOUBLE THE REGULAR SEEDING RATE, AND MULCH AND ANCHOR. DORMANT SEEDINGS NEED TO BE ANCHORED EXTREMELY WELL ON SLOPES, DITCH BASES AND AREAS OF CONCENTRATED FLOWS. DORMANT SEEDING REQUIRES INSPECTION AND RESEEDING AS NEEDED IN THE SPRING. ALL AREAS WHERE COVER IS INADEQUATE MUST BE IMMEDIATELY RESEEDED AND MULCHED AS SOON AS POSSIBLE.
5. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
6. MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE SLOPES.

D. HOUSEKEEPING

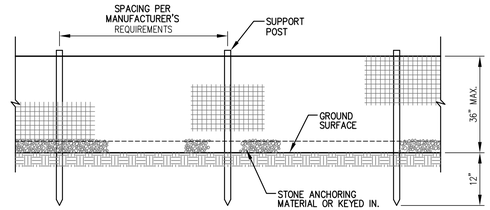
1. SPILL PREVENTION.CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.
2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.
4. DEBRIS AND OTHER MATERIAL. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER, MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
5. TRENCH OR FOUNDATION DE-WATERING. TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOTE AREAS THAT ARE SPECIFICALLY DESIGNATED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFER DAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE.

E. INSPECTION AND MAINTENANCE

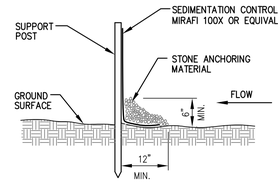
1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORM WATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE A WEEK AS WELL AS BEFORE AND AFTER STORM EVENTS, PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORM WATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT AND ANY DEP OR MUNICIPAL COMPANION DOCUMENTS, MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES BMPs NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
2. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME AND QUALIFICATIONS OF THE PERSON PERFORMING THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPs THAT NEED TO BE MAINTAINED, LOCATION(S) OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF THE INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED; INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

CONSTRUCTION SEQUENCE

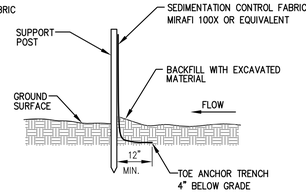
1. INSTALL EROSION CONTROL MEASURES.
2. DISCONNECT UTILITIES, DEMOLISH, REMOVE PAVEMENT, CLEAR AND GRUB OPEN AREAS.
3. INSTALL PROPOSED UTILITIES, BRING GRADE TO SUBGRADE.
4. CONSTRUCT BUILDING.
5. CONSTRUCT PAVED AREAS AND WALKS.
6. INSTALL PLANT MATERIAL AND THEN LOAM, SEED AND MULCH IN DISTURBED AREAS.
7. ONCE DISTURBED AREAS ARE PERMANENTLY STABILIZED REMOVE TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE.



ELEVATION



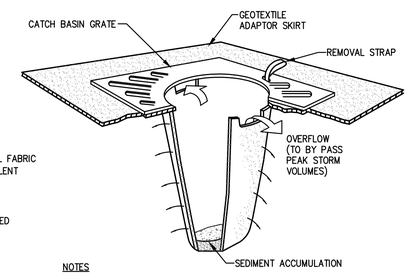
SECTION (STONE FILLET)



SECTION (KEYED IN)

1 SILTATION FENCE

SCALE: N.T.S.



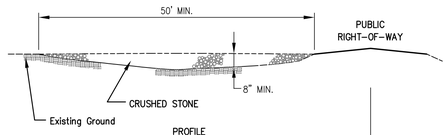
NOTES

1. CATCH BASIN PROTECTION TO BE "SILTSTACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).

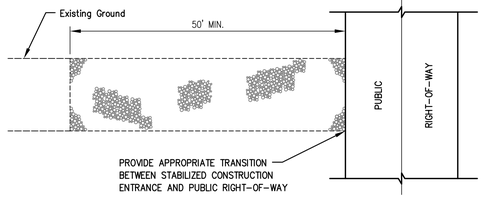
   INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.
2. INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

2 TEMPORARY INLET PROTECTION

SCALE: N.T.S.



PROFILE



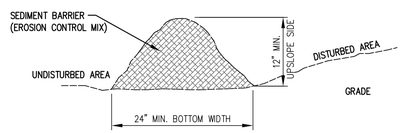
PLAN

CONSTRUCTION SPECIFICATIONS:

1. STONE SIZE – AASHTO DESIGNATION M 43, SIZE NO. 2 (2 1/2" TO 1 1/2"). USE CRUSHED STONE.
2. LENGTH – AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS – NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH – NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC REPAIR AND TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

3 STABILIZED CONSTRUCTION ENTRANCE

SCALE: N.T.S.



NOTES:

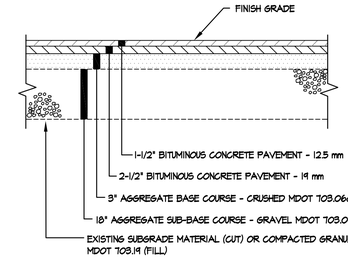
1. THE EROSION CONTROL MIX SHALL CONTAIN A WELL GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH.
2. MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS
   - A. THE ORGANIC CONTENT SHALL BE BEWTEEN 80 AND 100% DRY WEIGHT BASIS
   - B. PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MAXIMUM OF 85% PASSING A 0.75" SCREEN
   - C. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
   - D. LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX
   - E. SOLUBLE SALTS CONTENT SHALL BE <4.0 MMHOS/CM
   - F. THE pH SHOULD FALL BETWEEN 5.0 AND 8.0
3. PLACE BARRIER ALONG A RELATIVELY FLAT CONTOUR. CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES WHERE FINES CAN WASH UNDER THE BARRIER THROUGH GRASS BLADES AND BRANCHES.
4. PLACEMENT OF BARRIER SHOULD BE:
   - AT TOE OF THE SLOPE.
   - FROZEN GROUND, BEDROCK OR ROOTED FORESTED AREAS.
   - THE EDGE OF GRAVEL AND AREAS UNDER CONSTRUCTION.
5. BARRIER SHALL NOT BE USED ADJACENT TO WETLANDS
6. REMOVE SEDIMENT DEPOSITS WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
7. WHEN BARRIER IS DECOMPOSED, CLOGGED WITH SEDIMENT, ERODED OR INEFFECTIVE, IT MUST BE REPLACED OR REPAIRED. THE BARRIER SHOULD BE RESHAPED AS NECESSARY.

4 SEDIMENT BARRIER (EROSION CONTROL MIX)

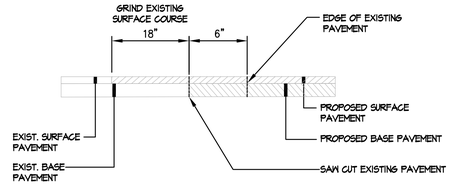
SCALE: N.T.S.

NOTES:

1. ADDITIONAL SUBBASE GRAVEL AND/OR GEOTEXTILES MAY BE REQUIRED DURING CONSTRUCTION IF SOIL CONDITIONS WARRANT.
2. MAXIMUM PARTICLE SIZE FOR BASE SHALL BE 2", AND MAXIMUM PARTICLE SIZE FOR SUBBASE SHALL BE 6".



5 DRIVES AND PARKING AREAS



6 HMA PAVEMENT BUTT JOINT

SCALE: N.T.S.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SITE DESIGN ASSOCIATES, ANY ALTERATIONS, OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SITE DESIGN ASSOCIATES.

REV.	DATE	STATUS	BY	CHKD.	APPD.
A	05/04/18	FOR LEVEL 2 AND CONDITIONAL USE REVIEW	DEPT	TWS	TWS

REV.	DATE	STATUS	BY	CHKD.	APPD.

STATE OF MAINE — THOMAS W. SAUCIER NO. 6018 — REGISTERED PROFESSIONAL ENGINEER

05-04-18

Site Design Associates
Consulting Engineering & Land Planning
23 Whitney Way Topsham, Maine 04086 Tel: (207) 449-4275

CLIENT:
PORT CITY ARCHITECTURE
65 NEWBURY STREET PORTLAND, MAINE

DESIGN: TWS
DRAWN: DEPT.
CHKD: TWS
DATE: NOV. 2017
SCALE: AS NOTED

PROJECT: CONVENIENCE STORE RECONSTRUCTION
1185 FOREST AVE PORTLAND, MAINE

EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

PROJ. NO. 17-203-00
DWG. NO. C-300
REV. A

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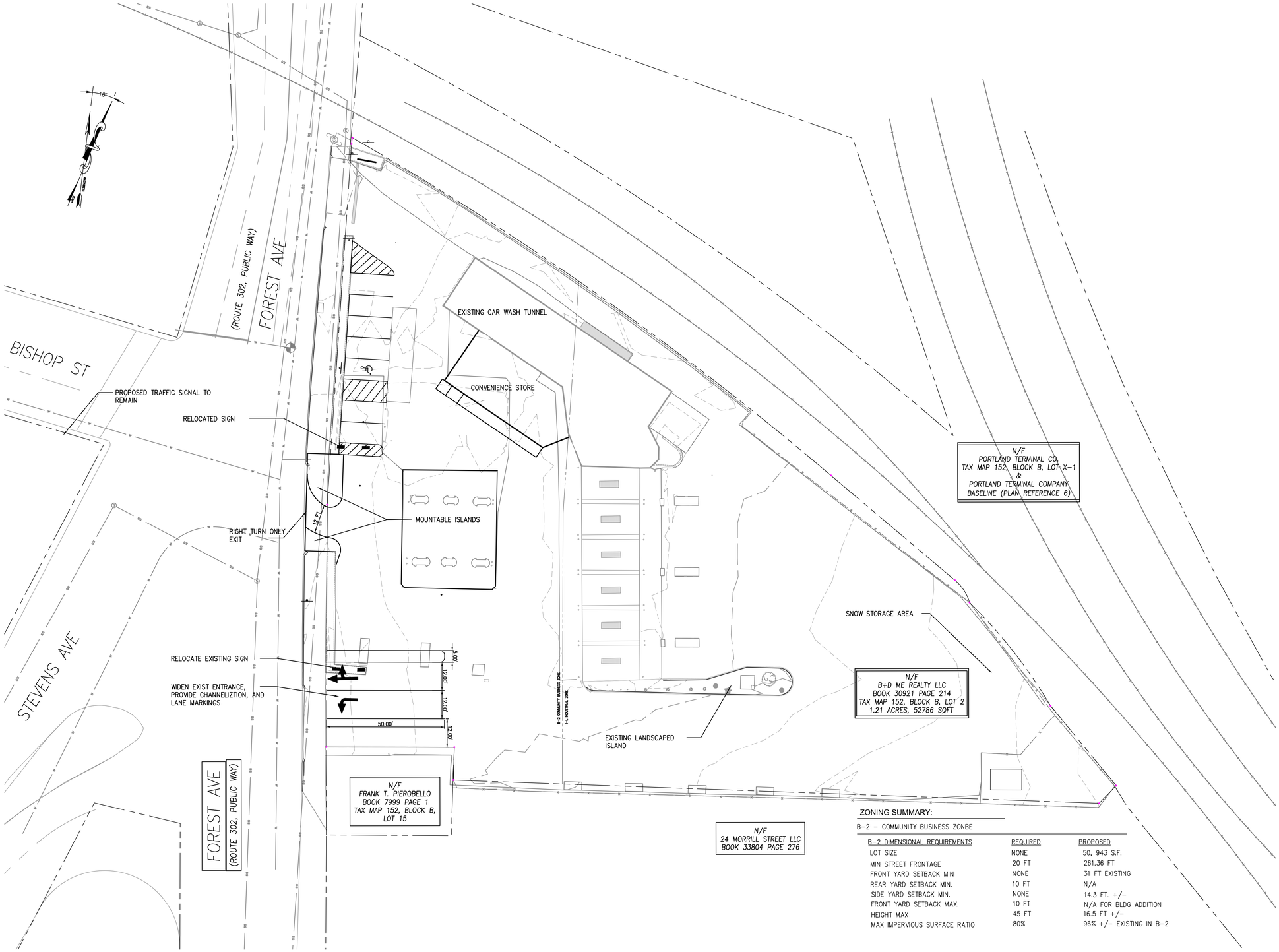

SITE LAYOUT AND MATERIALS NOTES:

1. ALL DIMENSIONS ARE PERPENDICULAR UNLESS OTHERWISE NOTED.
2. WALK DIMENSIONS ARE SHOWN FROM FACE OF CURB.
3. DO NOT SCALE DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE.
4. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION / DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED AT NO COST TO THE OWNER.
6. MDOT STANDARD DETAILS SHALL BE USED FOR ALL WORK PERFORMED IN THE TOWN AND STATE RIGHTS OF WAY.
7. ALL SIGNAGE AND PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE MUTCD STANDARDS.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL STAKE THE LAYOUT FOR APPROVAL BY THE OWNER PRIOR TO CONSTRUCTION.
9. A DIGITAL AUTOCAD FILE WILL BE SUPPLIED TO THE CONTRACTOR FOR LAYOUT PURPOSES UPON REQUEST.

UTILITY NOTES:

1. TOPOGRAPHIC SURVEY AND EXISTING UTILITY INFORMATION PROVIDED BY AMEC FOSTER WHEELER. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF NEW UTILITIES WITH THE APPROPRIATE UTILITY COMPANY.
3. ALL UTILITY WORK SHALL BE IN CONFORMANCE WITH THE INDIVIDUAL UTILITY COMPANY STANDARDS RESPECTIVELY.
4. CONTRACTOR SHALL EXCAVATE TEST PITS AT ALL POINTS WHERE PROPOSED UTILITIES ARE TO CROSS EXISTING UTILITIES. THIS INFORMATION SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL PROVIDE CONDUIT OF SUITABLE SIZE WITH PULL LINES FOR ALL UNDERGROUND WIRING. SEE ELECTRICAL DRAWINGS FOR CONDUIT REQUIREMENTS.
6. SHADED AREA REPRESENTS ANTICIPATED AREA OF FULL DEPTH PAVEMENT RECONSTRUCTION. FINAL FULL DEPTH LIMITS TO BE APPROVED BY OWNER.
7. SAWCUT AND BUTT JOINT ALL AREAS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
8. CONNECT TO EXISTING UTILTIES AS REQUIRED.

9. OWNER OF RECORD IS B & D MEREALTY LLC, 172 WORCESTER STREET, NATICK, MA 01760.

ZONING SUMMARY:

B-2 – COMMUNITY BUSINESS ZONBE

B-2 DIMENSIONAL REQUIREMENTS	REQUIRED	PROPOSED
LOT SIZE	NONE	50, 943 S.F.
MIN STREET FRONTAGE	20 FT	261.36 FT
FRONT YARD SETBACK MIN	NONE	31 FT EXISTING
REAR YARD SETBACK MIN.	10 FT	N/A
SIDE YARD SETBACK MIN.	NONE	14.3 FT. +/–
FRONT YARD SETBACK MAX.	10 FT	N/A FOR BLDG ADDITION
HEIGHT MAX	45 FT	16.5 FT +/–
MAX IMPERVIOUS SURFACE RATIO	80%	96% +/– EXISTING IN B-2

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

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REV.	DATE	STATUS	BY	CHKD.	APPD.
A	08-17-18	FOR LEVEL 2 AND CONDITIONAL USE REVIEW	TWS	TWS	TWS

REV.	DATE	STATUS	BY	CHKD.	APPD.

Site Design Associates
Consulting Engineering & Land Planning
23 Whitney Way Topsham, Maine 04086 Tel: (207) 449-4275

CLIENT:
PORT CITY ARCHITECTURE
65 NEWBURY STREET PORTLAND, MAINE

DESIGN: DEPT.
DRAWN: DEPT.
CHKD: TWS
DATE: APRIL 2018
SCALE: 1" = 20 FT

PROJECT:
CONVENIENCE STORE RECONSTRUCTION
1185 FOREST AVE PORTLAND, MAINE

CONCEPTUAL FUTURE ACCESS PLAN

PROJ. NO. 17–203–00 REV. A
DWG. NO. SK–101

Drawing Name: N:\2017 Projects\17-203-00 Scub A Sub\CAD\Civil\ Plot: 08-16-18 RIGHT TURN OUT CENTER | Plot Date / Time: Aug. 22, 18 / 5:59 PM