PLANNING BOARD

Tuesday, March 28, 2023 at 4:30 PM
This meeting will be held remotely via Zoom.

MEMBERS
Maggie Stanley, Chair
Brandon Mazer, Vice Chair
Justin Barker
Marpheen Chann
Sean Murphy
David Silk
Austin Smith

REMOTE ACCESS INFORMATION:
The Planning Board will conduct this meeting remotely via Zoom pursuant to the Remote Meeting Policy adopted by the Planning Board. Allow your computer to install the free Zoom app to get the best meeting experience. If you are not able to attend live, in person or via Zoom, a recording will be available following the meeting, in the Agenda Center.

For public comment via Zoom, you will need to use the "raise your hand" feature. To raise your hand via the telephone, please hit *9. You will be unmuted by the host when it is time for public comment.

You are invited to a Zoom webinar.
When: Mar 28, 2023 04:30 PM Eastern Time (US and Canada)
Topic: Planning Board Workshop and Public Hearing 3/28/2023

Please click the link below to join the webinar:
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PUBLIC COMMENT INFORMATION:
To submit written public comment on an agenda item, email planningboard@portlandmaine.gov. Submissions must be received by 12:00 pm the day before the Planning Board meeting to guarantee their inclusion in the agenda packet. All submissions must include the commenter's name and legal address. To help ensure your comment is submitted for the correct item, please include the name of the agenda item (see below).

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

AGENDA:

WORKSHOP - 4:30 PM

i. Major Site Plan; 2 Riverton Drive; Riverton Park, LP, Portland Housing Development Corp. and Portland Housing Authority, Co-Applicants. (estimated time 4:30 p.m.) The Planning Board will hold a remote workshop to consider a proposal to redevelop Portland Housing Authority's Riverton Park community. The project would involve the demolition of four existing buildings with 24 residential units, rehabilitation of 21 existing buildings with 123 residential units, and construction of a new mixed-use building with ground level offices, health clinic and two retail bays along with 59 residential units. The project would further involve

the demolition of an existing administration building, and the construction of a new neighborhood center and maintenance building. Other site improvements include enhancements to site utility infrastructure, replacement of curbing, sidewalks and pathways, repaving of parking areas, development of new open space areas, replacement of recreational facilities, and improvements to site lighting. The subject property totals 17.72 acres and is located in the B-2 Community Business and R-5A Residential zones. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-002319-2022.

PUBLIC HEARING - 6:00 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON MARCH 14, 2023

Afternoon Workshop
West Bayside MDP (196 Lancaster): Barker, Chann, Mazer, Murphy, Silk, Smith, and Stanley present.

Public Hearing
57 Douglass Street: Barker, Chann, Mazer, Murphy, Silk, Smith, and Stanley present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON MARCH 14, 2023

i. Major Site Plan Amendment; 57 Douglass Street; Maine Cooperative Housing Development Partners, Applicant. Mazer moved, and Smith seconded a motion to table the site plan amendment public hearing to April 25, 2023. Vote 7-0.

5. NEW BUSINESS

i. Major Site Plan; 111 Bedford Street (USM Center for the Arts); University of Southern Maine, Applicant. (estimated time 6:00 p.m.) The Planning Board will hold a remote public hearing to consider a proposal to construct a new 40,000 square foot performing arts facility with 200-seat performance hall, flexible Arts Lab, rehearsal room, classrooms, practice rooms and offices at 111 Bedford Street. The development is situated on the southern side of the USM Portland campus, which occupies 16.41 acres and is located within the R-5 Residential Zone as well as the USM Overlay Zone. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number PL-002314-2022.

ii. Major Site Plan; 73 Powsland Street; STJ, Inc., Applicant. **This item is being tabled to the April 11, 2023 agenda.**

iii. Conditional Use for Inclusionary Zoning; 178 – 184 Middle Street; Fresnel, LLC and Abatose, LLC, Co-Applicants. (estimated time 8:00 p.m.) The Planning Board will hold a remote public hearing to consider a proposal to convert 20,246 square feet of Class B office space into a 19-room hotel at 178-184 Middle Street, which is subject to the City's inclusionary zoning requirements. The subject property is 5,787 square feet in area and is zone B-3 Downtown Business, is located within the Downtown Entertainment Overlay Zone (DEOZ), the Pedestrian Activities District (PAD) and the Old Port Historic District. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number CU-002393-2023.

Memorandum
Planning and Urban Development Department

To: Chair Stanley & Members of the Planning Board
From: Sean King
Date: March 24, 2023
Re: Portland Housing Authority – Riverton Park Redevelopment & Rehabilitation
Project ID: PL-002319-2022; CU-002325-2023
Meeting Date: March 28, 2023

I. INTRODUCTION

The Portland Housing Development Corporation (PHDC) & Portland Housing Authority (PHA) have submitted a Major Site Plan, Conditional Use and Inclusionary Zoning Conditional Use application to redevelop PHA's Riverton Park Community, with a proposal to construct a new 4-story multifamily building with 59 residential units, retail, clinic and office space; a new Neighborhood Center building with social services, office and meeting spaces for residents; a new Maintenance building; rehabilitation of the 123 existing 2-story residential townhomes; and site work improvements throughout the property.



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

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Conditional Uses Standard, Section 6.5.1.A.2; Site Plan Standards, Section 14.6; and Inclusionary Zoning Conditional Use Standards, Section 18.2.3.

The Planning and Urban Development Department mailed 99 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the March 17, 2023 and March 18, 2023 editions of the *Portland Press Herald*.

Applicant: Tyler Plante, Portland Housing Development Corporation; Portland Housing Authority
Applicant Representatives: Matthew Phillips, Carroll Associates
Keegan Carmichael, CWS Architects
Architect: Andy Johnston, Atlantic Resources Consultants;
Engineer: Randy Loubier, Owen Haskell Inc

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan Review Standards	Section 14.6
Inclusionary Zoning Conditional Use	Section 18.2.3

Design Standards	City of Portland Design Manual, section (d) B-2 ; (h) Planned Residential Unit Developments (PRUDS) in the R-5a Residential Zone

Waiver Requests	*Applicable Standards*
Request: To reduce drive aisle width from 24 feet to 22 feet. (City's Consulting Traffic Engineers supports specific waiver request)	Technical Manual, Section 1.7.2.3 & 1.14.3.: Drive aisle and parking lot layout shall provide a minimum drive aisle of 24 feet.
Request: To increase the amount of compact parking spaces (18 proposed at 25% of total) in new Building 1 parking lot. (City's Consulting Traffic Engineers supports specific waiver request)	Technical Manual, Section 1.14.2: Parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces.
Request: To reduce the amount of granite curb within the right-of-way. (Department of Public Works staff has requested a revised concrete curb detail within the right-of-way for review and acceptance)	Technical Manual, Section 1: Granite curb shall be installed in right-of-way.

III. PROJECT DATA

Existing Zoning	B-2 Community Business; R-5a Residential
Property Size	17.72 acres
Existing Use	Residential (Planned Residential Unit Developments)
Proposed Use	Residential (Multi-family dwellings), Institutional (Clinics), Commercial / Service (General offices <5,000sf & Retail <5,000 SF) in the B-2 Commercial Business Zone. Institutional (Place of Assembly >10,000 SF) in the R-5a Residential Zone.

	Existing	*Proposed*	*Required*	*Net Change*
Dwelling Units	*141 units*	*176 units*	*n/a*	*+35 units*
Building Footprint	80,845 SF (14,935 SF Demolished)	32,733 SF	n/a	+17,798 SF
Building Floor Area	158,755 SF	227,478 SF	n/a	+68,723 SF
Parking Spaces in B-2	25	71	71	+46
Parking Spaces in R-5a	167	157	136	-10
Bicycle Parking in B-2	0	30	32	+32
Bicycle Parking in R-5a	0	52	3	+52
EV Charging Stations in B-2	0	14	14	+14
EV Charging Stations in R-5a	0	2	31	+2

IV. BACKGROUND

The Riverton Park property includes 25 existing residential buildings with 141 townhome apartments as well as an administrative office building. Built in 1972, this residential community has provided affordable housing for Portland residents for several generations. Portland Housing Authority (PHA) is seeking to improve the Riverton Park complex and ensure healthy, safe, accessible, energy-efficient, and affordable housing for their residents.

On June 22, 2022, the City Council approved an amendment to the zoning map for the Riverton Park campus and surrounding parcels from R-5 Residential into two zones (R-5a and B-2) along with a text amendment to the R-5a zone to allow Places of Assembly uses greater than 10,000 square feet in size, as conditional uses.

V. EXISTING CONDITIONS AND SURROUNDING AREA

The proposed redevelopment and rehabilitation application are within the Riverton Park development (Chart 327, Block B, Lot 12, 2 Riverton Drive), with Riverton Drive providing access between the site and Forest Avenue. The Riverton Park property is 17.72 acres and abuts the Terrace Pond Apartments to the West. Businesses within the area include a grocery store, a gas station, auto repair, convenience stores, and breweries. Riverton Trolley Park is located across Riverside Street. To the east, inbound Forest Avenue extends toward Portland's peninsula, and the remaining section of outbound Forest Avenue continues into Westbrook. Nearby, Riverside Street includes a mixture of light, medium, and heavy industrial zones.

VI. PROPOSED DEVELOPMENT

The applicant has provided an Overall Development Scheme (Plan 31) to illustrate the entire scope of the project. The newly proposed mixed-use building and associated site are located within the B-2 zone, while the new neighborhood center, maintenance building and existing townhome renovations are located within the R-5a zone. Ninety percent (90%) of all Riverton Park apartments will be affordable for households earning at or below 50% and 60% of Area Median Income (AMI) (165 of 182 units); and 10% will be market-rate rentals. Fifty-one percent (51%) of net new units will be affordable (17 of 35 net new units) and distributed throughout Building 1.



Figure 2: Overall Development Scheme (blue outlines B-2 Community Business zone, red outlines PRUD in R-5a Residential zone)

The development would contain 8 studio units, 13 1BR units, 36 2BR units, 69 3BR units, 30 4BR units, 20 5BR units, and 6 6BR units. Under this proposal, all of the existing larger units would be preserved, with the focus of this redevelopment being to add new, smaller units to diversify the community's unit composition. The applicant anticipates funding for 19 apartments will be set aside for families and individuals experiencing homelessness from the Affordable Housing Tax Increment Financing (AHTIF) and HOME application.

Under this application, off-street parking areas would be reconfigured to improve site circulation, and increase the off-street parking supply by 36 spaces. In addition, the overall development program includes:

1. Demolition of the four existing buildings with 24 units closest to Forest Avenue, and redevelopment of that area of property with a four-story multifamily building with 59 units ("Building 1"). The ground-floor of this building would house PHA Management offices, a new Greater Portland Health (GPH) clinic, and two small neighborhood retail bays. This building aims to achieve Passive House Certification.



Figure 3: Rendering of Building 1

2. Rehabilitation of 21 residential buildings with approximately 123 two-story residential townhomes. The proposed scope of work would include: the upgrade of building envelopes; the enhancement of building insulation; the replacement of roofs and windows; the replacement of boilers; the installation of new ventilation systems; the creation of new accessible units; exterior modifications to improve building accessibility; the renovation of unit interiors; and the replacement and/or addition of unit stoops.

3. Demolition of the existing administration building, and redevelopment of a new Neighborhood Center for resident services in the same location. The building program includes spaces for the Boys & Girls Club (B&GC), PHA Study Center, and Teen Center. The Center would also include a Multipurpose Recreational Gymnasium, Community Kitchen, Food & Clothing Pantry, Conference Room, Resident Service Coordination (RSC) office, and community policing liaison office. According to the applicant, building's design and programming were based on extensive conversations and multiple meetings with residents and service partners over the past four years.



Figure 4: Rendering of Neighborhood Center

4. Construction of a new maintenance building. PHA Facilities currently operate out of an undersized maintenance shop within the existing administrative building that would be demolished under this proposal.

5. Site work improvements throughout the property include but are not limited to: the replacement of curbing, sidewalks and pathways; improvements to pedestrian and bicycle infrastructure; the replacement of obsolete utility lines; improvements to site accessibility for persons with disabilities; the resurfacing of paved areas; site regrading to direct drainage away from buildings; enhancement of site landscaping; the addition of community gardens at each apartment building grouping; and improvements to site lighting. The project also involves the development of a new recreational field and playground, and is further proposing to rehabilitate the existing basketball court. Additionally, a new outdoor plaza with a performance stage and seating areas is proposed to be located between the Neighborhood Center and Building 1.

VII. RIGHT, TITLE, & INTEREST

The applicant submitted a deed transferring the Riverton Park parcel from F.D. Rich Housing Corp. to the Portland Housing Authority dated August 9, 1972 (Attachment 3-3.4).

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has submitted a letter of financial capacity to self-certify Portland Housing Development Corporation (PHDC) to secure financing to complete the redevelopment and rehabilitation of Riverton Park. PHDC seeks to utilize Low Income Housing Tax Credits (LIHTC) and has submitted an application to MaineHousing for a 4% LIHTC allocation to assist with funding the project. MaineHousing has agreed to act as construction lender and to provide permanent financing.

The Riverton Park Community currently operates as Public Housing, and utilizes funds by HUD's Section 18 Demolition & Disposition program. Riverton Park will convert to a Section 8 Project Based Voucher (PBV) funding platform at construction loan closing. (Attachment 9).

The applicant has assembled a highly qualified team of professionals for the preparation of this project, with significant experience with this type of project. All representatives of the applicant have proven experience working on projects located in the City of Portland.

IX. ZONING ANALYSIS

The subject property is located in the B-2 Community Business and R-5a Residential zones.

The proposed development proposes 59 units of residential units, offices and retail in the B-2 Community Business zone permitted by Land Use Code Table 6-A.

B-2 Community Business	*Permitted*	*Proposed*
Lot Area (min.)	N/A	1.52 acres
Lot area per dwelling unit (min.)	1,000 sq. feet	1,122 sq. feet
Street Frontage (min.)	20 feet	>20 feet
Front Setback (max.)	10 feet	**>10 feet[1]**
Rear Setback (min.)	10 feet	>10 feet
Side Setback (min.)	N/A	N/A

Stepbacks (above 35 feet when property line abuts a residential zone)	Side: 5 feet Rear: 15 feet	>5 feet >15 feet
Length of building wall at maximum setback (min.)	N/A	N/A
Length of undifferentiated blank wall along publicly accessible way (max.)	N/A	N/A
Floor area (max.)	N/A	N/A
Structure Height	50 feet[2]	49 feet
Lot coverage (max.)	N/A	N/A
Impervious surface ratio (max.)	Residential: None Other uses: 80%	<80%

[1] Where setbacks exceed 10 feet, a continuous, attractive, and pedestrian-scaled edge treatment shall be constructed along the street, consisting of street trees spaced at no more than 15 feet on center, approved by the City arborist, and a combination of landscaping no less than four feet deep, ornamental brick or stone walls, or ornamental fencing listed under Land Use Code Section 7.5.5.F.

[2] Structure height (max.) is 50 ft. if first floor is in commercial use under Land Use Code Table 7-E.

The proposed development proposes a place of assembly greater than 10,000 SF, a maintenance building and rehabilitation to 21 existing residential apartment buildings in the R-5a Residential zone permitted and conditional use by Land Use Code Table 6-A. This project requires a conditional use application and review for the Place of Assembly within the R-5a zone under Section 6.5.1.A.2 shall be reviewed by the Planning Board.

Table 7-B of the City's Land Use Code, describes the PRUD dimensional standards. In addition to the base dimensional standards, any PRUD, in which more than 50% of the units are either low-income or workforce units for rent or for sale, may utilize affordable housing density and dimensional bonuses and reductions as described in Section 18.2.4.B. and include the following provisions:

1. Minimum lot area per dwelling unit is reduced by 50%.
2. Maximum number of units and maximum length of buildings do not apply but may be set through site plan review.
3. Minimum building setbacks may be reduced to 10 feet.
4. The PRUD may cross public rights of way provided that the right of way does not count towards the minimum lot size nor towards any open space requirements.
5. Minimum recreation open space area is reduced to 200 square feet per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size and setbacks do not apply and shall be set through site plan review.
6. The Planning Board's Design Manual, design standards, and guidelines with respect to PRUDs shall apply in full to PRUDs utilizing this subsection.

The Riverton Park redevelopment project provides more than 50% of the units as low-income or workforce units for rent or for sale[1] and therefore is eligible to utilize dimensional bonuses available to PRUD developments under Section 18 of the City's Land Use Code, which is incorporated into the zoning review. Staff analyzed the proposal and found that the project complies with all dimensional requirements which are summarized below:

R-5a Residential Zone	*Permitted*	*PRUD Dimensional Bonus Applied*[1]	*Proposed*
Street Frontage (min.)	50 feet	N/A	>50 feet
Lot Width (min.)	65 feet	N/A	>65 feet
Front Setback (min.)	25 feet	10 feet	>10 feet[2]
Rear Setback (min.)	25 feet	10 feet	>20 feet
Right Side Setback (min.)	14-16 feet (varies)	10 feet	>16 feet
Left Side Setback (min.)	14-16 feet (varies)	10 feet	>16 feet
Stepbacks	N/A	N/A	N/A
Lot Coverage (max.)	30%	N/A	>30%
Lot Area (min.)	2 acres	N/A	16.20 acres
Net land area per dwelling unit (min.)	1,600 sq. feet.	N/A	5,737 sq. feet.
Units per building (max)	N/A	N/A	N/A
Average number of units per building (max.)	N/A	N/A	N/A
Structure Height (max.)	55 feet	N/A	<55 feet
Building length (max.)	N/A	N/A	N/A
Length of accessory garage structure (max.)	N/A	N/A	N/A
Bldg setback from external subdivision property lines (min.) Bldg. length >100 ft.	35 feet	N/A	>35 feet
Distance between detached PRUD dwelling units (min.)	N/A	N/A	N/A
Common recreation open space area (min.)	200 sq.feet./D.U	N/A	>200 sq. feet / D.U.

[1] Planned Residential Unit Developments (PRUD) developments with more than 50% of the units as low-income or workforce units for rent or for sale may utilize dimensional bonuses and changes listed under Land Use Code Section 18.2.4.B.

[2] Planned Residential Unit Developments (PRUD) may cross public rights of way provided that the right of way does not count towards the minimum lot size nor towards any open space requirements under Land Use Code Section 18.2.4.B.

X. CONDITIONAL USE – PLACE OF ASSEMBLY (>10,000 SF)

As required by Section 6.5.1.A of the City's Land Use Code, the Zoning Board of Appeals shall review all conditional use applications, with the exception that the Planning Board shall review all conditional use applications reviewed associated with projects that are otherwise before the Planning Board. The ordinance under Section 6.5.2 requires the review authority shall find the following standards satisfied:

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.* The City's Consulting Traffic Engineer has requested trip generation for additional review related to this conditional use standard.

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.* City staff finds the Neighborhood Center conditional use meets this standard and provides clear solutions with building program and location of utilities to alleviate nuisances.

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.* City staff has recommended tree and shrub plantings to provide additional buffer at adjacent properties.

D. The proposed use will meet any additional zone or use-specific standards identified in Tables 6-A to 6-F and Subsections 6.5.6 and 6.5.7. The proposed Neighborhood Center is a place of assembly for the residents at Riverton Park, and subject to the Institutional Uses conditional sse standards, listed under Section 6.5.6.F.

Following this workshop, staff will evaluate the project for compliance with the general conditional use standards (Sec. 6.5.2) and the use specific conditional use standards (Sec. 6.5.6.F) and will include additional discussion and findings related to these requirements.

XI. CONDITIONAL USE INCLUSIONARY ZONING (IZ)

As required by Section 18.2.3 of the City's Land Use Code, the City's Inclusionary Zoning Ordinance, residential developments with ten or more units are required to provide a minimum of twenty-five percent of the dwelling units as Workforce Housing units for sale or for rent. The ordinance under Section 18.2.3 C (5) also requires that the number of bedrooms across all IZ units be a minimum of 10% of the total number of bedrooms within the development. This project proposes 59 new dwelling units, which triggers IZ conditional use review.

In order to satisfy IZ requirements, the applicant is required to provide a minimum of 15 workforce housing units (25% at 80% AMI) pursuant to the Inclusionary Zoning requirements (Section 18.2.3). The term of affordability for the workforce units provided shall be defined as set forth in Table 18-B. As the number of workforce housing units being provided totals 25% of the total number of dwelling units being proposed, the minimum term of affordability would be thirty years.

As stated previously, four existing buildings with a total of 24 residential units are proposed to be demolished under this application. These 24 units would be replaced as part of the new Building 1 mixed-use building, which would also include 18 affordable units (at or below 100% AMI) and 17 market rate units. All dwelling units are proposed for rent under the affordable housing requirement.

The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Units and will be filed as a covenant to the property deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

XII. SITE PLAN REVIEW STANDARDS (Section 14.6)

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

1. Transportation Standards (Section 14.6.1)

A. Impact on surrounding street systems

The proposed redevelopment is located off of Riverton Drive, a local street, which connects to Forest Avenue, a principle arterial and priority corridor identified in the City's Comprehensive Plan.

The application was reviewed by the City's Consulting Traffic Engineer who has requested an estimate of traffic generation for Building 1.

The applicant has proposed public right-of-way improvements to include new curbing, sidewalk, drainage, a raised pedestrian crossing across Riverton Drive at new Neighborhood Center, street trees and municipal lighting.

B. Access and circulation

New site circulation for Building 1 proposes a new driveway to access the rear parking lot for Building 1. Emergency access is provided south of Building 1 across a concrete plaza and raised concrete apron at Riverton Drive. The application also includes new pathways to each unit and sidewalk throughout the development. City staff has indicated additional locations for pedestrian pathways to connect to areas programmed as open space.

C. Public transit access

METRO transit routes near the site include the Greater Portland METRO Local service Route 2 and the Lakes Region Bus route. The nearest transit stops to the applicant's site are along Forest Avenue near the intersection of Riverton Drive and Forest Avenue. The development at 1884 Forest Avenue included a new METRO shelter on Forest Avenue near its intersection with Riverton Drive, and easily accessible to residents of the development. Therefore, this standard is not applicable.

D. Parking

In general, a residential development is required to provide one parking space per dwelling unit unless a project is eligible for parking requirement exceptions as listed in Table 19-B of the Land Use Code. The redevelopment project in the B-2 meets the requirement for seventy-one parking stalls. The rehabilitation project that consists of the new neighborhood center, maintenance building and apartment renovations exceeds the required parking by more than 10%. There is a reduction in the existing parking stalls proposed throughout the R-5a PRUD, and the applicant shall submit a parking study as required under Land Use Code, Section 14.6.1.D.1.c. In addition, on-street parking spaces remain within the public right-of-way on a first come basis, which are to be available to the public.

E. Transportation demand management (TDM)

Mixed-use developments exceeding 50,000 square feet or more of floor area are required to submit a TDM. The applicant has submitted a TDM plan, City staff shall review for compliance with this standard.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features

The site is currently developed with several forested edges along the property boundaries along with several wetlands that are considered significant due to period of establishment. The contiguity of

wetlands is proposed to be preserved to the greatest extent, and the development includes minimal disturbance with proposed grading and site improvements.

B. Landscape preservation

The City's Parks department has reviewed the revised landscape plans and has prioritized the preservation of existing trees to remain within the development limit of work area and the planting of a native plant palette to mimic the wooded character of the existing site.

C. Site landscaping and buffers

The applicant has submitted Planting plans (Plans 25-26) which include locations and quantities for tree, shrub, groundcover and the select preservation of existing trees. Existing trees loosely buffer all sides of the property site. The City's Parks department is encouraging the planting of a high percentage of native species that would reinforce the woodland character of the site with groupings of plant material to emulate a more natural arrangement.

The creation of **59** residential units requires either planting a total of 59 street trees or an acceptable alternative as recommended by the City Arborist. The applicant has provided approximately 12 new street trees within or directly adjacent to the right-of-way, and street tree alternative per Technical Manual section 4.6.4 for 16 new street trees visible from right-of-way within twenty feet of the property line. The remaining 31 new street trees are located along Riverton Drive beyond project's frontage under Technical Manual, section 4.6.4 street tree alternatives for compliance with this standard.

D. Water quality/storm water management/erosion control

The applicant has submitted a Stormwater Management Report and Erosion and Sedimentation Control Report, which has been reviewed by the City's Consulting Stormwater Reviewer. The applicant shall provide NRPA permit by rule record and site location (SLOD) application as required for the City's delegated review.

Public Works and Water Resources has requested the installation of grease traps for any retail or communal kitchen use.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

Portland's Plan 2030 Comprehensive Plan goals and policies (state and local) relevant to the proposed development are included below. The development proposal aligns with these vision statements and goals, by creating a new opportunity for an affordable, and well-connected new housing development accessible to public transit supporting the Plans goal of *increasing, preserving, and modifying the overall supply of housing city-wide*.

B. Public safety and fire prevention

The City's Fire Marshal shall review the application materials for compliance with this standard.

C. Availability and capacity of public utilities

The applicant shall submit ability to serve letters from all respective utility providers.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The proposed 4-story building and Neighborhood Center are set back significantly from abutting properties and therefore, the bulk, location and/or height of the proposed structures will not adversely impact abutting structures or property. The applicant's plans provide landscape buffers and preservation of several existing trees to mitigate visual and wind impacts.

B. Shadows

A shadow study has not been submitted, as any shadows cast by the buildings at the site will not affect adjacent properties or City-owned parkland.

C. Snow and ice loading

The applicant plans indicate snow and ice storage throughout the redevelopment and reconfiguration of existing parking lots that City staff find in compliance with this standard.

D. View corridors

There are no designated view corridors within the project vicinity. This standard is not applicable.

E. Historic resources

The proposed development is not located in or within 100 feet of a historic district or historic landmark. This standard is not applicable.

F. Exterior lighting

The applicant has submitted a photometric lighting plan and proposed lighting fixture cut sheets that City staff find in compliance with this standard and meets Technical Manual, Section 12 site lighting standard. In addition, existing municipal lighting to remain within right-of-way.

G. Noise and vibration

The applicant plans do not indicate location of HVAC and/or other equipment for noise and vibration, upon resubmittal City staff will review for compliance with this standard.

H. Signage and wayfinding

The applicant plans indicate new wayfinding signage that shall be reviewed by City's Consulting Traffic Engineer for compliance with this standard.

I. Zoning-related design standards

The redevelopment project for Building 1 is subject to design standards under Section (d) B-2 Community Business zone & (i) Multi-family of the City's Design Manual. The rehabilitation project for the new neighborhood center, maintenance building and associated site is subject to design standards under Section (h) PRUD in the R-5a Residential Zone design standards of the City's Design Manual. The applicant has submitted renderings, elevations and floor plans with accompanying architectural narratives that identify the programming of each building to support the residents of Riverton Park. The City's Urban Designer generally finds the proposed building types, placement and materiality to be consistent with the PRUD design standards that support the neighborhood character the applicant has submitted. City staff will continue to review the new mixed-use Building 1 for zoning compliance that exceeds the front setback due to irregular lot.



Figure 5: Building 1 Landscape Plan

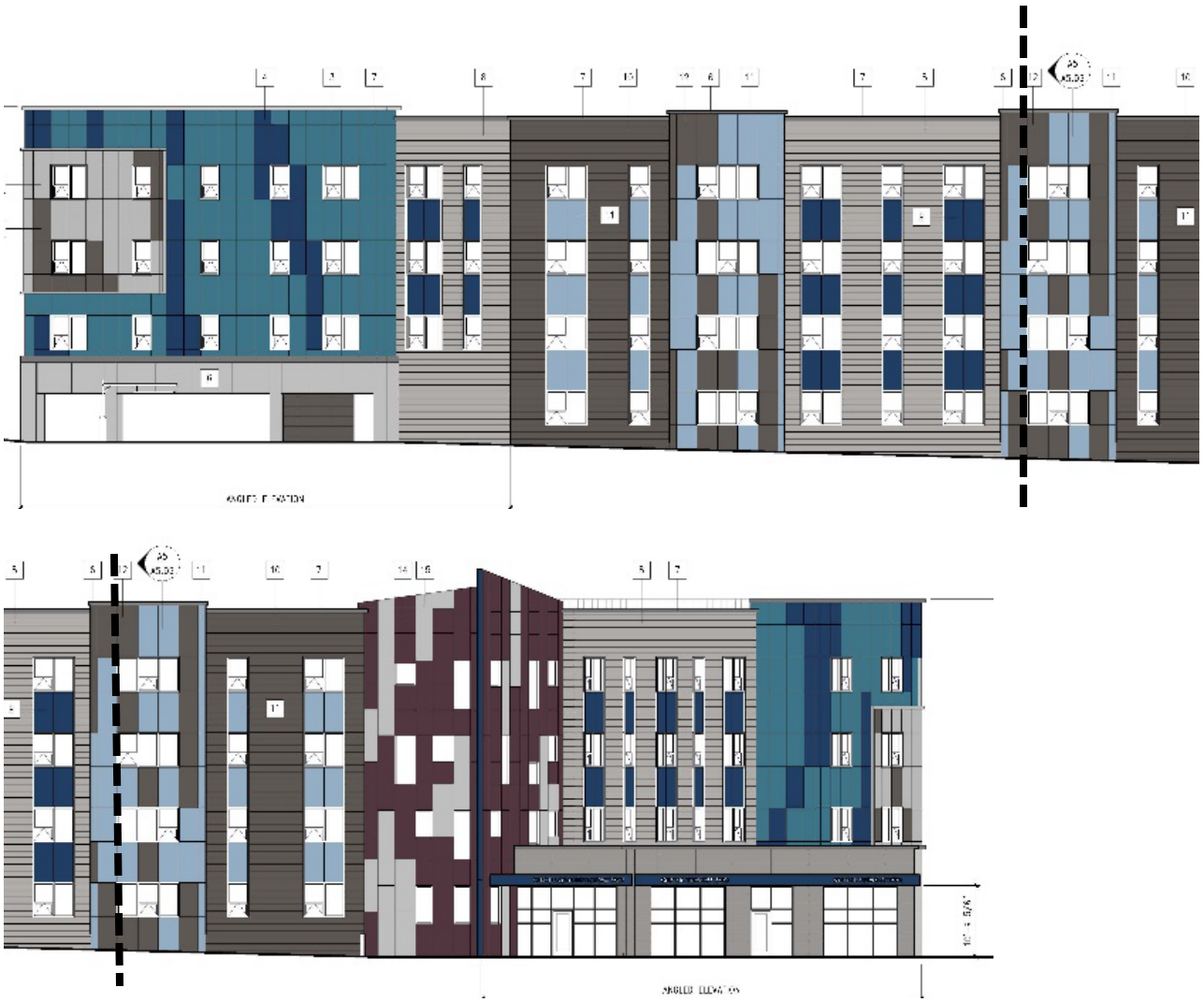


Figure 6: Building 1 front elevation (dashed line indicates matchline)

XIII. WAIVERS

The applicant has requested a waiver relevant to the parking lot and space design:

Technical Manual Section 1.14.3 – Parking lot drive aisle width

The applicant is requesting to reduce the minimum drive aisle width from the required 24 feet to 22 feet, a two-foot reduction. Section 1.14.3 of the City's Technical Manual requires a minimum drive aisle width of 24 feet. The applicant has provided additional justification for waiving the standard explaining:

Due to the low speed, low volume of traffic, user (staff) and familiarity of users we feel that the reduced parking lot aisle width is an acceptable request. We are looking to maximize landscape + snow storage areas while adding a sidewalk. The City's Consulting Traffic Engineers supports specific waiver request to expect low turnover spaces for the 5 parking stalls dedicated for PHA.

Technical Manual Section 1.14.2 – Compact parking spaces

The applicant is requesting to provide more than 20% compact spaces (applicant propose 18 compact parking spaces). Section 1.14.2 of the City's Technical Manual states parking lots with greater than 10

spaces may be comprised of up to 20% compact parking spaces. The applicant has provided additional justification for waiving the standard explaining:

Due to the changing dynamic of vehicle size, general greater acceptance of use of smaller parking stalls, and familiarity of residents with the parking configuration this reduction appears to be warranted. The City's Consulting Traffic Engineers supports specific waiver request to allow compact parking spaces greater than 20% of total parking spaces given the low turnover nature of vehicles.

The applicant has requested a waiver relevant to the local street cross section:

Technical Manual Section 1.14.3 – Granite curb

The applicant is requesting to use granite curb at corners and driveways only, and slip-form concrete curb in all other locations within the right-of-way. Section 1 (Figure I-1 & I-17) of the City's Technical Manual requires installation of granite curb within the right-of-way. The applicant has provided additional justification for waiving the standard explaining:

Cost savings as applicant is proposing to reconstruct all curbs and sidewalks within right-of-way. The Department of Public Works staff has requested a revised concrete curb detail within the right-of-way for review and acceptance.

XIV. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on Wednesday, February 22, 2023 (Attachment FF). Invitations for the in-person meeting were sent to properties within 500 feet of the proposed development and residents on the "interested parties" list. Representatives from the applicant team introduced the proposed redevelopment and renovation project that would increase residential units at the existing Riverton Park and provide residents with a new neighborhood center with convenient access to social, recreational and community services. The applicant team shared that the project is funded by MaineHousing and HUD to continue to provide affordable residential units, improve accessibility, add recreational areas and improve connectivity throughout the property. Members of the public inquired about the relocation of existing residents during phased construction and PHA's goal to return residents to subsequent renovation phase, vacant on-site apartments or newly renovated apartments.

XV. NEXT STEPS

1. Planning Board Workshop and initial comments
2. Planning Board Public Hearing & Recommendation

XVI. ATTACHMENTS

REPORT ATTACHMENTS

Att. 1 Riverton Dr. -2 City comments
Att. 2 City Council order 259-21_22

APPLICANT SUBMITTAL

A. Project description
B. Notice

C. Major Site Plan checklist
D. Conditional Use checklist
E. Right, Title & Interest
F. Deed document
G. Deed document
H. Deed document
I. Deed document
J. Evidence of State or Federal approvals
K. B-2 Zoning analysis
L. R-5a Zoning analysis
M. Zoning provisions
N. Site Plan standards
O. Conditional use standards
P. Easements
Q. Easements
R. Easements
S. Easements
T. Waivers
U. Waivers
V. Financial capacity
W. Technical capacity
X. Impact on Surrounding Street System
Y. Access and circulation
Z. Public transit
AA. Off-street parking
BB. TDM Plan
CC. Trip generation
DD. Preservation of significant natural features
EE. Landscape preservation
FF. Site landscaping and buffers
GG. Stormwater report
HH. Erosion and sediment control report
II. Impervious area by zone
JJ. Consistency with City master plans
KK. Public safety and fire prevention
LL. Public utilities
MM. Public utilities ability to serve
NN. Massing ventilation wind
OO. Shadow
PP. Shadow study
QQ. Snow and ice loading
RR. Exterior lighting
SS. Lighting cut sheets
TT. Noise and vibration
UU. Signage and wayfinding
VV. Zone related design standards
WW. Geotechnical report

XX. Turning movements
YY. Turning movements Neighborhood Center
ZZ. Construction management plan
AAA. Neighborhood meeting notice
BBB. Neighborhood meeting certificate
CCC. Applicant response letter
DDD. Occupant loads

PLANS AND DRAWINGS

Plan 1. Cover
Plan 2. Survey
Plan 3. Survey
Plan 4. Demolition Plan
Plan 5. Demolition Plan
Plan 6. Demolition Plan
Plan 7. Site Plan
Plan 8. Site Plan
Plan 9. Site Plan
Plan 10. Grading and Drainage Plan
Plan 11. Grading and Drainage Plan
Plan 12. Grading and Drainage Plan
Plan 13. Utility Plan
Plan 14. Utility Plan
Plan 15. Utility Plan
Plan 16. Erosion Control Plan
Plan 17. Erosion Control Plan
Plan 18. Erosion Control Plan
Plan 19. Erosion Control Notes
Plan 20. Erosion Control Details
Plan 21. Site Civil Details
Plan 22. Site Civil Details
Plan 23. Site Civil Details
Plan 24. Site Civil Details
Plan 25. Landscape Master Plan
Plan 26. Landscape Plan Enlargement
Plan 27. Landscape Details
Plan 28. Landscape Details
Plan 29. Landscape Details
Plan 30. Photometric Plan
Plan 31. Master Plan
Plan 32. Building 1 First Floor Plan
Plan 33. Building 1 Second Floor Plan
Plan 34. Building 1 Third Floor Plan
Plan 35. Building 1 Fourth Floor Plan
Plan 36. Building 1 Roof Plan
Plan 37. Building 1 Elevations
Plan 38. Building 1 Elevations

Plan 39. Building 1 Elevations
Plan 40. Building 1 Signage
Plan 41. Building 1 Signage
Plan 42. Building 1 site axonometric
Plan 43. Building 1 site axonometric
Plan 44. Building 1 perspective
Plan 45. Building 1 perspective
Plan 46. Maintenance building Floor Plan
Plan 47. Maintenance building Elevations
Plan 48. Neighborhood Center First Plan
Plan 49. Neighborhood Center Roof Plan
Plan 50. Neighborhood Center Elevations
Plan 51. Neighborhood Center Signage
Plan 52. Neighborhood Center Exterior Elevations
Plan 53. Townhome rehabilitation First Floor Plan Building 6
Plan 54. Townhome rehabilitation Second Floor Plan Building 6
Plan 55. Townhome rehabilitation First Floor Plan Building 22
Plan 56. Townhome rehabilitation Second Floor Plan Building 22
Plan 57. Townhome rehabilitation Exterior Building 5
Plan 58. Townhome rehabilitation Exterior Building 5
Plan 59. Townhome rehabilitation Exterior Building 10
Plan 60. Townhome rehabilitation Exterior Building 10
Plan 61. Townhome rehabilitation Exterior Building 18
Plan 62. Townhome rehabilitation Exterior Building 18
Plan 63. Townhome rehabilitation Exterior Building 21
Plan 64. Townhome rehabilitation Exterior Building 21
Plan 65. Townhome rehabilitation Exterior Building 22
Plan 66. Townhome rehabilitation Exterior Building 22
Plan 67. Rehabilitation building signage
Plan 68. Rehabilitation elevations
Plan 69. Rehabilitation elevations
Plan 70. Exterior Renderings
Plan 71. Rehabilitation Locations site plan

Description:

The Riverton Park Redevelopment & Rehabilitation project is a bold opportunity for the City to help preserve 123 existing affordable rental homes and add 59 new affordable and market-rate apartments. It will create a new Neighborhood Center to expand on-site resident services that better meet the needs of low-income families. It envisions a new Greater Portland Health clinic to improve the health and wellbeing of the Riverton community. Rehabilitation of 21 residential buildings with approximately 123 two-story residential townhomes. The project will improve pedestrian and bike infrastructure, social gathering spaces, recreational facilities, and accessibility for persons with disabilities at Riverton Park.

The Riverton Park Redevelopment & Rehabilitation project will create a new Neighborhood Center to expand on-site resident services that better meet the needs of low-income families. The project will improve pedestrian and bike infrastructure, social gathering spaces, recreational facilities, and accessibility for persons with disabilities at Riverton Park.

Applicant seeks approvals for Major Site Plan, a Planned Residential Unit Development (PRUD) in the R-5a zone, and Conditional Use for Places of Assembly greater than 10,000 sq. ft in the R-5a zone.

SITE REVIEW

- The applicant shall provide a construction management plan.
- The applicant shall submit ability to serve for utility service.
- The applicant shall provide allocation of bedroom types specific to Building 1.
- City staff encourages the applicant to provide phasing plan for resident's relocation.

DESIGN REVIEW

- Site renovations demarcates green areas on C1.0 Master Plan, applicant shall indicate the proposed open space program to meet design standards for recreation and open space for PRUDs in R-5a Residential zone.

- The front setback exceeds 10-feet at Riverton Drive and City staff finds the surface parking does not meet LUC 7.5.5.F to allow for a continuous attractive pedestrian edge treatment, specifically at north end of Building 1. Staff recommends shifting the northern wing of the building to align with the curvature of Riverton Drive, maintaining a consistent setback with the southern portions of the building, and removing the proposed surface parking fronting Riverton Drive.

- Applicant shall provide secondary entries for residents along Riverton Drive, or provide a response to indicate why residential unit entry or shared entries at the building corners is not achievable.

- Applicant to provide storefront window schedule or specification to observe .7 visible transmittance (VT).

- Staff recommends investigation of shifting Building 1 upper floors above retail towards Riverton Drive to create greater visibility to the street. Alternatively, the applicant shall consider rooftop residential amenity above Retail portion of the building.

ZONING

- The proposed development is split into two zones. Each zone has different dimensional requirements.

- Proposing to use section 18.2.4 for density bonuses, height and setback reductions in the B2 zone and subsection (B) for the R5A PRUD standards. Article 3 defines low income units as:
    - ***Low-income housing unit for rent****. A dwelling unit for which:*
        - *A. The rent is affordable to a household earning 80% or less of Area Median Income (AMI) as defined by the United States Department of Housing and Urban Development (HUD). B. The unit is rented to a household earning 80% or less of AMI.*

<u>New Mixed Use Building (B2)</u>

- There are 59 proposed dwelling units in the building. Will a minimum of 80% of the units be rented to a household earning 80% or less of the AMI? As proposed, Building 1 will create 59 residential units (the applicant has calculated the affordable units based on the net unit increase - 17 of 35 units). Currently at the proposed Building 1 site, 4 buildings with 28 residential units are proposed to be demolished. It is not clear if all 28 existing residential units are classified as affordable and if all these units are to be replaced within Building 1.

- The maximum height in the B-2 is 45' but can go up to 70' under section 18.2.4 if 75 or more of the units in the building are low income housing units. The proposed height is 52'7". This is well below the 70' allowed, but the average grade for the building should be provided and the height should be measured to the roof beam.

- The impervious ratio for the proposed redevelopment has been calculated to include Building 1, roadway, Neighborhood Center and associated site improvements, City staff is requesting the impervious ratio be divided by each zone (B2, R-5a).

<u>R5A zone:</u>

- 1. The proposed Neighborhood Center is located in the R5A part of the property. Since it is not a residential building does it need to meet the R5A setbacks including the 25' minimum setback for the front and rear yards? Right now it is meeting the 10' front setback allowed under section 18.2.4(B) for PRUDS.

<u>Conditional use for Neighborhood Center</u>:

- #6 Conditional Standards document needs to address the specific criteria in section 6.5.6(F) that apply to Neighborhood Center. Applicant shall submit additional documents to meet conditional standards.

TRAFFIC CONSULTANT

- The proposed project is expected to add 59 new affordable and market rate apartments. Additionally, the project will include PHA Management offices, a new GPH Clinic, two small neighborhood retail stores and a Neighborhood Center. The applicant shall provide an estimate of traffic generation for the project and details on each of the new proposed program elements (from an existing/proposed traffic generation perspective). Because some of the units have several bedrooms, the trip generation estimate should consider this.

- The 6-space parking area near the Neighborhood Center is constrained. Vehicle turning templates shall be provided.

- Detectible warning panels shall be provided for all pedestrian crossings of a public street, including the raised crosswalks.

- I support a waiver from the technical manual for aisle width for the 5 PHA parking spaces where an aisle width of 22 feet is proposed. I would expect these spaces to be low turnover spaces. One of the spaces is for a service vehicle. The applicant should note the type of vehicle expected to park in that space.

- Given the low turnover nature of the vehicles parking, I support the request for a slightly higher percentage of compact parking spaces. The proposed spaces will meet standard parking stall length (18 feet) and be 8 feet wide.

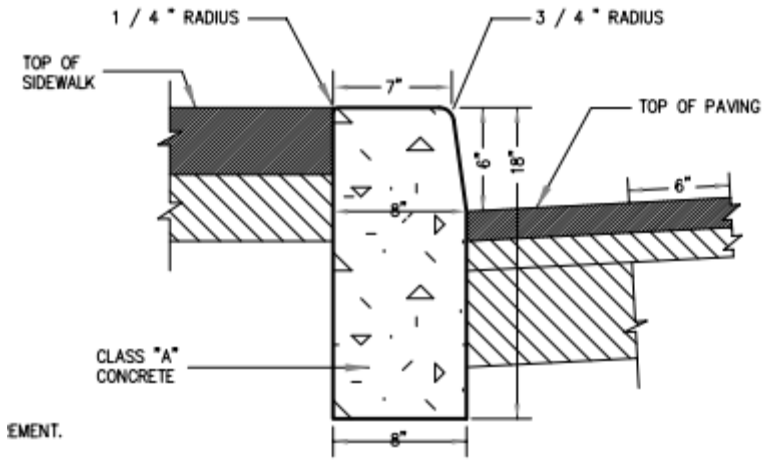
DEPARTMENT OF PUBLIC WORKS - TRANSPORTATION

- DPW-Observe condition of existing roadway, possible recommendation to overlay roadway the entire public portion.

- Traffic-Project may warrant new sidewalk along north side of Riverton Drive to connect Neighborhood Center to Forest Avenue. Consideration for periodic crosswalks throughout PRUD.

- Traffic-Applicant to clarify program for the project related to publicly-accessed uses for retail, office, clinic, and community center.

- The applicant shall revise the proposed concrete curb detail. Also show how the adjacent pavement will be repaired. See detail below:



TYPE "B"

1" BATTER FACE CONCRETE CURB

- Based on the current condition of the roadway pavement, once it is cut for the curb and utility installation the surrounding pavement may fail. How does the applicant plan to repair the adjacent pavement?

- What is planned for additional lighting around the proposed improvement? Is the existing system sufficient?

- Utility plan shows a new water main but does not show the trench repair. The proposed trenches shall be repaired per the Minor Excavation Pavement Repair Details (prior to paving the finished surface) found in the Rules and Regulations for Excavation Activity. Update the plans to show these repairs.

- The minimum radius for a City curb extension is 20 feet. Revise the plans sheets to reflect this requirement.

- DPW is supportive of raised crosswalk construction detail.

- The City's Technical Manual has been recently updated and approved. After reviewing the proposed details for this project it is clear that not all the changes are reflected in the plans and proposed details. The applicant shall update all proposed details (Site, Sewer, Stormwater, Landscape, …. details) to meet the requirements of the recently approved technical manual update or add a note to each of the proposed details that states the City standard detail (figure # and name) shall be followed.

DEPARTMENT OF PUBLIC WORKS – WATER RESOURCES

- All work within public right of ways shall be completed in accordance with City of Portland Technical standards. The applicant should include COP technical manual details in the plan set.

- 100' stream setbacks are required for perennial streams as stated in section 8 of the City's technical manual. These set-backs shall be shown on each grading and drainage plan sheet. A waiver from Tech Manual section 8.2.1 will be required for activities located within the 100' stream buffer zone.

- A double row of erosion and sediment control barriers should be utilized for construction disturbances adjacent to wetland and stream buffers.

- Stream and wetland setbacks shall be shown on grading and drainage plan C4.1 and C4.3 for further review.

- Private Building sewer laterals less than 8" in diameter shall be connected to the main sanitary sewer line by the use of wyes, tee/wyes, Inserta-Tees or similar approved methods as determined by the Department of Public Works per technical manual section 2.6.7 and as depicted on tech manual details II-16, II-17.

- It is acknowledged that the applicant has been in discussions with DPW water resources regarding an upcoming rehabilitation of the City pump-station which services this neighborhood. The applicant will still be required to submit a wastewater capacity application to DPW water resources engineering for review and authorization.

- The applicant shall complete a condition assessment of the existing sewer manholes proposed to be modified to ensure structural condition is adequate to accommodate the proposed connections.

- Inverts of the existing City sewers and storm drains shall be added to the plans in order for DPW to review all impacts of the proposed work.

- The applicant is proposing to install a bio-retention cell over the City's 18" Riverton Dr storm drain outfall line located to just northerly of the existing basketball court. DPW finds this problematic from a long term O&M perspective. The outfall line shall be relocated away from this disturbance and the applicant shall grant the City a 30' wide drainage easement for this line.

- The City is in the process of assessing the conditions of this storm drain outfall line and outlet area. The City may request upgrades to this infrastructure as part of this project based on the results of the condition assessments.

- The applicant shall submit further design information and details for the proposed stormwater rip-rap outfall protection for several proposed stormwater outfalls discharging stormwater in the direction of the stream cutting through the site. The outlet protection shall be designed in accordance with the Maine DEP ESC BMP design manual. https://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_engineers.pdf

- DPW is requesting that the following easements be granted by the applicant to the City of Portland for the following City owned infrastructure:

    - Existing City Sewage Pump Station at the corner of Springbrook Way and Riverton Drive.
    - Inlet and outlet areas of recently replaced twin 60" stream culverts crossing Springbrook Way near Riverton Drive.
    - Inlet and outlet of recently replaced 36" culvert crossing Riverton Drive near Springbrook Way.
    - 30' wide easements for all existing City of Portland storm drain outfall lines running across PHA property towards the stream.

- See attachments to this comment letter for further clarification on the requested easements.
    - **Proposed Pump Station Easement**
        - The City will provide an easement figure, deed description and language for the proposed pump station easement for PHA review.
    - **Proposed Culvert Easements**
        - The City will provide an easement figure (and CAD file) and a template easement document for the Springbrook Way and Riverton Dr culverts areas. The applicant will be required to write a deed description and provide easement language utilizing the City's easement template for City review.

- **Existing Storm Drain outfall easements:**
  - The applicant will be required to draft an easement figure, write an legal easement deed description and provide easement language for these easement areas for City review and approval.

- Additional information is needed regarding the proposed community kitchen to determine what grease control equipment will be required. External buried equipment may be needed for the kitchen and/or retail spaces (if food oriented) which requires a junction manhole where the discharge connects to the sanitary sewer. Grease control requirements and technical specification compliance can be assessed during the building permit phase.

STORMWATER

- The Applicant is required to comply with MaineDEP Chapter 500 and City of Portland Technical Manual Section 5 regulations for stormwater management. The applicant provided a comprehensive stormwater management analysis for the proposed project evaluating the areas defined as redevelopment.
  - Redevelopment Standard – The applicant has evaluated the project for the redevelopment standard and is providing for 70% treatment of the redeveloped area in compliance with MaineDEP Standards and 65% treatment of the redevelopment impervious area in compliance with City of Portland standards.
  - I'd like the Applicant to clarify the scope of work around the rehabilitation of the units and areas that have not been included as part of the stormwater management plan calculations. Per MaineDEP standards, if a redevelopment project includes 3.5 acres of "new structure" which includes buildings, pavement, etc., a Site Location of Development permit is required. This includes new buildings constructed where previous buildings were demolished – my understanding of the scope for most of these buildings is that they are not being demolished, and just renovated, but I want to clarify. The Applicant is proposing for drip strips along these buildings, which is an improvement, and if SLOD was required would be used towards any treatment requirements. The minor grading shown in the parking areas associated with repaving and resetting curb would be considered maintenance and not redevelopment.
- The Applicant has noted that a NRPA permit by rule will be required for work in proximity to wetlands. A copy of the PBR should be provided for the record.

- The Applicant has provided a discussion of proposed utility improvements. Confirmation of utility ability to serve should be provided.

- The Applicant has provided information on maintenance of stormwater systems proposed on the site. A final stormwater maintenance agreement will be required.

LANDSCAPING & ENVIRONMENTAL QUALITY

- PER CHAPTER 4 OF THE TECHNICAL MANUAL, "the tree survey shall clearly indicate forest type and the location, size and species of all existing trees 10" diameter at breast height (DBH) or greater on the site and in the right-of-way, and all feature mature trees on the site and in the

right-of-way. For sites with a high density of existing trees, the survey shall identify all existing shade and ornamental trees that may have been part of a prior landscape scheme for the site and the location, average size and species of groves of trees, and individual trees greater than 16" DBH. Without tree size information on the survey, the City cannot determine whether tree removals are being appropriately offset by new trees planted on site."

- The applicant shall survey existing trees within the development limit of work to identify caliper size of tree removals and preservation of significant trees to remain. The wooded area adjacent to the existing administrative building requires more detailed tree survey than what is currently provided.

- The applicant shall provide reasoning for tree removals, see City reviewer comments on plan sheets C2.1 and 2.3. Several existing trees are indicated on submitted plans to be preserved, City staff observes potential conflict with proposed athletic field. The applicant shall provide clarification to existing pine tree removal on C2.1

- For some tree removals in naturalized edge areas away from structures, consider leaving a portion of trunk as habitat snag for tree species that are not known to have invasive disease or insect risks associated with them (eg: emerald ash borer , etc) .

- The applicant shall consider removal of existing White Ash tree on sheet C2.3 due to poor condition due to signs of Emerald ash borer insect.

- The applicant shall provide removal of invasive plants along north property line (adjacent to the Shell gas station and a recently built parking lot) prior to new proposed plantings.

- The applicant shall clarify open space program for green spaces shown on C1.0 Master Plan. Consideration for shade and sun exposure for any areas where community gardens are being proposed. Some locations identified for community gardens are likely to be shaded by adjacent buildings. City staff recommend where grades allow, consider connecting programmed outdoor spaces with pedestrian pathways, see notes on C1.0.

- The applicant shall identify the nature and purpose of the path extension projecting west from Circle 4.

- The applicant shall clarify the purpose of the 20' driveway extending to the basketball court. City staff has maintenance concerns and suggest narrowing, if appropriate, to a pedestrian path width.

<u>Neighborhood Center:</u>

- The applicant shall provide more naturalized transitional planting between established woodland and site development area, City staff suggests native trees with various species selection and heights.

- The applicant shall identify existing tree species and caliper size that exceed 10" DBH within wooded area adjacent to proposed development area.

- City staff recommend an increase of plant material in the area between the new neighborhood center, play area and slope retention in the steeply graded areas proposed.

Building 1:

- City staff recommend a new pathway connection (ie, bridge or other means of pedestrian connection) between the recreation field and the climbing area/structure.

- City staff recommend a new pathway from Building 1 parking area to the climbing play feature. The applicant shall provide a new pathway loop to connect existing apartment buildings to new recreation field, climbing area and Building 1 parking area.

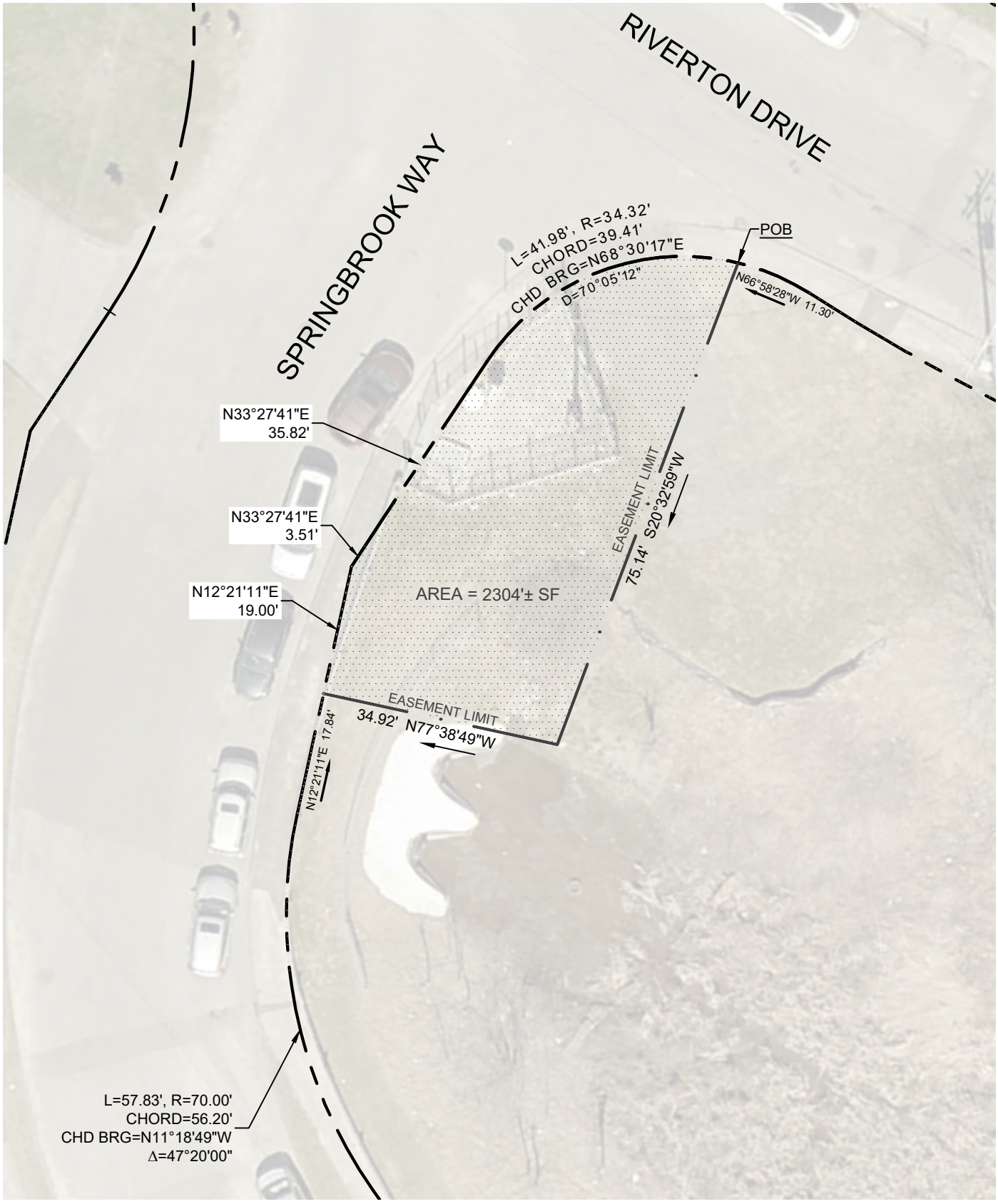
Planting Schedule:

- Platanus x acerifolia "Exclamation" is a great tree but is not well suited to a 5' wide parking median. Consider a tree with a less prominent trunk and root crown for that location. See notes on L1.0.

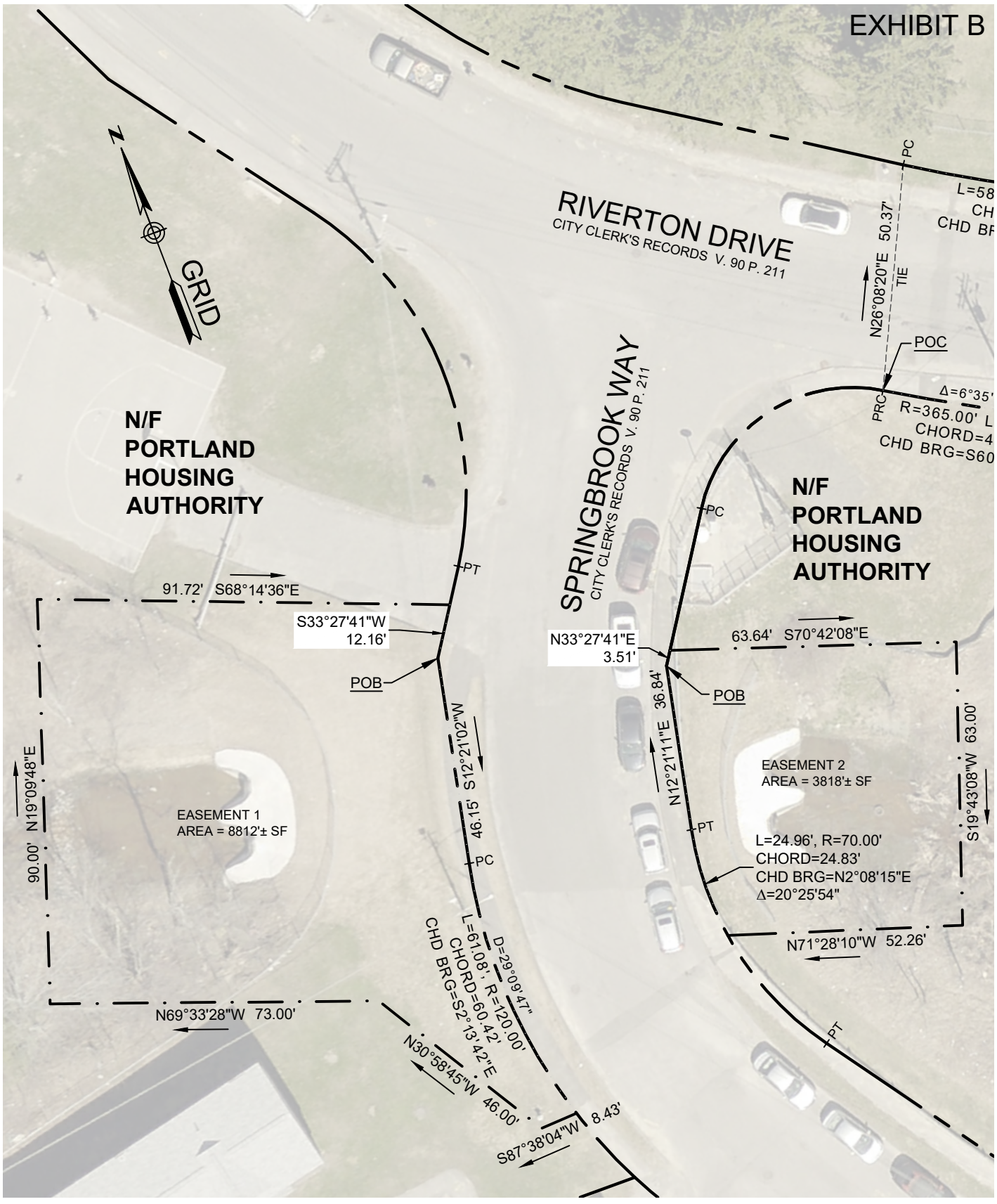
- Clumping forms of Betula nigra are very short lived due to their proclivity for splitting at the base. The City arborists and horticulturist advise swapping it for a standard form that will ultimately achieve an irregular and natural look and be longer-lasting.

- Prunus sargentii 'Pink Flair' is a relatively high maintenance tree requiring regular pruning to remove crossing branches and control its spreading/reaching habit. It is best located in open spaces and not against paths/driveways or buildings.

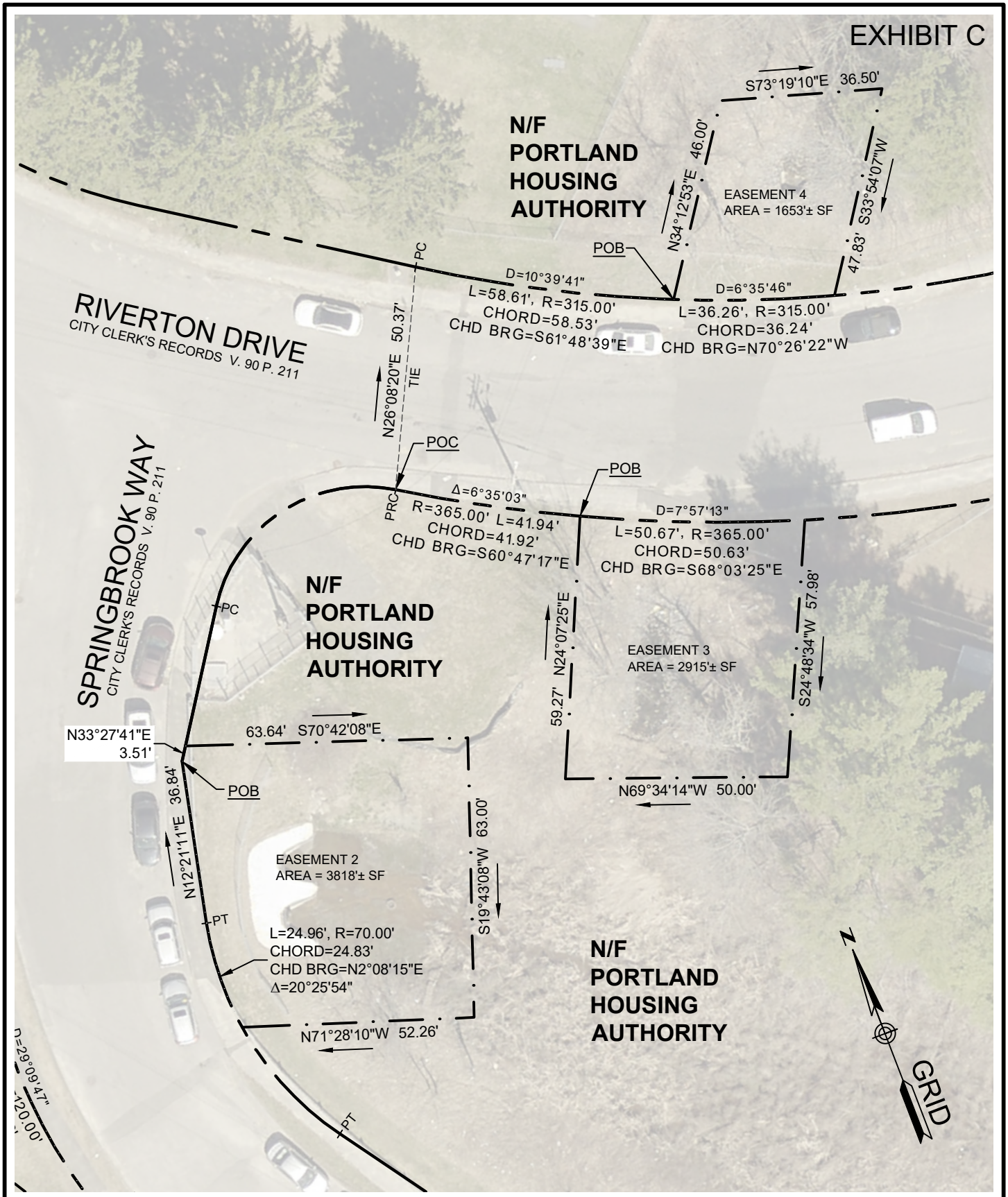
- Tilia americana is a great tree but is prone to dripping honeydew and being covered in sooty mold. Consequently, it is a nuisance when planted near parking lots and should be located away from surfaces that must be cleaned.



CITY OF PORTLAND PUBLIC WORKS ENGINEERING DIVISION	PROPOSED EASEMENT FOR RIVERTON DRIVE PUMP STATION	SCALE: 1" = 20'
	CIVIL 3D PROJECT: RIVERTON_PUMP_STA_2020_VRES DRAWING: RIVERTON_PUMP_STATION_2020_SURVEY.DWG	DATE: 04/15/2020



CITY OF PORTLAND PUBLIC WORKS ENGINEERING DIVISION	PROPOSED CULVERT EASEMENTS 1 & 2 SPRINGBROOK WAY		SCALE: 1" = 30'
	CIVIL 3D PROJECT: RIVERTON_PUMP_STA_2020_VRES DRAWING: RIVERTON_PUMP_STATION_2020_SURVEY.DWG		DATE: 06/11/2020



CITY OF PORTLAND PUBLIC WORKS ENGINEERING DIVISION	PROPOSED CULVERT EASEMENTS 3 & 4 RIVERTON DRIVE		SCALE: 1" = 30'
	CIVIL 3D PROJECT: RIVERTON_PUMP_STA_2020_VRES DRAWING: RIVERTON_PUMP_STATION_2020_SURVEY.DWG		DATE: 06/11/2020

Legend

●	IRON PIPE OR ROD FOUND	CIRF	CAPPED IRON ROD FOUND
■	MONUMENT FOUND	N/F	NOW OR FORMERLY
⌀	UTILITY POLE	000/000	DEED BOOK / PAGE
◯	MANHOLE		
⊠EM/GM	ELECTRIC/GAS METER	CONC.	CONCRETE
⊠	TELEPHONE BOX	CLF	CHAIN LINK FENCE
⊸	SIGN	MB	MAILBOX
▤ ◎	CATCH BASIN	EM	ELECTRIC METER
◇	HYDRANT	GM	GAS METER
⊗	WATER VALVE OR SHUTOFF	TB	TELEPHONE BOX
⊛	GAS VALVE		
☼	LIGHT POLE	CMF	CONCRETE MONUMENT FOUND
SD	SATELLITE DISH	GMF	GRANITE MONUMENT FOUND
(1)	BUILDING NUMBER		
○	CAPPED IRON ROD TO BE SET		
	DECIDUOUS TREE		
	CONIFEROUS TREE		
×—×—×	CHAIN LINK FENCE		
═══	CURB		
—OHW—	OVERHEAD WIRES		
70	1' CONTOUR		

PER CHAPTER 4 OF THE TECHNICAL MANUAL, "the tree survey shall clearly indicate forest type and the location, size and species of all existing trees 10" diameter at breast height (DBH) or greater on the site and in the right-of-way, and all feature mature trees on the site and in the right-of-way. For sites with a high density of existing trees, the survey shall identify all existing shade and ornamental trees that may have been part of a prior landscape scheme for the site and the location, average size and species of groves of trees, and individual trees greater than 16" DBH."

Without tree size information on the survey, the City cannot determine whether tree removals are being appropriately offset by new trees planted on site.

LINE	BEARING	DISTANCE
L1	S04°59'08"E	168.30'
L2	S21°39'09"E	250.05'
L3	S24°39'09"E	93.56'
L4	S35°59'09"E	49.52'
L5	S56°29'09"E	64.00'
L6	S88°27'09"E	64.38'
L7	S28°27'21"W	56.07'
L8	N88°27'09"W	39.00'
L9	S33°27'21"W	35.82'
L10	S12°20'51"W	36.84'
L11	N35°59'09"W	29.14'
L12	S34°59'09"E	77.69'
L13	N82°43'42"E	57.00'
L14	S07°16'19"E	50.00'
L15	S82°43'42"W	57.00'

LINE	BEARING	DISTANCE
L16	N88°25'39"W	50.00'
L17	N34°59'09"W	64.90'
L18	N89°10'04"W	18.04'
L19	N89°10'04"W	110.87'
L20	S66°09'16"E	59.53'
L21	N23°50'44"W	50.00'
L22	N66°09'16"E	70.47'
L23	S89°10'04"E	105.57'
L24	N12°20'51"E	46.16'
L25	N33°27'21"E	20.91'
L26	N05°09'09"W	64.48'
L27	N24°39'09"W	99.84'
L28	N21°39'09"W	251.35'
L29	S77°04'43"W	4.36'
L30	N05°09'09"W	2.00'

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	298.88'	86.07'	S13°24'09"E	85.77'
C2	126.00'	45.08'	S46°14'11"E	44.84'
C3	315.00'	175.74'	S72°28'08"E	173.47'
C4	365.00'	197.16'	N72°58'37"W	194.77'
C5	34.32'	53.34'	S77°58'49"W	48.13'
C6	70.00'	57.83'	S11°19'07"E	56.20'
C7	498.00'	215.87'	S22°34'03"E	214.19'
C8	498.00'	51.85'	S01°24'42"E	51.82'
C9	448.00'	285.84'	N16°42'27"W	281.02'
C10	120.00'	80.38'	N06°50'50"W	78.88'
C11	74.52'	90.33'	N01°15'50"W	84.89'
C12	348.88'	53.16'	N17°17'13"W	53.11'
C13	120.00'	18.76'	N30°30'31"W	18.74'

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.

BECAUSE THIS AREA IS INTENDED TO BE SIGNIFICANTLY REGRADED AND WILL SEE EXTENSIVE TREE REMOVAL, TREES IN THIS AREA THAT EXCEED 10" DBH SHOULD ALSO BE SURVEYED, IDENTIFYING SPECIES AND SIZE ACCORDING TO THE TECHNICAL MANUAL REQUIREMENTS IN CHAPTER 4.

Zoning Information

NONE PROVIDED

Legal Description

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

BEGINNING AT A POINT ON THE SOUTHWESTERLY SIDE OF SAID FOREST AVENUE, WHICH POINT IS 386.56 FEET SOUTHEASTERLY, ON A CURVE OF S 39° 06' 30" E, FROM THE INTERSECTION OF THE SOUTHWESTERLY SIDE LINE OF FOREST AVENUE WITH THE SOUTHEASTERLY SIDE LINE OF RIVERSIDE STREET AND 50.21 FEET NORTHWESTERLY ALONG FOREST AVENUE FROM AN IRON PIN AT THE MOST NORTHERLY CORNER OF LAND OF THE CORNERSTONE MASONIC CORPORATION; THENCE S 45° 35' W, ALONG LAND OF THIS GRANTOR 188.75 FEET TO A POINT; THENCE S 11° 35' W, 230 FEET TO A POINT; THENCE S 47° W, 360 FEET TO A POINT; THENCE S 43° E, 242 FEET TO A POINT; THENCE S 56° 07' 30" W, 413.61 FEET TO A POINT; AND LAND CONVEYED BY NEAL D. LUNT TO MARY J. FIELD, ET AL, BY DEED DATED OCTOBER 30, 1905 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, BOOK 776, PAGE 165; THENCE S 30° 53' 30" E, ALONG SAID FIELD LAND, PART OF WHICH IS NOW OR FORMERLY OWNED BY CHARLES KAATZ, 885.13 FEET TO A MONUMENT AT THE WESTERLY CORNER OF LAND CONVEYED BY ELLIE K. HAWES TO MAINE TURNPIKE AUTHORITY BY DEED DATED OCTOBER 5, 1954 AND RECORDED IN SAID REGISTRY OF DEEDS, IN BOOK 2195, PAGE 453; THENCE NORTHEASTERLY ALONG SAID MAINE TURNPIKE AUTHORITY LAND 750.40 FEET TO A MONUMENT; THENCE N 42° 41' 30" E, ALONG SAID TURNPIKE LAND, 226.06 FEET TO AN IRON PIN AND THE SOUTHWESTERLY SIDE LINE OF LAND CONVEYED BY JOSEPH HAWKES TO ALEXANDER BAILEY BY DEED DATED FEBRUARY 26, 1868, RECORDED IN SAID REGISTRY OF DEEDS, IN BOOK 360, PAGE 337, AND NOW OR FORMERLY OWNED BY WALTER F. HAWKES; THENCE N 31° 13' 30" W, ALONG SAID HAWKES LAND 656.92 FEET TO A MONUMENT; THENCE N 47° 52' E, ALONG SAID HAWKES LAND 108.55 FEET TO AN IRON PIN AND LAND OF CORNERSTONE MASONIC CORPORATION; THENCE N 66° 56' 30" W, ALONG SAID CORPORATION LAND 75.27 FEET TO AN IRON PIN; THENCE N 47° 17' 30" W, 295.21 FEET TO A MONUMENT AT THE NORTHWESTERLY CORNER OF SAID CORPORATION LAND; THENCE N 45° 35' E, ALONG SAID CORPORATION LAND 168.81 FEET TO THE SAID IRON PIN ON THE SOUTHWESTERLY SIDE OF FOREST AVENUE AT THE MOST NORTHERLY CORNER OF SAID CORPORATION LAND; THENCE NORTHWESTERLY ALONG SAID FOREST AVENUE 50.21 FEET TO THE POINT OF BEGINNING.

Plan References

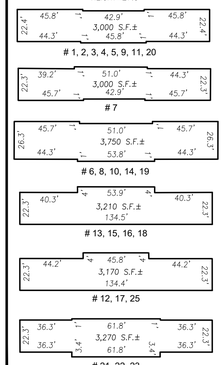
1. *"PLAN OF LAND IN PORTLAND, MAINE FOR F.D. RICH COMPANY" DEC. 31, 1968, REV. 3 3-9-70 BY OWEN HASKELL, INC.*
2. *"SITE PLAN, FAMILY TURNKEY HOUSING FOR PORTLAND HOUSING AUTHORITY, PORTLAND, MAINE" JAN. 14, 1971 BY LEASURE, TUTTLE & LEE ARCHITECTS & ENGINEERS.*
3. *"CITY OF PORTLAND, MAINE DEPARTMENT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

General Notes

1. *OWNER OF RECORD: PORTLAND HOUSING AUTHORITY, 14 BAXTER BOULEVARD, PORTLAND, MAINE C.C.R.D. BOOK 3280 PAGE 329 C.C.R.D. BOOK 4549 PAGE 293*
2. *LOCUS IS SHOWN AS LOT 12 BLOCK B ON TAX MAP 327.*
3. *BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83 PER POST PROCESS GPS OBSERVATIONS.*
4. *ELEVATIONS BASED ON NGVD 29 PER POST PROCESS GPS OBSERVATIONS.*
5. *NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, BUILDING ADDITIONS, OR RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED.*
6. *NO PROPOSED CHANGES IN STREET LINES IS KNOWN BY THIS SURVEYOR.*
7. *AT THE TIME OF THE SURVEY NEW GAS LINES WERE BEING INSTALLED. THE GAS LINES SHOWN HEREON REPRESENT THE LOCATION OF THE ORIGINAL GAS LINES.*
8. *STATE OF MAINE LIDAR DATA WAS USED TO GENERATE CONTOURS WITHIN THE GULLIES.*
9. *THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT.*
10. *PINEWOOD DRIVE WAS OFFICIALLY VACATED BY THE CITY OF PORTLAND IN DEED BOOK 13326, PAGE 19. FEE OWNERSHIP IS WITH PORTLAND HOUSING AUTHORITY.*

Building Detail

2 STORY BRICK & WOOD HEIGHT=27.5'



Flood Zone Note

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

SCALE : 1" = 50'

0' 25' 50' 100'

ALTA / NSPS Land Title Survey

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

Surveyor's Certification

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 11, 13, 14, 16, 17, 19 AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON APRIL 23, 2019 AND FEBRUARY 25, 2022.

RANDY R. LOUBIER
PROFESSIONAL LAND SURVEYOR NO. 2407
DATE OF PLAT OR MAP: APRIL 30, 2019
DATE OF LAST REVISION: SEPT. 6, 2022

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

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

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



UNIT SUMMARY:

DWELLING UNITS (DU)

	EX DU	EX RESIDENT SERVICE UNITS	PROP DU
CIRCLE 1 :	24 DU	0 SU	59 DU
CIRCLE 2:	24 DU	6 SU	29 DU
CIRCLE 3:	28 DU	2 SU	28 DU
CIRCLE 4	24 DU	0 SU	24 DU
CIRCLE 5:	17 DU	1 SU	18 DU
CIRCLE 6:	24 DU	0 SU	24 DU
	141 DU	9 SU	182 DU

PARKING SUMMARY:

OFF-STREET	EX	PROPOSED
BUILDING 1 :	25	71
CIRCLE 2:	38	34
CIRCLE 3:	38	33
CIRCLE 4:	35	26
CIRCLE 5:	25	25
CIRCLE 6:	27	26
MAINTENANCE:	-	2
NEIGHBORHOOD CENTER:	6	11
	194	228

ON-STREET	
RIVERTON DR.	45-51 PS
SPRINGBROOK WAY	34-39 PS
APRIL-NOV	±79-90 PS
NOV-APRIL	±40-45 PS
TOTAL AVAILABLE:	VARIES

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14 BAXTER BLVD
PORTLAND, MAINE 04101

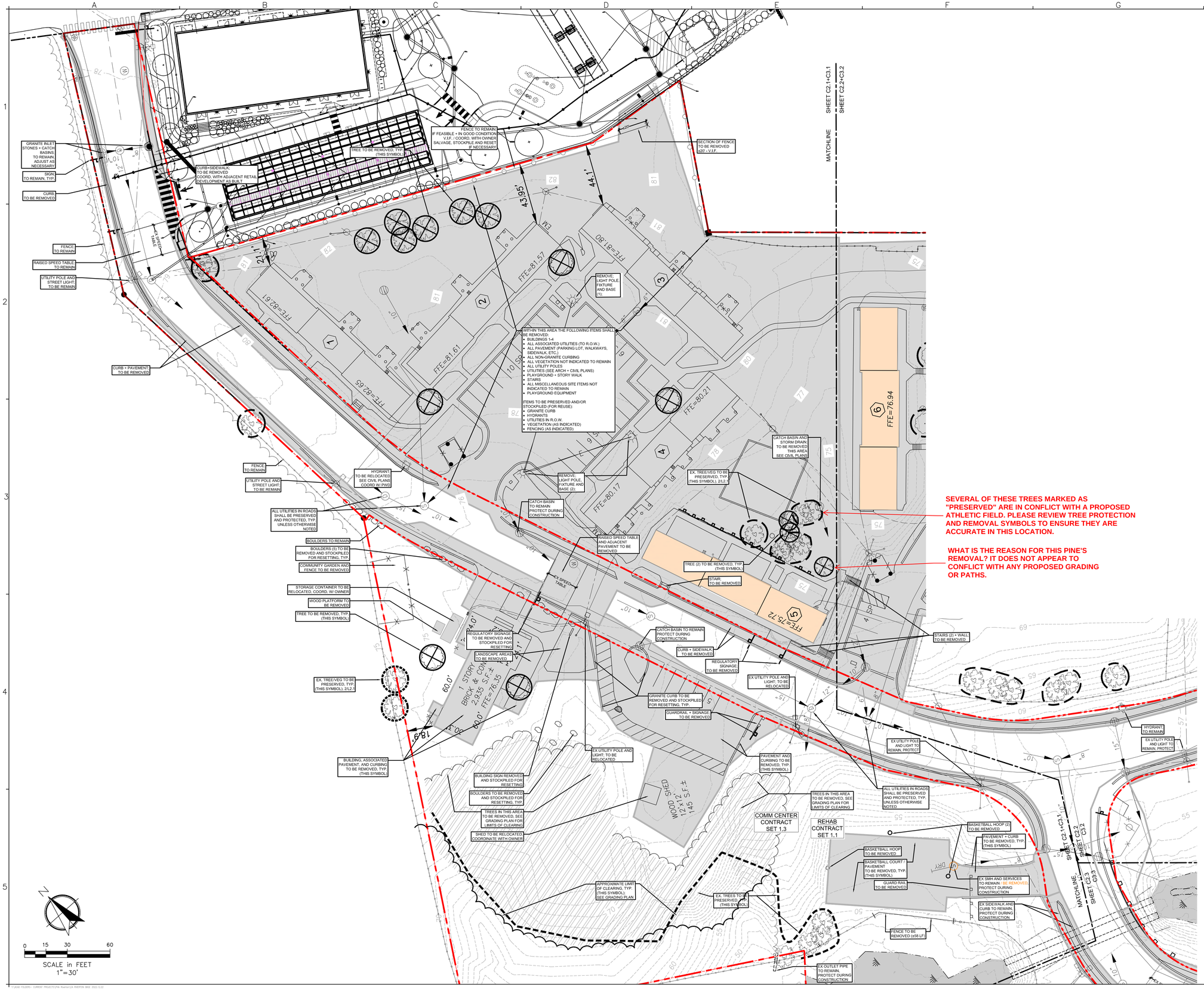
APPLICANT
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REDEVELOPMENT AND REHABILITATION
2 RIVERTON DRIVE PORTLAND, MAINE 04103

REVISIONS
1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING
MASTER PLAN
CWS PROJECT NUMBER: 15.021

DRAWING NUMBER
C1.0
SCALE: AS SHOWN
DATE: 1/12/2019



SEVERAL OF THESE TREES MARKED AS "PRESERVED" ARE IN CONFLICT WITH A PROPOSED ATHLETIC FIELD. PLEASE REVIEW TREE PROTECTION AND REMOVAL SYMBOLS TO ENSURE THEY ARE ACCURATE IN THIS LOCATION.

WHAT IS THE REASON FOR THIS PINE'S REMOVAL? IT DOES NOT APPEAR TO CONFLICT WITH ANY PROPOSED GRADING OR PATHS.

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PROJECT
RIVERTON PARK REDEVELOPMENT AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

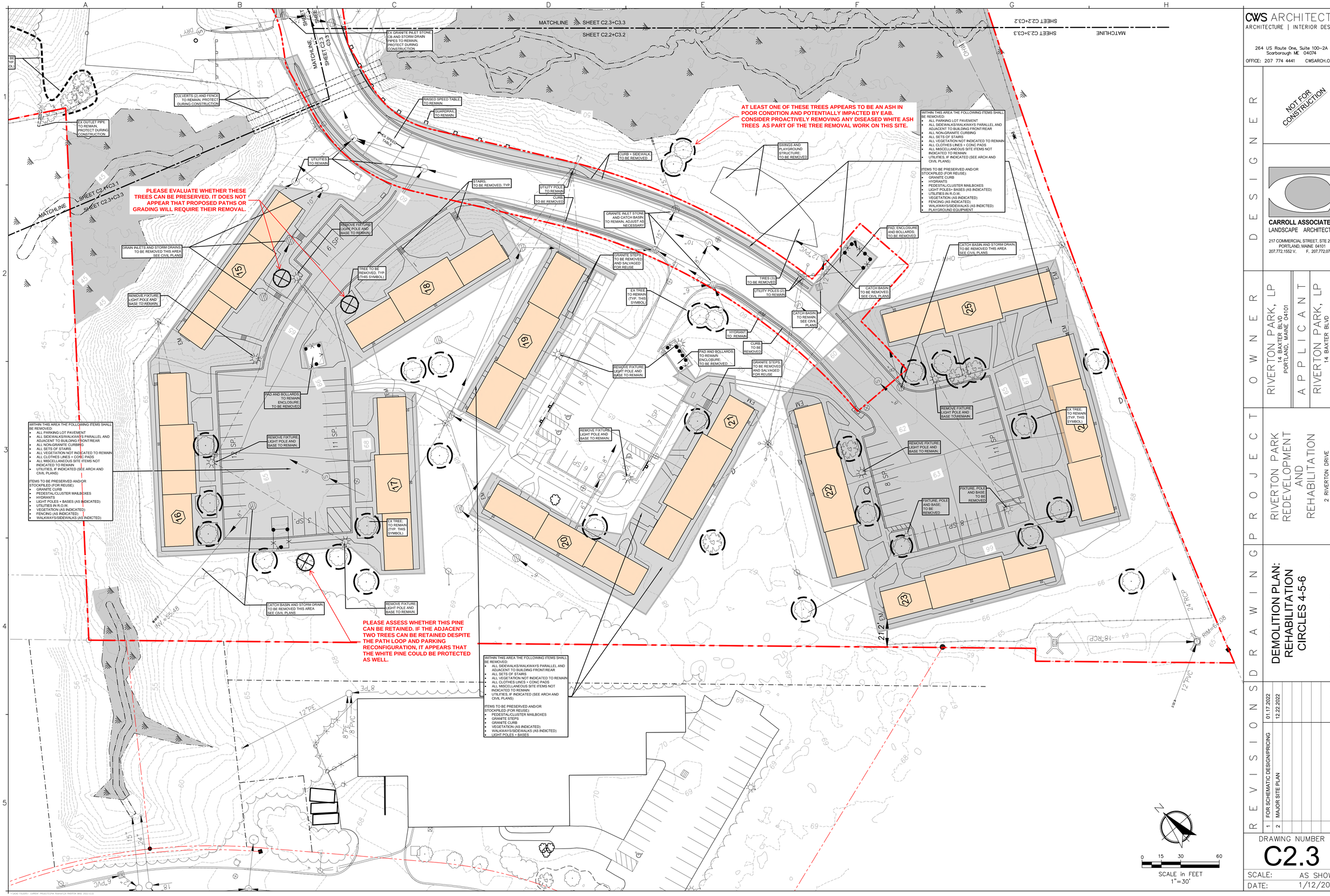
DRAWING
DEMOLITION PLAN: CIRCLE 1 AND NEIGHBORHOOD CENTER
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C2.1

SCALE: AS SHOWN
DATE: 1/12/2019



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APPLICANT
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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
DEMOLITION PLAN:
REHABILITATION
CIRCLES 4-5-6
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C2.3
SCALE: AS SHOWN
DATE: 1/12/2019



PLANTING NOTES

1. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF WATERING AND MAINTENANCE.
2. CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE WORK SHOWN ON THE PLAN. ANY DISCREPANCY BETWEEN THE QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED ON THE PLAN SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL RENUMERATION. ANY DISCREPANCIES SHALL BE CLARIFIED WITH THE LANDSCAPE ARCHITECT PRIOR TO ORDERING PLANT MATERIAL.
3. ALL MATERIALS SHALL CONFORM TO SPECIFICATIONS OF THE AMERICAN STANDARDS FOR NURSERY STOCK (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS THE ORIGINAL GRADES BEFORE DIGGING.
5. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
6. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AT THE NURSERY AND AT THE SITE.
7. ALL PLANT BEDS SHALL MEET MINIMUM TOPSOIL REQUIREMENTS (SEE SPECIFICATIONS).
8. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL GRUBBING, BED PREPARATION, AND FINISH GRADING HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
9. ALL PLANT BEDS AND TREE WELLS SHALL HAVE A MINIMUM OF 3" OF UNIFORMLY DISTRIBUTED, DARK, SHREDDED BARK MULCH.
10. CONTRACTOR SHALL SUBMIT SOIL SAMPLE AND TEST OF TOPSOIL TO LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. SOIL ADMIXTURE SHALL BE ADDED TO EXISTING SOIL (BY CONTRACTOR) IF DEEMED NECESSARY BY SOIL TEST RESULTS.
11. ROUGH GRADING AND BED PREPARATION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANT INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR TO REQUIRED SITE VISIT.
12. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. ALL ROOT WRAPPING AND CONTAINER MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING.
13. ALL BROAD LEAF EVERGREEN PLANTS SHALL BE SPRAYED WITH AN ANTI-DESSICANT AT THE BEGINNING OF THEIR FIRST WINTER.
14. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
15. CONTRACTOR SHALL STAKE TREES IF DEEMED NECESSARY BY LANDSCAPE ARCHITECT.
16. THE LANDSCAPE CONTRACTOR SHALL PROVIDE LOAM FILL AS PER THE CONTRACT SPECIFICATIONS.
17. ALL PLANTS SHALL BE WATERED BY THE CONTRACTOR, AS NECESSARY TO INSURE HEALTH UNTIL FINAL ACCEPTANCE.
18. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE PLANT LIST AND PLANTING SPECIFICATIONS FOR SEASONAL REQUIREMENTS AND OTHER RESTRICTIONS RELATED TO THE TIME AND SEASON OF PLANTING.
19. PLANTING SOIL MIX: 1 PART COMPOST, 8 PARTS TOPSOIL, 3 PARTS HUMUS.
TOPSOIL: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS GREATER THAN 1" IN ANY DIMENSION, PH RANGE 5.0-7.0 , AND SHALL CONTAIN NOT LESS THAN 6% ORGANIC MATTER BY WEIGHT.
SANDY LOAM OR LOAM SOIL AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE, AND HAVE THE FOLLOWING MECHANICAL ANALYSIS:

TEXTURAL CLASS	% OF TOTAL WEIGHT	AVERAGE %
SAND (0.05- 2.0 MM)	45 TO 75%	60%
SILT (0.002- 0.05 MM)	15 TO 35%	25%
CLAY (< 0.002 MM)	5 TO 25%	15%

STRONGLY SUGGEST SWITCHING TO A SINGLE LEADER. THE CLUMPING FORM LOOKS GOOD INITIALLY BUT IS VERY SHORT LIVED DUE TO ITS PROCLIVITY FOR SPLITTING APART AT THE BASE.

PLANTING SCHEDULE

	QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
TREES	10	AF	*Acer x freemani 'Red Pointe'*	Maple Hybrid	2"-2.5" cal.	B+B	X
	8	AL	*Amelanchier laevis 'Cumulus' or 'Spring Flurry'*	Allegheny Serviceberry	2"-2.5" cal.	B+B, TREE FORM	X
	21	AR	*Acer rubrum 'Karpick' or 'Bowhall'*	Red Maple	2"-2.5" cal.	B+B	X
	6	BN	*Betula nigra 'Heritage'*	River Birch	10'-12' ht.	B+B, CLUMP	X
	13	CC	*Carpinus caroliniana 'Palisade' or 'Uxbridge'*	American Hornbeam	2"-2.5" cal.	B+B	X
	5	CK	*Cladrastis kentukea*	Yellowwood	2"-2.5" cal.	B+B	
	7	GT	*Gleditsia triacanthos 'Street Keeper'*	Honeylocust	2"-2.5" cal.	B+B	
	15	LT	*Liriodendron tulipifera 'Little Volunteer'*	Tulip Tree	2"-2.5" cal.	B+B	
	7	MA	*Maackia amurensis 'Starburst'*	Maackia	2"-2.5" cal.	B+B	
	15	NS	*Nyssa slyvatica 'Firestarter'*	Tupelo	2"-2.5" cal.	B+B	X
	8	OV	*Ostrya virginiana*	Hop-Hornbeam	2"-2.5" cal.	B+B	X
	6	PA	*Platanus x acerfolia 'Exclamation'*	Planetree	2"-2.5" cal.	B+B	
	19	PG	*Picea glauca*	White Spruce	8'-10' ht.	B+B	X
	24	PS	*Prunus sargentii 'Pink Flair'*	Sargent Cherry	2"-2.5" cal.	B+B	
	12	PSF	*Pinus strobus 'Fastigiata'*	White Pine	8-10' ht.	B+B	X
	7	QB	*Quercus bicolor*	Swamp White Oak	2"-2.5" cal.	B+B	X
	4	TA	*Tilia americana 'McSentry'*	Basswood	2"-2.5" cal.	B+B	X
	8	UA	*Ulmus americana 'Princeton'*	American Elm	2"-2.5" cal.	B+B	X
	6	ZS	*Zelkova serrata 'Musashino'*	Zelkova	2"-2.5" cal.	B+B	

ATTRACTIVE TREE, BUT IT IS HIGH MAINTENANCE- REQUIRING PROFESSIONAL PRUNING DUE TO ITS BRANCHING HABIT AND PROCLIVITY FOR CROSSING BRANCHES. ITS SPREADING HABIT MAKES IT A POOR CHOICE FOR NARROW SPACES.

GOOD TREE AS LONG AS IT IS NOT OVERHANGING PARKING. BECAUSE IT IS PRONE TO SOOTY MOLD, IT CAN BE A NUISANCE WHEN OVERHANGING CARS.

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PROJECT
RIVERTON PARK REDEVELOPMENT AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWINGS
LANDSCAPE MASTER PLAN
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
L1.0
SCALE: AS SHOWN
DATE: 1/12/2019

If the cultivar/varietal selection specified is not crucial to the intended design effect, consider specifying straight species instead. Many cultivar selections offer greatly diminished benefits to pollinators and other beneficial insects.

Consider swapping for Juniperus horizontalis 'Bar Harbor'. It's a native alternative that achieves effect.

Be aware that where this is planted within parking islands or along paths, it will require regular trimming to keep it from spreading across pathways and parking stalls. Great where it is okay spreading.

Consider swapping for Spiraea tomentosa (native, non-cultivar) to serve pollinators.

It is understandable why this plant is being specified against the property line. For native alternatives, consider Kalmia latifolia in the area directly beneath the building overhang (shady/more sheltered, could be a nice foreground plant against the backdrop of arborvitae across the fence) and Juniperus communis upright varieties in the more exposed/hot/dry swath next to the parking lot.

Is there a reason this plant is being proposed in an otherwise mostly native and naturalistic plant palette and design? This ball-shaped shrub seems out of keeping with the planting design throughout this project.

Native alternative to Arborvitae could be Kalmia latifolia

Native alternative to Arborvitae in this hotter location could be a Juniperus virginiana or upright Juniperus communis variety. Alternatively Myrica pensylvanica.

There are many native plants that can serve the same purpose and better fit with the rest of the plant palette and aesthetic of this project.

STORMWATER AREA
BIO-RETENTION CELL:
PLANT QUANTITY AND SPECIES - TBD

STORMWATER AREA
BIO-RETENTION CELL:
PLANT QUANTITY + SPECIES - TBD

STORMWATER AREA
BIO-RETENTION CELL:
PLANT QUANTITY + SPECIES - TBD

STORMWATER AREA
BIO-RETENTION CELL:
PLANT QUANTITY AND SPECIES - TBD

LAWN

0 15 30 60
SCALE in FEET
1"=30'

1 LANDSCAPE PLAN: NEIGHBORHOOD CENTER, CIRCLE 1 AND BUILDING 5
SCALE: NTS

SHRUBS, GRASSES + PERENNIALS

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
33	DL	*Diervilla lonicera*	Northern Bush Honeysuckle	24" / #5		X
25	FM	*Fothergilla 'Mt. Airy'*	Bottlebrush Bush	2' / #5		
18	JV	*Juniperus virginiana 'Grey Owl'*	Juniper	2.5'-3' / #5		X
7	KL	*Kalmia latifolia 'Snowdrift'*	Mountain Laurel	2.5'-3' / #7		X
31	MD	*Microbiota decussata 'Prides'*	Siberian Carpet Cypress	#5		
33	MG	*Myrica gale*	Sweetgale	#5		X
16	MP	*Myrica pensylvanica 'Bobee'*	Northern Bayberry	3-4' / #7		X
8	PV	*Panicum virgatum 'Northwind'*	Switchgrass	#3		X
69	RA	*Rhus aromatica 'Gro-Low'*	Fragrant Sumac	2'-2.5' / #5		
32	SB	*Spiraea x bumalda 'Anthony Waterer'*	Spirea	#5		
68	SS1	*Schizachyrium scoparium 'Prairie Blues'*	Little Bluestem	#2		X
25	SS2	*Schizachyrium scoparium 'Blue Heaven'*	Little Bluestem	#3		X
44	TOS	*Thuja occidentalis 'Smaragd'*	Emerald Green Arborvitae	4' HT	B+B, matching	X
8	TOW	*Thuja occidentalis 'Woodwardii'*	Globe Arborvitae	3' HT	B+B, matching	X

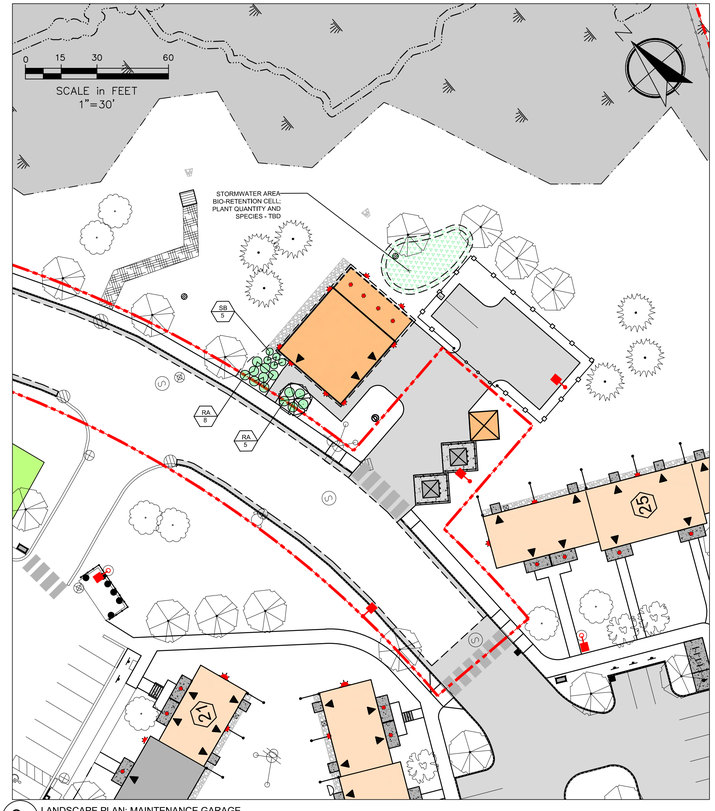
BIO-RETENTION AREAS (±4,505 SF)

SHRUBS

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
0	AM	*Aronia melanocarpa*	Black Chokeberry	#5	CONT	X
0	AZ	Azalea viscosum	Swamp Azalea	#7	CONT	X
0	CO	*Cephalanthus occidentalis 'Sugar Shack'*	Buttonbush	#7	CONT	X
0	CR	*Cornus sericea 'Farrow'*	Red Twig Dogwood	3-4' HT	B+B	X
0	CS	*Clethra alnifolia*	Summersweet	#5	B+B	X
0	IVJ	*Ilex verticillata 'Jim Dandy'*	Winterberry (male)	#5	CONT	X
0	IVR	*Ilex verticillata 'Red Sprite'*	Winterberry (female)	#5	CONT	X
0	PV	*Panicum virgatum*	Switch Grass	#3	CONT	X
0	VC	*Viburnum cassinoides*	Witherod Viburnum	3-4' HT	B+B	X

PERENNIALS + GRASSES

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
0	DC	*Deschampsia cespitosa*	Tufted Hair Grass	#2	container	X
0	ED	*Eupatorium dubium 'Little Joe'*	Joe-Pye Weed	#2	container	X
0	EP	*Echinacea purpurea 'Magnus'*	Coneflower	#2	container	X
0	IV	*Iris versicolor*	Blue Flag Iris	#2	container	X
0	LS	*Liatris spicata*	Blazing Star	#2	container	X
0	MF	*Monarda fistulosa*	Wild Burgamot	#2	container	X
0	PV	*Panicum virgatum 'Northwind'*	Switchgrass	#2	container	X
0	S	-	Erosion Control / Restoration Mix by New England Wetland Plants, Inc. or approved equal	35 lbs/acre (1250 sf/lbs)	seed	X



2 LANDSCAPE PLAN: MAINTENANCE GARAGE
SCALE: NTS

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
264 US Route One, Suite 100–2A
Scarborough ME 04074
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER

NOT FOR CONSTRUCTION

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

OWNER

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWINGS

LANDSCAPE PLAN:
ENLARGEMENTS

CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
L1.1

SCALE: AS SHOWN
DATE: 1/12/2019

Order 259-21/22
Motion to postpone to June 22, 2022: 9-0 on 6/2/2022
Passage: 9-0 on June 22, 2022 Effective 7/22/2022

KATE SNYDER (MAYOR)
ANNA TREVORROW (1)
VICTORIA L. PELLETIER (2)
TAE Y. CHONG (3)
ANDREW ZARRO (4)

CITY OF PORTLAND
IN THE CITY COUNCIL

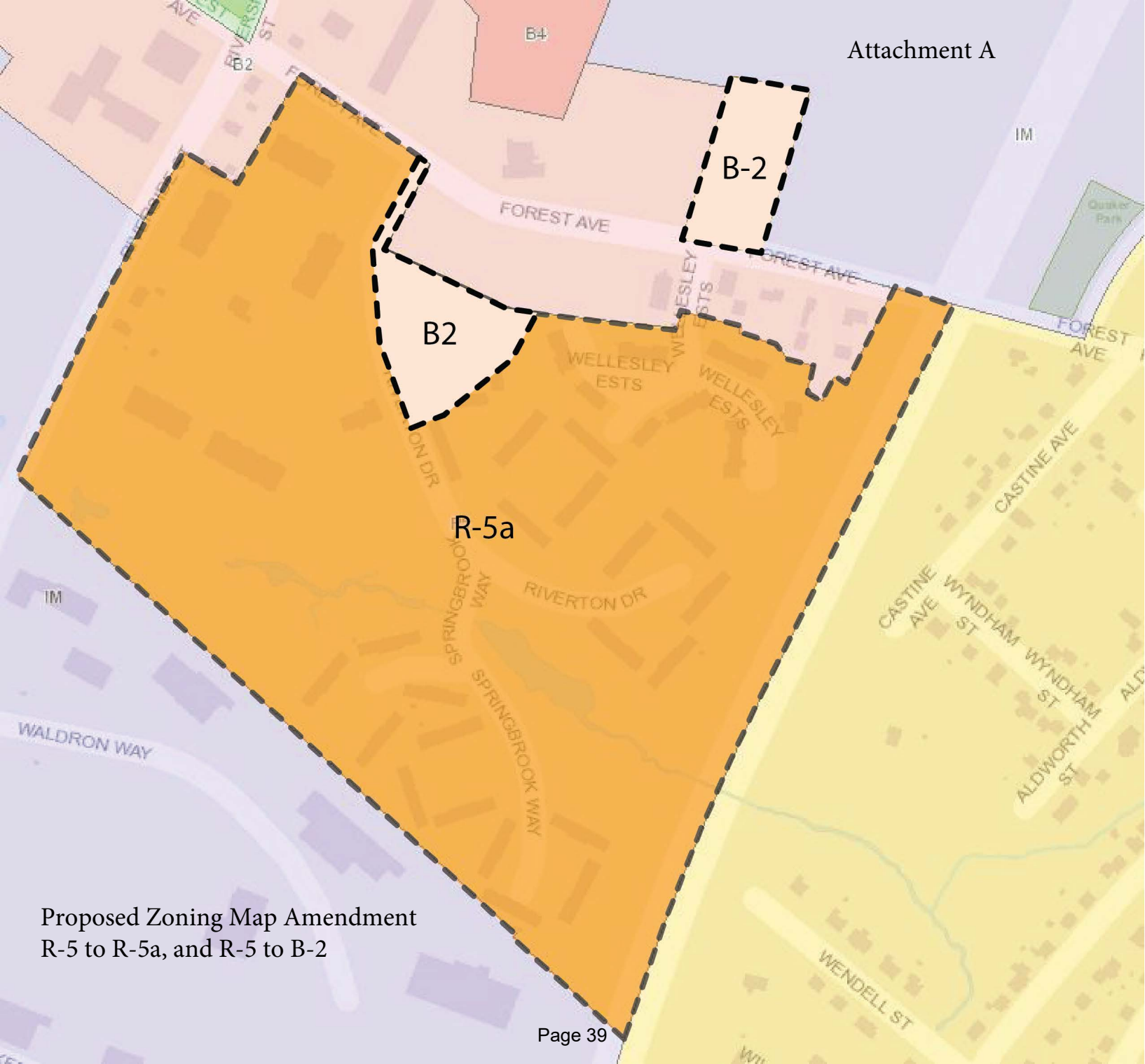
MARK DION (5)
APRIL D. FOURNIER(A/L)
PIOUS ALI (A/L)
ROBERTO RODRÍGUEZ (A/L)

AMENDMENT TO ZONING MAP
RE: RIVERTON PARK CAMPUS AND SURROUNDING PARCELS
FROM R-5 RESIDENTIAL TO R-5A AND B-2

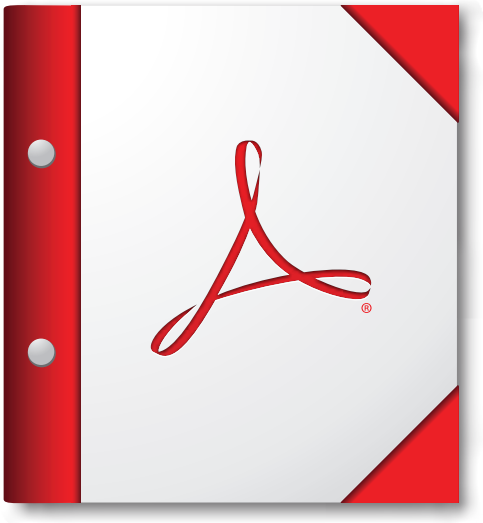
BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORTLAND, MAINE IN CITY COUNCIL ASSEMBLED AS FOLLOWS:

That the Zoning Map of the City of Portland, dated December 2000, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49, be and hereby is amended by adopting the attached map change amendment and specifically rezoning property on the Riverton Park campus and surrounding parcels from R-5 Residential to R-5a and B-2as shown in the bordered areas in the map attached hereto on the following page.

Attachment A



Proposed Zoning Map Amendment
R-5 to R-5a, and R-5 to B-2



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Get Adobe Reader Now!

RIVERTON PARK REDEVELOPMENT AND REHABILITATION

2 RIVERTON DRIVE
PORTLAND, ME
TAX MAP 327, BLOCK B, LOT 12

Consultants:

OWNER:
PORTLAND HOUSING AUTHORITY
14 Baxter Blvd.
Portland, ME 04101
(207) 773.4753

APPLICANT:
RIVERTON PARK, LP
C/O PORTLAND HOUSING
DEVELOPMENT CORPORATION
14 Baxter Blvd.
Portland, ME 04101
(207) 773.4753

ARCHITECT:
CWS ARCHITECTS
264 US Route One, Suite 100 2A
Scarborough, ME 04074
(207) 774.4441

LANDSCAPE ARCHITECT:
CARROLL ASSOCIATES
217 Commercial Street, Suite 204
Portland, ME 04101
(207) 772-1552

ENGINEER:
ATLANTIC RESOURCE CONSULATNTS
541 US Route One, Suite 21
Freeport, ME 04032
(207) 869.9050

SURVEYOR:
OWEN HASKELL, INC.
390 US Route One, Unit 10
Falmouth, ME 04105
(207) 774.0424

CONTRACTOR:
ZACHAU CONSTRUCTION
1185 US Route One, PO Box J
Freeport, ME 04032
(207) 869.6104

neighborhood center perspective





circle 1 building perspective



buildings 1 & 5 perspective

Plan Index:

SITE

1 ALTA / NPS LAND TITLE SURVEY
2 ALTA / NPS LAND TITLE SURVEY

C1.0 MASTER PLAN

C2.1 DEMO PLAN: CIRCLE 1 AND NEIGHBORHOOD CENTER
C2.2 DEMO PLAN: REHAB CIRCLES 2+3
C2.3 DEMO PLAN: REHAB CIRCLES 4-5-6

C3.1 SITE PLAN: CIRCLE 1 AND NEIGHBORHOOD CENTER
C3.2 SITE PLAN: REHAB CIRCLES 2+3
C3.3 SITE PLAN: REHAB CIRCLES 4-5-6

C4.1 GRADING & DRAINAGE PLAN: CIRCLE 1
C4.2 GRADING & DRAINAGE PLAN: CIRCLES 2+3
C4.3 GRADING & DRAINAGE PLAN: CIRCLES 4,5+6

C5.1 UTILITY PLAN: CIRCLE 1
C5.2 UTILITY PLAN: CIRCLES 2+3
C5.3 UTILITY PLAN: CIRCLES 4,5+6

C6.1 EROSION CONTROL: CIRCLE 1
C6.2 EROSION CONTROL: CIRCLES 2+3
C6.3 EROSION CONTROL: CIRCLES 4,5+6

C7.1 EROSION CONTROL NOTES
C7.2 EROSION CONTROL DETAILS
C7.3 SITE/CIVIL DETAILS 1
C7.4 SITE/CIVIL DETAILS 2
C7.5 SITE/CIVIL DETAILS 3
C7.6 SITE/CIVIL DETAILS 4

L1.0 LANDSCAPE MASTER PLAN
L1.1 LANDSCAPE PLAN: ENLARGEMENTS

L2.0 LANDSCAPE DETAILS
L2.1 LANDSCAPE DETAILS
L2.2 LANDSCAPE DETAILS

L3.0 PHOTOMETRIC MASTER PLAN

CIRCLE 1 BUILDING

A1.10 FIRST FLOOR PLAN
A1.20 SECOND FLOOR PLAN
A1.30 THIRD FLOOR PLAN
A1.40 FORTH FLOOR PLAN
A1.50 ROOF PLAN
A3.00 EXTERIOR ELEVATIONS
A3.01 EXTERIOR ELEVATIONS
A3.02 EXTERIOR ELEVATIONS
A3.50 SIGNAGE DETAILS
A3.51 SIGNAGE DETAILS
A3.60 SITE AXON NORTH
A3.61 SITE AXON SOUTH
A3.62 BUILDING 1 PERSPECTIVES
A3.63 BUILDING 1 PERSPECTIVES

NEIGHBORHOOD CENTER

A1.10 FIRST FLOOR PLAN
A1.30 ROOF PLAN
A3.00 EXTERIOR ELEVATIONS
A3.50 BUILDING SIGNAGE
A3.60 EXTERIOR RENDERING

MAINTENANCE BUILDING

A1.10 FLOOR PLAN
A3.10 EXTERIOR ELEVATIONS

REHAB BUILDINGS CIRCLES 2,3,4,5+6

G1.00 UNIT LOCATIONS SITE PLAN
A1.06.1 FIRST FLOOR NEW WORK PLAN BUILDING 6
A1.06.2 SECOND FLOOR NEW WORK PLAN BUILDING 6
A1.22.1 FIRST FLOOR NEW WORK PLAN BUILDING 22
A1.22.2 SECOND FLOOR NEW WORK PLAN BUILDING 22
A2.05.1 FIRST FLOOR REFLECTED CEILING PLAN BUILDING 5
A2.05.2 SECOND FLOOR REFLECTED CEILING PLAN BUILDING 5
A2.10.1 FIRST FLOOR REFLECTED CEILING PLAN BUILDING 10
A2.10.2 SECOND FLOOR REFLECTED CEILING PLAN BUILDING 10
A2.18.1 FIRST FLOOR REFLECTED CEILING PLAN BUILDING 18
A2.18.2 SECOND FLOOR REFLECTED CEILING PLAN BUILDING 18
A2.21.1 FIRST FLOOR REFLECTED CEILING PLAN BUILDING 21
A2.21.2 SECOND FLOOR REFLECTED CEILING PLAN BUILDING 21
A2.22.1 FIRST FLOOR REFLECTED CEILING PLAN BUILDING 22
A2.22.2 SECOND FLOOR REFLECTED CEILING PLAN BUILDING 22
A3.00 BUILDING SIGNAGE
A3.02 EXTERIOR ELEVATIONS
A3.09 EXTERIOR ELEVATIONS
A3.50 EXTERIOR RENDERING

ISSUED FOR: MAJOR SITE PLAN REVIEW
CONDITIONAL USE REVIEW

ISSUE DATE: DECEMBER 22, 2022

Legend

●	IRON PIPE OR ROD FOUND	CIRF	CAPPED IRON ROD FOUND
■	MONUMENT FOUND	N/F	NOW OR FORMERLY
	UTILITY POLE	000/000	DEED BOOK / PAGE
	MANHOLE	CONC.	CONCRETE
⊠EM/GM	ELECTRIC/GAS METER	CLF	CHAIN LINK FENCE
⊠	TELEPHONE BOX		
	SIGN	MB	MAILBOX
	CATCH BASIN	EM	ELECTRIC METER
	HYDRANT	GM	GAS METER
	WATER VALVE OR SHUTOFF	TB	TELEPHONE BOX
	GAS VALVE		
	LIGHT POLE	CMF	CONCRETE MONUMENT FOUND
SD	SATELLITE DISH	GMF	GRANITE MONUMENT FOUND
(1)	BUILDING NUMBER		
	CAPPED IRON ROD TO BE SET		
	DECIDUOUS TREE		
	CONIFEROUS TREE		
	CHAIN LINK FENCE		
OHW	OVERHEAD WIRES		
70	1' CONTOUR		

LINE	BEARING	DISTANCE
L1	S04°59'08"E	168.30'
L2	S21°39'09"E	250.05'
L3	S24°39'09"E	93.56'
L4	S35°59'09"E	49.52'
L5	S56°29'09"E	64.00'
L6	S88°27'09"E	64.38'
L7	S28°27'21"W	56.07'
L8	N88°27'09"W	139.00'
L9	S33°27'21"W	35.82'
L10	S12°20'51"W	36.84'
L11	N35°59'09"W	129.14'
L12	S34°59'09"E	77.69'
L13	N82°43'42"E	57.00'
L14	S07°16'19"E	50.00'
L15	S82°43'42"W	57.00'

LINE	BEARING	DISTANCE
L16	N88°25'39"W	50.00'
L17	N34°59'09"W	64.90'
L18	N89°10'04"W	18.04'
L19	N89°10'04"W	110.87'
L20	S66°09'16"E	59.53'
L21	N23°50'44"W	50.00'
L22	N66°09'16"E	70.47'
L23	S89°10'04"E	105.57'
L24	N12°20'51"E	46.16'
L25	N33°27'21"E	20.91'
L26	N35°59'09"W	64.48'
L27	N24°39'09"W	99.84'
L28	N21°39'09"W	251.35'
L29	S77°04'43"W	4.36'
L30	N05°09'09"W	2.00'

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	298.88'	86.07'	S13°24'09"E	85.77'
C2	126.00'	45.08'	S46°14'11"E	44.84'
C3	315.00'	175.74'	S72°28'08"E	173.47'
C4	365.00'	197.16'	N72°58'37"W	194.77'
C5	34.32'	53.34'	S77°58'49"W	48.13'
C6	70.00'	57.83'	S11°19'07"E	56.20'
C7	498.00'	215.87'	S22°34'03"E	214.19'
C8	498.00'	51.80'	S01°24'42"E	51.82'
C9	448.00'	285.84'	N16°42'27"W	281.02'
C10	120.00'	80.38'	N06°50'50"W	78.88'
C11	74.52'	90.33'	N01°15'50"W	84.89'
C12	348.88'	53.16'	N17°17'13"W	53.11'
C13	120.00'	18.76'	N30°30'31"W	18.74'

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.

Zoning Information

NONE PROVIDED

Legal Description

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

BEGINNING AT A POINT ON THE SOUTHWESTERLY SIDE OF SAID FOREST AVENUE, WHICH POINT IS 386.56 FEET SOUTHEASTERLY, ON A CURVE OF S 39° 06' 30" E, FROM THE INTERSECTION OF THE SOUTHWESTERLY SIDE LINE OF FOREST AVENUE WITH THE SOUTHEASTERLY SIDE LINE OF RIVERSIDE STREET AND 50.21 FEET NORTHWESTERLY ALONG FOREST AVENUE FROM AN IRON PIN AT THE MOST NORTHERLY CORNER OF LAND OF THE CORNERSTONE MASONIC CORPORATION; THENCE S 45° 35' W, ALONG LAND OF THIS GRANTOR 188.75 FEET TO A POINT; THENCE S 11° 35' W, 230 FEET TO A POINT; THENCE S 47° W, 360 FEET TO A POINT; THENCE S 43° E, 242 FEET TO A POINT; THENCE S 56° 07' 30" W, 413.61 FEET TO A POINT; AND LAND CONVEYED BY NEAL D. LUNT TO MARY J. FIELD, ET AL, BY DEED DATED OCTOBER 30, 1905 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, BOOK 776, PAGE 165; THENCE S 30° 53' 30" E, ALONG SAID FIELD LAND, PART OF WHICH IS NOW OR FORMERLY OWNED BY CHARLES KAATZ, 885.13 FEET TO A MONUMENT AT THE WESTERLY CORNER OF LAND CONVEYED BY ELLIE K. HAWES TO MAINE TURNPIKE AUTHORITY BY DEED DATED OCTOBER 5, 1954 AND RECORDED IN SAID REGISTRY OF DEEDS, IN BOOK 2195, PAGE 453; THENCE NORTHEASTERLY ALONG SAID MAINE TURNPIKE AUTHORITY LAND 750.40 FEET TO A MONUMENT; THENCE N 42° 41' 30" E, ALONG SAID TURNPIKE LAND, 226.06 FEET TO AN IRON PIN AND THE SOUTHWESTERLY SIDE LINE OF LAND CONVEYED BY JOSEPH HAWKES TO ALEXANDER BAILEY BY DEED DATED FEBRUARY 26, 1868, RECORDED IN SAID REGISTRY OF DEEDS, IN BOOK 360, PAGE 337, AND NOW OR FORMERLY OWNED BY WALTER F. HAWKES; THENCE N 31° 13' 30" W, ALONG SAID HAWKES LAND 656.92 FEET TO A MONUMENT; THENCE N 47° 52' E, ALONG SAID HAWKES LAND 108.55 FEET TO AN IRON PIN AND LAND OF CORNERSTONE MASONIC CORPORATION; THENCE N 66° 56' 30" W, ALONG SAID CORPORATION LAND 75.27 FEET TO AN IRON PIN; THENCE N 47° 17' 30" W, 295.21 FEET TO A MONUMENT AT THE NORTHWESTERLY CORNER OF SAID CORPORATION LAND; THENCE N 45° 35' E, ALONG SAID CORPORATION LAND 168.81 FEET TO THE SAID IRON PIN ON THE SOUTHWESTERLY SIDE OF FOREST AVENUE AT THE MOST NORTHERLY CORNER OF SAID CORPORATION LAND; THENCE NORTHWESTERLY ALONG SAID FOREST AVENUE 50.21 FEET TO THE POINT OF BEGINNING.

Plan References

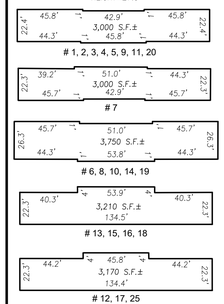
1. *"PLAN OF LAND IN PORTLAND, MAINE FOR F.D. RICH COMPANY" DEC. 31, 1968, REV. 3 3-9-70 BY OWEN HASKELL, INC.*
2. *"SITE PLAN, FAMILY TURNKEY HOUSING FOR PORTLAND HOUSING AUTHORITY, PORTLAND, MAINE" JAN. 14, 1971 BY LEASURE, TUTTLE & LEE ARCHITECTS & ENGINEERS.*
3. *"CITY OF PORTLAND, MAINE DEPARTMENT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

General Notes

1. OWNER OF RECORD: PORTLAND HOUSING AUTHORITY, 14 BAXTER BOULEVARD, PORTLAND, MAINE C.C.R.D. BOOK 3280 PAGE 329 C.C.R.D. BOOK 4549 PAGE 293
2. LOCUS IS SHOWN AS LOT 12 BLOCK B ON TAX MAP 327.
3. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83 PER POST PROCESS GPS OBSERVATIONS.
4. ELEVATIONS BASED ON NGVD 29 PER POST PROCESS GPS OBSERVATIONS.
5. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, BUILDING ADDITIONS, OR RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED.
6. NO PROPOSED CHANGES IN STREET LINES IS KNOWN BY THIS SURVEYOR.
7. AT THE TIME OF THE SURVEY NEW GAS LINES WERE BEING INSTALLED. THE GAS LINES SHOWN HEREON REPRESENT THE LOCATION OF THE ORIGINAL GAS LINES.
8. STATE OF MAINE LIDAR DATA WAS USED TO GENERATE CONTOURS WITHIN THE GULLIES.
9. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT.
10. PINEWOOD DRIVE WAS OFFICIALLY VACATED BY THE CITY OF PORTLAND IN DEED BOOK 13326, PAGE 19. FEE OWNERSHIP IS WITH PORTLAND HOUSING AUTHORITY.

Building Detail

2 STORY BRICK & WOOD
HEIGHT=27.5'



Flood Zone Note

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

SCALE : 1" = 50'

0' 25' 50' 100'

ALTA / NSPS Land Title Survey

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

Surveyor's Certification

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 11, 13, 14, 16, 17, 19 AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON APRIL 23, 2019 AND FEBRUARY 25, 2022.

RANDY R. LOUBIER
PROFESSIONAL LAND SURVEYOR NO. 2407
DATE OF PLAT OR MAP: APRIL 30, 2019
DATE OF LAST REVISION: SEPT. 6, 2022

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

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

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

Legend

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- EM/GM — ELECTRIC/GAS METER
- TELEPHONE BOX
- SIGN
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- LIGHT POLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- CHAIN LINK FENCE
- CURB
- OHW — OVERHEAD WIRES
- E — UNDERGROUND POWER
- W — WATER LINE
- G — GAS LINE
- T — TELEPHONE/COMMUNICATIONS
- SD — STORM DRAIN
- SS — SANITARY SEWER
- CIRF — CAPPED IRON ROD FOUND
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK / PAGE
- CONC. — CONCRETE
- MB — MAILBOX
- SD — SATELLITE DISH
- (1) — BUILDING NUMBER

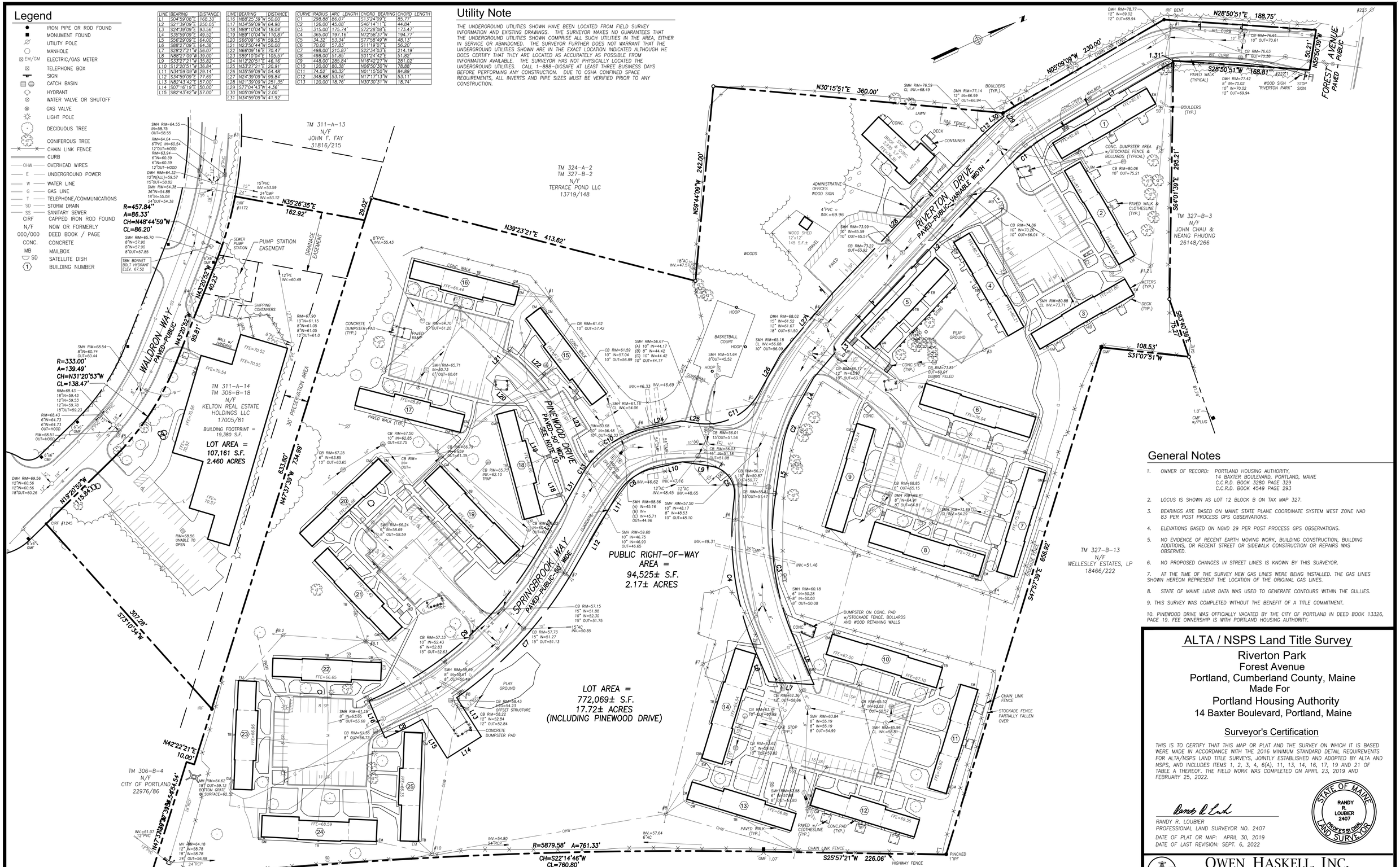
LINE	BEARING	DISTANCE
L1	S04°59'08"E	168.30'
L2	S21°39'09"E	250.05'
L3	S24°39'09"E	93.56'
L4	S35°59'09"E	49.52'
L5	S56°29'09"E	64.00'
L6	S88°27'09"E	64.38'
L7	S28°27'21"W	56.07'
L8	N88°27'09"W	39.00'
L9	S33°27'21"W	35.82'
L10	S12°20'51"W	36.84'
L11	N34°59'09"W	29.14'
L12	S34°59'09"E	77.69'
L13	N82°43'42"E	57.00'
L14	S07°16'19"E	50.00'
L15	S82°43'42"W	57.00'

LINE	BEARING	DISTANCE
L16	N88°25'39"W	50.00'
L17	N34°59'09"W	64.90'
L18	N89°10'04"W	18.04'
L19	N89°10'04"W	110.87'
L20	S66°09'16"W	59.53'
L21	N23°50'44"W	50.00'
L22	N66°09'16"E	70.47'
L23	S89°10'04"E	105.57'
L24	N12°20'51"E	46.16'
L25	N33°27'21"E	20.91'
L26	N35°59'09"W	54.48'
L27	N24°39'09"W	99.84'
L28	N21°39'09"W	251.35'
L29	S77°04'43"W	4.36'
L30	N05°09'09"W	2.00'
L31	N34°59'09"W	41.92'

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	298.88'	86.07'	S13°24'09"E	85.77'
C2	126.00'	45.08'	S46°14'11"E	44.84'
C3	315.00'	175.74'	S72°28'08"E	173.47'
C4	365.00'	197.16'	N72°58'37"W	194.77'
C5	34.32'	53.34'	S77°58'49"W	48.13'
C6	70.00'	57.83'	S11°19'07"E	56.20'
C7	498.00'	215.87'	S22°34'03"E	214.19'
C8	498.00'	51.85'	S01°24'42"E	51.82'
C9	448.00'	285.84'	N16°42'27"W	281.02'
C10	120.00'	80.38'	N06°50'30"W	78.88'
C11	74.52'	90.32'	N01°15'50"W	84.89'
C12	348.88'	53.16'	N17°17'13"W	53.11'
C13	120.00'	18.76'	N30°30'31"W	18.74'

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.



General Notes

1. OWNER OF RECORD: PORTLAND HOUSING AUTHORITY, 14 BAXTER BOULEVARD, PORTLAND, MAINE C.C.R.D. BOOK 3280 PAGE 329 C.C.R.D. BOOK 4549 PAGE 293
2. LOCUS IS SHOWN AS LOT 12 BLOCK B ON TAX MAP 327.
3. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83 PER POST PROCESS GPS OBSERVATIONS.
4. ELEVATIONS BASED ON NGVD 29 PER POST PROCESS GPS OBSERVATIONS.
5. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, BUILDING ADDITIONS, OR RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED.
6. NO PROPOSED CHANGES IN STREET LINES IS KNOWN BY THIS SURVEYOR.
7. AT THE TIME OF THE SURVEY NEW GAS LINES WERE BEING INSTALLED. THE GAS LINES SHOWN HEREON REPRESENT THE LOCATION OF THE ORIGINAL GAS LINES.
8. STATE OF MAINE LIDAR DATA WAS USED TO GENERATE CONTOURS WITHIN THE GULLIES.
9. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT.
10. PINEWOOD DRIVE WAS OFFICIALLY VACATED BY THE CITY OF PORTLAND IN DEED BOOK 13326, PAGE 19. FEE OWNERSHIP IS WITH PORTLAND HOUSING AUTHORITY.

ALTA / NSPS Land Title Survey

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

Surveyor's Certification

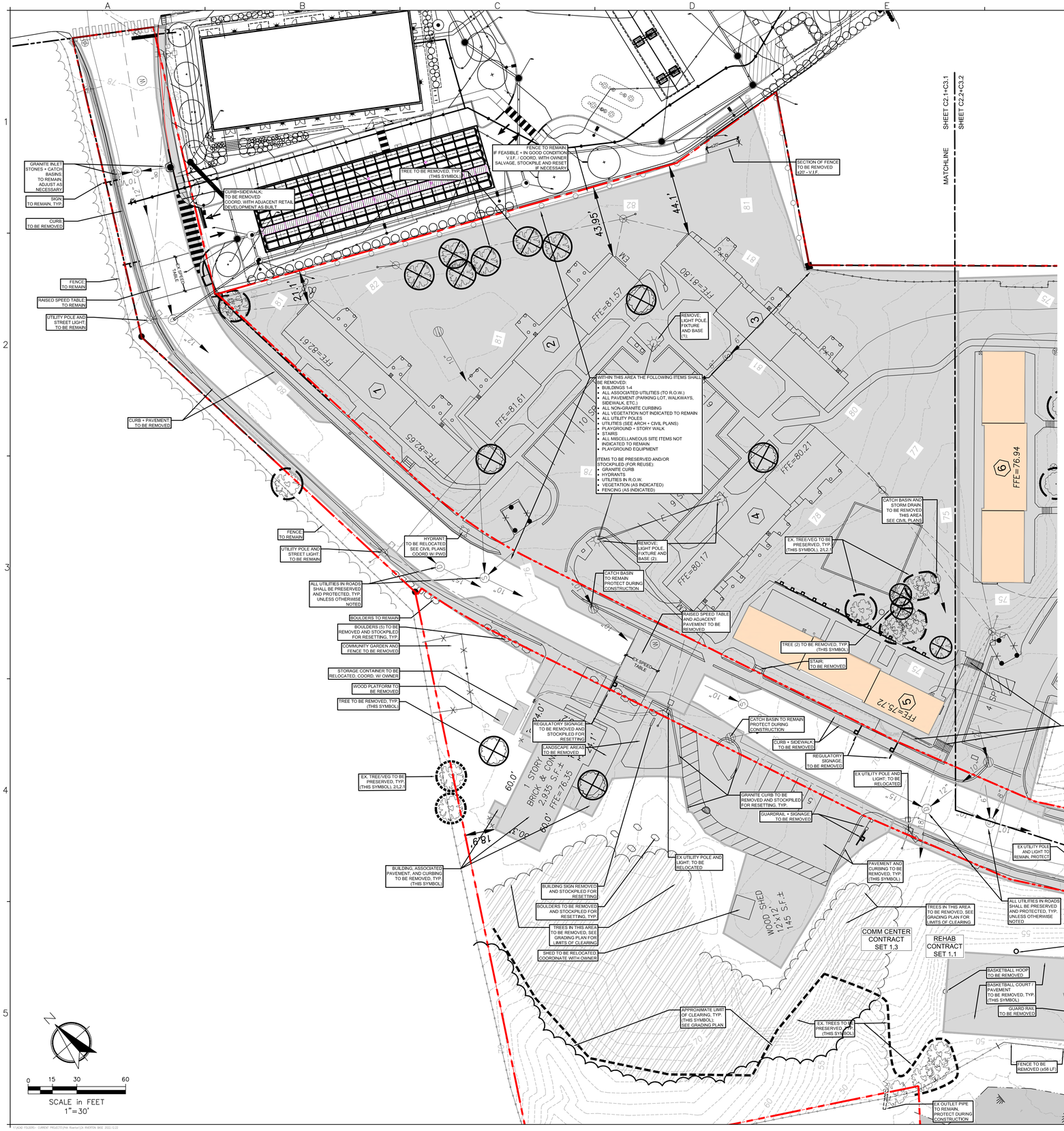
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 11, 13, 14, 16, 17, 19 AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON APRIL 23, 2019 AND FEBRUARY 25, 2022.

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

RANDY R. LOUBIER
PROFESSIONAL LAND SURVEYOR NO. 2407
DATE OF PLAT OR MAP: APRIL 30, 2019
DATE OF LAST REVISION: SEPT. 6, 2022

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

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



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OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER

NOT FOR CONSTRUCTION

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

OWNER

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

DEMOLITION PLAN:
CIRCLE 1 AND
NEIGHBORHOOD
CENTER

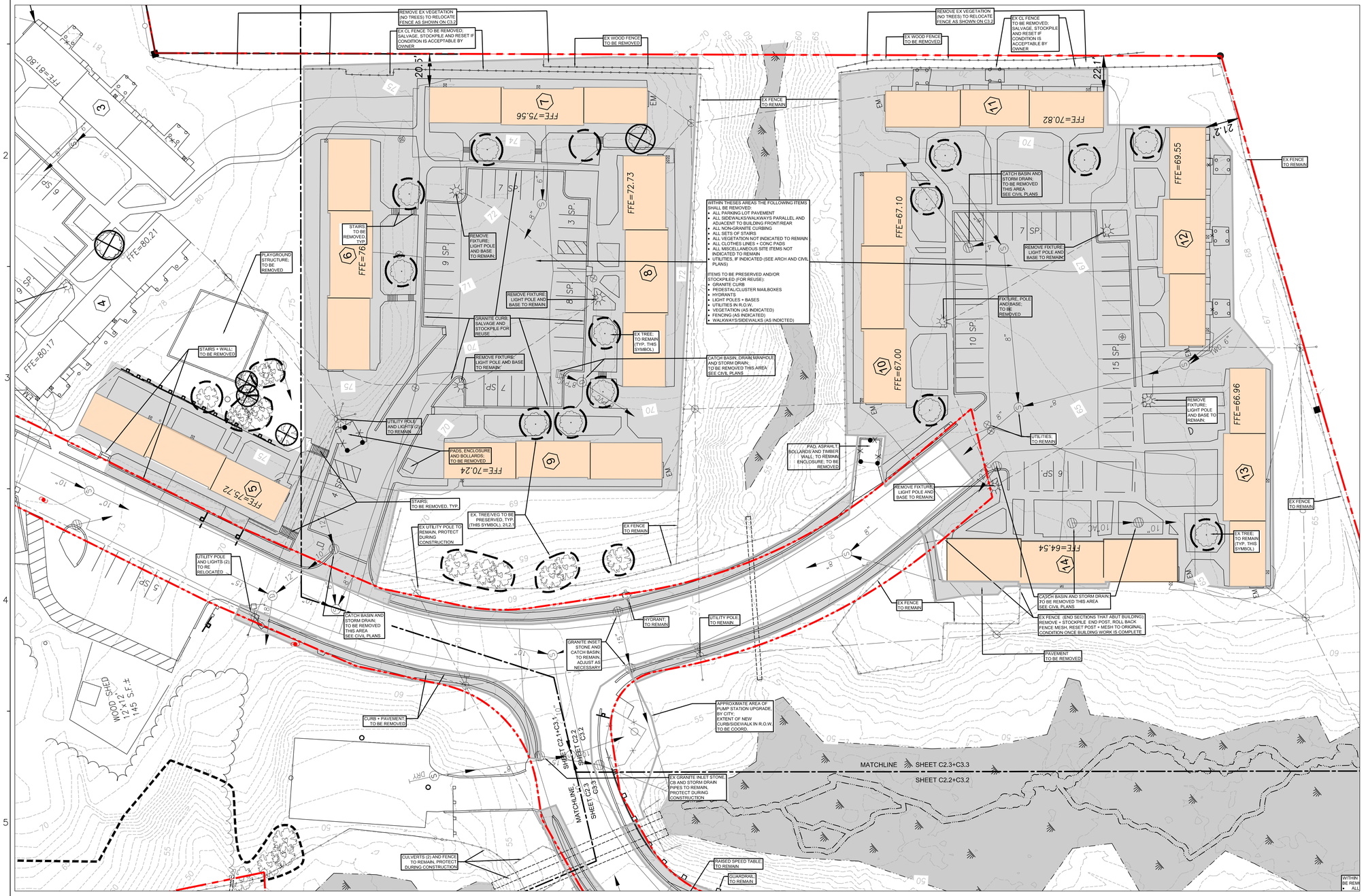
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C2.1

SCALE: AS SHOWN
DATE: 1/12/2019



0 15 30 60

SCALE in FEET
1"=30'

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ARCHITECTURE | INTERIOR DESIGN

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DESIGNER

NOT FOR CONSTRUCTION

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14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT

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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

DEMOLITION PLAN:
REHABILITATION
CIRCLES 2+3

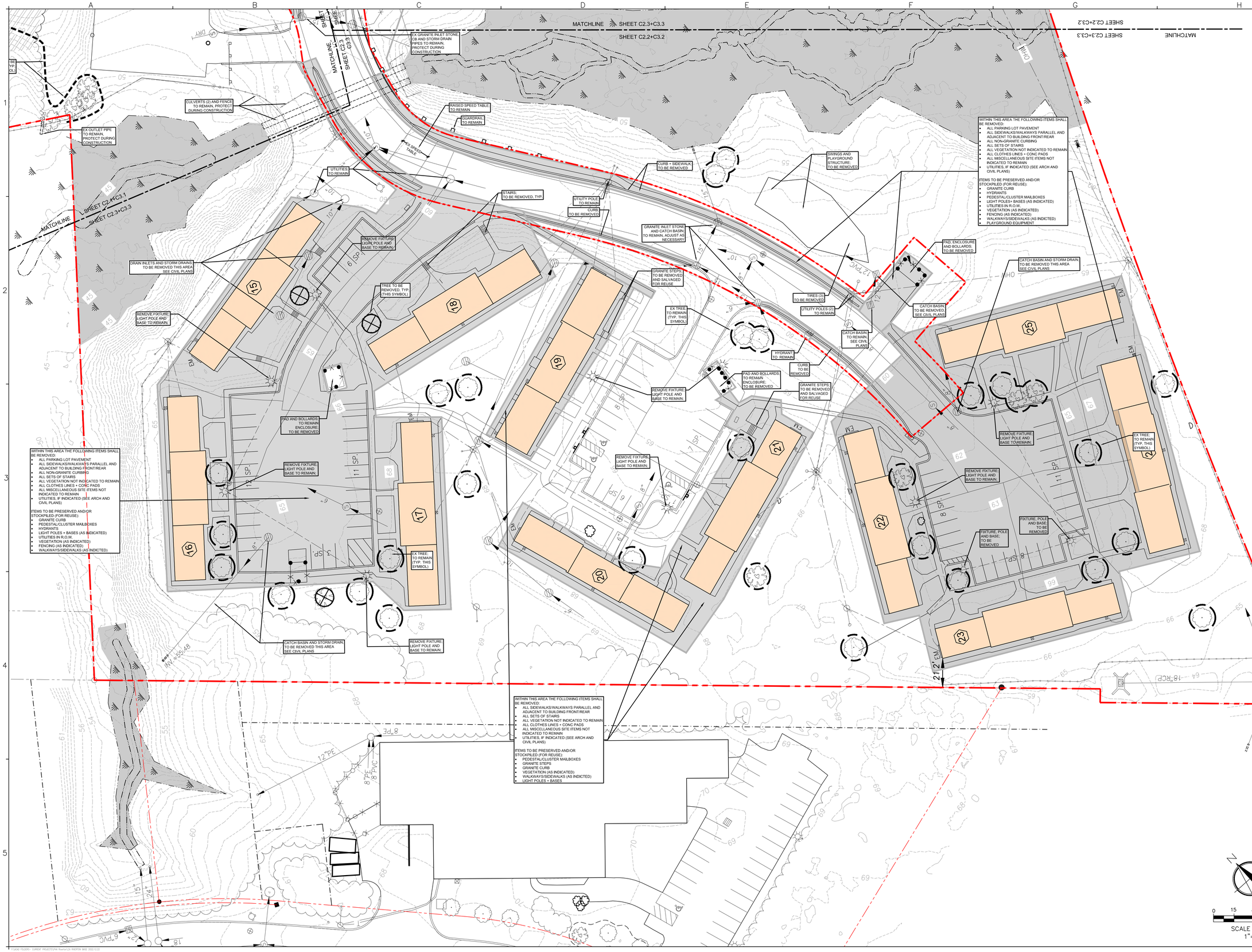
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C2.2

SCALE: AS SHOWN
DATE: 1/12/2019



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207.772.1552 V. F. 207.772.0712

OWNER

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

DEMOLITION PLAN:
REHABILITATION
CIRCLES 4-5-6

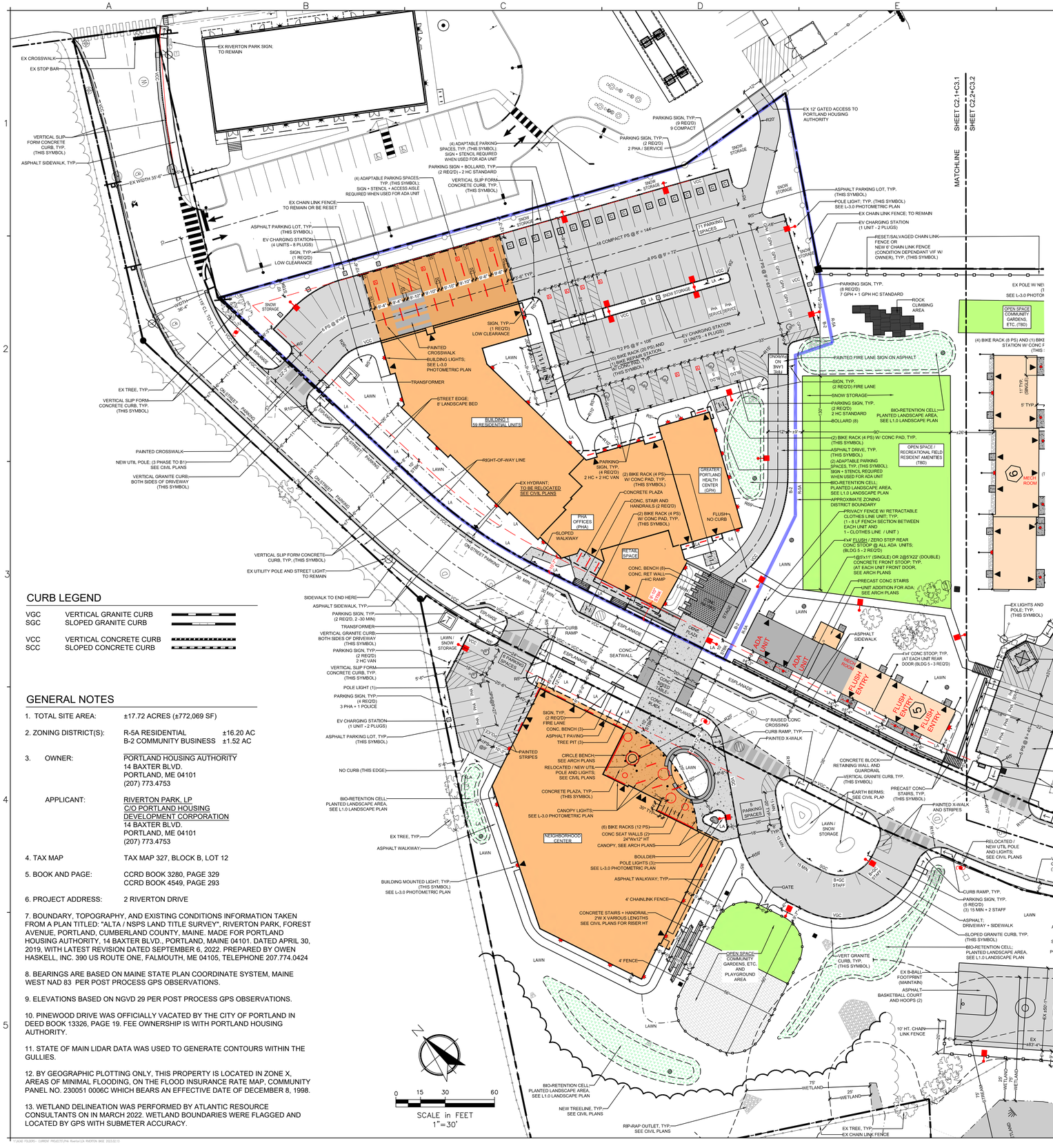
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C2.3

SCALE: AS SHOWN
DATE: 1/12/2019



CURB LEGEND

VGC	VERTICAL GRANITE CURB	
SGC	SLOPED GRANITE CURB	
VCC	VERTICAL CONCRETE CURB	
SCC	SLOPED CONCRETE CURB	

GENERAL NOTES

1. TOTAL SITE AREA: ±17.72 ACRES (±772,069 SF)

2. ZONING DISTRICT(S): R-5A RESIDENTIAL ±16.20 AC
B-2 COMMUNITY BUSINESS ±1.52 AC

3. OWNER: PORTLAND HOUSING AUTHORITY
14 BAXTER BLVD.
PORTLAND, ME 04101
(207) 773.4753

APPLICANT: RIVERTON PARK, LP
C/O PORTLAND HOUSING DEVELOPMENT CORPORATION
14 BAXTER BLVD.
PORTLAND, ME 04101
(207) 773.4753

4. TAX MAP: TAX MAP 327, BLOCK B, LOT 12

5. BOOK AND PAGE: CCRD BOOK 3280, PAGE 329
CCRD BOOK 4549, PAGE 293

6. PROJECT ADDRESS: 2 RIVERTON DRIVE

7. BOUNDARY, TOPOGRAPHY, AND EXISTING CONDITIONS INFORMATION TAKEN FROM A PLAN TITLED: "ALTA / NSPS LAND TITLE SURVEY", RIVERTON PARK, FOREST AVENUE, PORTLAND, CUMBERLAND COUNTY, MAINE. MADE FOR PORTLAND HOUSING AUTHORITY, 14 BAXTER BLVD., PORTLAND, MAINE 04101, DATED APRIL 30, 2019, WITH LATEST REVISION DATED SEPTEMBER 6, 2022. PREPARED BY OWEN HASKELL, INC. 390 US ROUTE ONE, FALMOUTH, ME 04105, TELEPHONE 207.774.0424

8. BEARINGS ARE BASED ON MAINE STATE PLAN COORDINATE SYSTEM, MAINE WEST NAD 83 PER POST PROCESS GPS OBSERVATIONS.

9. ELEVATIONS BASED ON NGVD 29 PER POST PROCESS GPS OBSERVATIONS.

10. PINEWOOD DRIVE WAS OFFICIALLY VACATED BY THE CITY OF PORTLAND IN DEED BOOK 13326, PAGE 19. FEE OWNERSHIP IS WITH PORTLAND HOUSING AUTHORITY.

11. STATE OF MAIN LIDAR DATA WAS USED TO GENERATE CONTOURS WITHIN THE GULLIES.

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

13. WETLAND DELINEATION WAS PERFORMED BY ATLANTIC RESOURCE CONSULTANTS ON IN MARCH 2022. WETLAND BOUNDARIES WERE FLAGGED AND LOCATED BY GPS WITH SUBMETER ACCURACY.

GENERAL NOTES (CONTINUED)

14. SPACE AND BULK: B-2 + R-5A + PRUD

USE + SQUARE FOOTAGE:

PLACE OF ASSEMBLY (POA)	
NEIGHBORHOOD CENTER (NC)	11,456 SF
CLINIC (GPH)	2,238 SF
RETAIL	1,344 SF
OFFICE (PHA)	2,480 SF
MAINTENANCE GARAGE	1,267 SF
RESIDENTIAL (BLDG 1)	59 DU
RESIDENTIAL (REHAB)	123 DU

A.)

	B-2 REQ	PROPOSED
MIN. LOT SIZE	N/A	TOTAL LOT 17.72 AC (B-2 ±1.52 AC)
AREA PER DWELLING UNIT	1,000 SF/DU (400 SF/DU**)	1,122 SF/DU (59 DU)
MIN. STREET FRONTAGE	20 FT	±380 FT.
FRONT YARD (MAX.)	10 FT	VARIES*
MIN. REAR YARD	10 FT.	>10 FT
MIN. SIDE YARD	NONE	10'-6"
MAX. LOT COVERAGE	NA	NA
MAX. STRUCTURE HT.	45 FT (70 FT**)	52'-7"
MAX. IMPERVIOUS	RESI. NA, OTHER 80%	<80%
OFF-STREET PARKING	RESI. 1PS/DU (59)	59 PS***
	RESI. FOR BULD 5 HC (0)	2 PS
	CLINIC 1PS/500 SF (5)	8 PS
	OFFICE 1PS/400 SF (7) (2@ CIRC 1 + 5 PS @ CIRCLE 2)	2 PS
	RETAIL 1PS/200 SF >2000SF (0)	0 PS****
	(71 REQ'D)	71 PS PROP

**** (2) 30 MIN. PS ARE PROPOSED ON-STREET

BIKE PARKING	RESI. 2PS/5DU (24)	26 PS
	CLINIC 2PS/10 CARS (2)	2 PS
	OFFICE 2PS/10 CARS (2)	2 PS
	RETAIL 2PS/10 CARS (2)	2 PS
	(30 REQ'D)	32 PROP

B.)

	R-5A PRUD REQ	PROPOSED
MIN. LOT SIZE	RESI. 6,000 SF PLACE OF ASSEMBLY 1AC	TOTAL LOT 17.72 AC (R-5A ±16.20 AC)
AREA PER DWELLING UNIT	1,600 SF/DU	5,737 SF/DU (123 DU)
MIN. STREET FRONTAGE	50 FT	>50 FT.
LOT WIDTH	60 FT	>60 FT
MIN. FRONT YARD	25 FT	10 FT**
MIN. REAR YARD	25 FT.	10 FT**
MIN. SIDE YARD	16 FT.	10 FT**
MAX. LOT COVERAGE	30%	<30%
MAX. STRUCTURE HT.	35 FT.	31'-8" **
OFF-STREET PARKING	RESI. (REHAB) 1 PS/D.U. (123)	144 PS
	PLACE OF ASSEMBLY 1PS/1000 SF (12)	11 PS
	GARAGE (TBD)	2 PS
	(136 REQ'D)	157 PS PROP
BIKE PARKING	RESI (REHAB) N/A (0)	40 PS
	POA / NC 2PS/10 CARS (3)	12 PS
	MAINT. GARAGE N/A (0)	0 PS
	(3 REQ'D)	52 PROP

C.)

	PRUD (R-5A)	PROPOSED
MIN. LOT SIZE	2 AC	TOTAL LOT 17.72 AC (R-5A DISTRICT ±16.20 AC)
AREA PER DWELLING UNIT	1,600 SF/DU	5,737 SF/DU (123 DU)
MAX. STRUCTURE HT.	55 FT.	31'-8" **
BLDG SETBACK FROM P.L.	25 FT	MIN. 10 FT**
REC. OPEN SPACE	200 SF/DU	>200 SF/DU

* 7.5.5.F.3(B+F) B2 FRONT YARD SETBACK
** 18.2.4 (B) AFFORDABLE HOUSING DENSITY AND DIMENSIONAL BONUSES AND REDUCTIONS
*** TABLE 19-B: CATEGORICAL EXCEPTIONS TO OFF-STREET PARKING MINIMUMS
(NO-OFF STREET PARKING REQ'D WITHIN ¼ MILE OF FIXED ROUTE TRANSIT SERVICE)

15. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES IN THE FIELD AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

16. ALL DIMENSIONS SHOWN ARE TO FACE OF ALL WALLS, BUILDINGS, CURBS, AND OTHER SITE ELEMENTS UNLESS OTHERWISE NOTED.

17. EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY. CALL DIG-SAFE PRIOR TO BEGINNING WORK (1-800-225-4977).

18. ALL EXISTING VEGETATION TO BE PRESERVED AS SHOWN ON PLANS. PROVIDE A SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING. AREAS NOT REQUIRING GRADING SHALL BE LEFT UNDISTURBED.

19. STORAGE OR PARKING WILL NOT BE ALLOWED OVER THE ROOTS OF VEGETATION WHICH ARE TO BE PRESERVED. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS REQUIRED FOR THE WORK ON THESE PLANS.

20. ALL WORK SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

21. ALL AREAS DISTURBED OR WORK REQUIRED WITHIN TEMPORARY CONSTRUCTION AREAS ON PROPERTY SHALL BE REPAIRED BY RE-PAVING OR LOAM/SEEDING AS REQUIRED TO RETURN THE SITE TO PRE-CONSTRUCTION CONDITIONS.

22. ALL WORK WITHIN THE RIGHT-OF-WAY MUST BE COORDINATED WITH THE DEPARTMENT OF PUBLIC SERVICES.

22. ALL EXTERIOR MECHANICAL EQUIPMENT WILL BE SCREENED FROM PUBLIC STREETS AND ADJACENT SITES BY STRUCTURE WALLS, EVERGREEN LANDSCAPING, FENCING, MASONRY WALLS OR A COMBINATION THEREOF.

23. SNOW MAY BE STORED WITHIN THE TEMPORARY SNOW STORAGE AREAS ONLY. ANY SNOW THAT CANNOT BE STORED ON-SITE SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFF-SITE WITHIN 24-48 HOURS FOLLOWING A STORM. SNOW TRANSPORTED OFF-SITE SHALL BE BROUGHT TO A MAINE DEP APPROVED 'SNOW DUMP' OR MEET THE EXEMPTION REQUIREMENT SPECIFIED WITHIN CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, CURBING, LIGHTING, FENCING, ETC. RESULTING FROM THEIR ACTIVITIES. THE SNOW CONTRACTOR SHALL USE SALT OR CHLORIDE SUBSTITUTE TO DEICE THE PARKING LOT. THE BUILDING OWNER / ASSOCIATION IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

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DESIGNER

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CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

OWNER

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK REDEVELOPMENT AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWINGS

SITE PLAN: CIRCLE 1 AND NEIGHBORHOOD CENTER
CWS PROJECT NUMBER: 15.021

REVISIONS

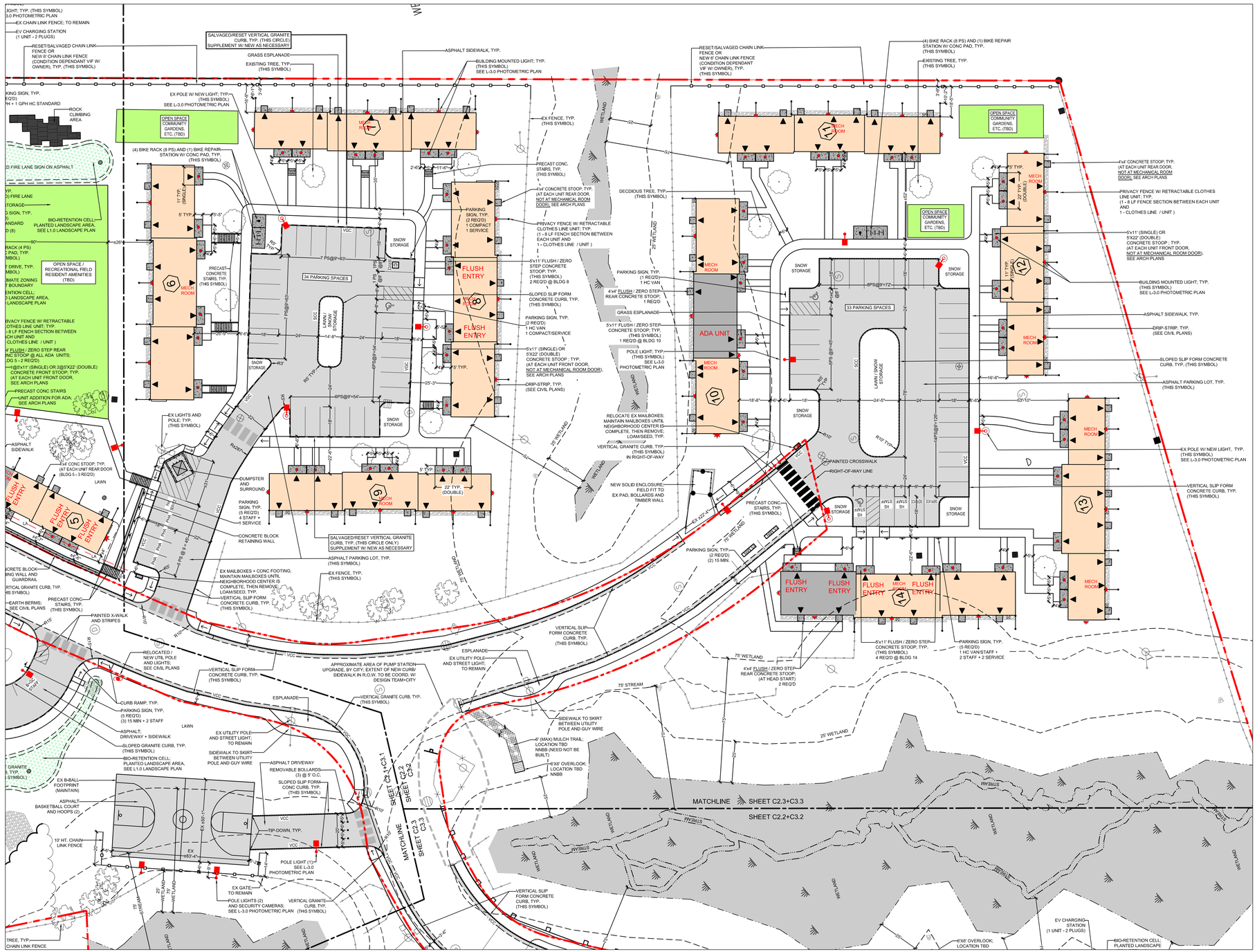
1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022
3.1	ISSUED FOR 50% PRICING (B1)	02.01.2023
3.2	ISSUED FOR 50% PRICING (NC)	02.09.2023
3.3	ISSUED FOR 50% PRICING (REHAB)	02.16.2023

DRAWING NUMBER
C3.1

SCALE: AS SHOWN
DATE: 1/12/2019

CURB LEGEND

VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
VCC	VERTICAL CONCRETE CURB
SCC	SLOPED CONCRETE CURB



CWS ARCHITECTS
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Scarborough ME 04074
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OWNER
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14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

DESIGNER
CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

NOT FOR CONSTRUCTION

PROJECT
RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2, RIVERTON, DRIVE
PORTLAND, MAINE 04103

DRAWING
SITE PLAN:
REHABILITATION
CIRCLES 2+3
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C3.2

SCALE: AS SHOWN
DATE: 1/12/2019

CURB LEGEND

VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
VCC	VERTICAL CONCRETE CURB
SCC	SLOPED CONCRETE CURB

MATCHLINE SHEET C2.3+C3.3

SHEET C2.2+C3.2

MATCHLINE SHEET C2.2+C3.2

SHEET C2.3+C3.3

0 15 30 60

SCALE in FEET
1"=30'

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN

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CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS

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207.772.1552 V. F. 207.772.0712

NOT FOR CONSTRUCTION

OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

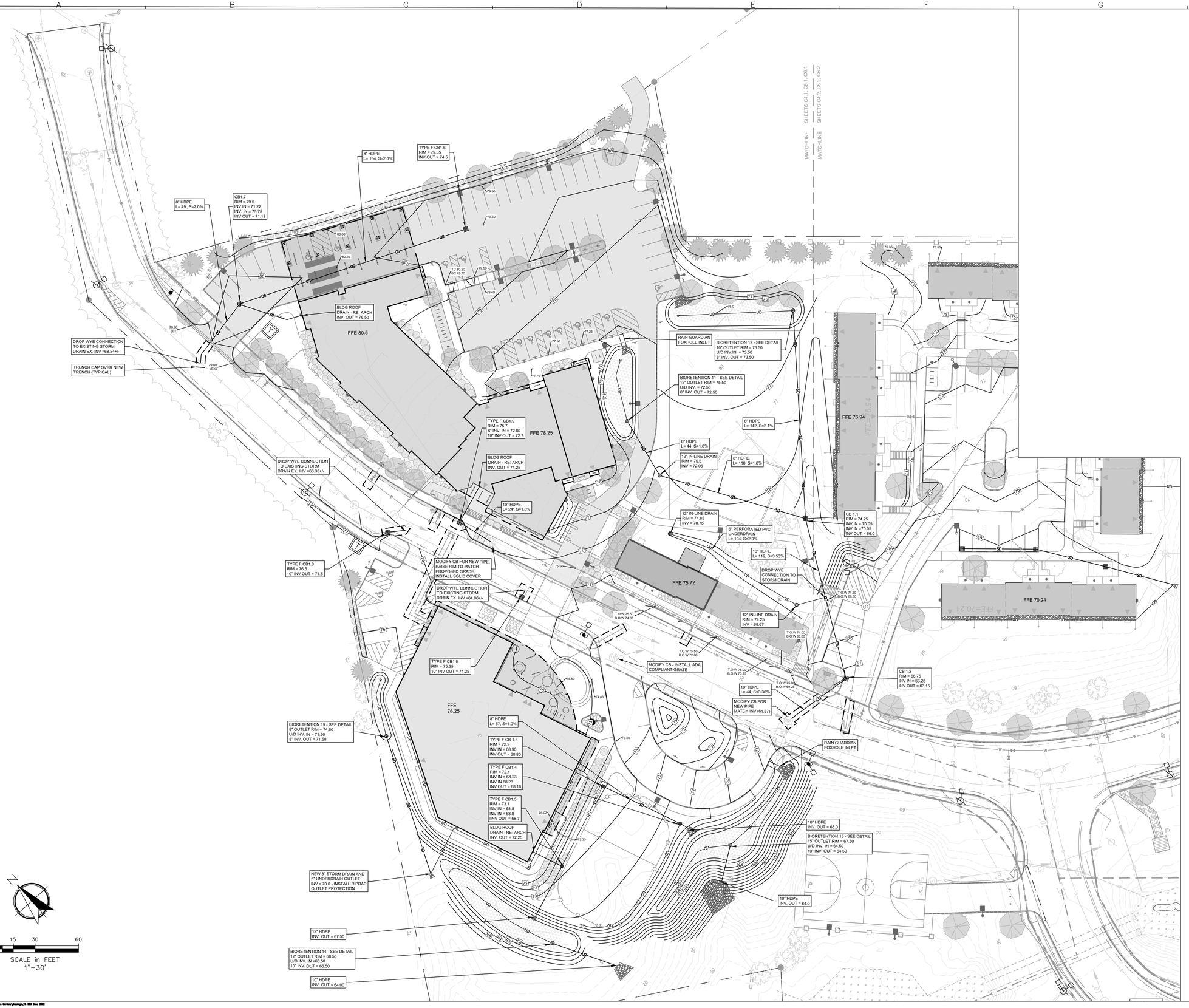
DRAWING
SITE PLAN:
REHABILITATION
CIRCLES 4-5-6 AND
MAINTENANCE GARAGE
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C3.3

SCALE: AS SHOWN
DATE: 1/12/2019



ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

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OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER
STATE OF MAINE
ANDREW M. JOHNSON
10759
12-20-22
LICENSED
PROFESSIONAL ENGINEER

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

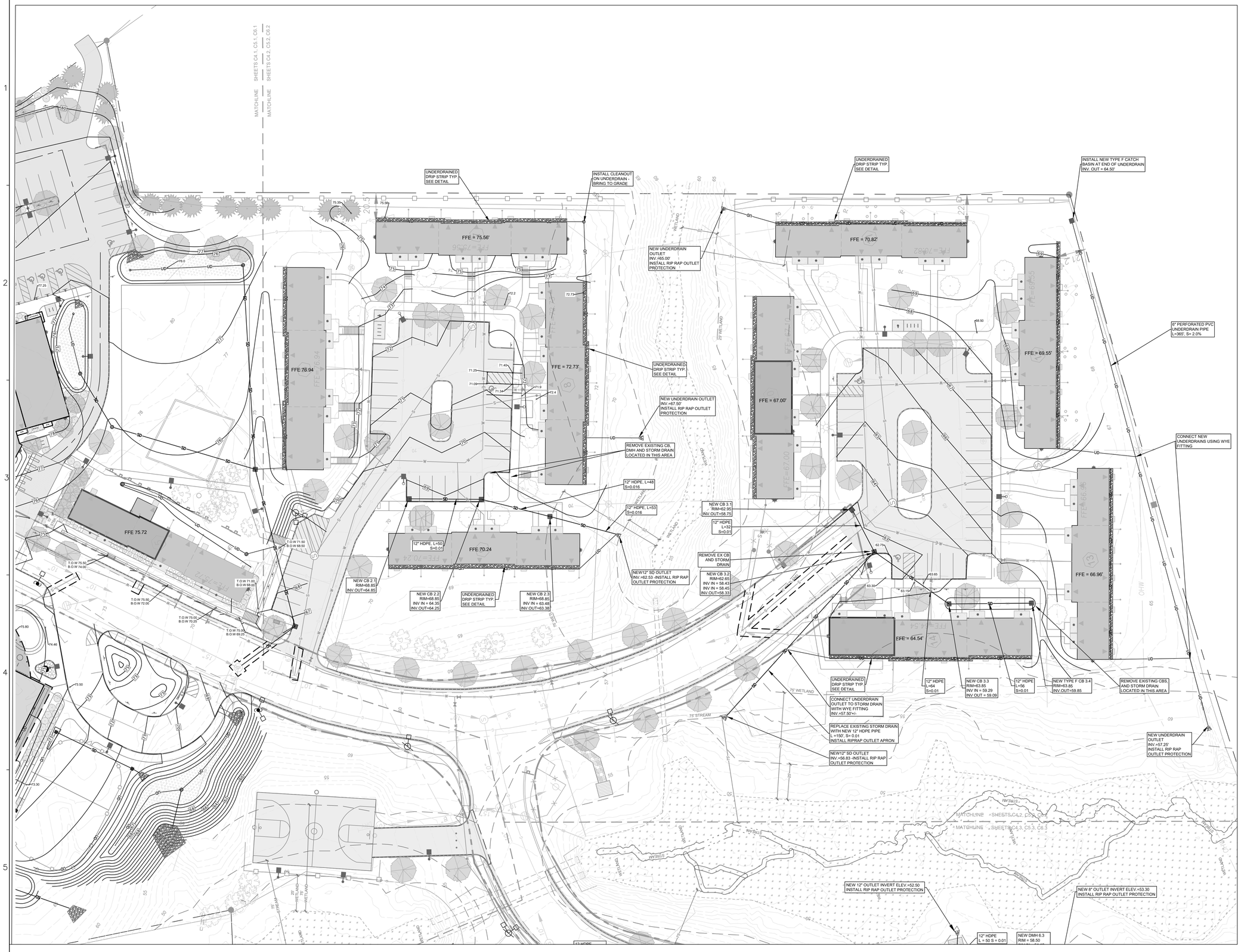
PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
GRADING & DRAINAGE PLAN
CIRCLE 1
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C4.1
SCALE: AS SHOWN
DATE: 1/12/2019



ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
264 US Route One, Suite 100-2A
Scarborough ME 04074
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER

STATE OF MAINE
ANDREW N. JOHNSON
No. 9994
12-20-22
REGISTERED PROFESSIONAL ENGINEER

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING, MAINTENANCE BUILDING AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
GRADING & DRAINAGE PLAN
CIRCLES 2+3
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C4.2

SCALE: AS SHOWN
DATE: 1/12/2019

S:\15-021 PVA Riverton Carroll\Drawings\15-021 Base 2022

MATCHLINE SHEETS C4.2, C5.2, C6.2
MATCHLINE SHEETS C4.3, C5.3, C6.3

NEW 12" OUTLET INVERT ELEV.=52.50
INSTALL RIP RAP OUTLET PROTECTION

NEW 8" OUTLET INVERT ELEV.=53.30
INSTALL RIP RAP OUTLET PROTECTION

12" INVERT OUT =54.93
INSTALL RIP RAP OUTLET PROTECT

12 HDPE
L = 55 S = 0.016

CONNECT UNDERDRAIN TO NEW
STORM DRAIN WITH WYE FITTING

CONNECT UNDERDRAIN TO EXISTING CATCH
BASIN CORE NEW INVERT IN ELEV.=61.50

12" HDPE
L = 50 S = 0.01

NEW DMH 6.3
RIM = 58.50
INV IN = 54.10
INV IN = 54.10
INV OUT = 54.00

BIORETENTION CELL -
SEE DETAIL
OUTLET INV. = 53.50

NEW UNDERDRAIN OUTLET INVERT
ELEV.=62.00
INSTALL RIP RAP OUTLET PROTECTION

UNDERDRAINED
DRIP STRIP TYP.
SEE DETAIL

NEW CB #4.6
RIM = 60.80
INV IN = 55.91
INV OUT = 55.81

12 HDPE
L = 44 S = 0.01

REMOVE EXISTING DRAIN
INLETS AND STORM DRAINS
IN THIS AREA

NEW CB #4.5
RIM = 61.40
INV IN = 56.40
INV OUT = 56.35

12 HDPE
L = 90, S = 0.006

NEW CB #4.4
RIM = 61.70
INV IN = 56.99
INV OUT = 56.94

NEW IN-LINE DRAIN 6.4
RIM = 57.50
INV IN = 53.00
INV OUT = 53.00

12" HDPE
L = 98 S = 0.01

FFE 58.30

UNDERDRAINED
DRIP STRIP TYP.
SEE DETAIL

FFE 62.65

FFE 66.66

UNDERDRAINED DRIP
STRIP TYP. SEE DETAIL

FFE 66.35

REMOVE EX CB 32
AND CB 33, AND
STORM DRAIN

12" HDPE
L = 112
S = 0.025

UNDERDRAINED DRIP
STRIP TYP. SEE DETAIL

12 HDPE
L = 76 S = 0.006

NEW CB #4.3
RIM = 61.60
INV IN = 57.50
INV OUT = 57.45

10" HDPE
L = 23 S = 2.17%

NEW CB #4.2
RIM = 64.50
INV OUT = 58.00

NEW CB 6.2
RIM = 61.55
INV IN = 57.00
INV OUT =56.90

12" HDPE
L = 40 S = 0.075

FFE 68.59

NEW CB 6.1
RIM = 62.50
INV OUT = 57.30

FFE 66.44

FFE 68.84

CONNECT UNDERDRAIN TO
EXISTING CATCH BASIN
CORE NEW INVERT IN
ELEV.=63.50'

UNDERDRAINED DRIP STRIP TYP.
SEE DETAIL

CONNECT UNDERDRAIN TO
EXISTING CATCH BASIN CORE NEW
INVERT IN ELEV.= 60.50

FFE 66.65

UNDERDRAINED DRIP
STRIP TYP. SEE DETAIL

REMOVE EXISTING
CB AND STORM
DRAIN

NEW 10" HDPE
L = 85 S = 0.8%

NEW 12 " HDPE INV OUT =
60.32 INSTALL RIPRAP
OUTLET APRON

NEW CB #4.1
RIM = 64.60
INV OUT = 61.0

CONNECT UNDERDRAIN TO EXISTING CATCH
BASIN CORE NEW INVERT IN ELEV.=64.50

FFE 66.96

UNDERDRAINED DRIP
STRIP TYP. SEE DETAIL

MATCHLINE SHEETS C4.1, C5.1, C6.1
MATCHLINE SHEETS C4.3, C5.3, C6.3

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0 15 30 60
SCALE in FEET
1"=30'

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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK,
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
GRADING &
DRAINAGE PLAN
CIRCLES 4,5+6
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C4.3
SCALE: AS SHOWN
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EXISTING METER PIT AND START OF PRIVATE WATER SYSTEM

ALTERNATE #1
REPLACE EXISTING 8" DUCTILE IRON MAIN IN STREET WITH 8" C900 PVC MAIN -SEE NOTES AND SPECIFICATIONS - NOTE: TRENCH CAP FOR NEW PIPING NOT SHOWN FOR CLARITY

INSTALL 8"-6" TEE AND GATE VALVE AND NEW 6" FIRE SERVICE TO BUILDING
INSTALL 8"-4" TEE AND GATE VALVE AND 4" DOMESTIC SERVICE TO BUILDING - SERVICE SIZES TBC

INSTALL NEW GAS SERVICE TO BUILDING FROM EXISTING PIPING PER GAS UTILITY STANDARDS - ABANDON OLD LINE

ALTERNATE #1
INSTALL 8"-6" SWIVEL TEE AND HYDRANT ASSEMBLY

MODIFY SEWER MANHOLE TO ACCEPT NEW PIPE

INSTALL 8"-4" TEE AND GATE VALVE AND NEW AND 4" DOMESTIC SERVICE TO BUILDING - SERVICE SIZES TBC

INSTALL 8"-6" TEE AND GATE VALVE AND NEW 6" FIRE SERVICE TO BUILDING
INSTALL 8"-4" TEE AND GATE VALVE AND NEW AND 4" DOMESTIC SERVICE TO BUILDING -SERVICE SIZES TBC

TAP MAIN AND INSTALL NEW AND 2" DOMESTIC SERVICE TO BUILDING - SERVICE SIZE TBC

TRENCH CAP FOR NEW UTILITY LINE (TYPICAL)

MODIFY SEWER MANHOLE TO ACCEPT NEW PIPE

RE-LOCATED UTILITY POLE (BY CMP)

TAP MAIN AND INSTALL NEW AND 2" DOMESTIC SERVICE TO BUILDING - INSTALL CURB STOP AT BACK OF SIDEWALK

RE-LOCATE HYDRANT BEHIND SIDEWALK

NEW 6" SDR35PVC BUILDING SEWER - INV. TBC

NEW 6" SDR35PVC BUILDING SEWER - INV. TBC

FFE 80.5

FFE 78.25

FFE 76.25

FFE 76.94

FFE 75.72

FFE 70.24

MATCHLINE SHEETS C4.1, C5.1, C6.1

MATCHLINE SHEETS C4.2, C5.2, C6.2

UD

0 15 30 60

SCALE in FEET
1"=30'

GENERAL NOTES

1. ALL UNDERGROUND UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND RECORD PLANS. THE ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES ARE IN THE EXACT LOCATIONS SHOWN, ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE AVAILABLE INFORMATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND TAKE SUCH MEASURES CONSIDERED PRUDENT TO PROTECT SUCH UTILITIES DURING AND AFTER CONSTRUCTION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, OR RESTORING AND EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. CALL 1-888-DIGSAFE.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL HIRE A PRIVATE UTILITY LOCATOR SERVICE TO IDENTIFY AND MAP THE LOCATIONS OF ALL EXISTING UTILITIES. THIS INFORMATION SHALL BE PROVIDED TO THE OWNER AND THE DESIGN TEAM IN ORDER TO COORDINATE FINAL UTILITY DESIGN AND LOCATION.

UTILITY NOTES

1. THE BASE BID SHALL INCLUDE ALL WORK FROM THE MAINS IN THE PUBLIC STREETS TO THE UNITS, INCLUDING 4" BRANCH MAINS THAT SERVE EACH CIRCLE. SITE ALTERNATE # 1 SHALL INCLUDE REPLACEMENT OF THE WATER MAINS IN THE PUBLIC STREETS, TO THE METER PIT CONNECTION AT THE FOREST AVENUE END OF RIVERTON STREET, INCLUDING VALVES, HYDRANTS. AND ANCILLARY ITEMS.
2. SIZING OF BUILDING UTILITY SERVICE CONNECTIONS ARE PRELIMINARY AND WILL NEED TO BE COORDINATED WITH INTERNAL DESIGN PLANS. THE SIZES AND LOCATIONS OF NEW SERVICES HAVE BEEN ASSUMED BASED ON THE AVAILABLE INFORMATION AND ARE SUBJECT TO REVIEW AND APPROVAL BY GOVERNING AUTHORITIES.
3. ALL UTILITY COVERS, VALVE BOXES AND CLEANOUTS TO REMAIN SHALL BE ADJUSTED TO CONFORM TO PROPOSED FINISHED GRADES. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT PRICE.
4. ALL UTILITY MAINS AND SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE GOVERNING UTILITY.
5. CONNECTIONS TO EXISTING MAINS AND/OR OPERATION OF VALVES ON THE WATER SYSTEM SHALL BE COORDINATED WITH THE OWNER. PORTLAND WATER DISTRICT SHALL BE INFORMED OF ANY WORK OCCURRING ON SITE THAT COULD IMPACT THE SAFETY AND OPERATION OF THE PUBLIC WATER SYSTEM.
6. REPLACEMENT OF WATER MAINS AND/OR SERVICES MAY REQUIRE INSTALLATION OF TEMPORARY WATER - COORDINATE WORK WITH OWNER.
7. ALL WORK ON SEWERS ON OR AROUND THE PROJECT SITE SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND ENGINEERING DEPARTMENT. ALL WORK ON SEWER MAINS SHALL BE PRE-ARRANGED WITH CITY OF PORTLAND ENGINEERING.
8. PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE UNDERTAKEN IN A MANNER THAT MAINTAINS THE INTEGRITY OF THE EXISTING STRUCTURE AND PROVIDES A WATERTIGHT SEAL BETWEEN THE NEW PIPE AND THE STRUCTURE.
5. ALL ELECTRICAL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CENTRAL MAINE POWER COMPANY. CONNECTIONS SHALL BE COORDINATED WITH CMP BY THE CONTRACTOR.
6. ALL WORK ON STORM DRAIN MAINS AND ROADSIDE DRAINAGEWAYS ADJACENT TO THE SITE SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
7. ALL WORK ON GAS SERVICES AND AROUND GAS MAINS SURROUNDING THE PROPERTY SHALL BE COORDINATED WITH UNITIL.

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LICENSED PROFESSIONAL ENGINEER

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OWNER
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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWINGS

UTILITY PLAN
CIRCLE 1

CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C5.1

SCALE: AS SHOWN
DATE: 1/12/2019

GENERAL NOTES

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UTILITY NOTES

1. THE BASE BID SHALL INCLUDE ALL WORK FROM THE MAINS IN THE PUBLIC STREETS TO THE UNITS, INCLUDING 4" BRANCH MAINS THAT SERVE EACH CIRCLE. SITE ALTERNATE # 1 SHALL INCLUDE REPLACEMENT OF THE WATER MAINS IN THE PUBLIC STREETS, TO THE METER PIT CONNECTION AT THE FOREST AVENUE END OF RIVERTON STREET, INCLUDING VALVES, HYDRANTS. AND ANCILLARY ITEMS.
2. SIZING OF BUILDING UTILITY SERVICE CONNECTIONS ARE PRELIMINARY AND WILL NEED TO BE COORDINATED WITH INTERNAL DESIGN PLANS. THE SIZES AND LOCATIONS OF NEW SERVICES HAVE BEEN ASSUMED BASED ON THE AVAILABLE INFORMATION AND ARE SUBJECT TO REVIEW AND APPROVAL BY GOVERNING AUTHORITIES.
3. ALL UTILITY COVERS, VALVE BOXES AND CLEANOUTS TO REMAIN SHALL BE ADJUSTED TO CONFORM TO PROPOSED FINISHED GRADES. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT PRICE.
4. ALL UTILITY MAINS AND SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE GOVERNING UTILITY.
5. CONNECTIONS TO EXISTING MAINS AND/OR OPERATION OF VALVES ON THE WATER SYSTEM SHALL BE COORDINATED WITH THE OWNER. PORTLAND WATER DISTRICT SHALL BE INFORMED OF ANY WORK OCCURRING ON SITE THAT COULD IMPACT THE SAFETY AND OPERATION OF THE PUBLIC WATER SYSTEM.
6. REPLACEMENT OF WATER MAINS AND/OR SERVICES MAY REQUIRE INSTALLATION OF TEMPORARY WATER - COORDINATE WORK WITH OWNER.
7. ALL WORK ON SEWERS ON OR AROUND THE PROJECT SITE SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND ENGINEERING DEPARTMENT. ALL WORK ON SEWER MAINS SHALL BE PRE-ARRANGED WITH CITY OF PORTLAND ENGINEERING.
8. PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE UNDERTAKEN IN A MANNER THAT MAINTAINS THE INTEGRITY OF THE EXISTING STRUCTURE AND PROVIDES A WATERTIGHT SEAL BETWEEN THE NEW PIPE AND THE STRUCTURE.
5. ALL ELECTRICAL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CENTRAL MAINE POWER COMPANY. CONNECTIONS SHALL BE COORDINATED WITH CMP BY THE CONTRACTOR.
6. ALL WORK ON STORM DRAIN MAINS AND ROADSIDE DRAINAGEWAYS ADJACENT TO THE SITE SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
7. ALL WORK ON GAS SERVICES AND AROUND GAS MAINS SURROUNDING THE PROPERTY SHALL BE COORDINATED WITH UNITIL.

MATCHLINE SHEETS C4.1, C5.1, C6.1

MATCHLINE SHEETS C4.2, C5.2, C6.2

NEW 6" SDR35 PVC BUILDING SEWER - INV TBC

EXISTING WATER AND SEWER LINES IN CIRCLE 2 TO BE ABANDONED - REMOVE WHERE IN CONFLICT WITH NEW WORK

INSTALL 2" PE WATER SERVICE TO BUILDING - PROVIDE CURB STOP AT BACK OF SIDEWALK

6" SDR35 PVC L= 113', S= 0.039

6" SDR35 PVC BUILDING SEWER - INV TBC

NEW SMH 2.2 RIM =68.3 INV IN = 60.59 INV. OUT = 60.49

8" SDR35 PVC L= 83', S= 0.045

RE-LOCATED UTILITY POLE (BY CMP)

MODIFY EXISTING SEWER MANHOLE TO ACCEPT NEW 8" PIPE - INV. IN = 56.75

ABANDON EXISTING SEWER MANHOLE, CAP AND ABANDON SEWER LINE

INSTALL 2" PE WATER SERVICE TO BUILDING - PROVIDE CURB STOP AT BACK OF SIDEWALK

NEW SMH 2.1 RIM =71.8 INV IN = 65.1 INV. OUT = 65.0

INSTALL 4" MJ CAP WITH 2" TAP AT END OF BRANCH MAIN - EXTEND 2" SERVICE TO BUILDING

INSTALL 2" PE WATER SERVICE TO BUILDING - PROVIDE CURB STOP AT BACK OF SIDEWALK

ALTERNATE #1 INSTALL 8"-4" REDUCER AT END OF R.O.W AND CONNECT TO NEW 4" BRANCH MAIN

6" SDR35 PVC BUILDING SEWER - INV TBC - INSTALL CLEANOUT 5FT FROM BUILDING

6" SDR35 PVC BUILDING SEWER - INV TBC

INSTALL 2" PE WATER SERVICE TO BUILDING - PROVIDE CURB STOP AT BACK OF SIDEWALK

ALTERNATE #1 INSTALL 8"-4" TEE AND 4" GATE VALVE ON BRANCH MAIN

ALTERNATE #1 INSTALL 8"-8" TEE AND 8" GATE VALVES ON CONTINUING MAINS

ALTERNATE #1 REPLACE EXISTING 8" DI WATER MAIN IN STREET WITH 8" C900 PVC - SEE NOTES AND SPECIFICATIONS

ALTERNATE #1 INSTALL 8"-8" SWIVEL TEE AND HYDRANT ASSEMBLY

ALTERNATE #1 REPLACE EXISTING 8" DI WATER MAIN IN STREET WITH 8" C900 PVC - SEE NOTES AND SPECIFICATIONS

NEW 6" SDR35 PVC BUILDING SEWER - INV TBC

EXISTING WATER AND SEWER LINES IN CIRCLE 3 TO BE ABANDONED - REMOVE WHERE IN CONFLICT WITH NEW WORK

INSTALL 2" PE WATER SERVICE TO BUILDING - PROVIDE CURB STOP AT BACK OF SIDEWALK

6" SDR35 PVC L= 171', S= 0.038

6" SDR35 PVC BUILDING SEWER - INV TBC

NEW SMH 3.1 RIM =67.25 INV IN = 57.88 INV. OUT = 57.83

6" SDR35 PVC L= 105', S= 0.025

NEW SMH 3.2 RIM =64.1 INV IN = 55.20 (2) INV. OUT = 55.00

INSTALL 4" MJ CAP WITH 2" TAP AT END OF BRANCH MAIN - EXTEND 2" SERVICE TO BUILDING

TRENCH CAP OVER NEW UTILITY LINE (TYPICAL)

MODIFY EXISTING SEWER MANHOLE TO ACCEPT NEW PIPES 6" INV. IN = 50.28 (2) 8" INV IN = 50.18

8" SDR35 PVC L= 136', S= 0.035

MATCHLINE SHEETS C4.2, C5.3, C6.3

MATCHLINE SHEETS C4.3, C5.3, C6.3

NEW 12" OUTLET INVERT ELEV =52.50 INSTALL RIP RAP OUTLET PROTECTION

NEW 8" OUTLET INVERT ELEV =53.30 INSTALL RIP RAP OUTLET PROTECTION

12" HDPE L= 50 S = 0.01

NEW DMH 6.3 RIM = 58.50

ISSUED FOR PERMITTING
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0 15 30 60

SCALE in FEET
1"=30'

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CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
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2 RIVERTON DRIVE
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DRAWINGS

UTILITY PLAN
CIRCLES 2+3

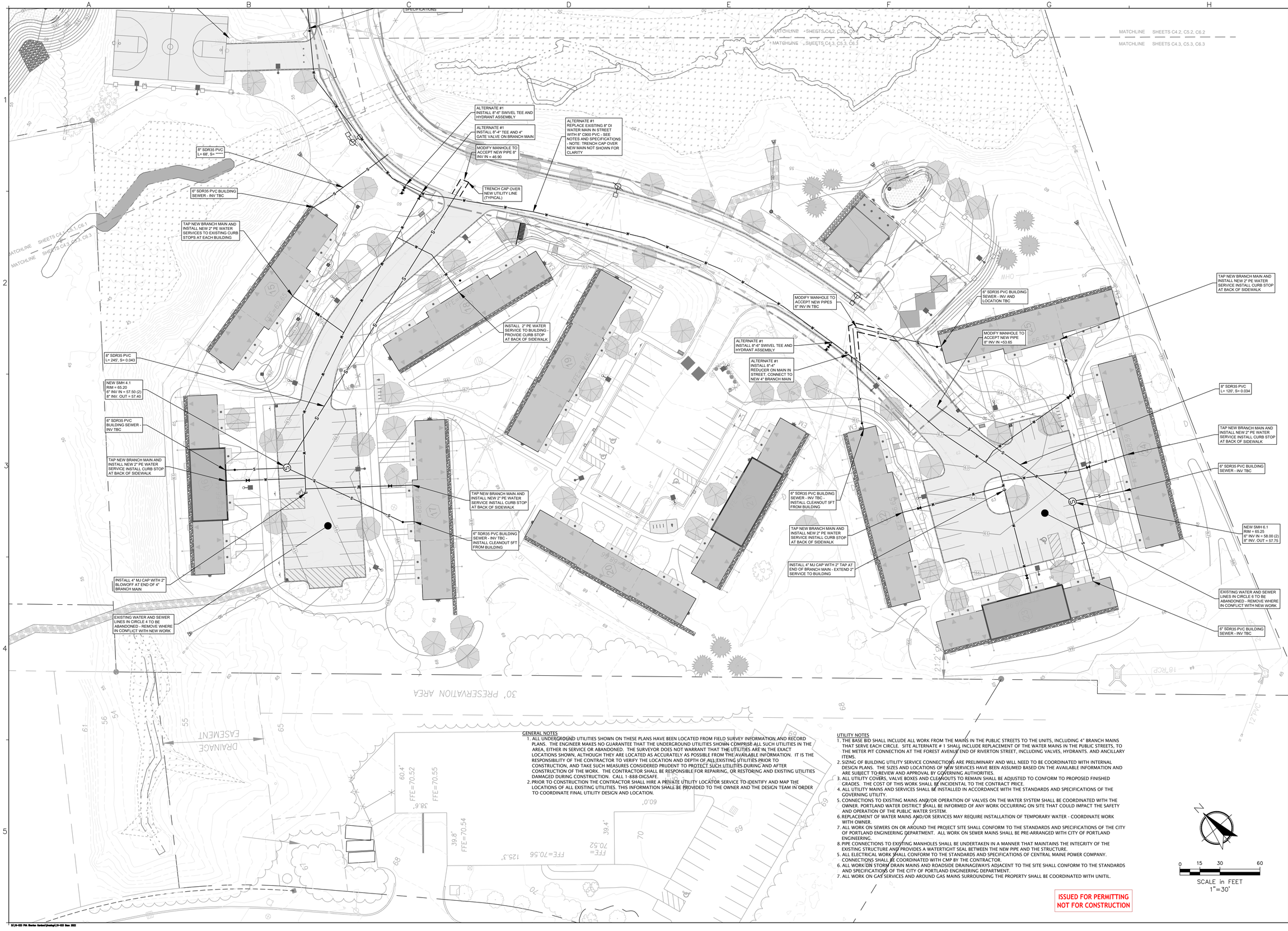
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C5.2

SCALE: AS SHOWN
DATE: 1/12/2019



GENERAL NOTES

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UTILITY NOTES

1. THE BASE BID SHALL INCLUDE ALL WORK FROM THE MAINS IN THE PUBLIC STREETS TO THE UNITS, INCLUDING 4" BRANCH MAINS THAT SERVE EACH CIRCLE. SITE ALTERNATE # 1 SHALL INCLUDE REPLACEMENT OF THE WATER MAINS IN THE PUBLIC STREETS, TO THE METER PIT CONNECTION AT THE FOREST AVENUE END OF RIVERTON STREET, INCLUDING VALVES, HYDRANTS. AND ANCILLARY ITEMS.
2. SIZING OF BUILDING UTILITY SERVICE CONNECTIONS ARE PRELIMINARY AND WILL NEED TO BE COORDINATED WITH INTERNAL DESIGN PLANS. THE SIZES AND LOCATIONS OF NEW SERVICES HAVE BEEN ASSUMED BASED ON THE AVAILABLE INFORMATION AND ARE SUBJECT TO REVIEW AND APPROVAL BY GOVERNING AUTHORITIES.
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4. ALL UTILITY MAINS AND SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE GOVERNING UTILITY.
5. CONNECTIONS TO EXISTING MAINS AND/OR OPERATION OF VALVES ON THE WATER SYSTEM SHALL BE COORDINATED WITH THE OWNER. PORTLAND WATER DISTRICT SHALL BE INFORMED OF ANY WORK OCCURRING ON SITE THAT COULD IMPACT THE SAFETY AND OPERATION OF THE PUBLIC WATER SYSTEM.
6. REPLACEMENT OF WATER MAINS AND/OR SERVICES MAY REQUIRE INSTALLATION OF TEMPORARY WATER - COORDINATE WORK WITH OWNER.
7. ALL WORK ON SEWERS ON OR AROUND THE PROJECT SITE SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND ENGINEERING DEPARTMENT. ALL WORK ON SEWER MAINS SHALL BE PRE-ARRANGED WITH CITY OF PORTLAND ENGINEERING.
8. PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE UNDERTAKEN IN A MANNER THAT MAINTAINS THE INTEGRITY OF THE EXISTING STRUCTURE AND PROVIDES A WATERTIGHT SEAL BETWEEN THE NEW PIPE AND THE STRUCTURE.
5. ALL ELECTRICAL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CENTRAL MAINE POWER COMPANY. CONNECTIONS SHALL BE COORDINATED WITH CMP BY THE CONTRACTOR.
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7. ALL WORK ON GAS SERVICES AND AROUND GAS MAINS SURROUNDING THE PROPERTY SHALL BE COORDINATED WITH UNITIL.

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0 15 30 60
SCALE in FEET
1"=30'

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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING, MAINTENANCE BUILDING AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
UTILITY PLAN
CIRCLES 4,5+6
CWS PROJECT NUMBER: 15.021

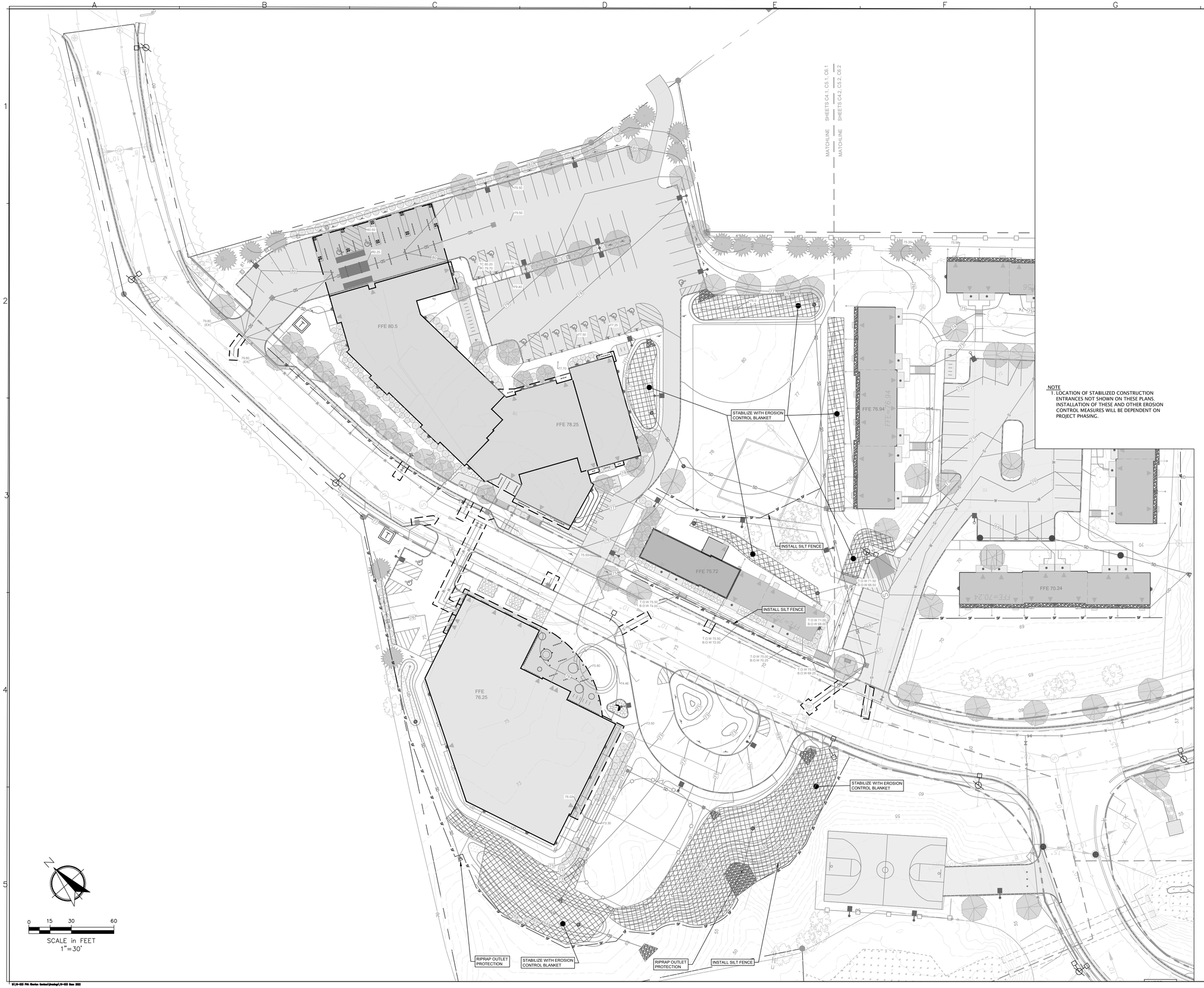
REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C5.3

SCALE: AS SHOWN
DATE: 1/12/2019

S:\15-021 Fth Riverton Gardens\Drawings\15-021 Base 2022



NOTE
1. LOCATION OF STABILIZED CONSTRUCTION ENTRANCES NOT SHOWN ON THESE PLANS. INSTALLATION OF THESE AND OTHER EROSION CONTROL MEASURES WILL BE DEPENDENT ON PROJECT PHASING.

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

0 15 30 60
SCALE in FEET
1"=30'

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PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE,
PORTLAND, MAINE 04103

DRAWING
EROSION
CONTROL PLAN
CIRCLE 1
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C6.1

SCALE: AS SHOWN
DATE: 1/12/2019

S:\15-021 Pitt Stanton Gardner\Zoning\15-021 Base 2022

MATCHLINE SHEETS C4.1, C5.1, C6.1
MATCHLINE SHEETS C4.2, C5.2, C6.2

NOTE
1. LOCATION OF STABILIZED CONSTRUCTION ENTRANCES NOT SHOWN ON THESE PLANS. INSTALLATION OF THESE AND OTHER EROSION CONTROL MEASURES WILL BE DEPENDENT ON PROJECT PHASING.

RIPRAP OUTLET PROTECTION
INSTALL SILT FENCE
INSTALL SILT SACKS IN CATCH BASINS (TYPICAL)
MATCHLINE SHEETS C4.2, C5.2, C6.2
MATCHLINE SHEETS C4.3, C5.3, C6.3
NEW 12" OUTLET INVERT ELEV =52.50 INSTALL RIP RAP OUTLET PROTECTION
NEW 8" OUTLET INVERT ELEV =53.30 INSTALL RIP RAP OUTLET PROTECTION
12" HDPE L = 50 S = 0.01
NEW DMH 6.3 RIM = 58.50

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

0 15 30 60
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1"=30'

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PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING, MAINTENANCE BUILDING AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
EROSION CONTROL PLAN
CIRCLES 2+3
CWS PROJECT NUMBER: 15.021

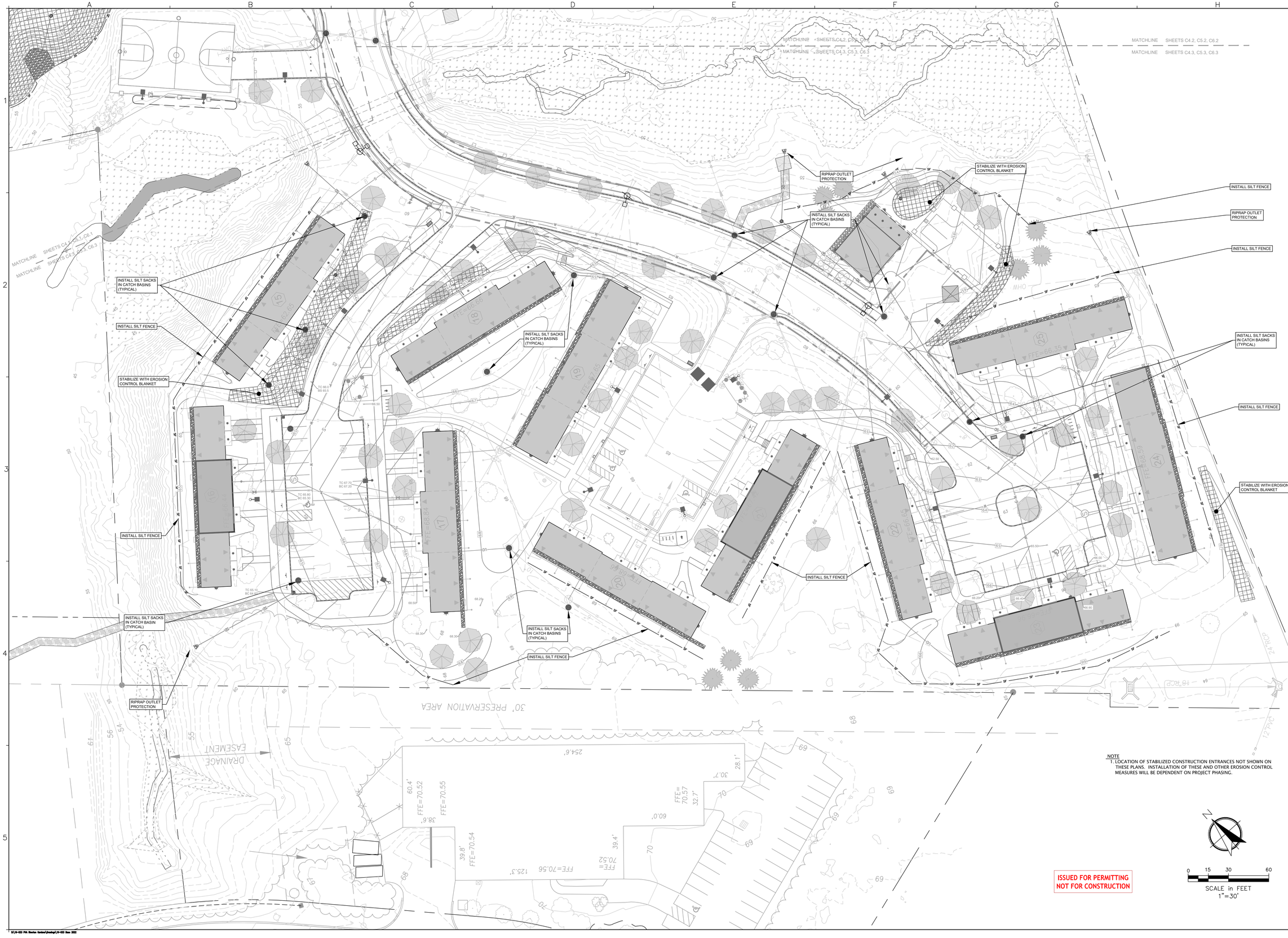
REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C6.2

SCALE: AS SHOWN
DATE: 1/12/2019

S:\15-022 PVA Riverton Gardens\Drawings\15-022 Base 2022



NOTE
1. LOCATION OF STABILIZED CONSTRUCTION ENTRANCES NOT SHOWN ON THESE PLANS. INSTALLATION OF THESE AND OTHER EROSION CONTROL MEASURES WILL BE DEPENDENT ON PROJECT PHASING.

ISSUED FOR PERMITTING
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OWNER
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PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
EROSION CONTROL PLAN
CIRCLES 4,5+6
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C6.3

SCALE: AS SHOWN
DATE: 1/12/2019

S:\15-022 Fifth Stories Garden\Zoning\15-022 Base 2022

A. SOIL EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, SILTATION FENCE, EROSION CONTROL MIX, STONE CHECK DAMS, HAY BALE 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, AND PERMANENT VEGETATION.

A. GENERAL

1. IT IS ANTICIPATED THAT CONSTRUCTION MAY BEGIN AS SOON AS POSSIBLE FOLLOWING RECEIPT OF NECESSARY PERMITS.

2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION & SEDIMENT CONTROL BMPS - MANUAL FOR DESIGNERS AND ENGINEERS (2016), OR AS CURRENTLY REVISED OR U.S. ENVIRONMENTAL PROTECTION AGENCY PUBLICATION 832/R-92-005 (SEPTEMBER, 1992) STORM WATER MANAGEMENT FOR CONSTRUCTION, CHAPTER 3, WHICHEVER IS MORE STRINGENT.

3. 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.

4. 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.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSPECTION, 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.a. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

a.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.

a.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.

a.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.

a.e. PAVED AREAS: FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

a.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 TEMPORARY SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE, OR ENGINEER. SILT FENCE SHALL BE INSTALLED ALONG THE DOWNGRADIENT SIDE OF CONSTRUCTION WORK AREAS, WITH LOCATIONS BEING ADJUSTED ALONG WITH THE CONSTRUCTION PHASING AREAS. THE CONTRACTOR MAY USE EROSION MIX IN PLACE OF SINGLE SILT FENCE BARRIER.

2. THE SILT FENCE SHALL BE INSTALLED PER THE DETAIL PROVIDED IN THE PLAN SET AND INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST WEEKLY IN THE ABSENCE OF SIGNIFICANT RAINFALL. ANY REQUIRED REPAIRS WILL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE SILT BARRIERS. THIS SEDIMENT WILL BE SPREAD AND STABILIZED IN AREAS OF THE SITE NOT SUBJECT TO EROSION. THE CONTRACTOR SHALL MAKE REPAIRS IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE. IF SUCH EROSION IS OBSERVED, THE CONTRACTOR SHALL TAKE PROACTIVE ACTION TO IDENTIFY THE CAUSE OF THE EROSION AND TAKE ACTION TO AVOID ITS REOCCURRENCE. PROPER PLACEMENT OF STAKES AND KEYING THE BOTTOM OF THE FABRIC INTO THE GROUND IS CRITICAL TO THE FENCE'S EFFECTIVENESS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM AND MEASURES TAKEN TO AVOID THE CONCENTRATION OF FLOWS NOT INTENDED TO BE DIRECTED TO THE SILT FENCE. SILT FENCE SHALL BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION.

3. EROSION CONTROL BERMS MAY BE USED IN PLACE OF SILT FENCE IN THE AREA ADJACENT TO THE DRAINAGEWAY AT THE NORTHWEST CORNER OF THE PROPERTY.

4. TEMPORARY SEDIMENT SUMPS WILL PROVIDE SEDIMENTATION CONTROL FOR STORMWATER RUNOFF FROM DISTURBED AREAS DURING CONSTRUCTION UNTIL STABILIZATION HAS BEEN ACHIEVED.

5. A CONSTRUCTION ENTRANCE WILL BE CONSTRUCTED AT ALL ACCESS POINTS ONTO THE SITE TO PREVENT TRACKING OF SOIL ONTO ADJACENT LOCAL ROADS AND STREETS.

6. SILTSACKS ™ WILL BE UTILIZED IN CATCH BASINS IN OR NEAR WORK AREAS AT RISK FROM RECEIVING TRANSPORTED SEDIMENT.

7. ALL CATCH BASINS AND FIELD INLETS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED DURING CONSTRUCTION.

8. REMOVAL OF SOD, TREES, BUSHES AND OTHER VEGETATION AND SOIL DISTURBANCE WILL BE KEPT TO A MINIMUM WHILE ALLOWING PROPER SITE DEVELOPMENT.

9. GRUBBINGS AND ANY UNUSABLE TOPSOIL SHALL BE STRIPPED AND REMOVED FROM THE PROJECT SITE AND DISPOSED OF IN AN APPROVED MANNER.

10. 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 WITHIN 7 DAYS OF FORMATION, OR TEMPORARILY MULCHED IF SEEDING CANNOT BE DONE WITHIN THE RECOMMENDED SEEDING DATES. SEDIMENT BARRIERS SHALL BE INSTALLED DOWNSTREAM OF STOCKPILES. STORMWATER SHALL BE DIVERTED AROUND STOCKPILE AREAS.

11. TEMPORARY DIVERSION BERMS AND DRAINAGE SWALES SHALL BE CONSTRUCTED AS NECESSARY TO PREVENT OFF-SITE DRAINAGE FROM ENTERING THE WORK AREA.

12. TEMPORARY STABILIZATION SHALL BE CONSTRUCTED 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.

13. TEMPORARY SEEDING SPECIFICATIONS: WHERE SEEDBED HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 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 ACRES, 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

15. PERMANENT SEEDING SPECIFICATION. IF A LANDSCAPE PLAN HAS BEEN PREPARED FOR THE PROJECT, SOIL PREPARATION AND SEED SPECIFICATIONS OF THAT PLAN SHALL SUPERSEDE THESE GENERAL PERMANENT SEEDING REQUIREMENTS. IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND JUNE 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 1SHALL 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 4 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-P2O5-K2O) FERTILIZER AT A RATE OF 800 LBS PER ACRE (18.4 LBS PER1,000 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 ACRES, AND ANCHOR AS NECESSARY.
d. THE SEED MIXTURE FOR LAWN AND FILTRATION BASIN AREAS SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:
30% CREEPING RED FESCUE
50% KENTUCKY BLUEGRASS
20% ITALIAN/PERENNIAL RYE GRASS
NOTE: SEED MIXTURE SHALL CONSIST OF AT LEAST TWO VARIETIES OF EACH TYPE OF GRASS. WHEN USED IN A FILTER BASIN, STORMWATER SHALL NOT BE DIRECTED TO THE BASIN UNTIL THE GRASS IS ESTABLISHED.

16. MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE.

17. 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.

18. 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.

19. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 20%, 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.

20. TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

C. SPECIAL MEASURES FOR SUMMER CONSTRUCTION

DURING DRY SUMMER CONDITIONS, THE CONTRACTOR SHALL:
1. IMPLEMENT A PROGRAM TO APPLY DUST CONTROL MEASURES ON A DAILY BASIS EXCEPT THOSE DAYS WHERE PRECIPITATION IS SUFFICIENT TO SUPPRESS DUST FORMATION. THIS PROGRAM SHALL EXTEND TO AND INCLUDE SWEEPING OF ADJACENT STREETS.
2. SPRAY ANY MULCHES WITH WATER AFTER ANCHORING TO DAMPEN THE SOIL AND ENCOURAGE EARLY GROWTH. SPRAYING MAY BE REQUIRED SEVERAL TIMES. TEMPORARY SEED MAY BE REQUIRED UNTIL THE LATE SUMMER SEEDING SEASON.
3. COVER STOCKPILES OF FINE-GRAINED MATERIALS, OR EXCAVATED SOILS WHICH ARE SUSCEPTIBLE TO EROSION TO PROTECT FROM THE INTENSE, SHORT-DURATION STORMS WHICH ARE MORE PREVALENT IN THE SUMMER MONTHS.
4. TAKE ADDITIONAL STEPS NEEDED, INCLUDING WATERING, OR COVERING EXCAVATED MATERIALS TO CONTROL FUGITIVE DUST EMISSIONS TO MINIMIZE REDUCTIONS IN VISIBILITY AND THE AIRBORNE DISBURSEMENT OF FINE-GRAINED SOILS. THIS IS PARTICULARLY IMPORTANT GIVEN THE POTENTIAL PRESENCE OF SOIL CONTAMINANTS, AND THEIR PROXIMITY ALONG THE ADJACENT STREETS AND PROPERTIES.
5. THESE MEASURES MAY ALSO BE REQUIRED IN THE SPRING AND FALL DURING THE DRIER PERIODS OF THESE SEASONS.

D. WINTER CONDITIONS

1. "WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1ST THROUGH APRIL 15TH. IF AREAS WITHIN THE CONSTRUCTION ACTIVITY ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15TH, 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. SILT FENCE: IN LIEU OF PROVIDING THE 6" X 6" TRENCH, FOR FROZEN GROUND, STONY SOIL, THE PRESENCE OF LARGE ROOTS, OR OTHER PROHIBITIVE CONDITIONS, THE BOTTOM 8" TO 12" OF THE FABRIC MAY BE LAID ON EXISTING GRADE AND BACK FILLED WITH STONE ANCHORING MATERIAL, AS SHOWN ON THE DRAWINGS.
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 1ST 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 1ST, 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.

E. HOUSEKEEPING

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON-SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORM WATER, 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, 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.

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 DEPARTMENT.

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:
- DISCHARGES FROM FIREFIGHTING ACTIVITY;
- FIRE HYDRANT FLUSHINGS;
- VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
- DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
- ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
- 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;
- UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
- UNCONTAMINATED GROUNDWATER OR SPRING WATER;
- FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED; UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
- POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND LANDSCAPE IRRIGATION.

7. UNAUTHORIZED NON-STORMWATER DISCHARGES. THE DEPARTMENT'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON_STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH APPENDIX C (6). SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
- WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
- FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
- SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

F. INSPECTION AND MAINTENANCE

5. 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 AND BEFORE AND AFTER A STORM EVENT, 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 OF IF ADDITIONAL BMPS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (0.5IN OR GREATER IN 24-HOUR PERIOD). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

6. 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.

7. INSPECTION OF THE PROJECT WORK SITE SHALL INCLUDE:
a. IDENTIFICATION OF PROPER EROSION CONTROL MEASURE INSTALLATION IN ACCORDANCE WITH THE EROSION CONTROL DETAIL SHEET.
b. DETERMINE WHETHER EACH EROSION CONTROL MEASURE IS PROPERLY OPERATING. IF NOT, IDENTIFY DAMAGE TO THE CONTROL DEVICE AND DETERMINE REMEDIAL MEASURES.
c. IDENTIFY AREAS WHICH APPEAR VULNERABLE TO EROSION AND DETERMINE ADDITIONAL EROSION CONTROL MEASURES WHICH SHOULD BE USED TO IMPROVE CONDITIONS.
d. INSPECT AREAS OF RECENT SEEDING TO DETERMINE PERCENT CATCH OF GRASS. A MINIMUM CATCH OF 90 PERCENT IS REQUIRED PRIOR TO REMOVAL OF EROSION CONTROL MEASURES.

4. IF INSPECTION OF THE SITE INDICATES A CHANGE SHOULD BE MADE TO THE EROSION CONTROL PLAN, TO EITHER IMPROVE EFFECTIVENESS OR CORRECT A SITE-SPECIFIC DEFICIENCY, THE INSPECTOR SHALL IMMEDIATELY IMPLEMENT THE CORRECTIVE MEASURE AND NOTIFY THE OWNER OF THE CHANGE.

5. ALL CERTIFICATIONS, INSPECTION FORMS, AND WRITTEN REPORTS PREPARED BY THE INSPECTOR(S) SHALL BE FILED WITH THE OWNER, AND THE PERMIT FILE CONTAINED ON THE PROJECT SITE. ALL WRITTEN CERTIFICATIONS, INSPECTION FORMS, AND WRITTEN REPORTS MUST BE FILED WITHIN ONE (1) WEEK OF THE INSPECTION DATE AND RECORDS MUST BE RETAINED FOR THREE YEARS FROM THE TIME PERMANENT STABILIZATION IS ACHIEVED.

6. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION/SEDIMENT CONTROL REPORT, INCLUDING CONTROL OF FUGITIVE DUST, AND SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

G. CONSTRUCTION SCHEDULE & SEQUENCE (TIMELINES ARE APPROXIMATE AND WILL BE DEPENDENT ON WEATHER AND SITE CONDITIONS).

1. PRE-CONSTRUCTION CONFERENCE: PRIOR TO ANY CONSTRUCTION AT THE SITE, REPRESENTATIVES OF THE CONTRACTOR, THE ARCHITECT, THE OWNER, AND THE SITE DESIGN ENGINEER SHALL MEET TO DISCUSS THE SCHEDULING OF THE SITE CONSTRUCTION AND THE DESIGNATION OF THE RESPONSIBLE PARTIES FOR IMPLEMENTING THE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE MEETING. PRIOR TO THE MEETING, THE CONTRACTOR WILL PREPARE A DETAILED SCHEDULE AND A MARKED-UP SITE PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL CONDUCT A MEETING WITH EMPLOYEES AND SUB-CONTRACTORS TO REVIEW THE EROSION CONTROL PLAN, THE CONSTRUCTION TECHNIQUES WHICH WILL BE EMPLOYED TO IMPLEMENT THE PLAN, AND PROVIDE A LIST OF ATTENDEES AND ITEMS DISCUSSED AT THE MEETING TO THE OWNER. THREE COPIES OF THE SCHEDULE, THE CONTRACTOR'S MEETING MINUTES, AND MARKED-UP SITE PLAN SHALL BE PROVIDED TO THE OWNER.

2. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO INSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES IS OPTIMIZED.
a. INSTALL SAFETY AND CONSTRUCTION FENCE TO SECURE THE SITE FOR CONSTRUCTION.
b. INSTALL ALL PERIMETER SILTATION FENCE AND EROSION CONTROL BARRIERS. PARTICULAR ATTENTION SHALL BE PAID TO AREAS UPSTREAM OF PROTECTED NATURAL RESOURCES. PROJECT LIMITS OF DISTURBANCE ARE CLEARLY DELINEATED ON THE DRAWINGS - NO ACTIVITY IS ALLOWED OUTSIDE THESE LIMITS. SIGNS SHALL BE ERECTED INDICATING THAT THE DOWNSTREAM AREAS ARE OFF LIMITS TO ALL CONSTRUCTION ACTIVITIES.
c. INSTALL CONSTRUCTION ENTRANCES.
d. CLEAR AND GRUB THE CONSTRUCTION AREA, REMOVE AND STOCKPILE UNSUITABLE FILL MATERIAL.
e. CONSTRUCT ACTIVITIES ON THE SITE TO OPTIMIZE THE HANDLING OF MATERIALS AND RESTRICT THE DENUDED AREAS TO THE TIME STIPULATED.
f. UNDERTAKE MAJOR EARTHWORK ACTIVITY TO ROUGH GRADE THE SITE
g. INSTALL UTILITIES AND CONSTRUCT STABILIZED PADS IN BUILDING AREAS.
h. INSTALL AND COMPACT NEW PAVEMENT BASE GRAVEL MATERIALS AND INSTALL BINDER PAVEMENT.
i. LANDSCAPE (LOAM AND SEED).
j. INSTALL STRIPING, SIGNAGE, AND MISCELLANEOUS SITE IMPROVEMENTS.
k. REVIEW SITEWORK WITH ENGINEER AND OWNER AND COMPLETE ANY PUNCH LIST ITEMS.
l. REMOVE ANY TEMPORARY EROSION CONTROL MEASURES.
3. THE CONTRACTOR MUST MAINTAIN AN ACCURATE SET OF RECORD DRAWINGS INDICATING THE DATE WHEN AN AREA IS FIRST DENUDED, THE DATE OF TEMPORARY STABILIZATION, AND THE DATE OF FINAL STABILIZATION. ON OCTOBER 1 OF ANY CALENDAR YEAR, THE CONTRACTOR SHALL SUBMIT A DETAILED PLAN FOR STABILIZING THE SITE FOR THE WINTER AND A DESCRIPTION OF WHAT ACTIVITIES ARE PLANNED DURING THE WINTER.

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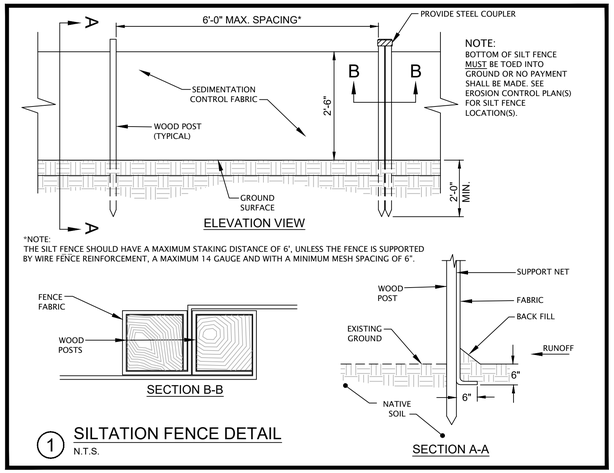
OWNER
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14 BAXTER BLVD
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PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
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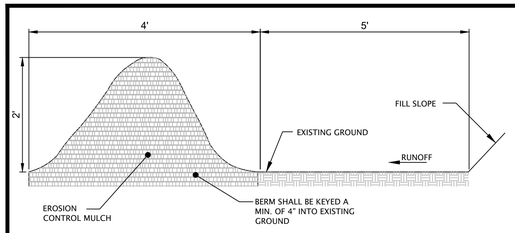
DRAWING
EROSION
CONTROL NOTES
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PL



1 SILTATION FENCE DETAIL
N.T.S.



NOTES:
1. THE EROSION CONTROL MULCH MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:

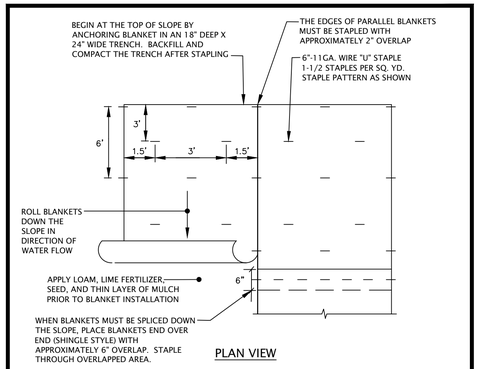
A. MOISTURE CONTENT - 30-60%
B. pH - 5.0-8.0
C. SCREEN SIZE - 100% LESS THAN 3", MAX. 70% LESS THAN 1"
D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION
F. NO STONES LARGER THAN 2" IN DIAMETER

2. THE EROSION CONTROL MULCH BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.

3. THE EROSION CONTROL MULCH FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES (LESS THAN 8%), ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS. THEY SHALL NOT BE USED ON SLOPES GREATER THAN 8% WITHOUT THE SUPPORT OF ADDITIONAL MEASURES, SUCH AS SILT FENCE.

4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT THE NATIVE EARTH CAN BE SEEN BELOW.

4 EROSION CONTROL MIX BERM SEDIMENT BARRIER
N.T.S.

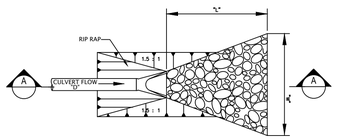


NOTE:
REINFORCEMENT BLANKET STAPLE SIZE AND DISTRIBUTION PER MANUFACTURER'S SPECIFICATIONS.

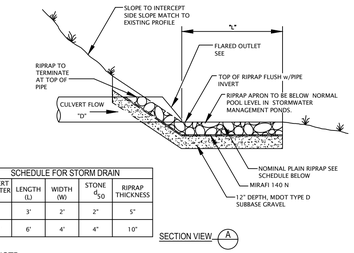
SECTION VIEW

NOTES:
1. IF GRASS CATCH IS NOT 90% BY SEPTEMBER 1, ADD #4 REBAR @ 3'-0" ROWS ON 3' CENTERS. REMOVE OR DRIVE REBAR 3" BELOW GRADE IN SPRING FOLLOWING TURF ESTABLISHMENT.
2. MULCH RATE TO BE 1/2 THE RATE OTHERWISE SPECIFIED.
3. SLOPES STEEPER THAN 1.5:1 ARE PROHIBITED.

7 EROSION CONTROL BLANKET DETAIL
N.T.S.



PLAN VIEW

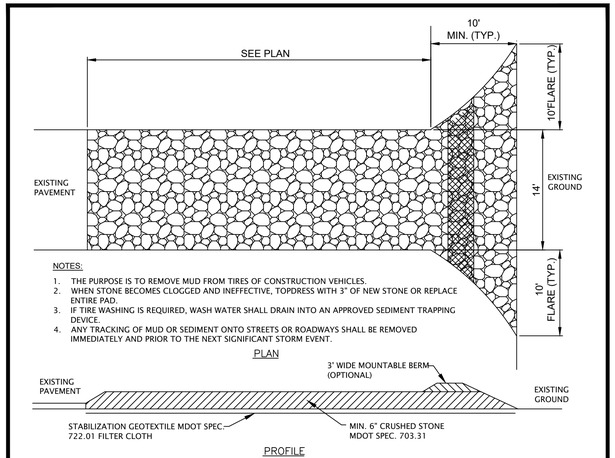


SCHEDULE FOR STORM DRAIN				
CULVERT DIAMETER (D)	LENGTH (L)	WIDTH (W)	STONE d_{50}	RIPRAP THICKNESS
6"	3'	2'	2"	5"
12"	6'	4'	4"	10"

SECTION VIEW A

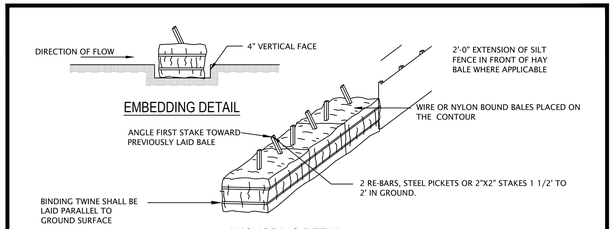
NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 2.5 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

9 RIP RAP OUTLET APRON
N.T.S.



NOTES:
1. THE PURPOSE IS TO REMOVE MUD FROM TIRES OF CONSTRUCTION VEHICLES.
2. WHEN STONE BECOMES CLOGGED AND INEFFECTIVE, TOPDRESS WITH 3" OF NEW STONE OR REPLACE ENTIRE PAD.
3. IF TIRE WASHING IS REQUIRED, WASH WATER SHALL DRAIN INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. ANY TRACKING OF MUD OR SEDIMENT ONTO STREETS OR ROADWAYS SHALL BE REMOVED IMMEDIATELY AND PRIOR TO THE NEXT SIGNIFICANT STORM EVENT.

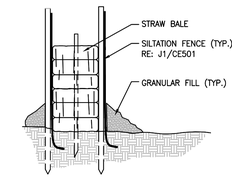
2 STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.



CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
6. A SILT SACK IS ALSO REQUIRED WHEN HAY BALES ARE USED FOR INLET PROTECTION.

5 STRAW OR HAY BALE BARRIER
N.T.S.



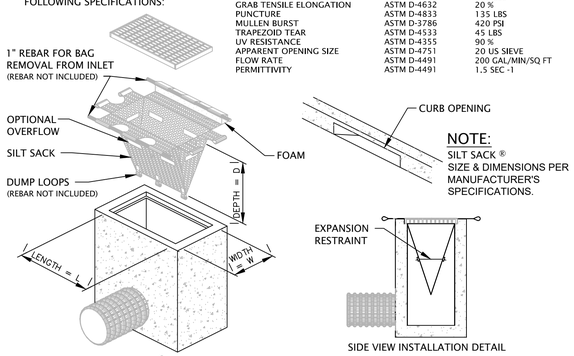
10 SILT FENCE: M/B BARRIER DETAIL
N.T.S.

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

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

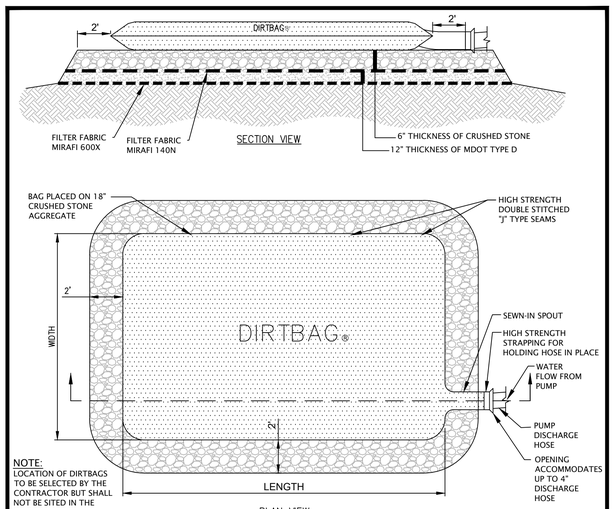
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1



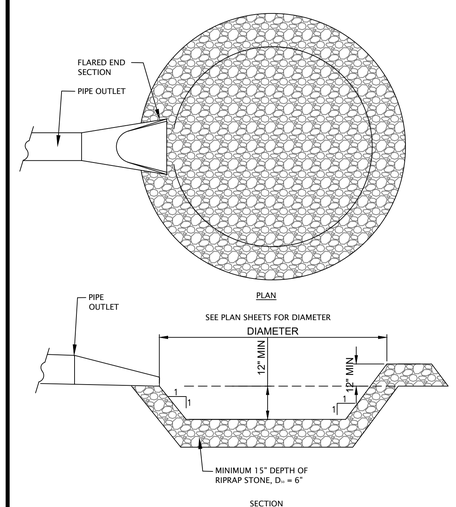
NOTE:
SILT SACK ® SIZE & DIMENSIONS PER MANUFACTURER'S SPECIFICATIONS.

3 SILT SACK ® DETAIL & SPECIFICATIONS
N.T.S.



NOTE:
LOCATION OF DIRTBAGS TO BE SELECTED BY THE CONTRACTOR BUT SHALL NOT BE SITED IN THE CRITICAL AREAS.

6 DIRTBAG / SPECIFICATIONS FOR DEWATERING DETAIL
N.T.S.



8 FOREBAY DETAIL
N.T.S.

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PROJECT
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CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE
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DRAWINGS

EROSION CONTROL DETAILS

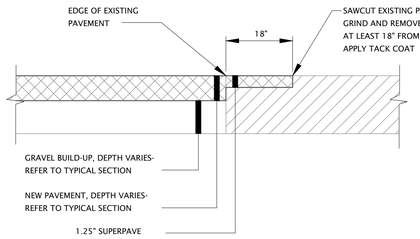
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

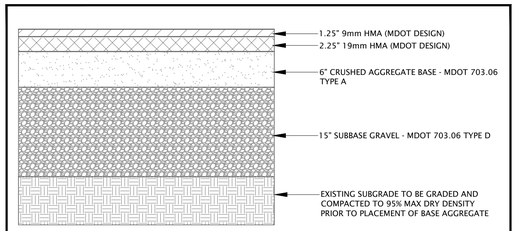
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C7.2

SCALE: AS SHOWN
DATE: 1/12/2019



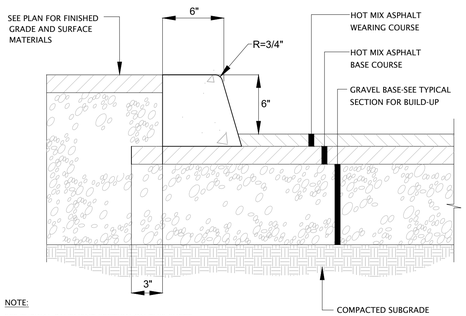
A PAVEMENT BUTT-JOINT DETAIL

N.T.S.



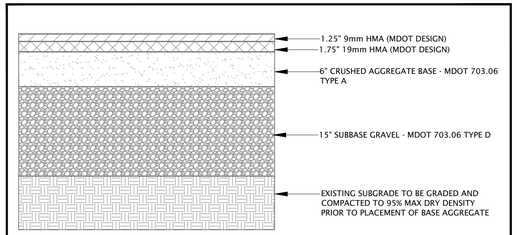
E HEAVY DUTY PAVEMENT DETAIL

N.T.S.



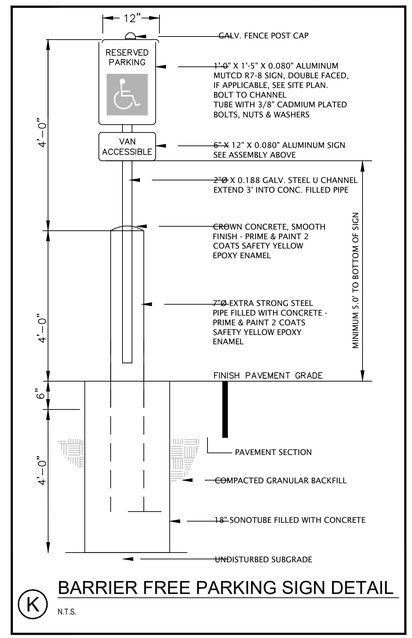
B SLIPFORM CONCRETE CURB DETAIL

N.T.S.



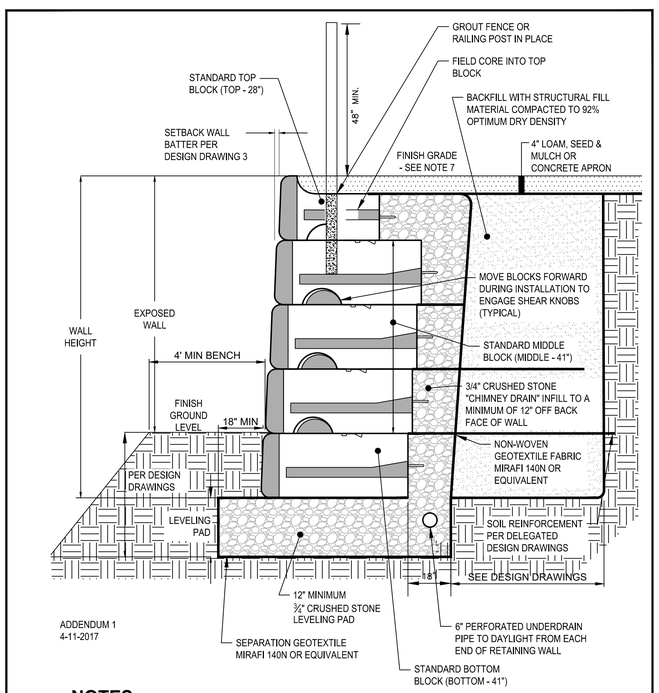
F LIGHT DUTY PAVEMENT DETAIL

N.T.S.



K BARRIER FREE PARKING SIGN DETAIL

N.T.S.



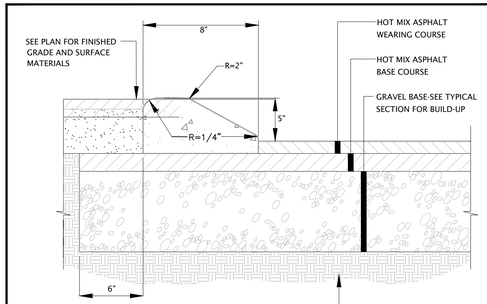
ADDENDUM 1
4-11-2017

NOTES:

1. RETAINING WALL MATERIAL SHALL BE REDI-ROCK LARGE BLOCK SEGMENTAL CONCRETE UNIT MASONRY RETAINING WALL SYSTEM WITH LIMESTONE TEXTURED FINISH, OR APPROVED EQUAL. ONLY WET CAST BLOCKS WILL BE ACCEPTED.
2. LARGE BLOCK SEGMENTAL CONCRETE UNIT MASONRY RETAINING WALLS REQUIRE UNDERDRAIN, CRUSHED STONE INFILL AND GRANULAR BORROW BACKFILL.
3. ALL BLOCKS AT THE ENDS OF THE WALL(S) MUST BE FINISHED ON THREE SIDES: THE FRONT, THE TOP AND THE EXPOSED END. BLOCKS WITH EXPOSED SURFACES AT THE ENDS AND TOP OF THE WALL MUST BE MANUFACTURED FOR THIS PURPOSE AND MUST BE FINISHED TO MATCH THE FACE OF THE BLOCKS.
4. PIPED DRAINAGE SHALL BE INCLUDED IN THE DESIGN OF THE WALLS.
5. THE FACE QUALITY OF PRECAST CONCRETE BLOCK WALL WILL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
6. RECOMMENDED SOIL PARAMETERS FOR USE IN DESIGN OF MODULAR BLOCK RETAINING WALLS AT THE SITE ARE LISTED IN THE PROJECT GEOTECHNICAL REPORT.
7. TOP OF WALL HEIGHT MAY BE ABOVE FINISHED GRADE AT SOME LOCATIONS TO PROVIDE BENCH SEATING - SEE GRADING PLANS FOR TOP OF WALL AND BOTTOM OF WALL GRADES.
8. A MINIMUM 4-FOOT WIDE HORIZONTAL BENCH SHALL BE PROVIDED IN FRONT OF WALLS FOUNDED ON SLOPES.
9. THE CONTRACTOR SHALL PROVIDE DESIGN DRAWINGS, PREPARED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF MAINE, FOR ALL RETAINING WALLS. FOR MORE INFORMATION SEE GEOTECHNICAL REPORT.

P LARGE BLOCK RETAINING WALL TYPICAL SECTION & NOTES

N.T.S.



C SLIPFORM CCAPE COD BERM DETAIL

N.T.S.



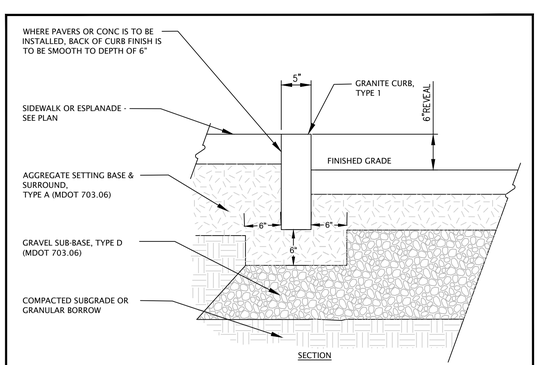
G NEW BITUMINOUS SIDEWALK DETAIL

N.T.S.



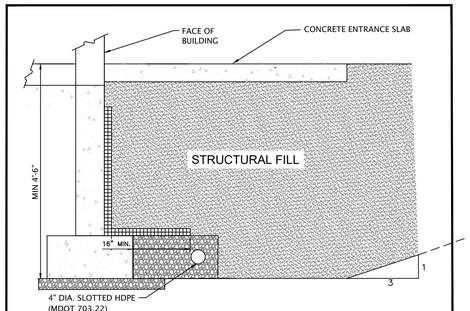
L DOWLED CONSTRUCTION JOINT

N.T.S.



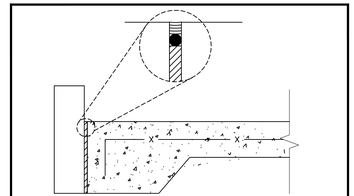
D VERTICAL GRANITE CURB DETAIL

N.T.S.



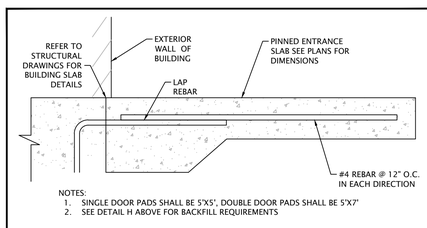
H CONCRETE ENTRANCE SLAB DETAIL

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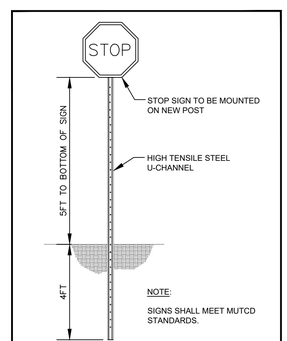
M ISOLATION/EXPANSION JOINT

N.T.S.



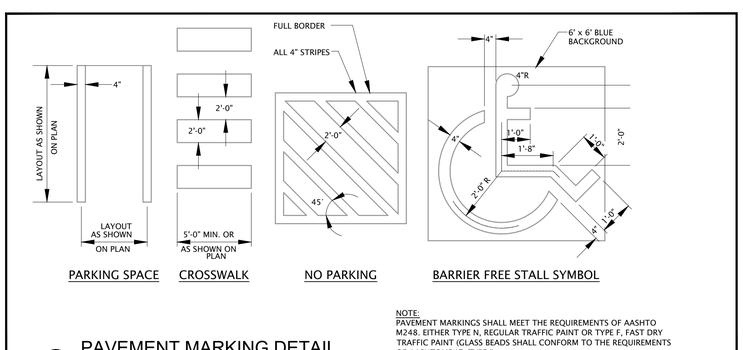
J PINNED ENTRANCE PAD DETAIL

N.T.S.



N STOP SIGN DETAIL

N.T.S.



NOTE:
PAVEMENT MARKINGS SHALL MEET THE REQUIREMENTS OF AASHTO M248. EITHER TYPE N, REGULAR TRAFFIC PAINT OR TYPE F, FAST DRY TRAFFIC PAINT (GLASS BEADS SHALL CONFORM TO THE REQUIREMENTS OF AASHTOM247, TYPE I).

Q PAVEMENT MARKING DETAIL

N.T.S.

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
264 US Route One, Suite 100-2A
Scarborough ME 04074
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER
STATE OF MAINE
ANDREW M. JOHNSON
NO. 3994
11-20-12
LICENSED PROFESSIONAL ENGINEER

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK,
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWINGS
SITE/CIVIL
DETAILS 1

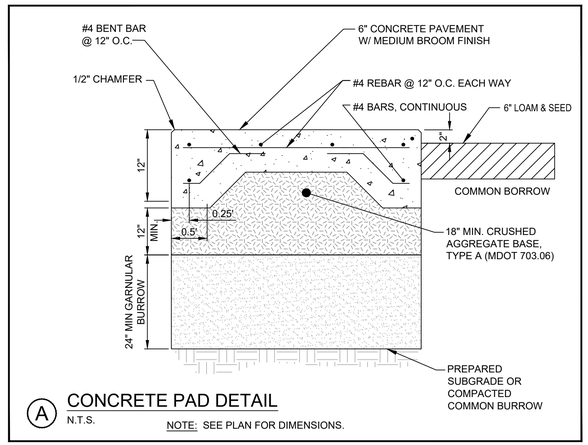
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C7.3

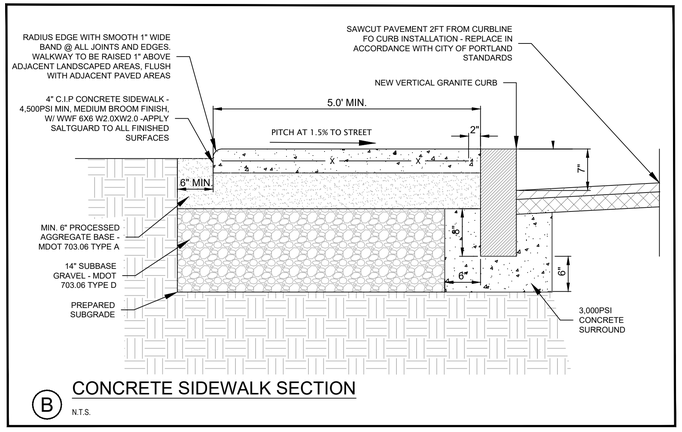
SCALE: AS SHOWN
DATE: 1/12/2019



A CONCRETE PAD DETAIL

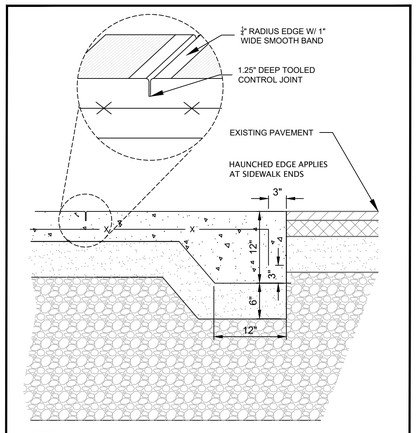
N.T.S.

NOTE: SEE PLAN FOR DIMENSIONS.



B CONCRETE SIDEWALK SECTION

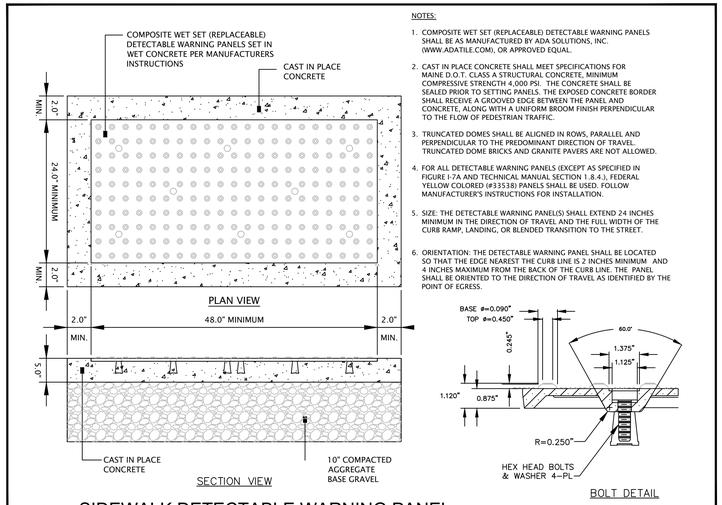
N.T.S.



NOTES:
1. PROVIDE ISOLATION JOINT W/ SELF-LEVELING SEALER WHERE WALK ABUTS ANY VERTICAL SURFACE.
2. DEPTH OF CONTROL JOINT MUST BE MIN. 1.25" FOR ACCEPTANCE OF WORK. SAWCUT JOINTS ¼" WIDE.
3. UNLESS SHOWN OR NOTED OTHERWISE, BROOM PERPENDICULAR TO DIRECTION OF TRAVEL.
4. APPLY SALTGUARD SEALANT TO ALL EXPOSED SURFACES

C SIDEWALK END AND JOINT DETAILS

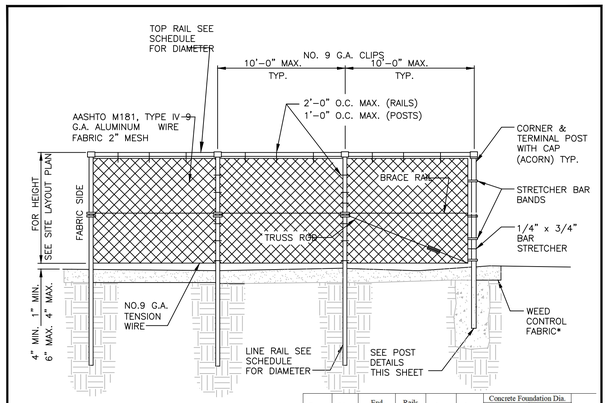
N.T.S.



NOTES:
1. COMPOSITE WET SET (REPLACEABLE) DETECTABLE WARNING PANELS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. (WWW.ADATILE.COM), OR APPROVED EQUAL.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
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. FOR ALL DETECTABLE WARNING PANELS (EXCEPT AS SPECIFIED IN FIGURE I-7A AND TECHNICAL MANUAL SECTION 1.8.4.), FEDERAL YELLOW COLORED (#33538) PANELS SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
5. SIZE: THE DETECTABLE WARNING PANEL(S) SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
6. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 2 INCHES MINIMUM AND 4 INCHES MAXIMUM FROM THE BACK OF THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

D SIDEWALK DETECTABLE WARNING PANEL

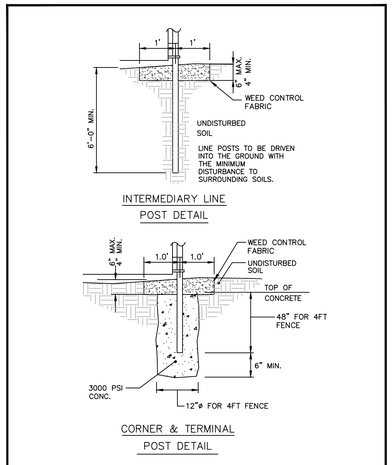
NOT TO SCALE



Fence Height	Line Posts	End Corner & Pull Post	Rails and Braces	Gate Frames	Gate Posts	Concrete Foundation Dia. Diameters Line Posts	Corner/End Pull & Gate Posts	Depth
4'	1-7/8"	3"	1-1/2"	1-1/2"	2-1/2"	12"	12"	48"
6'	1-7/8"	3"	1-1/2"	1-1/2"	2-1/2"	12"	12"	48"
10'	2-7/8"	4"	1-3/4"	1-1/2"	4"	18"	18"	54"

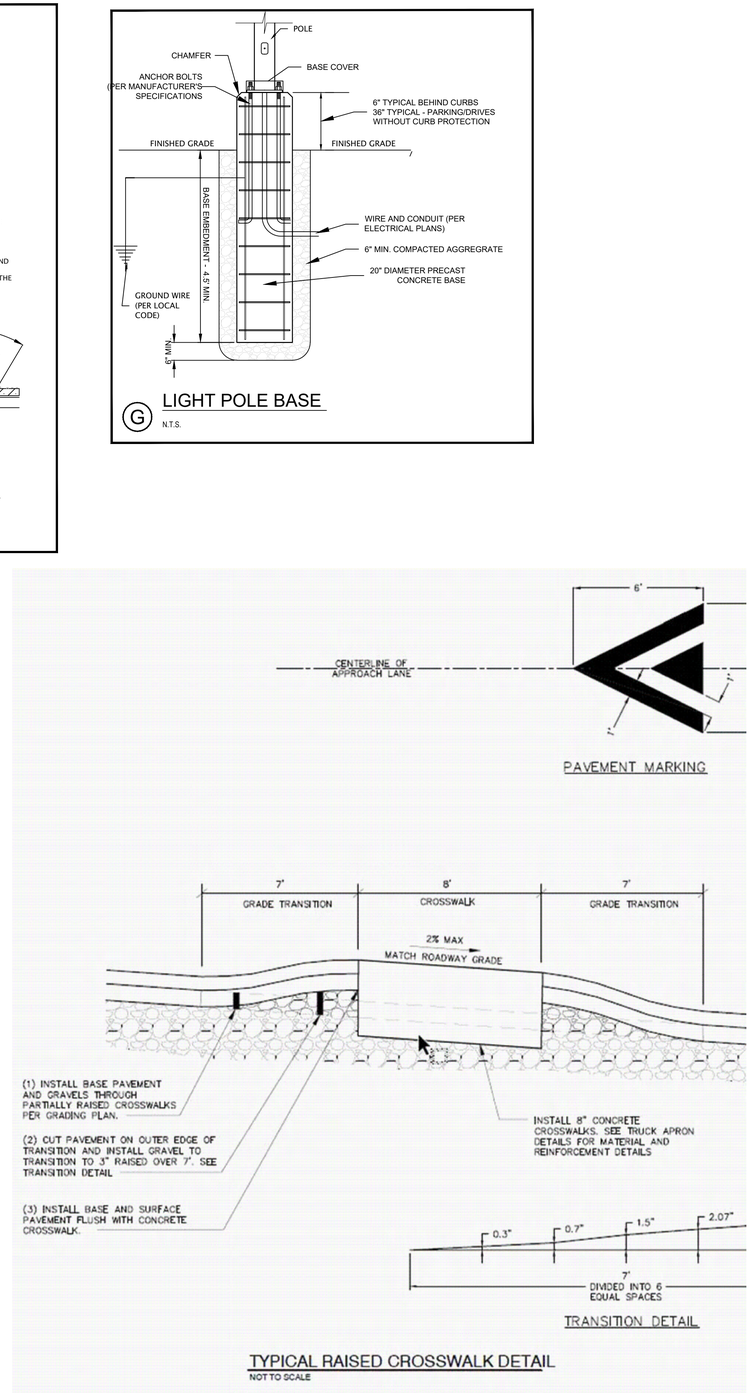
E CHAIN LINK FENCE DET

N.T.S.



F CHAIN LINK FENCE POST DETAILS

N.T.S.



G LIGHT POLE BASE

N.T.S.

PAVEMENT MARKING

TRANSITION DETAIL

TYPICAL RAISED CROSSWALK DETAIL

NOT TO SCALE

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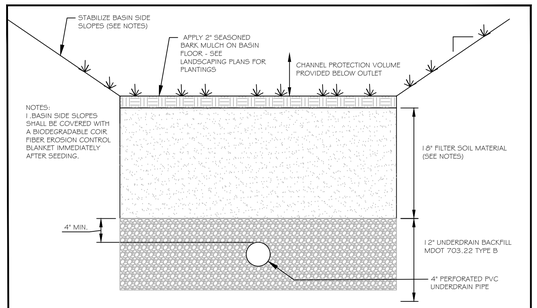
PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING,
MAINTENANCE BUILDING
AND REHABILITATION
2 RIVERTON DRIVE,
PORTLAND, MAINE 04103

DRAWINGS
SITE/CIVIL
DETAILS 2
CWS PROJECT NUMBER: 15.021

REVISIONS

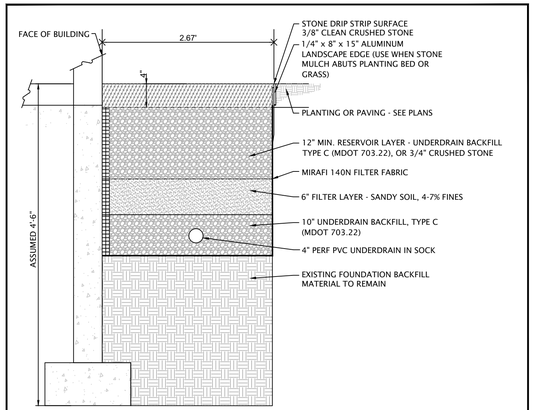
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2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C7.4
SCALE: AS SHOWN
DATE: 1/12/2019



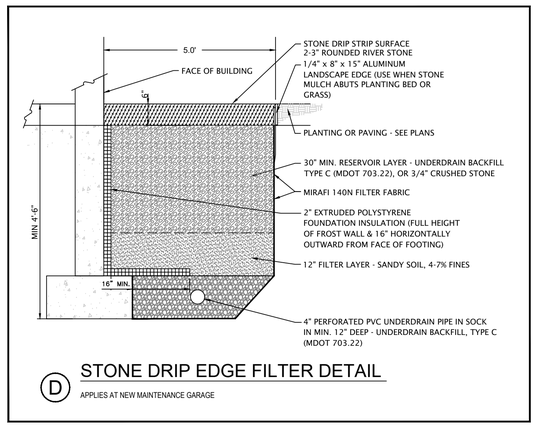
A CROSS-SECTION THROUGH BIORETENTION CELL

N.T.S.



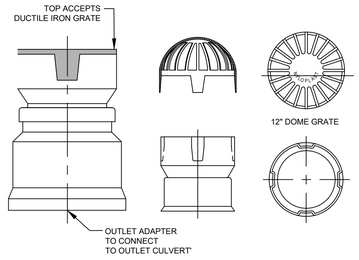
B SHALLOW FILTERING DRIP EDGE DETAIL

APPLIES AT BUILDING REHAB LOCATIONS ONLY



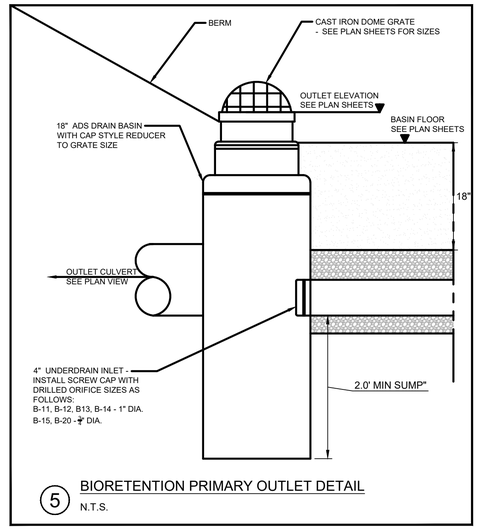
D STONE DRIP EDGE FILTER DETAIL

APPLIES AT NEW MAINTENANCE GARAGE



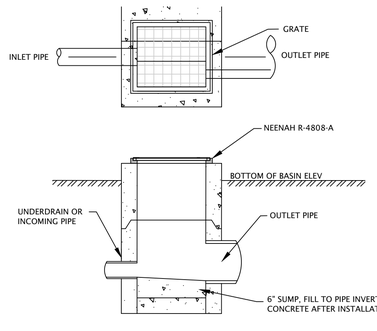
F IN-LINE DRAIN INLET STRUCTURE

N.T.S.



5 BIORETENTION PRIMARY OUTLET DETAIL

N.T.S.



G TYPE "F" CATCH BASIN DETAIL

N.T.S.

BIORETENTION CELL, UNDREDRAINED FILTER AND ROOF DRIP EDGE FILTER CONSTRUCTION NOTES

CONSTRUCTION OVERSIGHT
THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE CONSTRUCTION PLANS FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE BMP HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

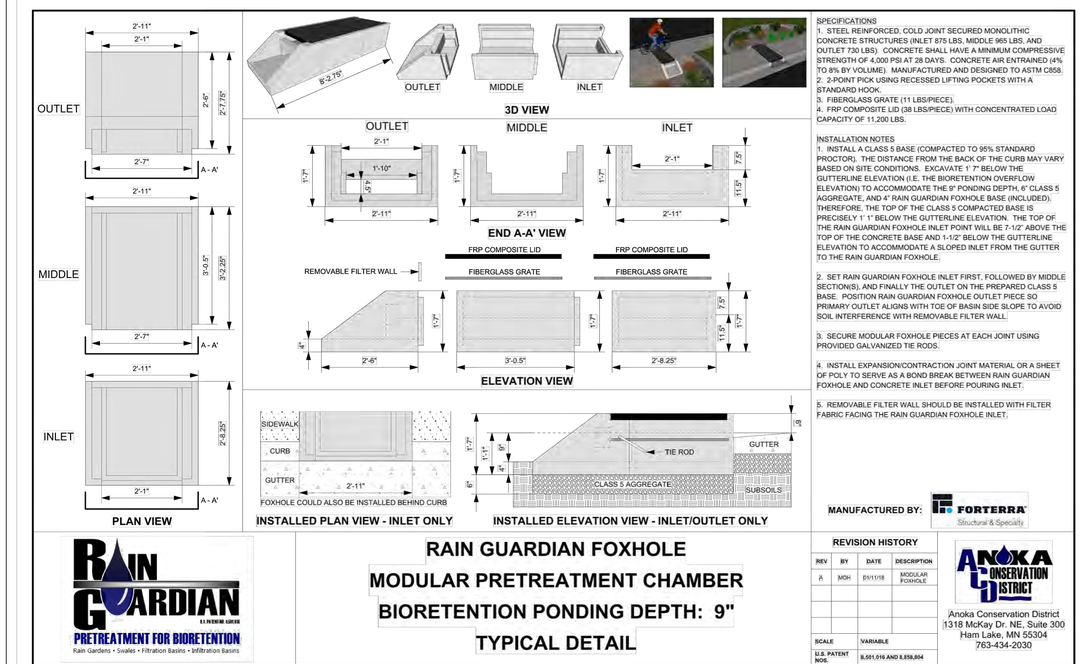
BASIC STANDARDS - EROSION CONTROL MEASURES
MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL 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

BIORETENTION AND UNDERDRAINED FILTER NOTES

1. FILTER SOIL MATERIAL FOR UNDERDRAINED SOIL FILTERS AND BIORETENTION AREAS SHALL COMPRISE A SILTY SAND OR SOIL MIXTURE COMBINED WITH AN ORGANIC SOIL AMENDMENT MATERIAL TO 20%-25% BY VOLUME. THE RESULTING MIXTURE SHALL HAVE BETWEEN 8% AND 12% PASSING THE #200 SEIVE, AND A CLAY CONTENT OF LESS THAN 2%.
   A. FILTER SOIL MATERIAL SHALL BE PLACED IN 12-INCH LIFTS USING LGP EQUIPMENT OR BY HAND. LGP EQUIPMENT SHALL EXERT A GROUND PRESSURE OF LESS THAN 5 PSI, AS STATED IN THE EQUIPMENT SPECIFICATION FROM THE MANUFACTURER. MATERIAL SHALL BE GRADED TO PROVIDE AN EVEN SURFACE, SEEDED AND COVERED WITH EROSION CONTROL BLANKET.
   B. UNDERDRAIN GRAVELS SHALL MEET THE SPECIFICATION REQUIREMENTS GIVE IN MDOT SPECIFICATION 703.22.
   C. SOIL FILTER MEDIA SHALL NOT BE INSTALLED UNTIL ALL UPSTREAM CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. IMPERMEABLE LINERS FOR BIORETENTION CELLS, AND UNDERDRAINED FILTERS SHALL BE A 30MIL IMPERMEABLE LINER.

Table 7.1.2 - Sandy Loam to Fine Sandy Loam Specifications	
Seive #	% Passing by Weight
No. 4	75-95
No. 10	60-90
No. 40	35-85
No. 200	20-70
200 (clay size)	<2.0

Table 7.1.3 - Loamy Coarse Sand Specifications	
Seive #	% Passing by Weight
No. 10	85-100
No. 200	70-100
No. 60	15-40
No. 200	8-15
200 (clay size)	<2.0



SPECIFICATIONS
1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURES (INLET 875 LBS, MIDDLE 965 LBS, AND OUTLET 730 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (4% TO 8% BY VOLUME). MANUFACTURED AND DESIGNED TO ASTM C858.
2. 2-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
3. FIBERGLASS GRATE (11 LBS/PIECE).
4. FRP COMPOSITE LID (38 LBS/PIECE) WITH CONCENTRATED LOAD CAPACITY OF 11,200 LBS.

INSTALLATION NOTES
1. INSTALL A CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS. EXCAVATE 1' 7" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 9" PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN FOXHOLE BASE (INCLUDED); THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1' 1" BELOW THE GUTTERLINE ELEVATION. THE TOP OF THE RAIN GUARDIAN FOXHOLE INLET POINT WILL BE 7-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN FOXHOLE.

2. SET RAIN GUARDIAN FOXHOLE INLET FIRST, FOLLOWED BY MIDDLE SECTION(S), AND FINALLY THE OUTLET ON THE PREPARED CLASS 5 BASE. POSITION RAIN GUARDIAN FOXHOLE OUTLET PIECE SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL.

3. SECURE MODULAR FOXHOLE PIECES AT EACH JOINT USING PROVIDED GALVANIZED TIE RODS.

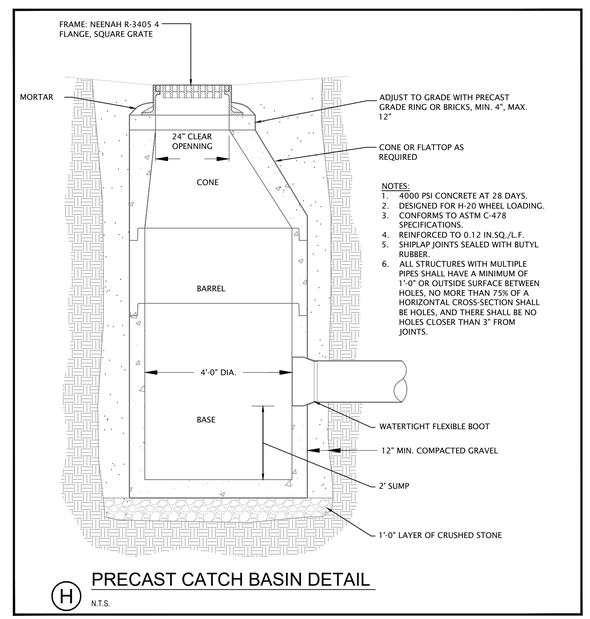
4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN FOXHOLE AND CONCRETE INLET BEFORE POURING INLET.

5. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC FACING THE RAIN GUARDIAN FOXHOLE INLET.

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
A	MDH	8/1/18	MODULAR FOXHOLE
SCALE		VARIABLE	
U.S. PATENT NOS.		8,551,016 AND 8,858,804	

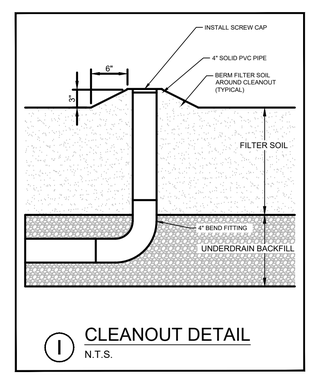
Anoka Conservation District
1318 McKay Dr. NE, Suite 300
Ham Lake, MN 55304
763-434-2030



NOTES:
1. 4000 PSI CONCRETE AT 28 DAYS.
2. DESIGNED FOR H-20 WHEEL LOADING.
3. CONFORMS TO ASTM C-478 SPECIFICATIONS.
4. REINFORCED TO 0.12 IN.SQ./L.F.
5. SHIPLAP JOINTS SEALED WITH BUTYL RUBBER.
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 1'-0" OR OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" FROM JOINTS.

H PRECAST CATCH BASIN DETAIL

N.T.S.



I CLEANOUT DETAIL

N.T.S.

CWS ARCHITECTS
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OFFICE: 207 774 4441 CWSARCH.COM

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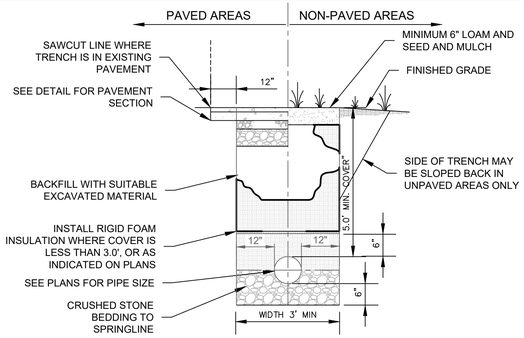
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PORTLAND, MAINE 04103

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

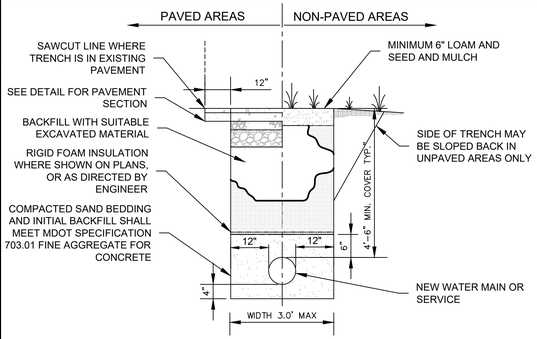
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SITE/CIVIL DETAILS 3
CWS PROJECT NUMBER: 15.021

DRAWING NUMBER
C7.5
SCALE: AS SHOWN
DATE: 1/12/2019



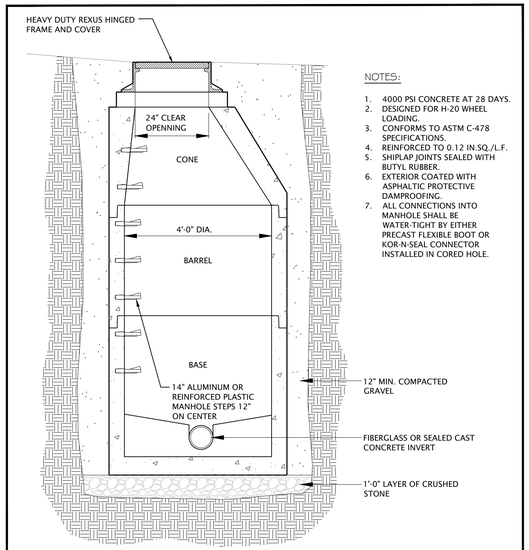
NOTE:
BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

(A) TYPICAL SEWER AND STORM DRAIN TRENCH DETAIL
N.T.S.



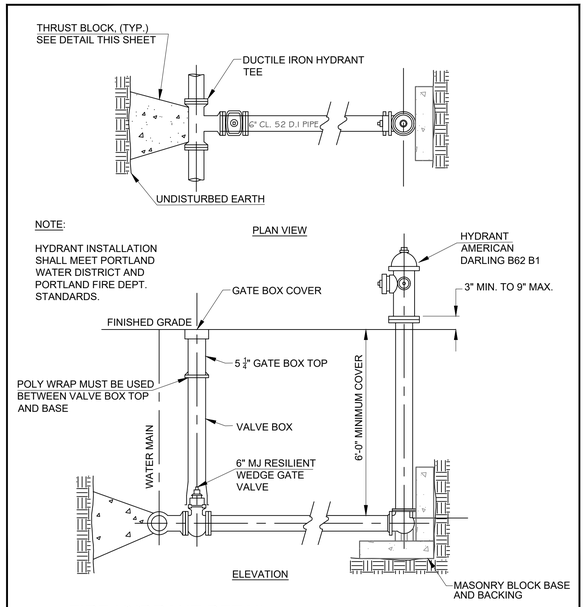
NOTE:
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

(B) WATER PIPE TRENCH DETAIL
N.T.S.



NOTES:
1. 4000 PSI CONCRETE AT 28 DAYS.
2. DESIGNED FOR H-20 WHEEL LOADING.
3. CONFORMS TO ASTM C-478 SPECIFICATIONS.
4. REINFORCED TO 0.12 IN.SQ./L.F.
5. SHIPLAP JOINTS SEALED WITH BUTYL RUBBER.
6. EXTERIOR COATED WITH ASPHALTIC PROTECTIVE DAMPROOFING.
7. ALL CONNECTIONS INTO MANHOLE SHALL BE WATER-TIGHT BY EITHER PRECAST FLEXIBLE BOOT OR KOR-N-SEAL CONNECTOR INSTALLED IN CORED HOLE.

(C) PRECAST SEWER MANHOLE DETAIL
N.T.S.

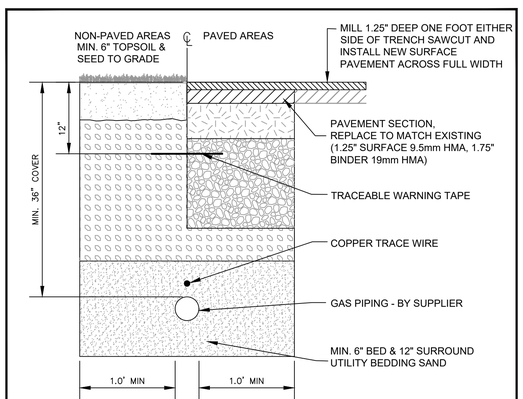


NOTE:
HYDRANT INSTALLATION SHALL MEET PORTLAND WATER DISTRICT AND PORTLAND FIRE DEPT. STANDARDS.

(D) FIRE HYDRANT DETAIL
N.T.S.

NOTE:
PAVEMENT REPAIR SHALL CONFORM TO CITY OF PORTLAND ROAD STANDARDS AS APPLICABLE TO THIS PROJECT

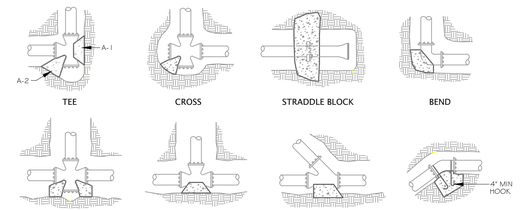
(E) WATER MAIN ROADWAY TRENCH DETAIL
NTS



(F) GAS PIPING TRENCH DETAIL
SUBJECT TO UNITIL REVIEW AND APPROVAL

(HORIZONTAL) BEARING AREA OF THRUST BLOCKS IN SQUARE FEET								(VERTICAL) VOLUME OF THRUST BLOCK IN CUBIC YARDS			
FITTING SIZE	TEE, WYE, DEAD END AND HYDRANT	STRADDLE BLOCK	90D BEND PLUGGED CROSS	TEE PLUGGED ON RUN A-1	TEE PLUGGED ON RUN A-2	45D BEND	22-1/2D BEND	11-1/4D BEND	90D BEND	45D BEND	22-1/2D BEND	11-1/4D BEND
4	1.0	1.6	1.4	1.9	1.4	1.0	---	---	---	---	---	---
6	2.1	3.7	3.0	4.3	3.0	1.6	1.0	---	1.3	---	---	---
8	3.8	6.5	5.3	7.6	5.4	2.9	1.5	1.0	2.3	1.1	---	---

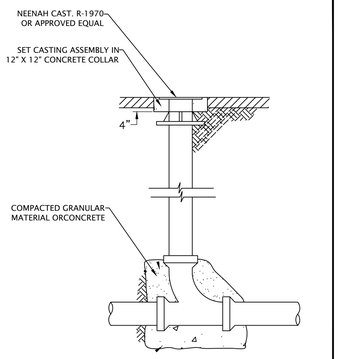
NOTES:
1. ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION:
BEARING AREA = (TEST PRESSURE / 150) x (2000 / SOIL BEARING STRESS) x (TABLE VALUE)
2. ABOVE VOLUMES BASED ON TEST PRESSURE OF 150 PSI AND THE WEIGHT OF CONCRETE = 4050 POUNDS PER CUBIC YARD. TO COMPUTE FOR DIFFERENT TEST PRESSURES, USE THE FOLLOWING EQUATION:
VOLUME = (TEST PRESSURE / 150) x (TABLE VALUE)



NOTES:
1. CONCRETE BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. ALL CONCRETE TO BE CLASS 2400 MINIMUM.
3. INSTALL ISOLATION MATERIAL BETWEEN PIPE AND/OR FITTINGS BEFORE POURING CONCRETE BLOCKING.
4. CONCRETE SHALL BE KEPT CLEAR OF ALL JOINTS AND ACCESSORIES.
5. TIE RODS SHALL BE DEFORMED GALVANIZED COLD ROLLED STEEL, 40000 PSI TENSILE STRENGTH.

RODS FOR VERTICAL BENDS		
FITTING SIZE	ROD SIZE	EMBEDMENT
12" AND LESS	#6	30"
14"-16"	#8	36"

(G) THRUST BLOCKING DETAIL
N.T.S.



NOTE:
CLEANOUT TOP SHALL BE ENCLOSED IN CASTING AND/OR FABRICATED COVER ASSEMBLY

IN LINE CLEANOUT

(J) SEWER CLEANOUT DETAIL
N.T.S.

THRUST RESTRAINT REQUIREMENTS

All tees, Bends, Reducers and End Caps should be restrained using thrust blocks, mega-lugs, mechanical joint fittings, field-lok gaskets, fusion joints, a combination of these methods, or other restraint fittings as sepcifically approved by The Engineer for use on the project. A certain number of joints before and after a restrained fitting may also require joint restraints as set forth in Tables below. Below Tables establish values for the minimum length of pipe ("L") within which other joints must be restrained. Values in feet are based on 150 PSI line pressure, 24" cover, Sandy-Clay type soil and a safety factor of 2. For other line pressures, multiply the "L" values by the actual pressure and divide by 150.

Pipe-Pipe Restraints for IPS & DPS pipe... minimum restrained length ("L") in feet

Pipe Size	Pipe OD IPS	Pipe OD DPS	Bends				Step Reduction			Dead End	Gate Valve
			11	22	45	90	1	2	3		
4"	4.5	4.8	2	5	11	24	17	24	37	54	28
6"	6.63	6.9	4	7	16	35	36	48	64	76	37
8"	8.63	9.05	5	10	18	46	40	66	76	90	46
10"	10.75	11.1	6	11	23	54	43	67	90	115	58
12"	12.75	13.2	6	12	25	64	46	72	100	134	67
14"		15.3	7	13	29	70	48	74	103	156	74
16"		17.4	7	16	32	78	50	77	106	175	88
18"		19.5	8	17	35	83	53	84	108	194	97
20"		21.6	10	18	38	91	55	96	110	214	107
24"		25.8	11	22	44	106	76	108	137	251	126

Based on 150 PSI pressure and 20 - foot length of pipe (for shorter pipe lengths, use table above)

Pipe-Pipe Restraints

Table below shows the number of adjacent joints to restrain...based on 20 foot length

Pipe Size	Pipe OD IPS	Pipe OD DPS	Bends				Step Reduction			Dead End	Gate Valve
			11	22	45	90	1	2	3		
4"	4.5	4.8	0	0	0	1	0	1	1	2	1
6"	6.63	6.9	0	0	0	1	1	2	3	3	1
8"	8.63	9.05	0	0	0	2	1	3	3	4	2
10"	10.75	11.1	0	0	1	2	2	3	4	5	2
12"	12.75	13.2	0	0	1	3	2	3	4	6	3
14"		15.3	0	0	1	3	2	3	5	7	3
16"		17.4	0	0	1	3	2	3	5	8	4
18"		19.5	0	0	1	4	2	4	5	9	4
20"		21.6	0	0	1	4	2	4	5	10	5
24"		25.8	0	1	2	5	3	5	6	12	6

Bend: Requires restraints on both ends. Other joints on both sides may require restraints (See Tables).
Reducers: Must be restrained on both ends. Additional joints on the larger end are required. (See Tables)
Standard Tee: Requires restraint on branch side only. Use 90-degree bend for additional joints. (See Tables)
Reducing Tee: Requires restraints on all three sides. (See Tables)
Dead End: Adjacent joint restraints are required on upstream joints. (See Tables)

(H) WATER MAIN PIPING THRUST RESTRAINT REQUIREMENTS
THESE STANDARDS APPLY IN ADDITION TO THRUST BLOCKING

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OWNER
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14 BAXTER BLVD
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PROJECT
RIVERTON PARK
CIRCLE 1 BUILDING, MAINTENANCE BUILDING AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWINGS
SITE/CIVIL DETAILS 4
CWS PROJECT NUMBER: 15.021

REVISIONS
1 FOR SCHEMATIC DESIGN/PRICING 01.17.2022
2 MAJOR SITE PLAN 12.22.2022

DRAWING NUMBER
C7.6
SCALE: AS SHOWN
DATE: 1/12/2019



PLANTING NOTES

1. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF WATERING AND MAINTENANCE.
2. CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE WORK SHOWN ON THE PLAN. ANY DISCREPANCY BETWEEN THE QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED ON THE PLAN SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL RENUMERATION. ANY DISCREPANCIES SHALL BE CLARIFIED WITH THE LANDSCAPE ARCHITECT PRIOR TO ORDERING PLANT MATERIAL.
3. ALL MATERIALS SHALL CONFORM TO SPECIFICATIONS OF THE AMERICAN STANDARDS FOR NURSERY STOCK (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS THE ORIGINAL GRADES BEFORE DIGGING.
5. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
6. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AT THE NURSERY AND AT THE SITE.
7. ALL PLANT BEDS SHALL MEET MINIMUM TOPSOIL REQUIREMENTS (SEE SPECIFICATIONS).
8. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL GRUBBING, BED PREPARATION, AND FINISH GRADING HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
9. ALL PLANT BEDS AND TREE WELLS SHALL HAVE A MINIMUM OF 3" OF UNIFORMLY DISTRIBUTED, DARK, SHREDDED BARK MULCH.
10. CONTRACTOR SHALL SUBMIT SOIL SAMPLE AND TEST OF TOPSOIL TO LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. SOIL ADMIXTURE SHALL BE ADDED TO EXISTING SOIL (BY CONTRACTOR) IF DEEMED NECESSARY BY SOIL TEST RESULTS.
11. ROUGH GRADING AND BED PREPARATION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANT INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR OF REQUIRED SITE VISIT.
12. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. ALL ROOT WRAPPING AND CONTAINER MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING.
13. ALL BROAD LEAF EVERGREEN PLANTS SHALL BE SPRAYED WITH AN ANTI-DESSICANT AT THE BEGINNING OF THEIR FIRST WINTER.
14. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
15. CONTRACTOR SHALL STAKE TREES IF DEEMED NECESSARY BY LANDSCAPE ARCHITECT.
16. THE LANDSCAPE CONTRACTOR SHALL PROVIDE LOAM FILL AS PER THE CONTRACT SPECIFICATIONS.
17. ALL PLANTS SHALL BE WATERED BY THE CONTRACTOR, AS NECESSARY TO INSURE HEALTH UNTIL FINAL ACCEPTANCE.
18. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE PLANT LIST AND PLANTING SPECIFICATIONS FOR SEASONAL REQUIREMENTS AND OTHER RESTRICTIONS RELATED TO THE TIME AND SEASON OF PLANTING.
19. PLANTING SOIL MIX: 1 PART COMPOST, 8 PARTS TOPSOIL, 3 PARTS HUMUS.
    TOPSOIL: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS GREATER THAN 1" IN ANY DIMENSION, PH RANGE 5.0-7.0 , AND SHALL CONTAIN NOT LESS THAN 6% ORGANIC MATTER BY WEIGHT.
    SANDY LOAM OR LOAM SOIL AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE, AND HAVE THE FOLLOWING MECHANICAL ANALYSIS:

TEXTURAL CLASS	% OF TOTAL WEIGHT	AVERAGE %
SAND (0.05- 2.0 MM)	45 TO 75%	60%
SILT (0.002- 0.05 MM)	15 TO 35%	25%
CLAY (< 0.002 MM)	5 TO 25%	15%

PLANTING SCHEDULE

	QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
TREES	10	AF	*Acer x freemani 'Red Pointe'*	Maple Hybrid	2"-2.5" cal.	B+B	X
	8	AL	*Amelanchier laevis 'Cumulus' or 'Spring Flurry'*	Allegheny Serviceberry	2"-2.5" cal.	B+B, TREE FORM	X
	21	AR	*Acer rubrum 'Karpick' or 'Bowhall'*	Red Maple	2"-2.5" cal.	B+B	X
	6	BN	*Betula nigra 'Heritage'*	River Birch	10'-12' ht.	B+B, CLUMP	X
	13	CC	*Carpinus caroliniana 'Palisade' or 'Uxbridge'*	American Hornbeam	2"-2.5" cal.	B+B	X
	5	CK	*Cladrastis kentukea*	Yellowwood	2"-2.5" cal.	B+B	
	7	GT	*Gleditsia triacanthos 'Street Keeper'*	Honeylocust	2"-2.5" cal.	B+B	
	15	LT	*Liriodendron tulipifera 'Little Volunteer'*	Tulip Tree	2"-2.5" cal.	B+B	
	7	MA	*Maackia amurensis 'Starburst'*	Maackia	2"-2.5" cal.	B+B	
	15	NS	*Nyssa slyvatica 'Firestarter'*	Tupelo	2"-2.5" cal.	B+B	X
	8	OV	*Ostrya virginiana*	Hop-Hornbeam	2"-2.5" cal.	B+B	X
	6	PA	*Platanus x acerfolia 'Exclamation'*	Planetree	2"-2.5" cal.	B+B	
	19	PG	*Picea glauca*	White Spruce	8'-10' ht.	B+B	X
	24	PS	*Prunus sargentii 'Pink Flair'*	Sargent Cherry	2"-2.5" cal.	B+B	
	12	PSF	*Pinus strobus 'Fastigiata'*	White Pine	8-10' ht.	B+B	X
	7	QB	*Quercus bicolor*	Swamp White Oak	2"-2.5" cal.	B+B	X
	4	TA	*Tilia americana 'McSentry'*	Basswood	2"-2.5" cal.	B+B	X
	8	UA	*Ulmus americana 'Princeton'*	American Elm	2"-2.5" cal.	B+B	X
	6	ZS	*Zelkova serrata 'Musashino'*	Zelkova	2"-2.5" cal.	B+B	

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PROJECT
RIVERTON PARK REDEVELOPMENT AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

REVISIONS
1 FOR SCHEMATIC DESIGN/PRICING 01.17.2022
2 MAJOR SITE PLAN 12.22.2022

DRAWING
LANDSCAPE MASTER PLAN
CWS PROJECT NUMBER: 15.021

DRAWING NUMBER
L1.0
SCALE: AS SHOWN
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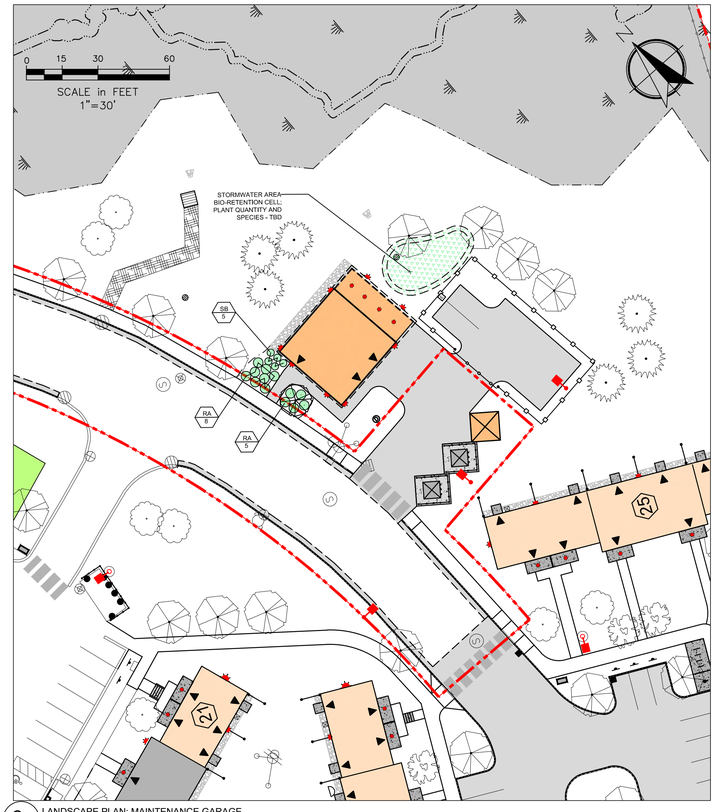
SHRUBS, GRASSES + PERENNIALS	QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
	33	DL	*Diervilla lonicera*	Northern Bush Honeysuckle	24" / #5		X
	25	FM	*Fothergilla 'Mt. Airy'*	Bottlebrush Bush	2' / #5		
	18	JV	*Juniperus virginiana 'Grey Owl'*	Juniper	2.5'-3' / #5		X
	7	KL	*Kalmia latifolia 'Snowdrift'*	Mountain Laurel	2.5'-3' / #7		X
	31	MD	*Microbiota decussata 'Prides'*	Siberian Carpet Cypress	#5		
	33	MG	*Myrica gale*	Sweetgale	#5		X
	10	MP	*Myrica pensylvanica 'Bobee'*	Northern Bayberry	3-4' / #7		X
	8	PV	*Panicum virgatum 'Northwind'*	Switchgrass	#3		X
	69	RA	*Rhus aromatica 'Gro-Low'*	Fragrant Sumac	2'-2.5' / #5		
	32	SB	*Spiraea x bumalda 'Anthony Waterer'*	Spirea	#5		
	68	SS1	*Schizachyrium scoparium 'Prairie Blues'*	Little Bluestem	#2		X
	25	SS2	*Schizachyrium scoparium 'Blue Heaven'*	Little Bluestem	#3		X
	44	TOS	*Thuja occidentalis 'Smaragd'*	Emerald Green Arborvitae	4' HT	B+B, matching	X
	8	TOW	*Thuja occidentails 'Woodwardii'*	Globe Arborvitae	3' HT	B+B, matching	X

BIO-RETENTION AREAS (±4,505 SF) SHRUBS	QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
	0	AM	*Aronia melanocarpa*	Black Chokeberry	#5	CONT	X
	0	AZ	Azalea viscosum	Swamp Azalea	#7	CONT	X
	0	CO	*Cephalanthus occidentalis 'Sugar Shack'*	Buttonbush	#7	CONT	X
	0	CR	*Cornus sericea 'Farrow'*	Red Twig Dogwood	3-4' HT	B+B	X
	0	CS	*Clethra alnifolia*	Summersweet	#5	B+B	X
	0	IVJ	*Ilex verticillata 'Jim Dandy'*	Winterberry (male)	#5	CONT	X
	0	IVR	*Ilex verticillata 'Red Sprite'*	Winterberry (female)	#5	CONT	X
	0	PV	*Panicum virgatum*	Switch Grass	#3	CONT	X
	0	VC	*Viburnum cassinoides*	Witherod Viburnum	3-4' HT	B+B	X

PERENNIALS + GRASSES	QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NATIVE
	0	DC	*Deschampsia cespitosa*	Tufted Hair Grass	#2	container	X
	0	ED	*Eupatorium dubium 'Little Joe'*	Joe-Pye Weed	#2	container	X
	0	EP	*Echinacea purpurea 'Magnus'*	Coneflower	#2	container	X
	0	IV	*Iris versicolor*	Blue Flag Iris	#2	container	X
	0	LS	*Liatris spicata*	Blazing Star	#2	container	X
	0	MF	*Monarda fistulosa*	Wild Burgamot	#2	container	X
	0	PV	*Panicum virgatum 'Northwind'*	Switchgrass	#2	container	X
	0	S	-	Erosion Control / Restoration Mix by New England Wetland Plants, Inc. or approved equal	35 lbs/acre (1250 sf/lbs)	seed	X



1 LANDSCAPE PLAN: NEIGHBORHOOD CENTER, CIRCLE 1 AND BUILDING 5
SCALE: NTS



2 LANDSCAPE PLAN: MAINTENANCE GARAGE
SCALE: NTS

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APPLICANT

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PROJECT

RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWINGS

LANDSCAPE PLAN:
ENLARGEMENTS

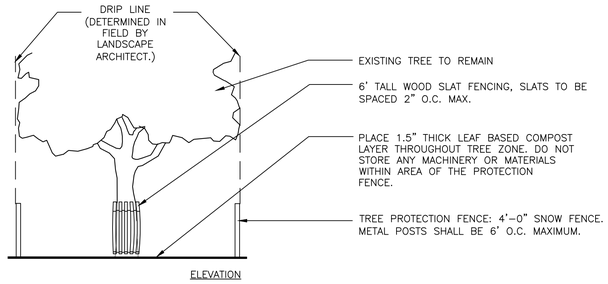
CWS PROJECT NUMBER: 15.021

REVISIONS

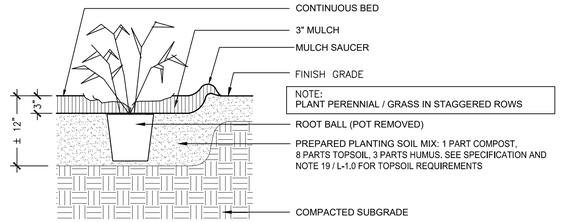
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2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
L1.1

SCALE: AS SHOWN
DATE: 1/12/2019



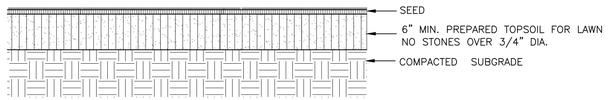
1 TREE PROTECTION
SCALE: NTS



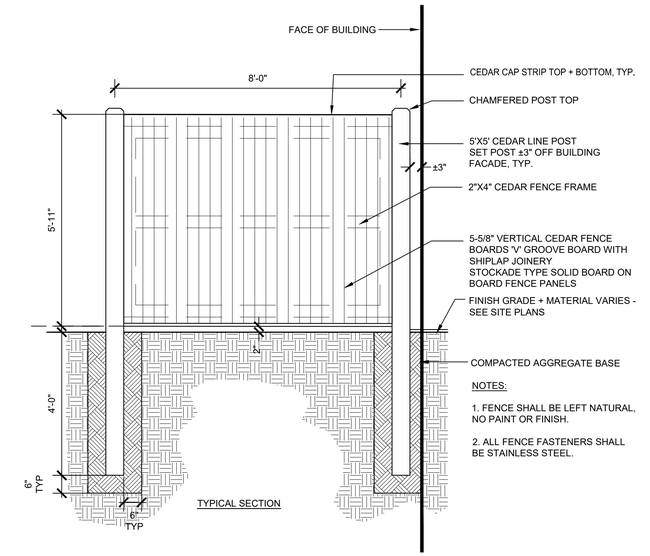
4 PERENNIAL + ORNAMENTAL GRASS PLANTING
SCALE: NTS

TOPSOIL: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS GREATER THAN 1" IN ANY DIMENSION, PH RANGE 5.0–7.0 , AND SHALL CONTAIN NOT LESS THAN 6% ORGANIC MATTER BY WEIGHT. SANDY LOAM OR LOAM SOIL AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE, AND HAVE THE FOLLOWING MECHANICAL ANALYSIS:

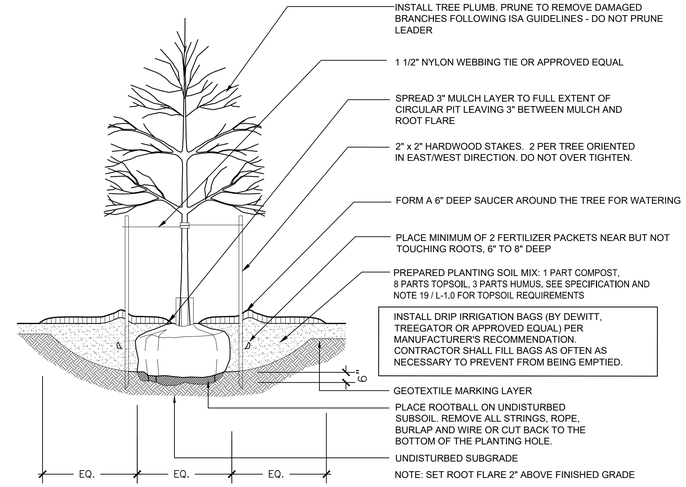
TEXTURAL CLASS	% OF TOTAL	WEIGHT AVERAGE %
SAND (0.05– 2.0 MM)	45 TO 75%	60%
SILT (0.002– 0.05 MM)	15 TO 35%	25%
CLAY (< 0.002 MM)	5 TO 25%	15%



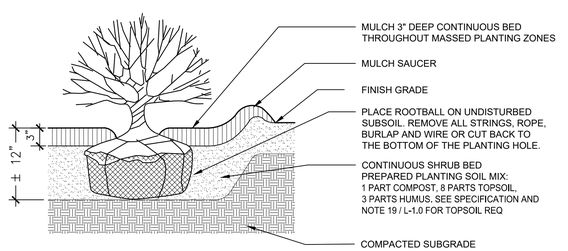
5 LAWN PLANTING
SCALE: NTS



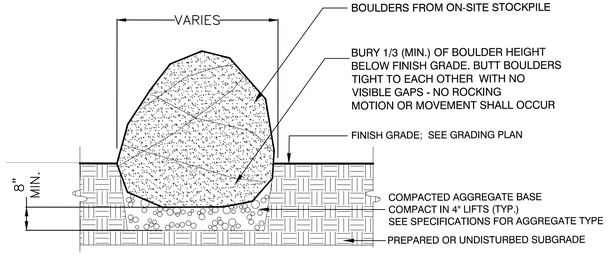
8 PRIVACY FENCE
SCALE: NTS



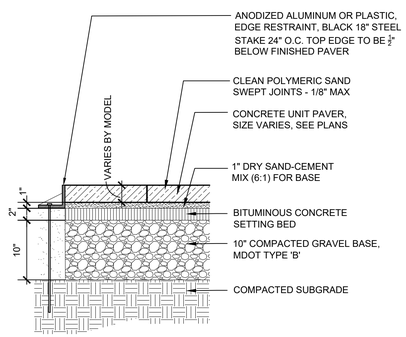
2 TREE PLANTING
SCALE: NTS



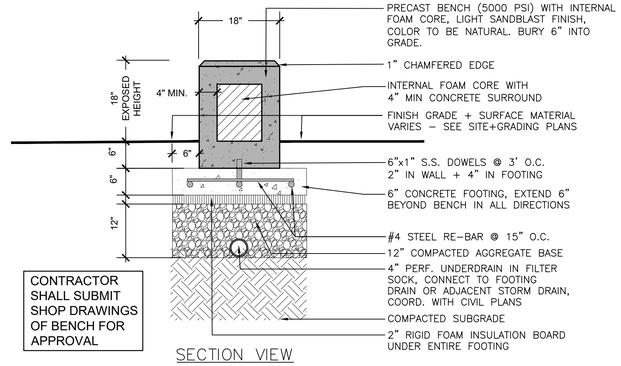
3 SHRUB PLANTING
SCALE: NTS



6 BOULDERS
SCALE: NTS



7 CONCRETE PAVERS
SCALE: NTS



9 BENCH
SCALE: NTS

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
264 US Route One, Suite 100–2A
Scarborough ME 04074
OFFICE: 207 774 4441 CWSARCH.COM

NOT FOR CONSTRUCTION

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

APPLICANT
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REDEVELOPMENT AND REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

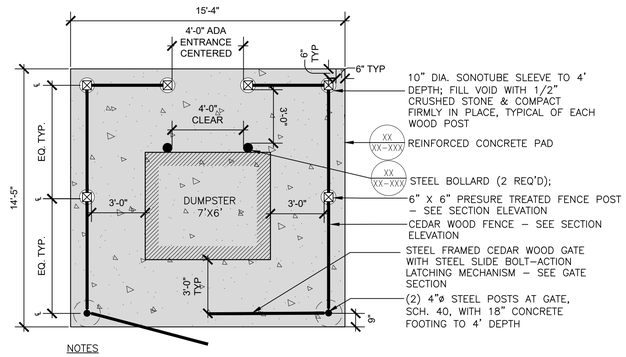
DRAWINGS
LANDSCAPE DETAILS
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
L2.0

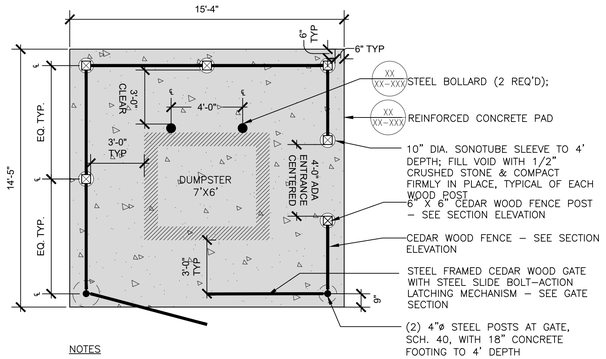
SCALE: AS SHOWN
DATE: 1/12/2019



NOTES

1. ALL WOOD SHALL BE NORTHERN WHITE CEDAR CHILMARK CEDAR WOOD FENCE BY WALPOLE WOODWORKERS (OR APPROVED EQUAL; STAIN COLOR T.B.D. FROM STANDARD COLOR CHART

2. ALL NAILS, SCREWS AND BRACKETS TO BE GALVANIZED

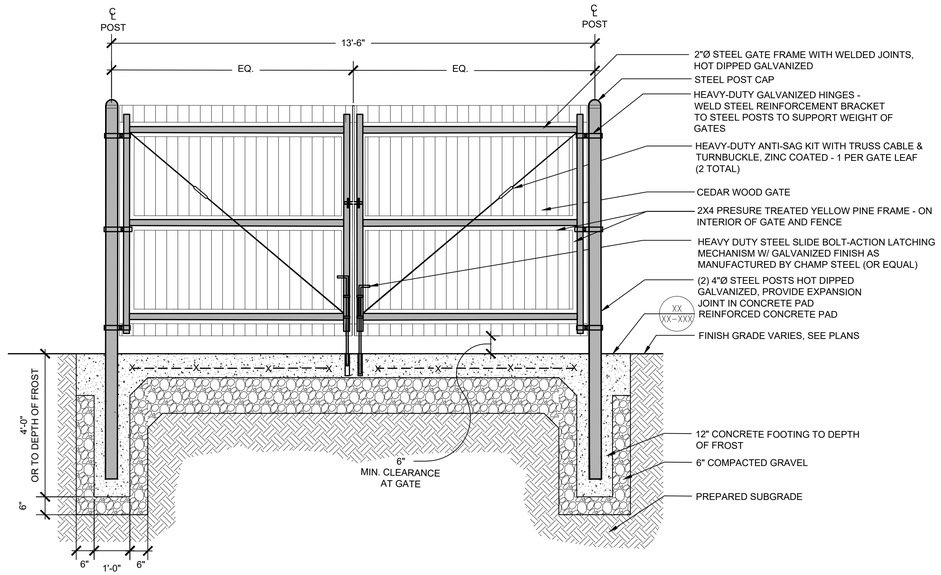


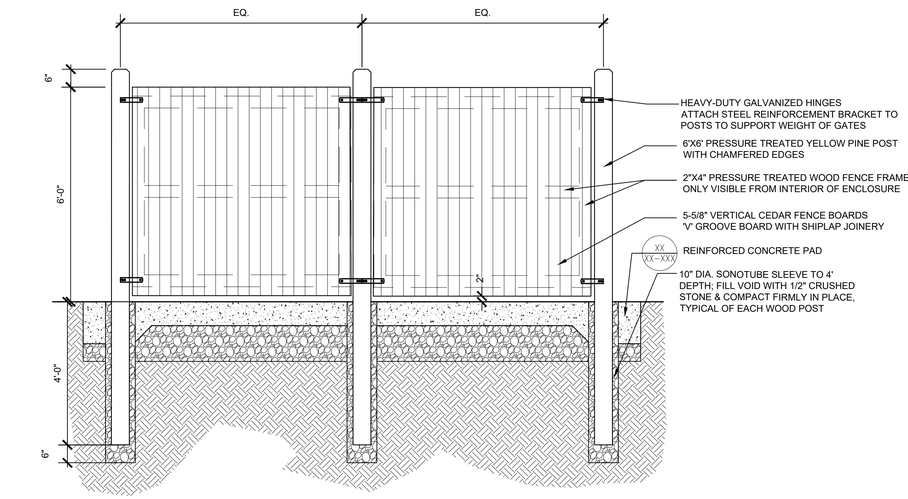
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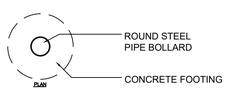
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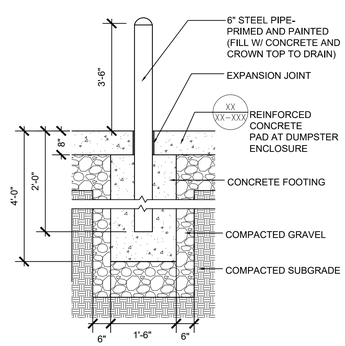
1 DUMPSTER ENCLOSURE + GATE
SCALE: NTS



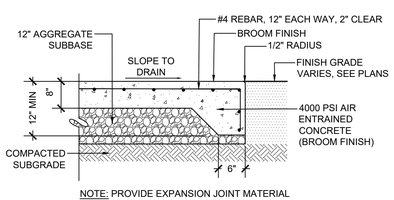


4 DUMPSTER SURROUND
SCALE: NTS





2 DUMPSTER BOLLARD
SCALE: NTS



NOTE: PROVIDE EXPANSION JOINT MATERIAL AROUND BOLLARDS AND STEEL POSTS

3 DUMPSTER PAD
SCALE: NTS

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DESIGNER

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OWNER

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APPLICANT

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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE,
PORTLAND, MAINE 04103

DRAWINGS

LANDSCAPE DETAILS

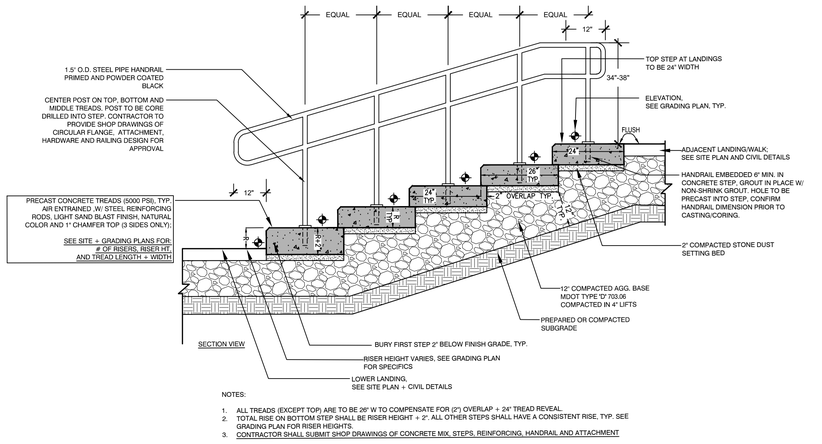
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
L2.1

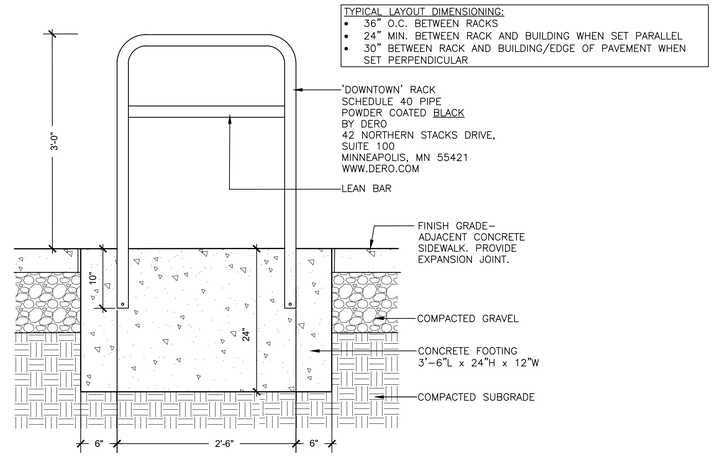
SCALE: AS SHOWN
DATE: 1/12/2019



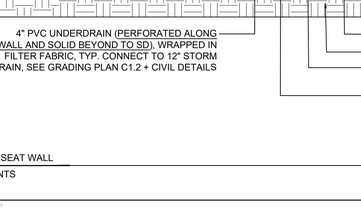
NOTES:

1. ALL TREADS (EXCEPT TOP) ARE TO BE 26" W TO COMPENSATE FOR (2") OVERLAP + 24" TREAD REVEAL.
2. TOTAL RISE ON BOTTOM STEP SHALL BE RISER HEIGHT + 2". ALL OTHER STEPS SHALL HAVE A CONSISTENT RISE, TYP. SEE GRADING PLAN FOR RISER HEIGHTS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF CONCRETE MIX, STEPS, REINFORCING, HANDRAIL AND ATTACHMENT

1 STEPS @ NEIGHBORHOOD CENTER
SCALE: NTS



4 BIKE RACK
SCALE: NTS



NOTES:

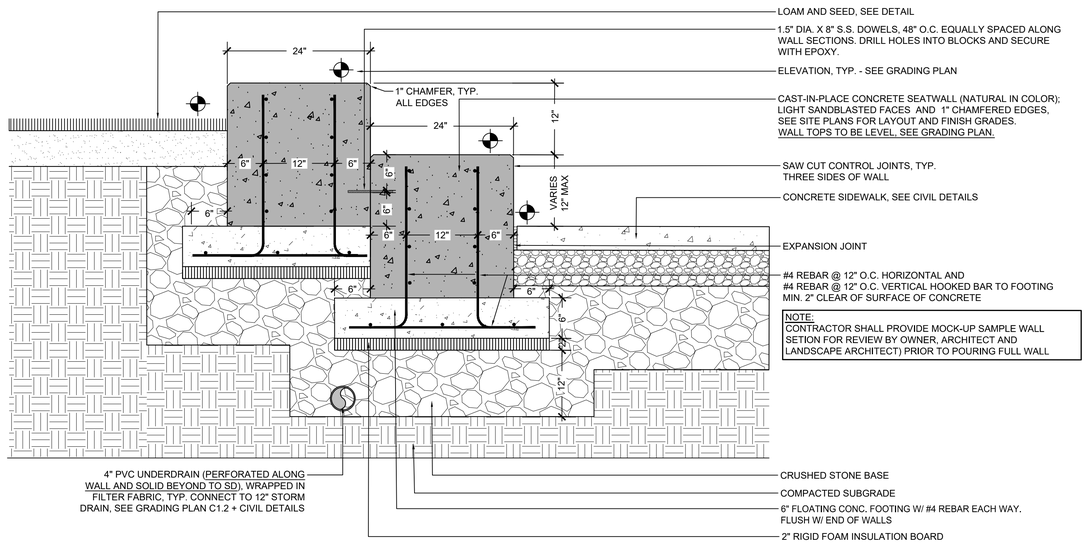
1. SLEEVE TO BE METAL W/ WELDED END; OPENING TO BE 1" LARGER THAN POST DIAMETER OR WIDTH

2. TOP OF POST SLEEVE TO BE FLUSH OR SLIGHTLY BELOW CONCRETE SURFACE

3. GROUT COLOR TO BE MATCH CONCRETE (TYP)

4. HANDRAIL INSTALLATION SHALL CONFORM TO ALL A.D.A. & LOCAL BLDG. CODES

2 HANDRAIL ATTACHMENT
SCALE: NTS



3 ELLIPSE SEAT WALL
SCALE: NTS

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PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2, RIVERTON, DRIVE
PORTLAND, MAINE 04103

DRAWING
LANDSCAPE DETAILS
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
L2.2

SCALE: AS SHOWN
DATE: 1/12/2019

LIGHTING SCHEDULE

QTY	SYM	LABEL	DESCRIPTION	MANUFACTURER	LAMP	POLE HT	POLE	BASE REVEAL	MOUNTING HEIGHT	NOTES	DESCRIPTION	LOCATION / BUILDING
10		EX1	EX UNKNOWN CITY / CMP LIGHT	UNKNOWN	ESTIMATED 31 WATTS	N/A	-	-	ESTIMATED +/-26'	-	ESTIMATED	CITY STREETS
2		L2	AQUA SERIES RECESSED SERIES STRIP LIGHT	FORUM LIGHTING	27 WATT LED	N/A	N/A	N/A	VARIES, SEE PLAN	3000K	AQR-F-X3-43LED-40-SAT X 2'-WH (C1-4)	CIRCLE 1 BUILDING
22		L4	AQUA SERIES RECESSED SERIES STRIP LIGHT	FORUM LIGHTING	27 WATT LED	N/A	N/A	N/A	VARIES, SEE PLAN	3000K	AQR-F-X3-43LED40-SAT X 4'-WH (C1-4)	CIRCLE 1 BUILDING NEIGHBORHOOD CENTER
32		L6	AQUA SERIES RECESSED SERIES STRIP LIGHT	FORUM LIGHTING	41 WATT LED	N/A	N/A	N/A	VARIES, SEE PLAN	3000K	AQR-F-X3-43LED30-SAT X 6'-WH PRORATED (C1-4)	CIRCLE 1 BUILDING NEIGHBORHOOD CENTER
8		S1A	VIPER STRIKE	BEACON LIGHTING	55 WATT LED	VARIES	4" ROUND	VARIES*	VARIES, SEE PLAN	3000K, *SEE PLANS FOR BASE REVEAL	VP-1-36L-55-3K7-4W	SITE WIDE
8		S1B	VIPER STRIKE	BEACON LIGHTING	55 WATT LED	VARIES	4" ROUND	VARIES*	VARIES, SEE PLAN	3000K, *SEE PLANS FOR BASE REVEAL	VP-1-36L-55-3K7-4F	SITE WIDE
3		S1C	VIPER STRIKE	BEACON LIGHTING	55 WATT LED	VARIES	4" ROUND	VARIES*	VARIES, SEE PLAN	3000K, *SEE PLANS FOR BASE REVEAL	VP-1-36L-55-3K7-3	SITE WIDE
2		S2	TWIN VIPER STRIKE	BEACON LIGHTING	55 WATT LED	14'	5" ROUND	24"	16'	3000K	TWIN-VP-1-36L-55-3K7-4F	CIRCLE 1 BUILDING PARKING LOT
3		S3	VIPER STRIKE	BEACON LIGHTING	39 WATT LED	VARIES	4" ROUND	VARIES*	VARIES, SEE PLAN	3000K, *SEE PLANS FOR BASE REVEAL	VP-1-36L-39-3K7-3	SITE WIDE
3		S4	VIPER STRIKE	BEACON LIGHTING	39 WATT LED	VARIES	4" ROUND	VARIES*	VARIES, SEE PLAN	3000K, *SEE PLANS FOR BASE REVEAL	VP-1-36L-39-3K7-4F	SITE WIDE
4		S5	VIPER STRIKE	BEACON LIGHTING	55 WATT LED	10'	4" ROUND	24"	12'	3000K	VP-1-36L-55-3K7-3-BC	CIRCLE 1 BUILDING
9		SRA	VIPER STRIKE RETROFIT HEAD	BEACON LIGHTING	55 WATT LED	EX	EX	EX	ESTIMATED +/-18'	NEW FIXTURE ON EX POLE, 3000K	VP-1-36L-55-3K7-4W RETROFIT HEAD	SITE WIDE
6		SRB	VIPER STRIKE RETROFIT HEAD	BEACON LIGHTING	55 WATT LED	EX	EX	EX	ESTIMATED +/-18'	NEW FIXTURE ON EX POLE, 3000K	VP-1-36L-55-3K7-4F RETROFIT HEAD	SITE WIDE
125		R	6" SQUARE LITEBOX	PRESCOLITE	13 WATT LED	N/A	N/A	N/A	8'-0"	3000K, TRIM COLOR TBD, ADD DAYLIGHT SENSOR	LBSE-6SQD-30K8	REHAB: FRONT STOOPS AND ELECTRICAL/BIKE ROOM ADDITIONS
4		R2	DRIVE SRT1 EDGE-LIT	BEACON LIGHTING	22 WATT LED	N/A	N/A	N/A	11'-0"	3000K	SRT1-20-3K7-5QW-UNV	MAINTENANCE GARAGE BAY 2
6		R3	CO-PILOT DOME	INSIGHT LIGHTING	5 WATT LED/FT	N/A	N/A	N/A	12'-0"	-	CPD-SO-RGBW-155-X-X	NEIGHBORHOOD CENTER CANOPY DOMES

LIGHTING SCHEDULE

QTY	SYM	LABEL	DESCRIPTION	MANUFACTURER	LAMP	POLE HEIG HT	POLE	BASE REVEAL	MOUNTING HEIGHT	NOTES	DESCRIPTION	LOCATION / BUILDING
66		W1A	SLING SLENDER WALL PACK	HUBBLE LIGHTING	20 WATT LED	N/A	N/A	N/A	10'-0"	3000K	SG1-20-3K7-FT	REHAB: BUILDINGS
22		W1B	SLING SLENDER WALL PACK	HUBBLE LIGHTING	40 WATT LED	N/A	N/A	N/A	18'-0"	3000K	SG1-40-3K	REHAB: BUILDINGS
7		W1C	SLING SLENDER WALL PACK	HUBBLE LIGHTING	10 WATT LED	N/A	N/A	N/A	10'-0"	3000K	SG1-10-3K	REHAB: BUILDINGS
4		W3A	GEOPACK TRAPEZOID WALLPACK	HUBBLE LIGHTING	15 WATT LED	N/A	N/A	N/A	VARIES, SEE PLAN	3000K	GEO1-24L-15-3K7-3-UNV-DBT	CIRCLE 1 BUILDING NEIGHBORHOOD CENTER MAINTENANCE GARAGE
22		W3B	GEOPACK TRAPEZOID WALL PACK	HUBBLE LIGHTING	20 WATT LED	N/A	N/A	N/A	VARIES, SEE PLAN	3000K	GEO1-24L-20-3K7-4-UNV-DBT	CIRCLE 1 BUILDING NEIGHBORHOOD CENTER MAINTENANCE GARAGE
13		W4B	CY1 CYPHER ACCENT SCALE	ARCHITECTURAL AREA LIGHTING	25 WATT LED	N/A	N/A	N/A	VARIES, SEE PLAN	3000K	CY1-25-3K7-1-4-R	CIRCLE 1 BUILDING



LIGHTING NOTES

1. EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2. CALCULATIONS MAY OR MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
3. READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
4. THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND / OR SITE.
5. CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
6. THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
7. DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.
8. EXISTING LIGHT FIXTURES INCLUDED IN CALCULATION ARE ESTIMATED ONLY, ACTUAL LIGHT OUTPUT AND LIGHT LEVELS WILL VARY.

SWANEY LIGHTING ASSOCIATES, INC.
215 PLEASANT HILL ROAD
SCARBOROUGH, MAINE 04074
207.883.7100

Calculation Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
SITE	0.45	26.8	0.0	N.A.	N.A.

CWS ARCHITECTS
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NOT FOR CONSTRUCTION

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PORTLAND, MAINE 04101

APPLICANT
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PROJECT
RIVERTON PARK
REDEVELOPMENT
AND
REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
PHOTOMETRIC
MASTER PLAN
CWS PROJECT NUMBER: 15.021

REVISIONS

1	FOR SCHEMATIC DESIGN/PRICING	01.17.2022
2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
L3.0
SCALE: AS SHOWN
DATE: 1/12/2019



UNIT SUMMARY:

DWELLING UNITS (DU)

	EX DU	EX RESIDENT SERVICE UNITS	PROP DU
CIRCLE 1 :	24 DU	0 SU	59 DU
CIRCLE 2:	24 DU	6 SU	29 DU
CIRCLE 3:	28 DU	2 SU	28 DU
CIRCLE 4	24 DU	0 SU	24 DU
CIRCLE 5:	17 DU	1 SU	18 DU
CIRCLE 6:	24 DU	0 SU	24 DU
	141 DU	9 SU	182 DU

PARKING SUMMARY:

OFF-STREET	EX	PROPOSED
BUILDING 1 :	25	71
CIRCLE 2:	38	34
CIRCLE 3:	38	33
CIRCLE 4:	35	26
CIRCLE 5:	25	25
CIRCLE 6:	27	26
MAINTENANCE:	-	2
NEIGHBORHOOD CENTER:	6	11
	194	228

ON-STREET	
RIVERTON DR.	45-51 PS
SPRINGBROOK WAY	34-39 PS
APRIL-NOV	±79-90 PS
NOV-APRIL	±40-45 PS
TOTAL AVAILABLE:	VARIES

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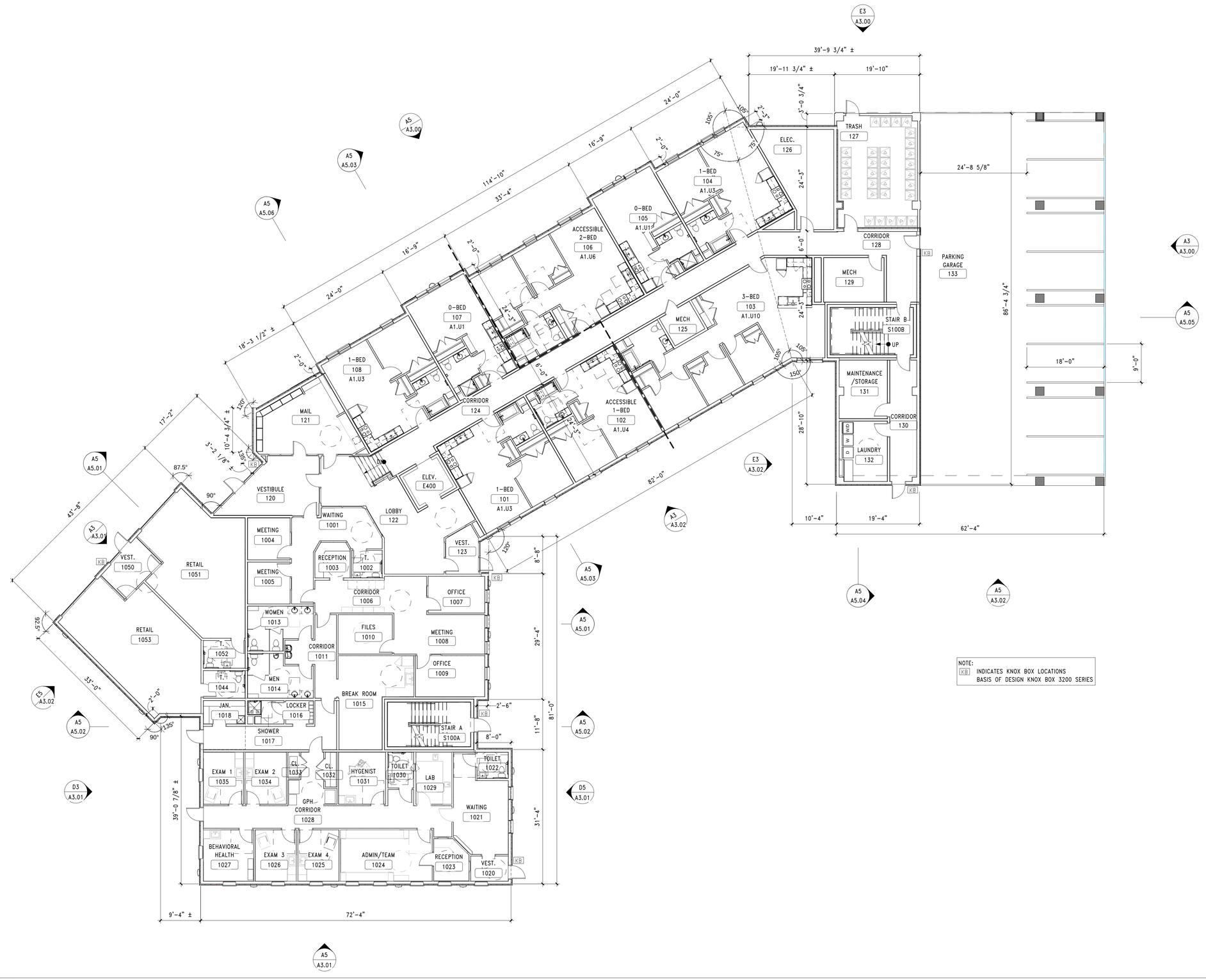
PROJECT
RIVERTON PARK REDEVELOPMENT AND REHABILITATION
2 RIVERTON DRIVE PORTLAND, MAINE 04103

DRAWINGS
MASTER PLAN
CWS PROJECT NUMBER: 15.021

REVISIONS

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2	MAJOR SITE PLAN	12.22.2022

DRAWING NUMBER
C1.0
SCALE: AS SHOWN
DATE: 1/12/2019



NOTE:
KB INDICATES KNOX BOX LOCATIONS
BASIS OF DESIGN KNOX BOX 3200 SERIES

UNIT MIX LEVEL 1

0-BED = 2
1-BED = 4 (1/4 ACCESSIBLE)
2-BED = 1 (1/1 ACCESSIBLE)
3-BED = 1

TOTAL = 8 UNITS (2 ACCESSIBLE)
TOTAL AREA = 16,011 SF

A5 01-FIRST FLOOR - OVERALL PLAN
REFERENCED FROM: A3.00 SCALE: 3/32" = 1'-0"

C:\Users\keegan.carmichael\Documents\21023_Circle One Building_R21_CENTRAL_KCarmichaelSPEY2.rvt

PROJECT NORTH
PLAN NORTH
TRUE NORTH

DRAWING NUMBER
A1.10

SCALE: 3/32" = 1'-0"
DATE: 12/22/2022

12/15/2022 1:16:12 PM

MAJOR SITE PLAN

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

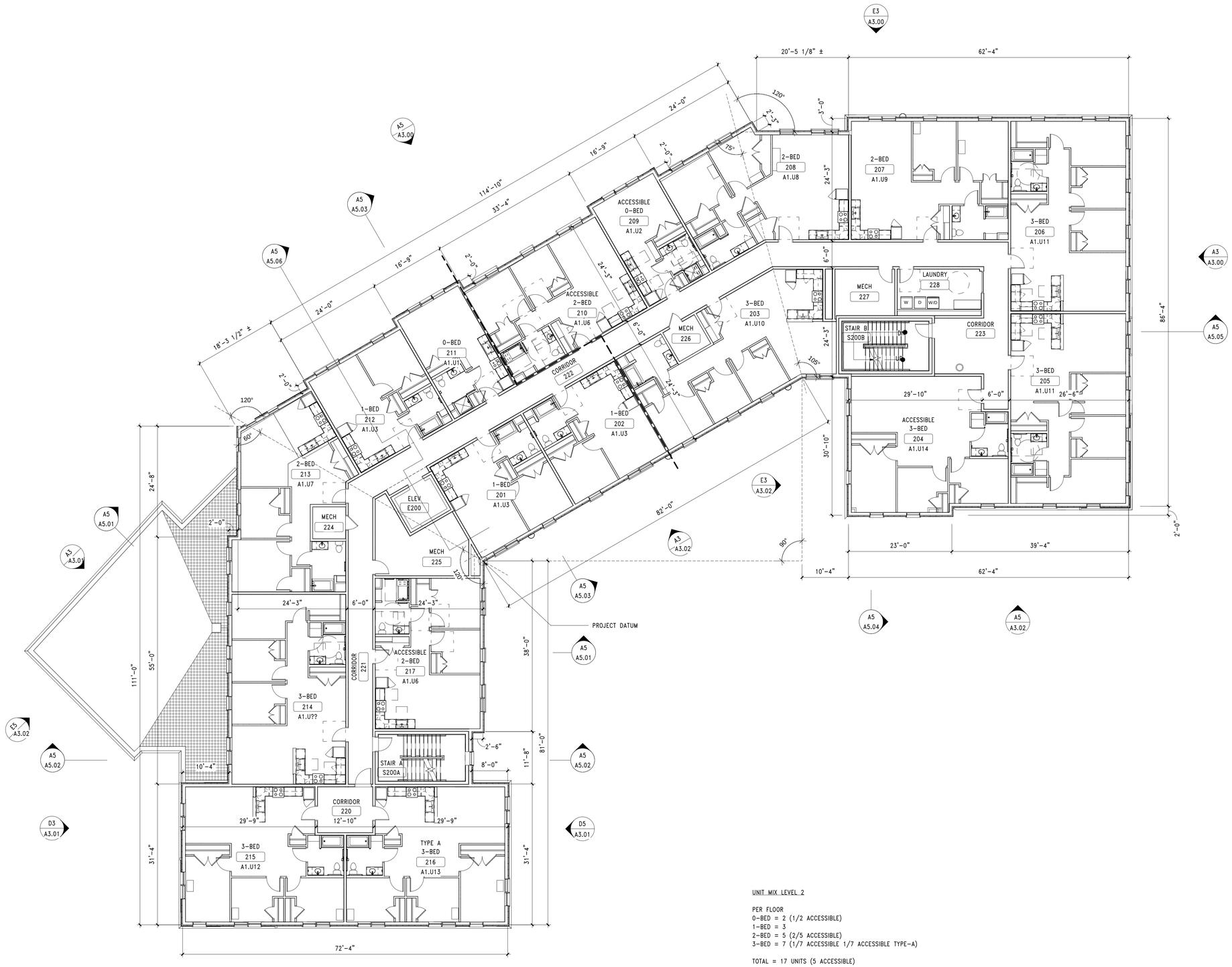
DESIGNER
CWS ARCHITECTURE + INTERIOR DESIGN
264 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER
RIVERTON PARK, LP
14 BAXTER BLVD.
PORTLAND, MAINE 04101

PROJECT
CIRCLE 1 BUILDING
RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
FIRST FLOOR PLAN
CWS PROJECT NUMBER: 21023

REVISIONS



UNIT MIX LEVEL 2

PER FLOOR
0-BED = 2 (1/2 ACCESSIBLE)
1-BED = 3
2-BED = 5 (2/5 ACCESSIBLE)
3-BED = 7 (1/7 ACCESSIBLE 1/7 ACCESSIBLE TYPE-A)

TOTAL = 17 UNITS (5 ACCESSIBLE)
TOTAL AREA = 18,308 SF

CWS ARCHITECTURE + INTERIOR DESIGN

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DESIGNER

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OWNER

RIVERTON PARK, LP

14 BAXTER BLVD.
PORTLAND, MAINE 04101

PROJECT

CIRCLE 1 BUILDING

RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

SECOND FLOOR PLAN

CWS PROJECT NUMBER: 21023

REVISIONS

PROJECT NORTH

PLAN NORTH
TRUE NORTH

DRAWING NUMBER

A1.20

SCALE: 3/32" = 1'-0"

DATE: 12/22/2022

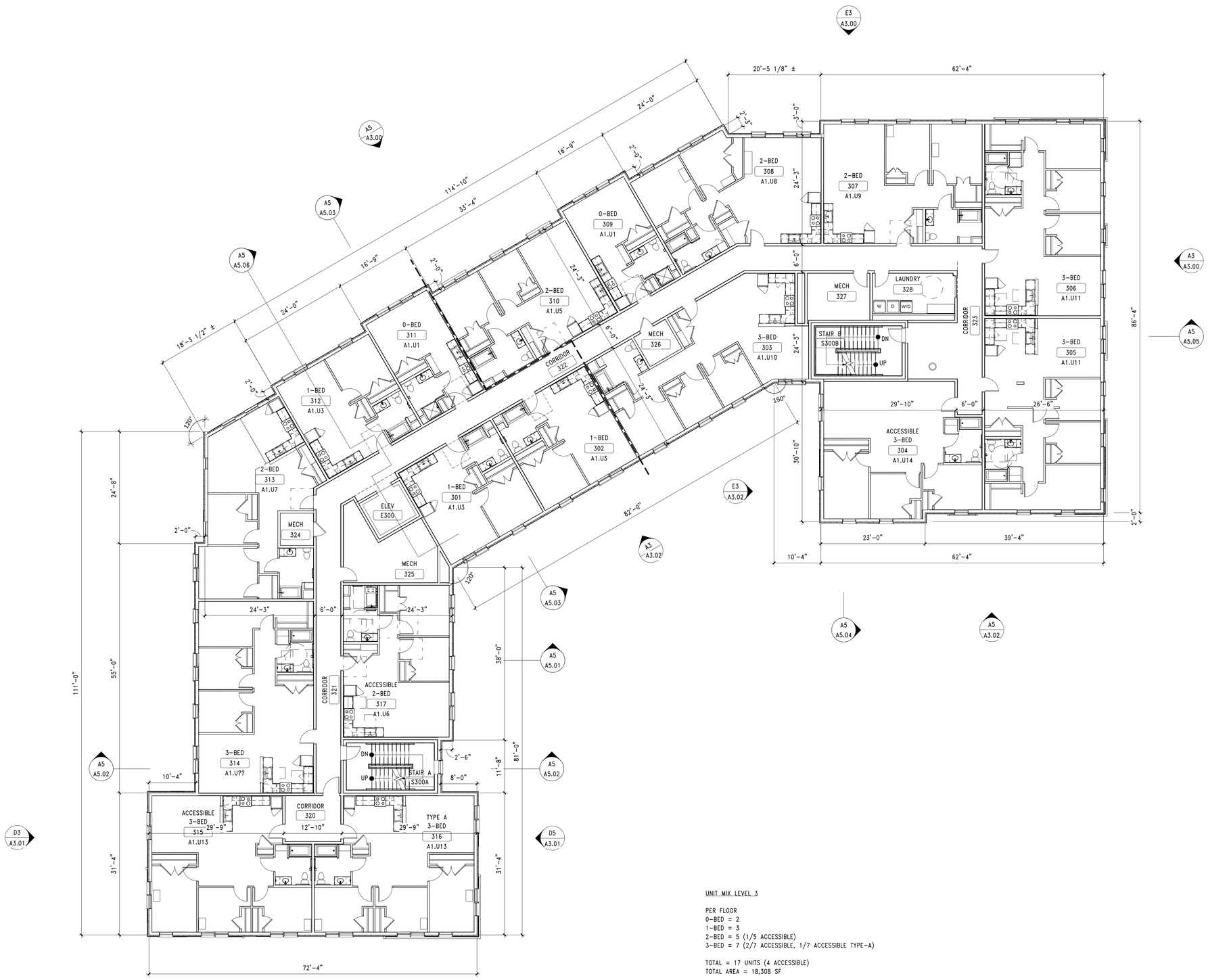
MAJOR SITE PLAN

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A5 02-SECOND FLOOR- OVERALL PLAN

REFERENCED FROM: A3.00 SCALE: 3/32" = 1'-0"

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UNIT MIX LEVEL 3

PER FLOOR
0-BED = 2
1-BED = 3
2-BED = 5 (1/5 ACCESSIBLE)
3-BED = 7 (2/7 ACCESSIBLE, 1/7 ACCESSIBLE TYPE-A)

TOTAL = 17 UNITS (4 ACCESSIBLE)
TOTAL AREA = 18,308 SF

A5 03-THIRD FLOOR - OVERALL PLAN

REFERENCED FROM: A3.00 SCALE: 3/32" = 1'-0"

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OWNER

RIVERTON PARK, LP
14 BAXTER BLVD.
PORTLAND, MAINE 04101

PROJECT

CIRCLE 1 BUILDING
RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

THIRD FLOOR PLAN

CWS PROJECT NUMBER: 21023

REVISIONS

PROJECT NORTH

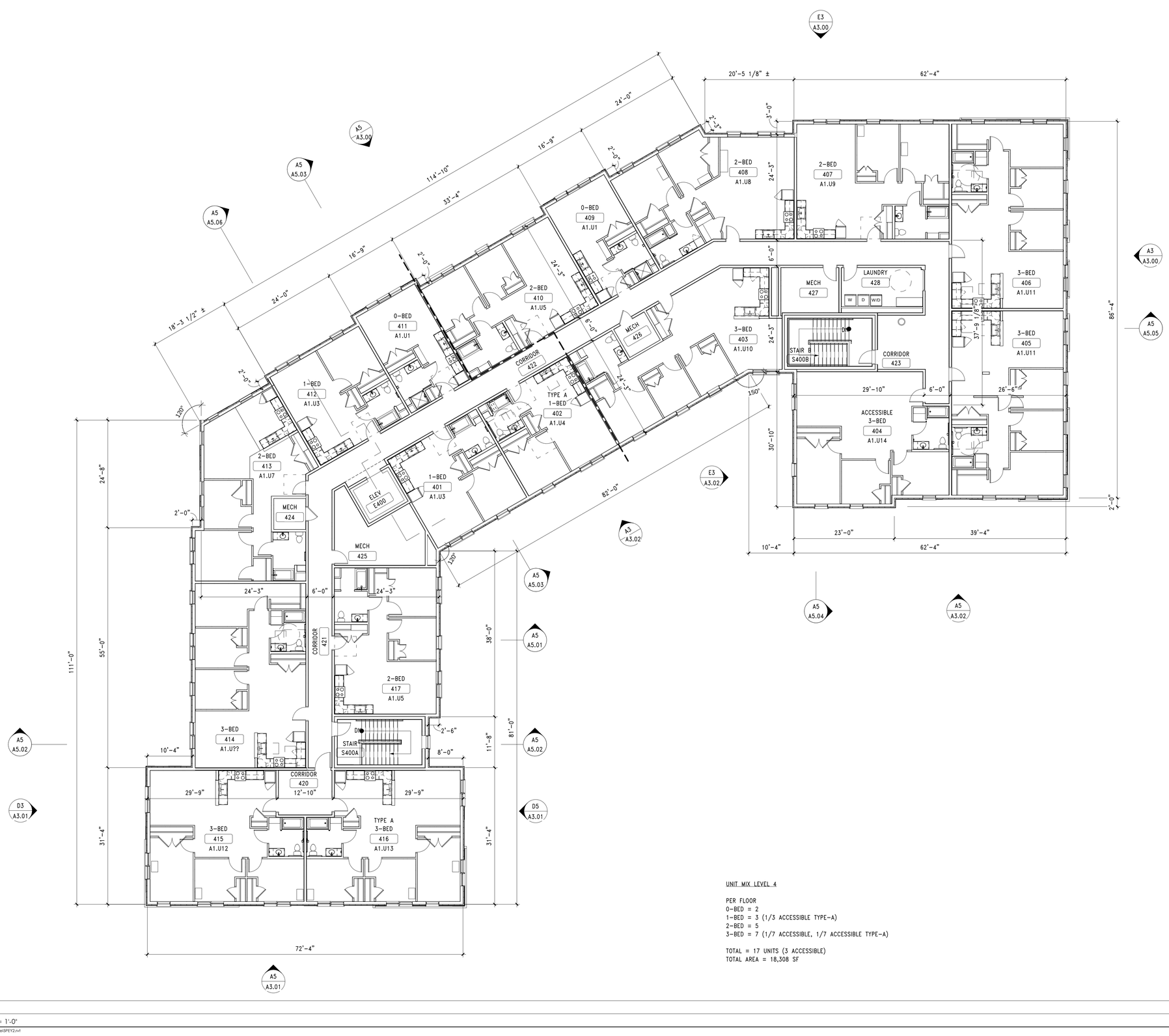
PLAN NORTH
TRUE NORTH

DRAWING NUMBER
A1.30

SCALE: 3/32" = 1'-0"
DATE: 12/22/2022

12/15/2022 1:21:20 PM

MAJOR SITE PLAN



UNIT MIX LEVEL 4

PER FLOOR
0-BED = 2
1-BED = 3 (1/3 ACCESSIBLE TYPE-A)
2-BED = 5
3-BED = 7 (1/7 ACCESSIBLE, 1/7 ACCESSIBLE TYPE-A)

TOTAL = 17 UNITS (3 ACCESSIBLE)
TOTAL AREA = 18,308 SF

A5 04-FORTH FLOOR - OVERALL PLAN

REFERENCED FROM: A3.00 SCALE: 3/32" = 1'-0"

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PROJECT
CIRCLE 1 BUILDING
RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
FORTH FLOOR PLAN
CWS PROJECT NUMBER: 21023

REVISIONS

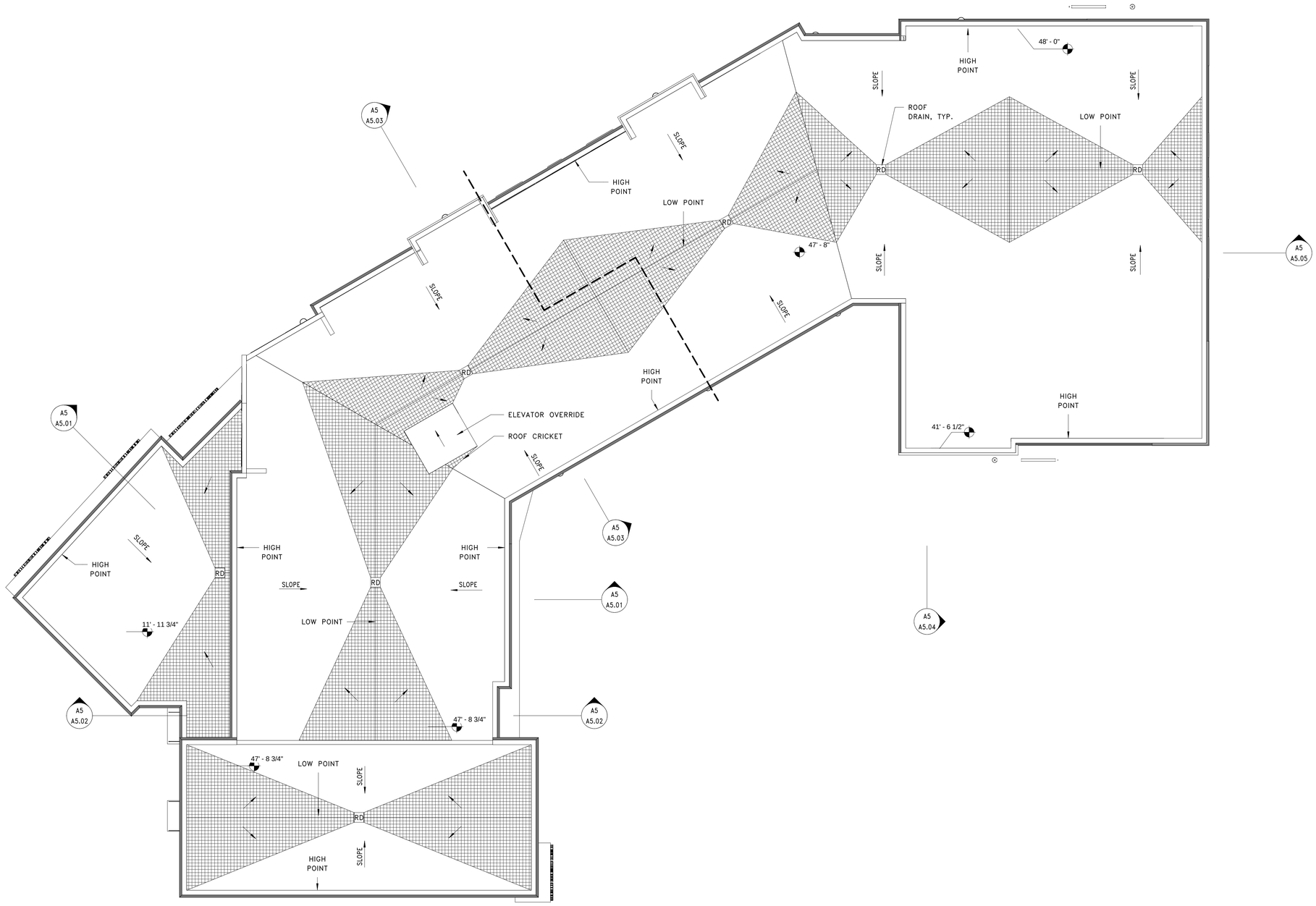
PROJECT NORTH
PLAN NORTH
TRUE NORTH

DRAWING NUMBER
A1.40

SCALE: 3/32" = 1'-0"
DATE: 12/22/2022

12/15/2022 1:21:49 PM

MAJOR SITE PLAN



A5	ROOF PLAN
REFERENCED FROM:	A3.00 SCALE: 3/32" = 1'-0"

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CWS ARCHITECTURE + INTERIOR DESIGN

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207 774 4441
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OWNER

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PORTLAND, MAINE 04101

PROJECT

CIRCLE 1 BUILDING

RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

ROOF PLAN

CWS PROJECT NUMBER: 21023

REVISIONS

PROJECT NORTH

PLAN NORTH
TRUE NORTH

DRAWING NUMBER

A1.50

SCALE: 3/32" = 1'-0"

DATE: 12/22/2022

12/15/2022 1:28:41 PM

MAJOR SITE PLAN

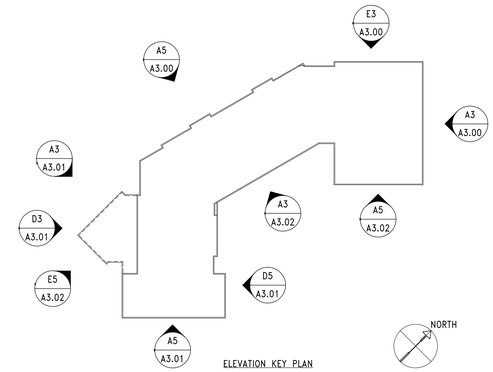
EXTERIOR FINISH MATERIAL LEGEND

CODE	MATERIAL	COLOR AND FINISH	PATTERN LEGEND
1	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: PEARL GRAY	
2	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: RICH ESPRESSO	
3	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: TURKISH TILE (PAINTED) SW 7610	
4	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: DEEP OCEAN	
5	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 6'-0" X 1'-3"	COLOR: RICH ESPRESSO	
6	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. VARIOUS PANEL SIZES	COLOR: AGED PEWTER	
7	BRAKE METAL TRIM CAP FLASHING	COLOR: METAL	
8	FIBER CEMENT SIDING – 12" REVEAL, NICHIHA PANEL	COLOR: PEARL GRAY	

EXTERIOR FINISH MATERIAL LEGEND

CODE	MATERIAL	COLOR AND FINISH	PATTERN LEGEND
9	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 6'-3"	COLOR: DEEP OCEAN	
10	FIBER CEMENT SIDING – 12" REVEAL, NICHIHA PANEL	COLOR: RICH ESPRESSO	
11	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 6'-3"	COLOR: BOOTHBAY BLUE	
12	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: IRON GRAY	
13	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: AGED PEWTER	
14	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: VARIOUS	COLOR: BLACKBERRY (PAINTED) SW 7577	
15	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: VARIOUS	COLOR: AGED PEWTER	

NOTE: SEE A8.20 FOR WINDOW AND LOUVER SCHEDULE



ELEVATION KEY PLAN



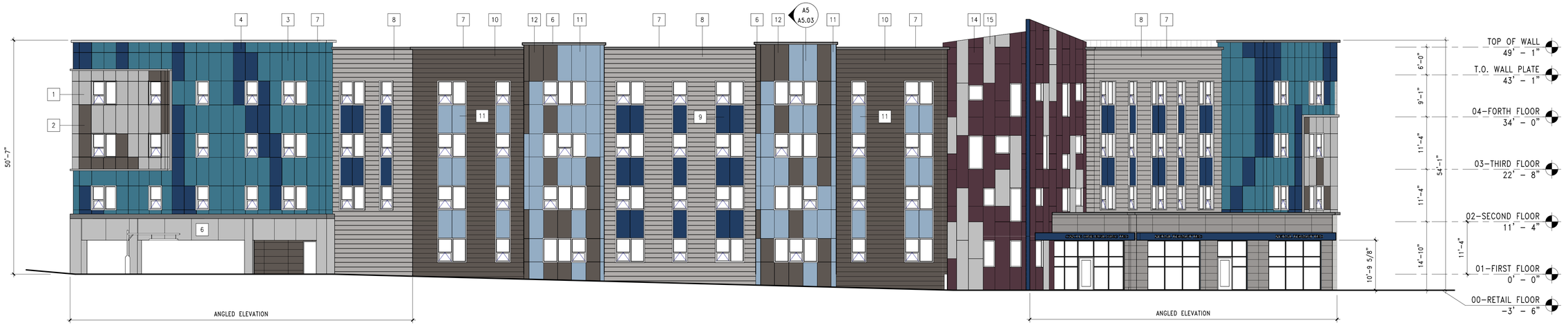
A3 ELEVATION 1

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



E3 ELEVATION 2

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



A5 ELEVATION 3

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"

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CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

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207 774 4441
CWSARCH.COM

OWNER

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

CIRCLE 1 BUILDING
RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

EXTERIOR ELEVATIONS
CWS PROJECT NUMBER: 21023

REVISIONS

DRAWING NUMBER
A3.00

SCALE: As indicated
DATE: 12/22/2022

12/15/2022 2:29:30 PM

MAJOR SITE PLAN

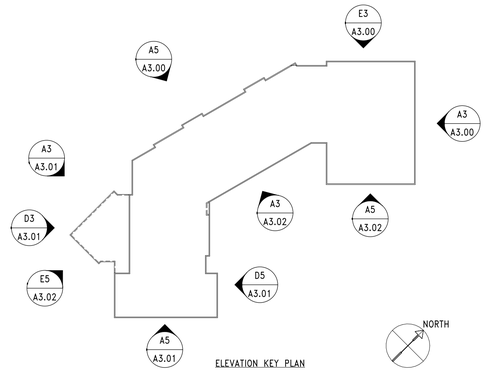
EXTERIOR FINISH MATERIAL LEGEND

CODE	MATERIAL	COLOR AND FINISH	PATTERN LEGEND
1	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: PEARL GRAY	
2	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: RICH ESPRESSO	
3	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: TURKISH TILE (PAINTED) SW 7610	
4	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: DEEP OCEAN	
5	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 6'-0" X 1'-3"	COLOR: RICH ESPRESSO	
6	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. VARIOUS PANEL SIZES	COLOR: AGED PEWTER	
7	BRAKE METAL TRIM CAP FLASHING	COLOR: METAL	
8	FIBER CEMENT SIDING – 12" REVEAL, NICHIHA PANEL	COLOR: PEARL GRAY	

EXTERIOR FINISH MATERIAL LEGEND

CODE	MATERIAL	COLOR AND FINISH	PATTERN LEGEND
9	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 6'-3"	COLOR: DEEP OCEAN	
10	FIBER CEMENT SIDING – 12" REVEAL, NICHIHA PANEL	COLOR: RICH ESPRESSO	
11	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 6'-3"	COLOR: BOOTHBAY BLUE	
12	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: IRON GRAY	
13	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'-0" X 5'-0" AND 3'-0" X 6'-3"	COLOR: AGED PEWTER	
14	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: VARIOUS	COLOR: BLACKBERRY (PAINTED) SW 7577	
15	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: VARIOUS	COLOR: AGED PEWTER	

NOTE: SEE A8.20 FOR WINDOW AND LOUVER SCHEDULE



ELEVATION KEY PLAN



A3 ELEVATION 5

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



D3 ELEVATION 4

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



A5 ELEVATION 6

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



D5 ELEVATION 7

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"

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PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
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SCARBOROUGH, ME 04074
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OWNER

RIVERTON PARK, LP

14 BAXTER BLVD.
PORTLAND, MAINE 04101

PROJECT

CIRCLE 1 BUILDING

RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

EXTERIOR ELEVATIONS

CWS PROJECT NUMBER: 21023

REVISIONS

DRAWING NUMBER

A3.01

SCALE: As indicated

DATE: 12/22/2022

12/15/2022 1:05:45 PM

MAJOR SITE PLAN

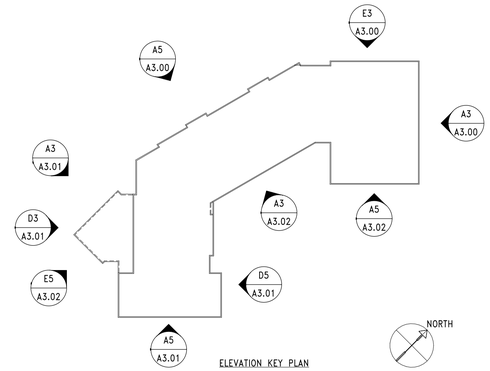
EXTERIOR FINISH MATERIAL LEGEND

CODE	MATERIAL	COLOR AND FINISH	PATTERN LEGEND
1	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 5'–0" AND 3'–0" X 6'–3"	COLOR: PEARL GRAY	
2	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 5'–0" AND 3'–0" X 6'–3"	COLOR: RICH ESPRESSO	
3	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 5'–0" AND 3'–0" X 6'–3"	COLOR: TURKISH TILE (PAINTED) SW 7610	
4	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 5'–0" AND 3'–0" X 6'–3"	COLOR: DEEP OCEAN	
5	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 6'–0" X 1'–3"	COLOR: RICH ESPRESSO	
6	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. VARIOUS PANEL SIZES	COLOR: AGED PEWTER	
7	BRAKE METAL TRIM CAP FLASHING	COLOR: METAL	
8	FIBER CEMENT SIDING – 12" REVEAL, NICHIHA PANEL	COLOR: PEARL GRAY	

EXTERIOR FINISH MATERIAL LEGEND

CODE	MATERIAL	COLOR AND FINISH	PATTERN LEGEND
9	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 6'–3"	COLOR: DEEP OCEAN	
10	FIBER CEMENT SIDING – 12" REVEAL, NICHIHA PANEL	COLOR: RICH ESPRESSO	
11	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 6'–3"	COLOR: BOOTHBAY BLUE	
12	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 5'–0" AND 3'–0" X 6'–3"	COLOR: IRON GRAY	
13	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: 3'–0" X 5'–0" AND 3'–0" X 6'–3"	COLOR: AGED PEWTER	
14	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: VARIOUS	COLOR: BLACKBERRY (PAINTED) SW 7577	
15	FIBER CEMENT PANELS RIPPED TO SIZE WITH SURROUND TRIM AND EXPOSED FASTENERS. PANEL SIZES: VARIOUS	COLOR: AGED PEWTER	

NOTE: SEE A8.20 FOR WINDOW AND LOUVER SCHEDULE

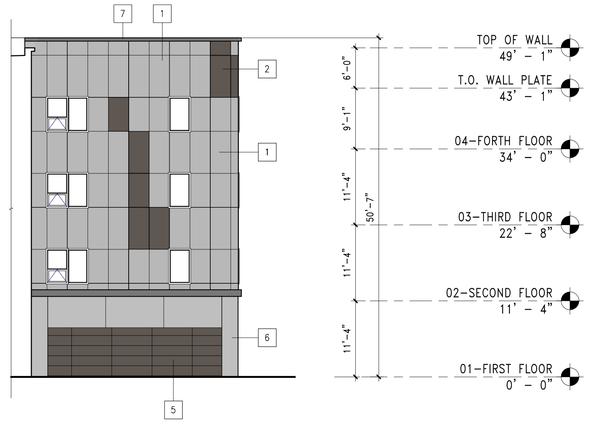


ELEVATION KEY PLAN



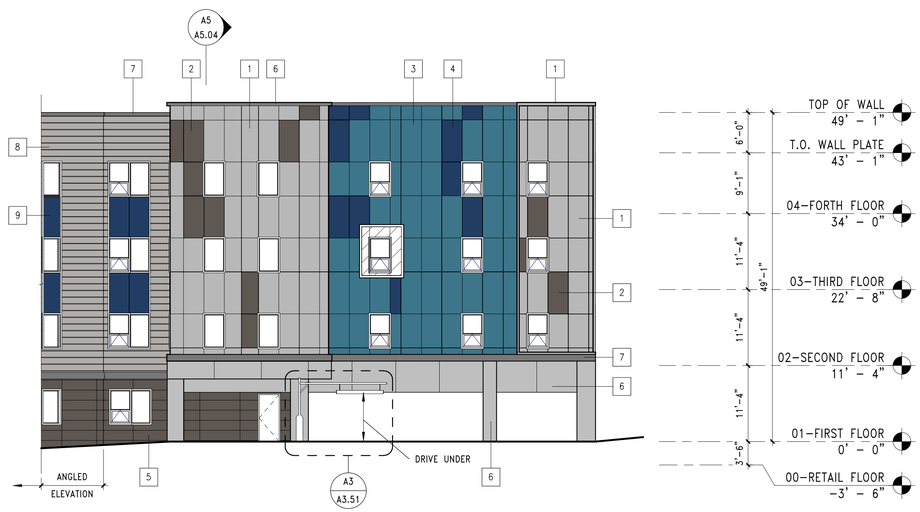
A3 ELEVATION 8

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



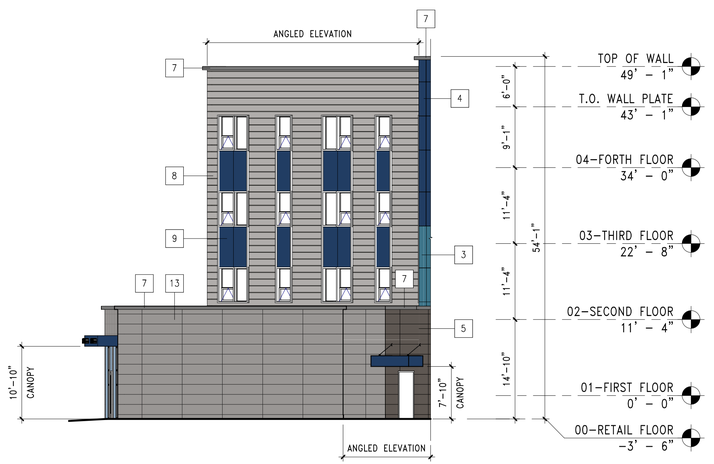
E3 ELEVATION 9

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



A5 ELEVATION 10

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"



E5 ELEVATION 11

REFERENCED FROM: A1.10 SCALE: 3/32" = 1'-0"

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RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

EXTERIOR ELEVATIONS

CWS PROJECT NUMBER: 21023

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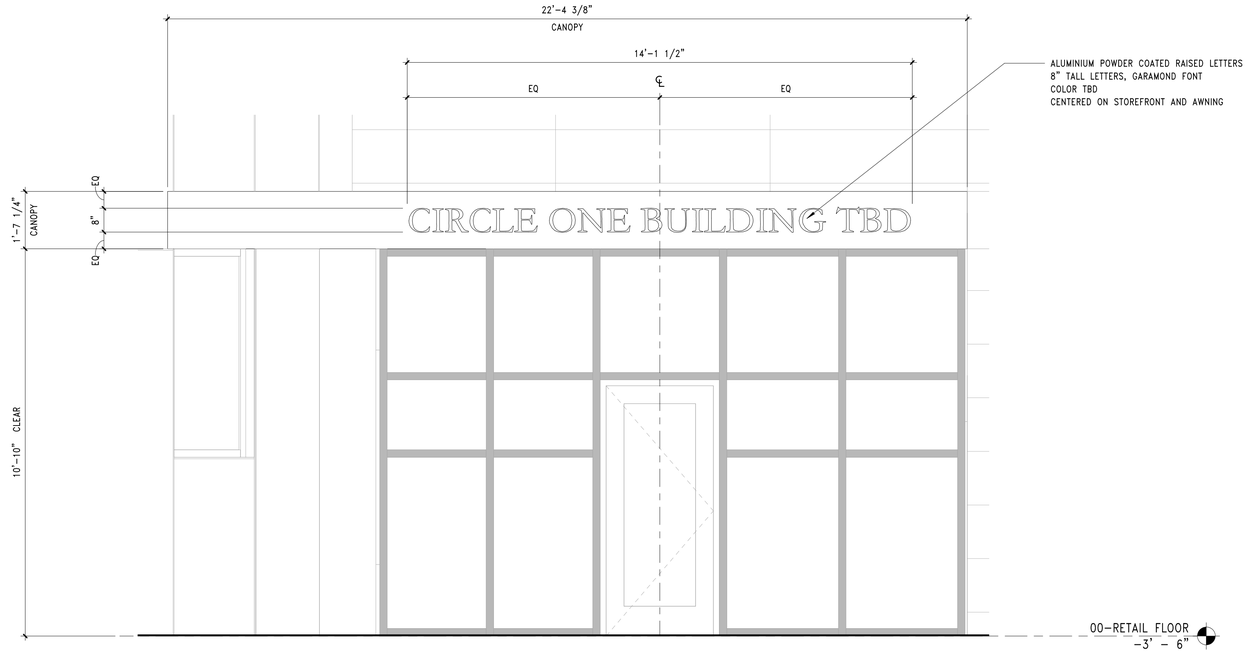
A3.02

SCALE: As indicated

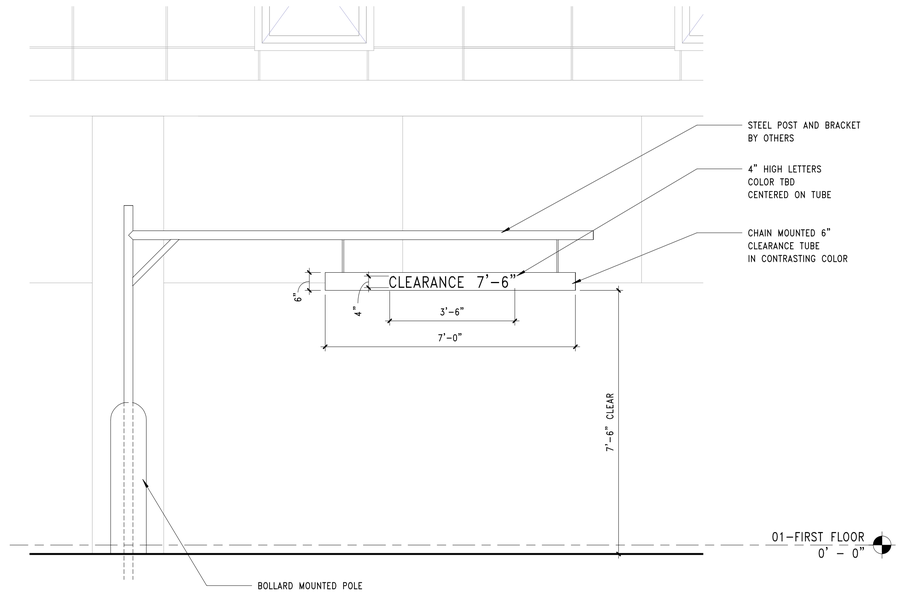
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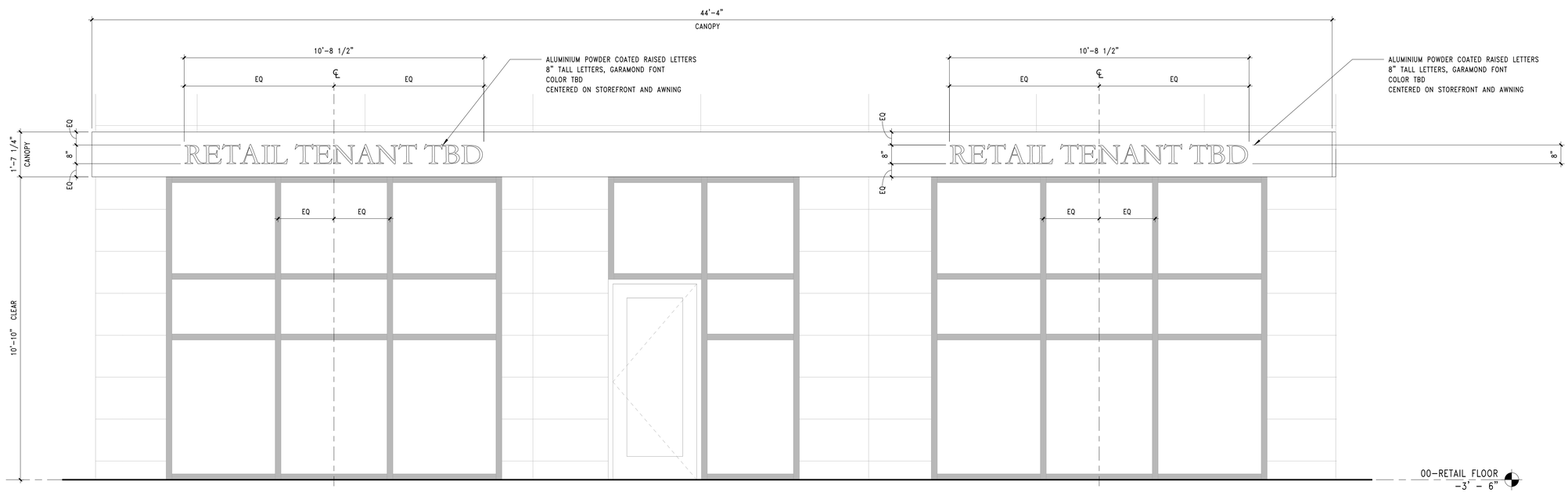
MAJOR SITE PLAN



A3 BUILDING ENTRY SIGNAGE
REFERENCED FROM: A1.10A SCALE: 1/2" = 1'-0"



E3 GARAGE ENTRY APPROACH SIGNAGE
REFERENCED FROM: A1.10B SCALE: 1/2" = 1'-0"



A5 RETAIL CANOPY SIGNAGE
REFERENCED FROM: A1.10A SCALE: 1/2" = 1'-0"

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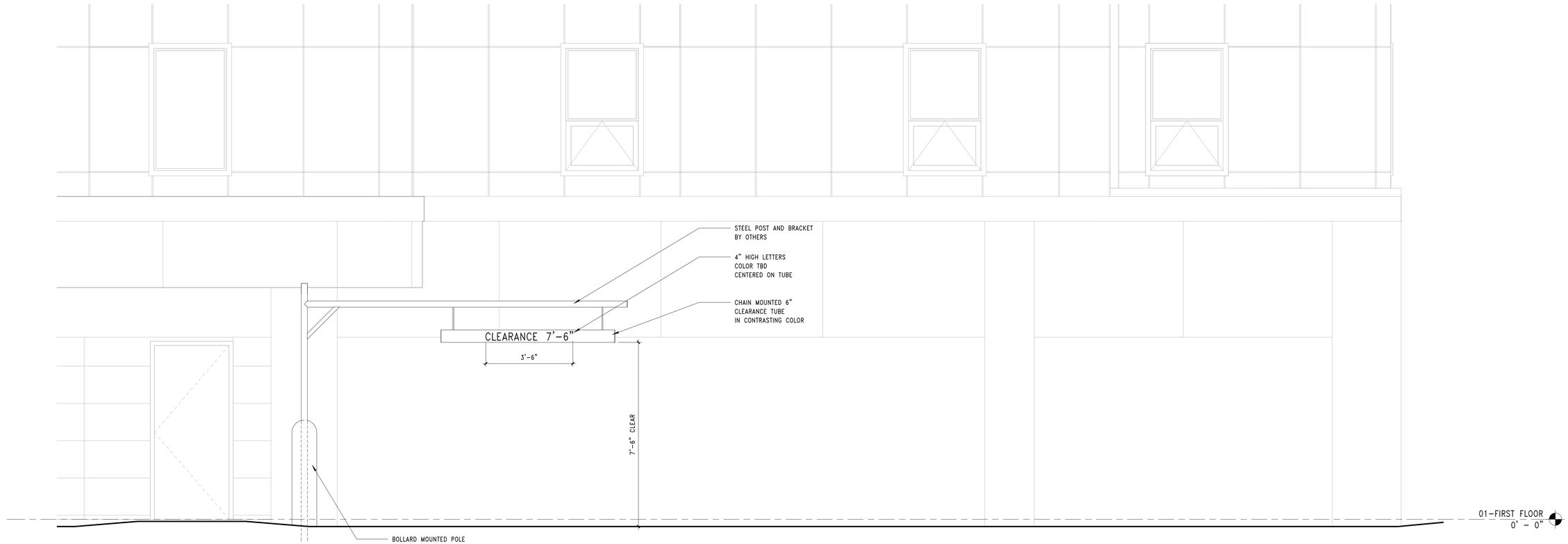
DRAWING
SIGNAGE DETAILS
CWS PROJECT NUMBER: 21023

REVISIONS

DRAWING NUMBER
A3.50

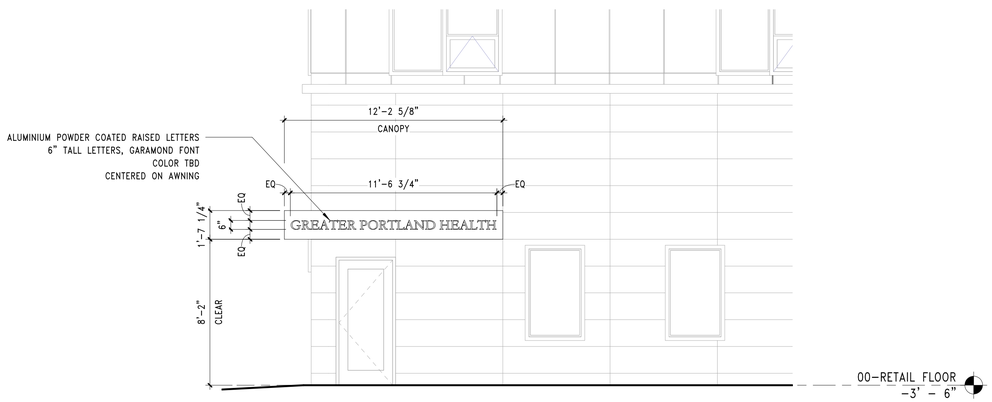
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DATE: 12/22/2022
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MAJOR SITE PLAN



A3 GARAGE ENTRY EXIT SIGNAGE

REFERENCED FROM: A2.10 SCALE: 1/2" = 1'-0"



E5 BUILDING SIGNAGE FROM REAR PARKING LOT

REFERENCED FROM: A1.10A SCALE: 1/4" = 1'-0"

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DRAWING
SIGNAGE DETAILS
CWS PROJECT NUMBER: 21023

REVISIONS

DRAWING NUMBER
A3.51

SCALE: As indicated
DATE: 12/22/2022

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DRAWING
SITE AXON NORTH
CWS PROJECT NUMBER: 21023

REVISIONS

DRAWING NUMBER
A3.60

SCALE:

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DRAWING

SITE AXON NORTH

CWS PROJECT NUMBER: 21023

REVISIONS

DRAWING NUMBER

A3.61

SCALE:

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DRAWING

BUILDING 1 PERSPECTIVES
CWS PROJECT NUMBER: 21023

REVISIONS

DRAWING NUMBER
A3.62

SCALE:
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MAJOR SITE PLAN

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DRAWING
BUILDING 1 PERSPECTIVES
CWS PROJECT NUMBER: 21023

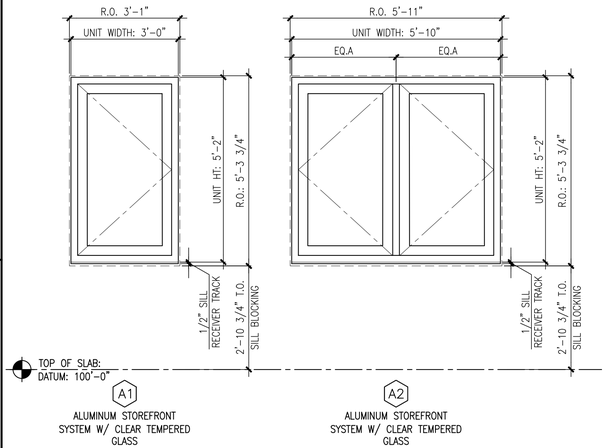
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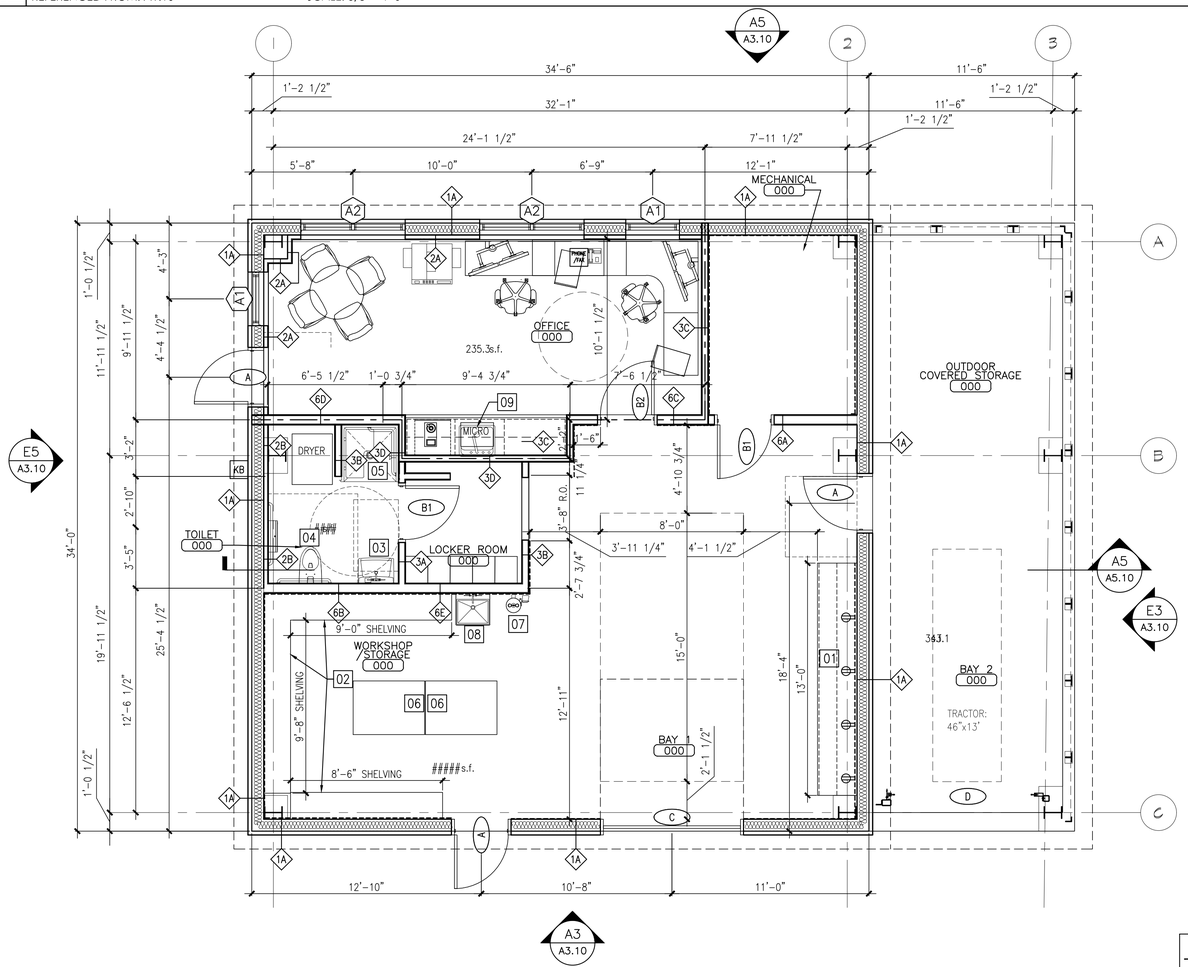
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MAJOR SITE PLAN



A2 ALUMINUM STOREFRONT ELEVATIONS

REFERENCED FROM: A1.10 SCALE: 3/8" = 1'-0"



NOTE:
----- DASHED LINE INDICATES EXTENT OF 3/4" PLYWOOD SHEATHING INSTALLED FROM 2'-0" AFF TO 10'-0" AFF

REVISED BUILDING AREAS: ORIGINAL BUILDING AREAS:

INTERIOR (CONDITIONED):	1,173 SF	1,326 SF
COVERED EXTERIOR:	374 SF	714 SF
TOTAL:	1,547 SF	2,040 SF

01 BASE CABINETS WITH NO DOORS, (3) 12" DEEP WALL SHELVES 24" ABOVE WOOD BLOCK WORK SURFACE.

02 (5) 16" HEAVY DUTY WIRE SHELVING ON HEAVY DUTY ADJUSTABLE STANDARDS

03 ADA ACCESSIBLE WALL-HUNG SINK

04 ADA ACCESSIBLE WALL-HUNG TOILET WITH GRAB-BARS

05 ADA ACCESSIBLE SHOWER UNIT WITH GRAB BARS AND FOLD-DOWN SEAT

06 WORK BENCH ISLAND: OPEN SHELVES BELOW, HEAVY DUTY LOCKABLE CASTERS, WOOD BLOCK TOP

07 EYE WASH STATION

08 UTILITY SINK

09 UTILITY SINK WOOD WALL AND BASE CABINETS WITH SOLID SURFACE COUNTERTOP

A5 ALUMINUM STOREFRONT ELEVATIONS

REFERENCED FROM: G0.00 SCALE: 1/4" = 1'-0"

G5 FLOOR PLAN NOTES

PROJECT NORTH

True North

DRAWING NUMBER

A1.10

SCALE: AS NOTED

DATE: 12/22/2022

MAJOR SITE PLAN

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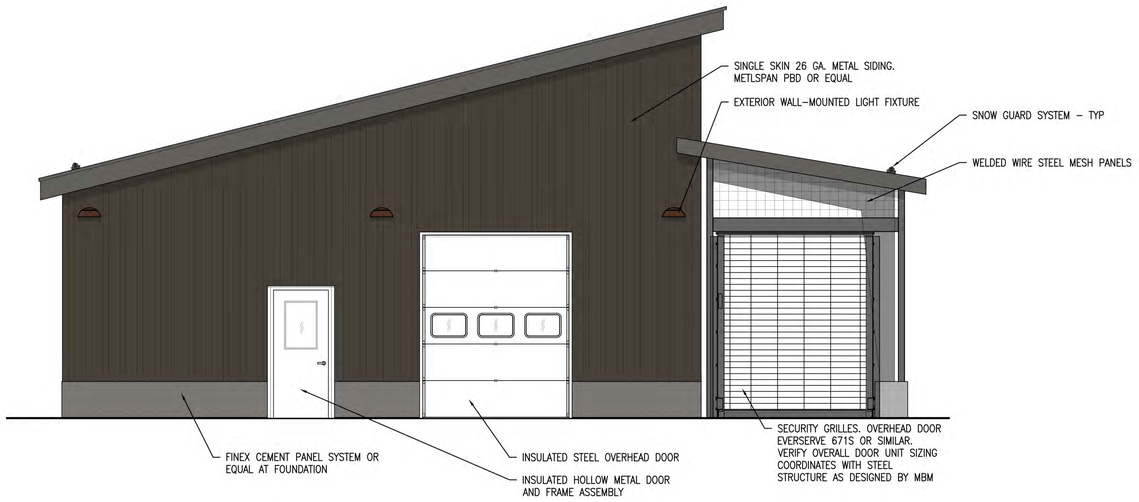
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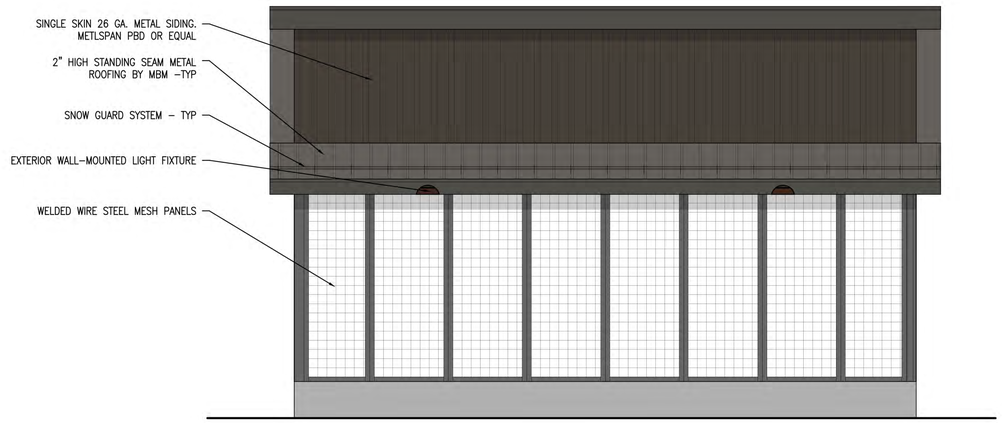
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MAINTENANCE BUILDING
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DRAWING
FLOOR PLAN
CWS PROJECT NUMBER: 19013

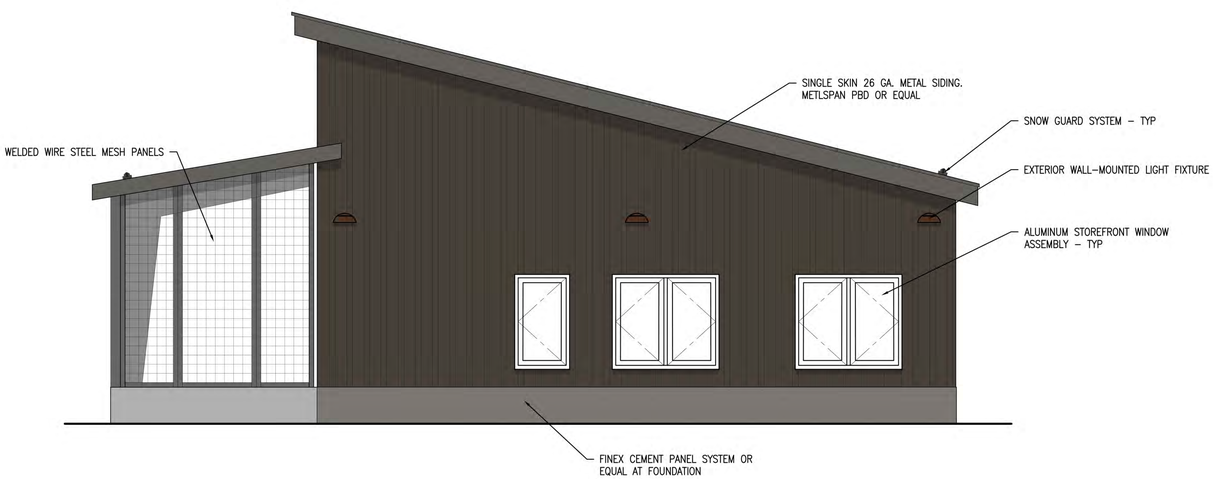
REVISIONS

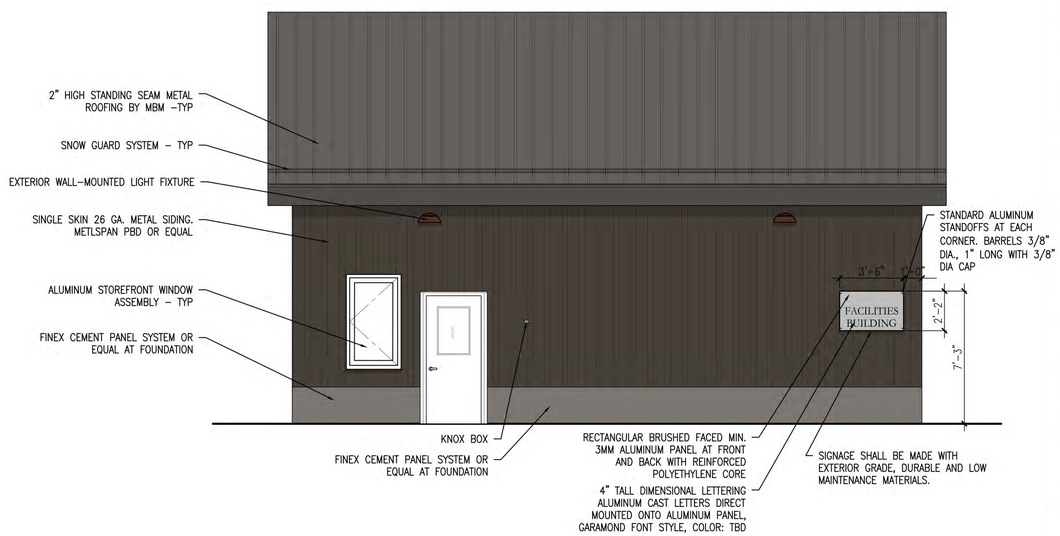




A5 FRONT AND LEFT SIDE ELEVATIONS

REFERENCED FROM: SCALE: 1/4" = 1'-0"





A5 BACK AND RIGHT SIDE ELEVATIONS

REFERENCED FROM: SCALE: 1/4" = 1'-0"

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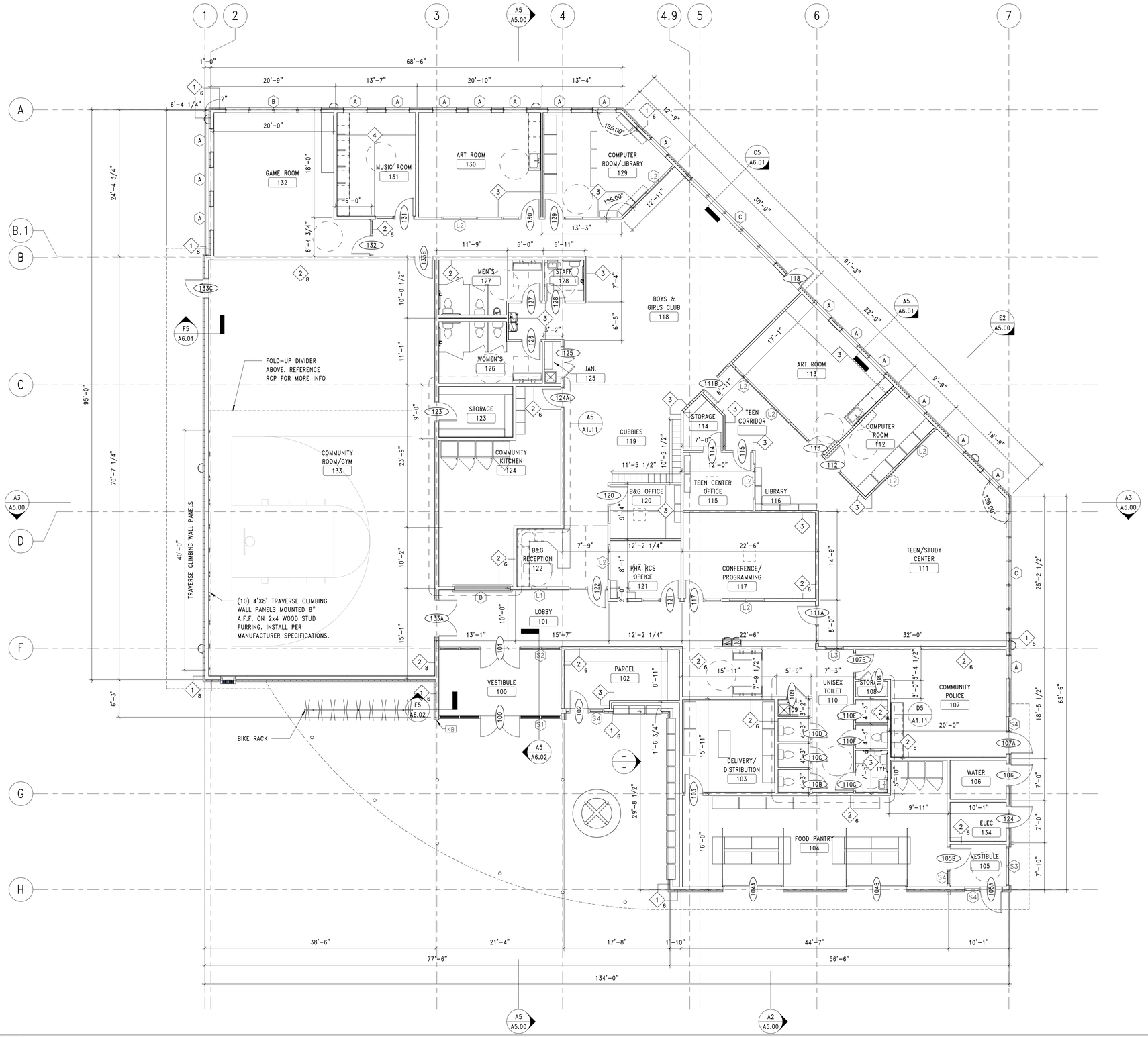
DRAWING
EXTERIOR ELEVATIONS
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A3.10

SCALE: 1/4" = 1'-0"
DATE: 12/22/2022

MAJOR SITE PLAN



A5 01-FIRST FLOOR

REFERENCED FROM: A3.00 SCALE: 1/8" = 1'-0"

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DRAWING
FIRST FLOOR PLAN
CWS PROJECT NUMBER: PROJECT NUMBER

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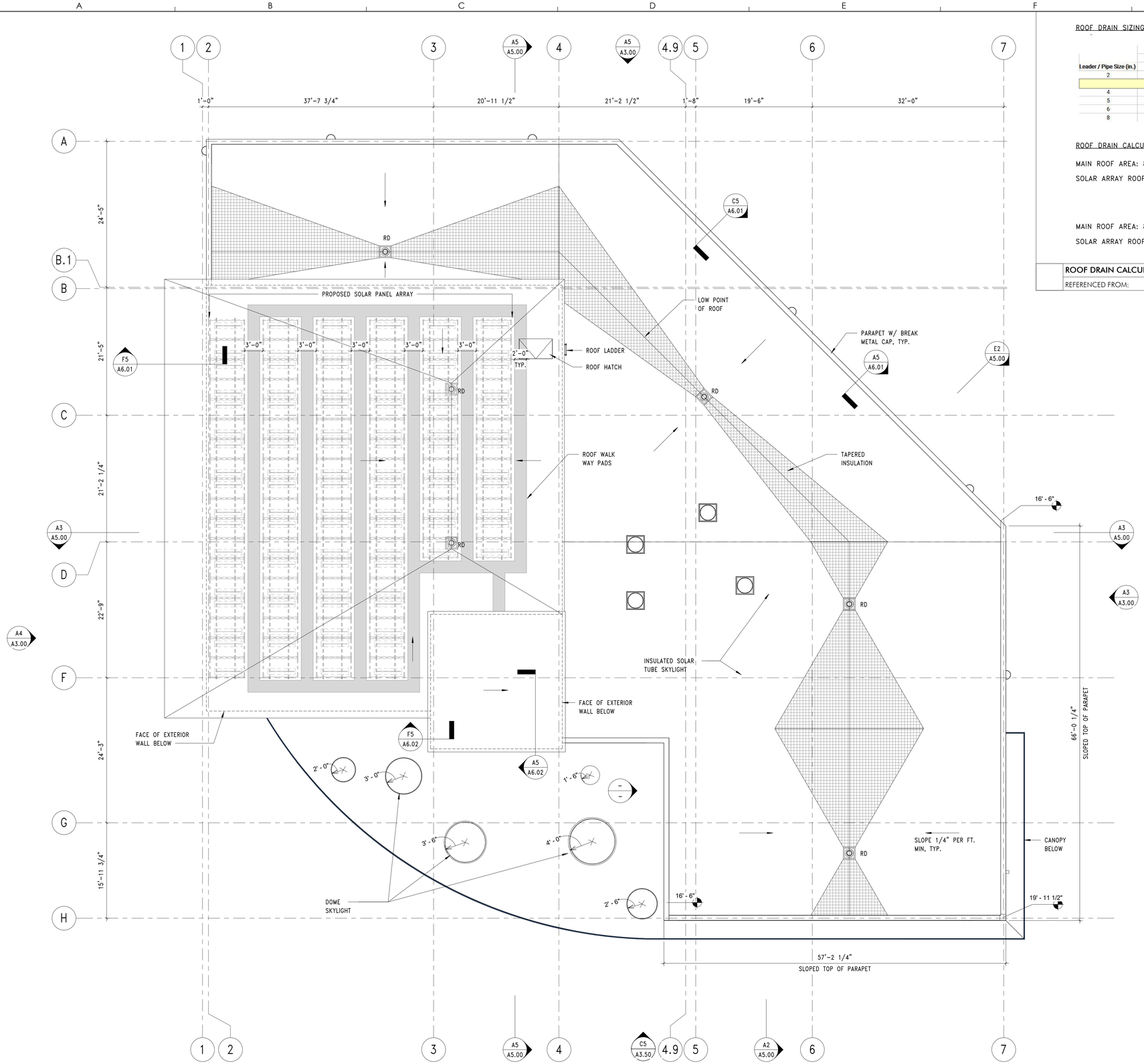
PROJECT NORTH

DRAWING NUMBER
A1.10

SCALE: 1/8" = 1'-0"
DATE: 12/22/2022

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MAJOR SITE PLAN



ROOF DRAIN SIZING:

Leader / Pipe Size (in.)	Hourly Rainfall (in.) 1	1.5	2	3	4	5	6	7	8
	Sq. Ft. Covered Per Drain								
2	2,880	1,920	1,440	960	720	575	480	410	360
4	18,400	12,700	9,200	6,130	4,600	3,680	3,070	2,630	2,300
5	34,600	23,050	17,300	11,530	8,650	6,920	5,765	4,945	4,325
6	54,000	36,000	27,000	18,000	13,500	10,800	9,000	7,715	6,750
8	116,000	77,400	58,000	38,660	29,000	23,200	19,315	16,570	14,500

ROOF DRAIN CALCULATION:

MAIN ROOF AREA: 8,250 SF

SOLAR ARRAY ROOF AREA: 4,483 SF

PER IBC 2015: HOURLY RAINFALL FOR PORTLAND, ME = 2.5"

ROOF DRAIN PIPE SIZE = 3"

AREA OF ROOF SERVED BY 1 DRAIN = 3,520

MAIN ROOF AREA: 8,250 SF / 3,520 = 2.3 OR 3 ROOF DRAINS

SOLAR ARRAY ROOF AREA: 4,483 SF / 3,520 = 1.3 OR 2 ROOF DRAINS

ROOF DRAIN CALCULATION

REFERENCED FROM: SCALE: 1/8" = 1'-0"

A5 03-ROOF PLAN

REFERENCED FROM: A3.00 SCALE: 1/8" = 1'-0"

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DRAWING

ROOF PLAN

CWS PROJECT NUMBER: PROJECT NUMBER

REVISIONS

PROJECT NORTH

PLAN NORTH
TRUE NORTH

DRAWING NUMBER

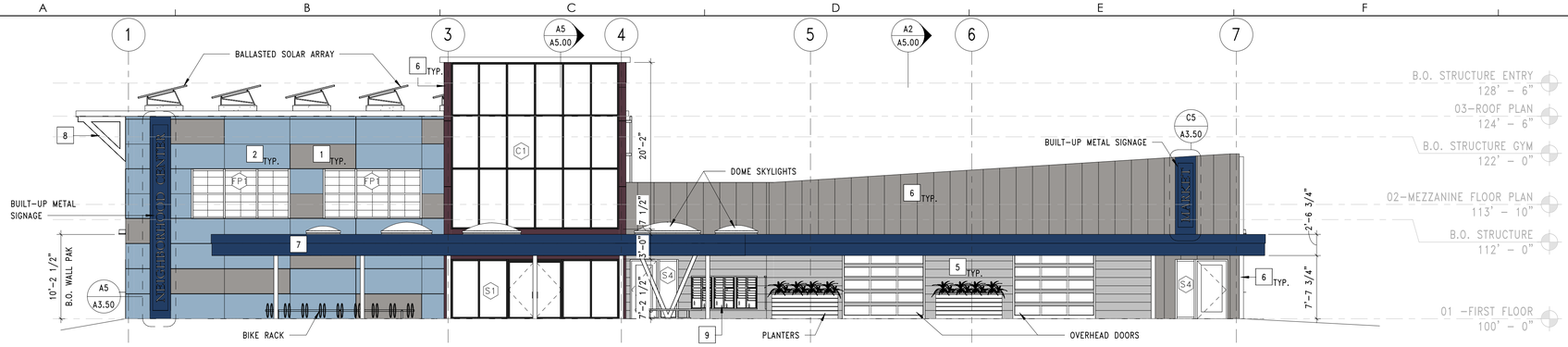
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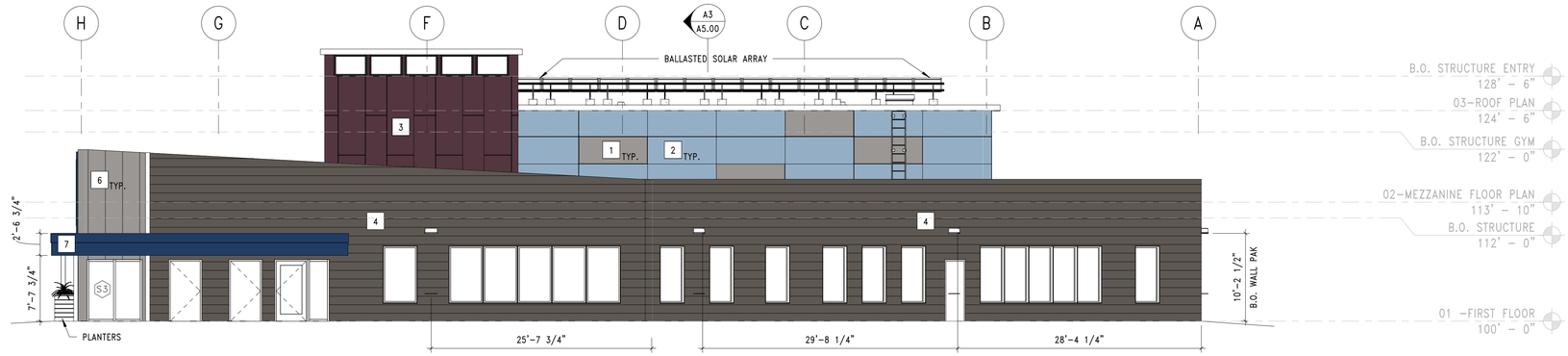
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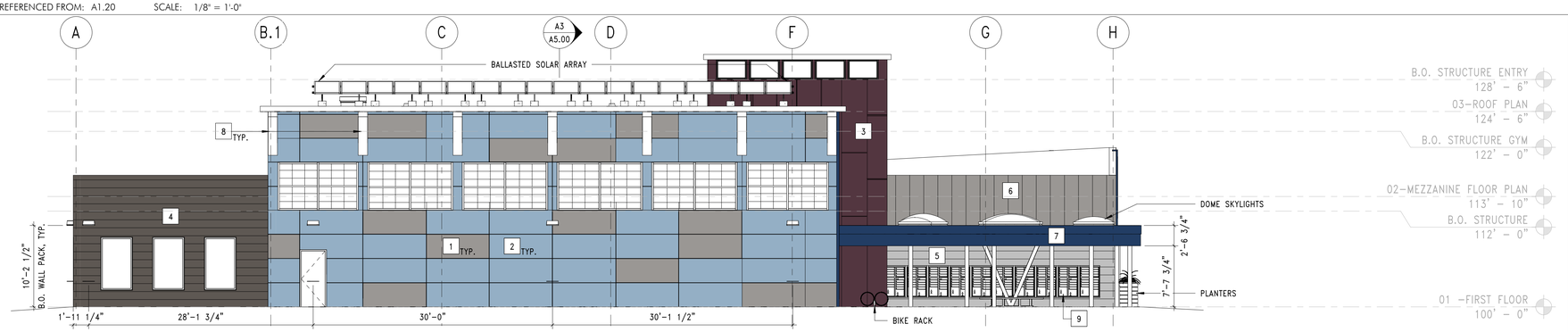
A2 EAST ELEVATION

REFERENCED FROM: A1.20 SCALE: 1/8" = 1'-0"



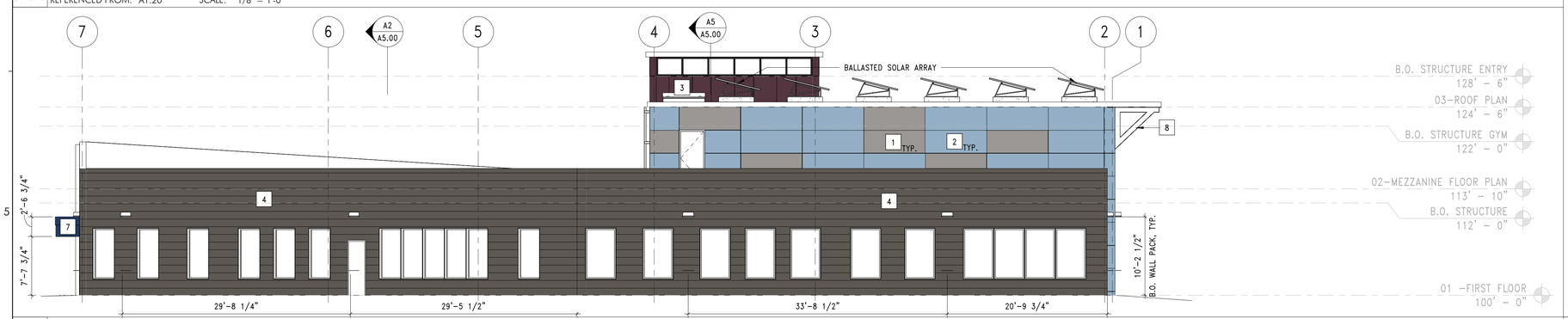
A3 NORTH ELEVATION

REFERENCED FROM: A1.20 SCALE: 1/8" = 1'-0"



A4 SOUTH ELEVATION

REFERENCED FROM: A1.20 SCALE: 1/8" = 1'-0"



A5 WEST ELEVATION

REFERENCED FROM: A1.20 SCALE: 1/8" = 1'-0"

EXTERIOR FINISH MATERIAL LEGEND

CODE	MATERIAL	COLOR AND FINISH	PATTERN LEGEND
1	FIBER CEMENT PANEL	COLOR: TBD STANDARD COLOR 1	
2	FIBER CEMENT PANEL	COLOR: TBD STANDARD COLOR 2	
3	FIBER CEMENT PANEL	COLOR: FIELD PAINTED	
4	FIBER CEMENT PLANK LAP SIDING	COLOR: TBD STANDARD COLOR 3	
5	FIBER CEMENT PLANK LAP SIDING	COLOR: TBD STANDARD COLOR 4	
6	FIBER CEMENT VERTICAL SIDING	COLOR: TBD STANDARD COLOR 5	
7	BREAK METAL FASCIA	COLOR: TBD	
8	BUILT WOOD EAVE SUPPORT	COLOR: TBD	
9	MAILBOXES	COLOR: TBD	

G5 EXTERIOR MATERIALS LEGEND

REFERENCED FROM: SCALE: 1/8" = 1'-0"

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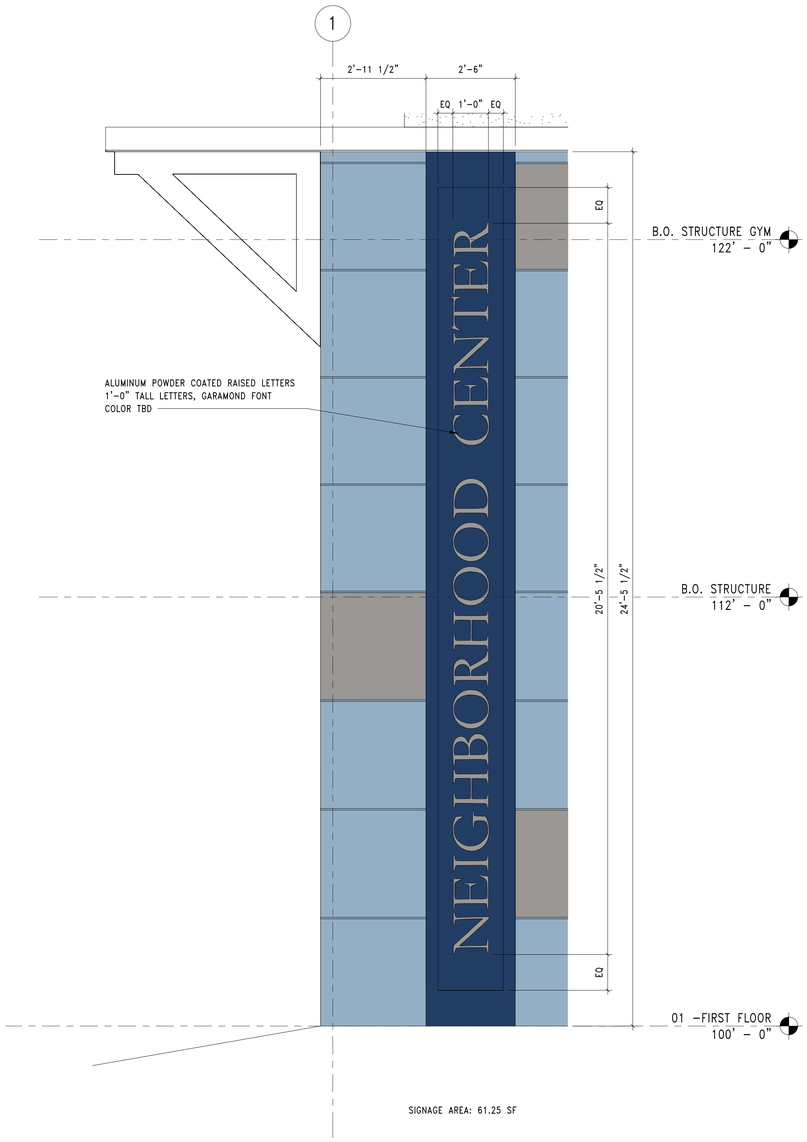
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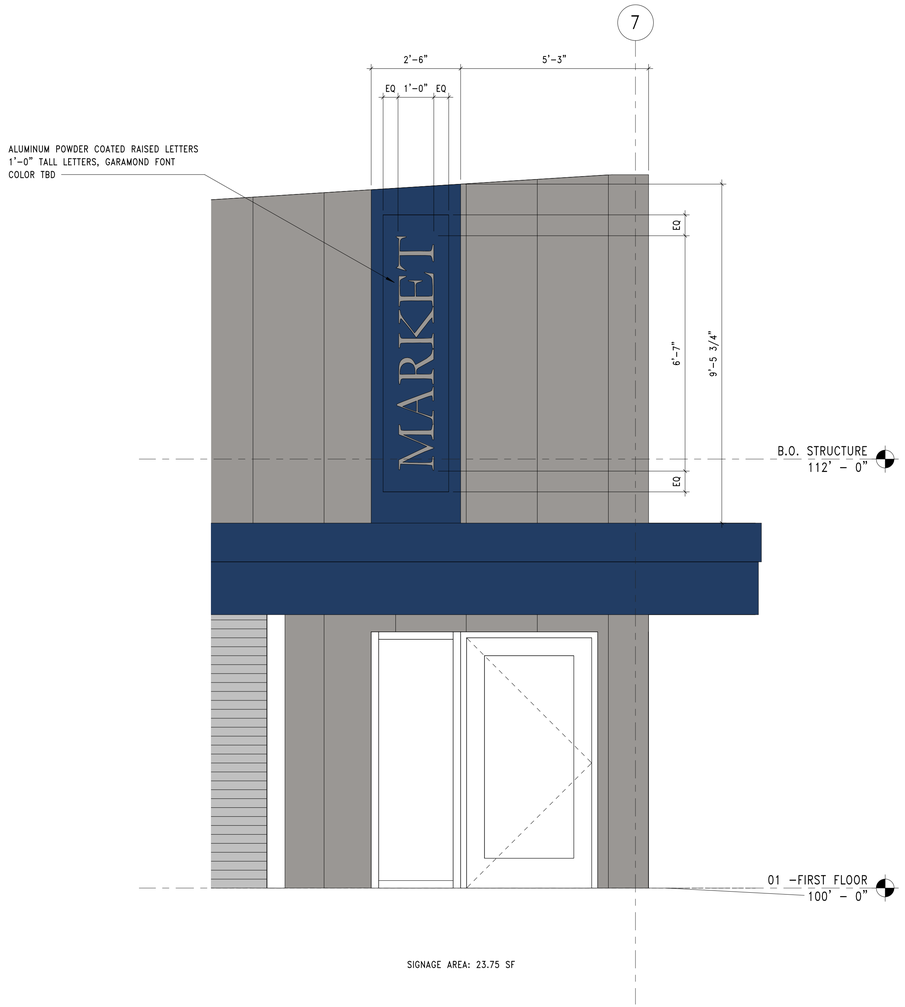
MAJOR SITE PLAN



SIGNAGE AREA: 61.25 SF

A5 SIGNAGE - NEIGHBORHOOD CENTER

REFERENCED FROM: A1.20 SCALE: 1/2" = 1'-0"



SIGNAGE AREA: 23.75 SF

C5 SIGNAGE - MARKET

REFERENCED FROM: A1.20 SCALE: 1/2" = 1'-0"

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DRAWING

BUILDING SIGNAGE
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A3.50

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DRAWING

EXTERIOR RENDERING

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REVISIONS

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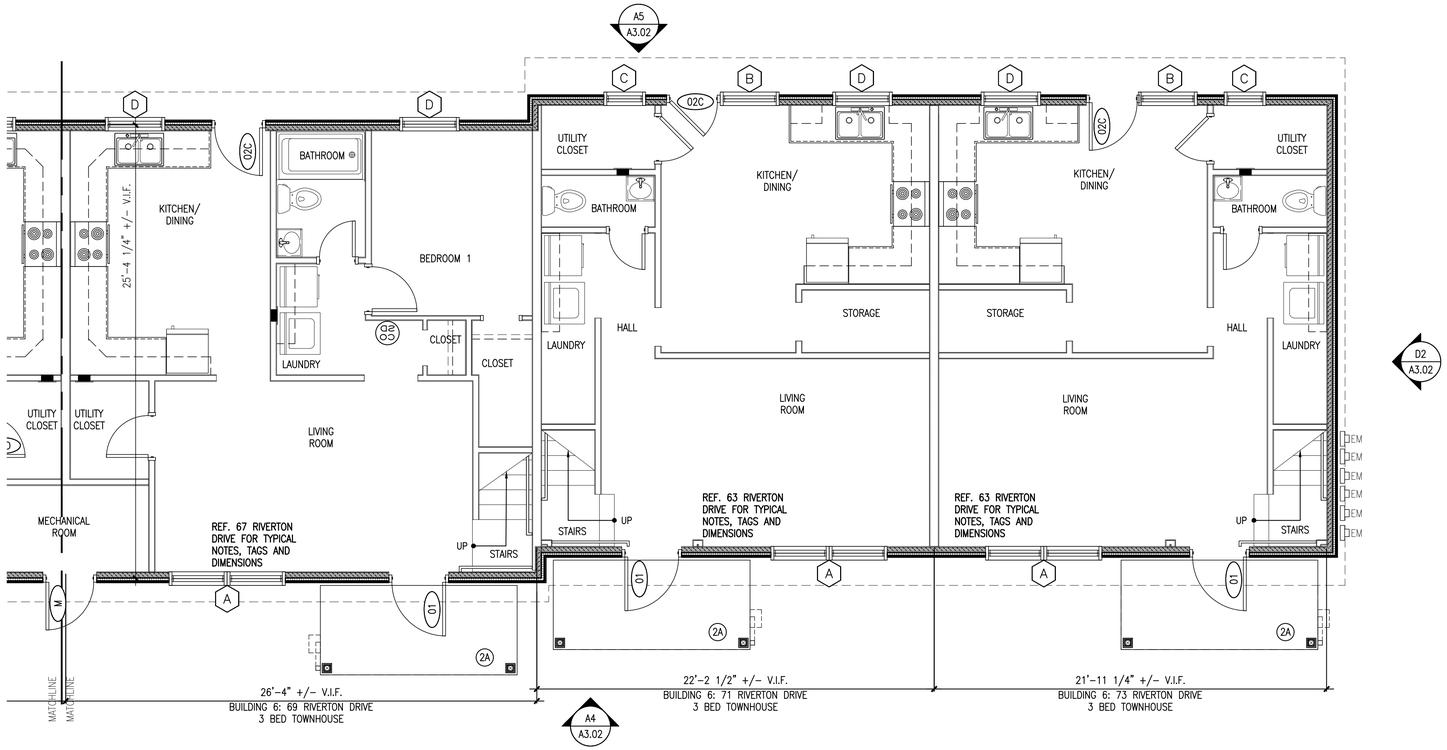
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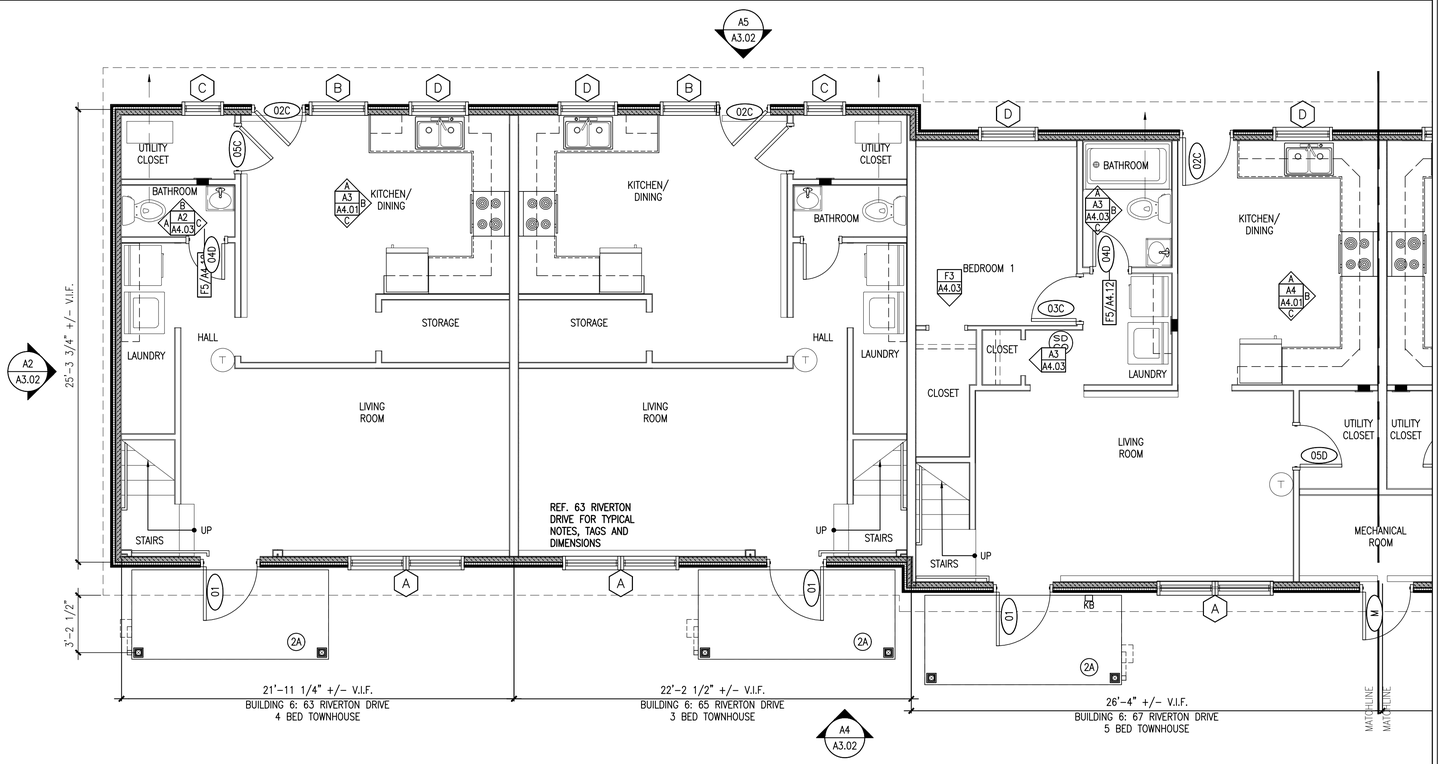
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MAJOR SITE PLAN



A3 ENLARGED PARTIAL FIRST FLOOR PLAN
REFERENCED FROM: BUILDING 6 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL FIRST FLOOR PLAN
REFERENCED FROM: BUILDING 6 SCALE: 1/4"=1'-0"

NEW WORK PLAN NOTES

1. REFERENCE SHEET A7.10 FOR COVERED ENTRY STOOP DETAILS
2. REFERENCE SHEET A7.20 FOR COVERED BIKE STORAGE / ELECTRICAL METER ENCLOSURE DETAILS (ADD ALTERNATE No. 1, NOT CURRENTLY SHOWN ON BUILDING PLANS

KEYED PLAN NOTES

(1) EXTEND/MODIFY WIRING FOR NEW APPLIANCE LOCATION(S)
(2A) EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.10
(2B) EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.11

NEW WORK PLAN LEGEND

EXISTING EXTERIOR WOOD STUD WALL ASSEMBLY WITH NEW INSULATION, SHEATHING, AND EXTERIOR FINISH SCOPE. REFERENCE WALL SECTIONS FOR MORE INFO

NEW EXTERIOR INFILL WALL ASSEMBLY.

EXISTING INTERIOR NON-RATED WOOD STUD AND GWB PARTITION

EXISTING 1-HOUR FIRE-RATED INTERIOR WOOD STUD AND GWB PARTITION

INTERIOR NON-RATED WOOD STUD AND GWB PARTITION

1-HOUR FIRE-RATED INTERIOR WOOD STUD AND GWB PARTITION

TYPICAL FLOOR / CEILING INFILL ASSEMBLY
1 HOUR FIRE-RATED, SIMILAR TO UL DESIGN NO. L519

1 HOUR FIRE RATED CEILING ASSEMBLY

- FINISHED FLOORING MATERIAL AS INDICATED PER SCHEDULE
- 11/32" UNDERLAYMENT, GLUED AND NAILED - REFER TO UNDERLAYMENT NOTES
- PLYWOOD SUBFLOOR - THICKNESS TO MATCH EXISTING
- 2X JOIST FRAMING - SIZING TO MATCH EXISTING
- 5 1/2" SOUND BATTS STAPLED AT UPPER REGION OF JOIST CAVITY
- RESILIENT SOUND CLIPS @ 48" O.C.
- 7/8" DRYWALL FURRING CHANNEL (HEMMED EDGE) @ 24" O.C.
- (1) LAYER 5/8" TYPE "X" GWB CEILING

SIMILAR TO UL DESIGN NO. L519

G5 NEW WORK NOTES & BUILDING 6 UNIT MATRIX (TBD)
REFERENCED FROM: SCALE: NTS

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FIRST FLOOR NEW WORK PLAN BUILDING 6
CWS PROJECT NUMBER: 19013

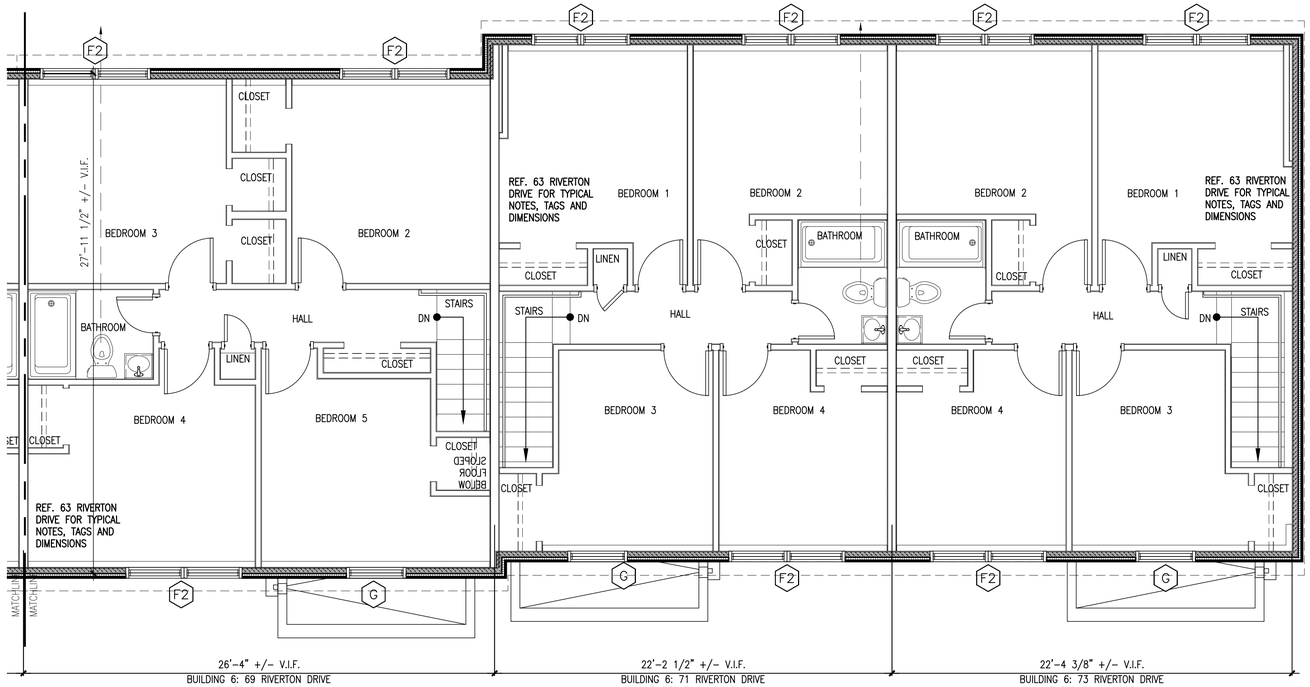
REVISIONS

DRAWING NUMBER
A1.06.1

SCALE: AS NOTED
DATE: 12/22/2022

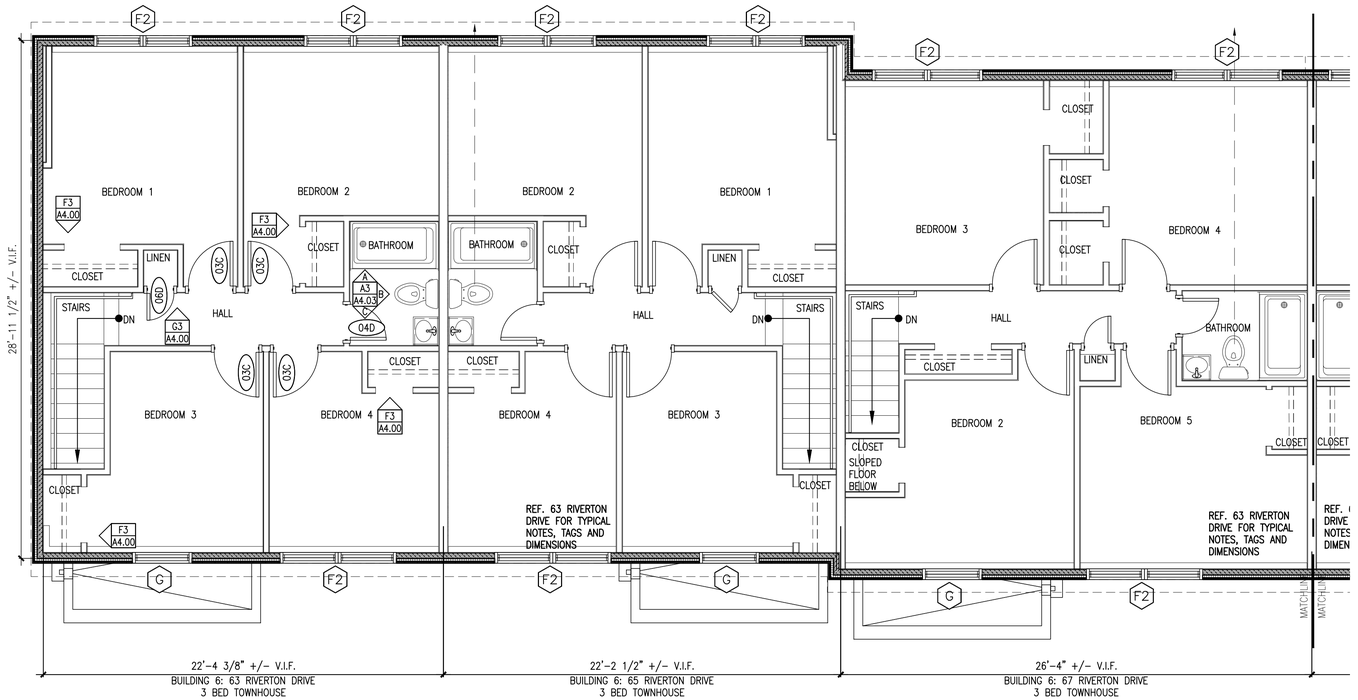
ISSUED FOR: MAJOR SITE PLAN

M:\2019 Design Projects\19013 PHA RAD-Riverton Park\1-Drawings\19013 A1.06 1st Fl. Series



A3 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 6 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 6 SCALE: 1/4"=1'-0"

NEW WORK PLAN NOTES

1. REFERENCE SHEET A7.10 FOR COVERED ENTRY STOOP DETAILS
2. REFERENCE SHEET A7.20 FOR COVERED BIKE STORAGE / ELECTRICAL METER ENCLOSURE DETAILS (ADD ALTERNATE No. 1, NOT CURRENTLY SHOWN ON BUILDING PLANS

KEYED PLAN NOTES

(1) EXTEND/MODIFY WIRING FOR NEW APPLIANCE LOCATION(S)
(2A) EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.10
(2B) EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.11

NEW WORK PLAN LEGEND

EXISTING EXTERIOR WOOD STUD WALL ASSEMBLY WITH NEW INSULATION, SHEATHING, AND EXTERIOR FINISH SCOPE. REFERENCE WALL SECTIONS FOR MORE INFO

NEW EXTERIOR INFILL WALL ASSEMBLY.

EXISTING INTERIOR NON-RATED WOOD STUD AND GWB PARTITION

EXISTING 1-HOUR FIRE-RATED INTERIOR WOOD STUD AND GWB PARTITION

INTERIOR NON-RATED WOOD STUD AND GWB PARTITION

1-HOUR FIRE-RATED INTERIOR WOOD STUD AND GWB PARTITION

TYPICAL FLOOR / CEILING INFILL ASSEMBLY
1 HOUR FIRE-RATED, SIMILAR TO UL DESIGN NO. L519

1 HOUR FIRE RATED CEILING ASSEMBLY

- FINISHED FLOORING MATERIAL AS INDICATED PER SCHEDULE
- 11/32" UNDERLAYMENT, GLUED AND NAILED - REFER TO UNDERLAYMENT NOTES
- PLYWOOD SUBFLOOR - THICKNESS TO MATCH EXISTING
- 2X JOIST FRAMING - SIZING TO MATCH EXISTING
- 3 1/2" SOUND BATTS STAPLED AT UPPER REGION OF JOIST CAVITY
- RESILIENT SOUND CLIPS @ 48" O.C.
- 7/8" DRYWALL FURRING CHANNEL (HEMMED EDGE) @ 24" O.C.
- (1) LAYER 5/8" TYPE "X" GWB CEILING

SIMILAR TO UL DESIGN NO. L519

G5 NEW WORK NOTES & BUILDING 6 UNIT MATRIX (TBD)

REFERENCED FROM: SCALE: NTS

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
CWS ARCHITECTURE + INTERIOR DESIGN
204 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, MAINE 04074 207.774.4441
WWW.CWSARCH.COM

OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

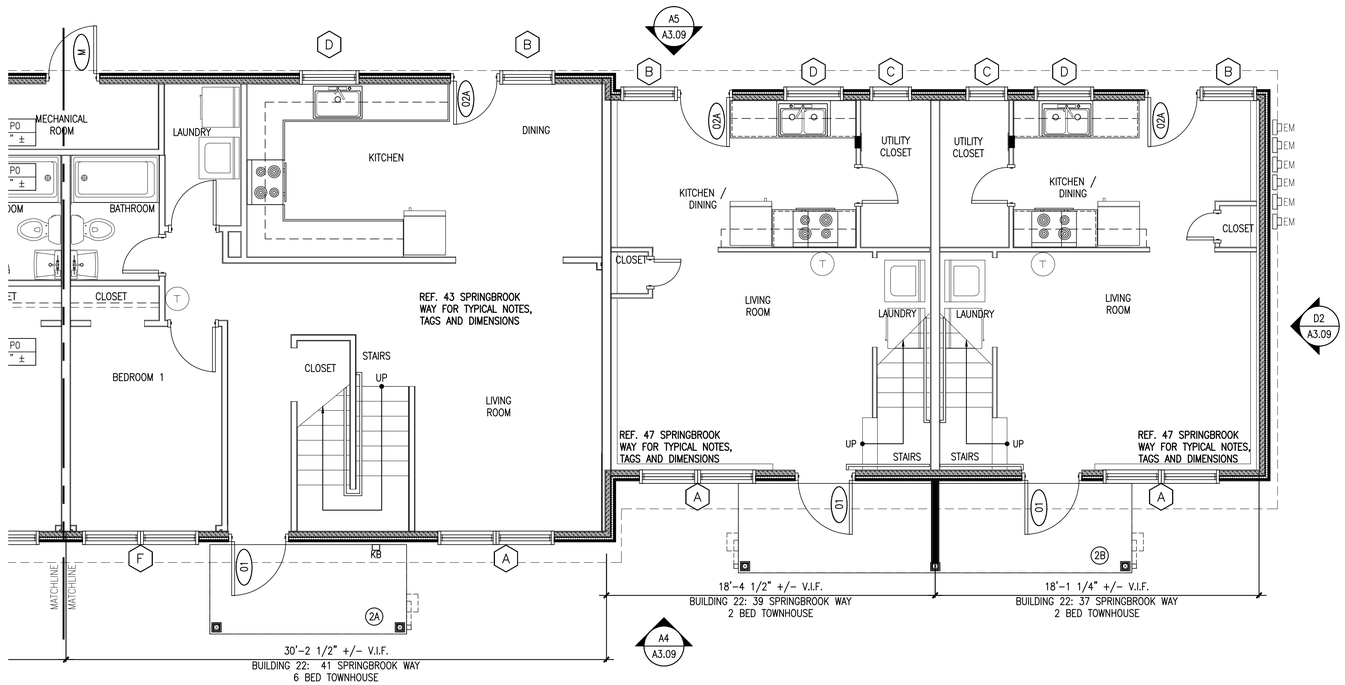
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SECOND FLOOR NEW WORK PLAN BUILDING 6
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A1.06.2

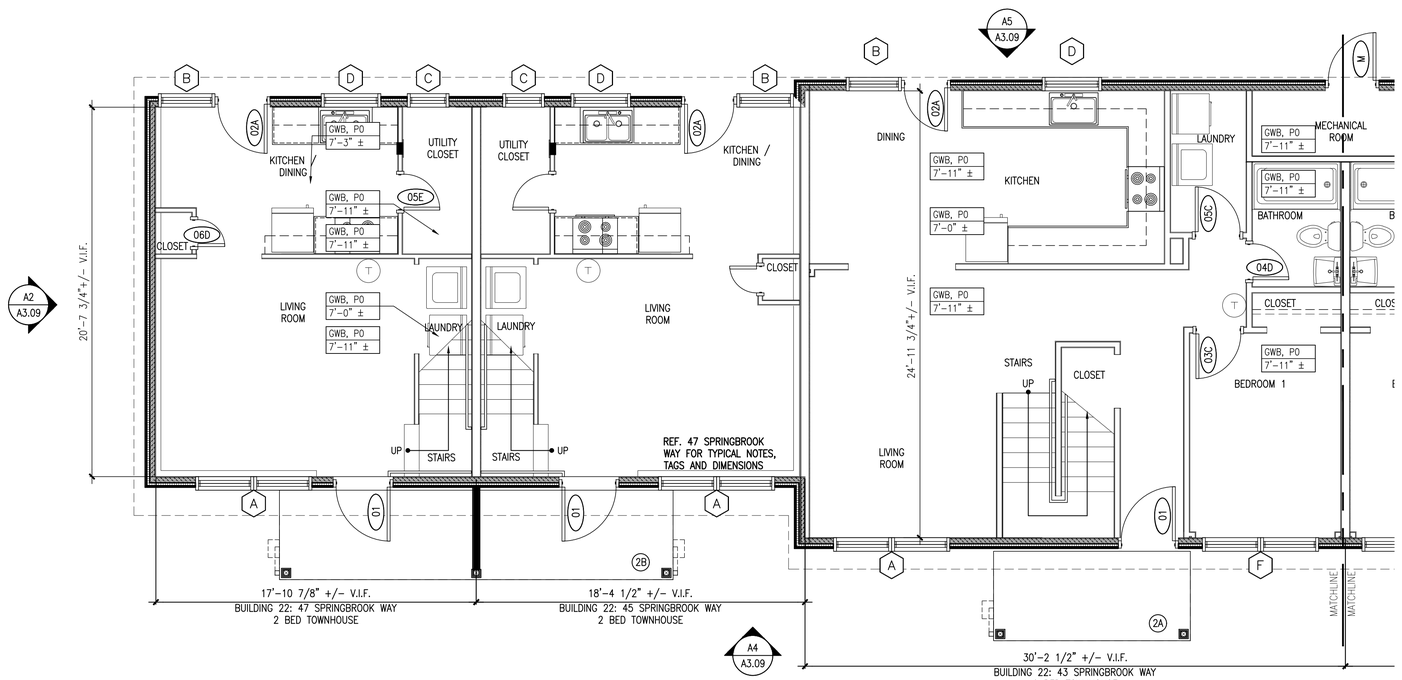
SCALE: AS NOTED
DATE: 12/13/2022

ISSUED FOR: COORDINATION



A3 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"

NEW WORK PLAN NOTES

1. REFERENCE SHEET A7.10 FOR COVERED ENTRY STOOP DETAILS
2. REFERENCE SHEET A7.20 FOR COVERED BIKE STORAGE / ELECTRICAL METER ENCLOSURE DETAILS (ADD ALTERNATE No. 1, NOT CURRENTLY SHOWN ON BUILDING PLANS

KEYED PLAN NOTES

1. EXTEND/MODIFY WIRING FOR NEW APPLIANCE LOCATION(S)
2A. EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.10
2B. EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.11

NEW WORK PLAN LEGEND

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INTERIOR NON-RATED WOOD STUD AND GWB PARTITION

1-HOUR FIRE-RATED INTERIOR WOOD STUD AND GWB PARTITION

TYPICAL FLOOR / CEILING INFILL ASSEMBLY
1 HOUR FIRE-RATED, SIMILAR TO UL DESIGN NO L519

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- RESILIENT SOUND CLIPS @ 48" O.C.
- 7/8" DRYWALL FURRING CHANNEL (HEMMED EDGE) @ 24" O.C.
- (1) LAYER 5/8" TYPE "X" GWB CEILING

1 HOUR FIRE RATED CEILING ASSEMBLY
SIMILAR TO UL DESIGN NO. L519

G5 NEW WORK NOTES & BUILDING 22 UNIT MATRIX (TBD)

REFERENCED FROM: SCALE: NTS

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
CWS ARCHITECTURE + INTERIOR DESIGN
204 US ROUTE ONE, SUITE 100-2A
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OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
FIRST FLOOR
NEW WORK PLAN
BUILDING 22
CWS PROJECT NUMBER: 19013

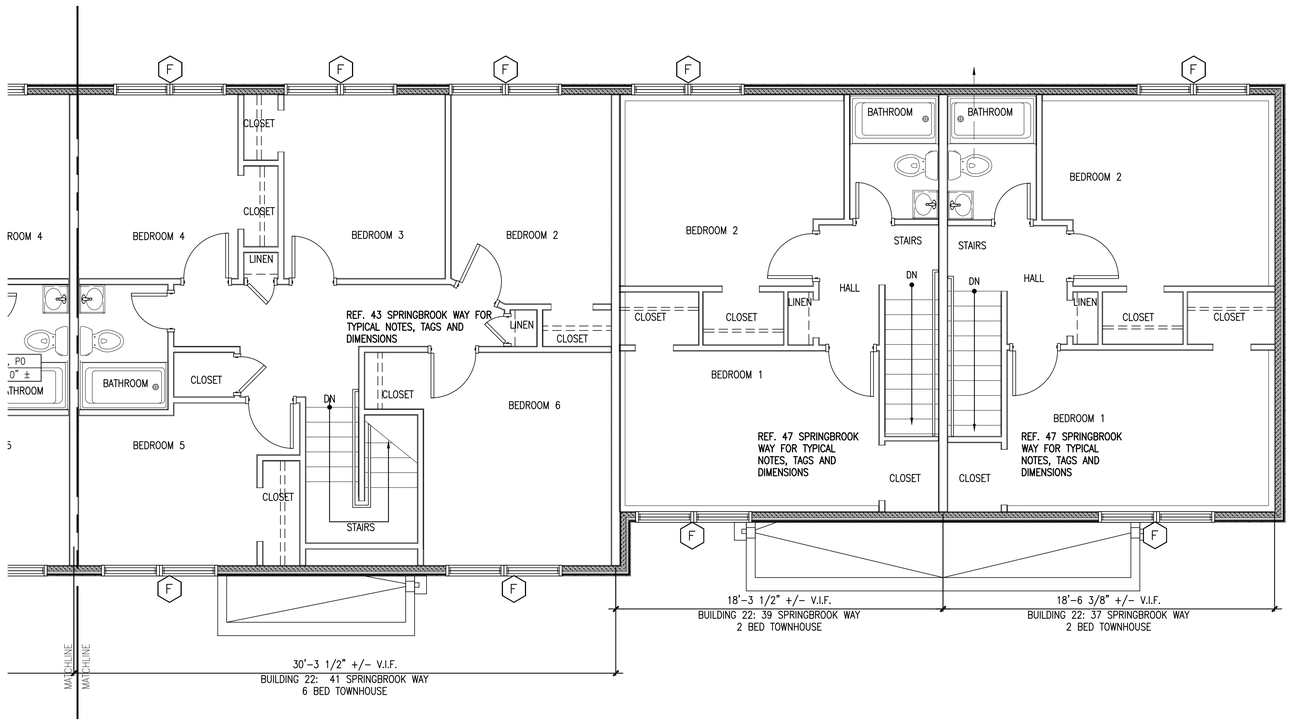
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DRAWING NUMBER
A1.22.1

SCALE: AS NOTED
DATE: 12/22/2022

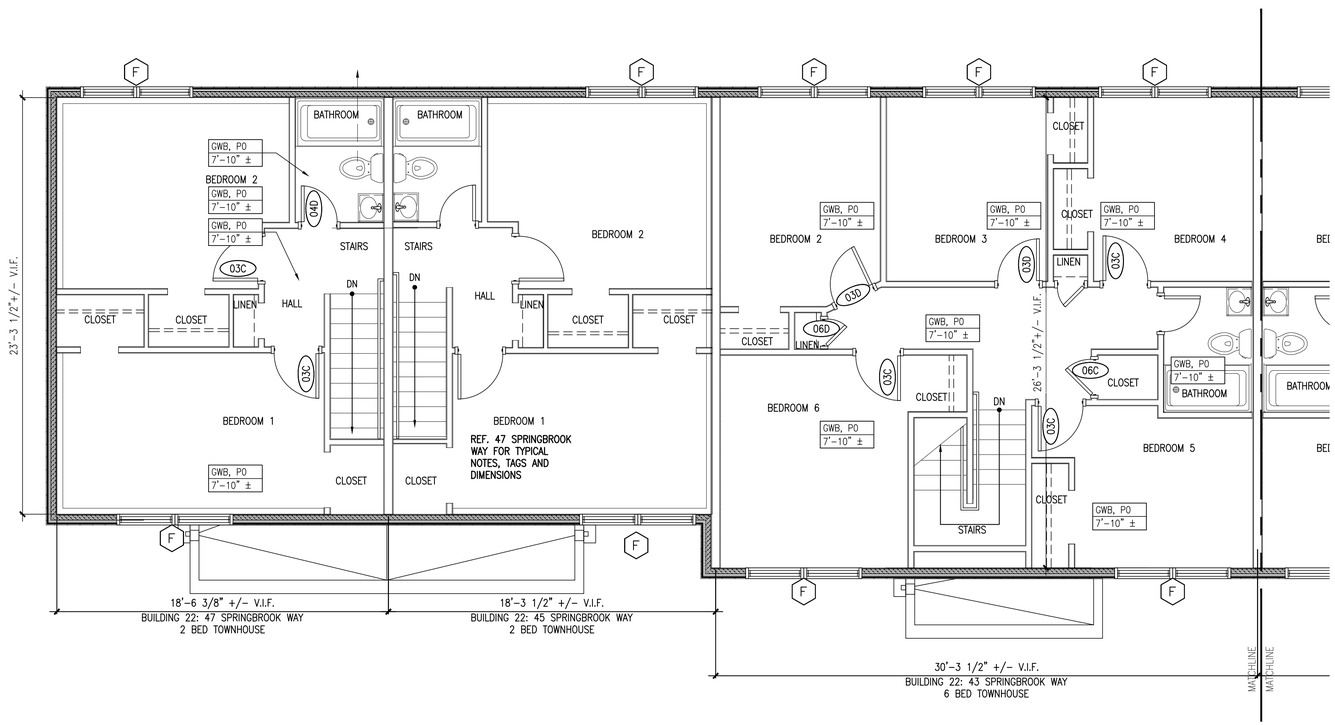
ISSUED FOR: MAJOR SITE PLAN

W:\2019 Design Projects\19013 PHA RAD-Riverton Park\1-Drawings\19013 A1.22 1st Fl. Series



A3 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"

W:\2019 Design Projects\19013 PHA RAD-Riverton Park\1-Drawings\19013 A1.22 2nd FL Series

NEW WORK PLAN NOTES

1. REFERENCE SHEET A7.10 FOR COVERED ENTRY STOOP DETAILS
2. REFERENCE SHEET A7.20 FOR COVERED BIKE STORAGE / ELECTRICAL METER ENCLOSURE DETAILS (ADD ALTERNATE No. 1, NOT CURRENTLY SHOWN ON BUILDING PLANS

KEYED PLAN NOTES

1. EXTEND/MODIFY WIRING FOR NEW APPLIANCE LOCATION(S)
2A. EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.10
2B. EXTERIOR STRUCTURAL CONCRETE STOOP AND WOOD-FRAMED DOOR HOOD - REFERENCE A7.11

NEW WORK PLAN LEGEND

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- RESILIENT SOUND CLIPS @ 48" O.C.
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- (1) LAYER 5/8" TYPE "X" GWB CEILING

SIMILAR TO UL DESIGN NO. L519

G5 NEW WORK NOTES & BUILDING 22 UNIT MATRIX (TBD)

REFERENCED FROM: SCALE: NTS

CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

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OWNER

RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

SECOND FLOOR NEW WORK PLAN BUILDING 22

CWS PROJECT NUMBER: 19013

REVISIONS

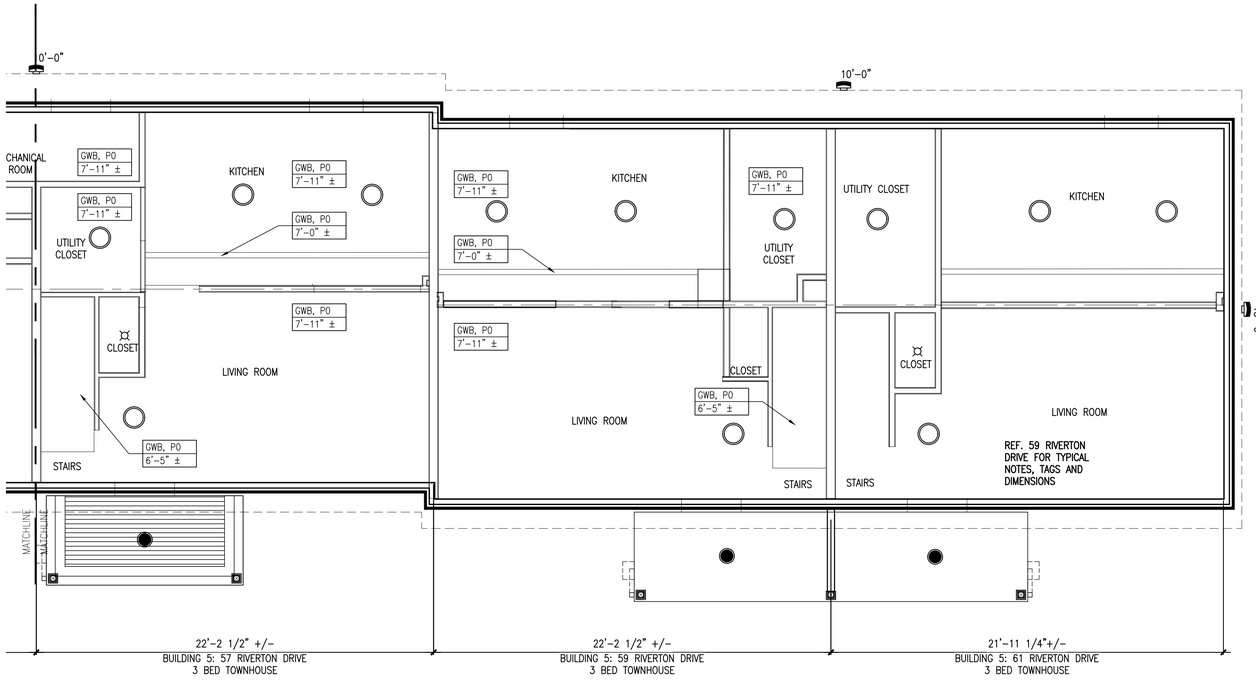
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A1.22.2

SCALE: AS NOTED

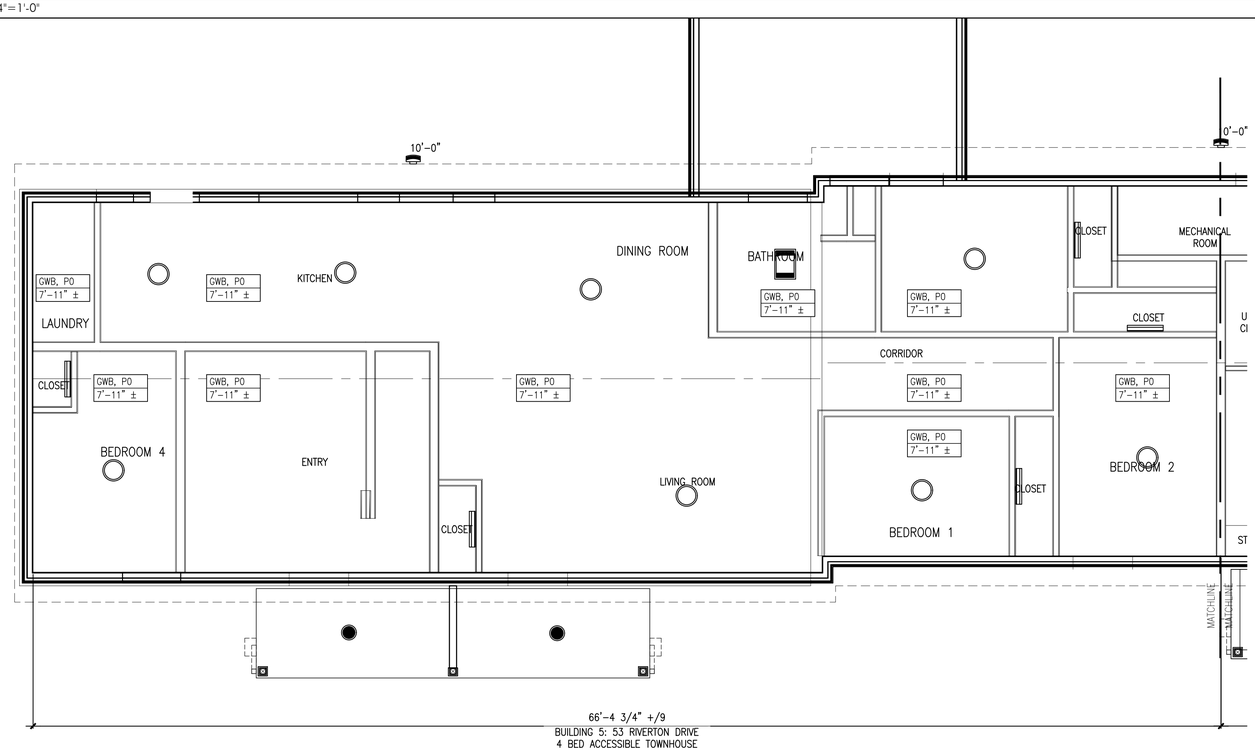
DATE: 12/13/2022

ISSUED FOR: COORDINATION



A3 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 5 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 5 SCALE: 1/4"=1'-0"

REFLECTED CEILING PLAN NOTES AND LEGEND:

- NEW CARBON MONOXIDE DETECTOR
- NEW CARBON MONOXIDE AND SMOKE DETECTOR
- NEW SMOKE DETECTOR
- EXISTING SMOKE DETECTOR
- NEW FIRE ALARM STROBE
- EXISTING FIRE ALARM STROBE
- EXISTING ACCESS PANEL
- NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
- CLOSET WALL-MOUNTED LIGHT
- EXTERIOR WALL-MOUNTED LIGHT
- EXTERIOR RECESSED MOUNTED LIGHT
- GWB CEILINGS AND SOFFITS. PATCH AND REPAIR EXISTING GWB CEILINGS TO MATCH EXISTING.
- BEADED VINYL SOFFIT
- VINYL SOFFIT – VENTED, 3 1/3"

NOTES:

1. INTERIOR FIXTURE LEGEND FOR DESIGN INTENT ONLY. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND CIRCUITING. ANY LIGHT FIXTURE DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF AND COORDINATED WITH ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO LIGHT FIXTURE INSTALLATION.

2. MECHANICAL SUBCONTRACTOR TO VERIFY SIZE AND LOCATION OF ANY MECHANICAL REGISTERS WITH ARCHITECT PRIOR TO CONSTRUCTION. LIGHTING LOCATIONS SHALL TAKE PRECEDENCE.

3. REFERENCE FLOOR CEILING ASSEMBLIES FOR FIRE RATED ASSEMBLIES AT NEW RECONFIGURED FLATS.

4. PATCH AND REPAIR EXISTING GWB CEILINGS AS REQUIRED PER NEW LIGHT FIXTURE LOCATIONS.

G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
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264 US ROUTE ONE, SUITE 100-2A
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OWNER
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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
FIRST FLOOR REFLECTED CEILING PLAN BUILDING 5
CWS PROJECT NUMBER: 19013

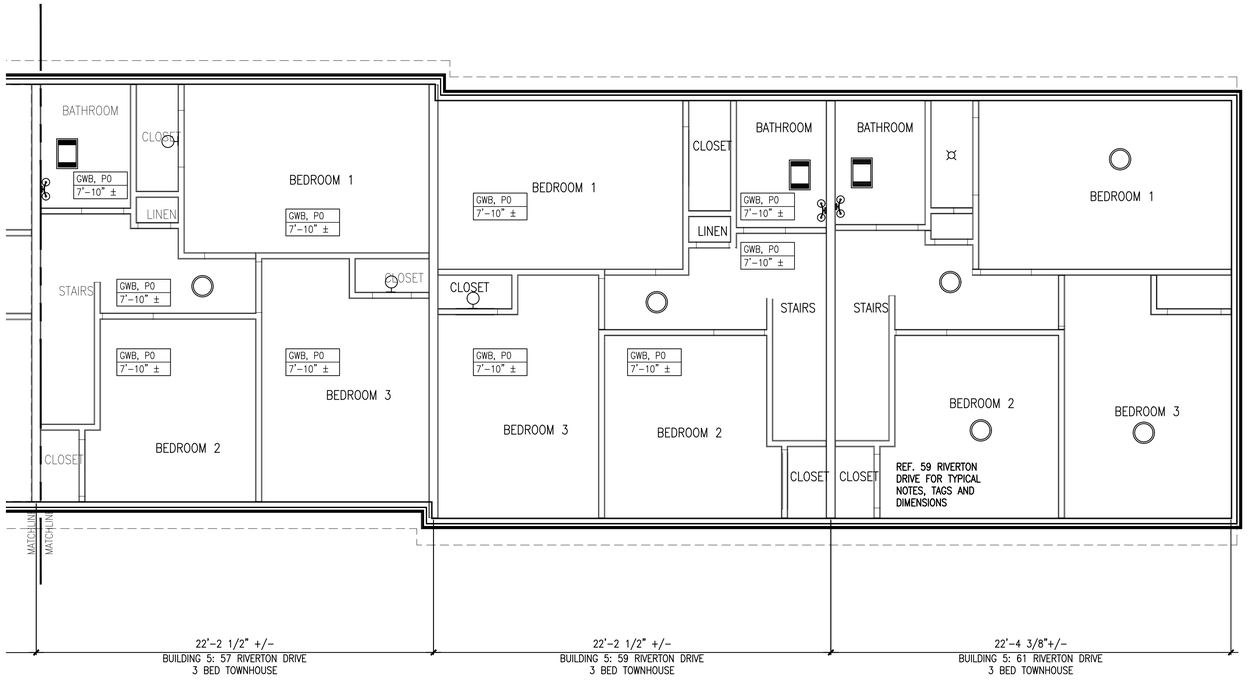
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DRAWING NUMBER
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SCALE: AS NOTED
DATE: 12/22/2022

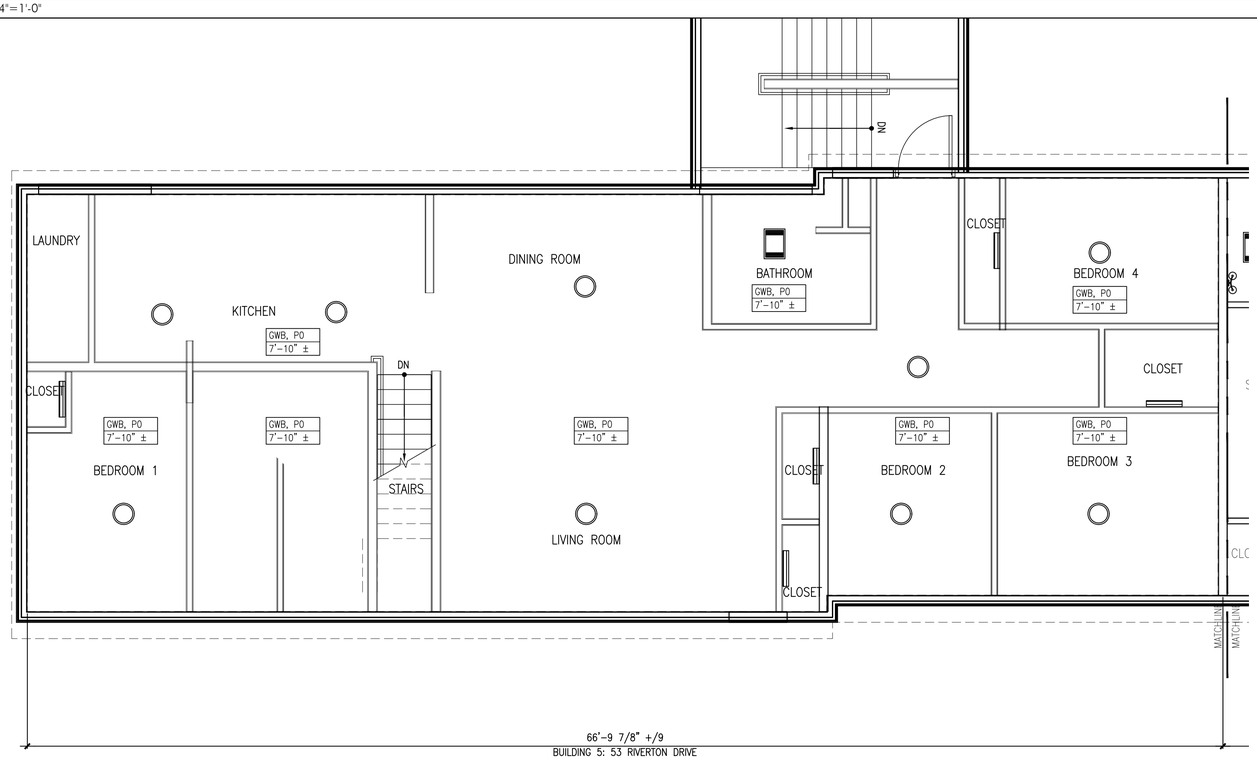
ISSUED FOR: MAJOR SITE PLAN

W:\2019 Design Projects\19013 RHA RAD-Riverton Park\1-Drawings\19013 A1.05 1st Fl Series



A3 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 5 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 5 SCALE: 1/4"=1'-0"

W:\2019 Design Projects\19013 RHA RAD-Riverton Park\1-Drawings\19013 A1.05 2nd FL Series

REFLECTED CEILING PLAN NOTES AND LEGEND:

- NEW CARBON MONOXIDE DETECTOR
- NEW CARBON MONOXIDE AND SMOKE DETECTOR
- NEW SMOKE DETECTOR
- EXISTING SMOKE DETECTOR
- NEW FIRE ALARM STROBE
- EXISTING FIRE ALARM STROBE
- EXISTING ACCESS PANEL
- NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
- CLOSET WALL-MOUNTED LIGHT
- EXTERIOR WALL-MOUNTED LIGHT
- EXTERIOR RECESSED MOUNTED LIGHT
- GWB CEILINGS AND SOFFITS. PATCH AND REPAIR EXISTING GWB CEILINGS TO MATCH EXISTING.
- BEADED VINYL SOFFIT
- VINYL SOFFIT – VENTED, 3 1/3"

NOTES:

1. INTERIOR FIXTURE LEGEND FOR DESIGN INTENT ONLY. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND CIRCUITING. ANY LIGHT FIXTURE DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF AND COORDINATED WITH ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO LIGHT FIXTURE INSTALLATION.

2. MECHANICAL SUBCONTRACTOR TO VERIFY SIZE AND LOCATION OF ANY MECHANICAL REGISTERS WITH ARCHITECT PRIOR TO CONSTRUCTION. LIGHTING LOCATIONS SHALL TAKE PRECEDENCE.

3. REFERENCE FLOOR CEILING ASSEMBLIES FOR FIRE RATED ASSEMBLIES AT NEW RECONFIGURED FLATS.

4. PATCH AND REPAIR EXISTING GWB CEILINGS AS REQUIRED PER NEW LIGHT FIXTURE LOCATIONS.

G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
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204 US ROUTE ONE, SUITE 100-2A
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OWNER
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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
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2 RIVERTON DRIVE
PORTLAND, MAINE 04103

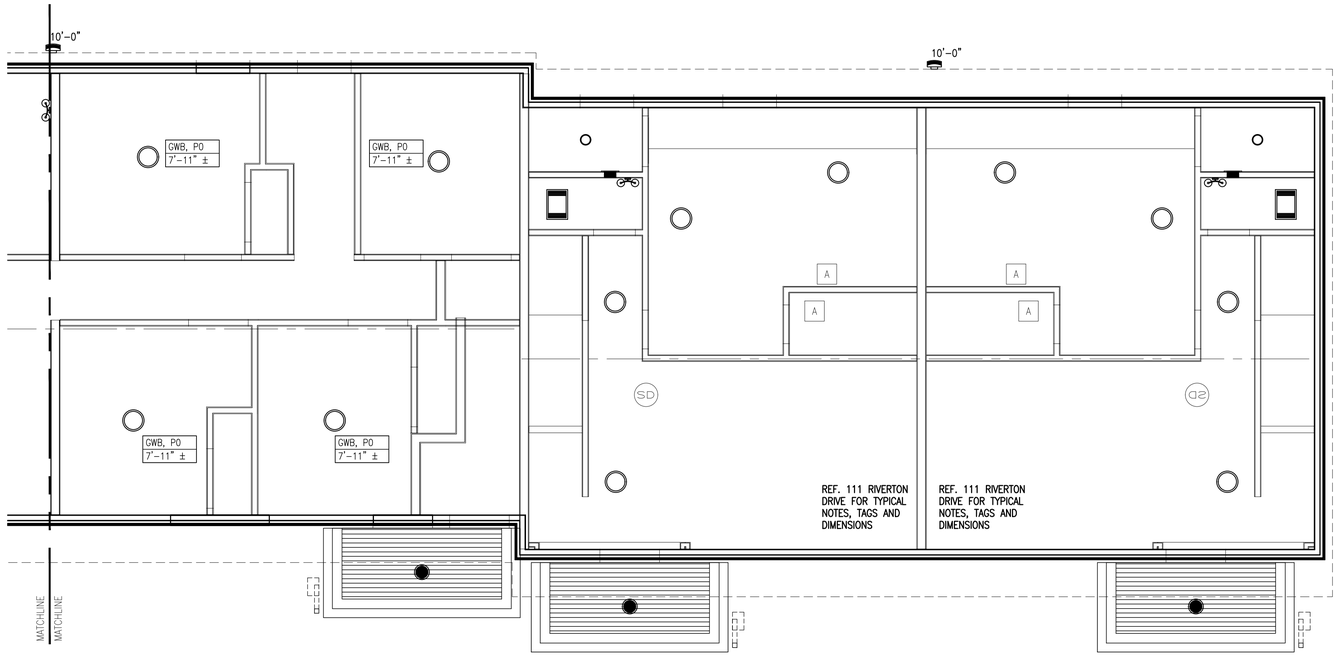
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SECOND FLOOR REFLECTED CEILING PLAN BUILDING 5
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
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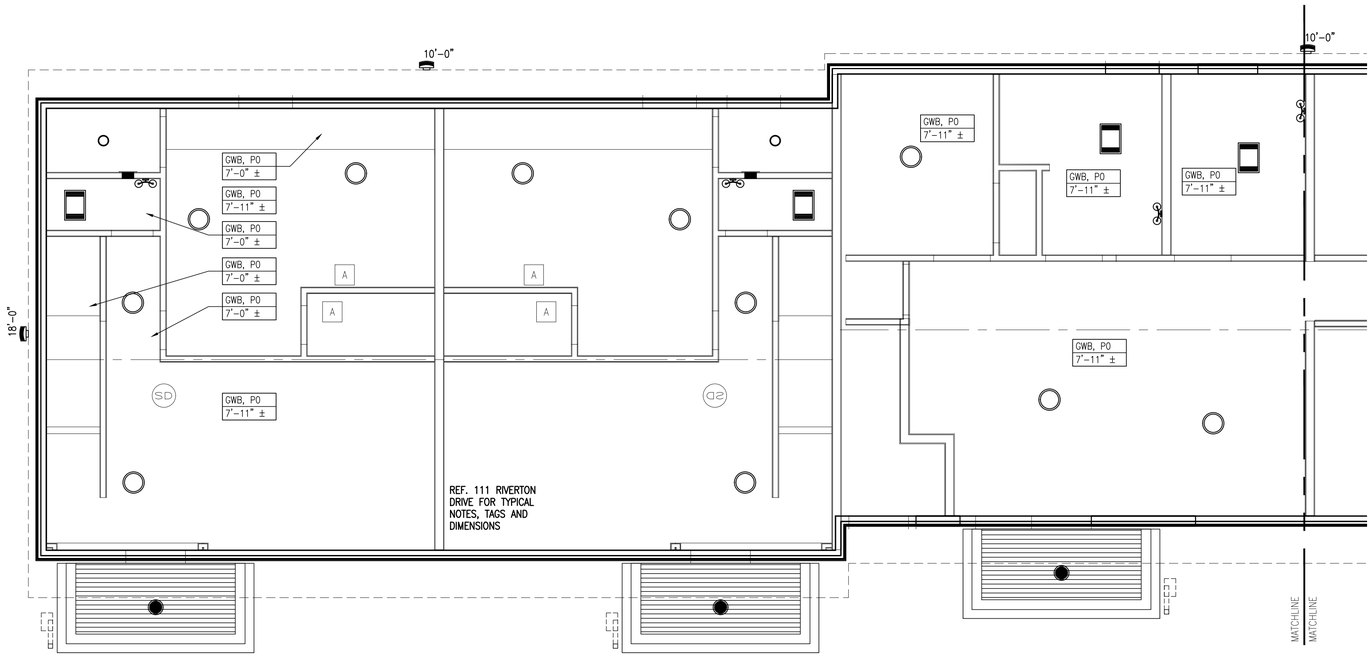
SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



A3 ENLARGED PARTIAL FIRST FLOOR REFLECTED CEILING PLAN

REFERENCED FROM: BUILDING 10 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL FIRST FLOOR REFLECTED CEILING PLAN

REFERENCED FROM: BUILDING 10 SCALE: 1/4"=1'-0"

W:\2019 Design Projects\19013 PKR RAD-Riverton Park\1-Drawings\19013 A110 1st Fl Series

REFLECTED CEILING PLAN NOTES AND LEGEND:

- CO — NEW CARBON MONOXIDE DETECTOR
- SD CO — NEW CARBON MONOXIDE AND SMOKE DETECTOR
- SD — NEW SMOKE DETECTOR
- SD — EXISTING SMOKE DETECTOR
- F — NEW FIRE ALARM STROBE
- F — EXISTING FIRE ALARM STROBE
- A — EXISTING ACCESS PANEL
- A — NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
- CLOSET WALL-MOUNTED LIGHT
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NOTES:

1. INTERIOR FIXTURE LEGEND FOR DESIGN INTENT ONLY. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND CIRCUITING. ANY LIGHT FIXTURE DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF AND COORDINATED WITH ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO LIGHT FIXTURE INSTALLATION.

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4. PATCH AND REPAIR EXISTING GWB CEILINGS AS REQUIRED PER NEW LIGHT FIXTURE LOCATIONS.

G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
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OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

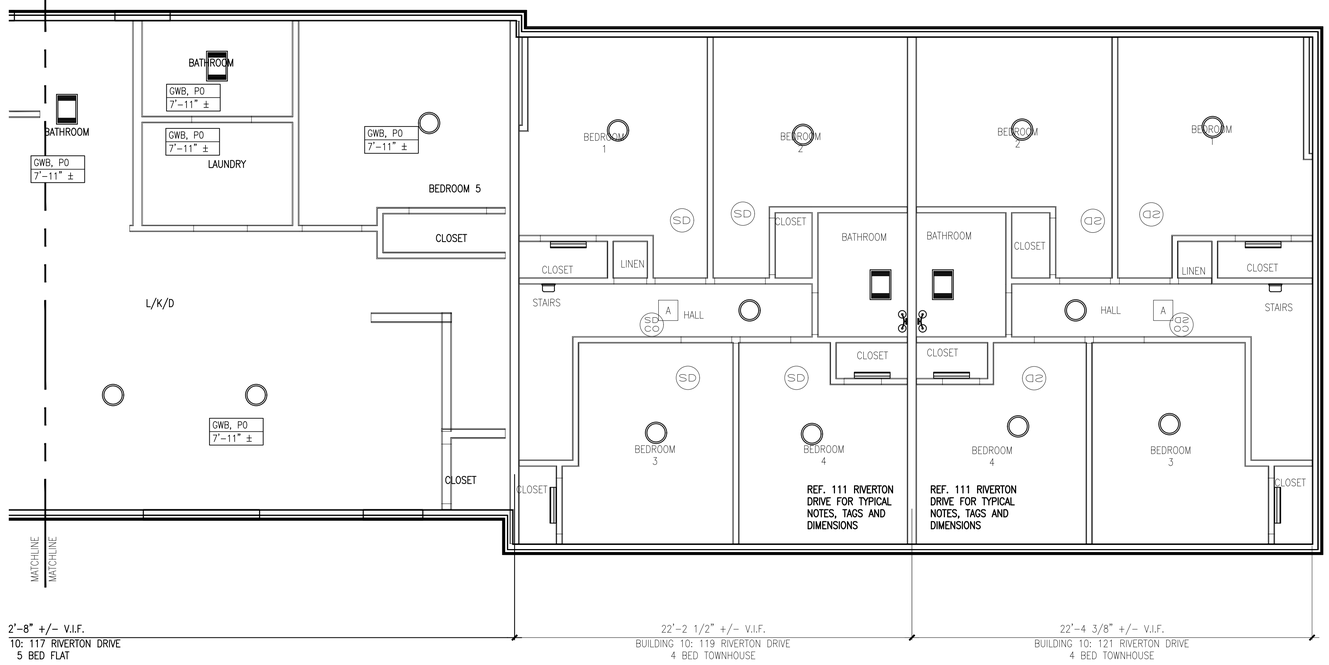
DRAWING
FIRST FLOOR REFLECTED CEILING PLAN BUILDING 10
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A2.10.1

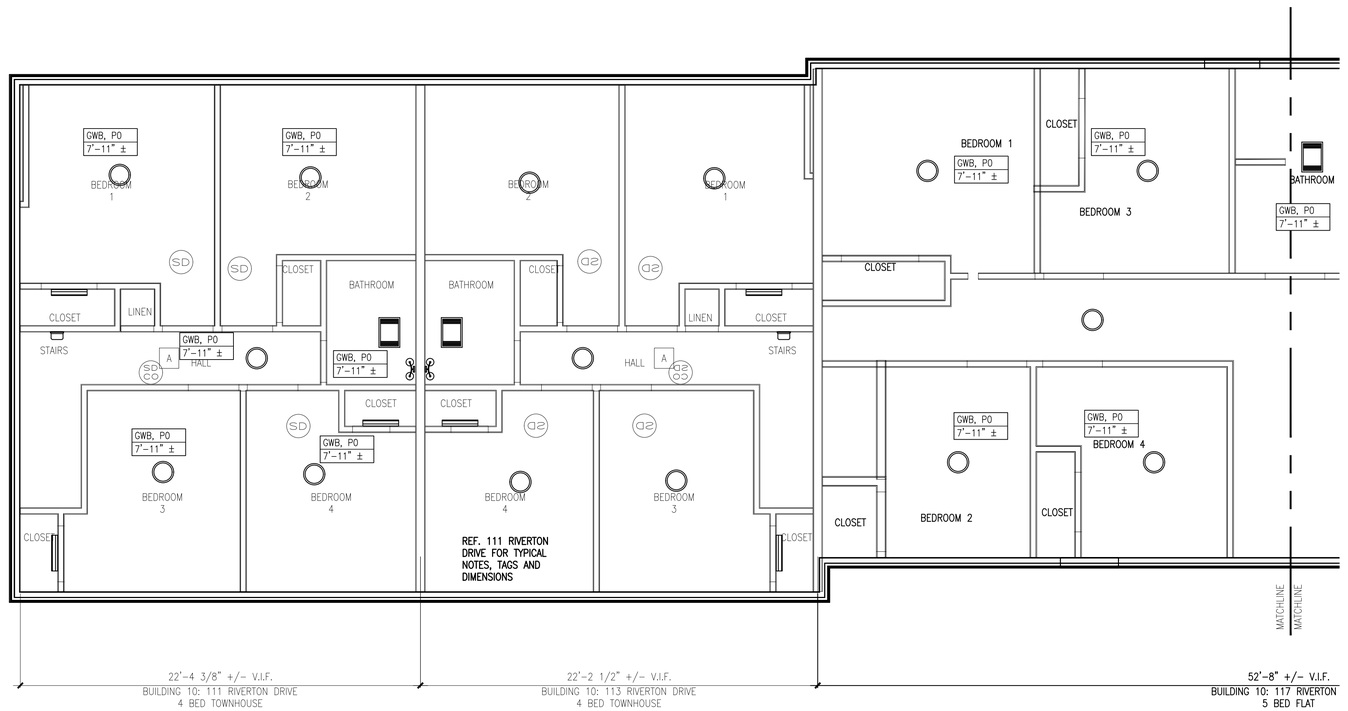
SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



A3 ENLARGED PARTIAL SECOND FLOOR REFLECTED CEILING PLAN

REFERENCED FROM: BUILDING 10 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL SECOND FLOOR REFLECTED CEILING PLAN

REFERENCED FROM: BUILDING 10 SCALE: 1/4"=1'-0"

REFLECTED CEILING PLAN NOTES AND LEGEND:

- NEW CARBON MONOXIDE DETECTOR
- NEW CARBON MONOXIDE AND SMOKE DETECTOR
- NEW SMOKE DETECTOR
- EXISTING SMOKE DETECTOR
- NEW FIRE ALARM STROBE
- EXISTING FIRE ALARM STROBE
- EXISTING ACCESS PANEL
- NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
- CLOSET WALL-MOUNTED LIGHT
- EXTERIOR WALL-MOUNTED LIGHT
- EXTERIOR RECESSED MOUNTED LIGHT
- GWB CEILINGS AND SOFFITS. PATCH AND REPAIR EXISTING GWB CEILINGS TO MATCH EXISTING.
- BEADED VINYL SOFFIT
- VINYL SOFFIT – VENTED, 3 1/3"

NOTES:

1. INTERIOR FIXTURE LEGEND FOR DESIGN INTENT ONLY. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND CIRCUITING. ANY LIGHT FIXTURE DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF AND COORDINATED WITH ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO LIGHT FIXTURE INSTALLATION.
2. MECHANICAL SUBCONTRACTOR TO VERIFY SIZE AND LOCATION OF ANY MECHANICAL REGISTERS WITH ARCHITECT PRIOR TO CONSTRUCTION. LIGHTING LOCATIONS SHALL TAKE PRECEDENCE.
3. REFERENCE FLOOR CEILING ASSEMBLIES FOR FIRE RATED ASSEMBLIES AT NEW RECONFIGURED FLATS.
4. PATCH AND REPAIR EXISTING GWB CEILINGS AS REQUIRED PER NEW LIGHT FIXTURE LOCATIONS.

G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
CWS ARCHITECTURE + INTERIOR DESIGN
204 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, MAINE 04074 207.774.4441
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OWNER
RIVERTON PARK, LP
14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
SECOND FLOOR REFLECTED CEILING PLAN BUILDING 10
CWS PROJECT NUMBER: 19013

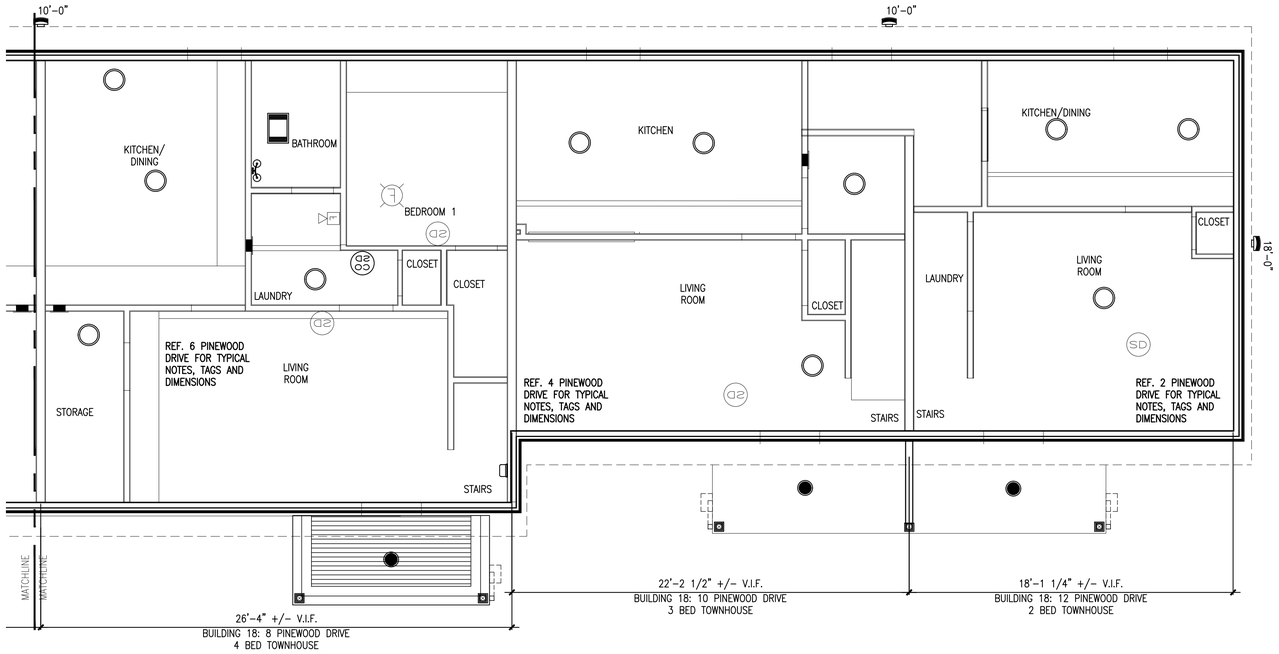
REVISIONS

DRAWING NUMBER
A2.10.2

SCALE: AS NOTED
DATE: 12/22/2022

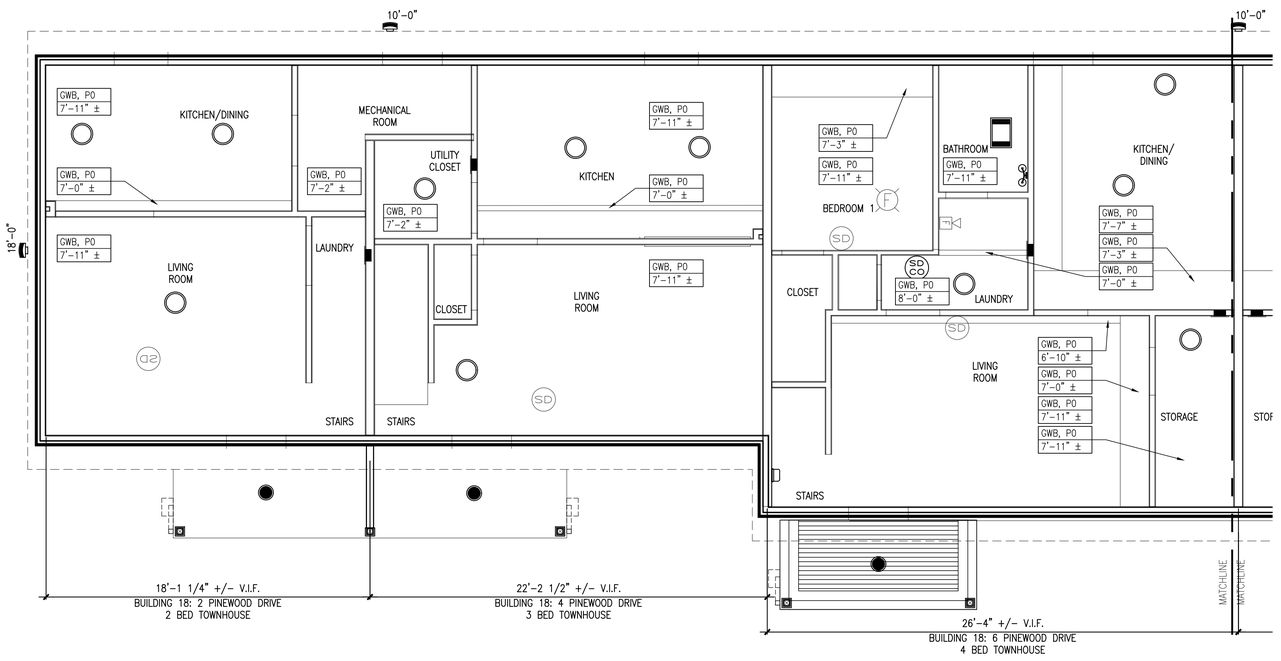
ISSUED FOR: MAJOR SITE PLAN

W:\2019 Design Projects\19013 PHA RAD-Riverton Park\1-Drawings\19013 A1.10 (2nd fl) Series



A3 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 18 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 18 SCALE: 1/4"=1'-0"

W:\2019 Design Projects\13613 PHA RAD-Riverton Park\1-Drawings\13613 A1.18 1st Fl. Series

REFLECTED CEILING PLAN NOTES AND LEGEND:

- NEW CARBON MONOXIDE DETECTOR
- NEW CARBON MONOXIDE AND SMOKE DETECTOR
- NEW SMOKE DETECTOR
- EXISTING SMOKE DETECTOR
- NEW FIRE ALARM STROBE
- EXISTING FIRE ALARM STROBE
- EXISTING ACCESS PANEL
- NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
- CLOSET WALL-MOUNTED LIGHT
- EXTERIOR WALL-MOUNTED LIGHT
- EXTERIOR RECESSED MOUNTED LIGHT
- GWB CEILINGS AND SOFFITS. PATCH AND REPAIR EXISTING GWB CEILINGS TO MATCH EXISTING.
- BEADED VINYL SOFFIT
- VINYL SOFFIT - VENTED, 3 1/3"

NOTES:

1. INTERIOR FIXTURE LEGEND FOR DESIGN INTENT ONLY. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND CIRCUITING. ANY LIGHT FIXTURE DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF AND COORDINATED WITH ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO LIGHT FIXTURE INSTALLATION.

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4. PATCH AND REPAIR EXISTING GWB CEILINGS AS REQUIRED PER NEW LIGHT FIXTURE LOCATIONS.

G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
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PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

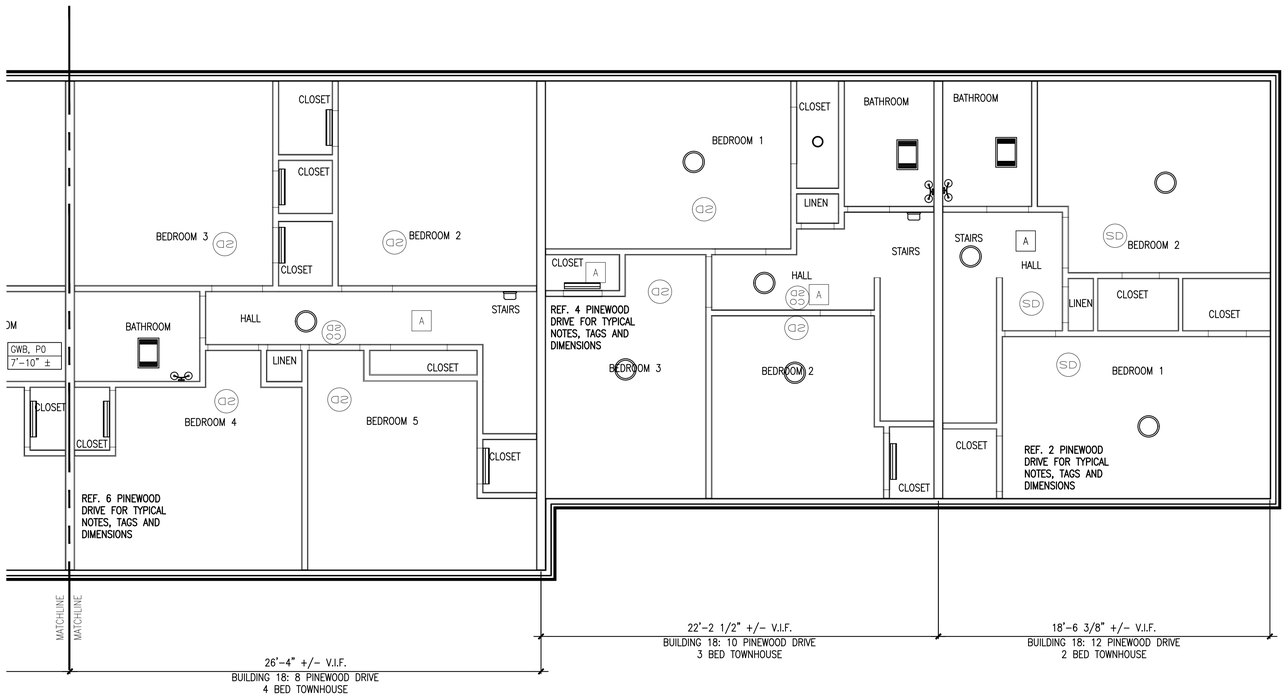
DRAWING
FIRST FLOOR REFLECTED CEILING PLAN BUILDING 18
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A2.18.1

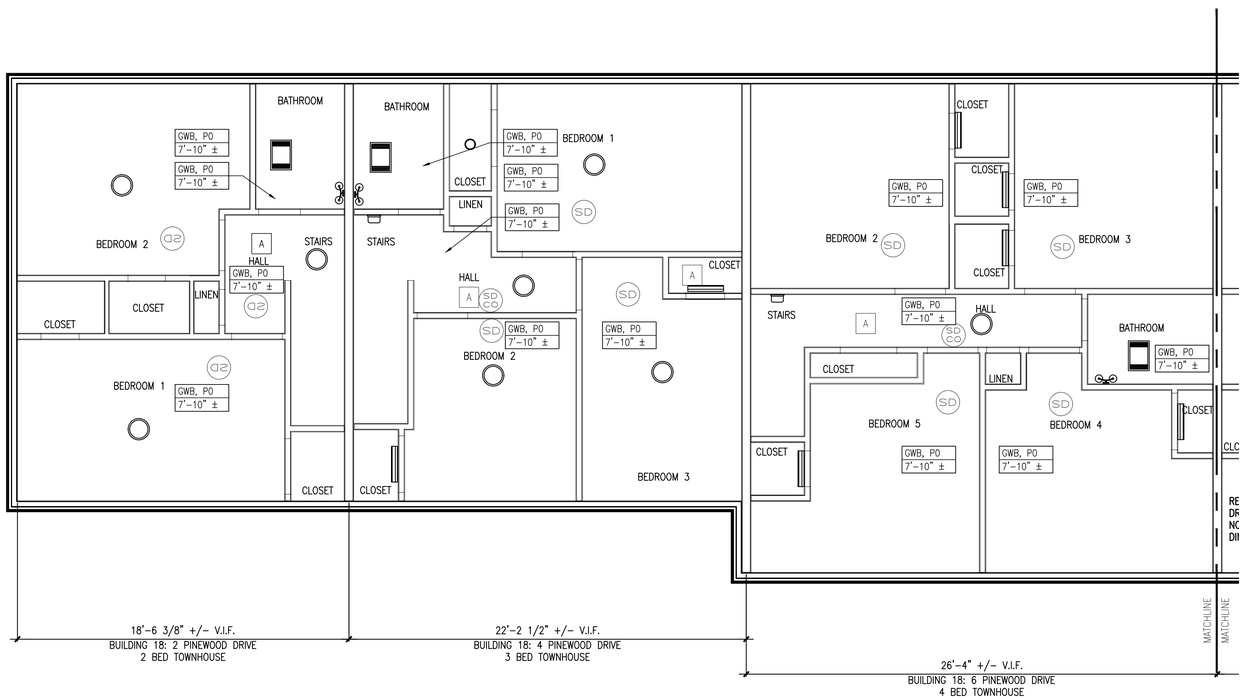
SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



A3 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 18 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 18 SCALE: 1/4"=1'-0"

W:\2019 Design Projects\19013 RHA RAD-Riverton Park\1-Drawings\19013 A1.18 (Ind 1).Series

REFLECTED CEILING PLAN NOTES AND LEGEND:

- NEW CARBON MONOXIDE DETECTOR
- NEW CARBON MONOXIDE AND SMOKE DETECTOR
- NEW SMOKE DETECTOR
- EXISTING SMOKE DETECTOR
- NEW FIRE ALARM STROBE
- EXISTING FIRE ALARM STROBE
- EXISTING ACCESS PANEL
- NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
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- VINYL SOFFIT – VENTED, 3 1/3"

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G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

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PROJECT
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2 RIVERTON DRIVE
PORTLAND, MAINE 04103

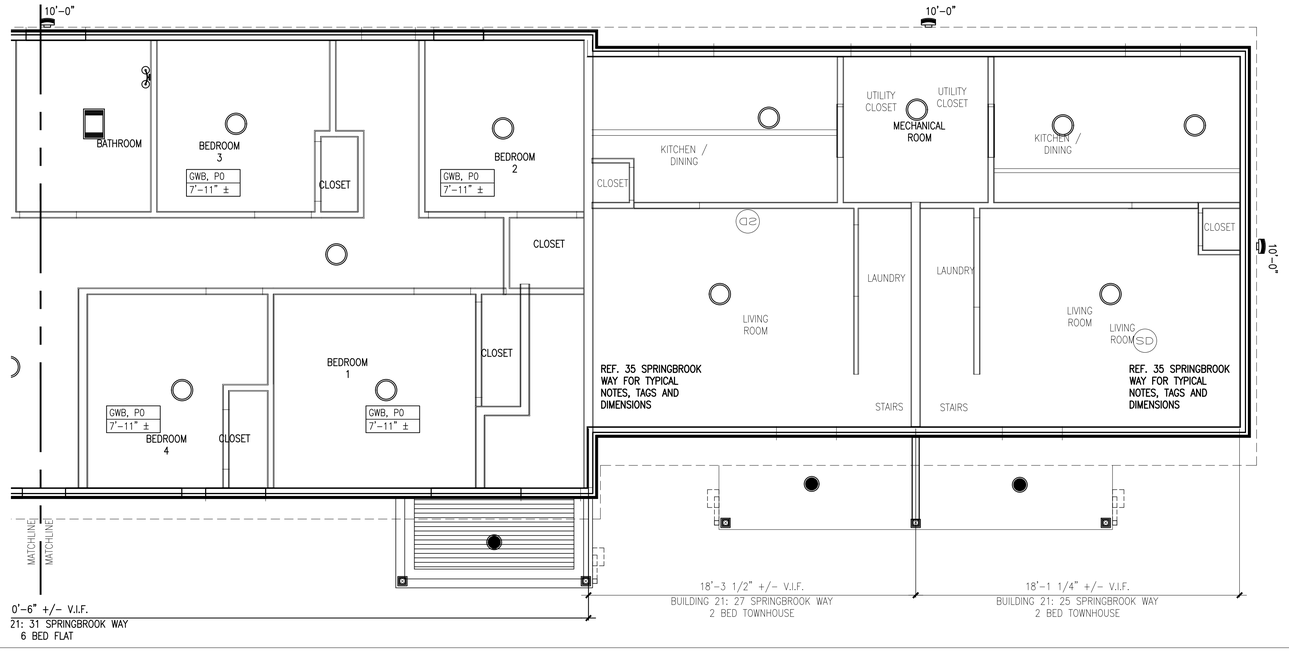
DRAWING
SECOND FLOOR REFLECTED CEILING PLAN BUILDING 18
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A2.18.2

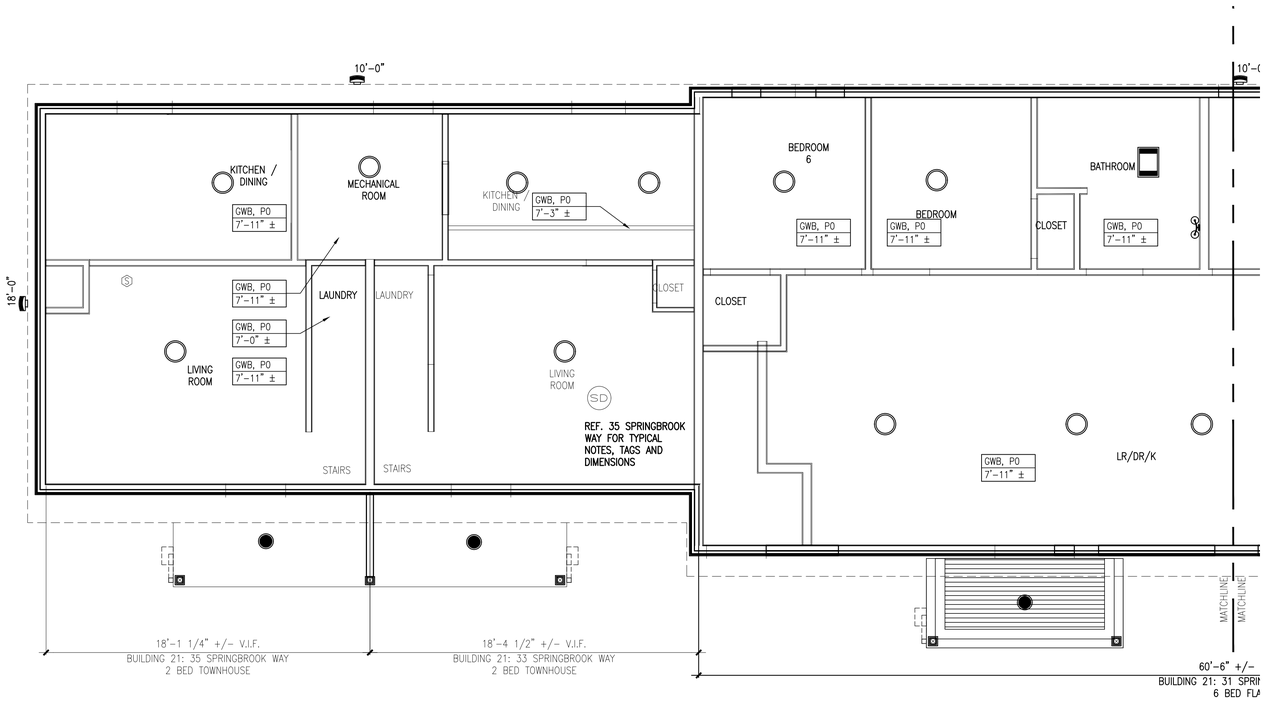
SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



A3 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 21 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 21 SCALE: 1/4"=1'-0"

REFLECTED CEILING PLAN NOTES AND LEGEND:

- NEW CARBON MONOXIDE DETECTOR
- NEW CARBON MONOXIDE AND SMOKE DETECTOR
- NEW SMOKE DETECTOR
- EXISTING SMOKE DETECTOR
- NEW FIRE ALARM STROBE
- EXISTING FIRE ALARM STROBE
- EXISTING ACCESS PANEL
- NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
- CLOSET WALL-MOUNTED LIGHT
- EXTERIOR WALL-MOUNTED LIGHT
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- BEADED VINYL SOFFIT
- VINYL SOFFIT - VENTED, 3 1/3"

NOTES:

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4. PATCH AND REPAIR EXISTING GWB CEILINGS AS REQUIRED PER NEW LIGHT FIXTURE LOCATIONS.

G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

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PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
FIRST FLOOR REFLECTED CEILING PLAN BUILDING 21
CWS PROJECT NUMBER: 19013

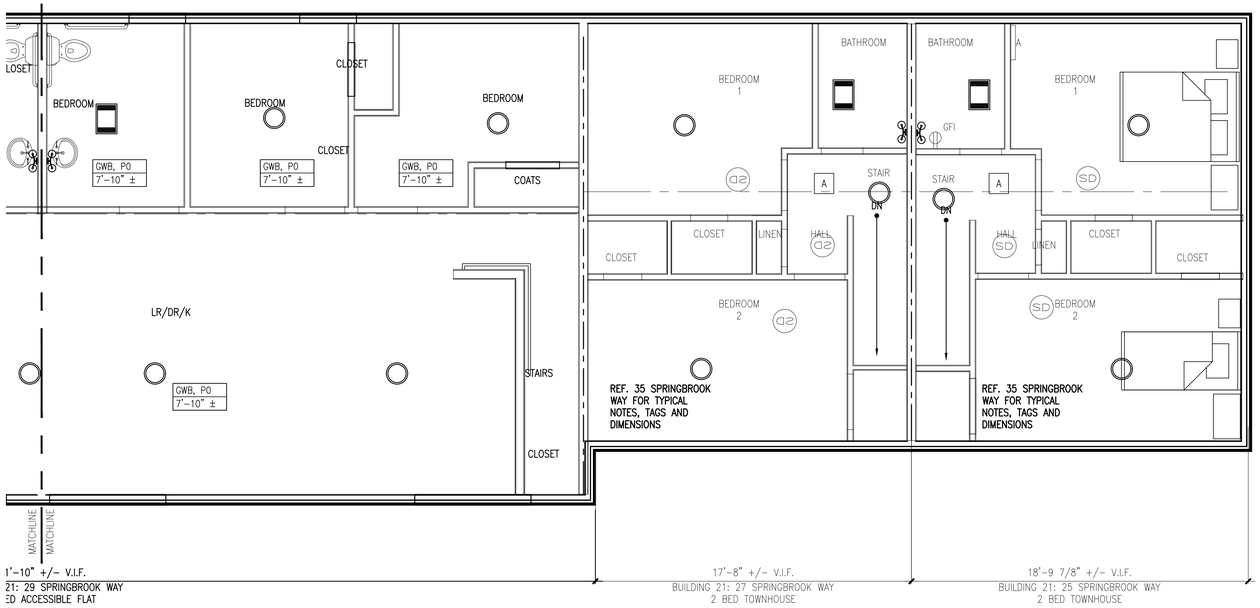
REVISIONS

DRAWING NUMBER
A2.21.1

SCALE: AS NOTED
DATE: 12/22/2022

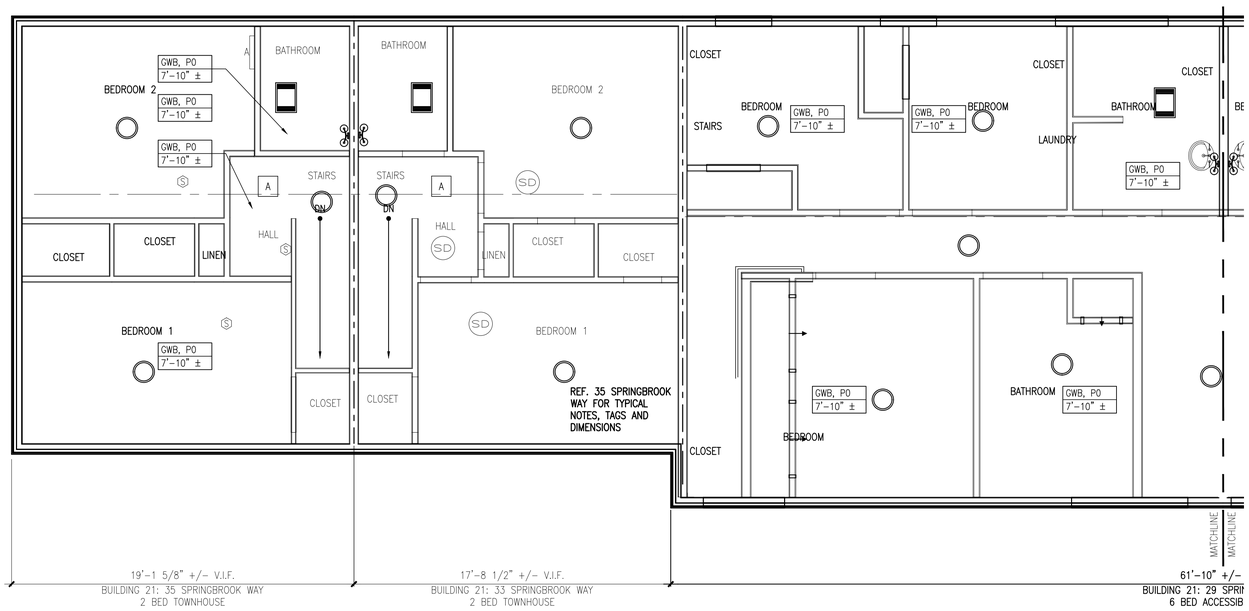
ISSUED FOR: MAJOR SITE PLAN

K:\2019 Design Projects\19013 Rlvt Rdl\Riverton Park\1-Drawings\19013 A1.21 1st fl. Series



A3 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 21 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 21 SCALE: 1/4"=1'-0"

REFLECTED CEILING PLAN NOTES AND LEGEND:

- CO — NEW CARBON MONOXIDE DETECTOR
- SD CO — NEW CARBON MONOXIDE AND SMOKE DETECTOR
- SD — NEW SMOKE DETECTOR
- SD — EXISTING SMOKE DETECTOR
- F — NEW FIRE ALARM STROBE
- F — EXISTING FIRE ALARM STROBE
- A — EXISTING ACCESS PANEL
- A — NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
- DECORATIVE VANITY LIGHT
- CLOSET WALL-MOUNTED LIGHT
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- VINYL SOFFIT – VENTED, 3 1/3"

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G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

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PLANNING + DESIGN CONSTRUCTION SERVICES

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204 US ROUTE ONE, SUITE 100-2A
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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

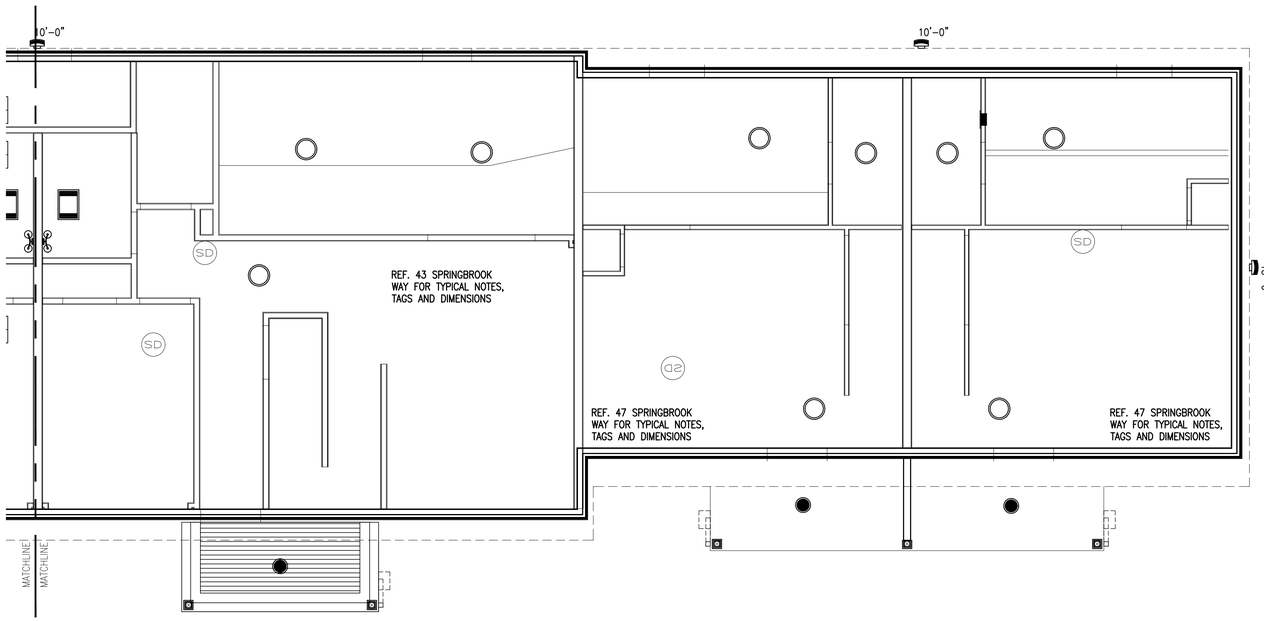
DRAWING
SECOND FLOOR REFLECTED CEILING PLAN BUILDING 21
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A2.21.2

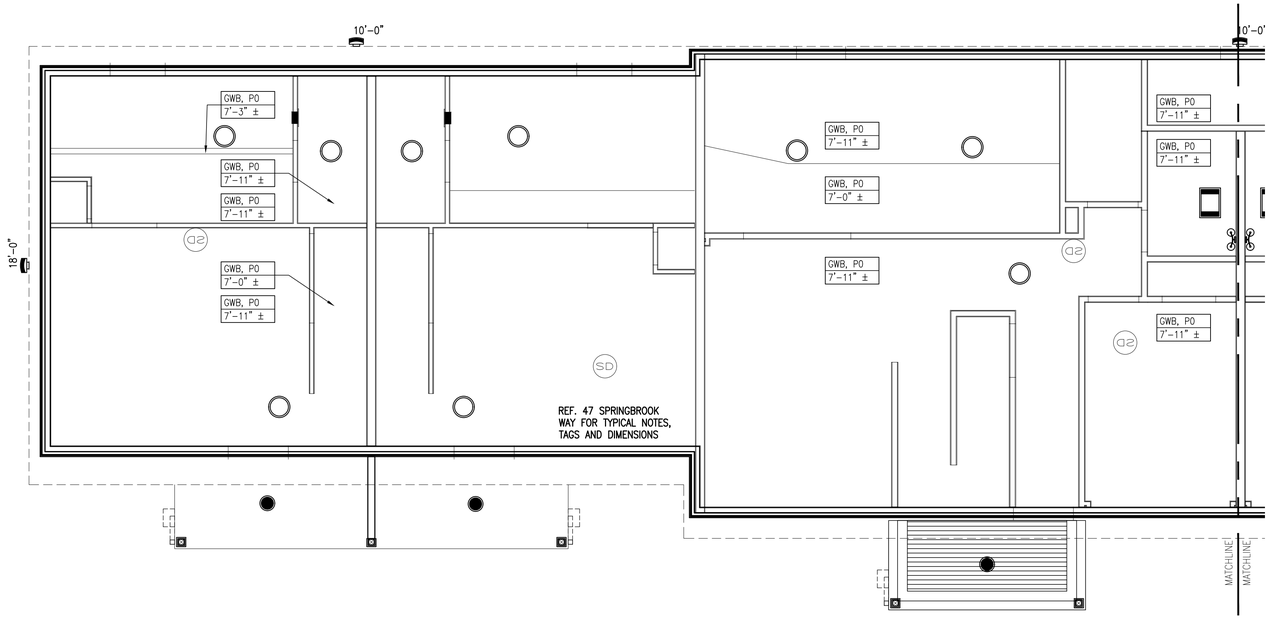
SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



A3 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL FIRST FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"

W:\2019 Design Projects\19013 RVR RAD-Riverton Park\1-Drawings\19013 A122 1st Fl Series

REFLECTED CEILING PLAN NOTES AND LEGEND:

- CO — NEW CARBON MONOXIDE DETECTOR
- SD CO — NEW CARBON MONOXIDE AND SMOKE DETECTOR
- SD — NEW SMOKE DETECTOR
- SD — EXISTING SMOKE DETECTOR
- F — NEW FIRE ALARM STROBE
- F — EXISTING FIRE ALARM STROBE
- A — EXISTING ACCESS PANEL
- A — NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
- SURFACE-MOUNTED LIGHT
- WALL-MOUNTED STAIRWELL LIGHT
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- BEADED VINYL SOFFIT
- VINYL SOFFIT – VENTED, 3 1/3"

NOTES:

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G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

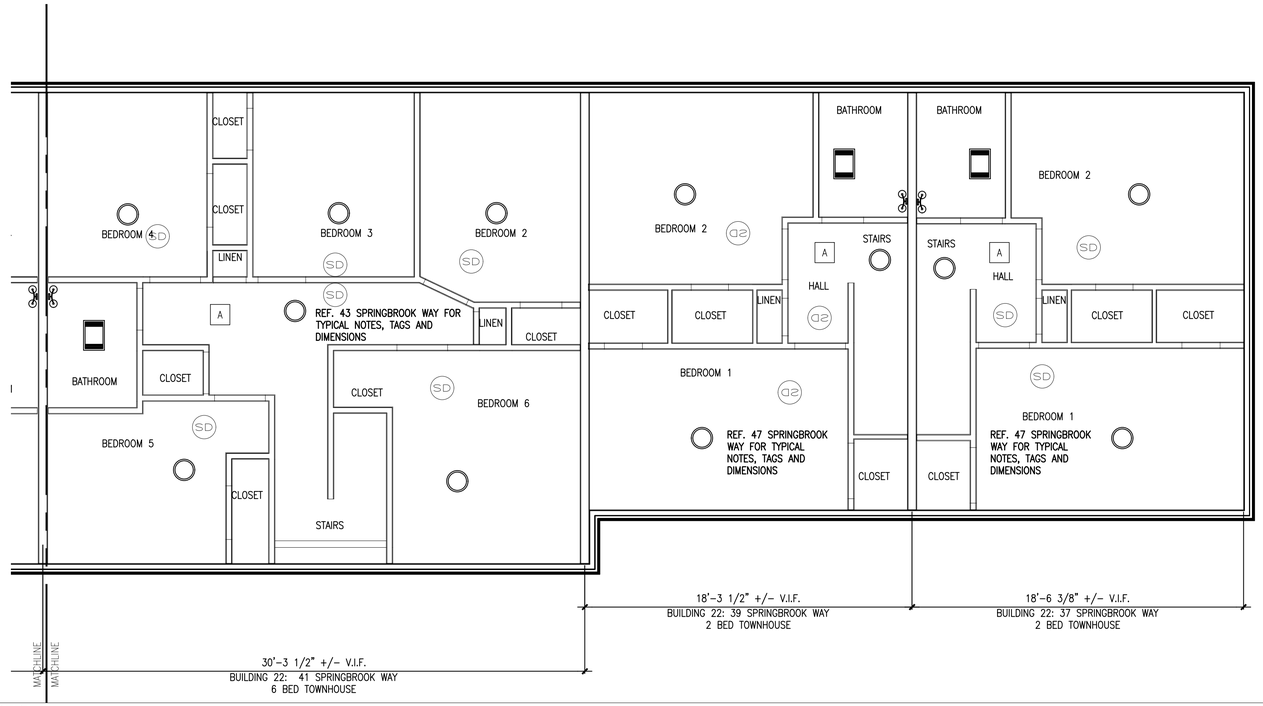
DRAWING
FIRST FLOOR REFLECTED CEILING PLAN BUILDING 22
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A2.22.1

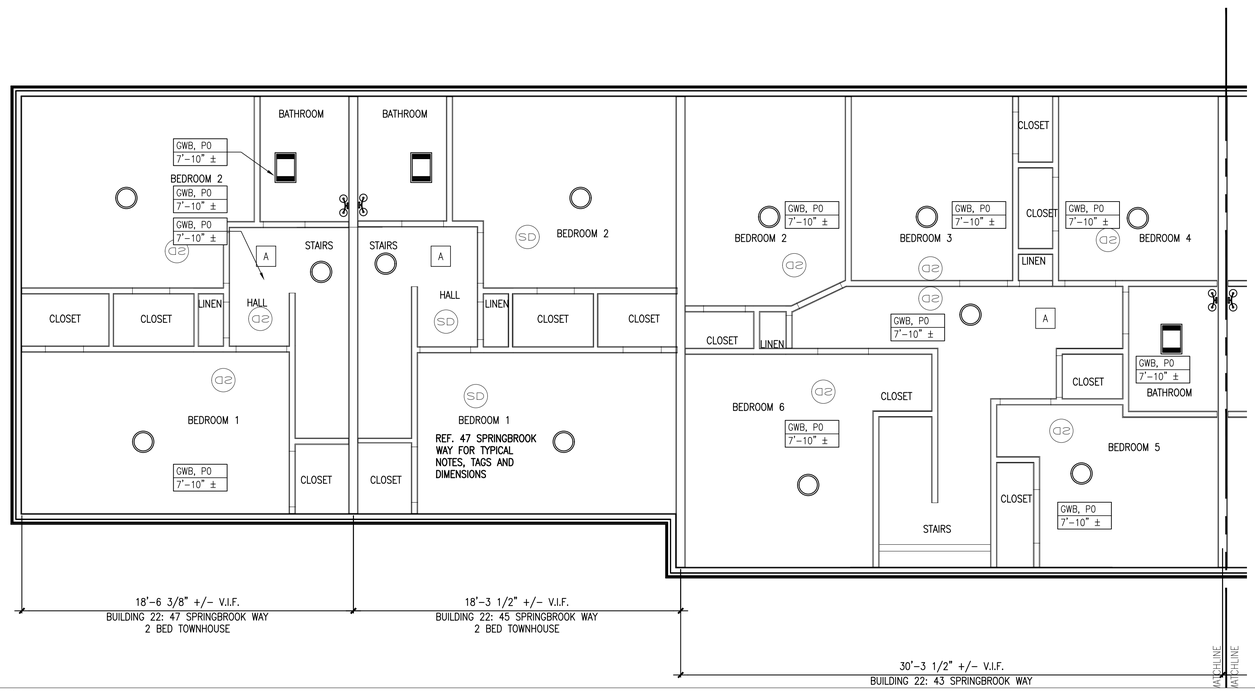
SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



A3 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"



A5 ENLARGED PARTIAL SECOND FLOOR PLAN

REFERENCED FROM: BUILDING 22 SCALE: 1/4"=1'-0"

REFLECTED CEILING PLAN NOTES AND LEGEND:

- NEW CARBON MONOXIDE DETECTOR
- NEW CARBON MONOXIDE AND SMOKE DETECTOR
- NEW SMOKE DETECTOR
- EXISTING SMOKE DETECTOR
- NEW FIRE ALARM STROBE
- EXISTING FIRE ALARM STROBE
- EXISTING ACCESS PANEL
- NEW ACCESS PANEL
- BATHROOM FAN/LIGHT COMBO
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G5 REFLECTED CEILING PLAN NOTES

REFERENCED FROM: SCALE: 1/4"=1'-0"

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PROJECT
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2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING
SECOND FLOOR
REFLECTED CEILING PLAN
BUILDING 22
CWS PROJECT NUMBER: 19013

REVISIONS

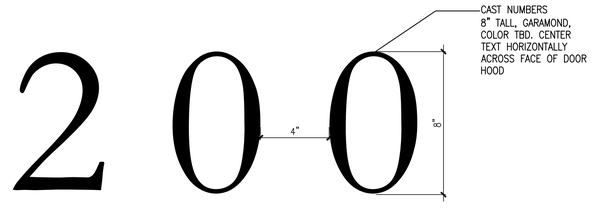
DRAWING NUMBER
A2.22.2

SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



A3 EXTERIOR BUILDING NUMBER SIGNAGE
REFERENCED FROM: SCALE: 3"=1'-0"



A5 BUILDING NUMBER SIGNAGE
REFERENCED FROM: SCALE: 3"=1'-0"

CODE	MATERIAL	MANUFACTURER	PRODUCT, STYLE AND COLOR	FINISH
A	FIBER CEMENT SIDING AND TRIM	JAMES HARDIE	REFERENCE SPECIFICATION SECTION 07 46 10; REFERENCE BUILDING ELEVATIONS FOR MATERIAL PATTERN	FACTORY
A-2	BOARD AND BATTON SIDING – REFERENCE A7 SERIES EXT DETAILS FOR MORE INFO.	JAMES HARDIE	REFERENCE SPECIFICATION SECTION 07 46 10; REFERENCE BUILDING ELEVATIONS FOR MATERIAL PATTERN	FACTORY
B	ASPHALT SHINGLE ROOFING	TBD		TBD
C	EXTERIOR DOOR AND FRAME ASSY		REFERENCE FLOOR PLANS AND SHEET A8.10, A8.11 & FINISH SCHEDULE	FACTORY PRIMED, FIELD–PAINTED
D	ALTERNATE No. 5: COMPOSITE WINDOW ASSEMBLY	TBD	REFERENCE SPECIFICATION SECTIONS 08 53 00 AND 08 54 13, AND DRAWING SHEET A8.21 FOR MORE INFO.	FACTORY
E	EXTERIOR INSULATION AND PARGE COAT AT FACE OF EXISTING FOUNDATION	TBD	TBD	FACTORY
F	WOOD–FRAMED DOOR HOOD – REFERENCE A7.00 & A7.01 FOR MORE INFO	N/A	TBD	EXIST
G	NEW OR REINSTALLED EXTERIOR LED LIGHT FIXTURE – LOCATIONS VARY – REFERENCE REFLECTED CEILING PLANS FOR MORE INFO.	TBD	TBD	FACTORY
H	BUILDING ADDRESS – REFERENCE FLOOR PLANS FOR ADDRESS PER ENTRY	GEMINI PRODUCTS	GARAMOND TYPEFACE PAINTED CAST ALUMINUM LETTERS	FACTORY,TBD
J	BUILDING SIGNAGE	GEMINI PRODUCTS	GARAMOND TYPEFACE PAINTED CAST ALUMINUM LETTERS	FACTORY,TBD
K	ELECTRICAL COMPONENT ENCLOSURE. LOCATIONS AND SIZE VARY BY BUILDING. REFERENCE FLOOR PLANS AND ELEC DWGS FOR MORE INFO.	N/A	REF A7.41 FOR DETAILS	N/A
L	PROVIDE CONDUIT FOR WIFI SYSTEM INSTALLATION (BY OTHERS) AND PV SYSTEM INSTALLATION. CONTRACTOR OPTION: PROVIDE MINIMAL TRENCH WITHIN NEW EXT INSUL SYSTEM, AND CONCEAL BEHIND NEW SIDING SYSTEM –OR– CONCEAL WITHIN EXISTING WALL STUD CAVITY.	N/A	N/A	N/A
M	EXIST ELECTRICAL CONDUIT TO REMAIN. PROVIDE MINIMAL TRENCH WITHIN NEW FOUNDATION INSULATION SYSTEM, CONCEAL BEHIND NEW FIBER CEMENT FDNN FINISH. PROVIDE SEALANT @ JUNCTION W/ FDN FINISH ASSEMBLY	N/A	N/A	N/A
N	PHOTOVOLTAIC ARRAY ASSEMBLY BY SUBCONTRACTOR. LAYOUT VARIES BY BUILDING.	N/A	N/A	N/A

E5 EXTERIOR MATERIALS LEGEND
REFERENCED FROM: SCALE: N/A

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
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OWNER
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14 BAXTER BLVD
PORTLAND, MAINE 04101

PROJECT
RIVERTON PARK REHABILITATION
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

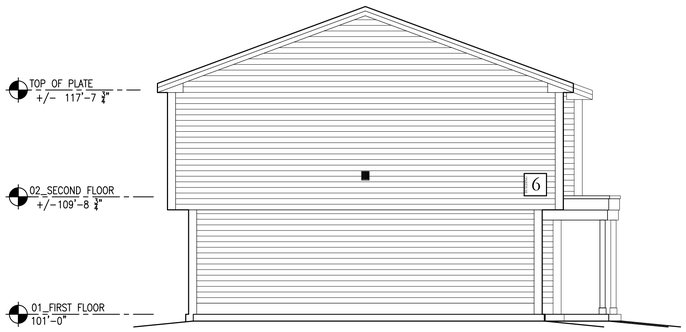
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CWS PROJECT NUMBER: 19013

REVISIONS

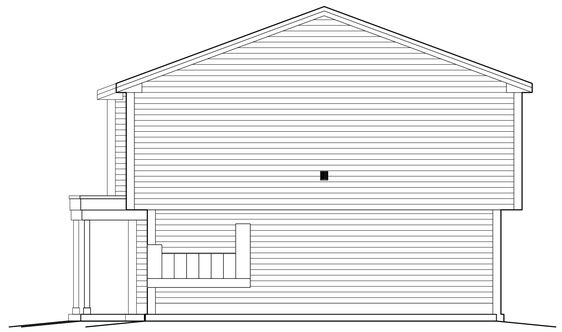
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SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



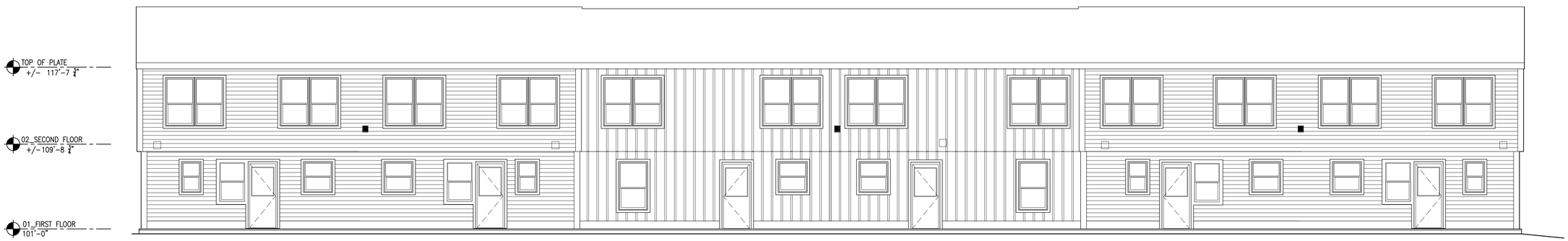
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W:\2019 Design Projects\19013 PHA RAD-Riverton Park\1-Drawings\19013 A102 - Building-6- 8-14-19-24 - Elevations

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PORTLAND, MAINE 04103

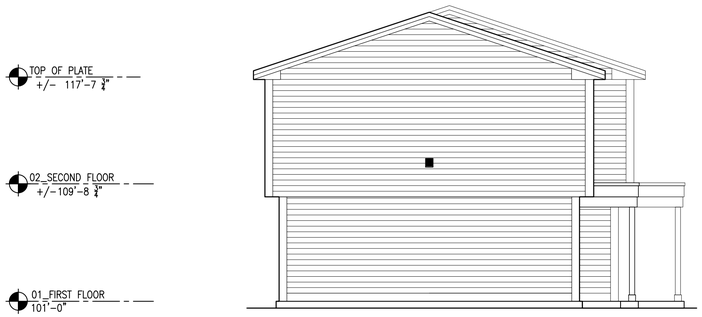
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REVISIONS

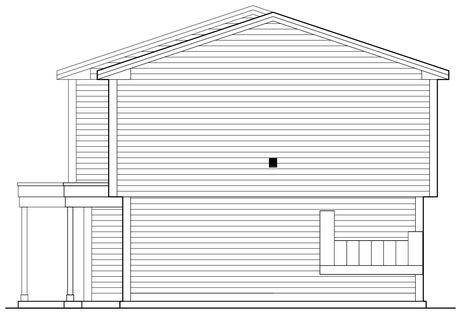
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SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



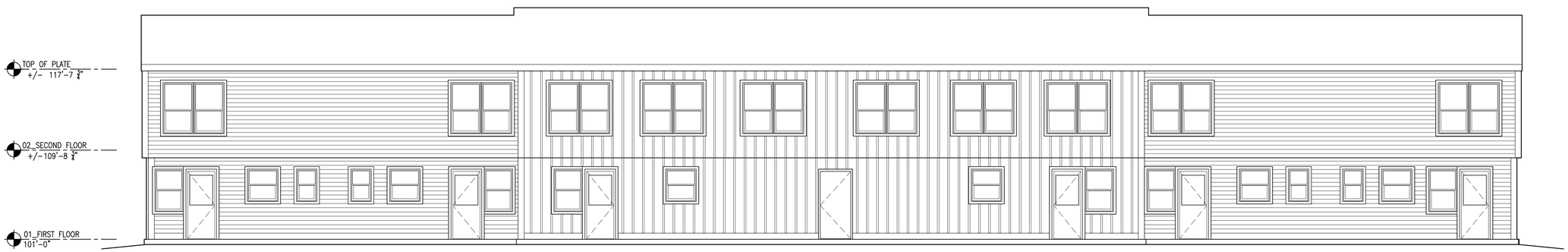
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REFERENCED FROM: PLANS SCALE: 3/16"=1'-0"



A5 REAR BUILDING ELEVATION
REFERENCED FROM: PLANS SCALE: 3/16"=1'-0"

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PROJECT
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PORTLAND, MAINE 04103

DRAWING
BUILDING 22
EXTERIOR ELEVATIONS
CWS PROJECT NUMBER: 19013

REVISIONS

DRAWING NUMBER
A3.09

SCALE: AS NOTED
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



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PLANNING + DESIGN CONSTRUCTION SERVICES

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OWNER

RIVERTON PARK, LP

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PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK
REHABILITATION

2 RIVERTON DRIVE
PORTLAND, MAINE 04103

DRAWING

EXTERIOR RENDERING

CWS PROJECT NUMBER: 19013

REVISIONS

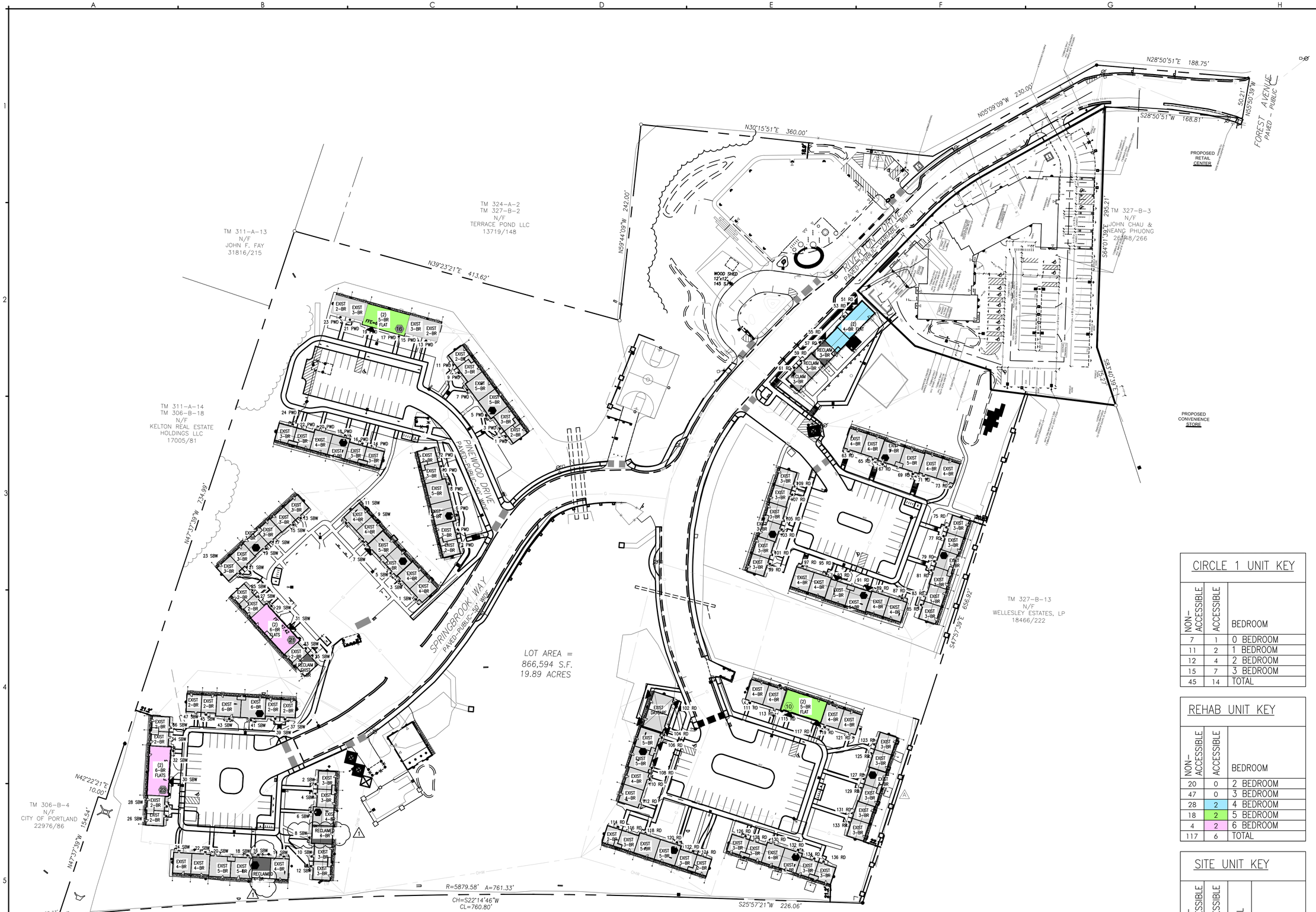
DRAWING NUMBER

A3.50

SCALE: AS NOTED

DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN



CIRCLE 1 UNIT KEY

NON-ACCESSIBLE	ACCESSIBLE	BEDROOM
7	1	0 BEDROOM
11	2	1 BEDROOM
12	4	2 BEDROOM
15	7	3 BEDROOM
45	14	TOTAL

REHAB UNIT KEY

NON-ACCESSIBLE	ACCESSIBLE	BEDROOM
20	0	2 BEDROOM
47	0	3 BEDROOM
28	2	4 BEDROOM
18	2	5 BEDROOM
4	2	6 BEDROOM
117	6	TOTAL

SITE UNIT KEY

NON-ACCESSIBLE	ACCESSIBLE	TOTAL	AREA
45	14	59	BUILDING 1
117	6	123	REHAB
162	20	182	TOTAL

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PORTLAND, MAINE 04103

DRAWING
UNIT LOCATIONS SITE PLAN
CWS PROJECT NUMBER: 19013

REVISIONS

⚠1 MSHA PRE-APP UPDATE	07/01/2022

DRAWING NUMBER
G1.00

SCALE: NA
DATE: 12/22/2022

ISSUED FOR: MAJOR SITE PLAN

Planning Board Report
Planning and Urban Development Department

Center for the Arts at USM
111 Bedford Street
Major Site Plan
PL-002314-2022
The University of Southern Maine, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Maya Balassa
Public Hearing Date:	March 28, 2023	**Date:**	March 24, 2023

I. INTRODUCTION

The University of Southern Maine (USM) has submitted a major site plan and site location amendment application to develop a new performing arts facility, to be called the 'Center for the Arts', at 111 Bedford Street on the USM Portland campus. This development is identified in the University's 2019 Facilities Master Plan, and is considered an anchor element of the University's proposed Portland Campus expansion, which includes the previously approved Student Success Center, Campus Quadrangle and Residence Hall, along with the anticipated Graduate Center for Professional Studies.

The Planning and Urban Development Department mailed 175 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in March 17th and 18th, 2023 editions of the *Portland Press Herald*.

The Planning Board held a workshop for this application on February 28, 2023.

Applicant: John Souther, The University of Southern Maine
Applicant Representatives: John DeWaters, Oak Point Associates

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Major Site Plan	Site Plan Ordinance – Article 14.6
Site Location of Development	

Waiver Requests	*Applicable Standards*
The applicant is proposing to remove three trees within the building setback that have a DBH of 10 inches or greater. Staff Finding: Staff note that these existing trees would be impacted during the course of construction, and are not able to be preserved. Noting this, staff are recommending that the applicant maximize new tree plantings on-site to off-set this impact, and pay tree replacement fees as needed per Technical Manual Section 4.3.8 to satisfy this mitigation requirement.	Standard 14.6.2.B.3 requires sites to preserve at least 30% of the trees within the building setback that have a DBH of 10 inches or greater. The applicant is proposing to replace each of the three trees being removed with a greater DBH than 10 inches with two trees along Bedford Street.

III. PROJECT DATA

Existing Zoning	R-5 Residential and USM Overlay
Property Size	29.33 acres
Existing Use	Institutional
Proposed Use	Institutional
Proposed Development Program	USM Center for the Arts

	Existing	*Proposed*	*Net Change*
Building Footprint	336,725 sf	376,800 sf	+40,075 sf
Building Floor Area	377,230 sf	417,305 sf	+40,075 sf
Impervious Surface Area	690,861 sf	714,819 sf	+23,958 sf
Parking Spaces	1150	0	0

*these figures are campus-wide

IV. BACKGROUND AND EXISING CONDITIONS



Figure 1 GoogleEarth view of 111 Bedford Street with the approximate area of disturbance highlighted.

The site is within the University of Southern Maine Portland campus that spans from Exeter Street to Forest Avenue and from Falmouth Street to the southern side of Bedford Street. The development site has frontages on Bedford Street, Deering Avenue, and Falmouth Street (Figure 1). The development site is largely vegetated with areas of lawn, stands of mature trees, and multiple pathways connecting the various areas and buildings on campus. The Deering Farmhouse is currently located within the proposed footprint

of the Center for the Arts building, and is being relocated towards Falmouth street on USM property in order to make space for the Center for the Arts building. The site plan for the relocation of the Deering Farmhouse was reviewed as a Minor Site Plan Application, PL-002251-2022, and was approved on February 21, 2023. The development site is situated directly across Deering Avenue from the former USM Law School building. Abutting this area to the east are other USM buildings including, Luther Bonney Hall. The site abuts Noyes Park to the west. The site used to have a section of Bedford Street running through that has since been incorporated into the green space as part of the Deering's Corner Roundabout project, which was completed in 2021.

USM has recently had several projects approved through site plan review, including a new 41,219 square foot student center, 580-bed dormitory and associated one-acre quad at 25 Bedford Street, approved by the Planning Board on November 10, 2020 (PL-001040-2020). On January 11, 2022 the Planning Board approved a 504-space parking garage at 50 Bedford Street (PL-001729-2021). The student center, residence hall and the parking garage are currently under construction.

V. PROPOSED DEVELOPMENT



Figure 2 Rendering of the CFA building and pull off lane from Bedford Street

The proposed 40,075 square foot building will serve as the new Center for the Arts (CFA) for the University of Southern Maine. The building includes a 200-seat Performance Hall, a flexible Arts Lab, a rehearsal room, classrooms, practice rooms, and an office for the Center of Book Arts.

The applicant is also proposing landscaping changes, new walkways connecting the CFA building to the surrounding context, a pull off lane along Bedford Street to function as a drop off/pick up lane as well as emergency vehicle access, and a loading area off Falmouth Street for the CFA building. Several areas for new plantings have been proposed, including along Bedford Street, around the relocated Deering Farmhouse, and along Falmouth Street to buffer the existing parking area. Walkways will be added to the site to connect the CFA building to the surrounding campus buildings and street network.

VI. PREVIOUS WORKSHOPS

A workshop was held on February 28, 2023 during which the board discussed potential traffic impacts during performance arts events, the campus-wide parking supply, design standards, pedestrian movements, landscaping standards and the undergrounding of utility lines along Bedford Street. Board Member Silk also requested that staff look into the possibility of a completed USM master plan related to the city. Staff confirm that USM does not have an officially adopted master plan or city plan. Additionally, there were two public comments made during the meeting. One comment was in support of the relocation and proposed programing of the Deering Farmhouse. The other comment raised concerns of pedestrian safety at the roundabout and potential noise impacts. The applicant has worked with City Staff to resubmit and update the plans. The applicant has since resubmitted an updated package of materials in response to Planning Board, staff, and public feedback.

VII. RIGHT, TITLE, & INTEREST

The applicant has demonstrated right, title, and interest through the property deed (Attachment D).

VIII. FINANCIAL & TECHNICAL CAPACITY

Documentation to verify financial capacity is a letter from Alexander Porteous, the Chief Operation Officer & Chief Business Officer stating the University will fund the project. Documentation for technical capacity has also been included. The applicant team includes Oak Point Associates and Pfeiffer Partners.

IX. ZONING ANALYSIS

The site is located within the R-5 Residential Zone and is within the USM Overlay Zone. The purpose of this zone is to "establish an overlay zone in which existing university campus can be continued and reasonably expanded within defined boundaries, in addition to those uses permitted in the underlying zone or zones" and to "recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods". The USM Overlay Zone was created prior to the City Council's adoption of the Institutional Overlay Zone (IOZ) mechanism. With respect to use requirements, the USM Overlay zone permits the types of uses planned including classrooms, auditoriums, and concert halls. The project also meets zoning dimensional requirements including building setback and height requirements. The impervious surface ratio proposed, 55%, is below the maximum allowed for the USM campus, which is 66%. The maximum building coverage allowable for the campus is 40%; this project meets that standard at a building coverage of 33%.

X. SITE PLAN REVIEW STANDARDS (Section 14.6)

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

1. Transportation Standards (Section 14.6.1)

   A. Impact on surrounding street systems

   The applicant is proposing a 12-foot-wide pull-off lane along Bedford Street for emergency vehicle access and for vehicle loading and unloading. This pull-off is not anticipated to impact the existing vehicle and bicycle lanes along Bedford Street. The existing sidewalk along Bedford Street, which runs the length of the area of disturbance will be reconstructed as part of this project.

   The proposed project anticipates an increase of 40 AM/45 PM new trips to the site per day. The anticipated increase in trips puts the project below the threshold for a Traffic Movement Permit. As

part of the 2020 student center and dormitory proposal (PL-001040-2020), the Planning Board approved a TMP, which required USM to construct and financially contribute to a number of traffic calming and pedestrian improvements outlined in the approval letter (Report Attachment 4).

B. Access and circulation

The proposed Center for the Arts does not involve the construction of new off-street parking, and generally relies on available capacity within existing off-street parking areas, notably the existing and newly constructed parking garages located on the south side of Bedford Street. Trips to and from these parking areas were anticipated as part of the 2020 TMP as noted under the preceding standard. In general, faculty, staff, students and the public will arrive at the Center for the Arts via existing and newly proposed pedestrian pathways. The campus can also be accessed via public transportation, with several bus stops nearby along Deering Avenue on the west side of Noyes Park, on Bedford Street between Forest and Deering avenues, on the corner of Forest Avenue and Bedford Street, as well as on the corner of Forest Avenue and Falmouth Street. Regarding sidewalks along public rights-of-way, the campus is located within a brick sidewalk district, and any sidewalk repair or construction will need to incorporate brick as a surface material.

There is a loading area proposed off Falmouth Street to the Center of the Arts via a widened sidewalk. A turning template for 30-foot box trucks has been submitted.

For pedestrian circulation context around the site, there are several existing crosswalks that connect the site to the surrounding context. Along Bedford there are two crosswalks along the site, one in front of Luther Bonney Hall and one across Bedford at Deering Avenue. There are three crosswalks crossing Deering Ave along the site, one at Bedford Street, at the end of the path through Noyes Park, and one before the roundabout. There is also a crosswalk before the roundabout across Falmouth Street.



Figure 3: USM Campus – Nearby pedestrian crosswalks

C. Public transit access

There is a bus stop at the top of Noyes Park along Deering Ave. This bus stop is within a quarter mile of the site, approximately 65 feet from the proposed building. This project is therefore not required to construct a bus stop and this standard is not applicable.

D. Parking

There are no changes to parking proposed as part of this application, with all off-street parking associated with this development being provided within the parking garage located off of Bedford Street.

Tom Errico, the City's consulting traffic engineer, has reviewed the submitted parking analysis and has found that the USM Portland campus has sufficient parking to accommodate peak parking demand, even where coupled with intermittent performances and events. (Report Attachment 6).

E. Transportation demand management (TDM)

The University of Southern Maine has an existing Transportation Demand Management (TDM) Plan that was updated prior to the submission of this application, which will take effect after the Certificate of Occupancy has been issued for the Center for the Arts building (Report Attachment 5). USM speaks to multiple strategies in addressing transportation demand on campus in Portland, including two major principles: mobility and sustainability. The development of the parking garage along Bedford was intended to cover parking demand created by several new developments, including the Center for the Arts. Staff found that USM's amended TDM plan met City TDM requirements.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features

The propose building was designed to minimize impacts to significant natural features to the greatest extent possible. There are several large trees on the site that are being preserved including a large Beech tree.

B. Landscape preservation

Tree clearing and turf removal is proposed as part of this project. There will be tree protection fences placed around preserved trees within or close to the construction area. The applicant is requesting a waiver for standard 14.6.2.B.3 in the Land Use Code, which requires the preservation of at least 30% of the trees within required building setbacks with a diameter at breast height (DBH) of 10 inches or greater.

The development site includes three existing trees which meet this criteria, all of which need to be removed as part of construction. In the event that this waiver is granted by the Planning Board, the applicant would be required to either plant additional trees, pay a fee, or provide a combination of both new tree plantings and fee in accordance with Section 4.3.8 of the Technical Manual, which can be seen in Figure 4 below.

4.3.8 Where a waiver is requested under the landscape preservation standards of the land use code and planting of replacement trees is not feasible, financial contributions proportionate to the cost of required replacement trees shall be as indicated below.

Contribution per required replacement tree	$400.00
Contribution per existing feature mature tree removed*	$100.00 per inch diameter
Contribution where applicant plants a tree to replace feature mature tree*	$100.00 per inch diameter of removed existing feature mature tree less $400.00

*In cases of removal of a feature mature tree, these contribution amounts supersede the base replacement tree fee of $400.

Figure 4: Technical Manual Excerpt Outlining Preservation of Vegetation Requirements

As the applicant is responsible for the preservation of 30% of existing trees 10-inches DBH or greater, the applicant would be required to mitigate the loss of one tree, which staff would base upon the largest tree being removed, a 30-inch Spruce which also qualifies as a 'feature mature tree' per Section 4 of the Technical Manual. In order to satisfy this waiver requirement, the applicant is proposing to plant two trees on-site, and pay the remaining fee, which is calculated to be $2,200. This has been drafted as a condition of approval to be considered in the event the Board approves this waiver request. .

C. Site landscaping and buffers

The landscaping plan submitted includes several planted areas to provide visual buffers and to better restrict pedestrian movements to existing and proposed pathways. The applicant is proposing six street trees along Bedford Street and three along Falmouth Street. Five additional street trees are required per Tech Manual standards. A fee in lieu of $2,000 ($400 per tree) is needed to meet the standard.

D. Water quality/storm water management/erosion control

The project proposes addressing stormwater by connecting to the University's existing internal storm drain system with an under drained subsurface sand filter that will collect and treat roof runoff before discharging into the separated storm drain system in Bedford Street. The city's third-party stormwater review consultant finds the proposed stormwater management to be sufficient.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

The project is following all zoning requirements, and is therefore in line with the Portland's Plan 2030.

B. Public safety and fire prevention

Emergency vehicle access would be provided via a 12-foot pull off along Bedford Street. The project will also introduce additional site lighting to ensure that pedestrian areas are adequately lit per the

City's Crime Prevention Through Environmental Design (CPTED) standards. Fire safety found the project plans and materials to be satisfactory.

C. Availability and capacity of public utilities

The building is proposed to connect into existing water and gas infrastructure below Falmouth Street and the sanitary sewer and stormwater system below Bedford Street. Electrical and communications service will be provided from USM's campus-wide electrical and communications infrastructure. The applicant has requested ability to serve confirmation from Unitil regarding the proposed gas service. A letter confirming wastewater capacity has been included in the application from the Public Works Department. A letter from the Portland Water District has also been included confirming capacity.

At the February 28th Planning Board workshop, the Board requested that the applicant consider undergrounding the overhead utility line; which as part of this application, is proposed to be relocated to the south side of Bedford Street. The applicant has stated that the undergrounding of this line would be cost prohibitive, and would constitute a substantial expansion of the scope of work within the Bedford Street right-of-way which would incur moratorium street opening and repair requirements. The applicant further clarified that electrical service to the Center for the Arts Building will be provided via a separate source internal to the campus, and will be undergrounded to the building in accordance with City site plan requirements, and will therefore meet this requirement. Noting this, staff agree with the applicant that the undergrounding of the Bedford Street overhead utility infrastructure is not required.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The bulk, location or height of the proposed building is not anticipated to result in any adverse impacts to the surrounding property or areas accessible to the public. The proposed single-story building will be a maximum height of 44 feet, less than the 45-foot minimum which would trigger review of shadow impacts.

B. Snow and ice loading

Snow storage has been identified on the submitted site plan. This standard is met.

C. View corridors

Not applicable. The site is not in a view corridor.

D. Historic resources

Not applicable. This site is not designated as historic.

E. Exterior lighting

The photometric plan (Attachment M) shows site lighting along pedestrian pathways and around the perimeter of the building. The site lighting supports pedestrian safety and meets relevant Technical Manual standards.

F. Noise and vibration

The project is not expected to create noise and vibration impacts.

G. Zoning-related design standards

This project is subject to zoning-related design standards. A design review was completed by the city's Urban Designer (Report Attachment 3). The applicant has addressed the only outstanding comment from the design review and uploaded documentation that show the visual transmittance of the window glazing treatment meets design standards (Attachment N).

XI. SITE LOCATION OF DEVELOPMENT

A Site Location of Development (SLOD) amendment has been submitted alongside this application. City staff are in support of the Site Location of Development amendment and find the application meets the standards found in Section 14 of the Technical Manual. The applicant has shown financial and technical capacity (Attachment H, Attachment I). A traffic study has been done to ensure that the development will not generate unreasonable congestion or unsafe conditions (Attachment J). The third-party Traffic Engineer reviewed the proposal and agrees with the findings. The applicant has assessed the environmental conditions of the site, including habitat, watershed, endangered species, and soil, and confirmed that minimal impact is expected on site. A stormwater report has been done for the development area and meets the applicable standards (Attachment Q). Utility capacity has been confirmed and documented from relevant services is provided.

XII. NEIGHBORHOOD MEETING & PUBLIC COMMENT

A neighborhood meeting was held on February 2, 2023. The city received the subsequent documentation (Attachment S). There were several questions concerning how the pull off along Bedford Street will function, tree preservation efforts, and preservation during the relocation of Deering Farmhouse. There have been two public comments submitted to the city. One of the comments was in support of relocating the Deering Farmhouse from Greater Portland Landmarks. The other comment submitted raised concerns over the danger of the glass entryway for the bird population. Specifically on the side of the building abutting Noyes Park.

XIII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Department staff recommends that the Planning Board approve the major site plan and site location amendment applications for the USM Center for the Arts Development (PL-002314-2022) located at 111 Bedford Street.

XIV. PROPOSED MOTIONS

A. WAIVERS

On the basis on 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 March 28, 2023 for application PL-002314-2022 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 the strict compliance with Portland's Land Use Code Section 14.6.2.B.3 Landscape preservation requirement to preserve a minimum of 30% of the existing trees with a DBH of ten inches or greater in the setback.

B. SITE PLAN REVIEW AND SITE LOCATION OF DEVELOPMENT

On the basis on 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 March

28, 2023 for application PL-002314-2022 relevant to Portland's site plan regulations; and the testimony presented at the Planning Board hearing, the Panning Board finds that the plans and Site Location of Development application **[are/are 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 ISSUANCE OF A BUILDING PERMIT

1. The applicant shall financially contribute to the city's tree fund for not meeting standard 14.6.2.B.3 in the Land Use Code to account for 30% the three mature trees proposed to be removed, with $400 dollars subtracted for each replacement tree planted onsite. The largest tree in the setback being removed is a spruce tree with a DBH of 30 inches. The applicant is proposing two replacement trees proximal to the Deering Farmhouse. The fee in lieu to be paid is $2,200.

2. Due to site constraints preventing the planting of required street trees in the right-of-way, the applicant shall contribute to the tree fund in the amount of $400 per tree for five trees for a total of $2,000.

XV. ATTACHMENTS

1. Applicant Submittal
    A. Cover Letter
    B. Contents
    C. Application Form and Project Description
    D. Right Title and Interest
    E. Evidence of State or Federal Approvals
    F. Zoning Analysis
    G. Waiver Requests
    H. Financial Capacity
    I. Technical Ability
    J. Transportation Standards
    K. Environmental Standards
    L. Pub Infrastructure and Safety
    M. Site Design Standards
    N. Compliance with USM Standards
    O. Cover_Back
    P. USM Site Location of Development – Minor Amendment
    Q. USM CFA Stormwater Report
    R. Transmittal Letter
    S. Neighborhood Meeting Notes

2. Plans
    1. Title Sheet
    2. Civil Notes Legend and Abbreviations
    3. Existing Conditions Plan
    4. Boundary Survey
    5. Removals Plan
    6. Site Plan
    7. Utility Plan

8. Grading and Drainage Plan
9. Erosion and Sediment Control Notes and Details
10. Site Details
11. Site Details
12. Site Details
13. Boring Logs
14. Landscape Plan
15. Landscape Details
16. Floor Plan
17. Exterior Elevations
18. Rendered Views
19. Rendered Views
20. Rendered Views
21. Solar Study

3. Public Comments
   PC 1. Ian Stevenson 2-7-2023
   PC 2. Janette Gustafson 3-14-2023

4. Report Attachments
   1. Staff Review Comments
   2. Third Party Stormwater Comments
   3. Design Review Memo
   4. 25 Bedford PL-001040-2020 Approval Letter
   5. USM TDM Plan
   6. Traffic Analysis_Tom Errico

Review Criteria:

- Portland's Site Plan Ordinance

GENERAL

- Please submit a photometric plan with a cutsheet to show conformance with lighting standards in the Tech Manual.

ZONING

- Please update the boundary survey to show the changes to the right of way and new roundabout.

TRANSPORTATION

- At the bus pullout along Bedford Street, the proposed catch basins along the curb line are not sufficiently placed. Please adjust.
- At the bus pullout along Bedford Street, the proposed gutter line shall be moved to the proposed curb line and not along the street lane.
- Please adjust the site plan to conform to sidewalk materiality standard and construct the sidewalk along Bedford Street.

WATER QUALITY, STORMWATER, & INFRASTRUCTURE

- Please update the Grading and Drainage plan to fade non-stormwater related items. Additionally, please label the underground sand filter (box 14) within the proposed area.
- The applicant proposes to install street/landscape trees in close proximity to the subsurface stormwater storage & sand filter treatment system. Verify that the location and type of tree are appropriate for this application and will not adversely impact the functionality or maintenance of the stormwater management system.
- The plans should clarify the design invert of the proposed 12" storm drain connection into the City's storm drain system in Bedford Street.
- The proposed 12" storm drain connection into the Bedford Street manhole shall be revised such that the pipe does not discharge against flow in the main line channel.
- The technical manual does not allow for private connections into public catch basins. The plans show two of these connections into Bedford Street which don't meet the City's technical standards.
- CB #2 is located about 50' downstream of the high point in Bedford Street. DPW feels the location of this basin is unnecessary. It appears that if the 12" SD running from CB-2 to CB-1 was shifted to private property it would eliminate the need for CB-2.
- Ensure all City sewer and storm details match the updated technical manual approved in November of 2022.

LANDSCAPING & ENVIRONMENTAL QUALITY

- Please add plantings in the strip between the existing parking lot and Falmouth Street to buffer Falmouth.

WATER QUALITY, STORMWATER, & INFRASTRUCTURE

- DMH-2 shows two outlets in the structure. One outlet is a 12" diameter pipe to the treatment area and the other outlet is a 12" diameter pipe used as an "overflow" to CB-5. There is a 4" orifice placed lower than any invert in the structure. Based on the HydroCAD model, the majority of flow is bypassed during the more frequent storm events (2-year storm) to CB-5 including the "first flush" which is presumably when pollutants would be the most concentrated. Please consider treating more flow during the more frequent storm events and bypass flows during the larger storm events while still meeting the requirements of MEDEP Chapter 500 and City of Portland standards.
- The typical catch basin/drain manhole detail located on sheet C-504 calls for a 2' sump. However, per the City of Portland Technical Manual Section 2.9.5, all catch basins shall be constructed with a minimum sump of three feet. Please correct.

Basic Standard

- Note A.3 on sheet C-501 currently states "temporarily stabilize any area of disturbed soil that remains unworked for more than 14 days..." This should be revised to 7 days in accordance with MEDEP Chapter 500 Appendix A.3.

Stormwater Design

- In the post-development model for Pond 1P: Treatment Area – RTANK, the project appears to be modelling the sand filter system. However, it does not appear that the routing is correct based on the plans. The appliccation indicates a 12" diameter culvert at invert 46.29'. However, there is no 12" diameter culvert shown on the plans at that elevation. Please provide further detail on this routing or revise the routing to reflect actual site conditions.
- It is unclear how the flow between the Cultec chamber and RTank works. There is no direct connection between the 2 devices which assumes that there is leaching from the Cultec chamber, through the stone layer, and into the RTank. As stated in the comment above in 2.a, the orifice in DMH-2 is shown lower than the 12" dia pipe leading to the stormwater treatment area, so it appears that some of this flow is in fact bypassing the stormwater treatment area. The applicantion also delineates the entire roof area as being "Treated Area" on sheet WS103. However, it is unclear how the entire roof area will be treated if flows are being bypassed within the diversion structure before getting to the stormwater treatment area. Please provide further detail on how this system functions and how the stormwater is actually treated, and not bypassed entirely.
- In the post-development model for Pond 1P: Treatment Area – RTANK, under device #4 the applicant is anticipating 1.33 in/hr of exfiltration to DMH-3. Based on the site plan however, DMH-3 does not appear to be connected to the RTANK system and is on the opposite side of the building. This appears to be a typo and should read "exfiltration to DMH-1." Please confirm the correct routing and revise appropriately.
- In the post-development model for Pond CB10: Catch Basin, the invert elevations for the storm drain do not match the elevations shown on the plan set. Please confirm the correct elevation and revise the model or plans accordingly.

- The pre-development total runoff area (263,727) is slightly less than the post-development total runoff area (265,701). Please provide a narrative as to why these areas are different or revise the model to represent the total area for the development.

Design Review
Planning and Urban Development Department

City of portland

Subject: 111 Bedford Street
Zone: R-5
Date of Review: January 20, 2023
Reviewer(s): Sean King (Urban Designer), Maya Balassa (Planner), Kevin Kraft (Deputy Director)
Project ID: PL-002314-2022

I. INTRODUCTION

The project to develop the Center for the Arts (CA) was reviewed against the University of Southern Maine (USM) Overlay Zone (Appendix 3 of the Design Manual) and shall apply to all development on the USM Portland campus.

(e) University of Southern Maine Overlay Zone

(1) STANDARDS. All major and minor development . . . shall be designed to create a quality and cohesive campus environment while integrating with and respecting the residential character of surrounding neighborhoods as demonstrated by compliance with the principles and standards . . . included as Appendix 3 of this manual.

II. DESIGN REVIEW COMMENTS: **bold** text denotes recent updates met, red text denotes standards not met to require resubmission.

PRINCIPLE A – Campus Design – *The campus design shall create a strong identity and sense of place.* - **Met**

STANDARD A-1 – Campus Edges: Met
The proposed development of the Center for the Art (CA) is sensitive to the surrounding neighborhood to provide transitions in building scale and form through mitigations in height, arrangement of exterior materials and provides accessible pedestrian connections.

STANDARD A-2 – Building Orientation: Met
The proposed CA is oriented towards existing streets to parallel Bedford Street along with the orientation perpendicular at the existing public open space of Noyes Park that maximizes solar exposure.

STANDARD A-3 – Pedestrian Environment: Met
The proposed development enhances the pedestrian environment through connectivity to all building entries accessible from public right of ways, inclusion of pedestrian scaled lighting, exterior gathering spaces at main entrance and internal Gallery program.

STANDARD A-4 – Gateways: Met
The proposed CA building creates a distinct visual gateway at the corner of Bedford Street and Deering Avenue with a distinct termination for the campus clearly articulated by symmetrical arrangement of

building elements as indicated by central curtainwall, materiality that breaks the uniformity of facades and architectural lighting.

STANDARD A-5 – Views and Landmarks: Met
The proposed CA building responds to prevailing view corridors and campus buildings in placement and presence at the corner of Bedford Street and Deering Avenue. Building design elements include central Gallery with curtainwall system, contemporary fenestration pattern at ground level, metal panel system at outer building forms and distribution of lawn that protects existing tree and plant demonstration areas within proposed campus green.

PRINCIPLE B – Access and Circulation *– Campus streets and sidewalks shall be scaled for expected traffic; encourage pedestrian, bicycle and transit activity; and connect to neighborhood streets and sidewalks. –* Met

STANDARD B-1 – Connectivity: Met
The proposed development connects internal campus circulation with neighboring streets at multiple access points located along Bedford Street, Deering Ave and Falmouth Street.

STANDARD B-2 – Circulation: Met
The proposed circulation includes a network of sidewalks at ground level that connect to existing internal campus sidewalks, public right of ways and buildings entrances at every facade of the building.

STANDARD B-3 – Multi-modality: Met
The proposed development includes pedestrian connection to existing campus circulation and serves to connect existing public transportation at transit shelter located on Deering Avenue. Emergency access is provided from adjacent streets and at rear of building at loading and service area.

STANDARD B-4 – Traffic-calming: Not applicable
The proposed development does not proposed internal vehicular circulation.

STANDARD B-5 – Sidewalks: Met
The proposed eight-foot width concrete sidewalk along frontage of CA building is an exception from the clay brick sidewalk provision on both sides of public streets. City staff finds the exception for concrete sidewalk in lieu of clay brick sidewalk to be appropriate as a continuation of the existing concrete sidewalk along the north side of Bedford Street.

STANDARD B-6 – Street Lights: Met
The proposed CA utility plan indicates lightpole locations and shall be reviewed to meet site lighting standards per site plan review. The proposed post top light fixtures closely match the installed fixtures along Bedford Street adjacent to the Library and Parking Structure to provide consistency.

PRINCIPLE C – Parking, Loading and Service Access *– Parking structures shall be designed and located so as to present an attractive façade to neighboring uses in order to minimize the impact along streets and residential areas. Surface parking lots shall be sited and designed to minimize their visual presence on the campus. -* Met

STANDARD C-1 – Structures: Not applicable

No parking structure proposed for CA development.

STANDARD C-2 – Active Uses: Not applicable
No parking structure proposed for CA development.

STANDARD C-3 – Decks and Ramps: Not applicable
No parking structure proposed for CA development.

STANDARD C-4 – Surface Lots: Not applicable
No surface lots for parking proposed for CA development.

STANDARD C-5 – Loading and Service Areas: Met
A consolidated loading and service area is proposed at the rear of building, shown on the west elevation with entrances recessed from the predominate façade and screened by a landscape buffer from campus sidewalk.

STANDARD C-6 – Utility Services: Met
A transformer for electrical service is proposed at the rear of building with vertically screened landscaping.

PRINCIPLE D – Architectural Design *– All new buildings shall be designed to create a visual connection with existing campus buildings with a goal of achieving a cohesive campus appearance. Buildings shall be characterized by excellence in architectural design, craftsmanship, materials, signage and lighting appropriate for a university in an urban setting in the Northeast.* – Not Met

STANDARD D-1 – Height: Met
The building heights transition along campus edges to the scale of the adjacent residential structures across Bedford Street and Noyes Park through variations of building height stepdown towards the neighboring streets.

STANDARD D-2 – Setbacks: Met
The proposed front yard setback along Bedford Street exceeds the ten feet standard from the street right of way and seeks exception to conform to the existing campus building Luther Bonney Hall. Staff finds this proposed exception for a forty-four front setback to be appropriate to complement the existing placement of Luther Bonney Hall setback approximately fifty feet from the street right of way and promote a cohesive open space experience that connects Noyes Park to the campus green.

STANDARD D-3 – Stepbacks: Not applicable
The proposed CA building is located adjacent to Bedford Street & Deering Avenue and setback significantly from Falmouth to not apply this standard.

STANDARD D-4 – Massing: Met
The proposed facades as visible from the street create an overall symmetry expressed by the central curtainwall spine and vertically flared forms that extend to the edges of the overall structure. Building design elements to extend the façade above roofline assist to shield views of rooftop appurtenance not visible from the street.

STANDARD D-5 – Entrances: Met
Building entrances are clearly visible from the street, with the primary entrance as the centralized curtainwall facing Noyes Park and secondary entrances visible along the east and west elevations as identified doorways adjacent to full height windows facing the street.

STANDARD D-6 – Windows: Not Met
Proposed windows are appropriate to the contemporary arrangement of building's massing that reinforces the first floor and expression of main spine/lobby. **The applicant shall submit proposed translucent ceramic frit film application to clear glazing to meet .7 or greater visible transmittance.**

STANDARD D-7 – Materials: Not Met
Exterior materials in the façade visible from public right of ways are expressed by the vertical curtainwall comprised of timber and glass with outer forms of the building cladded with highly durable and dynamic metal panel system with vertical and horizonal orientation that respond to each facade plane. **The applicant shall submit proposed window screen specification to observe level of tint for staff review.**

STANDARD D-8 – Signage: Met
New building address signage is incorporated into the street facing south elevation, along with building name centralized above the main entrances at street facing south elevation and campus facing north elevation.

STANDARD D-9 – Historic Structures: Not applicable
The existing Farmhouse is to be located, independent and not incorporated into the proposed CA building.

STANDARD D-10 – Original Residential Structures: Not applicable
Proposed CA building is located on undeveloped land where no original residential structures currently exist.

CITY OF PORTLAND, MAINE

PLANNING BOARD

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

11/18/2020

Alec Porteous
University of Southern Maine
P.O. Box 9300
Portland, Maine 04101

Darrin Stairs
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Project Name:	Student Center, Dorm, & Quad	**Project ID:**	PL-001040-2020
Address:	25 Bedford Street	**CBL:**	114A G009
Applicant:	University of Southern Maine		
Planner:	Christian Roadman		

Mr. Porteous,

On November 10, the Planning Board approved your application to construct a 218,612 square foot student housing facility, a 41,249 square foot student center, and associated open space at 25 Bedford Street in the B-2 and R-5 zones and the University of Southern Maine overlay zone.

The Planning Board reviewed the proposal for conformance with the site plan and site location of development standards of Portland's Land Use Code. The Planning Board voted 7-0 to approve the application with the following waivers and conditions as presented below.

Waivers

1. The Planning Board voted unanimously (7-0) based upon the submitted materials, that extraordinary conditions exist or undue hardship may result from strict compliance with the Design Manual standard (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials which prohibits use of fiber cement panels. The Planning Board waived the Design Manual standard (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials to allow use of fiber cement panel.

Site Plan and Site Location of Development Review

The Planning Board voted unanimously (7-0) that the plan is in conformance with the site plan standards of the Land Use Code and the Site Location of Development Act standards subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit an ability to serve letter from the Portland Water District.

2. The applicant shall submit confirmation of adequate wastewater capacity from the Department of Public Works.

3. The applicant shall submit a dewatering plan for review and approval by the Department of Public Works.

4. The applicant shall submit an updated construction management plan for review and approval by the Department of Public Works.

5. The applicant shall submit a request to connect to the municipal storm drain system with updated calculations for review and approval by the Department of Public Works.

6. The applicant shall submit an updated stormwater management report, including calculations and updated stormwater infrastructure designs and details, for review and approval by the Planning Authority and consulting civil engineer.

7. If modifications to the stormwater management design impact design plans, then the applicant shall submit an updated grading and drainage plan for review and approval by the Planning Authority and consulting civil engineer.

SIX MONTHS AFTER ISSUANCE OF A BUILDING PERMIT

8. The applicant shall provide proof of parking commitments sufficient to provide the 396 parking spaces required by the proposed development, or shall submit a site plan application for a parking garage providing these spaces, for review and approval by the Planning Authority.

PRIOR TO CERTIFICATE OF OCCUPANCY

9. The applicant shall obtain a certificate of occupancy for a parking garage providing the 396 parking spaces required by the proposed development, or shall provide a final parking management plan and executed leases providing these spaces, for review and approval by the Planning Authority.

Traffic Movement Permit

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on November 10, 2020 for application PL-001040-2020 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing, the Planning Board voted unanimously (7-0) to find that the plan is in conformance with 23 MRSA 704-A and Chapter 305 Rules and Regulations pertaining to Traffic Movement Permits, subject to the following conditions of approval:

1) The applicant shall provide conceptual design plans, preliminary and final plans and specifications for Traffic calming / pedestrian improvements at the Falmouth Street / Oakdale Street intersection for review and approval by the Department of Public Works and Planning Authority. Said improvements shall be constructed by the applicant prior to completion of a parking garage structure or five years from TMP approval, whichever is sooner.

PRIOR TO CERTIFICATE OF OCCUPANCY

2) The applicant shall provide a $10,000 contribution to the City towards Forest Avenue traffic signal optimization at the Forest Avenue / Bedford Street / Baxter Boulevard and Forest Avenue / Falmouth Street / Preble Street Extension intersections with the intent of improving mobility efficiencies.

3) The applicant shall provide conceptual design plans, preliminary and final plans and specifications for improvements at the Forest Avenue/Bedford Street/Baxter Boulevard intersection based on the Smart Corridor Study recommendations for review and approval by the Department of Public Works and Planning Authority. These shall include geometric modifications to the corners on the Baxter Boulevard approach and upgrades to pedestrian traffic signal equipment on those corners. The applicant shall construct the said improvements prior to Certificate of Occupancy, with all work complying with ADA standards.

4) The applicant shall provide conceptual design plans, preliminary and final plans and specifications for improvements at the Forest Avenue/Falmouth Street/Preble Street Extension intersection based on the Smart Corridor Study recommendations for review and approval by the Department of Public Works and Planning Authority. These shall include geometric modifications to the southeast corner, a crosswalk on the southerly Forest Avenue approach, and upgraded pedestrian traffic signal equipment. It should be noted that the new crosswalk will require installation of a new sidewalk ramp on the westerly side of Forest Avenue. Thus, improvements are proposed on the southeast and southwest corners of the intersection as a part of this condition. The applicant shall construct the said improvements prior to Certificate of Occupancy, with all work complying with ADA standards.

The approval is based on the submitted plans and findings related to site plan review, site location of development review, and traffic movement permit review as contained in the Planning Board report dated 11/106/2020 for application PL-001040-2020 which is attached.

Standard Procedures

Please Note: The following standard procedures apply to all approved site plans:

1. Stormwater Management Agreement The developer / contractor / subcontractor must comply with the conditions of the construction stormwater management plan and sediment and erosion control plan based on City standards and state guidelines.

   The owner / operator of the approved stormwater management system, and all assigns, shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Please submit final copies to both the Department of Planning and Urban Development and the Department of Public Works.

2. Site Plan Expiration Site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

3. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

4. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

5. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

6. Preconstruction Meeting A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

7. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

8. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site

plan or alteration of a parcel, or of approved exterior elevations, which was the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

9. Design Review of Exterior Elevations If the project is subject to design review, then the exterior elevations shall be constructed and maintained as depicted on the approved elevation drawings and in the written submission of the applicant. Modification of any approved exterior elevations shall require the approval of the revised plans by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use of the Portland City Code.

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

11. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.

12. Impact Fees New development or changes of use that result in net new residential dwelling units, non-residential building square footage, or water meters are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207) 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Christian Roadman at (207) 874-8984.

Sincerely,

Brandon Mazer
Chair, Portland Planning Board

Attachments:
1. Planning Board Report for Application PL-001040-2020
2. Draft Stormwater Maintenance Agreement
3. Performance Guarantee Packet

PLANNING BOARD REPORT
PORTLAND, MAINE

Student Center, Dormitory, & Quad
25 Bedford Street
Level III Site Plan and Site Location of Development Review
PL-001040-2020
University of Southern Maine, Applicant

Submitted to: Portland Planning Board **Public Hearing Date:** 11/10/2020	**Prepared by:** Christian Roadman, Planner **Date Prepared:** 11/6/2020

I. INTRODUCTION / PROPOSED DEVELOPMENT

The University of Southern Maine (USM) seeks to redevelop a portion of their campus, replacing two existing buildings and a parking lot with a 42,000 square foot student center, a 580 bed dormitory, and one-acre quad.

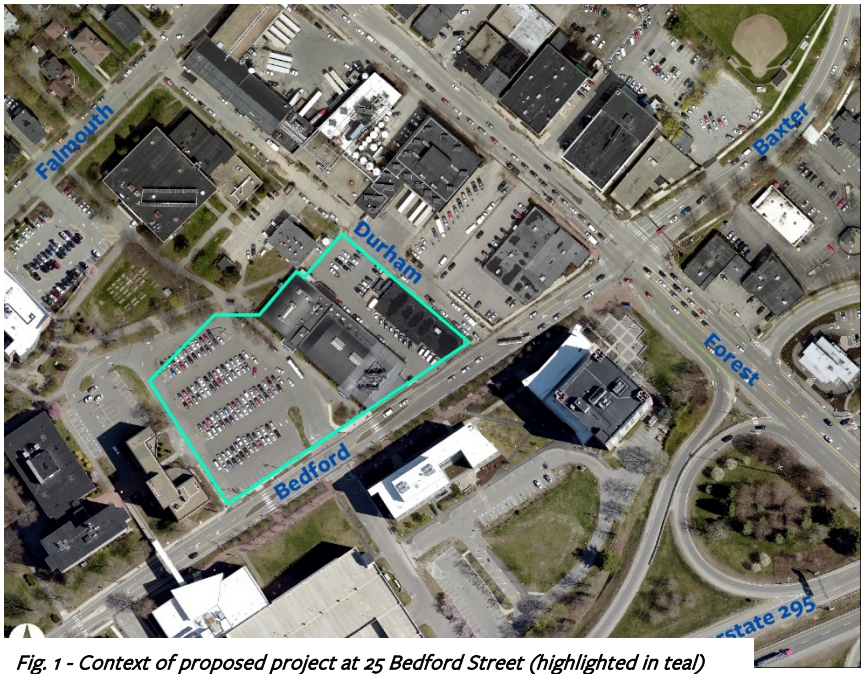


Fig. 1 - Context of proposed project at 25 Bedford Street (highlighted in teal)

The proposed project is located mostly within the R-5 Residential Zone, with a portion at the easternmost edge of the site in the B-2 Community Business Zone. USM's entire Portland campus also lies within the USM overlay zone, created to allow the University the flexibility to operate uses typical of an institution of higher education.

In addition to the City's site plan review requirements, this development is subject to a Site Location of Development (SLODA) review and requires a Maine DOT Traffic Movement Permit (TMP). The City of Portland is the delegated review authority for both.

Between removal of an existing 171 space parking lot and the new buildings, the development as currently proposed would result in a deficit of approximately 400 parking spaces. The University plans to construct a parking garage prior to completing this project; however, the Planning Board cannot assume that an appropriate facility would be planned, reviewed, permitted, and constructed within the necessary time frame. Because of this, USM developed a contingency plan (**Attachment D**) involving remote parking at offsite lots along METRO routes (or utilizing shuttles) and potential changes to existing parking operations to increase efficiency. Progress towards, and then provision of, adequate parking is suggested as a **condition of approval**.

Notices have been sent to 190 property owners and a legal advertisement was published in the October 30 and October 31 editions of the *Portland Press Herald*.



Fig. 2 - Rendering of proposed project at 25 Bedford Street in context viewed from the southwest (image: Applicant)

Applicant: University of Southern Maine
Consultants: Woodard & Curran, Inc. (civil engineering); SMRT Architects & Elkus Manfredi Architects (building design) Capstone Development Partners (student housing developer)

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Use of materials (fiber cement panel) identified as 'low quality' Staff support this waiver based on improved quality of fiber cement paneling	City of Portland Design Manual – (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials
Review	**Applicable Standards**
Site Plan	Section 14-526
Site Location of Development	Technical Manual Section 14
Traffic Movement Permit	Delegated Review from Maine DOT

III. PROJECT DATA

Existing Zoning	R-5 Residential, B-2 Community Business, USM Overlay Zone
Existing Use	Student center, university facilities building, parking
Proposed Use	Student center, dormitory, quad
Property Size (sf.)	~673,000 (~144, 600 disturbed)

	Existing	Proposed	Net Change
Building Footprint (sf.)	36,906	48,477	+8,571
Building Floor Area (sf.)	36,906	259,861	+222,955
Impervious Surface Area (sf.)	123,178	70,334	-52,844
Parking Spaces	~171	0 (offsite spaces plan intended to offset need)	-171
Bicycle Parking Spaces	14	~36	+22



Fig. 3 - Rendering of the proposed project Bedford Street; the proposed dorm is to the right, partially visible. (image: applicant)

IV. EXISTING CONDITIONS

The University of Southern Maine's Portland Campus occupies more than 15 acres of land just outside of Portland's peninsula in the Oakdale neighborhood, and is bounded by Forest Avenue and Durham Street to the East, Falmouth Street to the North, Exeter Street to the West and I-295 and Chamberlain Street to the South. The campus operates in conjunction with USM's two other campuses located in Gorham and Lewiston, and at present, largely serves a commuter student population, with residence halls housed on the university's Gorham campus. The campus consists of 34 buildings ranging from repurposed single-family homes to large academic buildings, ten surface parking lots, one parking garage, and pathways across campus.

The buildings proposed for demolition as part of the redevelopment house campus services and facilities management.

V. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

The applicant held a required neighborhood meeting virtually via Zoom on July 15, 2020. 21 members of the public attended. Those who spoke commented their appreciation for the architecture of the new buildings and overall design. The neighborhood meeting notification, sign-in sheet and minutes are included as **Attachment B**.

As of this writing, public comment received (**PC1 – PC7**) generally expresses neighborhood concern regarding potential traffic and parking impacts on the nearby residential neighborhood and also the business operations of Oakhurst Dairy. One "comment" is a neighborhood petition supported by approximately 44 neighbors which expresses particular concern regarding the applicant's intended parking garage and how it is not included in this application.

VI. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

The applicant provided four deeds (**Attachment F**) to evidence ownership of the property.

The applicant provided a letter listing voter-approved general obligation debt, philanthropic contributions, and revenue bonds as financial resources facilitating the proposed project (**Attachment F**).

The applicant cited consultant experience and expertise as evidence of technical capacity (**Attachment F**).

VII. ZONING ANALYSIS

The development site is located within the R-5 Residential Zone, the B-2 Community Business Zone, and the USM Overlay Zone. The purpose of the USM Overlay Zone is to allow the University's existing campus to "be continued and reasonably expanded within defined boundaries" while recognizing "the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods."

University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone. The Overlay Zone allows for an 85 foot building height in the area of the campus where this development is to occur, with required setbacks of 10 feet along Bedford Street, 0 feet along Durham Street, and 20 feet along Falmouth Street.

The uses proposed for this project, which are classified as 'university uses', are permitted within the USM Overlay Zone. These include classrooms, student unions, dining halls, bookstores, auditoriums, outdoor use areas, student housing and offices.

The proposed buildings conform to height restrictions in the zone – a portion of one building exceeding the height limit (**Attachment P17**) is for a stair tower and elevator overrun, which is allowable.

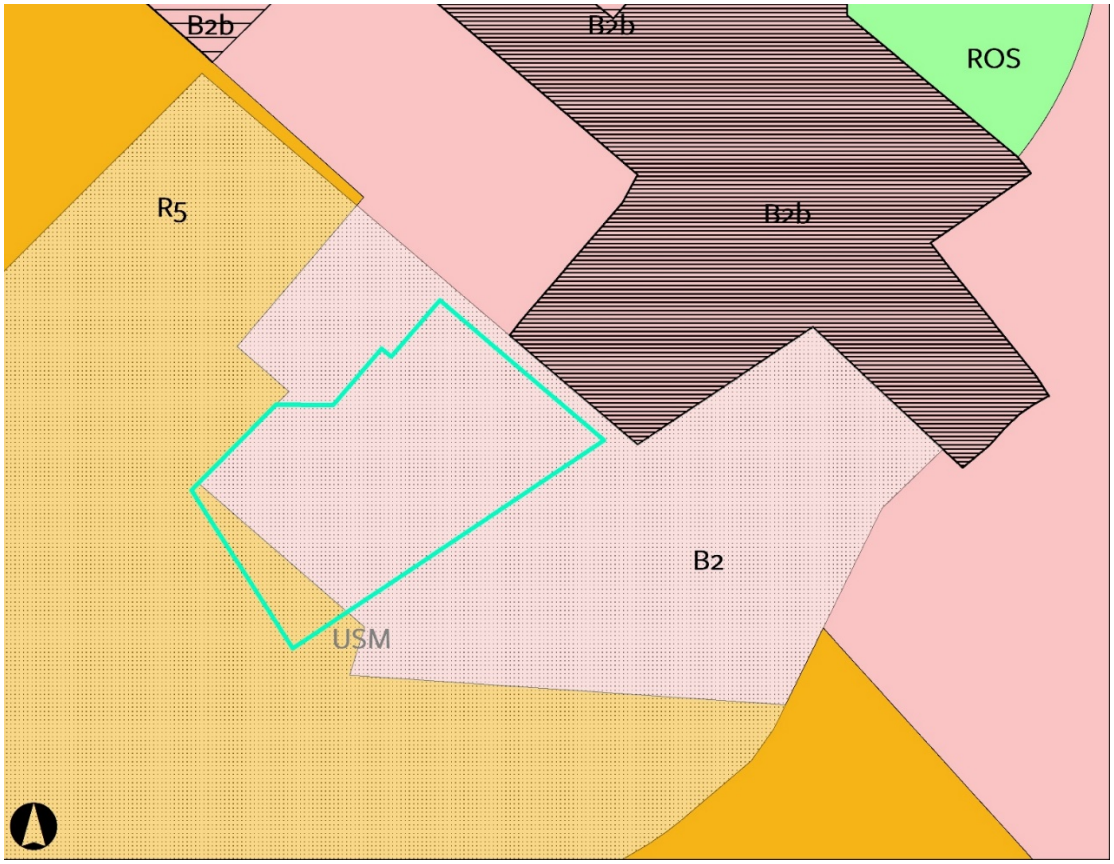


Fig. 4 - Zoning context of the proposed project at 25 Bedford Street (highlighted in teal). The stippled portion of the map represents the USM overlay zone.

VIII. DEVELOPMENT REVIEW

A. SITE PLAN STANDARDS (Section 14-526)

Staff reviewed the proposed development for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations, and staff comments relative to each standard are below:

a) Transportation Standards

Impact on Surrounding Street Systems and Access and Circulation; Access and Circulation; Public Transit Access; Parking; Transportation Demand Management

The proposed development is not expected to significantly impact the surrounding street system as the proposed uses are not expected to generate more traffic than current uses; the residence hall may reduce traffic demand on campus. Two curb cuts along Bedford Street would be eliminated, which should improve traffic flow on campus. Prior to the completion of this development, a new roundabout will be built at the intersection of Brighton Avenue and Deering Avenue, which at present is the most deficient intersection in the vicinity of the university. The roundabout is anticipated to improve traffic flow through that intersection and is currently under construction.

The University is located along the 2, 4, and Husky METRO (the latter connects its Gorham and Portland campuses). On campus, proposed pedestrian infrastructure connections are intended to improve pedestrian mobility.

In the short term, this development is expected to result in an overall decrease in the supply of off-street parking, as 171 surface spaces are being eliminated. As noted above, the University plans to construct a parking garage prior to completing this project; however, the Planning Board cannot assume that an appropriate facility would be planned, reviewed, permitted, and constructed within the necessary time frame.

Because of this, USM developed a contingency plan (**Attachment D**) involving remote parking at offsite lots along METRO routes or shuttle service, and potential changes to existing parking operations; utilizing parking attendants would allow cars to be "parked in" to maximize efficiency, and then be retrieved when needed by attendants. Additionally, USM proposed leasing parking spaces at one of two locations in Westbrook: Rock Row or 183 County Road in Westbrook. At the former, the existing Husky Line would allow students to then take the bus to campus and back. At the latter, the University would need to coordinate additional bus service or institute a shuttle service to that lot.

Progress towards, and then provision of, adequate parking is suggested as a **condition of approval**.

The University provided a Transportation Demand Management (TDM) plan (**Attachment C**) including a trip reduction goal of between 3% and 6%, and a parking reduction of between 10% and 14 % by the year 2025 (after presumed completion of the student center, residence hall and desired garage). The plan was reviewed and approved by the City's Transportation Programs Manager (**Attachment 1**), who noted that previous staff comments based on commitment to core strategies, development of greenhouse gas and mode split targets, expansion of monitoring / reporting on trip and parking reductions were addressed substantively to the satisfaction of staff.

The Department of Public Works senior engineer (**Attachment 3**) and consulting traffic engineer (**Attachment 2**) also participated in review of the project. Both are generally satisfied with the current application, but request specific conditions of approval tied to the applicant's Traffic Movement Permit (addressed below) and improvements to the applicant's construction management plan.

b) Environmental Quality Standards

Preservation of Significant Natural Features; Landscaping & Landscape Preservation; Water Quality, Storm Water Management and Erosion Control

The proposed project site is entirely developed, and as such, contains no significant natural features. The project introduces two new major green spaces: a one-acre campus quadrangle and a semi-private half-acre courtyard partially surrounded by the residence hall.

The proposed redevelopment will reduce the amount of impervious surface for this site but still must treat at least 50% of impervious area. To meet this threshold, the applicant proposes grassed underdrained soil filters and bioretention cell soil filters. The City's consulting civil engineer reviewed the applicant's proposal (**Attachment 4**) and requested updates and clarifications to several stormwater calculations and details. Revisions are anticipated prior to the Planning Board's public hearing on Tuesday. Otherwise, additional conditions of approval may be necessary.

The Department of Public Works requires (**Attachment 5**) a dewatering plan from the applicant. This is suggested as a **condition of approval**.

c) Public Infrastructure and Community Safety Standards

a. Consistency with related Master Plans; Public Safety and Fire Prevention; Availability and Capacity of Public Utilities

The project as shown appears consistent with master plans adopted by the City. The application was reviewed for compliance with relevant life/safety requirements and deemed satisfactory in this regard. The project proposes new utility connections for water, gas, electric and sewer. Confirmation of adequate wastewater capacity by the Department of Public Works and confirmation of ability to serve by the Portland Water District are suggested as **conditions of approval**.

d) Site Design Standards

1. Massing, Ventilation and Wind Impact; Shadows; Snow and Ice Loading; View Corridors; Historic Resources; Exterior Lighting; Noise and Vibration; Signage and Wayfinding

   The proposed building massing complements the existing campus environment, and promotes an improved pedestrian experience along Bedford Street with a more uniform street wall. The development is not anticipated to have adverse impacts related to either ventilation or wind, nor adverse impacts related to building shadows or snow and ice loading.

   There are no designated view corridors within the project vicinity, and lighting proposed (**Attachments G and P11**) meets City standards for light trespass and full cutoff fixtures. Lighting consists of bollard, wall pack and pole mounted fixtures that are concentrated along walkways, at building entrances and within the residence hall courtyard.

   No adverse impacts related to noise and vibration are anticipated as mechanical equipment is to be roof-mounted and away from public open spaces and other residential areas.

2. Zoning Related Design Standards

   The City's Urban Designer reviewed the proposed project (**Attachment 6**) against the USM Campus Design Principles and Standards (Appendix 3 of the Design Manual), and generally supported the proposed project design.

B. COMPREHENSIVE PLAN

Portland's Plan 2030 identifies a vision statement and policy goals for the City. Several of these are applicable to the proposed project and are reproduced below.

Vision statement:

- Equitable:
  "We will incorporate the needs of all our residents in planning for our future."

- Sustainable*:*

  "Portland will grow in order to sustain our community, infrastructure, and economy."

- Dynamic:

  "We will welcome new residents into our community because they enrich and sustain our community."

- Secure:
  "We will be committed to accessible housing and healthy food for all our residents."

- Authentic:
  "We will invest in and support our local economy.

  Policy goals:

- Environment:

  "Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation."

- Economy:

  "Support sustainable growth in our educational, medical, and cultural institutions."

- Housing:
  "Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods."

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

C. SITE LOCATION OF DEVELOPMENT

The City of Portland has delegated review authority from the Maine DEP for large projects that trigger Site Location of Development Act (SLODA) review. The standards for this review include the items below, which largely dovetail with Portland's existing site plan review standards:

- *Financial & Technical Capacity*: see section VI, above.
- *Traffic Movement*: see site plan standards, a, above, and Traffic Movement Permit, below.
- *No Adverse Effect on the Natural Environment, Ground Water, Flooding, Storm Water Management & Erosion and Sedimentation Control*: see site plan standards, b, above. The development is not located within a flood hazard zone, as shown on the FEMA Flood Insurance Rate Map provided in this application. The proposed development is not anticipated to cause or increase flooding or cause an unreasonable hazard to any adjacent structures.
- *Soil Types:* The applicant provided a draft geotechnical report and information regarding strategies to appropriately stabilize the building (Attachment X).
- *Infrastructure*: see site plan standards, c, above.

D. TRAFFIC MOVEMENT PERMIT

As defined under Maine state statute 704—A, a traffic movement permit is required of any project that generates 100 or more passenger car equivalents at peak hour. Any project surpassing this threshold is required to make adequate provision for traffic movement of all types into and out of the project area such that any traffic increase that is attributable to the project will not result in unreasonable congestion or unsafe conditions within the vicinity of the development.

Per the applicant's TMP materials (Attachment U) The proposed development is expected to generate 160 new morning peak hour trips am peak hour trips, and 160 new evening peak hour trips. Based on staff and

reviewer feedback, the applicant agreed to help fund and implement, in coordination with the City, physical infrastructure and signal timing improvements intended to mitigate traffic impacts and increase pedestrian safety in the area of the USM campus. Specifically, the applicant is required as a condition of approval, to:

1) Implement improvements at the Forest Avenue/Bedford Street/Baxter Boulevard intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the corners on the Baxter Boulevard approach, upgrading pedestrian traffic signal equipment with all work complying with ADA standards.

2) Implement improvements at the Forest Avenue/Falmouth Street/Preble Street Extension intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the southeast corner, implementing a crosswalk on the southerly Forest Avenue approach, upgrading pedestrian traffic signal equipment with all work complying with ADA requirements. It should be noted that the new crosswalk will require installation of a new sidewalk ramp on the westerly side of Forest Avenue.

3) Contribute $10,000 towards Forest Avenue Traffic Signal Optimization at the Forest Avenue/Bedford Street/Baxter Boulevard and Forest Avenue/Falmouth Street/Preble Street Extension intersections with the intent of improving mobility efficiencies.

4) Implement traffic calming / pedestrian improvements at the Falmouth Street / Oakdale Street intersection (including a raised intersection with supporting features for review and design by the Portland Department of Public Works) before completion of a parking garage structure or five years from TMP approval, whichever is sooner.

IX. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board report for the public hearing on November 10, 2020 for application PL-001040-2020 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board **[finds / does not find]** based upon the submitted materials, that extraordinary conditions exist or undue hardship may result from strict compliance with the Design Manual standard (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials which prohibits use of fiber cement panels. The Planning Board **[waives / does not waive]** the Design Manual standard ((e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials) to allow use of fiber cement panel.

B. SITE PLAN REVIEW & SITE LOCATION OF DEVELOPMENT

On the basis of the application, plans, reports, and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on November 10, 2020 for application PL-001040-2020 relevant to the site plan and Site Location of Development Act regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **[is / is not]** in conformance with the site plan standards of the land use code and the Site Location of Development Act standards, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit an ability to serve letter from the Portland Water District.

2. The applicant shall submit confirmation of adequate wastewater capacity from the Department of Public Works.

3. The applicant shall submit a dewatering plan for review and approval by the Department of Public Works.

SIX MONTHS AFTER ISSUANCE OF A BUILDING PERMIT

4. The applicant shall provide proof of parking commitments sufficient to provide the 396 parking spaces required by the proposed development, or shall submit a site plan application for a parking garage providing these spaces, for review and approval by the Planning Authority.

PRIOR TO CERTIFICATE OF OCCUPANCY

5. The applicant shall obtain a certificate of occupancy for a parking garage providing the 396 parking spaces required by the proposed development, or shall provide a final management plan and executed leases providing these spaces, for review and approval by the Planning Authority.

C. TRAFFIC MOVEMENT PERMIT

On the basis of the application, plans, reports, and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on November 10, 2020 for application PL-001040-2020 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan [is / is not] in conformance with 23 MRSA 704-A and Chapter 305 Rules and Regulations pertaining to Traffic Movement Permits, subject to the following conditions of approval:

1. The applicant shall provide conceptual design plans, preliminary and final plans and specifications (for review and approval by the Department of Public Works and Planning Authority) and then implementation of Traffic calming / pedestrian improvements at the Falmouth Street / Oakdale Street intersection (including a raised intersection with supporting features for review and design by the Portland Department of Public Works) before completion of a parking garage structure or five years from TMP approval, whichever is sooner.

PRIOR TO CERTIFICATE OF OCCUPANCY

2. The applicant shall provide a $10,000 contribution to the City towards Forest Avenue traffic signal optimization at the Forest Avenue / Bedford Street / Baxter Boulevard and Forest Avenue / Falmouth Street / Preble Street Extension intersections with the intent of improving mobility efficiencies.

3. The applicant shall provide conceptual design plans, preliminary and final plans and specifications (for review and approval by the Department of Public Works and Planning Authority) and then implementation of the following:

    - Improvements at the Forest Avenue/Bedford Street/Baxter Boulevard intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the corners on the Baxter Boulevard approach, upgrading pedestrian traffic signal equipment with all work complying with ADA standards.

- Improvements at the Forest Avenue/Falmouth Street/Preble Street Extension intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the southeast corner, implementing a crosswalk on the southerly Forest Avenue approach, upgrading pedestrian traffic signal equipment with all work complying with ADA requirements. It should be noted that the new crosswalk will require installation of a new sidewalk ramp on the westerly side of Forest Avenue.

XI. ATTACHMENTS

Report Attachments

1. Transportation Programs Manager TDM Memo
2. Consulting Transportation Engineer TMP Comments
3. Department of Public Works Senior Engineer CM Plan Memo
4. Consulting Civil Engineer Comments Memo
5. Department of Public Works Water Resources Comments
6. Urban Designer Review Memo

Public Comment

PC1 - PC 7.

Applicant's Submittals

A. Cover Letter and Project Summary
B. Neighborhood Meeting Materials
C. Transportation Demand Management
D. Interim Parking Management Plan Memo
E. Site Location of Development Application
F. Site Plan Requirements Narratives
G. Lighting Cut Sheets
H. Stormwater Report
I. USM Facilities Master Plan
J. Traffic Memo
K. Street Parking Memo
L. Design Narrative
M. Response to Comments Letters
N. Portland Commons Window to Wall Ratio
O. Landscape Design Concept Memo
P. Housing Survey Market Analysis
Q. Parking Analysis
R. Parking Garage Feasibility Study
S. Preliminary Plan for Move-In
T. Sightline Diagrams
U. TMP Section 7

Plans

P1. Cover Sheet
P2. Site Notes & Legends

P3. Existing Conditions & Removals Plan
P4. Building Demolition Plan
P5. Site Layout
P6. Utilities
P7. Planting & Landscape
P8. Grading & Drainage
P9. Erosion & Sedimentation Controls
P10. Steam Line
P11. Photometric
P12. Post Development Watershed Plan
P13. Post Development Water Quality Plan
P14. Construction Management
P15. USM Survey
P16. Floor Plans
P17. Elevations
P18. Renderings

CITY OF PORTLAND

Planning & Urban Development

Performance Guarantee, Inspection Fee, and Infrastructure Financial Contribution Packet

A. Site Plan/Subdivision Performance Guarantees Required

Portland's Land Use Code requires all developers with approved site plan and/or subdivision applications to submit a performance guarantee to the City prior to the start of any construction or site improvements. The performance guarantee represents 100% of the total cost of site improvements, as determined by the City.

The code further requires developers to pay an inspection fee of 2% of the performance guarantee amount to the City for the administrative costs associated with inspecting construction activity to ensure that it conforms with plans and specifications.

(Portland's Land Use Code, Sections 14-501 and 14-530)

B. Cost Estimate Form and Inspection Fee

The performance guarantee covers major site improvements related to site plan and subdivision review, such as paving, roadway, utility connections, drainage, landscaping, lighting, etc. Please submit an itemized cost estimate form to determine the detailed costs of both public and private site improvements to the Planning Division for review and approval. The cost estimate form (excel format) can be downloaded from the city's website here: http://portlandmaine.gov/costestimate The approved amount on the Cost Estimate form is the amount to be covered by the performance guarantee and is the basis for calculating the 2% inspection fee.

C. Acceptable Types of Performance Guarantees

The accepted forms of a performance guarantee, covering the amount approved on the Cost Estimate form, must be one of the following options consistent with the attached templates, with **NO** exceptions. The templates and instructions be located on our website at: https://www.portlandmaine.gov/2157/Performance-Guarantee

1. A letter of credit from a bank/credit union
2. A deposit into a bank-held escrow account
3. A deposit into a City-held escrow account

NOTE: No land use application of any kind shall be processed, reviewed or issued, no signed subdivision plat shall be released or recorded, and no building permit of any kind shall be issued unless all fees have been paid and every aspect of the proposed development is in compliance with City Codes as determined by the Development Review Coordinator in the Planning Division.

The developer is eligible to receive up to three reductions from the performance guarantee in a calendar year equal to the estimated cost of the completed improvements. In no case, however, shall any performance guarantee be reduced 1) in any line item where improvements remain to be completed; or 2) to a value which is less than the estimated cost of completing all remaining required improvements; or 3) to a value less than 10% of the Performance Guarantee. *(The Cost Estimate Form can also be used during the construction phase to submit reductions of fully completed site work items)*

At the conclusion of the project, the City will release 90% of the performance guarantee after the Development Review Coordinator determines that site improvements have been satisfactorily completed at the time of the final inspection. The City will then retain a 10% defect guarantee to cover the workmanship and durability of materials used in construction. The defect guarantee will be released one
(1) year from date of acceptance, subject to the Development Review Coordinator inspecting the site and finding it in compliance with the approved site plan.

D. Housing Replacement Performance Guarantees

For those projects that are subject to Portland's Housing Preservation and Replacement Ordinance (Section 24-
483) and have an approved plan, then a performance guarantee is required for housing replacement. An owner or developer must post a performance guarantee in the form of a letter of credit in the amount equivalent to the amount the applicant would have been required to contribute to the City's Housing Fund, if the applicant had chosen that option. The guarantee shall be valid for no more than three years, after which the full amount shall be provided to the City's Housing Trust Fund, if replacement units meeting the code do not have certificates of occupancy. The guarantee can be released upon the issuance of a certificate of occupancy for the replacement units. A suggested template for a Housing Replacement Performance Guarantee is included as Attachment 4.

E. Infrastructure Accounts

Contributions to infrastructure accounts may be required as part of the conditions of site plan approval. The contributions must be submitted prior to the issuance of any permits, unless stated otherwise in the approval. The form for submitted required contributions is included as Attachment 5.

F. Administrative Process for Submitting Performance Guarantee

- **Step 1 – Submit a Cost Estimate for Review**

  Submit completed cost estimate form to the Planning Division for review and approval. Once approved, use this total amount as the performance guarantee amount in Step 2.

- **Step 2 – Drafting a Performance Guarantee**

  Complete a draft of 1 of the 3 attached performance guarantee templates, inputting project specific information (Reference Guide for Drafting for help) into blank and bracketed areas, and submit to the Planning Division for final approval. Submit a draft to **planning@portlandmaine.gov** to

ensure fields are correctly entered. Once staff approved the draft, the applicant shall submit the official signed original performance guarantee document, which for option 1) or 2) must be on Bank/Credit Union letterhead with original signatures.

- **Step 3 - Submit Performance Guarantee, Inspection Fee, and Infrastructure Contributions** Submit the final original Performance Guarantee, the required inspection fee, and any infrastructure contributions (Include Attachment 6 form) to the Planning Division. The Planning Division will confirm that the final documents are accurate and acceptable.

- **Step 4 - Release of Recording Plat and Permits**
  Only after the performance guarantee is issued, fees paid, and all other conditions of site plan approval and compliance are met, will the recording plat be released for recording at the Cumberland County Registry of Deeds and/or City permits issued.

Contact: Please email the Cost Estimate Form to Jodie Keene at **jkeene@portlandmaine.gov** After the cost estimate is approved, all Performance Guarantees and Infrastructure Contributions can be submitted by mail to: **City of Portland Planning Division, 389 Congress Street, 4th Floor, Portland, ME 04101**. Please call our office with any questions: 207-874-8632

STORMWATER DRAINAGE SYSTEM
MAINTENANCE AGREEMENT

For SITE PLANS (THAT ARE NOT SUBDIVISIONS)

IN CONSIDERATION OF the site plan approval granted by the Planning Board/Planning Authority of the City of Portland to the proposed _____ (*name of development and project number)*), and the associated Grading, Drainage & Erosion Control Plan (*insert correct name of plan)* (Exhibit A) submitted by_____, prepared by _____ (*engineer/agent*) of _____(address) dated _____, and pursuant to a condition thereof, _____ (*name of owner*) a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of _____, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

Maintenance Agreement

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

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

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

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

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

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

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

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

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

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

_____
(*name of company*)

_____
(*representative of owner, name and title*)

STATE OF MAINE
CUMBERLAND, ss. Date: _____

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

Before me,

_____
Notary Public/Attorney at Law

Print name: _____

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

Exhibit B: Approved Stormwater Maintenance and Inspection Agreement

University of Southern Maine (USM) Portland Campus

Transportation Demand Management (TDM) Plan

University of Southern Maine
96 Falmouth Street
Portland, Maine 04103
(207) 780-4718

PREPARED WITH SUPPORT FROM

500 Southborough Drive, Suite 105B
South Portland, Maine 04106
207.889.3150

January 20, 2023

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1

Introduction

This Transportation Demand Management (TDM) plan provides a cohesive strategy for continuing a successful TDM program for the University of Southern Maine (USM) Portland campus. This plan seeks to enhance multimodal accessibility, ensure the use of non-vehicular modes, and discourage the use of driving through parking management, to achieve and build upon the parking demand reduction goals for the campus.

The TDM Plan expresses a TDM program of strategies and timeframe for when USM intends to implement the various strategies. The strategies aim at promoting walking and bicycling, improving transit service to promote ridership, promoting carpooling, , and managing parking demand via changes to USM's pricing and permit policies.

USM Portland

The University of Southern Maine (USM) Portland campus encompasses approximately 30 acres, with 27 buildings comprising 1,190,929 assignable square feet (ASF). Located less than one mile from the heart of downtown Portland, the Portland campus provides excellent access to social, cultural and internship opportunities. Linked to the Gorham campus ten miles to the west and the Portland city center via frequent bus service (METRO's Husky Line), the Portland campus also has convenient access and visibility from Interstate Highway 295,

with Forest Avenue serving as the primary roadway arrival point. A second important arrival point onto the campus is the roundabout at the intersection of Deering Avenue, Brighton Avenue, and Falmouth Streets. Bedford Street bisects the campus providing access to most of the parking lots and structured parking for the campus.

The campus is in a completely developed urban neighborhood. The adjacent land consists of Interstate Highway 295 on the south-east border, commercial uses on the north east (along Forest Avenue), and residential uses on the northwest, west and south west. The largest adjacent land use is the Oakhurst Dairy distribution center between the campus and Forest Avenue. The adjacent residential areas provide housing for some of USM's students but are generally a set of very solid and cohesive neighborhoods. Currently, no students reside on the Portland campus, but that will change in the summer of 2023 when a new residence hall will come online.

In 2017 and 2018, the University of Southern Maine undertook a process that resulted in a final *Facilities Master Plan* approval by the Board of Trustees in January 2019.[1] The process included information gathering via tours of all three campuses, extensive internal and external stakeholder interviews, and public input. The plan incorporates the visions, goals, facilities assessments, and the campus space needs assessments into a set of campus physical development recommendations. USM is now embarking in implementing specific capital projects identified in the plan.

Commitment to TDM

USM has a history of promoting Transportation Demand Management (TDM) strategies on its campuses. For starters, TDM clearly falls within two guiding principles of the University's Facilities Master Plan through its attempt to increase non-private vehicular transportation and reduce related transportation emissions:

- **Mobility**—the Master Plan supports robust pedestrian, bicycle, shuttle bus, ride share and metropolitan and regional public transit systems that look beyond private vehicular parking to meet the transportation needs of the campus community.
- **Sustainability**—the plan supports all existing sustainability policies of the University.

TDM also indirectly relates to several other guiding principles as a result of potential outcomes from a TDM program:

- **Student Experience**—the process, plan, and implementation focuses upon improving the students' academic, co-curricular and living experience on each of the campuses.
- **Public Safety**—the plan and subsequent implementation seeks to provide the safest campus environment possible through physical, programmatic, and operational improvements, including those in response to public health threats like Covid-19.

[1] For more details, please visit *usm.maine.edu/president/master-plan*.

- **Neighbors**—the plan seeks to establish campuses and campus communities that are positive members of the neighborhoods, mitigating negative impact and providing a beautiful and inviting campus landscape for all neighborhood members to enjoy.
- **Aesthetics**—the visual quality of the campus facilities is important to creating an environment that meets the mission and goals of the University.

The implementation of TDM measures provides USM with the ability to make access to the campus more enjoyable and safer for affiliates (because of reduced traffic), improved relations with neighbors (because of decreased traffic and parking concerns), and decreased campus space dedicated to parking.

As a result, the University introduced TDM for the first time within its 2017 Sustainability Plan. The sustainability plan set a quantitative goal for sustainability efforts related to transportation and established a baseline of strategies to achieve that goal. Per the sustainability plan, the goal related to transportation was to reduce greenhouse gas emissions from transportation by 20 percent from a Fiscal Year (FY) 2006 baseline. TDM-related strategies suggested by the Sustainability Plan are presented in Chapter 3; one recommendation was to develop a TDM plan.

To further understand how TDM will play a role as the campus continues to transform, USM hired VHB to develop a comprehensive TDM Plan that will allow the University to meet their sustainability goals while responsibly meeting user parking demands (and limiting the additional parking supply requirements). To develop a strategic approach for USM transportation that leverages current realities in developing future outcomes, VHB and USM hosted a series of stakeholder meetings and interviews. These conversations helped inform the proposed strategies presented in the first generation of this TDM plan, which was published in 2020. The plan presented here builds on the 2020 plan, modifying strategies to address lessons learned and behaviors observed through the first two years of implementation.

Development Proposal: Facilities Master Plan Program Elements

Consistent with the USM *Facilities Master Plan* approved January 27, 2019, USM has several development program aspirations that have triggered the initial development of this TDM Plan and continue to influence it. The University is actively building the new campus "heart", consisting of the following capital projects:

- **Career and Student Success Center**—This building, now named the McGoldrick Center, will replace the dining and cocurricular activity space formerly in the Woodbury Campus Center. In addition, the vision for this building is to provide a common place for programs and functions that support both the academic success and long-term professional success of the USM student. The building is anticipated to be approximately 41,000 square feet.
- **Student Housing**— This approximately 216,000 square-feet building will house upwards of 580 beds to accommodate upper class undergraduate students and graduate students.

- **"Quad"**—A key component of the transformation of the Portland Campus is a second campus open space, located adjacent to the residence halls and the Career and Student Success Center.
- **Center for the Arts Building**- Framing the west side of campus along the former Brighton Ave. Extension, this building will include classroom space, a recital hall, and a visual arts gallery.
- **Structured Parking**- A four-level structured parking garage is being built next to the existing parking garage adjacent to the Abromson Center. Not only will the facility accommodate approximately 504 automobile spaces and six motorcycle spaces, it will also contain 250 covered, secured long-term bike parking spaces and 58 level-two electric vehicle charging plugs.

The development noted above may be followed by additional capital projects on USM's Portland campus.

Parking Supply and Demand

To accommodate parking needs for the new construction laid out above, the master plan proposed an increase to the supply of parking. To verify this assumed need, the University hired VHB to conduct a parking study in 2019. The study, published in March of 2020, showed that the Portland campus would, indeed, be short on parking supply at the opening of the new buildings, even in a 0% enrollment increase scenario.

In the Fall of 2020, the University submitted site plans to the City of Portland for the new career and student success center and residence hall described above. Upon review of the University's parking study and the anticipated demand for parking stemming from the new residence hall, the City drafted a condition of approval for the project that mandated the provision of 396 net new parking spaces. The accounting within the condition of approval is listed in the table below. It incorporates a significant loss in surface parking as a result of the construction project and the creation of a large campus green.

Table 1: City of Portland's Condition of Approval for Supply of Parking

Item	Peak Demand or Supply Impact
Residence Hall (Provision of Parking for 68% of 580 residents)	394
Displacement by Closure of Woodbury Lot	130
Displacement by Closure of Facilities Lot	41
Displacement by Revision of Central Heat Plant Lot	6
Displacement for Future Salt Shed in Law School Lot	4
Wishcamper Parking Lot Expansion Plan	-115
Reduction from TDM Strategies Applied to this Parking Pool	-64
TOTAL NEED	396

After the Planning Board approved the career and student success center and residence hall buildings, the University moved forward with plans to meet the condition of approval for net new parking by submitting site plans for a structured parking garage in the Fall of 2021. Given that the new structured parking garage would be situated on the Wishcamper surface lot, 92 current spaces would be lost in addition to 115 future spaces. The future spaces had been previously anticipated to be gained by a City-approved expansion and re-striping of that lot that had also been incorporated into the condition of approval for the career and student success center and residence hall. Due to this displacement of parking in the Wishcamper lot, the University proposed that the size of the structured parking garage be 504 automobile spaces in order to reach the City's condition of approval for 396 net new spaces. With the planned departure of the Maine Law School from campus set to occur prior to opening the new buildings, the University estimated it would see reduced demand of at least 152 vehicles during the peak hour, allowing for a 504-space garage to sufficiently meet the condition of approval for 396 net new spaces. VHB reviewed and verified the numbers, and in January of 2022, the City of Portland's Planning Board approved the parking garage project.

In December of 2022, the University submitted site plans for the Center for the Arts building (CFA). The University estimates that this building will create new demand for 32 parking spaces at peak time. The combination of the new parking garage, the departure of the Maine Law School, and the TDM initiatives outlined in this plan are anticipated to collectively accommodate 32 parking spaces for the CFA building, and still leave 75 spaces of surplus

available for future growth in enrollment. The loss of the Brighton Ave. lot from the City's 2021 roundabout project (26 spaces) is factored into this projected net surplus. Reduced demand from TDM campus-wide (144 spaces), as opposed to only lots impacted by construction in the condition of approval, is also factored into the net surplus explained here. This additional TDM impact is estimated to reduce demand by another 80 vehicles over the original 64 vehicles accounted for in the condition of approval.

2

Mobility Context

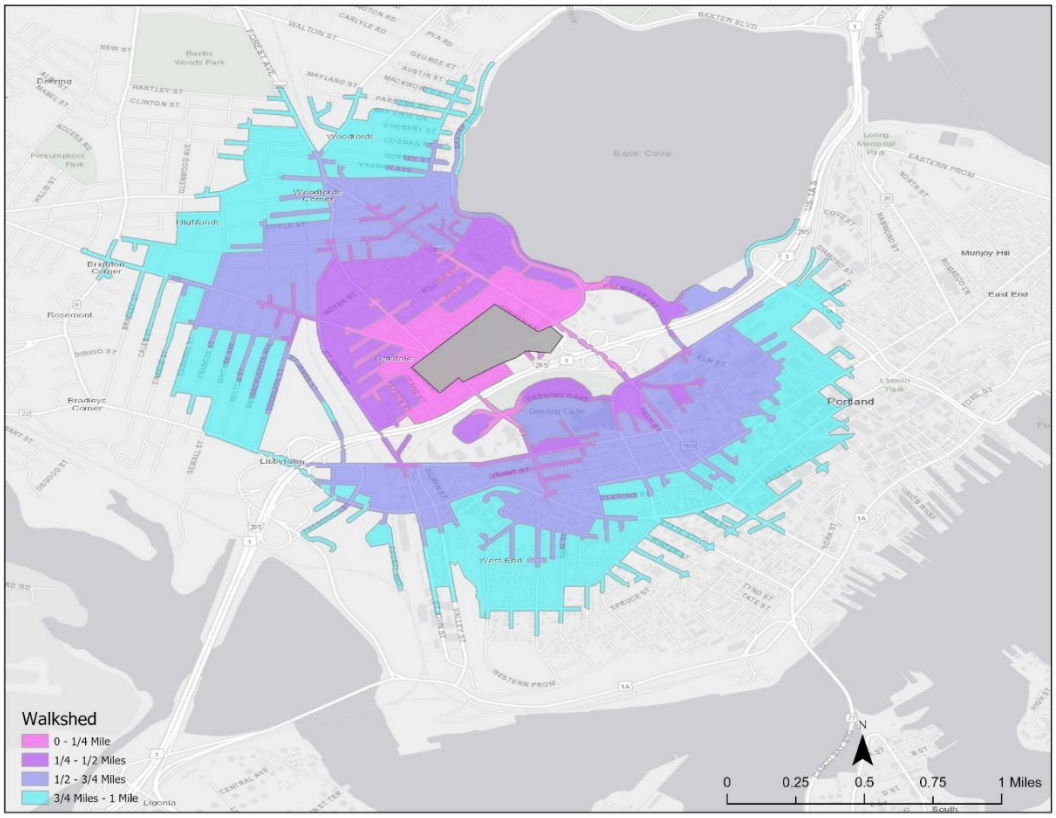
Understanding the transportation context that is available for students, faculty, staff, and visitors at USM Portland is important to be able to recommend targeted TDM program elements. This section summarizes VHB's findings from 2019 when assessing the different ways that one can access the USM campus as well as opportunities and challenges related to those options.

Walking and the Pedestrian Environment

USM's Portland campus is located on the edge of the Portland peninsula adjacent to the Oakdale residential neighborhood. Oakdale maintains a grid of streets, a majority with sidewalks, and low-volume, low-speed streets that make it generally comfortable and conducive for walking. The University is also adjacent to Forest Avenue, which offers local retail (including a grocery shop) within a short walk of the University. *Walkscore.com*, a real-estate site that evaluates walkability and transportation when choosing where to live, scores USM a 78 out of 100 and considers it to be a "Very Walkable" location where most errands can be accomplished on foot.

Some built and natural barriers limit accessibility to areas on the south side because of the I-295 highway, to the west and southwest because of a below-grade railroad, and to the northeast because of the Back Cove. Although there is a comfortable shared use path under the interstate, I-295 can pose as a psychological barrier to some people for walking trips to downtown. Figure 1 shows the walkshed in quarter-mile increments out to a mile from the USM Portland campus.

Figure 1: 1-Mile Walkshed from USM Portland Campus



On campus, there is a robust network of pedestrian paths that connect all campus buildings (Figure 2). There are also information kiosks and wayfinding to assist pedestrians in their orientation around campus.

Figure 2: Portland Campus Map



In summary, walking is easy in and around USM; however, natural or human-made barriers may provide some real barriers and some psychological barriers. For example, the primary walk route to downtown from campus is on Forest Ave, which is a wide, fast street with large intersections and long wait times, despite the fact that there is a safe and comfortable shared used pathway crossing the on and off ramps of 295.

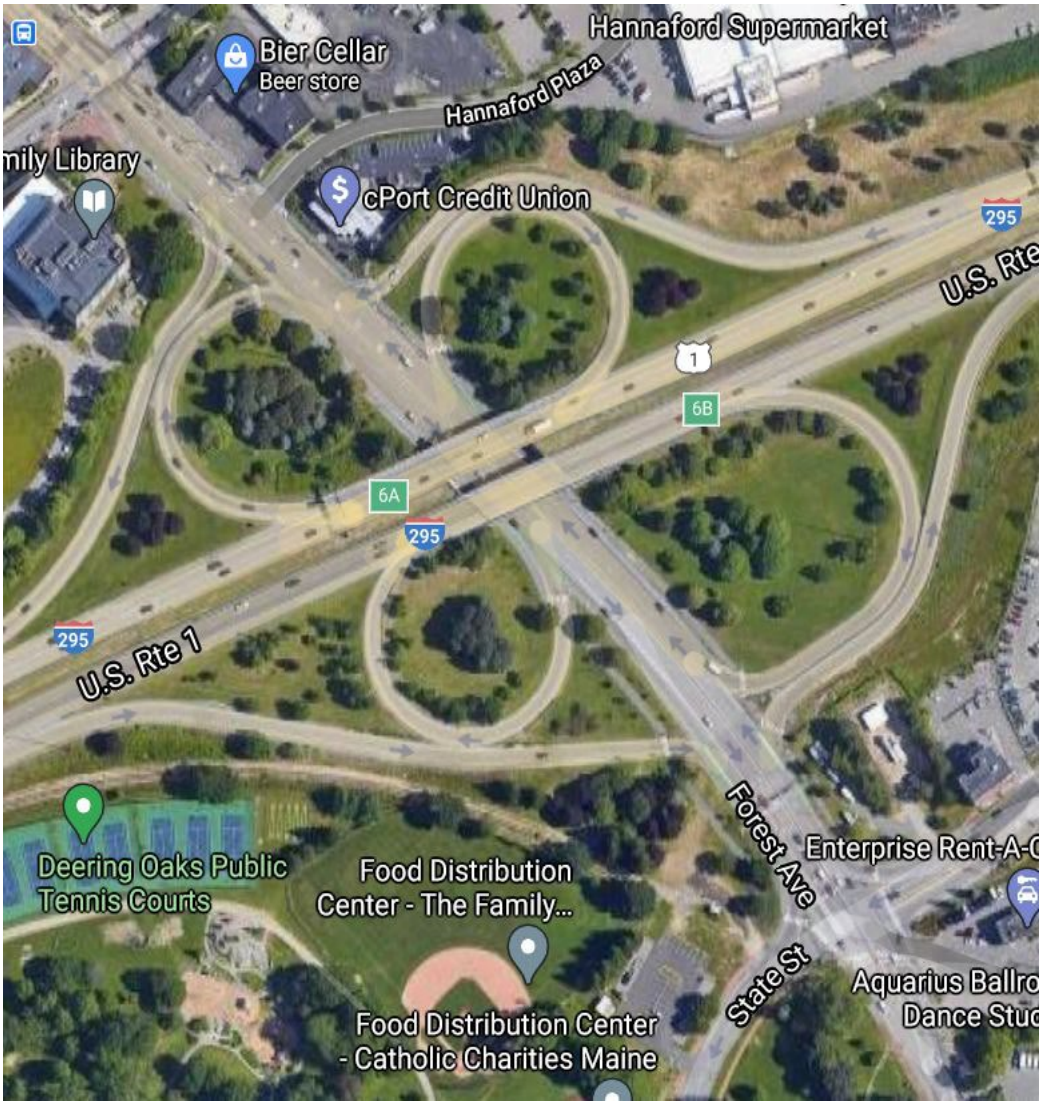
TDM strategies within this plan will seek to better connect the University despite these perceived or real barriers.

Bicycling Environment and Infrastructure

The *Walkscore.com* website lists USM at a Bikescore of 93 out of 100, the equivalent of a "Biker's Paradise." In fact, USM is located at the convergence of several key bike routes in the region that ultimately connect to the Portland Peninsula. Bike lanes around USM can be found along Brighton Avenue, Deering Avenue, Bedford Street, and Forest Avenue.

Some work is needed to teach the University community how to overcome certain psychological barriers. The best example, arose in stakeholder input sessions, was the perception that traveling on Forest Avenue to downtown is difficult. The root of the perception may be from the fact that there are six intersections, on ramps, or off ramps on each side of the road for a 1,200 foot-long stretch. See the aerial image in Figure 3 below:

Figure 3: Forest Avenue Bi-Secting I-295



The City has worked hard to increase the safety and comfort of this area by building and maintaining a shared used path on each side of Forest Avenue.

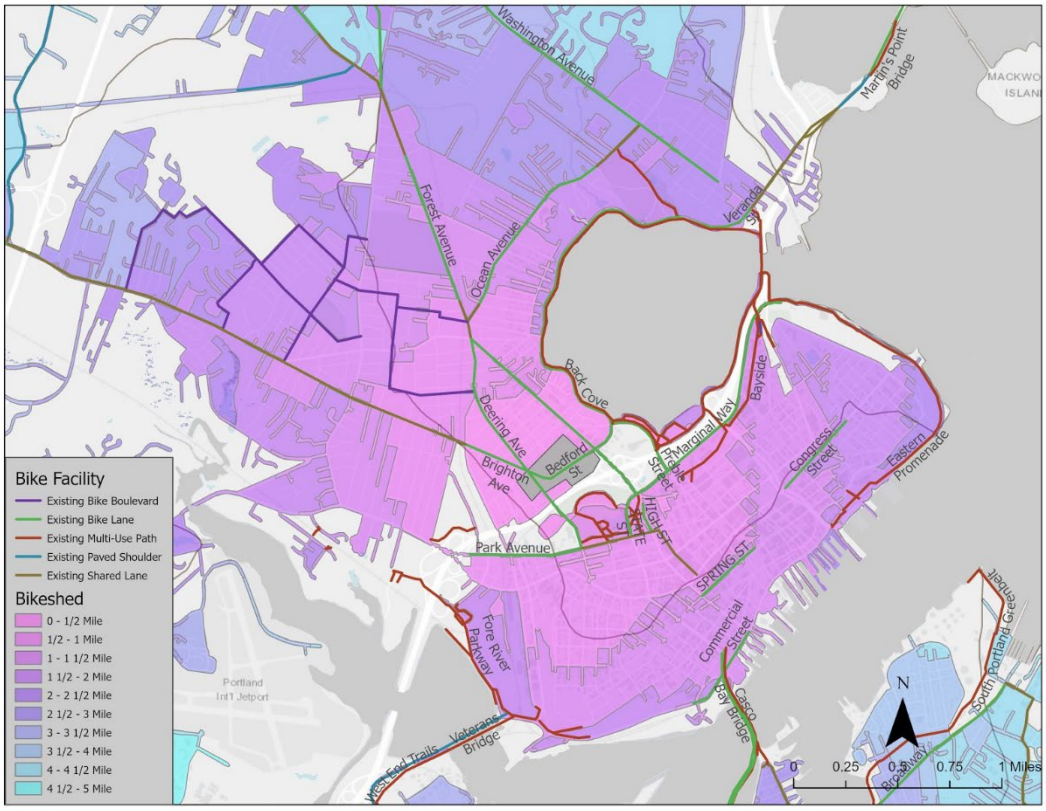
Figure 4: Shared Use Path Available on Forest Avenue Provides Access Under I-295



There is also a shared use path that runs parallel along the Back Cove. In addition to providing beautiful vistas of the downtown skyline, this path provides comfortable and safe bike/ped access to numerous Portland neighborhoods including the Back Cove, Woodfords, East Deering, and Bayside. Even the East End and the Old Port can be accessed this way, via the Eastern Prom Trail connected to the Back Cove path. Through the various shared use paths near the University, the entire Portland peninsula can be accessed within 2 miles of USM.

Within 5 Miles, one can also reach South Portland to the south, Westbrook to the west, and the border of Falmouth to the north. For the bike-to-transit trips, METRO buses serving the University are equipped with bike racks. The Husky line buses have slots for three bikes, and the other METRO buses serving the Portland campus have slots for two.

Figure 5: Bikeshed from USM



On-campus, there are 16 locations with bicycle racks and a bicycle repair stand adjacent to the Woodbury Campus Center. The locations of most of these racks are readily visible within the campus map (Figure 2) posted on kiosks throughout the campus and online. The majority of the racks are easily visible when on foot, except for the covered racks under Masterton's awning and in Abromson parking garage. The condition of the on-campus bicycle racks is fair; however, the Bike Fix-it Station needs repair: its tools have rusted and are bent and unusable. Shower access for campus affiliates is available at the Sullivan Gym. In order to gain access, they must show their campus ID.

In comparison to most places in the United States, the biking network in and around Portland and USM Portland campus is robust. On-campus, commuters have a place to store these bikes. TDM strategies related to biking should focus on marketing this commute option to overcome any fears about perceived barriers and thereby expand the potential pool of people that can bike. The University should also collaborate with the City as they seek to expand and improve the bicycle network.

Public Transit

USM affiliates are granted unlimited free METRO transit access as part of their enrollment and employment at USM. Transit access is paid by way of the student transportation fee and

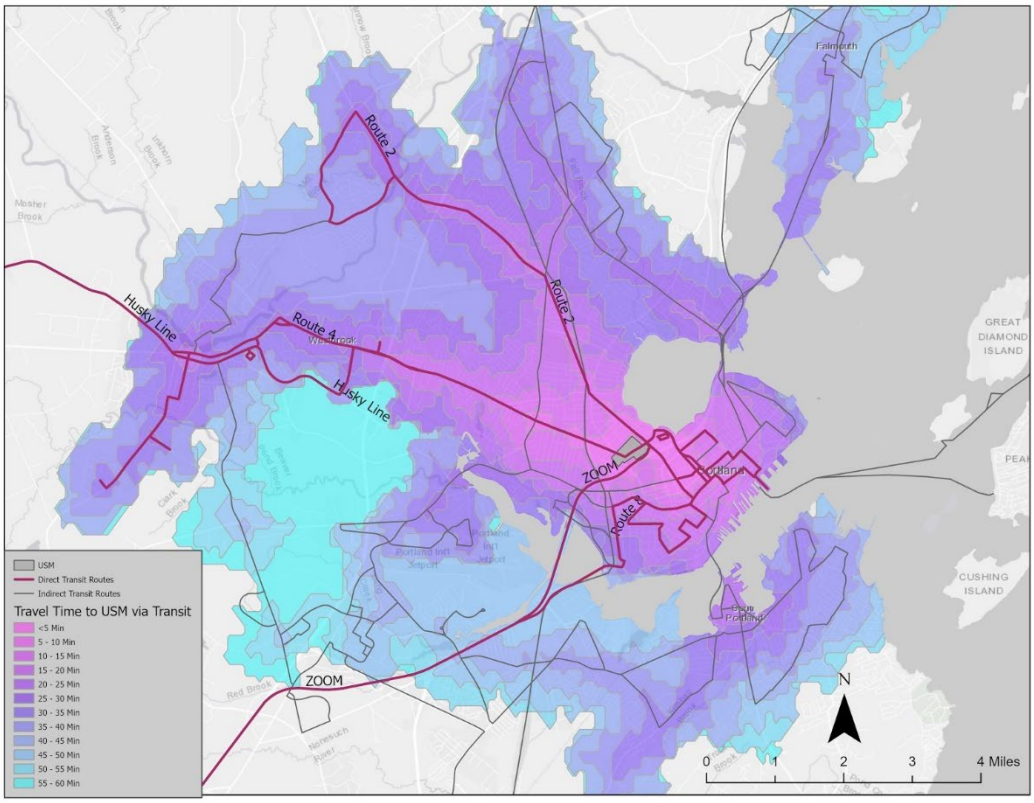
the employee parking permit fee. When boarding a METRO bus, USM affiliates must show their ID to the bus driver.

Four METRO bus routes serve the USM Portland campus: Route 4 and Husky Line serve the campus directly with a stop on Bedford Street, and within a quarter-mile, the Route 2 (via Forest Avenue) and Route 8 (at Hannaford Plaza). In addition to METRO service, the Lakes Region Explorer Bus ($2 one-way) is also nearby. Among the four, only the Husky Line has limited stop service all the way between the Portland and Gorham campuses.

On Bedford Street, at the heart of campus, there are shelters for Route 4 (Westbrook–Portland Pulse) and the Husky Line (USM Gorham via Westbrook–Portland Pulse). Route 2 (Forest Avenue) and Route 8 (Peninsula Loop) can be accessed at nearby Hannaford Plaza roughly a quarter-mile from campus. The Lakes Region Explorer (Windham Route), run by RTP, stops at the corner of Forest Avenue and Bedford Street.

Transit "accessibility" was determined by travel time, including time required to walk to the stop, wait for a transfer when applicable, ride the bus, and walk to the final destination. This differs from accessibility for walk and bike sheds where distance from campus generally determines accessibility. Expected transit travel time to the campus using the existing Portland transit network was mapped out in 5-minute increments (Figure 6). These increments include up to a maximum of a 15-minute walk for the total trip (to account for walk-access to transit).

Figure 6: Transit Service at USM Portland



Transit is not only a function of having a service route present nearby; other important pieces to consider are its span of service (i.e., is the service available at the times of day when needed) and service frequency (i.e., does the service operate at frequent intervals). Scheduled headways and service hours for direct services are included in Table 1 below.

Table 2: Direct Transit Route Headways

Route	Headways (minutes)							Span					
	Weekday			Saturday		Sunday		Weekday		Saturday		Sunday	
	Peak	Day	Evening	Day	Evening	Day	Evening	Start	End	Start	End	Start	End
Bedford St USM (0.0 Miles)													
Husky	30	30	50	45	45	45	45	6:30 AM	10:30 PM	8:30 AM	11:00 PM	8:00 AM	7:00 PM
4	30	30	60	30	60	45	-	5:30 AM	11:30 PM	6:00 AM	11:30 PM	8:30 AM	7:30 PM
Forest at Bedford St. (<0.25 Miles)													
2	20	30	60	60	60	60	-	6:00 AM	11:00 PM	6:30 AM	10:30 PM	8:30 AM	4:40 PM
Lakes Region Explorer	180	180	180	-	-	-	-	6:00 AM	10:30 PM	-	-	-	-
Hannaford Plaza (<0.25 Miles)													
8	30	30	-	60	-	60	-	7:00 AM	6:00 PM	8:00 AM	6:00 PM	9:00 AM	4:00 PM
?													
Zoom Turnpike Express	30	-	-	-	-	-	-	6:00 AM	6:40 PM	-	-	-	-

While all transit services adjacent to USM operate during the schedule of a normal business day and into the evening, the frequency can pose challenges to some of USM's population. As one can see above, the most frequent transit service (Route 2) runs every 20 minutes while the Husky Line, Route 4, and Route 8 run on 30-minute intervals. For many, these frequencies are satisfactory, especially given that the Husky Line is a limited stop service, cutting down on travel time. But, the frequencies don't yet meet the threshold for "transit

freedom" or the ability to travel without planning ("Transit freedom", per the definition by Jarrett Walker in *Human Transit*, is a frequency of at least 15 minutes all day[2]). People who are able to plan are facilitated by helpful resources like the Transit Tracker app and soon-to-be-installed transit screens at certain stops.

Other Mobility

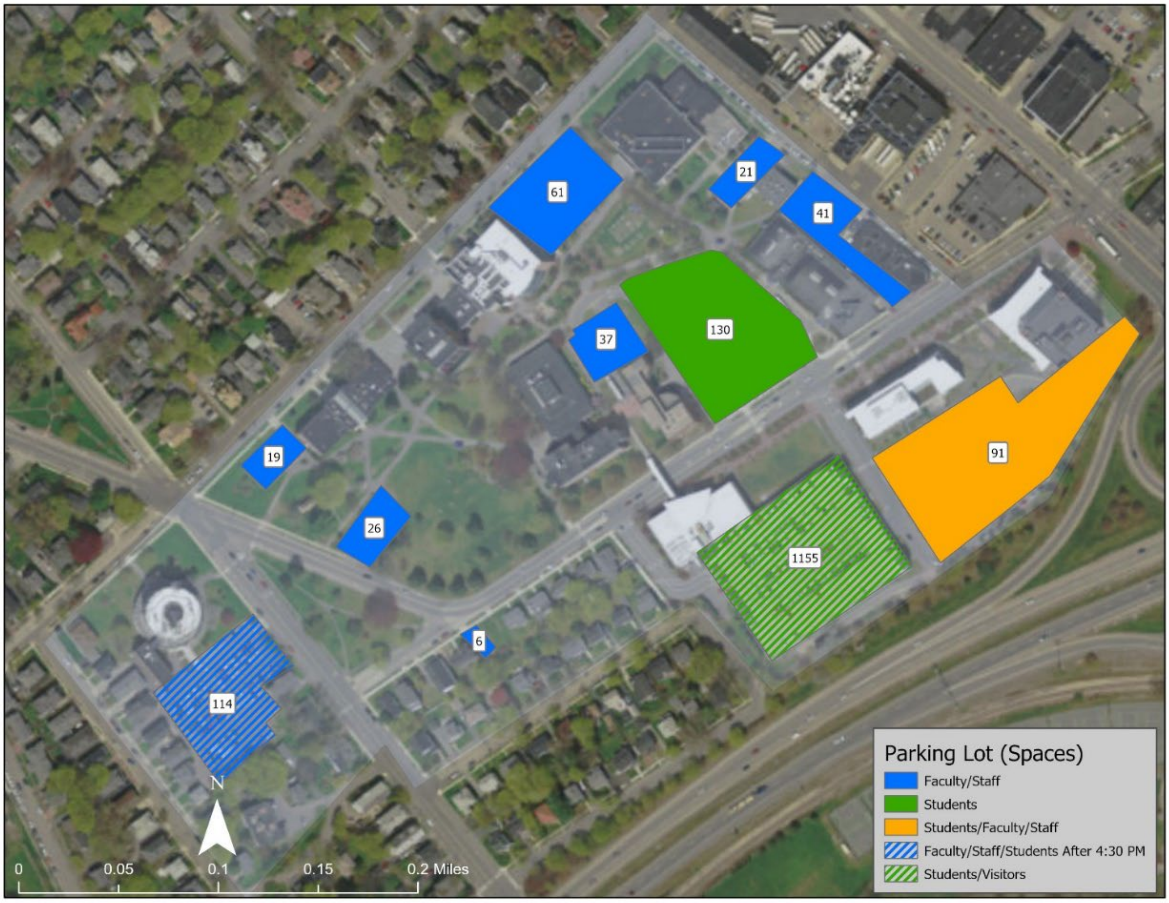
In addition to walking, biking, and riding transit buses, USM affiliates can use ride-hailing services Uber, Lyft, or taxis, which are readily available in and around the peninsula. No carshare vehicles are located within a half-mile of USM. Also, no dedicated carpool parking spaces are designated on campus. Carshare and carpool are opportunities that the TDM Plan can leverage to reduce the number of people parking on campus.

Parking Facilities and Policy

Campus affiliates and visitors can park at 11 distinct parking lots (including one garage) across campus hosting a total of 1,701 spaces (Figure 7). By far, the largest parking facility on campus is the University Garage, which has a total of 1,155 parking spaces. Lots are designated by permit type and only users with that permit can park in that lot. Figure 7 identifies the location of these lots, permitted users, and the total number of spaces. The campus also has dedicated spaces for handicap, service vehicles, and an electric charging station.

[2] Source: humantransit.org/2011/12/how-frequent-is-freedom.html

Figure 7: Parking Spaces at USM Portland



Note: Although the 1,155-space Abromson Garage is primarily for student and visitor parking, faculty and staff may use the facility. The garage is access-controlled by a revenue control system.

All vehicles in University of Southern Maine (USM) parking lots on the Portland campus must display a valid USM parking permit, which comes in the form of a hang tag that must be hung from a vehicle's rear-view mirror. Permits may be obtained from the parking office or online through the University's parking web portal.

USM Portland has the following permit types:

- Student (Commuter, Gorham Residential) – All students are given the same parking privileges on the Portland Campus
- Employee (Faculty, Staff)

On the Portland campus, students may park at three different lots during the day (designated by a green sign) and at a fourth lot only after 4:30 PM. All students pay a transportation fee if registered for on-campus courses. The fee varies based on the number of credits for which they are registered: between $55 and $110 per semester. These payments are mandatory as part of enrollment and are made each semester: fall, spring, and summer.

On the Portland campus, employees are allowed to park in eight different lots on campus (designated by a blue sign). They pay $25 annually for their parking permit, which needs to be renewed each calendar year.

Short-term visitors to the campus may park in the parking garage for $2 an hour between the hours of 7 AM and 5 PM, Monday–Friday. Outside of these hours, visitor parking is free. There is a charge for overnight parking, except during snow bans. Prospective students and their families, campus guests, visitors, and volunteers receive free validation by the office or department they are visiting. To pay for parking, visitors must pay at the Parking Garage Office or use the pay-on-foot stations located by the doors to the parking garage on the first and second floors of Abromson Center and the ground floor of the parking garage by the vehicle exit.

A violation of parking guidelines may result in any number of consequences, including a parking ticket fine, towing of a vehicle (and responsibility of the owner/operator for payment of related towing and storage fees), or suspension of campus parking privileges. Parking tickets range from $25 to $200 depending on the infraction. Students and faculty must pay outstanding tickets before picking up a new permit.

Parking at USM is relatively unconstrained. Typical parking activity is accommodated with the present supply. Although on-street parking is also an option, many of the streets adjacent or near the campus are metered or have 1- or 2-hour parking limits during daytime hours. Recent observations conducted by VHB for USM found approximately one third of the on-street parking spaces available during peak parking periods.

Remote lots have been considered, but a large portion of USM students have one or more off-campus jobs, which require them to have ready access to their vehicles. To be more effective at discouraging parking on-campus, the University plans to make the transactional cost of parking more apparent for students.

The University reviewed parking rates around the City and around the New England market in general to see if there was room to use increased rates as a leverage point. This influenced the University to go from charging $0 for public parking to $2 per hour, which is still on the low to medium end of the market. The University is considering raising prices again to possibly $3-$4 per hour. However, the current plan is to keep it free for the early evening hours (5-11 pm), and to help out the neighborhood by allowing them to park for free during for snow bans from the hours of 5 pm to 8 am the following morning.

Regional TDM Program

At USM's disposal are several regional, state, and national-level TDM programs and services that are intended to support programs such as the one being reviewed by USM. Among these potential programs/services that could support USM include:

GO MAINE: Run by the Maine Turnpike Authority, this state-wide program serves as a rideshare matching service as well as a platform to log any kind of non-single occupancy trips, including non-motorized trips. The range of services include the following:

- **Emergency Ride Home-** This program essentially serves as "insurance" to provide people an option to get home from work in case of an emergency. The rides are provided using a taxi or Enterprise rent-a-car. It is available to commuters who carpool, vanpool, take transit, bike or walk at least three days a week. The benefit may be used up to eight times per calendar year.
- **Way 2 Go Maine-** *Way 2 Go Maine* is an annual commuter challenge in October that encourages employees of local businesses to use alternative transportation options through an inter-company competition. The competition recognizes companies for their successful participation and distributes prizes such as gift cards and swag to encourage participation.
- **Vanpool Matching-** Vanpooling is a common, long-distance commute option for employees headed to the same general area consisting of between 5 to 15 commuters. GO MAINE assists to form these vanpools.
- **Rewards Program-** GO MAINE has a rewards program for individuals who take greener trips, which include walking, biking, telecommuting, carpooling, vanpooling, or taking public transportation. Participants must sign-up and log their commutes daily. Rewards include gift cards and discounts to various local businesses.

Portland Slow Ride: To get people comfortable with biking, the Bicycle Coalition of Maine offers the "Portland First Friday Slow Ride". These rides are typically done at a relaxed pace and coincide with Portland's "First Friday" art walk event.

Smart Cycling Traffic Skills 101 and Educational Courses: Traffic Skills 101 is hosted by the Bicycle Coalition of Maine and is a course that teaches new and experienced cyclists how to ride in traffic. An individual or employer can specifically request a safety workshop.

Discounted Helmets: The Bicycle Coalition of Maine runs a helmet purchase discount program: when purchased in bulk (8-30 helmets) the cost is $7 per helmet.

Bicycle Benefit: As part of this national program, local businesses offer rewards to patrons who arrive at their establishments by bicycle.

Cycling Savvy: Is a program of the American Bicycling Education Association aimed at helping communities become more livable and sustainable by promoting a civil and cooperative environment on roads through complementary education and infrastructure design.

Best Employers for Commuters: This membership program provides qualified employers with national recognition and an elite designation for offering outstanding commuter benefits.

TDM at USM

TDM related to increasing multimodal transportation is not a new concept for USM. In 2017, the Office of Sustainability worked with various campus stakeholders to develop an eight-year sustainability plan that set a quantitative goal for sustainability efforts related to transportation and established a baseline of strategies to achieve that goal. Per the

sustainability plan, the goal related to transportation was to reduce greenhouse gas emissions from transportation by 20 percent from a FY 2006 baseline.

Table 2 below identifies the original strategies pursued by the sustainability plan as well as current strategies that came as a result of this original proposal:

Table 3: Suggested TDM Tactics from Sustainability Plan

Category	Original TDM Strategy	Progress at the Inception of TDM Plan (2019)
Shuttle	Extend shuttle routes and improve shuttle footprint	USM has partnered with the Greater Portland bus system, METRO, allowing students, staff and faculty to ride anywhere in the METRO system for free and vastly expanding the reach of University affiliates.
Carsharing	Explore option of starting a carshare program on campus	USM has explored options with one company and discussed ways it could fit into the vehicle fleet.
Comprehensive TDM Strategy	Create a Comprehensive Transportation Demand Management (TDM) strategy	This document is a product of the development of a comprehensive TDM Plan.
Bicycle Infrastructure	Create adequate bicycle infrastructure & education on campus to support people who would consider biking including a bikeshare program.	To accommodate bicycles, USM provides bicycle racks around the campus (16 racks & 250 spaces total). The Portland campus also has a fix-it work stand which is the first of its kind in Portland and allows riders to make simple bike repairs on campus. The University transportation website also highlights the benefits of biking from a health and environmental perspective.
Carpooling	Create adequate carpooling infrastructure & education on campus to support people who would consider carpooling	USM researched different carpool apps and began interviewing stakeholders to create a plan.
Hybrid & EV Vehicle Discounts	Create modest incentives for hybrid or electric vehicles	An EV charging station is provided at the parking garage and is free to use. Additional charging stations are being considered for the garage, Wishcamper, and locations in Gorham.
Incentive Program	Explore a partnership with Rise-Up to award incentives for alternative transportation commuting	The Office of Sustainability has held brainstorming sessions with the Wellness Committee to determine what types of incentives would qualify for the health credit. The Wellness Committee has agreed to work on implementation.
Carbon On-Setting Project	Explore possibility of creating a carbon on-setting project with local low-income households	No transportation related actions were identified. The Office of Sustainability chose a home weatherization project instead.

Category	Original TDM Strategy	Progress at the Inception of TDM Plan (2019)
Sustainable Business Travel	Develop mechanism for incentivizing more sustainable business travel	Measured carbon footprint of business travel in order to establish a baseline.
Parking Enforcement	Create a parking enforcement division of the University, separate from Public Safety, in order to maximize space utilization of existing lots	Division was created, staff were hired, and enforcement began.

The Plan found that it would be useful to conduct a Transportation Survey of campus affiliates to understand transportation patterns, needs and barriers. USM conducted a transportation survey effort in Spring 2019, yielding over 1,000 responses related to commute patterns, inter-campus travel, and receptiveness of possible TDM strategies.

Not listed within the Sustainability Plan, but nevertheless worth mentioning as TDM measures that have been pursued by the University include:

- Establishing a new USM transportation website to communicate the availability of alternative modes of transportation.
- Charging USM employees, students, and visitors for parking.
- Having a University System-wide telecommuting policy, which allows for telecommuting in certain cases. In response to the global pandemic, this policy was broadened to incorporate more people for longer periods of time.
- Having a larger portion of online classes in response to the global pandemic.

3

Existing Transportation Patterns

By exploring how USM students, faculty, and staff are currently traveling to campus we can identify which alternative modes may have the greatest potential to reduce drive alone commutes, and save on trips, parking and carbon emissions. This investigation allows for the development of targeted TDM strategies that offer a greater degree of changing commuter behavior.

VHB has reviewed USM affiliates' travel patterns using two data sources: a transportation survey and registered permit data. These data help identify how people are commuting to campus, what modes of transportation may interest commuters, and finally, what types of strategies would be most beneficial towards encouraging alternative commute modes.

Transportation Survey: Mode Shares and Travel Behavior

The Transportation survey conducted in Spring 2019 was done as part of the University's sustainability effort to chart emissions related to transportation. The online survey asked about current travel patterns between home and USM and about travel between the USM campuses. The survey also included questions about one's receptiveness to certain TDM strategies. About 1,000 USM affiliates participated.

Some key findings related to the survey (pulled from the "Final Survey Summary" prepared by USM) include:

- 78 percent of the USM population reported driving alone at least once a week to campus from home. About 72 percent of the population drives 2+ times per week to campus.
- 94 percent of USM employees park on campus; 81 percent of students park on campus.
- 25 percent of commuter students ride the METRO bus
- Dedicated, preferential carpool spots were the highest ranked activity to encourage students to use an alternative mode of transportation
- Per the survey, a new bike would be the best buyout reward for a parking cashout program, which may be a function of it being the highest value option ($500) compared to less valuable options of $100 cash, $200 discount on carshare/bikeshare, $200 discount on carshare/scootershare, $150 gift certificate to bookstore, and $150 gift certificate to dining services.

Additional conclusions from the survey data for the USM population who indicated making a trip to the Portland Campus include:

- 72 percent of USM Portland population reported having driven alone at least once a week to campus, 66 percent of the population drive 2+ times per week alone.
- 14 percent of the USM Portland population reported have taken transit at least once a week, 11.5 percent have taken transit at least twice per week.
- Considering only USM Portland commute trips (of employees and students), the Portland campus mode split is as follows: Drive Alone: 73 percent; Transit: 6 percent; Walk/Bike: 11 percent; Carpool: 8 percent; Motorcycle: 2 percent[3]
- USM's Walk/Bike mode split of 11% exceeds the typical average of 3% among Universities across the country, including those who have implemented TDM programs, according to VHB
- Average One-Way Commute Distance: 13.8 miles.
- 56 percent of the USM Portland population travels to other campuses
- For trips taken between the Portland and Gorham Campus, 40 percent take transit, 37 percent drive alone, 20 percent carpool, 3 percent bike, 1 percent use a motorcycle

Another transportation survey was conducted in the Spring of 2022. However, those results are not shown here because the University does not believe they represent baseline behavior since the global Covid-19 pandemic was significantly impacting the number of in-person courses being offered at the time and the number of employees teleworking was arbitrarily high. This was validated by an analysis done on peak parking and vehicle entries and exits in the parking garage. This analysis estimated that parking during the peak hour in the Spring

[3] It is important to note that this survey was taken before the Covid-19 pandemic. The next survey may show considerably different percentages for transit and carpooling.

of 2022 dropped by 45% over the 2019 baseline. Estimated trip generation dropped 20% during the AM peak and 41% during the PM peak.

Future surveys, perhaps as soon as the Spring of 2023, are expected to offer better comparison data when compared to Fall of 2019. Such data will be featured in annual reports to the City of Portland as described in the *Monitoring and Reporting Plan* section below.

Commute Trip Origins Based on Parking Permit Data

USM provided VHB with anonymized home address data for all their parking permit holders, which allows for an investigation of opportunities for providing incentives for reducing drive-alone trips to the campus. The following figures shows the distribution of commute trip origins based on the permit data. Major clusters of population are centered around the City of Portland, Westbrook, Gorham, Lewiston-Auburn, Brunswick, and Sanford (Figure 8). Figure 9 shows a zoomed-in version of the same data, showing that major residential areas include: Portland, South Portland, Westbrook, Gorham, Biddeford, Scarborough, and Yarmouth.

Using the parking permit data, VHB calculated drive time for faculty and staff. About 50 percent live less than a 20-minute drive from the Portland campus and 94 percent live within a 60-minute drive of the campus.

Figure 8: Distribution of Home (Commute Trip Origins) – Southern Maine Area

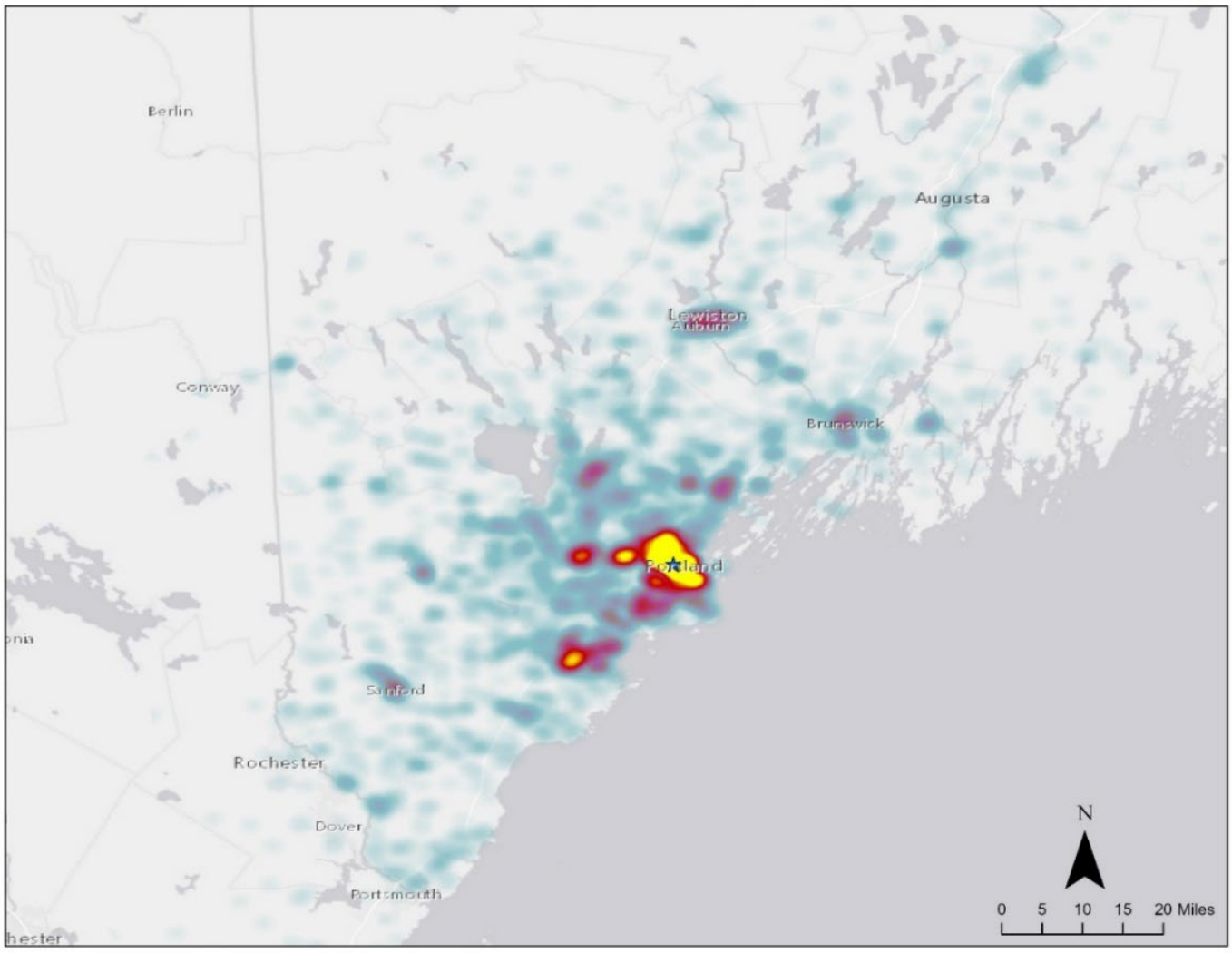
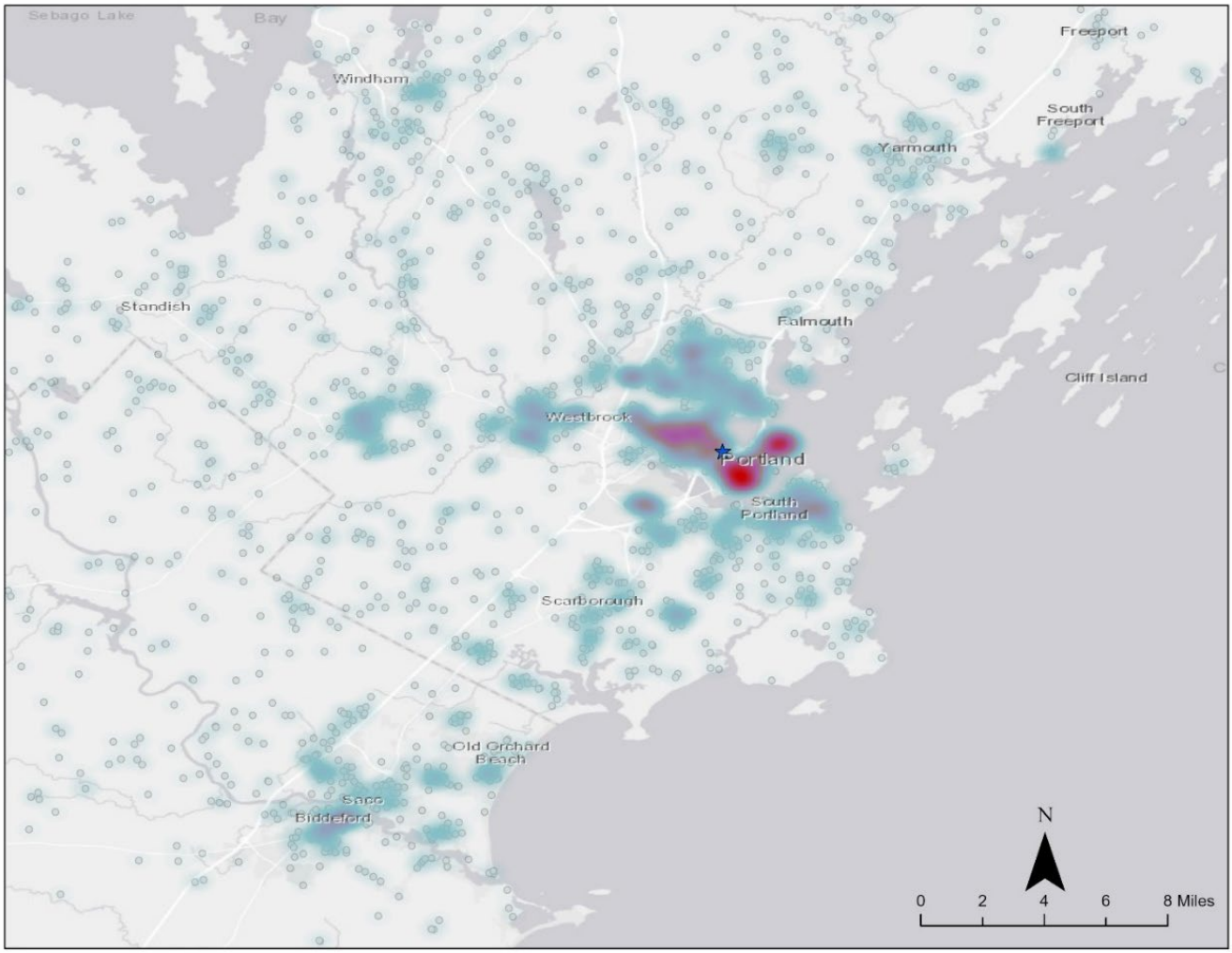


Figure 9: Distribution of Home (Commute Trip Origins) – Greater Portland Area



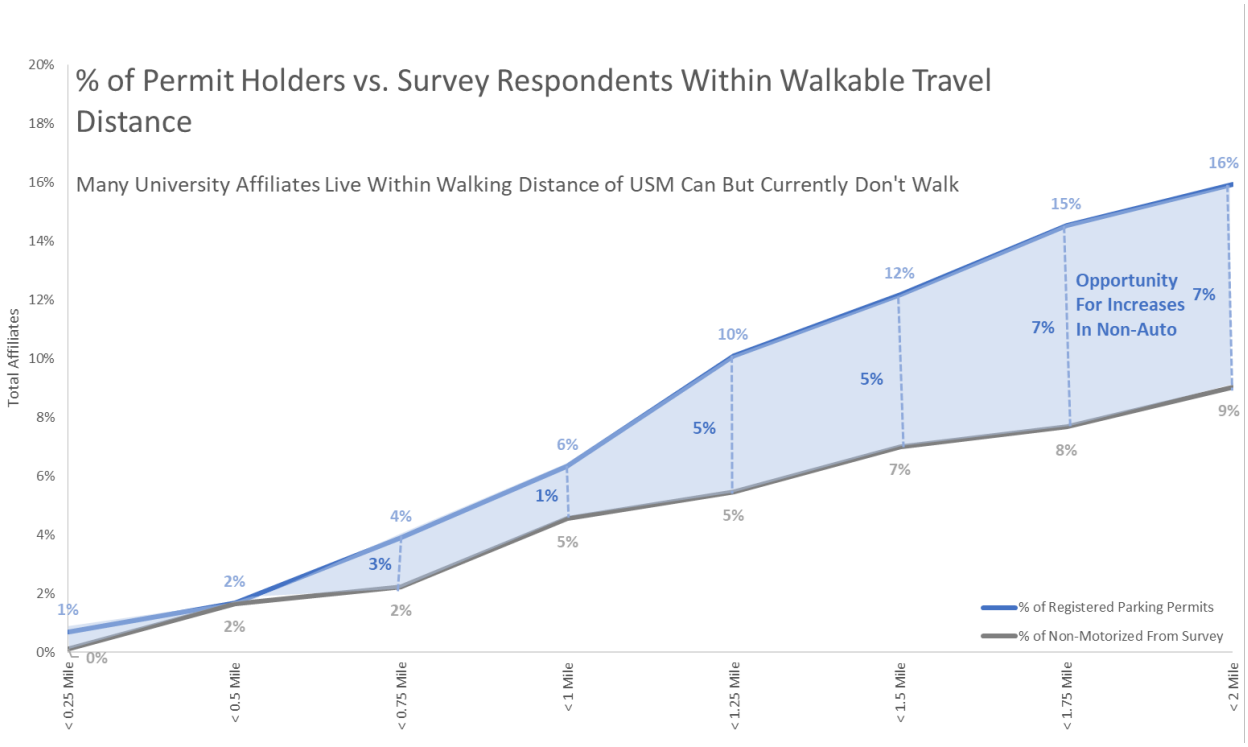
Alternative Mode Potential: Opportunities for TDM

To gauge the modal potential for walking, biking, and transit to USM, the geographic distribution of parking permit trip origin data was compared to the walking, bicycling, and transit travel market sheds. To get an understanding of current travel behavior versus potential travel choices, the 2019 transportation survey results are overlaid against this geographic distribution. The difference between the total number of people matched to a particular mode and the mode choice results from the survey form an "opportunity" zone for a potential increase in the use of a travel mode. People are represented here as FTE (Full-time equivalent) rather than headcount because FTE fits greenhouse gas reporting protocol and the University believes it is a better representation of how trip proportion impacts campus.

Walk Potential

Within a mile walking distance from campus, approximately 5 percent (an estimated 251 full-time equivalent individuals) of USM Portland students/employees reported using non-auto transportation to the USM Portland campus whereas per the permit data 6 percent of parking permit holders were geographically matched to reside a mile from USM (Figure 10). The delta between the two data points increases significantly as distance from campus increases. At 2 miles, only 9 percent of students/employees use non-auto travel modes (per the survey), whereas a total of 16 percent live within 2 miles of campus (per the permit data).

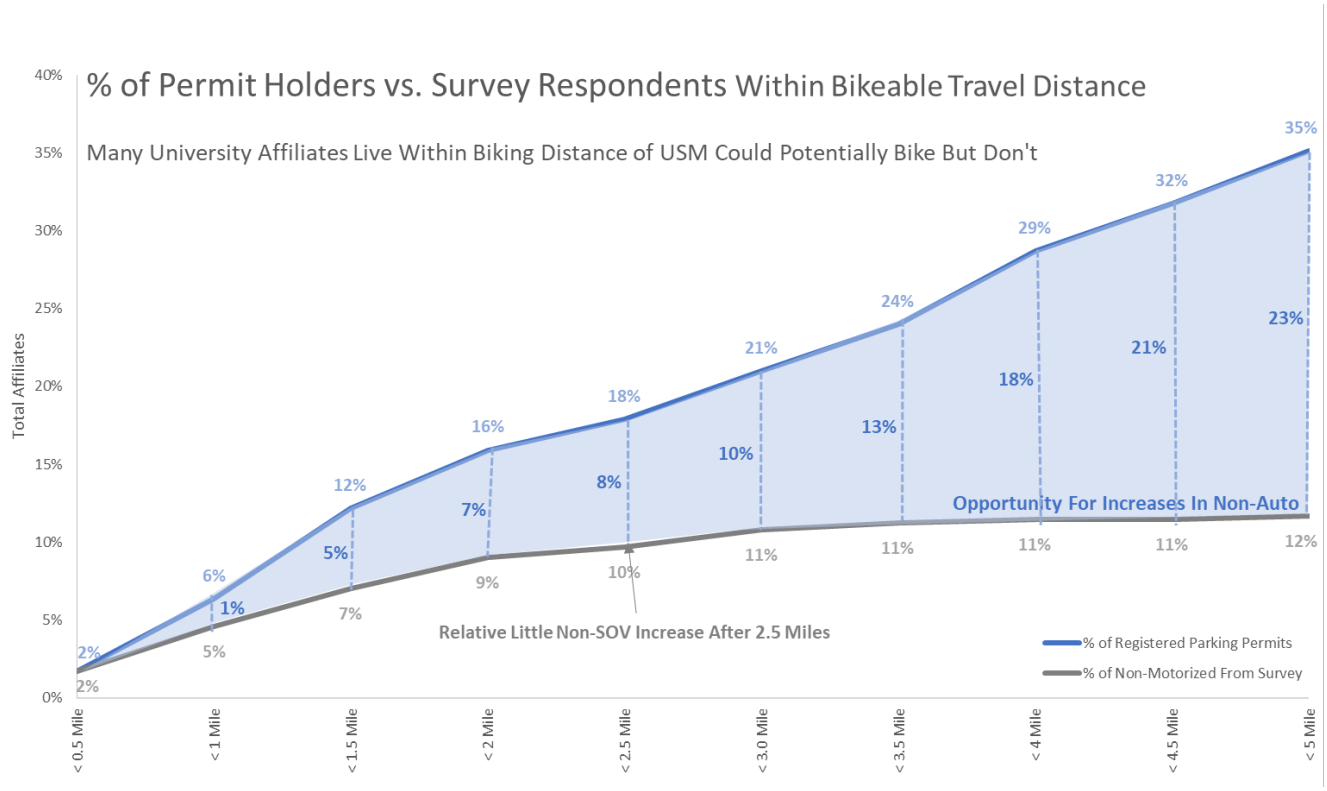
Figure 10: Walk Potential



Bicycling Potential

Biking distance for parking permit holders was compared to non-motorized users based on survey results (Figure 11). Based on the geocoded parking permit data, up to 35 percent of all USM employees and commuter students (an estimated 1,759 full-time equivalent individuals) live within 5 miles of campus, considered the upper limit for a reasonable biking distance for a commute. Per the transportation survey, however, only about 12 percent of commuters who live within 5 miles of campus use a non-motorized form of transportation. According to Figure 11, below, after 2½ miles, most people at USM stop using non-SOV[4] modes of transportation, which may be an indication of the cultural and environmental limits of biking in Maine. Although there is potential beyond 2 ½ miles, that potential should be tempered by barriers of safety, comfort, and weather.

Figure 11: Bike Potential

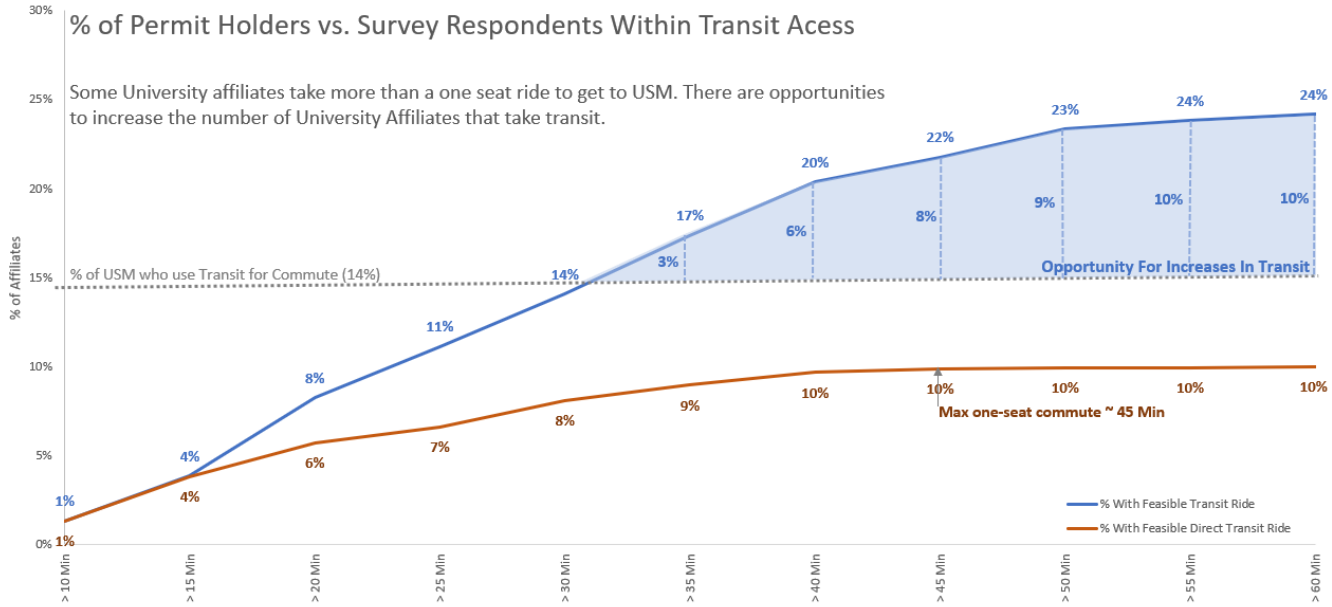


[4] SOV – single-occupancy vehicle (this mode is also referred to as *drive alone*)

Transit Potential

Transit-access time was compared to the percent of commuters from the survey who reported using transit (Figure 12). Up to 10 percent (or 503 FTE individuals) of USM affiliates live within walking distance of a direct transit route to USM Portland (based on the parking permit data). A further 14 percent (summing to 24 percent) can take a transit option that would take less than an hour to access USM Portland. This is 10 percent more than the existing number of University affiliates who indicated taking transit to USM (as reported in the transportation survey).

Figure 12: Transit Potential



Given the higher number of USM affiliates who noted taking transit than the number of affiliates within direct transit routes indicates that either a percentage of affiliates may be connecting on transit service or otherwise driving to a stop first (example driving to Gorham campus and then hopping on the Husky Line). Of all transit routes with direct access to the USM Portland campus, the Husky Line[5] has the highest number of permit holders who live within walking distance (459), followed by Route 4 (451), Route 2 (352), and Route 8 (270). Of all transit routes, the Route 9A and Route 9B serve the most affiliates within walking distance of stops (611), but these routes require a transfer to a transit bus line with direct service to the Portland campus.

[5] This analysis does not account for the fact that the Husky Line is a direct service route with few stops, whereas the other lines are more traditional services; however, the comparison serves to highlight what would be possible if the Husky Line or a route like it where to offer more stops in certain neighborhoods.

4

TDM Coordinator

TDM program management responsibilities will be designated to three representatives associated with the University.

USM appointed the Director of Sustainability to serve as the lead TDM Coordinator for USM, with primary responsibilities centered on long-term demand reduction, planning and implementation. The Manager of Parking and Transportation Services will play a supporting role, with primary responsibilities focused on more short-term planning and on-the-ground assessment of existing programs. Considerable overlap is expected between both of these individuals. Both of these positions report to the Associate Vice President of Operations, who will also play a role in both short-term and long-term operations and planning of TDM initiatives.

The current Director of Sustainability, Aaron Witham, can be reached via:

- email at aaron.z.witham@maine.edu
- phone at 207-780-5947.

The responsibilities of the Director of Sustainability will include the following:

- Promote non-SOV transportation choices primarily to faculty, staff, students and residents

- Champion the implementation of new TDM strategies to reduce parking demand and increase the use of non-SOV transportation modes
- Conduct new student/new employee orientation to educate incoming affiliates regarding their transportation options to and from the campus.
- Coordinate the implementation of TDM strategies with Campus Scheduling, Human Resources, Parking, and any other departments.
- Work with the City of Portland, METRO, GoMaine, a private carpool app and other potential partners to improve non-SOV transportation access to the campus and to gain support for program implementation.
- Recruit and engage participants for any outreach events or campaigns associated with the TDM program over time.
- Review potential new alternative transportation technology or SOV reduction technology and coordinate implementation efforts associated with them.
- Co-coordinate all monitoring and evaluation activities necessary to measure the effectiveness of the TDM program in achieving the targets.
- Co-develop a TDM Report, which will provide an assessment of strategies implemented to date and outline the activities to be implemented in the upcoming year.
- Co-develop and implement financial parking incentives or disincentives as identified by the TDM plan.

The responsibilities of the Manager of Parking and Transportation Services will include the following:

- Provide consultation on TDM strategies that impact parking supply, services, and technology.
- Co-coordinate all monitoring and evaluation activities necessary to measure the effectiveness of the TDM program in achieving the targets, such as providing up-to-date data on parking volumes and trip generation estimates.
- Co-develop a TDM Report, which will provide an assessment of strategies implemented to date and outline the activities to be implemented in the upcoming year.
- Co-develop and implement financial parking incentives or disincentives as identified by the TDM plan.
- Maintain existing motor vehicle and bike parking infrastructure and technology, with the support of Facilities Management and Capital Planning.
- Maintain parking services, including payments, campus notifications, and website updates.
- Carry-out parking enforcement.

5

Transportation Demand Reduction Goals

USM expects the TDM program to reduce the number of single-occupancy vehicle trips, thus reducing overall trips, demand for parking, and greenhouse gas emissions.

Trip Reduction Goal: USM aims to reduce University-generated peak hour vehicle trips between 3-6% (17-35 trips) for the AM peak hour and by 3-6% (12-23 trips) for the PM peak hour by 2025. This goal is relative to a baseline of 581 and 381 trips, respectively, in the year 2023, at the opening of Portland Commons, the Career and Student Success Center, and a new parking garage (as determined by the Traffic Movement Permit analysis conducted in March of 2020). The peak hours are based on total traffic in the area, inclusive, but not limited to USM's contribution. They are noted to be between 7:30 am- 8:30 am and between 4:30-5:30 pm. Given that the morning hour is a higher peak overall, that hour will be the primary focus of the goal. This goal is not adjusted to account for the Maine Law School leaving campus, in order to ensure that the strategies presented in this document for reducing traffic are overly sufficient.

Parking Demand Reduction Goal: USM aims to reduce parking demand by 10-14% (144-201 vehicles) by 2025 during the hour of peak demand on campus[6]. The peak parking hour

[6] The peak hour for trips is related to the peak hour for parking, but they are not the same. For example, the first peak hour for trips occurs early in the morning when the maximum volume of people are on the road traveling. The peak parking hour occurs later, reflecting cumulative impact as a result of multiple hours of trips coming to campus. This is why the trip reduction goal is smaller than the parking reduction goal.

and baseline volume (1,435 vehicles) was established from 12:30-1:30 pm, Monday-Wednesday, inventoried in the Fall of 2018. As strategies are implemented to achieve this goal, the peak demand hour may change, so the goal will stand in reference to the volume, not the time, of parking demand measured at the original baseline peak hour in Fall of 2018.

Mode Split Reduction Goal: USM aims to decrease the percentage of SOV (single occupancy vehicle) trips to 70% and increase the percentage of non-SOV trips to 30% by 2030. The SOV category includes personal automobile trips without passengers and motorcycles, while the non-SOV category includes carpools, riding the bus, biking, and walking. The most recent data set of 2019 shows that USM is currently at approximately 75% SOV and 25% non-SOV. Given that measuring this goal relies on self-reported survey data and only includes a sample of the larger population, the University primarily wants to use this goal for internal planning purposes and for estimating greenhouse gas emissions. However, the University will provide the current estimate annually in its reports to the City.

Greenhouse Gas Reduction Goal: USM aims to reduce greenhouse gas emissions from commuting by 20% (or .4 MT of CO2e per capita) by the year 2025, in line with its goal to reduce all scope one emissions at the University by 20%[7]. The 2006 baseline greenhouse gas emissions from commuting on an annual, per capita basis is approximately 2 MT of CO2e. This goal is tied to a larger University pledge called the President's Carbon Commitment, a national commitment among hundreds of colleges and universities to reach carbon neutrality. USM signed the pledge in 2007, and set 2006 as the baseline with a goal of 2040 for carbon neutrality. The 20% goal here is higher than the goals set for trip generation and parking reduction because in addition to vehicle reductions, the University is actively building infrastructure for electric vehicle charging and anticipates increases in fuel economy standards for traditional gasoline-powered vehicles and hybrids.

Table 4: Summary of Targets Following City of Portland Reporting Guidelines

Date of Original TDM Plan: 11-3-2020				1-20-2023 Revision
Provide Data in Percentages and Absolute Numbers, where applicable		*Baseline Data (at time of TDM plan adoption*	*TDM Plan Reduction Target (if applicable)*	*Current Reporting Period Data*
Vehicular Trips	*Off-Peak*	N/A	N/A	Report forthcoming in 2023
	AM Peak Hr	581	3-6% (17-35 trips)	Report forthcoming in 2023
	PM Peak Hr	381	3-6% (12-23 trips)	Report forthcoming in 2023

[7] There are three categories of emissions in GHG accounting. Under Second Nature, scope three is comprised of commuting, business travel, study abroad, downstream waste emissions, and transmission and distribution loss from electricity, as well as occasionally other sectors.

Mode Split (future data may be reported as SOV & Non-SOV)	*Single-Occupancy Vehicle*	75%	70%	Report forthcoming in 2023
	Non-SOV	25%	30%	Report forthcoming in 2023
	Carpool	8%	Not specific	Report forthcoming in 2023
	Bicycle	*11% (shared with walk)	Not specific	Report forthcoming in 2023
	Walk	*11% (shared with bike)	Not specific	Report forthcoming in 2023
	Transit	6%	Not specific	Report forthcoming in 2023
On-site Parking (Peak)		1,435	10-14% (144-201)	Report forthcoming in 2023
GHG Emissions Targets		2 MT of CO2e per capita	20% (or .4 MT of CO2e per capita)	Report forthcoming in 2023
Other:_____				

6

Trip, Parking, Mode Split and GHG Reduction Strategies

The USM TDM Plan establishes an aspirational vision and set of goals for transportation, mobility, and sustainability. The Plan builds off USM's multimodal strengths but pushes forward-thinking and multifaceted solutions.

Ultimately, USM will achieve success if one keeps in mind the following key concepts:

There is no "silver bullet" in TDM. The recommendations represent a package of reforms; implementing only one or two items will not solve USM's parking challenges.

Behavior change is difficult, but critical if USM would like to realize its vision. Future growth at the University will present critical challenges with parking. USM will need to depart from the status quo and rethink parking and transportation in order to grow sustainably.

The Plan is a "living" document. Key to the success of this plan is to implement, measure, learn, and adjust. Over time as the transportation context, technology, institutional culture, and user preferences change, so may the types of strategies that are pursued. This is true now, more than ever, given the current global pandemic, and the need to remain adaptable.

What is presented here is the University's current plan for Transportation Demand Management. It is subject to change as the global pandemic unfolds, as financial constraints

dictate, and as annual survey data and parking counts inform what is working and what is not working among USM's unique population.

Therefore, the University is not committing to launch every one of these initiatives necessarily or committing to keeping every initiative in place permanently if they prove to not be feasible. Rather, the University is aiming to achieve trip, parking, and greenhouse gas emissions reduction targets using the most effective suite of technologies and policies available and achievable for a particular year. That said, it is the desire of the University to launch most of these initiatives in order to provide a multi-modal suite of options to students, staff and faculty, not all of which have the privilege of owning a personal vehicle. Moreover, the University has identified certain initiatives as "core" initiatives that it is committed to implementing. These are indicated with an asterisk in Table 3.

The matrix below introduces a snapshot of the initiatives that USM hopes to implement. Following the matrix is a section outlining descriptions of the initiatives. To the extent possible, strategies are grouped by categories reflected in the *City of Portland's Technical Manual*. For each strategy, an anticipated launch date is provided.

Most of the initiatives described here were first conceived and published in the 2020 version of the TDM Plan. Therefore, progress has been made toward many of them over the two years since the plan was released. Some of the initiatives have even been fully implemented. For annual initiatives or initiatives that require ongoing management, they are considered "ongoing". The implementation status is indicated in the "Launch Date" column below.

Table 5: Overview of TDM Initiatives for USM

STRATEGY	LAUNCH DATE	INFRASTRUCTURE	INCENTIVES	EDUCATION
Walking				
Participate in the "Complete City Project"	Completed in 2020			X
Hold Fitness Challenges	Completed in 2022 & Ongoing		X	
Biking				
*Co-launch City Bikeshare	Completed in 2022 & Ongoing	X		
Build Bicycle Repair Station	Fall 2023	X		X
Promote Local Bike Activities	Completed in 2022 & Ongoing		X	X
*Improve Bike Infrastructure	Fall 2023	X		
Apply for Bike Friendly University Certification	Fall 2023	X	X	X
Transit				
*Continue METRO Pass Program	Completed in 2022 & Ongoing	X	X	

Promote & Market METRO to University Students, Staff & Faculty	Completed in Fall 2021 & Ongoing		X	X
Work with METRO to Incentivize Travel of Community Members to USM Events	Fall 2025		X	X
Propose Transit Service Expansion Beyond Husky Line	Completed in Fall 2022	X		
Install Transit Screen on Portland Campus	Spring 2024	X		
Subsidize City-Link passes for Lewiston-Auburn College students	Spring 2024		X	
Carpooling, Telecommuting & Time-of-Day				
Designate Carpool Spaces	Completed in Fall 2022	X	X	
Expand Rideshare Matching Opportunities	Fall 2024	X		
Promote Telework & Flexwork	Completed in Spring 2020 & Ongoing		X	X
Restructure Course Schedule	Completed in Fall 2020	X		
Parking Pricing				
*Establish Residential Parking Buyout Program	Fall 2023		X	
Host Carshare Program to Support Buyouts	Fall 2023	X	X	
*Unbundle Student Parking Fees	TBD		X	X
Build Additional EV Charging Stations	Spring 2023 & Ongoing	X		
Review Parking Price Levels	Completed in Fall 2020 & Ongoing		X	
Communications & Marketing				
*Hold New Student & Employee Orientations for Transportation	Completed in Fall 2022 & Ongoing		X	X
*Revise Transportation Website	Completed in Fall 2022 & Ongoing			X
*Publish Access Guide	Completed in Fall 2021 & Ongoing			X
Offer Emergency Ride Home Service	Fall 2023		X	

*Core strategies that the University is committing to are indicated by *. In the case of the Carpooling, Telecommuting & Time-of-Day category, the category itself is considered core, but the University will maintain flexibility in which of these strategies it implements, depending on future conditions

Walking Initiatives

Participate in "The Complete City" project: A class led by Dr. Yuseung Kim collaborated with the Portland Society for Architecture (PSA) to carry out this project. The goal of the project was to make the Greater Portland community area more accessible, more attractive, more just, and equitable. This includes creating what they (and others) describe as "The Complete City," where within the city, each neighborhood has all it needs within a half mile, incentivizing alternative transportation by intentionally planning communities. Having one's needs within a half mile makes a community walkable. Six graduate students worked on the project and helped deliver a 130-page report and a 15-page executive summary. More about the Complete City Project can be found here: https://thecompletecity.com/disconnected/.

Hold Fitness Challenges: In the Spring of 2022, the Office of Sustainability launched its first sustainable-fit commute challenge. The purpose of the challenge was to incentivize students, staff, and faculty to try walking or biking to campus in order to better their health and the health of the planet. Over 100 people signed up for the four-week challenge, which took place between April and May. Participants were asked to fill out a form at the end of each week to self-report their mileage or steps.

The winning walker and biker each week received a prize of Husky Bucks, which are University dollars that can be used in the campus bookstore or dining facilities. As an additional incentive, employees and eligible spouses, who participated each of the four weeks, were granted achievement of their level 2 health incentive with the University's health program, which comes with a $100 reward. The Employees Benefits Center, Human Resources Departments, and the University's Health Committee all partnered on the initiative. The University intends to continue holding the event annually.

Biking Initiatives

Co-Launch City Bikeshare: Over the Fall of 2021 and the Spring of 2022, the University helped the City of Portland research and develop its RFP for bikeshare services. The RFP effort was successful and the chosen vendor, Tandem Mobility, begin installing bikes across the City in 2022. In the Fall of 2022, the University established two bikeshare locations on the Portland campus, including Skywalk Landing by Masterton Hall and a location by Sullivan Gym. The University endeavors to move one or both of these stations to locations that are anticipated to see higher foot traffic after the McGoldrick Center, residence hall and center for the arts buildings come online. The current plan is to have one bikeshare station on each end of campus, serving the two new quads. The University promotes the bikeshare program on its website, through Instagram, and in direct emails to the University community. USM will continue working with Tandem Mobility and the City of Portland to support and expand the program, including the potential to integrate bikeshare incentives into the campus' broader parking management strategies.

Build Bicycle Repair Station: In the early summer of 2023, the new structured parking garage on Bedford Street will open on the Portland campus. Contained within this structure is a dedicated bike repair room that is adjacent to the bike-storage room. This covered room, with electrical outlets and lighting, will be outfitted with basic tools and stands, so that students, staff, and faculty may conduct basic bike repairs. At a minimum, the space will be set up to operate in a self-serve capacity. However, if funding and expertise can be acquired in future years, the room may be able to house a bike repair shop.

Promote Local Bicycle Activities: The University will promote the participation in (and facilitation of) local bike activities such as the Portland Slow Ride, Smart Cycling Traffic Skills 101, and Cycling Savvy events. At least one opportunity or event will take place each semester. In the Spring of 2022, the University co-hosted three bike activities with the Bicycle Coalition of Maine: a Great Maine Bike Swap on the Lewiston campus, a Great Maine Bike Swap on the Gorham campus, and a bike-in-traffic workshop on the Portland campus. In the Spring of 2023, the University has two fix-it workshops planned with Bicycle Coalition of Maine, with planning taking place for another bike-in-traffic workshop. The number of activities and types of bike activities offered each year will depend on current demand and availability of instructors.

Improve Bicycle Infrastructure: The University plans to increase bicycle parking spaces to 2.5 times what is currently offered on the Portland campus. Currently there are 250 spaces.

In the summer of 2023, USM plans to add 122 short-term (uncovered spaces) to campus, with a lot of them slated for the new quad and some of them being distributed throughout campus to fill in gaps. USM also plans to add 288 long-term (covered and secured) spaces at the same time. Approximately 38 of these long-term spaces are being built inside a bike room within the Portland Commons residence hall, and 250 long-term spaces are being installed in a dedicated bike room in the new structured parking garage. Bikeshare notwithstanding, the total spaces on campus by the Fall of 2023 is planned to be 670. Then, in the Fall of 2024, another 10 bike spaces are planned to be installed near the new center for the arts.

These volumes of new bike parking meet or exceed several important standards that align with the University's aggressive plan to increase biking among its students, staff, and faculty:

- 5.5 times higher than City of Portland's Technical Specs, campus-wide[8]
- Double the amount suggested by APBP for short-term parking for students and employees[9]
- Meets APBP's recommended long-term space allocation per bed[10]
- Exceeds City of Washington D.C.'s requirement by over 50% for long-term spaces per dwelling units in residential apartments[11]

[8] Per City of Portland Code of Ordinances, Section 14-526

[9] Per Association of Pedestrian & Bicycle Professionals' Bicycle Parking Guidelines, 2nd Edition, assuming that student & faculty vehicle spaces are a reasonable proxy for individuals on campus at one time

[10] Per Association of Pedestrian & Bicycle Professionals' Bicycle Parking Guidelines, 2nd Edition multi-family housing criteria of .5 spaces per bed

[11] Per Table 1: https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/DDOT%20bike%20parking%20guide_060118_Screen.pdf

- Double City of Cambridge, MA's requirements for short-term spaces and exceeds their requirements for long-term spaces.[12]

Off campus, the University will collaborate with the City of Portland on identifying improvements to bicycling infrastructure along corridors traveled by USM commuters through the annual transportation survey.

Apply for Bike Friendly University Certification: The University plans to apply for Bike Friendly University Certification. The application process, completed every four years, will help the University identify areas for improvement, and inform the types of questions that need to be asked in the annual survey of students, faculty and staff. Preliminary work began in the Fall of 2021 to identify where to find and how to compile the necessary data in order to apply. The University plans to draft an application in the Summer of 2023.

Transit Initiatives

Bus ridership has obviously been impacted by the global pandemic by some customers deciding not to ride the bus and by temporary restrictions on being issued by the Federal Government. Despite these challenges, VHB believes that transit ridership demand will fully rebound again within a couple of years, so they do not recommend changes to long-term ridership predictions at this point. However, they note that the ability for ridership to be accommodated depends on supply of seats being available, which could possibly be impacted by future policy decisions coming from the Federal government. For the time being, the University is not adjusting expected transit impact for TDM goals set on a 2023 horizon.

Continue METRO Pass Program: In 2018, the University established a program with the Greater Portland METRO to allow students, staff, and faculty to ride any METRO route for no cost to the individual, so long as they show a USM ID. The program has been popular for students, as it increased the number of trips offered between Portland and Gorham via the newly established limited stop Husky line. Post pandemic, it has great potential to shift USM commuters out of personal vehicles if they live on or near an existing line. In the Fall of 2022, the University activated its last option year under the existing contract and is working with METRO on a contract renewal to keep service operating beyond the Summer of 2023.

Promote & Market METRO to University Students, Staff & Faculty: The University will work with METRO to promote use of the Husky Line as well as the system as a whole. In the last couple of years, the University has promoted bus ridership on social media and hosted group rides through new student orientation. Use of the METRO is also being planned as part of a focused sustainable transportation orientation.

[12] Per College or University Student Activity Facilities, page 4: https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Bike/Bicycle_Parking_Guide_20130926_2017PictureEdits.pdf

Work with METRO to Incentivize Travel of Community Members to USM Events: The University is working with METRO to explore grant or METRO-funded discounts on fares through ticket purchases for the general public attending University events, such as events that will be hosted in the new center for the arts or athletic events. METRO and the University meet quarterly to discuss improvements to service and to share ideas for broadening ridership.

Propose Transit Service Expansion Beyond Husky Line: In 2022, the University of Southern Maine and the Maine Law School met with METRO multiple times to discuss expansion of the Husky Line deeper into downtown Portland. Discussions have centered around advancing the route down Congress Street and Franklin Arterial in order to serve the Fore Street and waterfront neighborhood, before traveling back to Elm Street. Such an expansion would assist University students, staff, and faculty in accessing downtown businesses without bringing a single occupancy vehicle onto the peninsula. METRO is taking multiple stakeholders into consideration before it finalizes any plans for route expansion. The University remains available and willing to assist with data collection or analysis.

Install Transit Screen: The University plans to install a real-time transit screen near the center of campus. Discussions with METRO and various University stakeholders have identified the new Career and Student Success Center, the bus stop, or the new structured parking garage as potential locations. Installation may not take place until after the new buildings have opened and pedestrian routes through campus have been established, so that the University can decide which location would achieve the highest visibility.

Carpooling, Telecommuting and Time of Day Initiatives

The initiatives below are paired together here so that they can be substituted for one another when responding to the risks created by the Covid-19 pandemic and future pandemics. For example, under non-pandemic circumstances, the telework initiative may only constitute 25% of the demand management that this category is capable of, while under a pandemic scenario it may need to constitute 100% of the demand management.

Designate Carpool Spaces: In the Fall of 2022, the University designated 50 prime parking spaces for carpool on the Portland campus. Three spots have been signed in the Masterton Lot, two spots in the Human Resources Lot, one in the Payson Smith Hall Lot, six in the Law School Lot, and 38 in the parking garage. Each location allows carpoolers to park close to the adjacent building. Students, staff, and faculty parking in the spaces are required to display two valid parking passes within the vehicle to prove that a second vehicle is being left at home. Non drivers are allowed to apply for a non-driver carpool pass that can be displayed as the second parking pass. To advertise the launch of the program, the Director of Sustainability and the Associate Vice President of Operations informed drivers entering the parking garage during the first week of classes, and a narrative describing the program was emailed to the entire University along with other transportation-related notifications. Usage of the spots has not yet reached its full potential, so the Office of Sustainability will continue marketing efforts in future semesters. Future expansion of the program will be considered if space counts demonstrate high usage and if survey data provides evidence that expansion will incentivize more carpooling.

Expand Rideshare-Matching Opportunities: The University advertises the Maine Turnpike Authority's rideshare matching platform through Go Maine. Information about Go Maine is available on the University's transportation website, sustainable transit quick access guide, and other mass communication. However, the University does not yet have a formal partnership with Go Maine. Research into the benefits and risks of a partnership have been ongoing since 2019. The University is exploring whether or not it wants to pursue development of or a subscription to a private rideshare-matching application, and aims to make a decision by the Fall of 2024, assuming that the Covid-19 pandemic has leveled out by then. The carpooling mode share at the University is relatively high (8% in 2019 and 6% in 2022), so efforts to assist in ride-matching are not as high of a priority as some other TDM initiatives.

Promote Telework and Flexwork: The University of Southern Maine will continue promoting its existing voluntary telecommuting policy issued by the University of Maine System. Over the last two years, the Human Resources department has issued several notifications to employees about how to apply for telework.

Restructure Course Schedule: In the Fall of 2020, the University's Registrar's Office led a restructuring of the course schedule to spread out enrollment throughout the day and to better align with the METRO schedule in order to assist students wanting to take the bus from Gorham to their classes in Portland. In addition to impacting peak parking demand in the middle of the day, the effort was also meant to reduce demand on available classroom space, and to give students more options for when to take courses. The new course schedule starts 45 minutes earlier in the morning, lengthening the day. It also adds an additional early morning time block and an additional evening time block when courses can be booked. The full effects of this restructuring will not fully seen until after the University's ratio of online/hybrid courses to in-person-only courses falls back to pre-pandemic levels.

Parking Pricing Initiatives

Establish Residential Parking Buyout Program: The University plans to launch a parking buyout program to encourage student residents on the Portland campus to give up their parking pass for a year in exchange for a cash incentive and value toward bikeshare and/or carshare services. The current proposal, subject to change, is to offer up to 100 buy-outs that include both the cash incentive and value toward alternative transportation services. The second 100 buy-outs would be just for alternative transportation services. Additionally, the first 30 applicants would get secure, covered parking inside Portland Commons. The second 170 applicants would get secure, covered parking inside the bike room of the parking garage. All participants would receive a limited number of one-day vehicle passes to assist them through unplanned life events or emergencies. The amounts of the financial incentives are still being finalized and are subject to the forthcoming budget approval process culminating in May of 2023. The University will monitor this program over time and adjust the number of buy-outs and the financial incentive to respond to changing conditions.

Host Carshare Program to Support Buyouts: The University will attempt to establish a carshare program that would be utilized as part of the residential student buy-out program

(in subsidized form), as well as by commuter students, staff, faculty and non-USM community members. The University recognizes that the carshare business plan has been challenged by Covid-19 due to the financial losses sustained by car rental businesses, so this initiative may not prove reliable. To that end, it is not a critical leverage point within this TDM plan; rather it is supplemental to the buy-out initiative. The hope is that the industry will rebound in 2023. Effort will be made to partner with the City of Portland if it develops an interest in establishing a carshare program.

Unbundle Student Parking Fees: The Office of Sustainability endeavors to find a way to either unbundle the student transportation fee from their other tuition-related fees or make the parking-related portion of the transportation fee more transparent, so that the payment for a parking permit becomes a more conscious action. This action which will draw attention to the cost of those applying and serve as a disincentive to some. Because of the fact that University of Southern Maine fees are established through Board of Trustee (BOT) approval, and BOT processes are longer than most other approval processes at the University, it is unclear when the next opportunity to achieve this goal will arise.

Build Additional EV Charging Stations: The University has purchased 29 level-2 charging stations with 58 plugs to have installed in the new structured parking garage upon opening. There are already two level-2 charging stations on the Portland campus and one on the Gorham campus. In future years, the University's goal is to ensure there are enough charging stations available to meet the next year's expected demand of students, staff, and faculty driving EV vehicles to campus (as indicated by available data from charging station software, parking permits and the annual transportation survey), so that spaces to park do not limit potential EV drivers. Stations will charge customers to charge.

Review Parking Price Levels: The University has carried out recent reviews of parking pricing in an effort to discourage single occupancy vehicles and increase revenue. In 2020, the University Auxiliary Services division reviewed parking pricings at the University and surveyed the Greater Portland market. The findings influenced operation of the parking garage on the Portland campus over the following two years. In the Fall of 2022, the Operations division increased pricing for non-permit holders from $2 per hour to $3 per hour. The goal will be to achieve greater parity between employee and student parking pricing. When the new residence hall opens on the Portland campus, the University intends to charge a premium for students parking overnight. Future considerations are being made for efforts to increase parking price parity between students and employees.

Communications and Marketing Initiatives

Communications & Marketing: The University plans to hold new student and employee orientations for alternative transportation modes, infrastructure, resources, and incentives. In 2022, the University developed two different orientation models (an in-person and a virtual). During the Fall semester, the Office of Sustainability launched the virtual orientation, which comprised of providing participants with sustainable transportation tutorial information, a code for two hours of free bikeshare, and a request to post a picture of themselves on a bikeshare bike with a hashtag linking the post to the Office of Sustainability's Instagram page. The Office of Sustainability plans to conduct an in-person orientation during warmer

months. These new orientation programs will supplement existing group bus rides that occur during new-student orientation programming.

Revise Transportation Website: In the Fall of 2022, the University launched a new transportation website, its second major revision in the last three years. The latest website offers targeted information on how visitors to campus can ride a bike, take a bus, take a train, carpool, or drive an electric vehicle. Separate pages on each of these alternative modes covers infrastructure, incentives, local resources such as maps, and estimated greenhouse gas emissions saved. The Office of Sustainability and Parking Office will update this website over time.

Publish Access Guide: In 2021, the Office of Sustainability developed a "slick sheet" access guide summarizing ways to travel to campus and nearby destinations, using alternative modes. The guide was printed as a flyer and hung around campus. It has also been incorporated into new student orientation packets. The Office of Sustainability will update this guide over time and continually evaluate the best venues to use for publicizing it.

Offer Emergency Ride Home Service: The University plans to promote the "guaranteed ride home" program from Go Maine and consider supplementing this service with a University-funded budget for additional guaranteed rides home. The service would likely be structured as reimbursement for a taxi, private bus, or a rideshare service, such as Uber or Lyft. It would provide security to students, staff and faculty who choose not to bring their single occupancy vehicle to campus. If they experience an emergency that requires them to get a ride home, to a doctor's appointment, or to pick up a child, they would be able to apply for reimbursement if they meet certain minimum requirements.

Potential Greater Portland Initiatives

The University recognizes that it is only one entity within a much larger complex system of transportation within the greater Portland. Toward that end, VHB researched potential improvements that could be considered by the METRO, the City of Portland, and other supporting entities to support USM's TDM plan. VHB also estimated the potential impact these initiatives could have on USM's trip generation and parking goals. The proposed initiatives and their potential impacts are summarized here:

- **Increase frequency of Husky Line to 15 minutes:** Reduction of 39 (2.5%) to 79 (5%) Peak Hour Parking Spaces
- **Increase frequency of METRO Routes 2 and 4 to 15 minutes**: Reduction of 39 (2.5%) to 79 (5%) Peak Hour Parking Spaces
- **Restructure departures and arrivals of all METRO routes serving the Portland campus in order to create 10 minute headways to downtown:** Reduction of 8 (0.5%) to 16 (1%) Peak Hour Parking Spaces, with even greater reductions possible if all routes were routed to serve the same stop on campus
- **Create local on-demand circulator route (shuttle):** Reduction of 56 (3.5%) to 111 (7%) Peak Hour Parking Spaces
- **Improve downtown METRO loop (Route 8) and route it through the USM campus:** Reduction of 43 (2.7%) to 86 (5.4%) Peak Hour Parking Spaces

- **In support of the above initiatives, METRO could begin to plan around USM as an anchor node in their network when the new residence hall comes online**
- **Create a better defined and safer bicycle/pedestrian corridor from USM to downtown:** Reduction too difficult to estimate until the goal is more defined

The reduction ranges featured above should be considered for each initiative individually, as opposed to being additive if all initiatives were implemented. In other words, some individual riders may be affected by more than one initiative. To further explore these initiatives, the University recommends that a coalition of METRO, the City, the University, and others research what the potential cost per rider would be for implementing these strategies, in order to determine which may warrant further consideration.

7

Monitoring and Reporting Plan

Program monitoring and evaluation are important components of any successful TDM Program, because they provide a quantitative benchmark of the program's effectiveness in reducing single occupancy vehicle trips and parking demand. The Transportation Demand Management Coordinator can use the information gathered via the monitoring plan to direct the ongoing implementation of the TDM Program, allowing for adjustments and the introduction of new strategies. Furthermore, via regular periodic reports, USM will provide

evidence to the City of the applicant's diligence in implementing the program.

There are different methods for collecting the data necessary to monitor a TDM Program, including surveys, program participation documentation, vehicle parking counts, and activity logs. USM's TDM program monitoring will use trip generation counts, vehicle parking counts and person surveys in evaluating the effectiveness of the program. Each of these tools is discussed below.

Trip Generation Counts

Trip generation counts refer to estimating the potential contribution of USM students, staff, and faculty to the total volume of vehicles on the roads feeding the Portland campus. The peak trip hours will be used as the boundary for this metric, and the data will originate from recorded vehicles entering and exiting the parking garage structures on campus. The University will then apply the ratio of trips per parking spaces calculated from the garage data to the surface lots on campus, in order to estimate trip counts to/from the surface lots as well. The parking garages will represent the supermajority of parking for the foreseeable future (e.g. 87% of the parking in 2024), which provides the University confidence that this method will yield a reasonable estimate of trip generation for the entire campus.

The peak hours will be assumed to be between the hours of 7:30-8:30 am and 4:30-5:30 pm, Monday through Wednesday, in October, unless future analysis shows they should be at a different time. These hours were determined by the Traffic Movement Permit published in 2021 and updated in 2022.

The Manager of Parking and Transportation Services at USM will provide vehicle count data from the automated garage entry systems. In the event that the automated garage entry system is broken, then visual counts or traffic strips may be used.

The report generated in the Spring of 2023 will show percentage change relative to 2022, given that the baseline year for this metric does not occur until the Fall of 2023. From 2024 onward, the percentage change will be based on a baseline year of 2024.

Parking Occupancy Counts

Parking counts refer to an accounting of the number of occupied and/or empty parking spaces. These data are used to ensure that the amount of parking supply (spaces) on site is appropriate to meet peak hour parking demand (parked vehicles).

Under the direction of the TDM Coordinator or the Manager of Parking and Transportation Services, the University will collect observations of vehicle parking during a representative (typically busy, classes-in-session) 3-day period in October. Observations of spaces occupied will be made during each hour in a ten-hour period of 8:00 AM to 6:00 PM.

The automated garage entry system at the gates to the parking garages will be used to collect the data, provided it is functioning at the time. If it is not functioning, then a visual

count or traffic strip will be utilized. The parking supply in the parking garages will represent the supermajority of available parking on campus for the foreseeable future (e.g. in 2024, 87% of the parking will be in the parking garages). An occupancy ratio will be determined from this data set that will then be applied to the surface lots on the Portland campus, in order to estimate the approximate occupancy counts of those spaces.

The reporting of parking transactions and garage use should distinguish, to the extent possible, those users who are USM employees, students, and transient/visitors (hourly, public) users.

A parking occupancy rate relative to total supply of parking on campus will be reported by the University for the three days of data. The University will also report the raw data for these counts when requested to do so by the City of Portland.

Survey of Commuting Patterns, Mode Split and GHG Emissions

The Office of Sustainability or Parking Services will administer a survey of both employees and students of USM Portland.

Surveys provide a qualitative understanding of how well TDM (and Parking Management) program elements are working. The survey will also be used to estimate greenhouse gas emissions associated with commuting, as well as the current mode split.

The TDM Coordinator will conduct the surveys in either the Spring or Fall session (e.g., March or October), depending on available resources and labor relative to the resources and labor required to conduct the trip generation and parking analysis. The survey will be completed during a week without any holidays and when classes are in session.

Survey questions will incorporate the following components, in addition to others:

- Type and frequency of modes of transportation used in a typical week
- Destinations traveled to via particular modes
- Reasons why people are driving alone
- Reasons why people are not driving alone
- Level of enthusiasm for incentives that would encourage drive-alone respondents to use an alternative mode
- Ideas for improvements to transportation system, including ideas for incentives
- Routes traveled by foot or bike and associated improvements desired
- Trip generation during time of day (in order to supplement USM-generated contribution to peak traffic generation)
- Ownership of electric vehicles
- Questions required for Bike Friendly University application
- Questions about health concerns (e.g. Covid-19) with different modes and how that is impacting behavior and expected to impact behavior in the future

Status and Monitoring Report

Each year, after data are collected, the Office of Sustainability or Parking Services will prepare a report summarizing TDM program status and monitoring results. In addition to reporting the results of the data collection, the report will detail (1) what/when strategies were implemented, (2) an estimate of how many individuals participated in certain programs, and (3) the lessons learned regarding the most effective TDM strategies, including barriers to not driving alone from the survey.

A core summary table of the goals will be provided in the report that includes baseline numbers, progress to date, goal numbers, and dates by which the University is striving to reach the goals. Goals included will be trip generation, parking counts, mode split, and greenhouse gases.

In addition to reporting on electric vehicle data collected through the annual survey, the University will provide an EV Use and Forecast Report to the City on or before May 15th of each year beginning in calendar year 2024, summarizing EV ownership and EV charging station use statistics. The Report will also include a proposal regarding the number of EV charging stations for the coming school year, based upon the supply and demand statistics from the previous year. In alignment with the other reporting activities outlined in the TDM plan, the University commits to annual reporting through 2030, the horizon of the Facilities Master Plan, after which a new TDM plan may be proposed.

The University will submit the report to the City of Portland's TDM Program Manager (a position currently staffed in the Planning and Transportation Division of the Planning and Urban Development Department). A report should be issued on or before May 15th. The University will work with the City every year to ensure it is meeting expectations of the City regarding format of the report. The TDM Coordinator will meet with the City of Portland Planning Department, as needed, to discuss suggestions for changes to the TDM Program, and will make adjustments before the start of the Fall semester if necessary.

Monitoring Schedule

Monitoring (survey, parking, and traffic data collection) will begin the year this plan is published (2023). Monitoring will occur according to the schedule detailed below, until the year 2030, the horizon year of the *Facilities Master Plan*. Updates to the *Sustainability Strategic Plan* and/or *Facilities Master Plan* may conclude that further monitoring is warranted.

Annually, the University will:

- Conduct analysis of trip generation (as described above)
- Conduct parking occupancy observations (as described above)
- Conduct a travel survey (as described above)
- Prepare a TDM monitoring report (as described above)

City Staff Comments | 3.23.23 | PL-002314-2022 | 111 Bedford Street
Planner: Maya Balassa (mbalassa@portlandmaine.gov)

Per the request of the planning board, I have assessed parking demand associated with a weekday evening event at the Arts Center. The following presents the parking assessment.

- For the purposes of this assessment the following parking demand is estimated.
    - 200 seat Performance Hall: Assuming a vehicle occupancy of 2.5, this equates to **80 vehicles**. This is a worst-case scenario with all attendees arriving by car and originating from outside of the USM campus.
    - Performers: Thirty (30) performers are likely with a possible maximum of 100 performers. In most cases the performers will be from the USM community. Assuming a vehicle occupancy of 2.5, this equates to a maximum of 40 vehicles, although 12 vehicles would be typical (**range of between 12 and 40 vehicles**). Again, this is a worst-case estimate with all attendees arriving by car and originating from outside of the USM campus.
    - It is assumed that event would not occur at the same time as the Youth Ensemble.
    - There will be some staff at the facility, and it is assumed to be between **5 and 10 vehicles**.
    - It is my understanding that there could be an art gallery event that may occur at the same time as an event in the Performance Hall. This type of event could include about 150 attendees and these types of events occur only 3 to 4 times per year. Assuming a vehicle occupancy of 2.5, this equates to a maximum of **60 vehicles**. Again, this is a worst-case estimate with all attendees arriving by car and originating from outside of the USM campus.
    - Based upon the above a worst-case parking demand estimate, events at the Arts Center would be expected to generate a parking demand of between **157 and 190 vehicles**. In my professional opinion this parking demand estimate is high and accounts for a scenario that includes an art gallery event that occurs infrequently, the primary mode of transportation is by vehicle, and parking demand is from outside of the USM campus.
- Based upon information provided by USM, the campus has an overall parking supply of 1910 parking spaces with the following parking facility occupancy at 6:00PM on a weekday.
    - Residential Students: 394 parking spaces
    - Commuters: 431 parking spaces
    - Hannaford Hall: 512 parking spaces
    - CFA: 200 spaces
    - Net available parking spaces: **374 parking spaces** (additional spaces will become available as commuters depart the campus after 6:00PM)

Based upon the above analysis I concur with the need for approximately 200 parking spaces for the Arts Center and the USM campus will have a sufficient supply of parking spaces during events at the Arts Center.

Please contact me if you have any questions.

Best regards,

Tom Errico

MAJOR SITE PLAN REVIEW APPLICATION

University of Southern Maine

246 Deering Avenue, Portland, Maine

Center for the Arts
111 Bedford Street, Portland, Maine



Prepared For:

City of Portland Planning Board
389 Congress Street
Portland, Maine 04101

December 15, 2022
(REVISED February 23, 2023)

Prepared By:

OAK POINT ASSOCIATES
architecture
engineering
planning

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Section 1 – Project Description

This application package is for the construction for a Center for the Arts Building (CFA) that will provide a state-of-the-art, purpose-built home for the University of Southern Maine School of Music as well as visual arts programs such as the Kate Cheney Chappell ’83 Center for Book Arts. The package has been prepared in accordance with the City’s requirements and submitted by Oak Point Associates, acting as the University’s agent for the purposes of permitting.

Project Intent

The CFA will be the focal point of artistic development and exhibition on the University of Southern Maine’s Portland campus. As a new home for the School of Music, the CFA will leverage its prominent exposure toward both the central campus and the broader community as a catalyst for engagement not only with music, but also with its sister arts. This intersection of the arts is most clearly manifest in the central Gallery space – a prominently featured forum for the exhibition of visual arts and other media and a highly visible corner studio to display the activities of the book arts.

The project adds new academic and administrative spaces that will enable the College of Music to grow and provide the highest quality acoustical and technical practice and rehearsal spaces for students’ musical training and education. Key elements include a 200-seat performance hall, arts lab with telescoping seating and a large door to the Gallery for flexible event use, large rehearsal hall, flex studio for visual arts, teaching studios, classrooms, and administrative offices.

Project Location

The CFA will be located on the southwest edge of University of Southern Maine’s Portland Campus, along the edge of Noyes Park. The building serves to frame the campus green to the north while providing a gateway to the campus from Deering Avenue. The new facility anchors the southern edge of the campus green formed by the CFA, Luther Bonney Hall, and Payson Smith Hall. The block of Brighton Avenue between Bedford Street and Falmouth Avenue, which served as a physical break between USM and Noyes Park, was removed in 2021 as part of the Deering's Corner roundabout project and infilled with lawn. The building has been assigned the address 111 Bedford Street by the City of Portland and is located within the R-5 Residential and USM Campus Overlay Zones.

Proposed Building and Siting

The demolition of Brighton Avenue between Falmouth and Bedford Streets has created several opportunities for the University of Southern Maine’s Portland campus and the City of Portland. These improvements have provided the opportunity for Noyes Park to become a more pedestrian-friendly and

welcoming environment. This newly defined park edge allows the new CFA to become a prominent new front door to the campus toward the City of Portland at its southwestern edge of campus. Experientially, it represents an intersection between town and gown.

In addition to engaging Noyes Park, the building has been sited so that it can enhance the campus green while avoiding impacts to significant trees on the site and in the park. The project will preserve pedestrian connectivity through the campus green and the buildings to the north as well as the Law School Building and adjacent parking lot to the south (across Deering Avenue) while extending the existing sidewalk on Bedford Street north to connect to the existing sidewalk at Noyes Park. No additional parking is proposed as part of the project, but a drop-off area is proposed on Bedford Street that doubles as fire department access.

A small loading area is proposed on the northwest side of the building that will be accessed from the end of the parking lot adjacent to Payson Smith Hall. This loading area allows for occasional delivery of musical equipment and trash removal. Because the loading area will be used infrequently and due to the location of the loading area, a formal access drive is not desirable. Instead, the sidewalks on this side of the building have been laid out to accommodate the turning movement of delivery trucks.

The building will be connected to the existing water and natural gas infrastructure under Falmouth Street, the existing on-campus electrical and communications infrastructure, and the existing sewer and storm drain lines beneath Bedford Street. A subsurface sand filter is proposed to detain and treat roof runoff prior to entering the municipal storm drain system.

Architectural Approach

The fundamental configuration of the CFA represents simultaneous intersections from the city to the campus with a Central Gallery becoming a gateway from Noyes Park to the campus. The Gallery is an exhibition space for the visual arts, open to passersby. It also serves as a threshold between the campus and the CFA, opening out onto a newly defined campus green and bringing the arts outside and connecting to the purpose-built spaces for teaching, rehearsal, and practice.

Proposed Planting/Landscaping

Several planted areas will be provided around the building. The plants serve several functions on the site, including providing screening of the loading area from the Noyes Park side of the site, visual interest near the building entrance, a buffer in locations to discourage pedestrian cut-throughs, and preventing outdoor gathering near windows at interior assembly spaces. USM has a desire to provide a plant palette that includes edible plants and plants that are native to New England, and the landscape is designed accordingly. Proposed street trees are provided along Bedford Street, except where proximity to stormwater treatment facilities (under drained subsurface sand filter) preclude them. Street tree species are listed on the *City of Portland Recommended Tree List.*

Project Timeline

This project is the second of a two-part project that also includes relocating a portion of the existing Deering Farmhouse building to accommodate the CFA and provide additional office and storage space. The farmhouse relocation project is currently being reviewed by the City, and construction is anticipated to begin in spring 2023. Construction of the CFA is anticipated to begin shortly afterward in summer of 2023 and is anticipated to be substantially complete by the fall of 2025.

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST
Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

**** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ****

At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.

GENERAL APPLICATION DOCUMENTS	
Yes **NA**	**Project Description** ● Cover letter with detailed project description
Yes **NA**	**Completed Checklist** (this document)
Yes **NA**	**Evidence of Right, Title, and Interest** ● Deeds, leases, or purchase and sales agreements
Yes **NA**	**Evidence of State or Federal Approvals** ● Permits or letters of non-jurisdiction, if applicable
Yes **NA**	**Zoning Assessment** (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes **NA**	**Site Plan Standards Assessment** (see Section 14.6 of the land use code) • Summary of project compliance with site plan standards of the land use code
Yes **NA**	**Summary of Existing and/or Proposed Easements or Covenants, applicable.** ● Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
Yes **NA**	**Waiver Requests** (see Waiver Table) ● Written request for waiver describing request and compliance with applicable waiver standards
Yes **NA**	**Financial Capability** ● Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes **NA**	**Technical Capability** ● Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.

TRANSPORTATION	
Yes **NA**	**Impact on Surrounding Street Systems (14-14.6.1(A))** ● Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes **NA**	**Access and Circulation (14-14.6.1(B))** Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes **NA**	**Public Transit (14-14.6.1(C)), if applicable** Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
Yes **NA**	**Off-Street Parking (14-14.6.1(D)), if applicable** Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
Yes **NA**	**Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable** ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL	
Yes **NA**	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes **NA**	**Landscape Preservation (14-14.6.2(B))** Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
Yes **NA**	**Site Landscaping and Buffers (14-14.6.2(C))** Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
Yes **NA**	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY	
Yes **NA**	**Consistency with City Master Plans (14-14.6.3(A))** ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes **NA**	**Public Safety and Fire Prevention (14-14.6.3(B))** Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)
Yes **NA**	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections
SITE DESIGN	
Yes **NA**	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures
Yes **NA**	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes **NA**	**Snow and Ice Loading (14-14.6.4(C))** ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes **NA**	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes **NA**	**Historic Resources (14-14.6.4(E)), if applicable** Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources

Yes **NA**	**Exterior Lighting (14-14.6.4(F))** ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes **NA**	**Noise and Vibration (14-14.6.4(G))** ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes **NA**	**Signage and Wayfinding (14-14.6.4(H)), if applicable** ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
Yes **NA**	**Zone-Related Design Standards (14-14.6.4(I))** ● Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

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

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

- Location of fire hydrants
- Location of solid waste management receptacles
- Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable
- Location of proposed easements and rights-of-way, including dimensions
- Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed

UTILITY PLAN including:

- Proposed electrical infrastructure
- Location, sizing and directional flows of all proposed sewer and stormwater infrastructure
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- Proposed grades
- Proposed stormwater management measures meeting Technical Manual (Section 5) standards
- Any proposed alteration of a watercourse or wetlands
- Any groundwater protection measures
- Proposed buffers and preservation measures for wetlands or significant natural features

LANDSCAPE PLAN including:

- Existing vegetation to be preserved and preservation measures
- Proposed landscaping, screening, and street trees, including caliper widths for trees
- Planting schedule, including street trees

ARCHITECTURAL PLANS AND RENDERINGS including:

- Exterior building elevations, color renderings, illustrations of all sides
- Axonometric and street-level views for structures greater than three stories in height
- Provide context drawings, if applicable (Design Manual, page 1)
- Floor plans

CONSTRUCTION MANAGEMENT PLAN including:

- Specifics on traffic control, sidewalk sheds, and pedestrian rerouting
- Include a drawing and written narrative

OTHER

- Details and cross-sections, as necessary

DocuSign Envelope ID: 5055615B-E4C7-4826-B314-32B9DAB333C9

November 15, 2022

To: Local, State, and Federal Review Officials

RE: AUTHORIZED REPRESENTATIVE – USM Center for the Arts

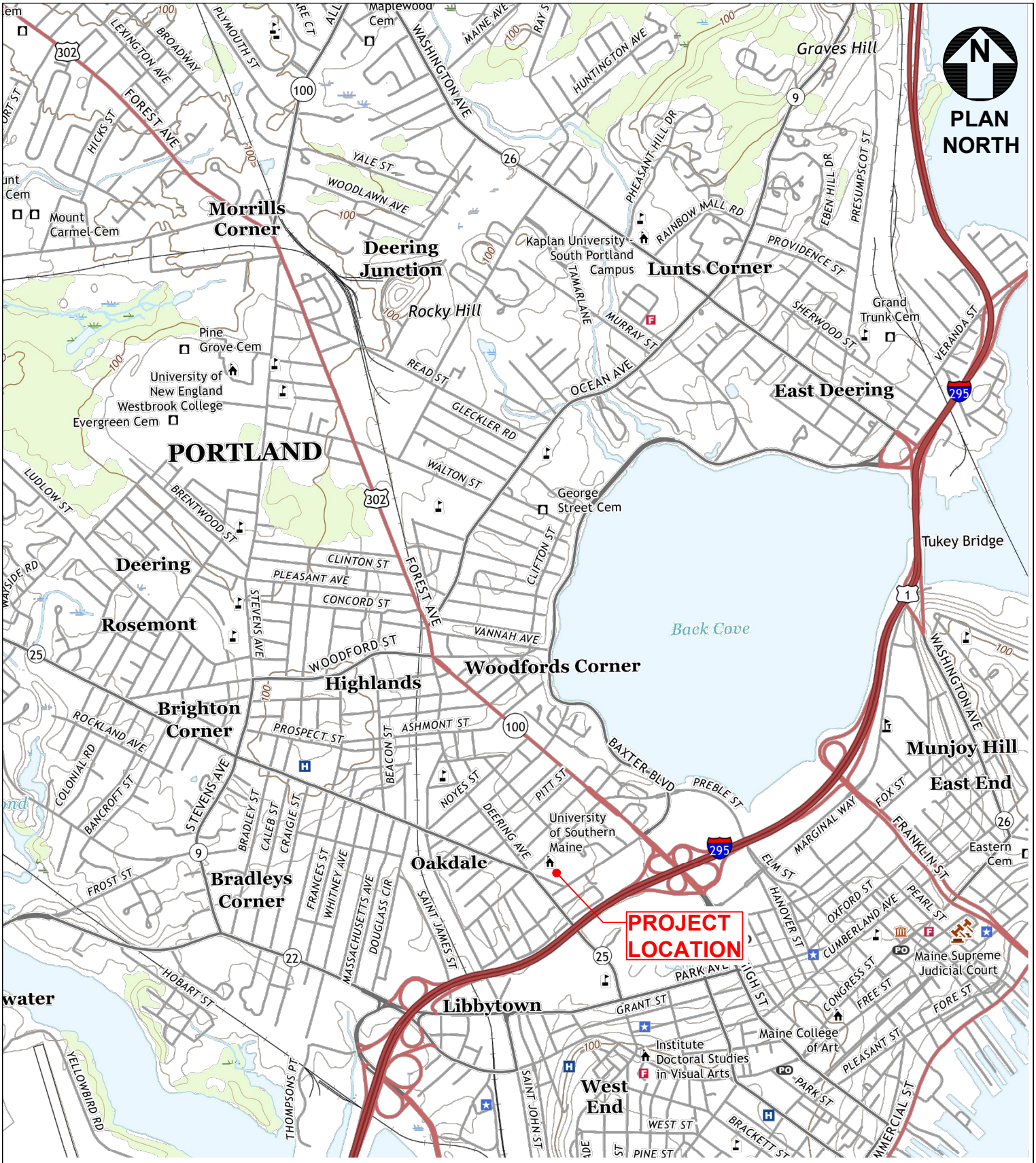
The University of Southern Maine, a member of the University of Maine System, is preparing plans for construction of a new Center for the Arts located on the University of Southern Maine, Portland Campus. The University has retained Pfeiffer, a studio of Perkins Eastman Architects DPC, as our Designer of Record and Oak Point Associates as the Engineering Consultant, to assist in the preparation of the applications associated with permitting approvals for this project. When necessary, Oak Point Associates is authorized as the agent to represent the University in addressing questions on the plans, or applicable application for this project.

Sincerely,

DocuSigned by:
C68AD86AE7CA431...

John M. Souther,
Executive Director of Facilities Management,
University of Southern Maine for the
University of Maine System

Cc: to file.



NOTE: USGS TOPOGRAPHIC QUADRANGLE OBTAINED ON OCTOBER 3, 2022

SCALE: 1"=2,000'
DATE: 11-01-2022

Q1

USGS LOCUS MAP

CENTER FOR THE ARTS

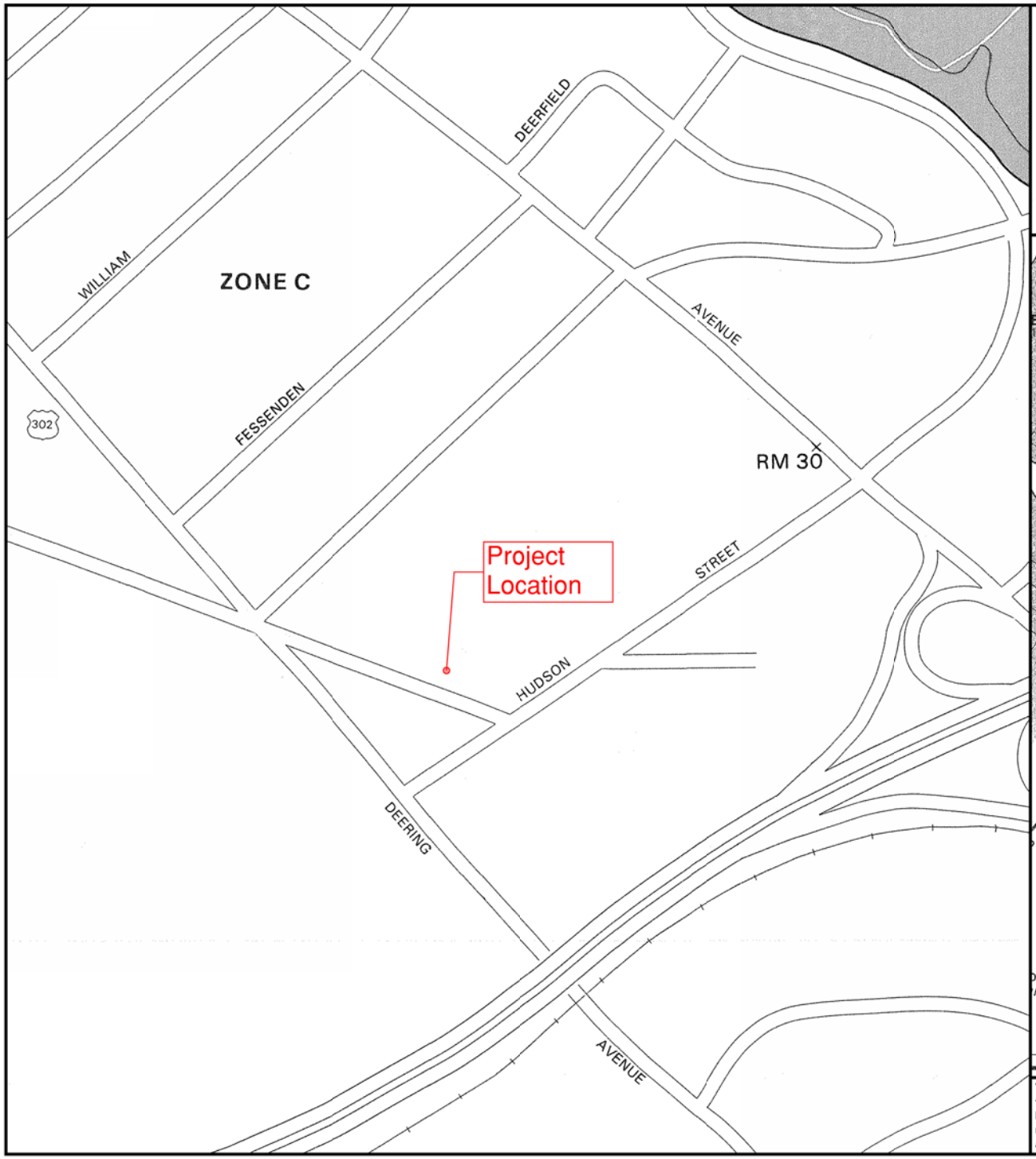
UNIVERSITY OF SOUTHERN MAINE PORTLAND CAMPUS

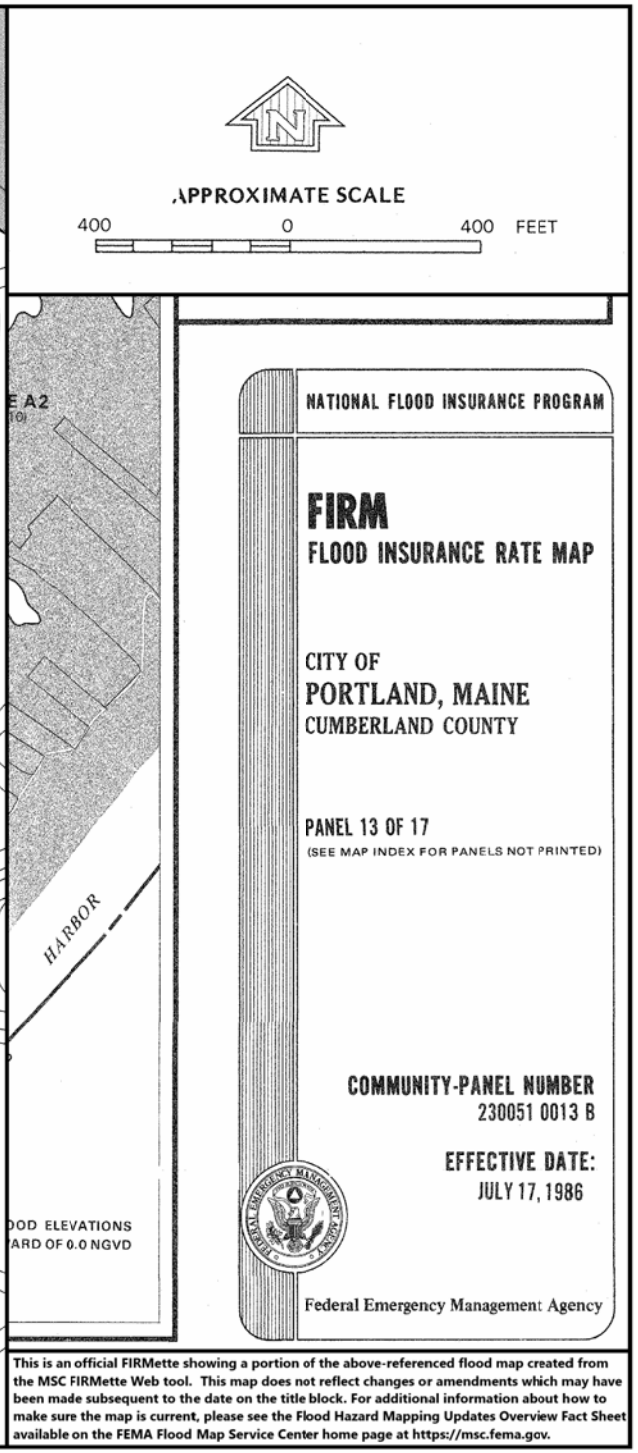
104 Falmouth Street, Portland Maine 04103

DESIGNED BY: JSD
DRAWN BY: JSD
CHECKED BY: JSD

PROJECT: 21904.10

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
231 Main Street, Biddeford, Maine 04005 (T) 207.283.0193 (F) 207.283.4283
www.oakpoint.com





This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

Section 2 – Right, Title and Interest

The Center for the Arts will be constructed on USM property at the corner of Bedford Street and Brighton Avenue. A portion of the property is yet to be conveyed to the University, and it is the subject of a 2018 Land Exchange Agreement between the City and the University System related to the Deering's Corner Roundabout Project. The actions that still need to occur under the agreement are the discontinuance of the former Brighton Avenue extension and a conveyance by the City of its portion of the former road to the University. The City's Corporation Counsel has been made aware of these outstanding items and is working to begin the discontinuance process with the Council. Once the conveyances from the Roundabout Project are fully executed, the total area of the USM campus will have grown by approximately 0.5 acres to approximately 29.33 acres. The plans included with this application show property lines in a post-conveyance condition.

A small amount of grading will occur within Noyes Park, which is owned by the City of Portland. The University has requested a temporary construction and grading easement from the City, which is in process and will be obtained prior to the start of construction.

Copies of the deed for the campus and a copy of the Land Exchange Agreement as well as a boundary survey conducted in 2019 are included in this section.

(90) 135

Know all Men by these Presents,

That Portland Junior College ~~Company~~,

a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine in consideration of one dollar and other valuable considerations

Portland Junior College to University of Maine -- War

paid by University of Maine, a corporation organized and existing under the laws of the State of Maine and located at Orono in the County of Penobscot and State of Maine

the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said University of Maine its successors ~~heirs~~ and assigns forever,

a certain lot or parcel of land with the buildings thereon situated in Portland aforesaid bounded and described as follows:

Beginning at a pipe set in the ground at the corner formed by the intersection of the easterly side of Brighton Avenue and the southerly side of Falmouth Street; thence by said southerly side of Falmouth Street in an easterly direction nine hundred eighty-two and sixty-seven hundredths (982.67) feet to a pipe set in the ground on said southerly side of Falmouth Street; thence southerly with an included angle of ninety-four degrees thirty-eight minutes (94° 38') three hundred fifty-two and eighty-nine hundredths (352.89) feet to a pipe; thence westerly on a line parallel with Falmouth Street and at an included angle of eighty-five degrees twenty-two minutes (85° 22') one hundred sixty-four and sixty-five hundredths (164.65) feet to a point, said point being on the line of a row of trees running approximately north and south; thence southwardly along the line of said row of trees two hundred forty-five (245) feet more or less to the northerly side of Bedford Street; thence westerly along the northerly side of said Bedford Street six hundred (600) feet more or less to the easterly side of Brighton Avenue; thence along the easterly side of Brighton Avenue four hundred eighty-seven and thirty-eight hundredths (487.38) feet more or less to the point of beginning.

Reference is made to three deeds to Portland University Extension Courses, Inc., the name of which, subsequently, by act of the Legislature has been changed to Portland Junior College, and a fourth deed to Portland Junior College, all from Edward Deering Noyes dated and recorded as follows: December 28, 1946, Book 1854 Page 424, June 30, 1947, Book 1875 Page 227, July 1, 1948, Book 1916 Page 364, and December 31, 1956, Book 2332 Page 151.

136 **To have and to hold,** the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said

University of Maine, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And the said Grantor Corporation does hereby COVENANT with the said Grantee , its successors ~~heirs~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances;
that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that if and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee , its successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Portland Junior College ~~Company~~ has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Philip I. Milliken , its Treasurer, thereunto duly authorized, this 28th day of August in the year one thousand nine hundred and fifty-seven.

Signed, Sealed and Delivered
in presence of

Jane C. Magnusson

~~Company~~.
PORTLAND JUNIOR COLLEGE
By Philip I. Milliken
Treasurer.

Countersigned
Raymond S. Hastings
President

(CORPORATE SEAL)

State of Maine

County of Cumberland ss. August 28, 1957

Then personally appeared the above named Philip I. Milliken Treasurer of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

Jane C. Magnusson Justice of the Peace.
~~Notary Public~~

AUG 28 1957
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 12 H 27 M P.M., and recorded in
BOOK 2370 PAGE 135 Register

QUITCLAIM DEED WITH COVENANT

DLN# _____

UNIVERSITY OF MAINE SYSTEM (f/k/a University of Maine, reference being made to a notice of name change dated June 13, 1988 and recorded in the Cumberland County Registry of Deeds in Book 8331, Page 89), a body politic and corporate and an instrumentality and agency of the State of Maine, with a mailing address of 5703 Alumni Hall, Orono, Maine 04469 (hereinafter "Grantor") for good and valuable consideration paid, grants to the **CITY OF PORTLAND**, a body corporate and politic and Maine municipal corporation having a mailing address of 389 Congress Street, Portland, Maine 04101 (hereinafter "Grantee"), with quitclaim covenant, certain real property located in the City of Portland, County of Cumberland and State of Maine and more particularly described on **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed by its duly authorized representative as of this 22 day of March, 2019.

WITNESS:

UNIVERSITY OF MAINE SYSTEM

By: _____
Name: M.F. Chip Gavin
Its: Chief Facilities Management and General Services Officer

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. MARCH 22, 2019

PERSONALLY APPEARED the above-named M.F. Chip Gavin, Chief Facilities Management and General Services Officer of the University of Maine System, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the University of Maine System.

Before me,

_____
Notary Public/Attorney at Law
Commission Expires:
Print Name: ME BAR # 5646
SARA MCNAMARCHEK

EXHIBIT A

UNIVERSITY OF MAINE SYSTEM
TO
CITY OF PORTLAND

PARCEL ONE:

A certain lot or parcel of land located on the southeasterly side of Falmouth Street, the southwesterly side of Brighton Avenue and the southwesterly side of Deering Avenue in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point on the southeasterly sideline of Falmouth Street, said point of beginning located N 48°34'53" E a distance of sixty-nine and 93/100 (69.93) feet from the intersection of the northeasterly sideline of Exeter Street with the southeasterly sideline of said Falmouth Street. Thence:

1. N 48°34'53" E by said Falmouth Street a distance of two hundred forty-three and 79/100 (243.79) feet to a point on the southerly sideline of Brighton Avenue;

2. S 67°27'04" E by said Brighton Avenue a distance of eleven and 80/100 (11.80) feet to a point on the southwesterly sideline of Deering Avenue;

3. S 38°46'34" E by said Deering Avenue a distance of one hundred eleven and 32/100 (111.32) feet to a point;

4. N 47°34'40" W through land of the Grantor a distance of sixty-five and 82/100 (65.82) feet to a point;

5. N 88°45'17" W through said land of the Grantor a distance of seventy-one and 00/100 (71.00) feet to a point;

6. S 40°44'35" W through said land of the Grantor a distance of forty-nine and 84/100 (49.84) feet to a point;

7. S 48°14'39" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

8. S 57°25'25" W through said land of the Grantor a distance of ninety-nine and 27/100 (99.27) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 4,513 square feet, more or less, and being a portion of the premises as described in deeds to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 3047, Page 354, Book 3053, Page 326, Book 3056, Page 504 and Book 3079, Page 537.

PARCEL TWO:

A certain lot or parcel of land located on the southeasterly side of Falmouth Street and the northeasterly side of Brighton Avenue in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the southeasterly sideline of Falmouth Street with the northeasterly sideline of Brighton Avenue. Thence:

1. N 45°03'56" E by said Falmouth Street a distance of sixty-seven and 91/100 (67.91) feet to a point;

2. S 25°30'06" W through land of the Grantor a distance of twenty-one and 27/100 (21.27) feet to a point;

3. S 05°00'58" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

4. S 53°19'05" E through said land of the Grantor a distance of twenty-five and 06/100 (25.06) feet to the northeasterly sideline of said Brighton Avenue;

5. N 67°27'04" W by said Brighton Avenue a distance of sixty and 39/100 (60.39) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 1,099 square feet, more or less, and being a portion of the premises as described in a deed to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 2370, Page 135.

Received
Recorded Register of Deeds
Mar 28,2019 01:01:34P
Cumberland County
Nancy A. Lane

NOTICE OF LAYOUT AND TAKING

The State of Maine by its Department of Transportation does hereby give notice to all whom it may concern:

That the Department of Transportation in accordance with the authority of Title 23 M.R.S. Section 651, has determined that public exigency requires the altering, widening, changing the grade, changing the drainage, laying out and establishing of a portion of State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street in the City of Portland, County of Cumberland.

That the Department of Transportation, in accordance with Title 23 M.R.S. Sections 701 and 651, hereby lays out the location of a portion of State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street in the City of Portland.

That the Department of Transportation, in accordance with Title 23 M.R.S. Sections 651 and 151 to 159, has determined that public exigency requires the taking in fee simple all lands as hereinafter described, and all rights in land as specified and as shown on a Right-of-Way Map, State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street, City of Portland, Federal Aid Project No. 1862400, (W.I.N. 018624.00), dated October 2019, on file in the Office of the Department of Transportation, (D.O.T. File No. 3-641) and to be recorded in the Registry of Deeds of Cumberland County, a print of which is on file in the office of the County Commissioners of Cumberland County.

The Base Line of location of the portions of State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street hereby laid out being described as follows:

Base Line Descriptions

State Highway "12" (Brighton Avenue)/State Highway "76" (Deering Avenue) Base Line

Beginning at a point in the present traveled way of State Highway "12" (Brighton Avenue) and designated as P.T. Sta.1+05.88;

Thence S. 64°47'30" E. one hundred fifty-eight and no hundredths (158.00) feet to P.C. Sta. 2+63.88;

Thence southeasterly by a 28°38'52" curve to the left, seven and thirty-two hundredths (7.32) feet to P.T. Sta. 2+71.20;

Thence S. 66°53'17" E. thirty-seven and twenty-two hundredths (37.22) feet to P.C. Sta. 3+08.42;

Thence southeasterly by a 28°38'52" curve to the left, twenty-one and sixty-eight hundredths (21.68) feet to P.T. Sta. 3+30.10;

Thence S. 73°05'57" E. eighty and four hundredths (80.04) feet to P.C. Sta. 4+10.14;

Thence southeasterly by a 57°17'45" curve to the right, forty-one and sixty-three hundredths (41.63) feet to P.T. Sta. 4+51.77 at the point of intersection with State Highway "76" (Deering Avenue);

Thence S. 49°14'49" E. ninety-two and ninety-four hundredths (92.94) feet to P.C. Sta. 5+44.71;

Thence southeasterly by a 14°19'26" curve to the right, seventy-three and sixty-seven hundredths (73.67) feet to P.T. Sta. 6+18.38;

Thence S. 38°41'41" E. two hundred sixty-six and forty hundredths (266.40) feet to P.C. Sta. 8+84.78;

Thence southeasterly by a 28°38'52" curve to the right, three and ten hundredths (3.10) feet to P.T. Sta. 8+87.88;

Thence S. 37°48'26" E. one hundred ninety-six and twenty-four hundredths (196.24) feet to P.C. Sta. 10+84.12 at a point in the present traveled way of State Highway "76" (Deering Avenue).

State Highway "76" (Deering Avenue) Segment II Base Line

Beginning at a point in the intersection of State Highway "76" (Deering Avenue) and Fessenden Street and designated as Sta. 0+00.00;

Thence S. 38°16'29" E. one hundred one and forty-seven hundredths (101.47) feet to P.C. Sta. 1+01.47;

Thence southeasterly by a 28°38'52" curve to the left, nine and fifty hundredths (9.50) feet to P.T. Sta. 1+10.97;

Thence S. 40°59'49" E. seventy-six and seventy hundredths (76.70) feet to P.C. Sta. 1+87.67;

Thence southeasterly by a 38°11'50" curve to the right, fifty-seven and fifty-one hundredths (57.51) feet to P.T. Sta. 2+45.18;

Thence S. 19°01'49" E. fifty and thirty-three hundredths (50.33) feet to Sta. 2+95.51 which point equals Sta. 4+19.27 on the State Highway "12" (Brighton Avenue)/State Highway "76" (Deering Avenue) Base Line.

Falmouth Street Base Line

Beginning at a point in the present traveled way of Falmouth Street, said point being about three hundred twenty-five (325) feet southwesterly of its intersection with State Highway "12" (Brighton Avenue) and State Highway "76" (Deering Avenue) and designated as Sta. 0+50.00;

Thence N. 48°26'52" E. fifty-seven and ninety-four hundredths (57.94) feet to P.C. Sta. 1+07.94;

Thence northeasterly by a 57°17'45" curve to the right, seventeen and twenty-four hundredths (17.24) feet to P.T. Sta. 1+25.18;

Thence N. 58°19'22" E. forty-seven and seven hundredths (47.07) feet to P.C. Sta. 1+72.25;

Thence northeasterly by a 20°27'46" curve to the left, ninety-six and seventy-three hundredths (96.73) feet to P.T. Sta. 2+68.98;

Thence N. 38°31'40" E. and passing through Sta. 3+67.34 which point equals Sta. 4+35.95 on the State Highway "12" (Brighton Avenue) Base Line, one hundred and seventy-one hundredths (100.71) feet to P.C. Sta. 3+69.69;

Thence northeasterly by a 57°17'45" curve to the right, nineteen and twenty-eight hundredths (19.28) feet to P.T. Sta. 3+88.97;

Thence N. 49°34'30" E. sixty-two and twenty-one hundredths (62.21) feet to P.C. Sta. 4+51.18;

Thence northeasterly by a 28°38'52" curve to the left, fourteen and sixty-seven hundredths (14.67) feet to P.T. Sta. 4+65.85;

Thence N. 45°22'19" E. one hundred thirty-four and fifteen hundredths (134.15) feet to Sta. 6+00.00 at a point in the present traveled way of Falmouth Street.

Bedford Street Base Line

Beginning on the State Highway "76" (Deering Avenue) Base Line at Sta. 9+38.26 which point equals Sta. 40+50.00 on the Bedford Street Base Line;

Thence N. 56°14'54" E. three hundred thirty and no hundredths (330.00) feet to Sta. 43+80.00 at a point in the present traveled way of Bedford Street.

DESCRIPTION OF FEE TAKING

All land, buildings, and rights in land within the following described boundaries, are hereby taken in fee simple:

Area 1

Beginning at a point in the present northwesterly line of Falmouth Street, said point being about thirty-four (34) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base line at Sta. 2+88;

Thence northerly by a direct course about twenty-six (26) feet to a point forty and seventy-five hundredths (40.75) feet southwesterly from and as measured along a line at right angles to the State Highway "12" (Brighton Avenue) Base Line at Sta. 3+66;

Thence northwesterly by a direct course twenty-two and seventy-five hundredths (22.75) feet to a point thirty-two (32) feet southwesterly from and as measured along a line at right angles to the State Highway "12" (Brighton Avenue) Base Line at Sta. 3+45;

Thence northwesterly by a direct course, about one hundred seven (107) feet to a point in the present northwesterly line of land now or formerly of Mark E. High, et al, and the present southeasterly line of land now or formerly of Francis Schwanauer, et al, said point being twenty-nine (29) feet southwesterly from and as measured along a line at right angles to the State Highway "12" (Brighton Avenue) Base Line at about Sta. 2+42;

Thence northeasterly along the present northwesterly line of land of said High, et al, and along the present southeasterly line of land of said Schwanauer, et al, about three (3) feet to a point in the present southwesterly line of State Highway "12" (Brighton Avenue), said point being about twenty-six (26) feet southwesterly from and as measured along a line at right angles to said Base Line at about Sta. 2+42;

Thence southeasterly along the present southwesterly line of State Highway "12" (Brighton Avenue), about one hundred fifty-seven (157) feet to the point of intersection with the present northwesterly line of Falmouth Street, said point being about twenty-seven (27) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at about Sta. 3+25;

Thence southwesterly along the present northwesterly line of Falmouth Street, about thirty-nine (39) feet to the point of beginning. Being shown on the beforementioned right-of-way map as Parcel Nos. (3) and (4).

Area 2

Beginning at a point in the present northwesterly line of Falmouth Street, said point being about thirty-one (31) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at Sta. 4+70;

Thence southwesterly along the present northwesterly line of Falmouth Street, about sixty (60) feet to the point of intersection with the present northeasterly line of State Highway "76" (Deering Avenue), said point being about twenty-seven (27) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at about Sta. 4+08;

Thence northwesterly along the present northeasterly line of State Highway "76" (Deering Avenue), about one hundred forty-seven (147) feet to a point about twenty-four (24) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 1+30;

Thence southeasterly by a direct course, about forty-three (43) feet to a point twenty-six (26) feet northwesterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 1+75;

Thence S. 49°40'39" E. sixty and forty-one hundredths (60.41) feet to a point forty-one (41) feet northeasterly from and as measured along a line normal to the State Highway "76" (Deering Avenue) Base Line at Sta. 2+25;

Thence S. 75°12'58" E. forty-three and nineteen hundredths (43.19) feet to a point thirty-four (34) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at Sta. 4+50;

Thence northeasterly by a direct course, about eighteen (18) feet to the point of beginning. Being shown on the beforementioned right-of-way map as Parcel Nos. (5) and (6).

Area 3

Beginning at a point, forty (40) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 6+67;

Thence S. 29°25'19" E. forty-nine and sixty-five hundredths (49.65) feet to a point thirty-two (32) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 7+16;

Thence S. 38°41'41" E. one hundred twenty-one and no hundredths (121.00) feet to a point thirty-two (32) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 8+37;

Thence S. 50°40'15" E. thirty-three and seventy-three hundredths (33.73) feet to a point thirty-nine (39) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 8+70;

Thence S. 77°38'06" E. forty-three and sixty hundredths (43.60) feet to a point forty (40) feet northwesterly from and as measured along a line at right angles to Bedford Street Base Line at Sta. 41+14;

Thence southeasterly along said right angle line, about ten (10) feet to a point in the present northwesterly line of Bedford Street;

Thence southwesterly along the present northwesterly line of Bedford Street, about thirty-six (36) feet to the point of intersection with the present northeasterly line of State Highway "76"

(Deering Avenue), said point being about thirty (30) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at about Sta. 9+10;

Thence northwesterly along the present northeasterly line of State Highway "76" (Deering Avenue), about three hundred (300) feet to the point of intersection with the present southwesterly line of State Highway "3" (Brighton Avenue), said point being about twenty-nine (29) feet northeasterly from and as measured along a line normal to the State Highway "76" (Deering Avenue) Base line at about Sta. 6+11;

Thence southeasterly along the present southwesterly line of State Highway "3" (Brighton Avenue), about twenty-four (24) feet to a point about forty-one (41) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at about Sta. 6+32;

Thence S. 37°55'44" E. about thirty-five (35) feet to the point of beginning. Being shown on the beforementioned right-of-way map as Parcel No. (9).

Area 4

"Beginning at a point on the southeasterly sideline of Falmouth Street, said point of beginning located N 48°34'53" E a distance of sixty-nine and 93/100 (69.93) feet from the intersection of the northeasterly sideline of Exeter Street with the southeasterly sideline of said Falmouth Street. Thence:

1. N 48°34'53" E by said Falmouth Street a distance of two hundred forty-three and 79/100 (243.79) feet to a point on the southerly sideline of Brighton Avenue;

2. S 67°27'04" E by said Brighton Avenue a distance of eleven and 80/100 (11.80) feet to a point on the southwesterly sideline of Deering Avenue;

3. S 38°46'34" E by said Deering Avenue a distance of one hundred eleven and 32/100 (111.32) feet to a point;

4. N 47°34'40" W through land of the Grantor a distance of sixty-five and 82/100 (65.82) feet to a point;

5. N 88°45'17" W through said land of the Grantor a distance of seventy-one and 00/100 (71.00) feet to a point;

6. S 40°44'35" W through said land of the Grantor a distance of forty-nine and 84/100 (49.84) feet to a point;

7. S 48°14'39" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

8. S 57°25'25" W through said land of the Grantor a distance of ninety-nine and 27/100 (99.27) feet to the point of beginning."

Being the same as the first parcel of land described and conveyed from University of Maine System to City of Portland by Quitclaim Deed with Covenant dated March 22, 2019 and recorded at the Cumberland County Registry of Deeds in Book 35543, Page 338 and being shown on the beforementioned right-of-way map as Parcel No. (13).

Area 5

"Beginning at the intersection of the southeasterly sideline of Falmouth Street with the northeasterly sideline of Brighton Avenue. Thence:

1. N 45°03'56" E by said Falmouth Street a distance of sixty-seven and 91/100 (67.91) feet to a point;

2. S 25°30'06" W through land of the Grantor a distance of twenty-one and 27/100 (21.27) feet to a point;

3. S 05°00'58" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

4. S 53°19'05" E through said land of the Grantor a distance of twenty-five and 06/100 (25.06) feet to the northeasterly sideline of said Brighton Avenue;

5. N 67°27'04" W by said Brighton Avenue a distance of sixty and 39/100 (60.39) feet to the point of beginning."

Being the same as the second parcel of land described and conveyed from University of Maine System to City of Portland by Quitclaim Deed with Covenant dated March 22, 2019 and recorded at the Cumberland County Registry of Deeds in Book 35543, Page 338 and being shown on the beforementioned right-of-way map as Parcel No. (14).

EXCEPTIONS AND RESERVATIONS

There is excepted and reserved from the before described taking in fee simple:

All existing utility company rights-of-way and/or easements, however acquired, and located within the aforedescribed boundaries, EXCEPTING any that may be specifically set forth in the hereinafter Informative Summary.

DESCRIPTIONS OF EASEMENT AND/OR RIGHTS TAKING

The following described easement and/or rights in land are taken at the locations, in the manner, to the extent specified and as shown on the right-of-way map hereinbefore mentioned:

TEMPORARY CONSTRUCTION RIGHTS

The right, for the duration of the period of the Project construction as determined by the date of completion of construction according to the records of the Department of Transportation, to enter upon land outside of and adjoining the boundary lines of the above-referenced highway to perform the work as set forth below within the limits defined as "Temporary Construction Limits" as shown on the above-referenced Right-of-Way map.

Said right may include, but is not limited to, necessary excavating, placing of fill material, curbing, loaming, seeding, paving, installation of structures, removal of trees, shrubs, bushes and other growth, selective cutting, trimming, and other necessary incidental work in grading said adjoining land, in addition to the temporary placement of utility poles including all related fixtures, overhead wires, guys, etc. in order to allow for project construction in accordance with all governing regulations and other requirements of law.

Parcel/ Item	**Apparent Owner**	**Location: Lt./Rt.**
2	Francis Schwanauer Johanna M. Schwanauer	Sta. 1+76 to Sta. 2+42 Rt. (S.H."12"/Brighton Avenue)
3	Mark E. High Mary Elizabeth Woodbury	Sta. 2+42 to Sta. 3+15 Rt. (S.H."12"/Brighton Avenue)
4	Donnabeth Davis	Sta. 3+14 to Sta. 3+53 Rt. (S.H."12"/Brighton Avenue) Sta. 2+23 Lt. (Falmouth Street) to Sta. 3+63 Rt. (S.H."12"/Brighton Avenue)
5	Richard T. Boles	Sta. 1+25 to Sta. 1+75 Lt. (S.H."76"/Deering Avenue)
6	257 Deering LLC	Sta. 1+75 Lt. (S.H."76"/Deering Avenue) to Sta. 4+70 Lt. (Falmouth Street)

Parcel/ Item	Apparent Owner	Location: Lt./Rt.
7	University of Maine System	Sta. 1+04 to Sta. 2+05 Rt. (Falmouth Street) Sta. 2+13 to Sta. 2+52 Rt. (Falmouth Street) Sta. 2+61 to Sta. 2+93 Rt. (Falmouth Street) Sta. 5+16 to Sta. 8+18 Rt. (S.H."76"/Deering Avenue)
8	University of Maine System	Sta. 5+12 Rt. (Falmouth Street) to Sta. 5+43 Lt. (S.H."76"/Deering Avenue) Sta. 6+84 to Sta. 7+08 Lt. (S.H."76"/Deering Avenue)
9	City of Portland	Sta. 6+32 to Sta. 8+03 Lt. (S.H."76"/Deering Avenue) Sta. 8+12 Lt. (S.H."76"/Deering Avenue) to Sta. 41+00 Lt. (Bedford Street)
10	University of Maine System	Sta. 8+18 to Sta. 8+94 Rt. (S.H."76"/Deering Avenue)
11	University of Maine System	Sta. 8+94 to Sta. 9+13 Rt. (S.H."76"/Deering Avenue)
12	Vincent A. Ciampi, Jr.	Sta. 40+94 Rt. (Bedford Street) to Sta. 9+84 Lt. (S.H."76"/Deering Avenue)

INFORMATIVE SUMMARY

The following is a list summarizing the parcel or item numbers, names of apparent owners of record of land and rights involved, estimated areas, and rights affected, within and adjacent to the before-referenced highway boundaries, as shown on the beforementioned right-of-way map:

Parcel/ Item No.	Apparent Owner	Area	Slopes	Drainage	Temp. Const. Rights	Other Rights & Bldgs.
2	Francis Schwanauer Johanna M. Schwanauer	None	None	None	Yes	None
3	Mark E. High Mary Elizabeth Woodbury	240 ± Sq. Ft.	None	None	Yes	None

Parcel/ Item No.	Apparent Owner	Area	Slopes	Drainage	Temp. Const. Rights	Other Rights & Bldgs.
4	Donnabeth Davis	854 ± Sq. Ft.	None	None	Yes	None
5	Richard T. Boles	93 ± Sq. Ft.	None	None	Yes	None
6	257 Deering LLC	1868 ± Sq. Ft.	None	None	Yes	None
7	University of Maine System	None	None	None	Yes	None
8	University of Maine System	None	None	None	Yes	None
9	City of Portland	2433 ± Sq. Ft.	None	None	Yes	None
10	University of Maine System	None	None	None	Yes	None
11	University of Maine System	None	None	None	Yes	None
12	Vincent A. Ciampi, Jr.	None	None	None	Yes	None
13	City of Portland	4513 ± Sq. Ft. (Entire Lot)	None	None	None	None
14	City of Portland	1099 ± Sq. Ft. (Entire Lot)	None	None	None	None

Pursuant to Title 23 M.R.S. Section 651, that portion of State Highway "3"/Brighton Avenue, which lies southeasterly of the beforedescribed and redefined right of way limits of State Highway "76" (Deering Avenue) from about Sta. 5+43 Lt. of the State Highway "76"/Deering Avenue Base Line southeasterly to its intersection with Bedford Street, as shown on the before referenced Right of Way Map (D.O.T. File No. 3-641), upon completion of the project, shall hereafter be the responsibility of the City of Portland.

DOC :4635 BK:36372 PG:11
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
01/27/2020, 09:49:26A
Register of Deeds Nancy A. Lane E-RECORDED

PORTLAND
1862400
WIN: 018624.00

The Department of Transportation directs that this Notice of Layout and Taking be recorded in the Registry of Deeds of Cumberland County and filed with the City Clerk of the City of Portland and with the County Commissioners of Cumberland County and published in "The Portland Press Herald" a newspaper of general circulation in the County where said highway is located, and also directs that a copy of the Right-of-Way Map be filed with the County Commissioners of said County and also that Notice be sent by Certified Mail to any Owners and Mortgagees of Record.

Dated at Augusta, Maine

12/10/19
Date

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

Bruce A. Van Note, Commissioner

STATE OF MAINE
COUNTY OF KENNEBEC

Date December 18, 2019

Personally appeared the above named Bruce A. Van Note, Commissioner, Department of Transportation, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the State of Maine.

Before me, Shelly Wood
Notary Public
Print Name:
My Commission Expires:

SHELLY WOOD
NOTARY PUBLIC
KENNEBEC COUNTY
MAINE
MY COMMISSION EXPIRES DECEMBER 26, 2025

APPROVED BY
AWARDED BY
CONCURRED
NOTED
COMMISSIONER OF TRANSPORTATION
12/18/19
DATE

SHELLY WOOD
NOTARY PUBLIC
KENNEBEC COUNTY
MAINE
MY COMMISSION EXPIRES DECEMBER 26, 2025

LAND EXCHANGE AGREEMENT
BETWEEN
CITY OF PORTLAND AND
THE UNIVERSITY OF MAINE SYSTEM

THIS AGREEMENT is made this 12th day of March, 2018 between the City of Portland, a body politic and corporate with a mailing address of 389 Congress Street, Portland, Maine 04101("City"), and the University of Maine System, acting through the University of Southern Maine, with a mailing address of, 5703 Alumni Hall, Orono, Maine 04469 ("University").

RECITALS

Whereas, by Order 26-13/14 dated August 5, 2013, the City approved the Brighton-Deering-Falmouth Intersection Study as a Master Plan in substantially the form included in a certain August 2013 Final Report prepared by Vanasse Hangen Brustlin, Inc. (the "Report"); and

Whereas, the City, through a separate agreement with the Maine Department of Transportation, desires to construct, operate, and maintain a proposed roundabout at the intersection of Brighton Avenue/Deering Avenue/Falmouth Street (the "Project") as generally depicted sheet 1 of the plan entitled State of Maine Department of Transportation Right Of Way Map, Project No._____, dated July 2017, a copy of which is attached hereto as Exhibit A and made a part hereof (the "Plan"); and

Whereas, portions of the Project are to be constructed on land owned by the University, which land is depicted on the Plan as Parcel No. (7) and Parcel No. (8) and more particularly described in Exhibits B and C attached hereto and made a part hereof, and which the University shall convey to the City pursuant to the terms of this Agreement; and

Whereas, in exchange for such conveyances, the City shall pursue the discontinuance of the green shaded portion of Brighton Avenue between Falmouth Street and Bedford Street on sheet 2 of the Plan, which portion is more particularly described in D attached hereto and made a part hereof (the "Brighton Avenue Land"), and convey the City's interest in the Brighton Avenue Land to the University.

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, City and University hereby agree as follows:

1. Conveyance of University Property to City. For the sum of one dollar and other valuable consideration,

    a. The University will convey to City the parcel of land depicted on Exhibit A as Parcel No. (7), which parcel contains approximately 4,513 square feet and is a portion of property conveyed to the University of Maine by deeds recorded in

the Cumberland County Registry of Deeds in Book 3047, Page 354; Book 3053, Page 326; Book 3056, Page 504; and Book 3079, Page 537.

b. The University will convey to City the parcel of land depicted on Exhibit A as Parcel No. (8), which parcel contains approximately 1,099 square feet and is a portion of property conveyed to the University of Maine by deed recorded in the Cumberland County Registry of Deeds in Book 2370, Page 135. Parcels No. (7) and (8) are referred to herein as the "University Property."

c. In the event that updates to the plan require adjustments to the descriptions of the University Property described in Exhibits B & C, the parties shall agree on revised on descriptions to be included in the deed conveying the University Property to the City.

2. Discontinuance of Brighton Avenue Land; Conveyance of City Property to University.

a. Upon completion of the Project, and subject to the State lifting its state highway designation and the reversion of jurisdiction to the City, and subject to the City obtaining all other necessary approvals, the City will discontinue the "Brighton Avenue Land" subject to any utility easements of record and a utility easement and public easement to be retained by the City. Provided that the City discontinues the Brighton Avenue Land, the University shall waive its right to any damages resulting from the discontinuance.

b. Within 180 days after completion of the Project, and provided that the City Council has discontinued the Brighton Avenue Land and any applicable appeal periods have passed, the City shall convey to the University, by municipal quitclaim deed, its interest in the Brighton Avenue Land (the "City Property").

c. Subject to the provisions of section 9 below, in the event that the City does not discontinue the Brighton Avenue Land and convey its interest in the Brighton Avenue Land land to the University: (1) the City will hire a licensed appraiser, to be agreed upon by the parties, to prepare an appraisal report for the University Property at the City's expense; and (2) within 30 days of receipt of the appraiser's final report, the City will pay the University the appraised value of the University Property.

3. Title And Due Diligence.

a. Each party will have from the date first set forth above (the "Effective Date") until 4:00 PM Eastern Daylight Savings Time on the day that is ninety (90) days after the Effective Date (the "Due Diligence Period") to complete any survey, environmental review and title examinations, and to undertake such other investigations, testing or inspections as it shall deem appropriate.

b. During the Due Diligence Period, the University agrees to provide the City with open access, during normal business hours, to any and all of the University's files containing information about the University Property, including, without limitation, reports on soil conditions or other kinds of technical reports regarding the University Property, any information related to infrastructure on the University Property or infrastructure agreements and any information regarding restrictions, covenants or conditions affecting the University Property or the City's intended use of the University Property for roundabout purposes.

c. Each party will have until the end of the Due Diligence Period to deliver to the other any written objections to title, environmental, or survey matters that the party determines materially affects the use or the cost of development of or construction on the property. Objections not made prior to the end of the Due Diligence Period will be deemed waived; provided, however, that objections pertaining to matters of record first appearing after the end of the Due Diligence Period may be made at any time prior to the closing.

d. Option to Cure. In the event of a title, survey or environmental objection by a party, the conveying party will have the option, but not the obligation, to cure the objection and will notify other of its election within ten (10) business days after receipt of the objection. In the event that the conveying party elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the parties may agree, to cure the objection. In the event that the conveying party does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to the other's reasonable satisfaction, the objecting party will have the option to (1) terminate this Agreement, after which neither party will have any further obligation or liability to the other under this Agreement, (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so).

4. Conditions Precedent to Closing.

a. The City shall have no obligation to close on the transactions contemplated by this Agreement if the City decides, in its sole discretion, not to proceed with the construction of the Project. In the event the City decides not to proceed with the Project, this Agreement shall terminate and the parties shall have no further obligations to each other. Provided, however, that in the event that the City terminates this Agreement after the University has conveyed the University Property to the City, the City shall reconvey the University Property to the City as set forth in section 9(e).

5. University's Representations. The University represents to City that the following are true as of the date of this Agreement and will be true as of the dates of the City Property Closing and University Property Closing:

   a. It has full power and authority to enter into this Agreement and to carry out its obligations under this Agreement.

   b. This Agreement has been duly authorized, executed, and delivered and is a legal, valid, and binding agreement of University, enforceable in accordance with its terms, subject to the University of Maine System Board of Trustees approval. The execution, delivery, and performance of this Agreement by University will not violate any judgment or order applicable to University or University's instruments of organization, governance or operation, and will not result in any material breach of, or constitute a material default under, or result in the creation of any material lien, charge, security interest, or other encumbrance upon the University Property or any note, bond, indenture, mortgage, deed of trust, bank loan, or credit agreement to which University is a party or by which the University Property is bound.

   c. University has not received any written notice of any pending condemnation, violation of law, or other legal action of any kind materially and adversely affecting the University Property.

   d. University has no knowledge of any pending or threatened litigation, administrative action, or governmental investigation or examination (including, but not limited to, environmental investigations, examinations, claims, and demands) concerning the University Property.

   e. No third party has any right to acquire all or any part of the University Property.

6. City's Representations. City represents to the University that the following are true as of the date of this Agreement and will be true as of the dates of the City Property Closing and the University Property Closing:

   a. It has full power and authority to enter into this Agreement and to carry out its obligations under this Agreement.

   b. This Agreement has been duly authorized, executed, and delivered and is a legal, valid, and binding agreement of City, enforceable in accordance with its terms. The execution, delivery, and performance of this Agreement by City will not violate any judgment or order applicable to City or City's instruments of organization, governance or operation, and will not result in any material breach of, or constitute a material default under, or result in the creation of any material lien, charge, security interest, or other encumbrance upon the City Property or any note, bond, indenture, mortgage, deed of trust, bank loan,

or credit agreement to which City is a party or by which the City Property is bound.

c. City has not received any written notice of any pending condemnation, violation of law, or other legal action of any kind materially and adversely affecting the City Property.

d. University has no knowledge of any pending or threatened litigation, administrative action, or governmental investigation or examination (including, but not limited to, environmental investigations, examinations, claims, and demands) concerning the City Property.

7. Property Conveyed As Is, Where Is. Each party acknowledges that it will have an opportunity to inspect the property being conveyed to it, and to hire professionals to do so, and that the properties will be conveyed "as is, where is" and "with all faults." Neither party makes any representations or warranties with respect to the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the property, or as to the fitness of the property for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues, or the environmental, mechanical, or structural condition of the property. Acceptance by the parties of the respective deeds at the closings shall be deemed to be full performance and discharge by the conveying party of every agreement and obligation contained herein except as expressly set forth herein.

8. Closing For The University Property. Time is of the essence in the performance of this Agreement. The closing for the University Property shall be held at City Hall, 389 Congress Street, Portland, Maine at a time agreeable to the parties on or before the day that is 30 days after the end of the Due Diligence Period (the "University Property Closing Date"). At the Closing:

a. The University shall convey the University Property to City by quitclaim deed with covenant. Title shall be good and insurable title, free and clear of all liens and encumbrances except (i) easements described herein; (ii) easements for utilities servicing the property, and (iii) City ordinances.

b. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement, and for the City to obtain owners title insurance in form reasonably acceptable to the City.

c. Each party shall deliver to the other evidence, reasonably satisfactory to other's counsel, that the transaction has been approved by the parties' respective governing bodies, and that the individuals acting with respect to the Closing and executing documents on behalf the parties are authorized to do so.

d. The recording fee for the deed of conveyance shall be paid for by the City.

9. Closing For The City Property. Subject to the provisions of section 2 above, the closing for the City Property shall be held at City Hall, 389 Congress Street, Portland, Maine at a time agreeable to the parties on or before the day that is 180 days after completion of the Project, provided that the City Council has discontinued the Brighton Avenue Land and any applicable appeal periods have passed. At the closing:

   a. The City shall convey the City Property to the University by municipal quitclaim deed. Title shall be good and insurable title, free and clear of all liens and encumbrances except (i) the public and utility easements retained by the City; (ii) easements for utilities servicing the property, and (iii) City ordinances.

   b. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement, and for the University to obtain owners title insurance in form reasonably acceptable to the University.

   c. Each party shall deliver to the other evidence, reasonably satisfactory to other's counsel, that the transaction has been approved by the parties' respective governing bodies, and that the individuals acting with respect to the Closing and executing documents on behalf the parties are authorized to do so.

   d. The recording fee for the deed of conveyance shall be paid for by the University.

   e. Notwithstanding anything to the contrary herein, in the event that the City or the Maine Department of Transportation decide not to fund or otherwise proceed with the Project, the City shall have the right to reconvey the University Property to the University in lieu of making the payment described in section 2(c). The University will cooperate with the City in obtaining any regulatory approvals required for the reconveyance, which shall be obtained at the City's expense.

10. Post-Closing Matters:

   a. During construction of the Project, the University will cede its use of a 9,500 square foot parking lot adjacent to the Brighton Avenue Land (the "Brighton Avenue Parking Lot Property"), resulting in the elimination of 26 parking spaces. The Brighton Avenue Parking Lot Property will be graded, loamed, and seeded as part of the Project by the City and at no cost to the University. Title to this Brighton Avenue Parking Lot Property will remain in the

University. The parties shall enter into a separate license agreement to allow the City or its contractors to enter the University's land to perform such grading, loaming, and seeding and other work associated with the Project.

b. Subject to applicable zoning and land use regulations and any other applicable laws, rules and regulations, the University and the City will work cooperatively to create signage and landscaping for the Project.

c. While the streets are open during construction of the Project, the City will allow the University, at the University's sole expense, to update and replace various utility lines connecting the University's Law School with the core of the University Campus, provided that such work does not delay the Project schedule.

d. The University and the City will work cooperatively on the Project's construction schedule in order to minimize scheduling conflicts during major University and City events.

e. Subject to applicable zoning and land use regulations and any other applicable laws, rules, and regulations, the City will support the University in its efforts to locate parking spaces to replace the Brighton Avenue Parking Lot on other parcels within the University campus should the University choose to do so. All costs associated with replacing the Brighton Avenue Parking Lot will be borne by the University.

11. Miscellaneous.

a. This Agreement constitutes the entire agreement between the parties relating to the subject hereof, and any prior agreements pertaining thereto, whether oral or written, have been merged and integrated into this Agreement. No subsequent modification of any of the terms of this Agreement shall be valid, binding upon the parties or enforceable unless made in writing and signed by the parties.

b. Any obligations in this Agreement that by its terms are intended to be performed after termination or Closing shall survive the same.

c. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the recipient at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

For The City:	City of Portland ATTN: City Manager 389 Congress Street Portland, ME 04101
With a copy to:	The Office of the Corporation Counsel at the same address.
For The University:	M. F. Chip Gavin Chief Facilities Management and General Services Officer 25 Bedford Street Portland, ME 04101
With a copy to:	General Counsel Office 46 University Dr. Augusta ME, 04330

d. As an alternative to physical delivery, any signed document and written notice may be delivered in electronic form by facsimile or email. Documents with original signatures shall be provided upon request of any party.

e. This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. All parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

f. This contract shall be binding upon and inure to the benefit of the successors and assigns of the parties.

g. No waiver of any breach of any one or more of the conditions of this Agreement by either party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.

h. The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.

i. The City and Buyer each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.

j. This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

IN WITNESS WHEREOF, the said CITY OF PORTLAND has caused this Agreement to be signed and sealed by Jon P. Jennings, its City Manager, thereunto duly authorized, and UNIVERSITY OF MAINE SYSTEM has caused this Agreement to be signed and sealed by M.F. Chip Gavin, its Chief Facilities Management and General Services Officer, thereunto duly authorized, as of the day and date first above written.

CITY OF PORTLAND

Witness: _____ By: _____
Jon P. Jennings
Its City Manager

UNIVERSITY OF MAINE SYSTEM

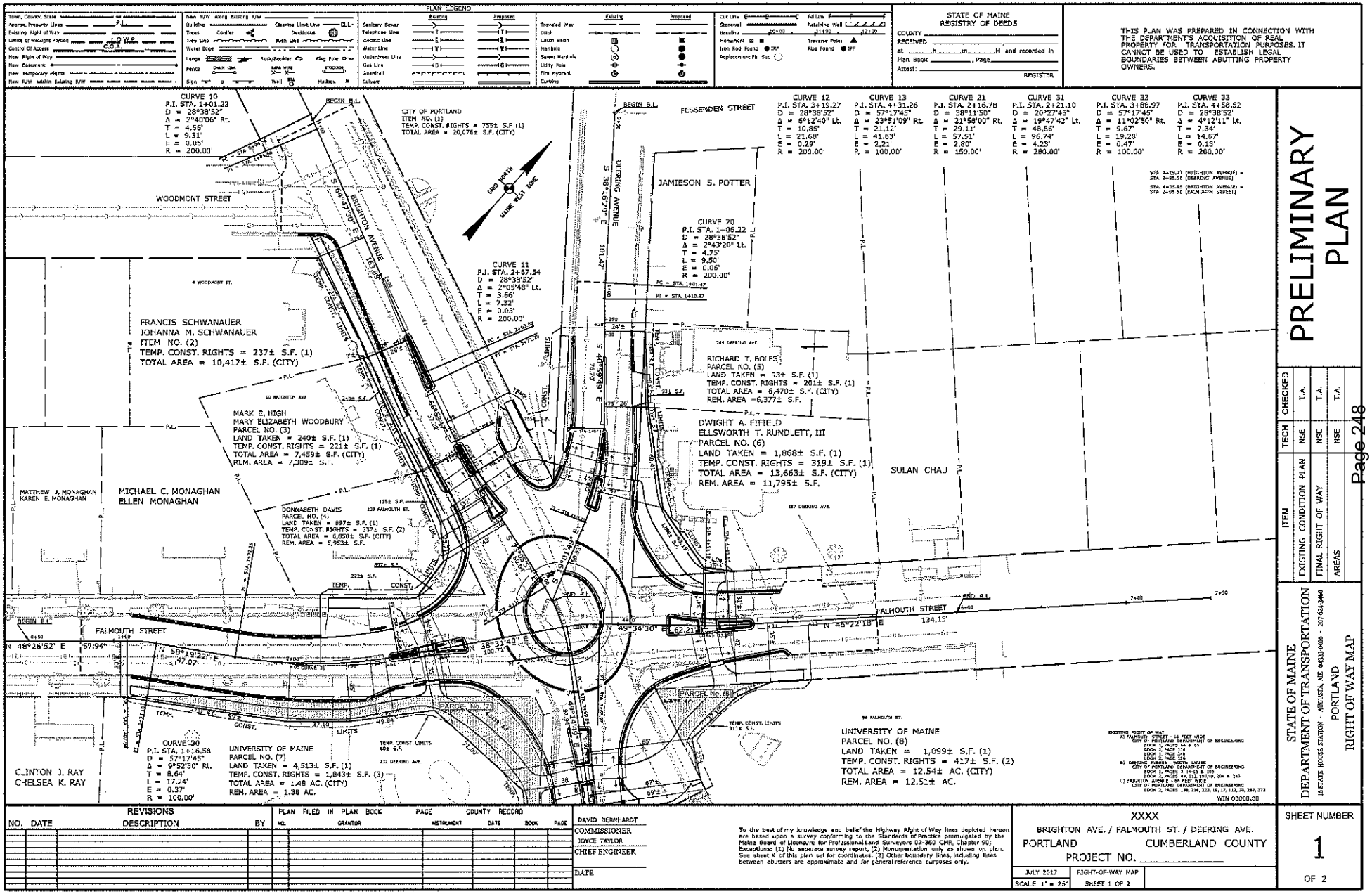
Witness: _____ By: _____
M.F. Chip Gavin
Its Chief Facilities Management and General Services Officer

Approved as to form:

_____
City Corporation Counsel's Office

EXHIBIT A

(Copy of State of Maine Department of Transportation Right Of Way Map, Project No._____, dated July 2017)


PLAN LEGEND
CURVE 10
P.I. STA. 1+01.22
D = 28°38'52"
Δ = 2°40'06" Rt.
T = 4.66'
L = 9.31'
E = 0.05'
R = 200.00'
CURVE 11
P.I. STA. 2+67.54
D = 28°38'52"
Δ = 2°05'48" Lt.
T = 3.66'
L = 7.32'
E = 0.03'
R = 200.00'
CURVE 12
P.I. STA. 3+19.27
D = 28°38'52"
Δ = 6°12'40" Lt.
T = 10.85'
L = 21.68'
E = 0.29'
R = 200.00'
CURVE 13
P.I. STA. 4+31.26
D = 57°17'45"
Δ = 23°51'09" Rt.
T = 21.12'
L = 41.63'
E = 2.21'
R = 100.00'
CURVE 20
P.I. STA. 1+06.22
D = 28°38'52"
Δ = 2°43'20" Lt.
T = 4.75'
L = 9.50'
E = 0.06'
R = 200.00'
CURVE 21
P.I. STA. 2+16.78
D = 38°11'50"
Δ = 21°58'00" Rt.
T = 29.11'
L = 57.51'
E = 2.80'
R = 150.00'
CURVE 30
P.I. STA. 1+16.58
D = 57°17'45"
Δ = 9°52'30" Rt.
T = 8.64'
L = 17.24'
E = 0.37'
R = 100.00'
CURVE 31
P.I. STA. 2+21.10
D = 20°27'46"
Δ = 19°47'42" Lt.
T = 48.86'
L = 96.74'
E = 4.23'
R = 280.00'
CURVE 32
P.I. STA. 3+88.97
D = 57°17'45"
Δ = 11°02'50" Rt.
T = 9.67'
L = 19.28'
E = 0.47'
R = 100.00'
CURVE 33
P.I. STA. 4+58.52
D = 28°38'52"
Δ = 4°12'11" Lt.
T = 7.34'
L = 14.67'
E = 0.13'
R = 200.00'
STATE OF MAINE
REGISTRY OF DEEDS
COUNTY
RECEIVED
at h m M and recorded in
Plan Book , Page
Attest:
REGISTER
THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.
BEGIN P.I.
END P.I.
FESSENDEN STREET
DEERING AVENUE
BRIGHTON AVENUE
WOODMONT STREET
FALMOUTH STREET
GRID NORTH
MAINE WEST ZONE
JAMIESON S. POTTER
FRANCIS SCHWANAUER
JOHANNA M. SCHWANAUER
ITEM NO. (2)
TEMP. CONST. RIGHTS = 237± S.F. (1)
TOTAL AREA = 10,417± S.F. (CITY)
MARK E. HIGH
MARY ELIZABETH WOODBURY
PARCEL NO. (3)
LAND TAKEN = 240± S.F. (1)
TEMP. CONST. RIGHTS = 221± S.F. (1)
TOTAL AREA = 7,459± S.F. (CITY)
REM. AREA = 7,309± S.F.
MATTHEW J. MONAGHAN
KAREN E. MONAGHAN
MICHAEL C. MONAGHAN
ELLEN MONAGHAN
DONNABETH DAVIS
PARCEL NO. (4)
LAND TAKEN = 897± S.F. (1)
TEMP. CONST. RIGHTS = 237± S.F. (2)
TOTAL AREA = 6,850± S.F. (CITY)
REM. AREA = 5,953± S.F.
CLINTON J. RAY
CHELSEA K. RAY
UNIVERSITY OF MAINE
PARCEL NO. (7)
LAND TAKEN = 4,513± S.F. (1)
TEMP. CONST. RIGHTS = 1,843± S.F. (3)
TOTAL AREA = 1.48 AC. (CITY)
REM. AREA = 1.38 AC.
CITY OF PORTLAND
ITEM NO. (1)
TEMP. CONST. RIGHTS = 755± S.F (1)
TOTAL AREA = 20,076± S.F. (CITY)
RICHARD T. BOLES
PARCEL NO. (5)
LAND TAKEN = 93± S.F. (1)
TEMP. CONST. RIGHTS = 201± S.F. (1)
TOTAL AREA = 6,470± S.F. (CITY)
REM. AREA =6,377± S.F.
DWIGHT A. FIFIELD
ELLSWORTH T. RUNDLETT, III
PARCEL NO. (6)
LAND TAKEN = 1,868± S.F. (1)
TEMP. CONST. RIGHTS = 319± S.F. (1)
TOTAL AREA = 13,663± S.F. (CITY)
REM. AREA = 11,795± S.F.
SULAN CHAU
UNIVERSITY OF MAINE
PARCEL NO. (8)
LAND TAKEN = 1,099± S.F. (1)
TEMP. CONST. RIGHTS = 417± S.F. (2)
TOTAL AREA = 12.54± AC. (CITY)
REM. AREA = 12.51± AC.
PARCEL No. (8)
TEMP. CONST. LIMITS
313± S.F.
TEMP. CONST. LIMITS
602± S.F.
TEMP. CONST. LIMITS
1,843± S.F.
TEMP. CONST. LIMITS
201± S.F.
TEMP. CONST. LIMITS
319± S.F.
TEMP. CONST. LIMITS
417± S.F.
EXISTING RIGHT OF WAY
A) FALMOUTH STREET - 66 FEET WIDE
CITY OF PORTLAND DEPARTMENT OF ENGINEERING
BOOK 1, PAGES 94 & 95
BOOK 2, PAGE 110
BOOK 3, PAGE 148
BOOK 5, PAGE 126
B) DEERING AVENUE - WIDTH VARIES
CITY OF PORTLAND DEPARTMENT OF ENGINEERING
BOOK 1, PAGES 1, 14-15 & 102
BOOK 2, PAGES 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 204 & 243
C) BRIGHTON AVENUE - 66 FEET WIDE
CITY OF PORTLAND DEPARTMENT OF ENGINEERING
BOOK 2, PAGES 198, 216, 222, 19, 17, 112, 26, 267, 273
WIN 000000.00
REVISIONS
NO. DATE DESCRIPTION BY
PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD
NO. GRANTOR INSTRUMENT DATE BOOK PAGE
DAVID BERNHARDT
COMMISSIONER
JOYCE TAYLOR
CHIEF ENGINEER
DATE
To the best of my knowledge and belief the Highway Right of Way lines depicted hereon are based upon a survey conforming to the Standards of Practice promulgated by the Maine Board of Licensure for Professional Land Surveyors (32-360 CMR, Chapter 90; Exceptions: (1) No separate survey report, (2) Monumentation only as shown on plan. See sheet X of this plan set for coordinates. (3) Other boundary lines, including lines between abutters are approximate and for general reference purposes only.
XXXX
BRIGHTON AVE. / FALMOUTH ST. / DEERING AVE.
PORTLAND CUMBERLAND COUNTY
PROJECT NO.
JULY 2017 RIGHT-OF-WAY MAP
SCALE 1" = 25' SHEET 1 OF 2
PRELIMINARY PLAN
ITEM TECH CHECKED
EXISTING CONDITION PLAN NSE T.A.
FINAL RIGHT OF WAY NSE T.A.
AREAS NSE T.A.
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
PORTLAND
RIGHT OF WAY MAP
SHEET NUMBER
1
OF 2
EXHIBIT A
Date:9/15/2017
Username: common
Division: HIGHWAY
Filename: ...\Microstation\001_RWPlan1.dgn
Page 248

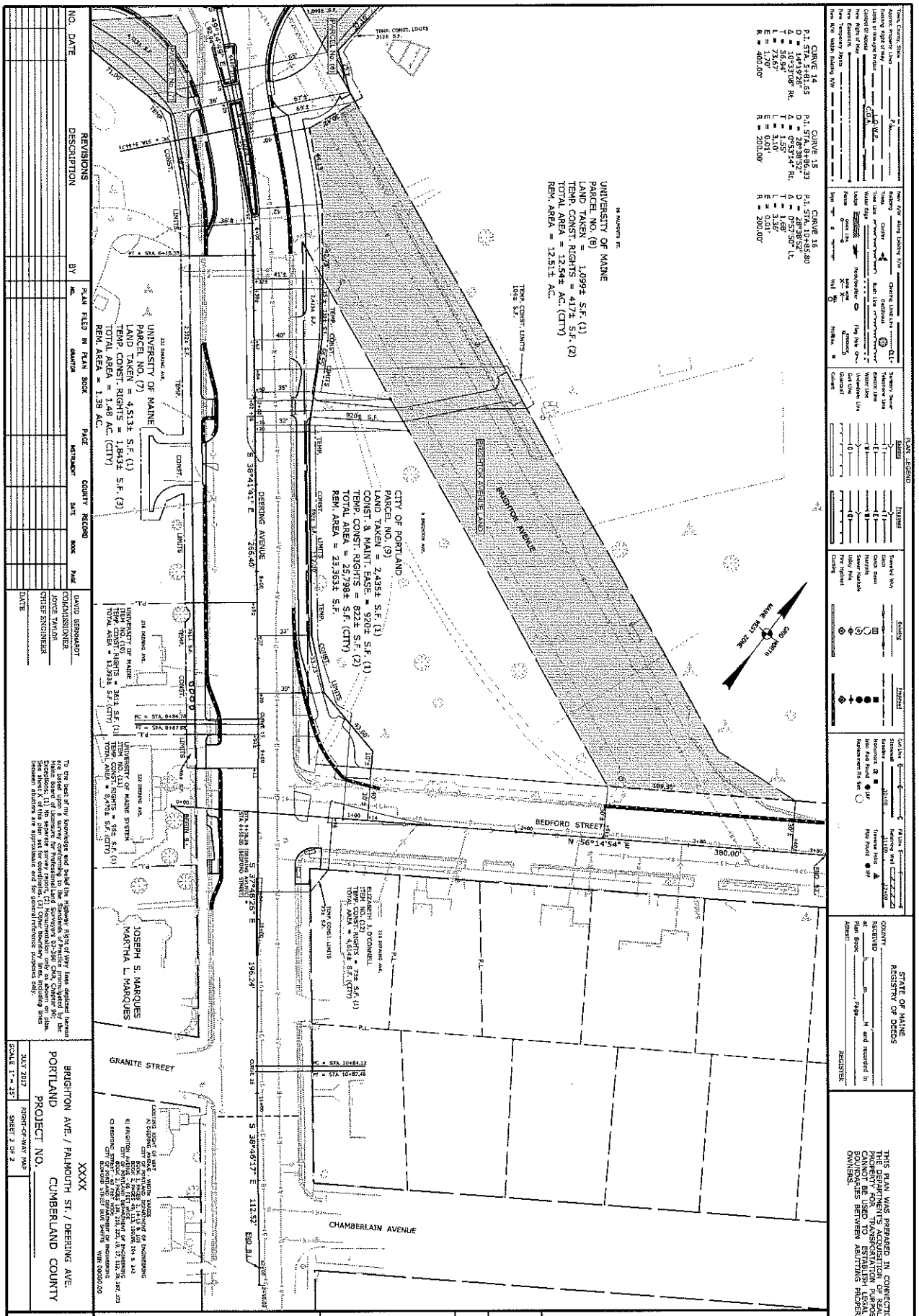

CURVE 14
P.I. STA. 5+81.55
D = 14°19'26"
D = 10°55'08" Rt.
T = 36.04'
L = 73.67'
E = 1.70'
R = 400.00'
CURVE 15
P.I. STA. 8+86.33
D = 28°38'52"
D = 15°55'14" Rt.
T = 51.57'
L = 3.10'
E = 0.01'
R = 200.00'
CURVE 16
P.I. STA. 10+85.80
D = 28°38'52"
D = 15°55'14" Lt.
T = 51.57'
L = 3.36'
E = 0.01'
R = 200.00'
99 HANCOCK PL.
UNIVERSITY OF MAINE
PARCEL NO. (8)
LAND TAKEN = 1,099± S.F. (1)
TEMP. CONST. RIGHTS = 417± S.F. (2)
TOTAL AREA = 12.54± AC. (CITY)
REM. AREA = 12.51± AC.
UNIVERSITY OF MAINE
PARCEL NO. (7)
LAND TAKEN = 4,513± S.F. (1)
TEMP. CONST. RIGHTS = 1,843± S.F. (3)
TOTAL AREA = 1.48 AC. (CITY)
REM. AREA = 1.38 AC.
CITY OF PORTLAND
PARCEL NO. (9)
LAND TAKEN = 2,435± S.F. (1)
CONST. & MAINT. EASE. = 9201± S.F. (2)
TEMP. CONST. RIGHTS = 822± S.F. (2)
TOTAL AREA = 25,798± S.F. (CITY)
REM. AREA = 23,363± S.F.
BRIGHTON AVENUE
BRIGHTON AVENUE LAND
DEERING AVENUE
BEDFORD STREET
GRANITE STREET
CHAMBERLAIN AVENUE
JOSEPH S. MARQUES
MARTHA L. MARQUES
ELIZABETH J. O'CONNELL
ITEM NO. (12)
TEMP. CONST. RIGHTS = 758± S.F. (1)
UNIVERSITY OF MAINE SYSTEM
ITEM NO. (11)
TEMP. CONST. RIGHTS = 261± S.F. (1)
TOTAL AREA = 13,932± S.F. (CITY)
UNIVERSITY OF MAINE
ITEM NO. (10)
TEMP. CONST. RIGHTS = 1,647± S.F. (1)
TOTAL AREA = 8,470± S.F. (CITY)
N 56°14'54" E
380.00'
S 37°48'26" E
196.24'
S 38°45'17" E
112.52'
PC = STA. 10+81.12
PT = STA. 10+87.46
PC = STA. 8+84.78
PT = STA. 8+87.88
PC = STA. 5+42.38
PT = STA. 5+50.12
PLAN LEGEND
REVISIONS
NO. DATE DESCRIPTION BY
PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD
GRANTOR INSTRUMENT STATE BOOK PAGE
DAVID BERNHARDT
COMMISSIONER
JOYCE TAYLOR
CHIEF ENGINEER
DATE
To the best of my knowledge and belief this Highway Right of Way lines depicted hereon are based upon a survey conforming to the Standards of Practice promulgated by the Board of Licensure for Professional Surveyors. Exceptions: (1) No separate survey report, (2) Monumentation only as shown on plan. See sheet X of this plan set for coordinates, (3) Other boundary lines, including lines between abutters are approximate and for general reference purposes only.
STATE OF MAINE
REGISTRY OF DEEDS
COUNTY
RECEIVED
at ____h ____m and recorded in
Plan Book ____ Page ____
ATTEST:
REGISTER
THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY INTERESTS. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.
XXXX
BRIGHTON AVE. / FALMOUTH ST. / DEERING AVE.
PORTLAND CUMBERLAND COUNTY
PROJECT NO.
JULY 2017
SCALE 1" = 25'
RIGHT-OF-WAY MAP
SHEET 2 OF 2
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
PORTLAND
RIGHT OF WAY MAP
SHEET NUMBER 2 OF 2
ITEM | TECH | CHECKED
EXISTING CONDITION PLAN | NSE | T.A.
FINAL RIGHT OF WAY | NSE | T.A.
AREAS | NSE | T.A.
PRELIMINARY PLAN

EXHIBIT B

Description of Parcel No. (7)

A certain lot or parcel of land located on the southeasterly side of Falmouth Street, southwesterly side of Brighton Avenue and the southwesterly side of Deering Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at point on the southeasterly sideline of Falmouth Street, said point of beginning being located N 48°34'53" E a distance of Sixty-Nine and 93/100 (69.93) feet from the intersection of the northeasterly sideline of Exeter Street with the southeasterly sideline of said Falmouth Street. Thence:

1. N 48°34'53" E by said Falmouth Street a distance of Two Hundred Forty-Three and 79/100 (243.79) feet to a point on the southerly sideline of Brighton Avenue;

2. S 67°27'04" E by said Brighton Avenue a distance of Eleven and 80/100 (11.80) feet to a point on the southwesterly sideline of Deering Avenue;

3. S 38°46'34" E by said Deering Avenue a distance of One Hundred Eleven and 32/100 (111.32) feet to a point;

4. N 47°34'40" W through land of the Grantor a distance of Sixty-Five and 82/100 (65.82) feet to a point;

5. N 88°45'17" W though said land of the Grantor a distance of Seventy-One and 00/100 (71.00) feet to a point;

6. S 40°44'35" W through said land of the Grantor a distance of Forty-Nine and 84/100 (49.84) feet to a point;

7. S 48°14'39" W through said land of the Grantor a distance of Thirty-Seven and 10/100 (37.10) feet to a point;

8. S 57°25'25" W through said land of the Grantor a distance of Ninety-Nine and 27/100 (99.27) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 4,513 square feet, more or less, and being a portion of property as described in deeds to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 3047, Page 354, Book 3053, Page 326, Book 3056, Page 504 and Book 3079, Page 537.

EXHIBIT C

Description of Parcel No. (8)

A certain lot or parcel of land located on the southeasterly side of Falmouth Street and the northeasterly side of Brighton Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at the intersection of the southeasterly sideline of Falmouth Street with the northeasterly sideline of Brighton Avenue. Thence:

1. N 45°03'56" E by said Falmouth Street a distance of Sixty-Seven and 91/100 (67.91) feet to a point;

2. S 25°30'06" W through land of the Grantor a distance of Twenty-One and 27/100 (21.27) feet to a point;

3. S 05°00'58" W through said land of the Grantor a distance of Thirty-Seven and 10/100 (37.10) feet to a point;

4. S 53°19'05" E through said land of the Grantor a distance of Twenty-Five and 06/100 (25.06) feet to the northeasterly sideline of said Brighton Avenue;

5. N 67°27'04" W by said Brighton Avenue a distance of Sixty and 39/100 (60.39) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 1,099 square feet, more or less, and being a portion of property as described in a deed to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 2370, Page 135.

EXHIBIT D

Description of the Brighton Avenue Land

A certain portion of a right of way known as Brighton Avenue located in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at the intersection of the northeasterly side of Brighton Avenue with the northwesterly sideline of Bedford Street. Thence:

1. S 56°16'26" W by the northwesterly side of said Bedford Street a distance of One Hundred Nine and 35/100 (109.35) feet to a point at land now or formerly of the City of Portland as described in a deed recorded in the Cumberland County Registry of Deeds in Book 1290, Page 35;

2. N 67°27'04" W by said land of the City of Portland a distance of Three Hundred Thirty-Four and 98/100 (334.98) feet to a point;

3. N 38°17'00" W through said Brighton Avenue a distance of Forty-Two and 75/100 (42.75) feet to a point;

4. N 47°55'58" W through said Brighton Avenue a distance of Forty-Four and 13/100 (44.13) feet to a point;

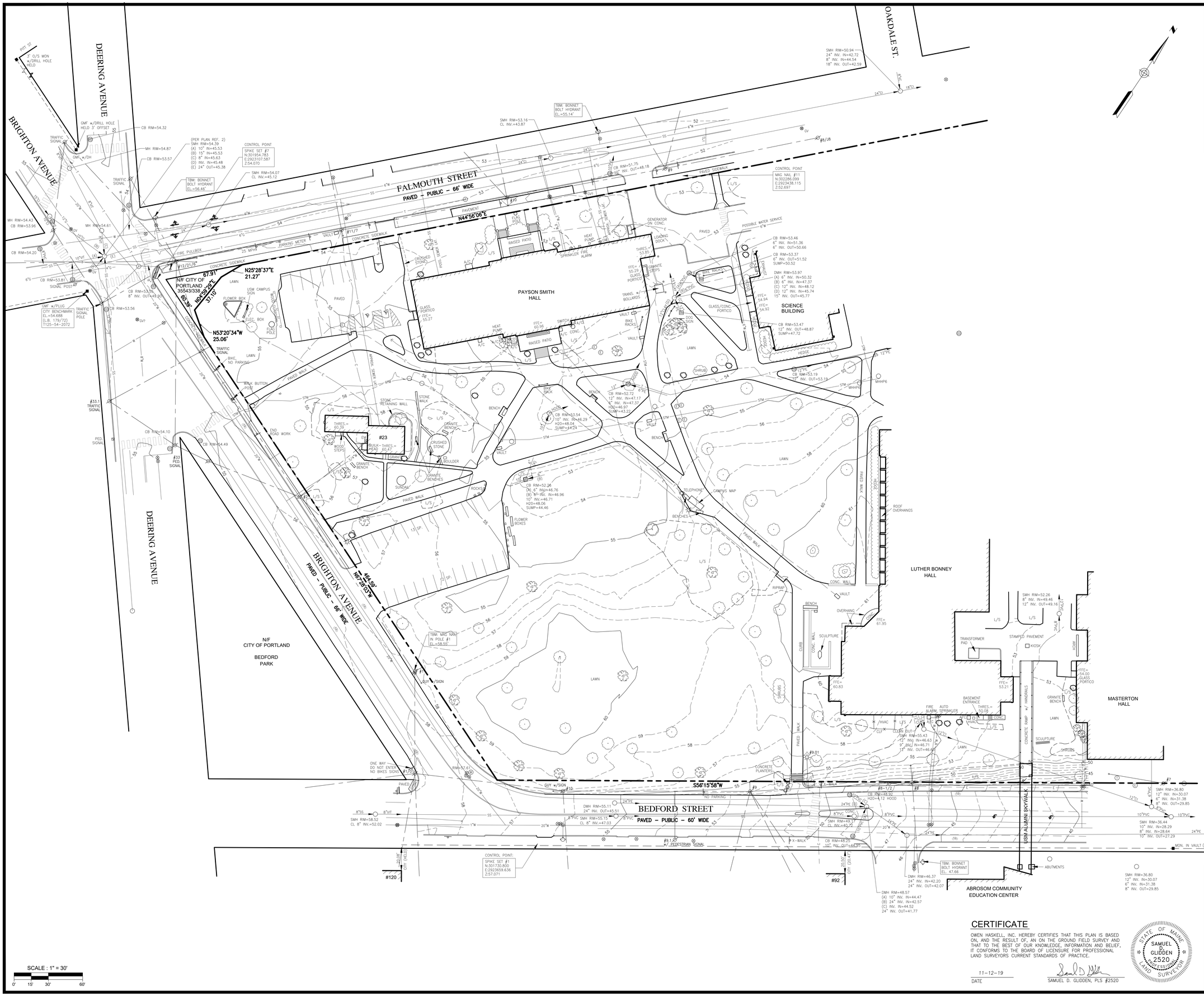
5. N 22°06'16" E through said Brighton Avenue a distance of Thirty and 42/100 (30.42) feet to a point on the northeasterly sideline of said Brighton Avenue and land now or formerly of the University of Maine as described in a deed recorded in said Registry in Book 2370, Page 135;

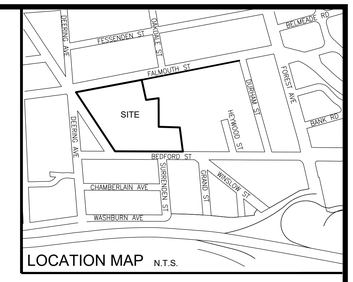
6. S 67°27'04" E by said land of the University of Maine a distance of Four Hundred Twenty-Eight and 19/100 (428.19) feet to a point;

7. N 84°24'41" E by said land of the University of Maine a distance of Fifty-Two and 91/100 (52.91) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 27,587 square feet, more or less, and being a portion of Brighton Avenue.





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
- SHRUB / BUSH
- FENCE
- CURB
- OVERHEAD WIRES
- E UNDERGROUND POWER
- C COMMUNICATION
- W WATER LINE
- G GAS LINE
- T TELEPHONE
- SD STORM DRAIN
- SS SANITARY SEWER
- STM STEAM/CONDENSATION LINES
- 50 1' CONTOUR
- IPF/IRF IRON PIPE OR ROD FOUND
- L/S LANDSCAPED AREA
- CONC. CONCRETE
- FFE FINISHED FLOOR ELEVATION
- THRES. THRESHOLD
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK / PAGE

PLAN REFERENCES

1. "BOUNDARY & TOPOGRAPHIC PLAN ON BEDFORD STREET, USM CAMPUS, PORTLAND, MAINE MADE FOR WOODARD & CURRAN, INC." SEPTEMBER 08, 2005 REV. 5 11-02-06 BY OWEN HASKELL, INC. JOB# 05-211.

2. "BRIGHTON-DEERING-FALMOUTH & BEDFORD-DEERING ROUNDABOUTS PRELIMINARY DESIGN PLANS, PREPARED FOR THE CITY OF PORTLAND" BY RANSOM CONSULTING, INC. DATED 2017-07-12 AND REVISED THROUGH 5-10-19. PROJECT NUMBER 141.06013

GENERAL NOTES

1. OWNER OF RECORD: UNIVERSITY OF MAINE SYSTEM
   P/O TAX MAP 114 BLOCK A LOT 1
   C.C.R.D. BOOK 2370 PAGE 135

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER COORDINATE DATA PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS.

3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM, NGVD 29. BENCHMARK UTILIZED IS A COPPER BOLT IN 3 FOOT OFFSET MONUMENT LOCATED AT THE SOUTHWEST CORNER OF THE BRIGHTON AVENUE AND FALMOUTH STREET INTERSECTION, SHOWN HEREON.

UTILITY NOTE

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

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.

11-12-19
DATE

SAMUEL D. GLIDDEN, PLS #2520

STATE OF MAINE · SAMUEL D GLIDDEN · 2520 · PROFESSIONAL LAND SURVEYOR

Boundary and Topograpic Survey
USM Portland Campus
96 Falmouth Street, Portland, Maine
Made for
Oak Point Associates
231 Main Street, Biddeford, Maine

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

DRAWN BY: SDG / JLW	DATE: NOV. 12, 2019	JOB NO. 2019-244 P	
CHECKED BY: SDG	SCALE: 1" = 30'	DRWG. NO. 1	

Section 3 – Evidence of State or Federal Approvals

The following State permits will be obtained for the work. Copies of these permits can be provided to the City once they are obtained, if requested:

- Maine Department of Environmental Protection Site Location of Development Act Minor Amendment (Submitted to the City of Portland for review concurrently with the submission of this permit application package)

- Maine Construction General Permit Notice of Intent

- Amended Maine Department of Environmental of Protection Air Emissions Permit

Section 4 – Zoning Analysis

The project is located within the R5 Zone. The project is also within the University of Southern Maine Overlay Zone, which is subject to the additional requirements in Section 8.10 of the Land Use Code. The Overlay Zone lists "classrooms, auditoriums, and concert and lecture halls" as permitted uses.

The City's USM overlay maps have not been updated for the portion of Brighton Avenue that has been removed/incorporated into the USM campus. However, it has been assumed that the setback from Noyes Park indicated will remain consistent with what the setback from Brighton Avenue was. Thus, the required setbacks and building height requirements are as follows:

Falmouth Street: 20'
Noyes Park (formerly Brighton Avenue setback): 10'
Bedford Street: 10'
Building Height (zone B): 75' maximum, 35' minimum.

The maximum impervious surface ratio for the total land area within the USM overlay zone is 66% (exclusive of public streets), and the maximum lot coverage is 40%. The following table summarizes the lot coverage and impervious ratio at three different stages of development on the campus:

	Parking Garage Completion[1]	Pre-Development[2]	Project Completion
Lot Coverage	30%	30%	33%
Impervious Area Ratio	55%	55%	56%

[1]Percentages taken from the zoning analysis table in Section 6 of the Site Plan Application for USM's Structured Parking Garage project approved in January 2022.

[2]Percentages include changes from the previously-submitted Deering Farmhouse relocation/addition project and incorporation of the portion of the Brighton Avenue right-of-way discussed in Section 2 of this application.

ZONING ANALYSIS Relevant Zone(s) R5, USM Overlay

All Projects:

	Required	Proposed
Lot Size	N/A	N/A
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	N/A	N/A
Front Yard Minimum	10' (Bedford St)	+/- 44'
Front Yard Maximum	N/A	N/A
Rear Yard	20' (Falmouth St)	+/- 160'
Yard Right	10' (Noyes Park)	+/- 33'
Yard Left	N/A	N/A
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	40%	33%
Minimum Lot Coverage	N/A	N/A
Maximum Height	75'	+/- 44'
Open Space	N/A	N/A
Maximum Impervious Area	66%	56%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	N/A	0 (No Change)
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	N/A	N/A	N/A
Height	N/A	N/A	N/A
Setback Reduction	N/A	N/A	N/A
Recreation Space	N/A	N/A	N/A
Maximum Accessory Building Length	N/A	N/A	N/A
Minimum Setbacks	N/A	N/A	N/A
Minimum Building Separation	N/A	N/A	N/A
Minimum Open Space	N/A	N/A	N/A
Explanatory Text 1 (optional): N/A			
Explanatory Text 2 (optional): N/A			
Explanatory Text 3 (optional): N/A			

Section 5 – Waiver Requests

A waiver is requested from the City of Portland Land Use Code Section 14.6.2.B.3 requirement to preserve at least 30% of the trees within the building setbacks that have a DBH of 10" or greater. The only trees within the building setbacks that have a DBH of 10" or greater are three trees along Bedford Street: a 26" DBH spruce tree, a 30" DBH spruce tree, and a 15" DBH birch tree. Due to the proposed location of the building and site amenities (sidewalks and stormwater treatment) along with the grading necessary to provide compliant access to the building, all three trees will need to be removed.

Land Use Code Section 14.6.2.B.4 provides an alternative avenue for meeting this requirement that consists of providing replacement trees in lieu of preserving the existing ones. We calculate that two new trees need to be provided as replacement for one of the existing trees greater than 16" DBH. The project will include planting six new street trees on the Bedford Street side of the building. Locating the trees on Bedford Street will help the roadway retain some of its existing characteristics while not interfering with site amenities such as sidewalks and subsurface utilities, most notably subsurface stormwater treatment in the turf area between the building and Bedford Street.

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.
Preservation of 30% or more of existing trees 10" DBH and higher within the setback areas	Land Use Code, Section 14.6.2.B.3, "All development subject to zoning setbacks shall preserve a minimum of 30% of existing trees 10 inches DBH or greater within the required setback area"	We are requesting a waiver to remove trees on Bedford Street and provide replacement trees in accordance with Table 14-D	The site features and grading necessary to provide compliant access to the building requires removal of the existing trees on Bedford Street. To comply with 14.6.2.B.4, six street trees are proposed on Bedford Street north of the building

Section 6 – Financial Capacity

The estimated cost for this project is between $56 million and $59 million. Attached is a copy of the University's commitment to fund the project.

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UNIVERSITY OF
SOUTHERN MAINE
Finance and Administration

October 31, 2022

Mr. Jonah DeWaters
Oak Point Associates
231 Main Street
Biddeford, ME 04005

Dear Mr. DeWaters:

The University of Southern Maine expects the Center for the Arts project to cost approximately $56 million to $59 million.

To fund the project, the University would utilize philanthropy and other University resources pursuant to approval by the University of Maine System Board of Trustees.

Thank you for your consideration.

Sincerely,

DocuSigned by:
Alexander E Porteous
73AFFEE3455845F...

Alexander E. Porteous
Chief Operation Officer & Chief Business Officer

Section 7 – Technical Ability

The University of Southern Maine (USM) is a public university with over 8,000 undergraduate and graduate students taking courses online and at campuses in Portland, Gorham, and Lewiston. Known for its academic excellence, student focus, and engagement with the community, USM provides students with hands-on experience that complements classroom learning and leads to employment opportunities in one of the nation's most desirable places to live. USM is a member of the University of Maine System, the State's largest educational enterprise that includes seven universities and an annual enrollment of nearly 30,000 students.

Oak Point Associates is a 75-employee, full-service interdisciplinary design and consulting organization providing a wide range of architectural, engineering, and planning services and an advantageous integrated design approach. These services include civil engineering, stormwater management design, municipal and state environmental permitting, and construction administration/management. With offices in Biddeford, Maine, and Portsmouth, New Hampshire, Oak Point Associates and has been serving the public and private sector for over 40 years. Our capabilities have been demonstrated through successful and award-winning projects for clients that include municipalities, universities and other educational institutions, state agencies, and private entities, as well as federal agencies such as the U.S. Navy, U.S. Fish and Wildlife Service, and U.S. General Services Administration.

Pfeiffer is a specialty design studio of Perkins Eastman providing architectural, interior design, programming, and master planning from locations in Los Angeles and New York City, supporting the firm's 24 offices. Our work is focused on new and existing educational and cultural buildings for non-profit, private and public clients. Fundamental to our design philosophy is our abiding sense of design as a collaborative undertaking. From this perspective, we approach each project without preconceived notions about style and aesthetics, responding uniquely to our client's ideas, site conditions, historic considerations and functional requirements.

Pfeiffer has planned and designed facilities for fine and performing arts for over 50 years. This work has spanned theaters of every shape and size for communities and academic institutions across the country and encompasses over five million square feet of space in projects ranging from feasibility studies to the renovation and reuse of existing facilities to design of new buildings for civic and academic use. Our architects, planners and interior designers have a particular passion for the arts and thrive on creating unique yet functional spaces for teaching, learning, production and design, practice, and performance.

Section 8 – Transportation Standards

The project has been designed to meet the City's Site Plan Review Standards. Compliance with the Transportation Standards (14-14.6.1) are summarized below:

Impact on Surrounding Street Systems (14-14.6.1(A))

The project is not proposing to construct additional parking areas. Instead, a 12' wide pull-off is proposed on Bedford Street that will allow for loading/unloading of passengers. To minimize the impact of the project on the traffic flow on Bedford Street, the pull-off is located outside of the vehicular and bicycle travel lanes. The pull-off will also double as a fire department access lane, and parking will not be permitted within it.

Access and Circulation (14-14.6.1(B))

Pedestrian Pathways

Due to the nature of the campus and location of parking lots/garages on the campus edges, there is a significant amount of pedestrian traffic through the project site, particularly through the campus green from the Law School and adjacent parking lot on Deering Avenue to Luther Bonney Hall. While the project will expand the campus green, pedestrian routes through the green will continue to provide internal pedestrian connections to the buildings on campus. The project will also include construction of a sidewalk on the north side Bedford Street to create a new pedestrian link between the existing sections of sidewalk on Bedford Street that ends just southwest of Luther Bonney Hall and at the edge of Noyes Park. The sidewalk on Bedford Street will be curbed in conformance with City requirements, and it will contain ADA-compliant curb ramps.

Loading and Servicing

The project will have minimal need for a service area, with loading and service needs limited to occasional deliveries of musical equipment (30' box truck or smaller vehicle) and trash collection by USM facilities staff (pickup truck or smaller vehicle) from an interior trash storage room. The site will not have exterior dumpsters.

To accommodate these access needs, a small loading area is proposed on the north side of the building that will be accessed from Falmouth Street via a widened sidewalk on the south side of the parking lot adjacent to Payson Smith Hall. This sidewalk has been designed to accommodate the turning movements of a 30-foot box truck, ensuring that the truck will not have to back out into Falmouth Street. A plan showing the turning movements of trucks using the loading zone is included in this section.

Public Transit (14-14.6.1(C))

This project will not create additional public transit stops. There is an existing bus stop on the east side of Deering Avenue, approximately 65' from the proposed building.

Parking (14-14.6.1(D))

Vehicular Parking

Instead of providing new parking lots for the building, the project will take advantage of an existing surplus of parking on the campus. The attached calculation sheet summarizes the changes in parking since the 2020 approval of the Student Center, Dormitory and Quad project and demonstrates that the campus has sufficient parking to accommodate the project.

Bicycle parking

Bicycle racks will be provided adjacent to the southern entrance to the building (facing Noyes Park). Based on parking demand, the site will require at least 8 bicycle parking spaces, and bicycle racks for 10 bicycles are being provided. Refer to the Landscape Plan for the specific location of the bicycle racks.

Snow Storage

Sidewalks and pedestrian pathways will be cleared by the University using their snow removal equipment, which will primarily utilize the landscaped and turf areas adjacent to the sidewalk areas for snow storage. At the loading area, snow storage is available in turf areas along the southwest and northeast edges. Should snow amounts exceed the available storage, it will be removed from the site.

Electric Vehicle Charging

This standard is not applicable.

Transportation Demand Management (14-14.6.1(E))

The project does not meet the threshold for requiring a Maine Department of Transportation Traffic Movement Permit as described in the attached memo. USM has a campus-wide transportation demand management plan (TDM) that is continually updated as conditions on the campus change. Prior to the submission of this application package, meetings were held with the City's Traffic Engineer and TDM Manager to review the project and its impact on transportation needs, and a draft copy of the revised TDM plan was submitted to the City's Transportation Director. The updated TDM plan is included this section incorporates their comments.

Memorandum

To: City of Portland

Date: December 14, 2022

Project #: 55540.02

From: Jennifer Conley, PE, PTOE

Re: University of Southern Maine
Center for the Arts

The University of Southern Maine (USM) is proposing to construct a Center for the Arts on the west side of the Portland campus along what was the former Brighton Avenue right of way. The Center for the Arts will include classroom space, a recital hall and a visual art gallery. VHB has estimated the number of trips anticipated to be generated by the facility.

Transportation Context

USM has recently permitted a 510 space garage (6 of which are for motorcycles) on the Portland campus that is currently under construction. The transportation analysis included in the Traffic Movement Permit (TMP) associated with the Parking Garage determined that the best estimation of trip generation was associated with the anticipated growth in enrollment on the campus of the next five year period. The City of Portland's traffic consultant agreed with this methodology and reviewed all calculations.

As presented in the Parking Garage TMP, USM predicts enrollment growth of 970 students in the 5-year period between 2022 and 2027. This growth, and the trips associated with it, were included in the permitting of the parking garage on Bedford Street. The traffic analysis conducted as part of the permitting for the Bedford Street garage was based on industry standards and MaineDOT guidance. The number of new peak hour trips anticipated with the growth in enrollment is 160 trips (125 in and 35 out) in the highest AM peak hour and 160 trips (51 and 109 out) in the highest PM peak hour with no adjustments for the high portion of transit trips to and from the campus. As such, the limited increase in enrollment and the trips associated with the development of the Center for the Arts facility were included in those projections. The goal enrollment increase of the Music Department is 92 additional students. These increases are anticipated in part as a result of the improved, expanded facilities and this project was under consideration when enrollment projections were made in recent years.

To confirm that the number of trips associated with the Center for the Arts is accounted for in the growth included in the garage, USM staff did an analysis of the commuting patterns associated with staff that will be located at the new facility and reviewed each of the class times for classes that in the future will be located at the new building and the students, faculty and staff trips associated with them.

For this or any project that generates over 100 peak-hour trips, MaineDOT requires a Traffic Movement Permit. The Traffic Movement Permit evaluates a project's traffic impacts at area intersections based on the number of trips anticipated to be generated and added to movements at the intersection. For smaller projects, MaineDOT gives the City of Portland development review authority. Because the Traffic Movement Permit for the garage project included growth and trips associated with this project (among others), the Center for the Arts will not generate additional trips beyond the existing permit.

500 Southborough Drive
Suite 105B
South Portland, Maine 04106

Center for Fine Arts Related Traffic

The traffic associated with the Center for Fine Arts was determined. The trips associated with faculty staff and students were each determined based on class schedules, work schedules, and other events. Each Component is described below:

Music Trips

- Scheduled Classes: Students in classes scheduled during peak commuting times. A review of the numbers of students anticipated to be traveling to and from classes during the AM and PM peak hours were determined. During the highest hour in the AM, 41 students would be anticipated to be traveling to or from the new facility in scheduled classes. During the highest hour in the PM, 31 students would be anticipated to be traveling to or from the new facility in scheduled classes.
- Arranged Classes: It is anticipated that 7 students would arrive during the PM peak hour for an arranged class with a faculty member.
- Faculty and staff: to be conservative each of the projected full time staff of 4 and full time faculty of 11 are anticipated to arrive in the morning peak hour and leave during the PM peak hour. In addition to those numbers, in the AM peak hour, 3 part time faculty would arrive and during the PM peak hour, another 7 faculty would arrive for the arranged classes. Finally, one leadership trip for the Music department is anticipated to enter the facility during the AM peak hour and exit during the PM peak hour.

Art Trips

- Based on the programming for the art space, it is anticipated that no students enter or exit during the AM peak hour and that 4 students enter or exit during the PM peak hour. Two faculty/staff trips are anticipated to enter during the AM peak hour and exit during the PM peak hour.

Event Trips

- On Wednesday nights only, there will be a Youth Ensemble Program. It is anticipated that approximately 54 Youth Ensemble participants will enter the site around 5:45 PM. This once-a-week Youth event trip traffic has not been included in the trip demand estimate as it does not occur on most weeknights each week.

Adjustments

- Based on the typical split between residential and commuting students at the Gorham campus, it is anticipated that six of the student trips identified above during each peak hour would in fact be living in the new residential units on the Portland campus.
- Applying the mode shares calculated from the 2022 USM Transportation Survey, 18% of students, faculty and staff will use the bus, 6% will carpool, and 5% will bike or walk to campus. Applying these percentages reduces 16 AM and PM peak hour trips from the total trips.

The resulting number of vehicular trips associated with the proposed facility is 40 AM peak hour trips and 45 PM peak hour trips. The data is summarized in the table below:

Table 1 Trip Demand

	AM Peak	PM Peak
Total vehicle trips		
Students (Scheduled Classes)	41	31
Students (Arranged Classes)	-	7
Faculty & staff	19	23
Art trips	2	6
Subtotal	***62***	***67***
Adjustments and mode splits		
On-campus students	-6	-6
Alt. transportation (incl. carpool, bus)	-16	-16
Subtotal	***-22***	***-22***
Total new trips		
	40	**45**

Conclusions

The proposed Center for the Arts is anticipated to be associated with 40 AM peak hour vehicle trips and 45 PM peak hour vehicle trips. This trip estimate is significantly below the threshold for Traffic Movement Permit review. These trips were part of the 160 AM peak hour and 160 PM peak hour trips associated with permitting the parking garage where these trips will start and end on the USM campus.

Factors Contributing to Initial Condition of Approval for Student Center & Res Hall Permit (Nov 2020):

394 new for Portland Commons (68% of 580)
130 displaced by closure of Woodbury lot
41 displaced by closure of Facilities lot
6 displaced in revised central heat plant lot
4 displaced in Law School lot to accommodate salt shed
(-115) from Wishcamper parking lot revision
(-64) from TDM strategies applied to this parking pool
= 396 TOTAL

How USM will Meet CFA Demand during Peak Hour

Condition of Approval (COA) for Parking Supply

For the new residence hall and career/student center	-396

Anticipated Increase in Supply Since COA

New parking garage	504

Lost Spaces Since COA

Displacement from siting new garage on Wishcamper lot	-207
Loss of Brighton Ave. lot from City roundabout project	-26

Anticipated Reduced Demand

Peak demand gain in available spaces by Law School moving offsite	152
Campus-wide demand reduction of 10% from TDM Plan (144 campus-wide minus 64 already accounted for in COA)	80

Anticipated Increased Demand from Center for the Arts

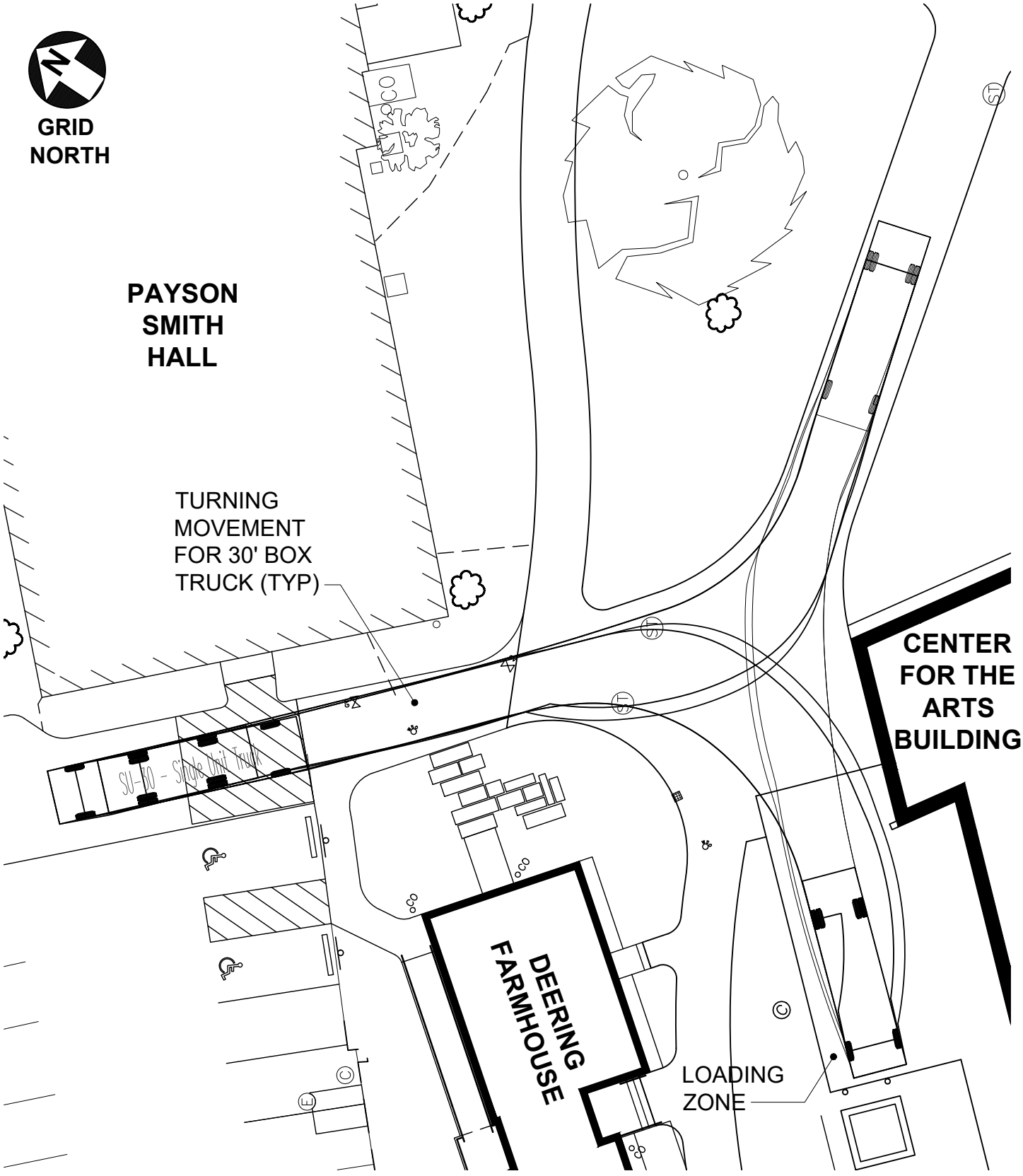
Peak demand from students, staff & faculty in music and art programs	-32

GRAND TOTAL NET SURPLUS CAMPUS-WIDE

Including all factors listed above	75

*Six Motorcycle spaces planned for new garage are additional to the above automobile spaces

*Up to 5 spaces may be lost or gained due to final configurations in existing garage, new garage, and surface area behind Glickman library



SCALE: 1"=20'-0"
DATE: 12-15-2022

C1

TRUCK ACCESS TO LOADING ZONE

CENTER FOR THE ARTS

UNIVERSITY OF SOUTHERN MAINE PORTLAND CAMPUS

104 Falmouth Street, Portland Maine 04103

DESIGNED BY:	**JSD**
DRAWN BY:	**JSD**
CHECKED BY:	**JSD**
PROJECT:	**21904.10**

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University of Southern Maine (USM) Portland Campus

Transportation Demand Management (TDM) Plan

University of Southern Maine
96 Falmouth Street
Portland, Maine 04103
(207) 780-4718

PREPARED WITH SUPPORT FROM

500 Southborough Drive, Suite 105B
South Portland, Maine 04106
207.889.3150

January 20, 2023

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1

Introduction

This Transportation Demand Management (TDM) plan provides a cohesive strategy for continuing a successful TDM program for the University of Southern Maine (USM) Portland campus. This plan seeks to enhance multimodal accessibility, ensure the use of non-vehicular modes, and discourage the use of driving through parking management, to achieve and build upon the parking demand reduction goals for the campus.

The TDM Plan expresses a TDM program of strategies and timeframe for when USM intends to implement the various strategies. The strategies aim at promoting walking and bicycling, improving transit service to promote ridership, promoting carpooling, , and managing parking demand via changes to USM's pricing and permit policies.

USM Portland

The University of Southern Maine (USM) Portland campus encompasses approximately 30 acres, with 27 buildings comprising 1,190,929 assignable square feet (ASF). Located less than one mile from the heart of downtown Portland, the Portland campus provides excellent access to social, cultural and internship opportunities. Linked to the Gorham campus ten miles to the west and the Portland city center via frequent bus service (METRO's Husky Line), the Portland campus also has convenient access and visibility from Interstate Highway 295,

with Forest Avenue serving as the primary roadway arrival point. A second important arrival point onto the campus is the roundabout at the intersection of Deering Avenue, Brighton Avenue, and Falmouth Streets. Bedford Street bisects the campus providing access to most of the parking lots and structured parking for the campus.

The campus is in a completely developed urban neighborhood. The adjacent land consists of Interstate Highway 295 on the south-east border, commercial uses on the north east (along Forest Avenue), and residential uses on the northwest, west and south west. The largest adjacent land use is the Oakhurst Dairy distribution center between the campus and Forest Avenue. The adjacent residential areas provide housing for some of USM's students but are generally a set of very solid and cohesive neighborhoods. Currently, no students reside on the Portland campus, but that will change in the summer of 2023 when a new residence hall will come online.

In 2017 and 2018, the University of Southern Maine undertook a process that resulted in a final *Facilities Master Plan* approval by the Board of Trustees in January 2019.[1] The process included information gathering via tours of all three campuses, extensive internal and external stakeholder interviews, and public input. The plan incorporates the visions, goals, facilities assessments, and the campus space needs assessments into a set of campus physical development recommendations. USM is now embarking in implementing specific capital projects identified in the plan.

Commitment to TDM

USM has a history of promoting Transportation Demand Management (TDM) strategies on its campuses. For starters, TDM clearly falls within two guiding principles of the University's Facilities Master Plan through its attempt to increase non-private vehicular transportation and reduce related transportation emissions:

- **Mobility**—the Master Plan supports robust pedestrian, bicycle, shuttle bus, ride share and metropolitan and regional public transit systems that look beyond private vehicular parking to meet the transportation needs of the campus community.
- **Sustainability**—the plan supports all existing sustainability policies of the University.

TDM also indirectly relates to several other guiding principles as a result of potential outcomes from a TDM program:

- **Student Experience**—the process, plan, and implementation focuses upon improving the students' academic, co-curricular and living experience on each of the campuses.
- **Public Safety**—the plan and subsequent implementation seeks to provide the safest campus environment possible through physical, programmatic, and operational improvements, including those in response to public health threats like Covid-19.

[1] For more details, please visit *usm.maine.edu/president/master-plan*.

- **Neighbors**—the plan seeks to establish campuses and campus communities that are positive members of the neighborhoods, mitigating negative impact and providing a beautiful and inviting campus landscape for all neighborhood members to enjoy.
- **Aesthetics**—the visual quality of the campus facilities is important to creating an environment that meets the mission and goals of the University.

The implementation of TDM measures provides USM with the ability to make access to the campus more enjoyable and safer for affiliates (because of reduced traffic), improved relations with neighbors (because of decreased traffic and parking concerns), and decreased campus space dedicated to parking.

As a result, the University introduced TDM for the first time within its 2017 Sustainability Plan. The sustainability plan set a quantitative goal for sustainability efforts related to transportation and established a baseline of strategies to achieve that goal. Per the sustainability plan, the goal related to transportation was to reduce greenhouse gas emissions from transportation by 20 percent from a Fiscal Year (FY) 2006 baseline. TDM-related strategies suggested by the Sustainability Plan are presented in Chapter 3; one recommendation was to develop a TDM plan.

To further understand how TDM will play a role as the campus continues to transform, USM hired VHB to develop a comprehensive TDM Plan that will allow the University to meet their sustainability goals while responsibly meeting user parking demands (and limiting the additional parking supply requirements). To develop a strategic approach for USM transportation that leverages current realities in developing future outcomes, VHB and USM hosted a series of stakeholder meetings and interviews. These conversations helped inform the proposed strategies presented in the first generation of this TDM plan, which was published in 2020. The plan presented here builds on the 2020 plan, modifying strategies to address lessons learned and behaviors observed through the first two years of implementation.

Development Proposal: Facilities Master Plan Program Elements

Consistent with the USM *Facilities Master Plan* approved January 27, 2019, USM has several development program aspirations that have triggered the initial development of this TDM Plan and continue to influence it. The University is actively building the new campus "heart", consisting of the following capital projects:

- **Career and Student Success Center**—This building, now named the McGoldrick Center, will replace the dining and cocurricular activity space formerly in the Woodbury Campus Center. In addition, the vision for this building is to provide a common place for programs and functions that support both the academic success and long-term professional success of the USM student. The building is anticipated to be approximately 41,000 square feet.
- **Student Housing**— This approximately 216,000 square-feet building will house upwards of 580 beds to accommodate upper class undergraduate students and graduate students.

- **"Quad"**—A key component of the transformation of the Portland Campus is a second campus open space, located adjacent to the residence halls and the Career and Student Success Center.
- **Center for the Arts Building**- Framing the west side of campus along the former Brighton Ave. Extension, this building will include classroom space, a recital hall, and a visual arts gallery.
- **Structured Parking**- A four-level structured parking garage is being built next to the existing parking garage adjacent to the Abromson Center. Not only will the facility accommodate approximately 504 automobile spaces and six motorcycle spaces, it will also contain 250 covered, secured long-term bike parking spaces and 58 level-two electric vehicle charging plugs.

The development noted above may be followed by additional capital projects on USM's Portland campus.

Parking Supply and Demand

To accommodate parking needs for the new construction laid out above, the master plan proposed an increase to the supply of parking. To verify this assumed need, the University hired VHB to conduct a parking study in 2019. The study, published in March of 2020, showed that the Portland campus would, indeed, be short on parking supply at the opening of the new buildings, even in a 0% enrollment increase scenario.

In the Fall of 2020, the University submitted site plans to the City of Portland for the new career and student success center and residence hall described above. Upon review of the University's parking study and the anticipated demand for parking stemming from the new residence hall, the City drafted a condition of approval for the project that mandated the provision of 396 net new parking spaces. The accounting within the condition of approval is listed in the table below. It incorporates a significant loss in surface parking as a result of the construction project and the creation of a large campus green.

Table 1: City of Portland's Condition of Approval for Supply of Parking

Item	Peak Demand or Supply Impact
Residence Hall (Provision of Parking for 68% of 580 residents)	394
Displacement by Closure of Woodbury Lot	130
Displacement by Closure of Facilities Lot	41
Displacement by Revision of Central Heat Plant Lot	6
Displacement for Future Salt Shed in Law School Lot	4
Wishcamper Parking Lot Expansion Plan	-115
Reduction from TDM Strategies Applied to this Parking Pool	-64
TOTAL NEED	396

After the Planning Board approved the career and student success center and residence hall buildings, the University moved forward with plans to meet the condition of approval for net new parking by submitting site plans for a structured parking garage in the Fall of 2021. Given that the new structured parking garage would be situated on the Wishcamper surface lot, 92 current spaces would be lost in addition to 115 future spaces. The future spaces had been previously anticipated to be gained by a City-approved expansion and re-striping of that lot that had also been incorporated into the condition of approval for the career and student success center and residence hall. Due to this displacement of parking in the Wishcamper lot, the University proposed that the size of the structured parking garage be 504 automobile spaces in order to reach the City's condition of approval for 396 net new spaces. With the planned departure of the Maine Law School from campus set to occur prior to opening the new buildings, the University estimated it would see reduced demand of at least 152 vehicles during the peak hour, allowing for a 504-space garage to sufficiently meet the condition of approval for 396 net new spaces. VHB reviewed and verified the numbers, and in January of 2022, the City of Portland's Planning Board approved the parking garage project.

In December of 2022, the University submitted site plans for the Center for the Arts building (CFA). The University estimates that this building will create new demand for 32 parking spaces at peak time. The combination of the new parking garage, the departure of the Maine Law School, and the TDM initiatives outlined in this plan are anticipated to collectively accommodate 32 parking spaces for the CFA building, and still leave 75 spaces of surplus

available for future growth in enrollment. The loss of the Brighton Ave. lot from the City's 2021 roundabout project (26 spaces) is factored into this projected net surplus. Reduced demand from TDM campus-wide (144 spaces), as opposed to only lots impacted by construction in the condition of approval, is also factored into the net surplus explained here. This additional TDM impact is estimated to reduce demand by another 80 vehicles over the original 64 vehicles accounted for in the condition of approval.

2

Mobility Context

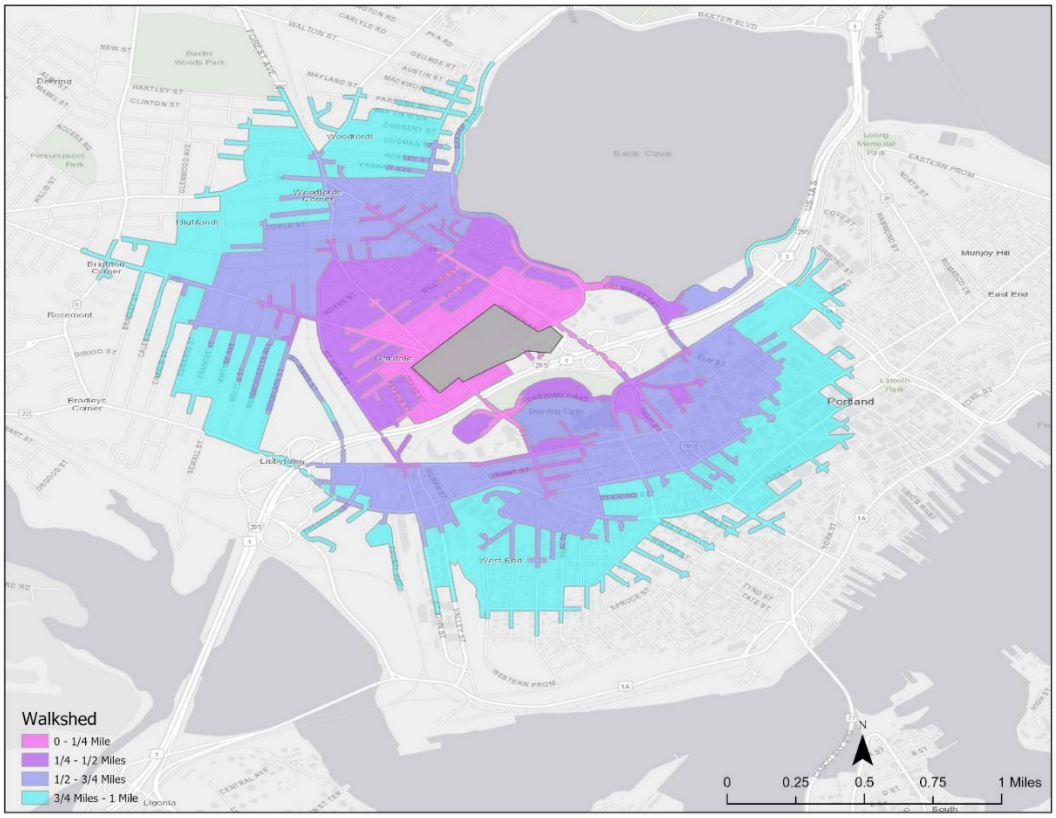
Understanding the transportation context that is available for students, faculty, staff, and visitors at USM Portland is important to be able to recommend targeted TDM program elements. This section summarizes VHB's findings from 2019 when assessing the different ways that one can access the USM campus as well as opportunities and challenges related to those options.

Walking and the Pedestrian Environment

USM's Portland campus is located on the edge of the Portland peninsula adjacent to the Oakdale residential neighborhood. Oakdale maintains a grid of streets, a majority with sidewalks, and low-volume, low-speed streets that make it generally comfortable and conducive for walking. The University is also adjacent to Forest Avenue, which offers local retail (including a grocery shop) within a short walk of the University. *Walkscore.com*, a real-estate site that evaluates walkability and transportation when choosing where to live, scores USM a 78 out of 100 and considers it to be a "Very Walkable" location where most errands can be accomplished on foot.

Some built and natural barriers limit accessibility to areas on the south side because of the I-295 highway, to the west and southwest because of a below-grade railroad, and to the northeast because of the Back Cove. Although there is a comfortable shared use path under the interstate, I-295 can pose as a psychological barrier to some people for walking trips to downtown. Figure 1 shows the walkshed in quarter-mile increments out to a mile from the USM Portland campus.

Figure 1: 1-Mile Walkshed from USM Portland Campus



On campus, there is a robust network of pedestrian paths that connect all campus buildings (Figure 2). There are also information kiosks and wayfinding to assist pedestrians in their orientation around campus.

Figure 2: Portland Campus Map



In summary, walking is easy in and around USM; however, natural or human-made barriers may provide some real barriers and some psychological barriers. For example, the primary walk route to downtown from campus is on Forest Ave, which is a wide, fast street with large intersections and long wait times, despite the fact that there is a safe and comfortable shared used pathway crossing the on and off ramps of 295.

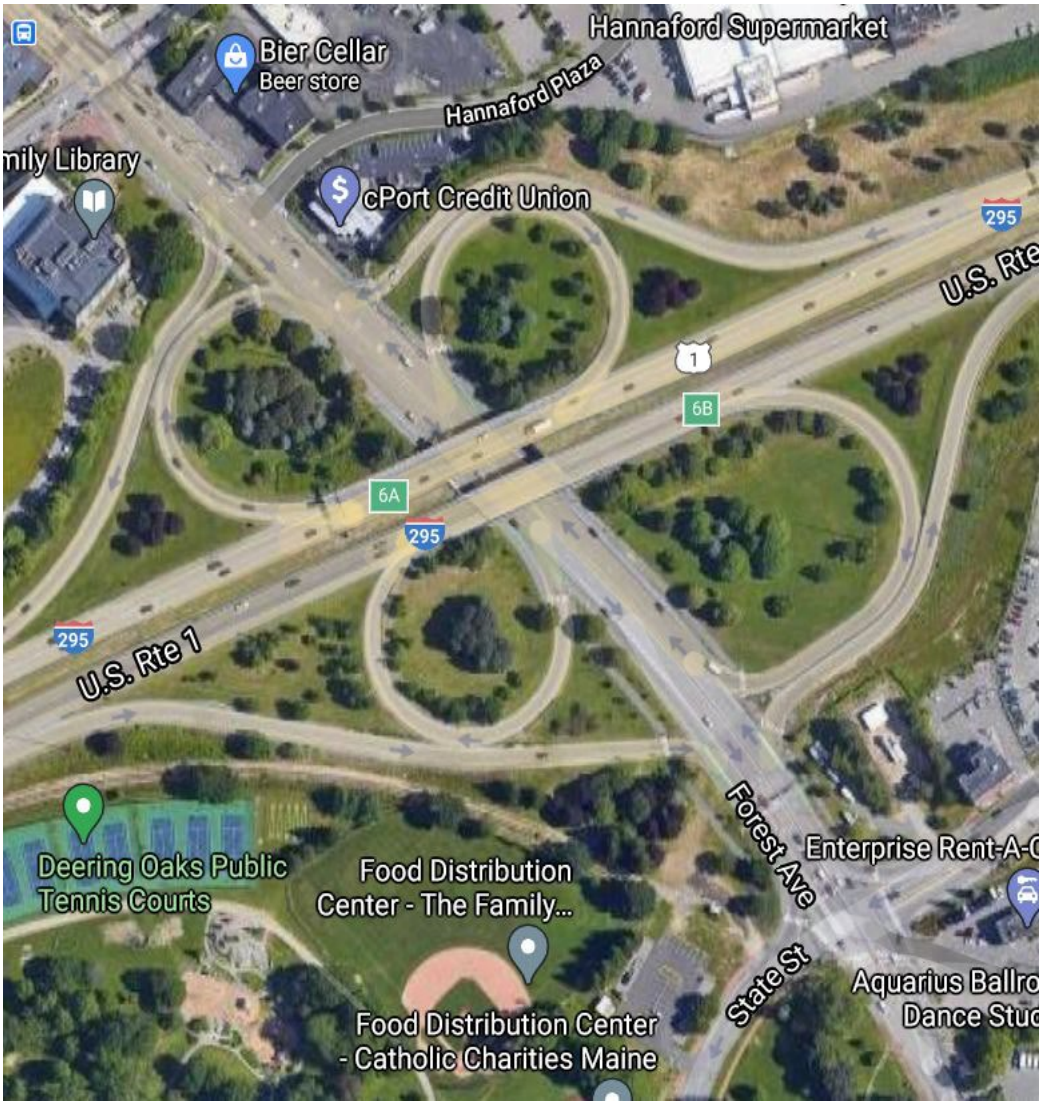
TDM strategies within this plan will seek to better connect the University despite these perceived or real barriers.

Bicycling Environment and Infrastructure

The *Walkscore.com* website lists USM at a Bikescore of 93 out of 100, the equivalent of a "Biker's Paradise." In fact, USM is located at the convergence of several key bike routes in the region that ultimately connect to the Portland Peninsula. Bike lanes around USM can be found along Brighton Avenue, Deering Avenue, Bedford Street, and Forest Avenue.

Some work is needed to teach the University community how to overcome certain psychological barriers. The best example, arose in stakeholder input sessions, was the perception that traveling on Forest Avenue to downtown is difficult. The root of the perception may be from the fact that there are six intersections, on ramps, or off ramps on each side of the road for a 1,200 foot-long stretch. See the aerial image in Figure 3 below:

Figure 3: Forest Avenue Bi-Secting I-295



The City has worked hard to increase the safety and comfort of this area by building and maintaining a shared used path on each side of Forest Avenue.

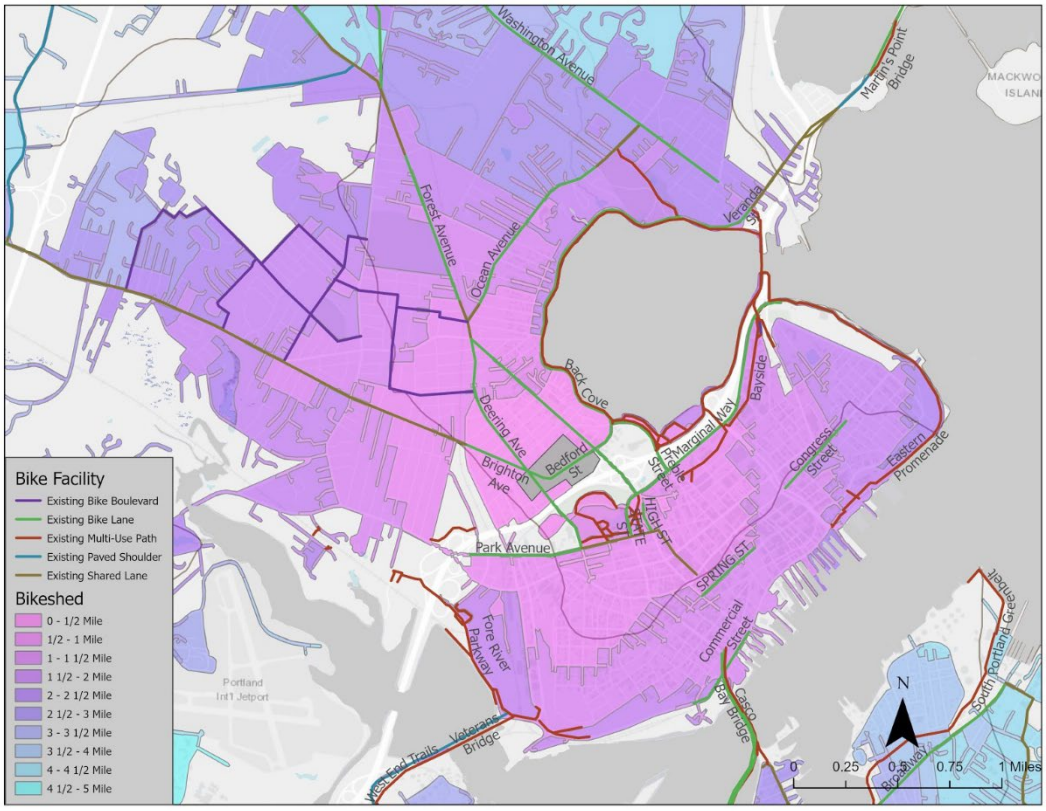
Figure 4: Shared Use Path Available on Forest Avenue Provides Access Under I-295



There is also a shared use path that runs parallel along the Back Cove. In addition to providing beautiful vistas of the downtown skyline, this path provides comfortable and safe bike/ped access to numerous Portland neighborhoods including the Back Cove, Woodfords, East Deering, and Bayside. Even the East End and the Old Port can be accessed this way, via the Eastern Prom Trail connected to the Back Cove path. Through the various shared use paths near the University, the entire Portland peninsula can be accessed within 2 miles of USM.

Within 5 Miles, one can also reach South Portland to the south, Westbrook to the west, and the border of Falmouth to the north. For the bike-to-transit trips, METRO buses serving the University are equipped with bike racks. The Husky line buses have slots for three bikes, and the other METRO buses serving the Portland campus have slots for two.

Figure 5: Bikeshed from USM



On-campus, there are 16 locations with bicycle racks and a bicycle repair stand adjacent to the Woodbury Campus Center. The locations of most of these racks are readily visible within the campus map (Figure 2) posted on kiosks throughout the campus and online. The majority of the racks are easily visible when on foot, except for the covered racks under Masterton's awning and in Abromson parking garage. The condition of the on-campus bicycle racks is fair; however, the Bike Fix-it Station needs repair: its tools have rusted and are bent and unusable. Shower access for campus affiliates is available at the Sullivan Gym. In order to gain access, they must show their campus ID.

In comparison to most places in the United States, the biking network in and around Portland and USM Portland campus is robust. On-campus, commuters have a place to store these bikes. TDM strategies related to biking should focus on marketing this commute option to overcome any fears about perceived barriers and thereby expand the potential pool of people that can bike. The University should also collaborate with the City as they seek to expand and improve the bicycle network.

Public Transit

USM affiliates are granted unlimited free METRO transit access as part of their enrollment and employment at USM. Transit access is paid by way of the student transportation fee and

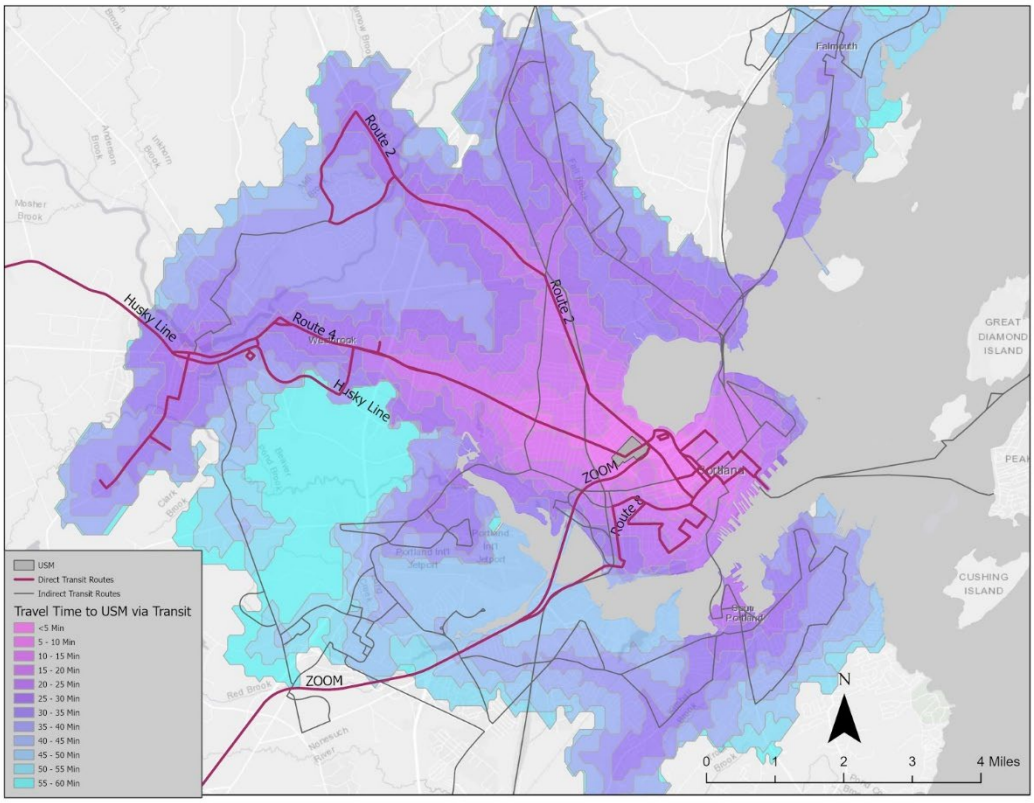
the employee parking permit fee. When boarding a METRO bus, USM affiliates must show their ID to the bus driver.

Four METRO bus routes serve the USM Portland campus: Route 4 and Husky Line serve the campus directly with a stop on Bedford Street, and within a quarter-mile, the Route 2 (via Forest Avenue) and Route 8 (at Hannaford Plaza). In addition to METRO service, the Lakes Region Explorer Bus ($2 one-way) is also nearby. Among the four, only the Husky Line has limited stop service all the way between the Portland and Gorham campuses.

On Bedford Street, at the heart of campus, there are shelters for Route 4 (Westbrook–Portland Pulse) and the Husky Line (USM Gorham via Westbrook–Portland Pulse). Route 2 (Forest Avenue) and Route 8 (Peninsula Loop) can be accessed at nearby Hannaford Plaza roughly a quarter-mile from campus. The Lakes Region Explorer (Windham Route), run by RTP, stops at the corner of Forest Avenue and Bedford Street.

Transit "accessibility" was determined by travel time, including time required to walk to the stop, wait for a transfer when applicable, ride the bus, and walk to the final destination. This differs from accessibility for walk and bike sheds where distance from campus generally determines accessibility. Expected transit travel time to the campus using the existing Portland transit network was mapped out in 5-minute increments (Figure 6). These increments include up to a maximum of a 15-minute walk for the total trip (to account for walk-access to transit).

Figure 6: Transit Service at USM Portland



Transit is not only a function of having a service route present nearby; other important pieces to consider are its span of service (i.e., is the service available at the times of day when needed) and service frequency (i.e., does the service operate at frequent intervals). Scheduled headways and service hours for direct services are included in Table 1 below.

Table 2: Direct Transit Route Headways

Route	Headways (minutes)							Span					
	Weekday			Saturday		Sunday		Weekday		Saturday		Sunday	
	Peak	Day	Evening	Day	Evening	Day	Evening	Start	End	Start	End	Start	End
Bedford St USM (0.0 Miles)													
Husky	30	30	50	45	45	45	45	6:30 AM	10:30 PM	8:30 AM	11:00 PM	8:00 AM	7:00 PM
4	30	30	60	30	60	45	-	5:30 AM	11:30 PM	6:00 AM	11:30 PM	8:30 AM	7:30 PM
Forest at Bedford St. (<0.25 Miles)													
2	20	30	60	60	60	60	-	6:00 AM	11:00 PM	6:30 AM	10:30 PM	8:30 AM	4:40 PM
Lakes Region Explorer	180	180	180	-	-	-	-	6:00 AM	10:30 PM	-	-	-	-
Hannaford Plaza (<0.25 Miles)													
8	30	30	-	60	-	60	-	7:00 AM	6:00 PM	8:00 AM	6:00 PM	9:00 AM	4:00 PM
?													
Zoom Turnpike Express	30	-	-	-	-	-	-	6:00 AM	6:40 PM	-	-	-	-

While all transit services adjacent to USM operate during the schedule of a normal business day and into the evening, the frequency can pose challenges to some of USM's population. As one can see above, the most frequent transit service (Route 2) runs every 20 minutes while the Husky Line, Route 4, and Route 8 run on 30-minute intervals. For many, these frequencies are satisfactory, especially given that the Husky Line is a limited stop service, cutting down on travel time. But, the frequencies don't yet meet the threshold for "transit

freedom" or the ability to travel without planning ("Transit freedom", per the definition by Jarrett Walker in *Human Transit*, is a frequency of at least 15 minutes all day[2]). People who are able to plan are facilitated by helpful resources like the Transit Tracker app and soon-to-be-installed transit screens at certain stops.

Other Mobility

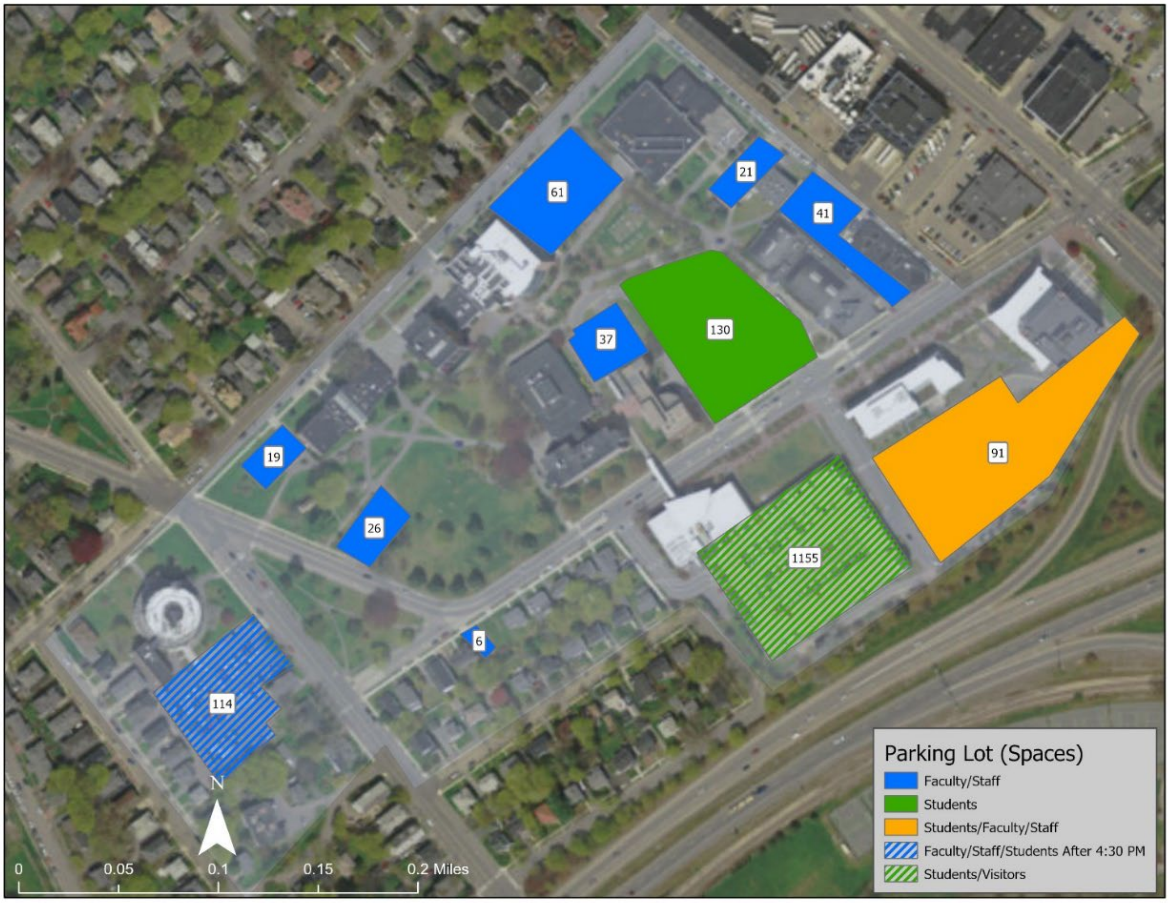
In addition to walking, biking, and riding transit buses, USM affiliates can use ride-hailing services Uber, Lyft, or taxis, which are readily available in and around the peninsula. No carshare vehicles are located within a half-mile of USM. Also, no dedicated carpool parking spaces are designated on campus. Carshare and carpool are opportunities that the TDM Plan can leverage to reduce the number of people parking on campus.

Parking Facilities and Policy

Campus affiliates and visitors can park at 11 distinct parking lots (including one garage) across campus hosting a total of 1,701 spaces (Figure 7). By far, the largest parking facility on campus is the University Garage, which has a total of 1,155 parking spaces. Lots are designated by permit type and only users with that permit can park in that lot. Figure 7 identifies the location of these lots, permitted users, and the total number of spaces. The campus also has dedicated spaces for handicap, service vehicles, and an electric charging station.

[2] Source: humantransit.org/2011/12/how-frequent-is-freedom.html

Figure 7: Parking Spaces at USM Portland



Note: Although the 1,155-space Abromson Garage is primarily for student and visitor parking, faculty and staff may use the facility. The garage is access-controlled by a revenue control system.

All vehicles in University of Southern Maine (USM) parking lots on the Portland campus must display a valid USM parking permit, which comes in the form of a hang tag that must be hung from a vehicle's rear-view mirror. Permits may be obtained from the parking office or online through the University's parking web portal.

USM Portland has the following permit types:

- Student (Commuter, Gorham Residential) – All students are given the same parking privileges on the Portland Campus
- Employee (Faculty, Staff)

On the Portland campus, students may park at three different lots during the day (designated by a green sign) and at a fourth lot only after 4:30 PM. All students pay a transportation fee if registered for on-campus courses. The fee varies based on the number of credits for which they are registered: between $55 and $110 per semester. These payments are mandatory as part of enrollment and are made each semester: fall, spring, and summer.

On the Portland campus, employees are allowed to park in eight different lots on campus (designated by a blue sign). They pay $25 annually for their parking permit, which needs to be renewed each calendar year.

Short-term visitors to the campus may park in the parking garage for $2 an hour between the hours of 7 AM and 5 PM, Monday–Friday. Outside of these hours, visitor parking is free. There is a charge for overnight parking, except during snow bans. Prospective students and their families, campus guests, visitors, and volunteers receive free validation by the office or department they are visiting. To pay for parking, visitors must pay at the Parking Garage Office or use the pay-on-foot stations located by the doors to the parking garage on the first and second floors of Abromson Center and the ground floor of the parking garage by the vehicle exit.

A violation of parking guidelines may result in any number of consequences, including a parking ticket fine, towing of a vehicle (and responsibility of the owner/operator for payment of related towing and storage fees), or suspension of campus parking privileges. Parking tickets range from $25 to $200 depending on the infraction. Students and faculty must pay outstanding tickets before picking up a new permit.

Parking at USM is relatively unconstrained. Typical parking activity is accommodated with the present supply. Although on-street parking is also an option, many of the streets adjacent or near the campus are metered or have 1- or 2-hour parking limits during daytime hours. Recent observations conducted by VHB for USM found approximately one third of the on-street parking spaces available during peak parking periods.

Remote lots have been considered, but a large portion of USM students have one or more off-campus jobs, which require them to have ready access to their vehicles. To be more effective at discouraging parking on-campus, the University plans to make the transactional cost of parking more apparent for students.

The University reviewed parking rates around the City and around the New England market in general to see if there was room to use increased rates as a leverage point. This influenced the University to go from charging $0 for public parking to $2 per hour, which is still on the low to medium end of the market. The University is considering raising prices again to possibly $3-$4 per hour. However, the current plan is to keep it free for the early evening hours (5-11 pm), and to help out the neighborhood by allowing them to park for free during for snow bans from the hours of 5 pm to 8 am the following morning.

Regional TDM Program

At USM's disposal are several regional, state, and national-level TDM programs and services that are intended to support programs such as the one being reviewed by USM. Among these potential programs/services that could support USM include:

GO MAINE: Run by the Maine Turnpike Authority, this state-wide program serves as a rideshare matching service as well as a platform to log any kind of non-single occupancy trips, including non-motorized trips. The range of services include the following:

- **Emergency Ride Home-** This program essentially serves as "insurance" to provide people an option to get home from work in case of an emergency. The rides are provided using a taxi or Enterprise rent-a-car. It is available to commuters who carpool, vanpool, take transit, bike or walk at least three days a week. The benefit may be used up to eight times per calendar year.
- **Way 2 Go Maine-** *Way 2 Go Maine* is an annual commuter challenge in October that encourages employees of local businesses to use alternative transportation options through an inter-company competition. The competition recognizes companies for their successful participation and distributes prizes such as gift cards and swag to encourage participation.
- **Vanpool Matching-** Vanpooling is a common, long-distance commute option for employees headed to the same general area consisting of between 5 to 15 commuters. GO MAINE assists to form these vanpools.
- **Rewards Program-** GO MAINE has a rewards program for individuals who take greener trips, which include walking, biking, telecommuting, carpooling, vanpooling, or taking public transportation. Participants must sign-up and log their commutes daily. Rewards include gift cards and discounts to various local businesses.

Portland Slow Ride: To get people comfortable with biking, the Bicycle Coalition of Maine offers the "Portland First Friday Slow Ride". These rides are typically done at a relaxed pace and coincide with Portland's "First Friday" art walk event.

Smart Cycling Traffic Skills 101 and Educational Courses: Traffic Skills 101 is hosted by the Bicycle Coalition of Maine and is a course that teaches new and experienced cyclists how to ride in traffic. An individual or employer can specifically request a safety workshop.

Discounted Helmets: The Bicycle Coalition of Maine runs a helmet purchase discount program: when purchased in bulk (8-30 helmets) the cost is $7 per helmet.

Bicycle Benefit: As part of this national program, local businesses offer rewards to patrons who arrive at their establishments by bicycle.

Cycling Savvy: Is a program of the American Bicycling Education Association aimed at helping communities become more livable and sustainable by promoting a civil and cooperative environment on roads through complementary education and infrastructure design.

Best Employers for Commuters: This membership program provides qualified employers with national recognition and an elite designation for offering outstanding commuter benefits.

TDM at USM

TDM related to increasing multimodal transportation is not a new concept for USM. In 2017, the Office of Sustainability worked with various campus stakeholders to develop an eight-year sustainability plan that set a quantitative goal for sustainability efforts related to transportation and established a baseline of strategies to achieve that goal. Per the

sustainability plan, the goal related to transportation was to reduce greenhouse gas emissions from transportation by 20 percent from a FY 2006 baseline.

Table 2 below identifies the original strategies pursued by the sustainability plan as well as current strategies that came as a result of this original proposal:

Table 3: Suggested TDM Tactics from Sustainability Plan

Category	Original TDM Strategy	Progress at the Inception of TDM Plan (2019)
Shuttle	Extend shuttle routes and improve shuttle footprint	USM has partnered with the Greater Portland bus system, METRO, allowing students, staff and faculty to ride anywhere in the METRO system for free and vastly expanding the reach of University affiliates.
Carsharing	Explore option of starting a carshare program on campus	USM has explored options with one company and discussed ways it could fit into the vehicle fleet.
Comprehensive TDM Strategy	Create a Comprehensive Transportation Demand Management (TDM) strategy	This document is a product of the development of a comprehensive TDM Plan.
Bicycle Infrastructure	Create adequate bicycle infrastructure & education on campus to support people who would consider biking including a bikeshare program.	To accommodate bicycles, USM provides bicycle racks around the campus (16 racks & 250 spaces total). The Portland campus also has a fix-it work stand which is the first of its kind in Portland and allows riders to make simple bike repairs on campus. The University transportation website also highlights the benefits of biking from a health and environmental perspective.
Carpooling	Create adequate carpooling infrastructure & education on campus to support people who would consider carpooling	USM researched different carpool apps and began interviewing stakeholders to create a plan.
Hybrid & EV Vehicle Discounts	Create modest incentives for hybrid or electric vehicles	An EV charging station is provided at the parking garage and is free to use. Additional charging stations are being considered for the garage, Wishcamper, and locations in Gorham.
Incentive Program	Explore a partnership with Rise-Up to award incentives for alternative transportation commuting	The Office of Sustainability has held brainstorming sessions with the Wellness Committee to determine what types of incentives would qualify for the health credit. The Wellness Committee has agreed to work on implementation.
Carbon On-Setting Project	Explore possibility of creating a carbon on-setting project with local low-income households	No transportation related actions were identified. The Office of Sustainability chose a home weatherization project instead.

Category	Original TDM Strategy	Progress at the Inception of TDM Plan (2019)
Sustainable Business Travel	Develop mechanism for incentivizing more sustainable business travel	Measured carbon footprint of business travel in order to establish a baseline.
Parking Enforcement	Create a parking enforcement division of the University, separate from Public Safety, in order to maximize space utilization of existing lots	Division was created, staff were hired, and enforcement began.

The Plan found that it would be useful to conduct a Transportation Survey of campus affiliates to understand transportation patterns, needs and barriers. USM conducted a transportation survey effort in Spring 2019, yielding over 1,000 responses related to commute patterns, inter-campus travel, and receptiveness of possible TDM strategies.

Not listed within the Sustainability Plan, but nevertheless worth mentioning as TDM measures that have been pursued by the University include:

- Establishing a new USM transportation website to communicate the availability of alternative modes of transportation.
- Charging USM employees, students, and visitors for parking.
- Having a University System-wide telecommuting policy, which allows for telecommuting in certain cases. In response to the global pandemic, this policy was broadened to incorporate more people for longer periods of time.
- Having a larger portion of online classes in response to the global pandemic.

3

Existing Transportation Patterns

By exploring how USM students, faculty, and staff are currently traveling to campus we can identify which alternative modes may have the greatest potential to reduce drive alone commutes, and save on trips, parking and carbon emissions. This investigation allows for the development of targeted TDM strategies that offer a greater degree of changing commuter behavior.

VHB has reviewed USM affiliates' travel patterns using two data sources: a transportation survey and registered permit data. These data help identify how people are commuting to campus, what modes of transportation may interest commuters, and finally, what types of strategies would be most beneficial towards encouraging alternative commute modes.

Transportation Survey: Mode Shares and Travel Behavior

The Transportation survey conducted in Spring 2019 was done as part of the University's sustainability effort to chart emissions related to transportation. The online survey asked about current travel patterns between home and USM and about travel between the USM campuses. The survey also included questions about one's receptiveness to certain TDM strategies. About 1,000 USM affiliates participated.

Some key findings related to the survey (pulled from the "Final Survey Summary" prepared by USM) include:

- 78 percent of the USM population reported driving alone at least once a week to campus from home. About 72 percent of the population drives 2+ times per week to campus.
- 94 percent of USM employees park on campus; 81 percent of students park on campus.
- 25 percent of commuter students ride the METRO bus
- Dedicated, preferential carpool spots were the highest ranked activity to encourage students to use an alternative mode of transportation
- Per the survey, a new bike would be the best buyout reward for a parking cashout program, which may be a function of it being the highest value option ($500) compared to less valuable options of $100 cash, $200 discount on carshare/bikeshare, $200 discount on carshare/scootershare, $150 gift certificate to bookstore, and $150 gift certificate to dining services.

Additional conclusions from the survey data for the USM population who indicated making a trip to the Portland Campus include:

- 72 percent of USM Portland population reported having driven alone at least once a week to campus, 66 percent of the population drive 2+ times per week alone.
- 14 percent of the USM Portland population reported have taken transit at least once a week, 11.5 percent have taken transit at least twice per week.
- Considering only USM Portland commute trips (of employees and students), the Portland campus mode split is as follows: Drive Alone: 73 percent; Transit: 6 percent; Walk/Bike: 11 percent; Carpool: 8 percent; Motorcycle: 2 percent[3]
- USM's Walk/Bike mode split of 11% exceeds the typical average of 3% among Universities across the country, including those who have implemented TDM programs, according to VHB
- Average One-Way Commute Distance: 13.8 miles.
- 56 percent of the USM Portland population travels to other campuses
- For trips taken between the Portland and Gorham Campus, 40 percent take transit, 37 percent drive alone, 20 percent carpool, 3 percent bike, 1 percent use a motorcycle

Another transportation survey was conducted in the Spring of 2022. However, those results are not shown here because the University does not believe they represent baseline behavior since the global Covid-19 pandemic was significantly impacting the number of in-person courses being offered at the time and the number of employees teleworking was arbitrarily high. This was validated by an analysis done on peak parking and vehicle entries and exits in the parking garage. This analysis estimated that parking during the peak hour in the Spring

[3] It is important to note that this survey was taken before the Covid-19 pandemic. The next survey may show considerably different percentages for transit and carpooling.

of 2022 dropped by 45% over the 2019 baseline. Estimated trip generation dropped 20% during the AM peak and 41% during the PM peak.

Future surveys, perhaps as soon as the Spring of 2023, are expected to offer better comparison data when compared to Fall of 2019. Such data will be featured in annual reports to the City of Portland as described in the *Monitoring and Reporting Plan* section below.

Commute Trip Origins Based on Parking Permit Data

USM provided VHB with anonymized home address data for all their parking permit holders, which allows for an investigation of opportunities for providing incentives for reducing drive-alone trips to the campus. The following figures shows the distribution of commute trip origins based on the permit data. Major clusters of population are centered around the City of Portland, Westbrook, Gorham, Lewiston-Auburn, Brunswick, and Sanford (Figure 8). Figure 9 shows a zoomed-in version of the same data, showing that major residential areas include: Portland, South Portland, Westbrook, Gorham, Biddeford, Scarborough, and Yarmouth.

Using the parking permit data, VHB calculated drive time for faculty and staff. About 50 percent live less than a 20-minute drive from the Portland campus and 94 percent live within a 60-minute drive of the campus.

Figure 8: Distribution of Home (Commute Trip Origins) – Southern Maine Area

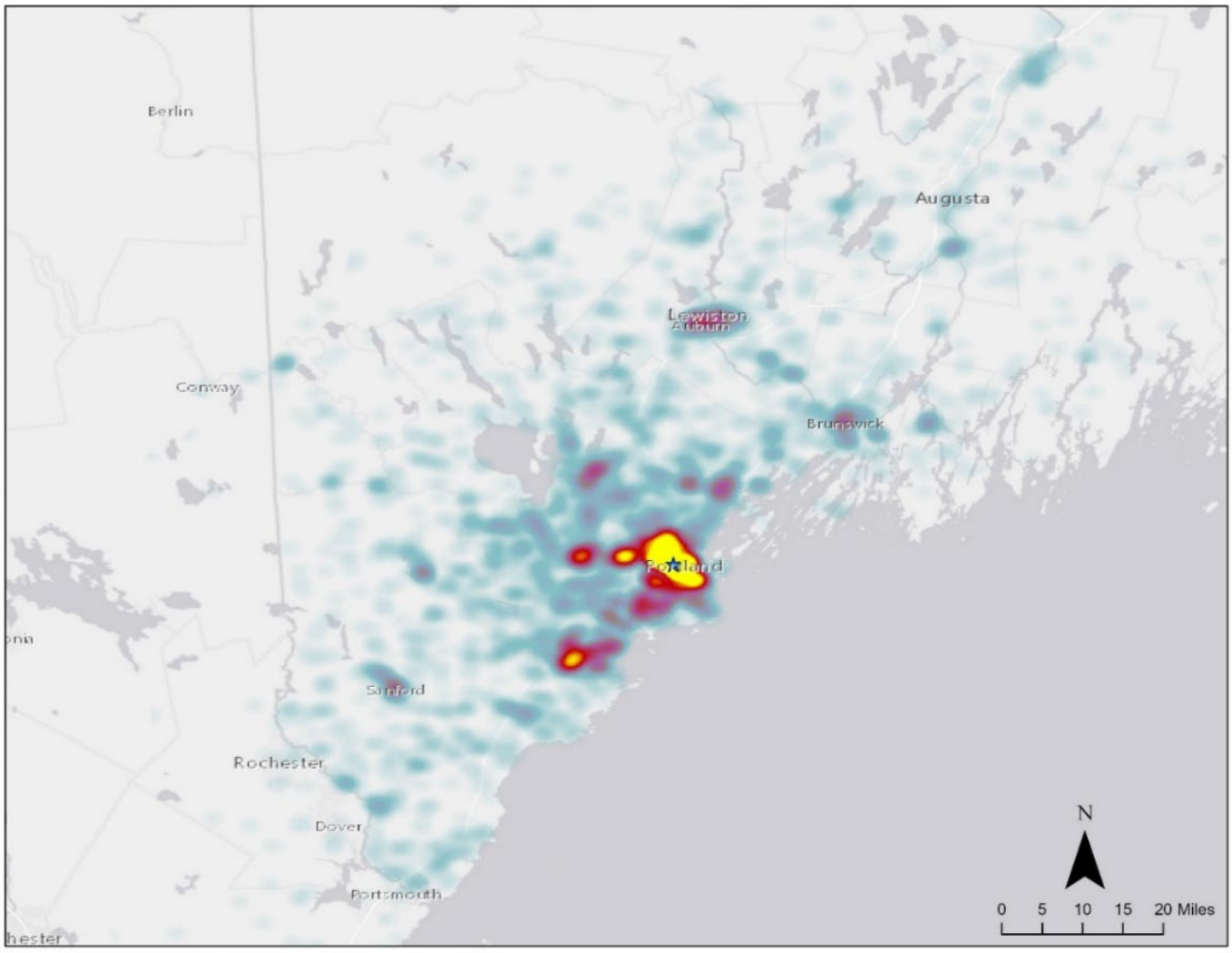
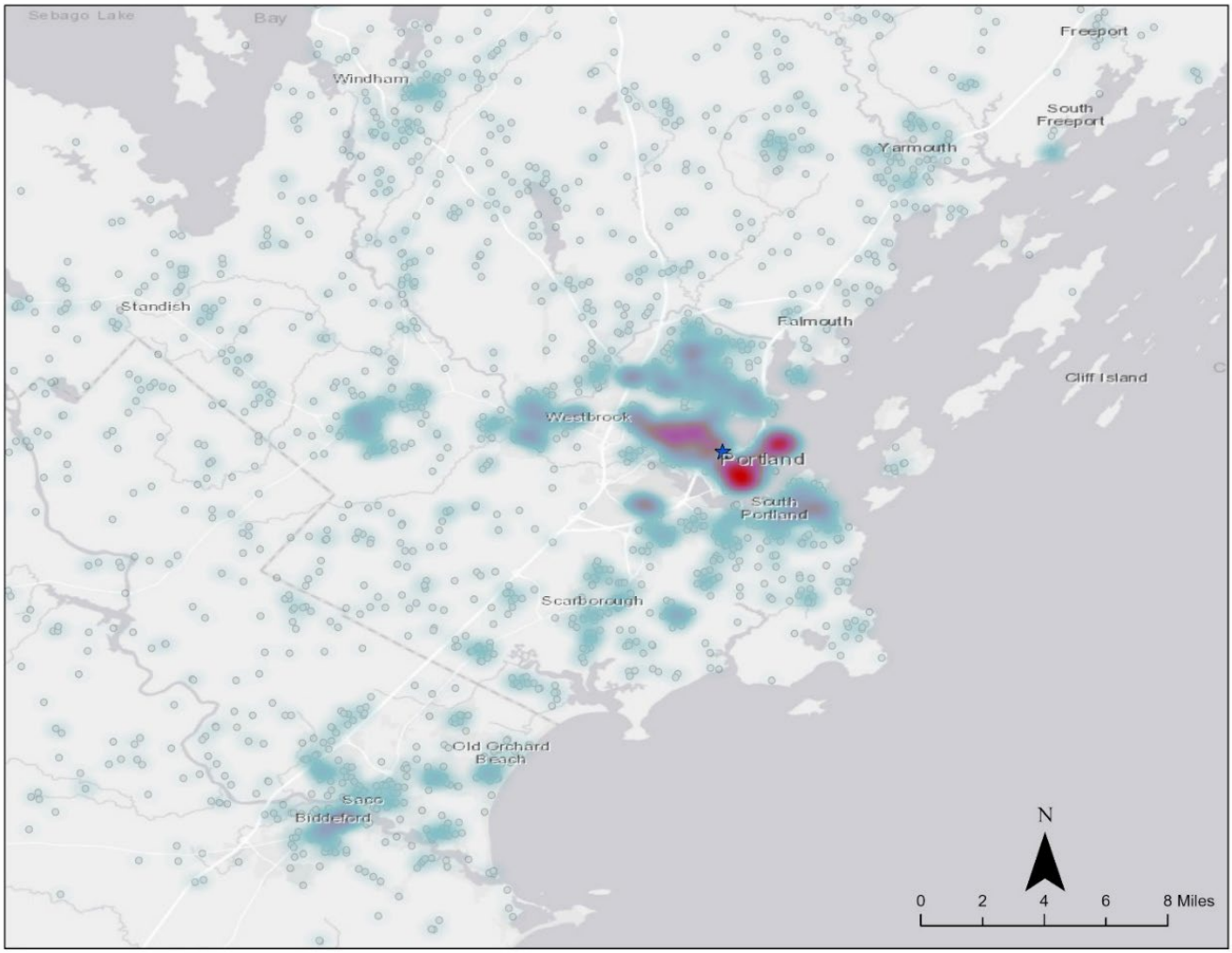


Figure 9: Distribution of Home (Commute Trip Origins) – Greater Portland Area



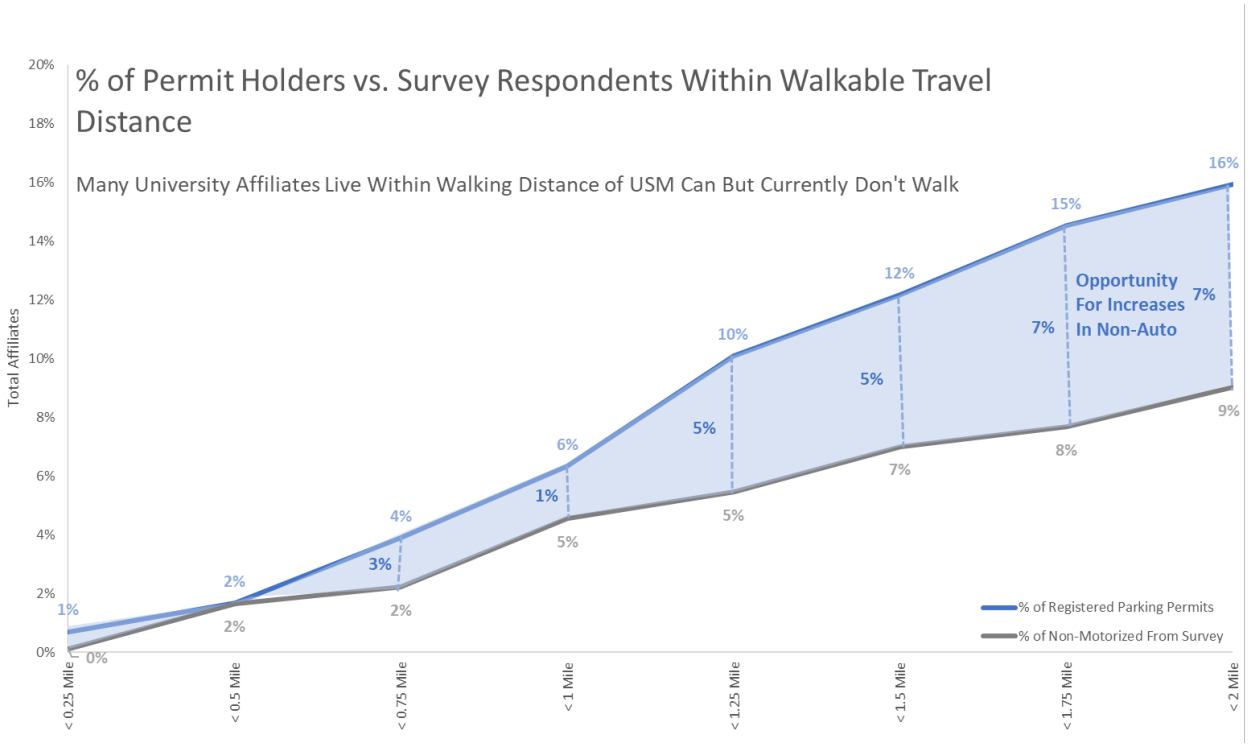
Alternative Mode Potential: Opportunities for TDM

To gauge the modal potential for walking, biking, and transit to USM, the geographic distribution of parking permit trip origin data was compared to the walking, bicycling, and transit travel market sheds. To get an understanding of current travel behavior versus potential travel choices, the 2019 transportation survey results are overlaid against this geographic distribution. The difference between the total number of people matched to a particular mode and the mode choice results from the survey form an "opportunity" zone for a potential increase in the use of a travel mode. People are represented here as FTE (Full-time equivalent) rather than headcount because FTE fits greenhouse gas reporting protocol and the University believes it is a better representation of how trip proportion impacts campus.

Walk Potential

Within a mile walking distance from campus, approximately 5 percent (an estimated 251 full-time equivalent individuals) of USM Portland students/employees reported using non-auto transportation to the USM Portland campus whereas per the permit data 6 percent of parking permit holders were geographically matched to reside a mile from USM (Figure 10). The delta between the two data points increases significantly as distance from campus increases. At 2 miles, only 9 percent of students/employees use non-auto travel modes (per the survey), whereas a total of 16 percent live within 2 miles of campus (per the permit data).

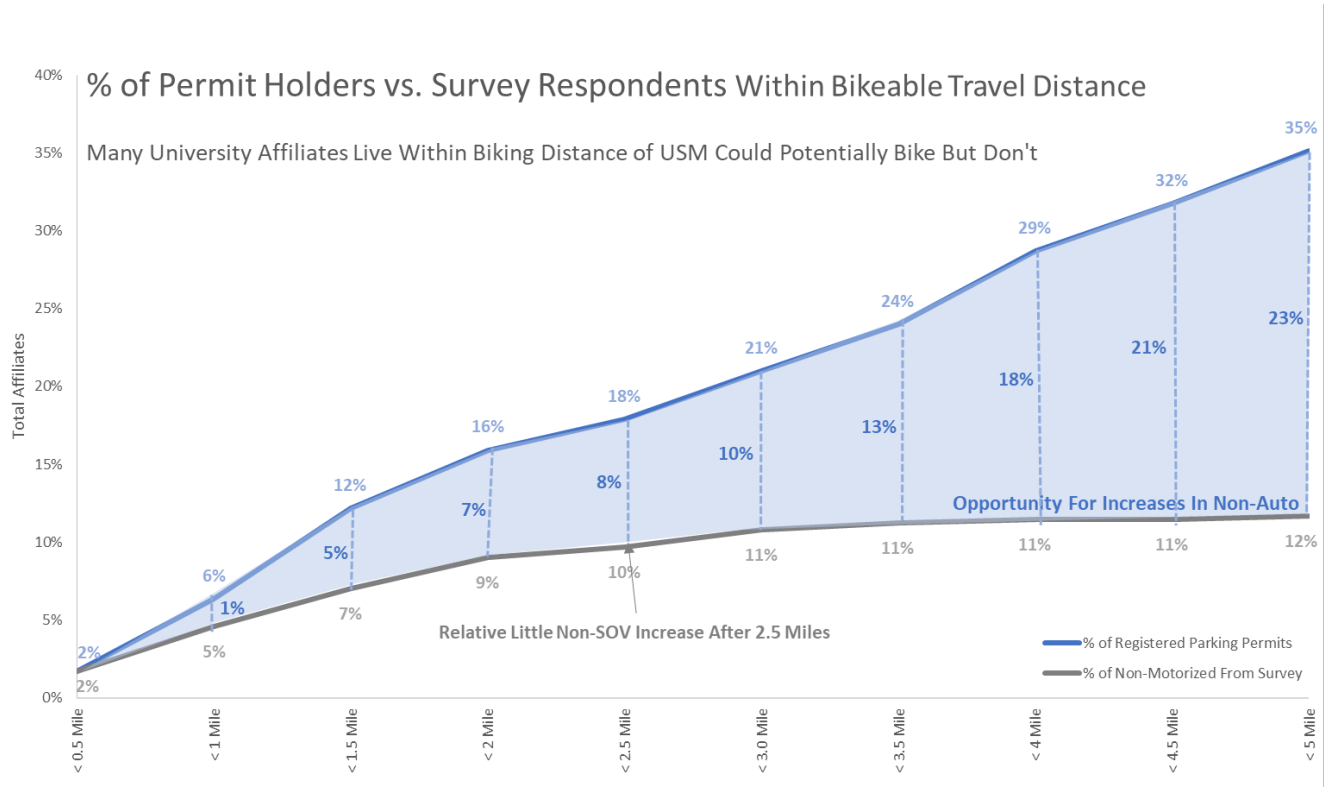
Figure 10: Walk Potential



Bicycling Potential

Biking distance for parking permit holders was compared to non-motorized users based on survey results (Figure 11). Based on the geocoded parking permit data, up to 35 percent of all USM employees and commuter students (an estimated 1,759 full-time equivalent individuals) live within 5 miles of campus, considered the upper limit for a reasonable biking distance for a commute. Per the transportation survey, however, only about 12 percent of commuters who live within 5 miles of campus use a non-motorized form of transportation. According to Figure 11, below, after 2½ miles, most people at USM stop using non-SOV[4] modes of transportation, which may be an indication of the cultural and environmental limits of biking in Maine. Although there is potential beyond 2 ½ miles, that potential should be tempered by barriers of safety, comfort, and weather.

Figure 11: Bike Potential

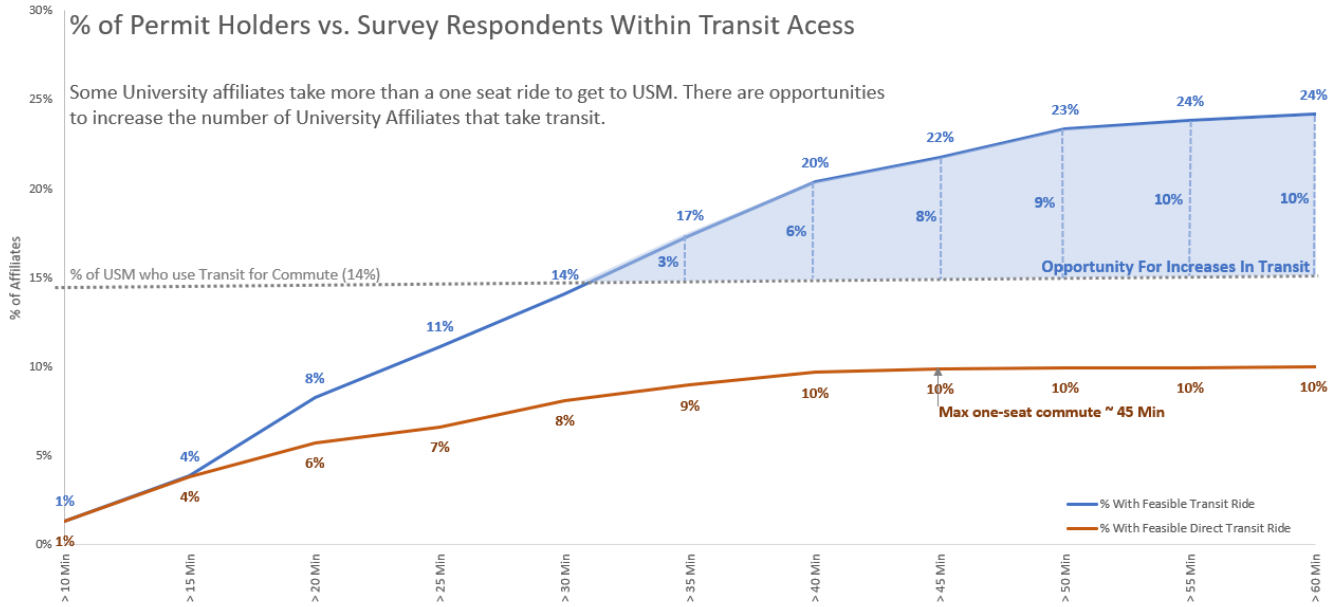


[4] SOV – single-occupancy vehicle (this mode is also referred to as *drive alone*)

Transit Potential

Transit-access time was compared to the percent of commuters from the survey who reported using transit (Figure 12). Up to 10 percent (or 503 FTE individuals) of USM affiliates live within walking distance of a direct transit route to USM Portland (based on the parking permit data). A further 14 percent (summing to 24 percent) can take a transit option that would take less than an hour to access USM Portland. This is 10 percent more than the existing number of University affiliates who indicated taking transit to USM (as reported in the transportation survey).

Figure 12: Transit Potential



Given the higher number of USM affiliates who noted taking transit than the number of affiliates within direct transit routes indicates that either a percentage of affiliates may be connecting on transit service or otherwise driving to a stop first (example driving to Gorham campus and then hopping on the Husky Line). Of all transit routes with direct access to the USM Portland campus, the Husky Line[5] has the highest number of permit holders who live within walking distance (459), followed by Route 4 (451), Route 2 (352), and Route 8 (270). Of all transit routes, the Route 9A and Route 9B serve the most affiliates within walking distance of stops (611), but these routes require a transfer to a transit bus line with direct service to the Portland campus.

[5] This analysis does not account for the fact that the Husky Line is a direct service route with few stops, whereas the other lines are more traditional services; however, the comparison serves to highlight what would be possible if the Husky Line or a route like it where to offer more stops in certain neighborhoods.

4

TDM Coordinator

TDM program management responsibilities will be designated to three representatives associated with the University.

USM appointed the Director of Sustainability to serve as the lead TDM Coordinator for USM, with primary responsibilities centered on long-term demand reduction, planning and implementation. The Manager of Parking and Transportation Services will play a supporting role, with primary responsibilities focused on more short-term planning and on-the-ground assessment of existing programs. Considerable overlap is expected between both of these individuals. Both of these positions report to the Associate Vice President of Operations, who will also play a role in both short-term and long-term operations and planning of TDM initiatives.

The current Director of Sustainability, Aaron Witham, can be reached via:

- email at aaron.z.witham@maine.edu
- phone at 207-780-5947.

The responsibilities of the Director of Sustainability will include the following:

- Promote non-SOV transportation choices primarily to faculty, staff, students and residents

- Champion the implementation of new TDM strategies to reduce parking demand and increase the use of non-SOV transportation modes
- Conduct new student/new employee orientation to educate incoming affiliates regarding their transportation options to and from the campus.
- Coordinate the implementation of TDM strategies with Campus Scheduling, Human Resources, Parking, and any other departments.
- Work with the City of Portland, METRO, GoMaine, a private carpool app and other potential partners to improve non-SOV transportation access to the campus and to gain support for program implementation.
- Recruit and engage participants for any outreach events or campaigns associated with the TDM program over time.
- Review potential new alternative transportation technology or SOV reduction technology and coordinate implementation efforts associated with them.
- Co-coordinate all monitoring and evaluation activities necessary to measure the effectiveness of the TDM program in achieving the targets.
- Co-develop a TDM Report, which will provide an assessment of strategies implemented to date and outline the activities to be implemented in the upcoming year.
- Co-develop and implement financial parking incentives or disincentives as identified by the TDM plan.

The responsibilities of the Manager of Parking and Transportation Services will include the following:

- Provide consultation on TDM strategies that impact parking supply, services, and technology.
- Co-coordinate all monitoring and evaluation activities necessary to measure the effectiveness of the TDM program in achieving the targets, such as providing up-to-date data on parking volumes and trip generation estimates.
- Co-develop a TDM Report, which will provide an assessment of strategies implemented to date and outline the activities to be implemented in the upcoming year.
- Co-develop and implement financial parking incentives or disincentives as identified by the TDM plan.
- Maintain existing motor vehicle and bike parking infrastructure and technology, with the support of Facilities Management and Capital Planning.
- Maintain parking services, including payments, campus notifications, and website updates.
- Carry-out parking enforcement.

5

Transportation Demand Reduction Goals

USM expects the TDM program to reduce the number of single-occupancy vehicle trips, thus reducing overall trips, demand for parking, and greenhouse gas emissions.

Trip Reduction Goal: USM aims to reduce University-generated peak hour vehicle trips between 3-6% (17-35 trips) for the AM peak hour and by 3-6% (12-23 trips) for the PM peak hour by 2025. This goal is relative to a baseline of 581 and 381 trips, respectively, in the year 2023, at the opening of Portland Commons, the Career and Student Success Center, and a new parking garage (as determined by the Traffic Movement Permit analysis conducted in March of 2020). The peak hours are based on total traffic in the area, inclusive, but not limited to USM's contribution. They are noted to be between 7:30 am- 8:30 am and between 4:30-5:30 pm. Given that the morning hour is a higher peak overall, that hour will be the primary focus of the goal. This goal is not adjusted to account for the Maine Law School leaving campus, in order to ensure that the strategies presented in this document for reducing traffic are overly sufficient.

Parking Demand Reduction Goal: USM aims to reduce parking demand by 10-14% (144-201 vehicles) by 2025 during the hour of peak demand on campus[6]. The peak parking hour

[6] The peak hour for trips is related to the peak hour for parking, but they are not the same. For example, the first peak hour for trips occurs early in the morning when the maximum volume of people are on the road traveling. The peak parking hour occurs later, reflecting cumulative impact as a result of multiple hours of trips coming to campus. This is why the trip reduction goal is smaller than the parking reduction goal.

and baseline volume (1,435 vehicles) was established from 12:30-1:30 pm, Monday-Wednesday, inventoried in the Fall of 2018. As strategies are implemented to achieve this goal, the peak demand hour may change, so the goal will stand in reference to the volume, not the time, of parking demand measured at the original baseline peak hour in Fall of 2018.

Mode Split Reduction Goal: USM aims to decrease the percentage of SOV (single occupancy vehicle) trips to 70% and increase the percentage of non-SOV trips to 30% by 2030. The SOV category includes personal automobile trips without passengers and motorcycles, while the non-SOV category includes carpools, riding the bus, biking, and walking. The most recent data set of 2019 shows that USM is currently at approximately 75% SOV and 25% non-SOV. Given that measuring this goal relies on self-reported survey data and only includes a sample of the larger population, the University primarily wants to use this goal for internal planning purposes and for estimating greenhouse gas emissions. However, the University will provide the current estimate annually in its reports to the City.

Greenhouse Gas Reduction Goal: USM aims to reduce greenhouse gas emissions from commuting by 20% (or .4 MT of CO2e per capita) by the year 2025, in line with its goal to reduce all scope one emissions at the University by 20%[7]. The 2006 baseline greenhouse gas emissions from commuting on an annual, per capita basis is approximately 2 MT of CO2e. This goal is tied to a larger University pledge called the President's Carbon Commitment, a national commitment among hundreds of colleges and universities to reach carbon neutrality. USM signed the pledge in 2007, and set 2006 as the baseline with a goal of 2040 for carbon neutrality. The 20% goal here is higher than the goals set for trip generation and parking reduction because in addition to vehicle reductions, the University is actively building infrastructure for electric vehicle charging and anticipates increases in fuel economy standards for traditional gasoline-powered vehicles and hybrids.

Table 4: Summary of Targets Following City of Portland Reporting Guidelines

Date of Original TDM Plan: 11-3-2020				1-20-2023 Revision
Provide Data in Percentages and Absolute Numbers, where applicable		*Baseline Data (at time of TDM plan adoption*	*TDM Plan Reduction Target (if applicable)*	*Current Reporting Period Data*
Vehicular Trips	*Off-Peak*	N/A	N/A	Report forthcoming in 2023
	AM Peak Hr	581	3-6% (17-35 trips)	Report forthcoming in 2023
	PM Peak Hr	381	3-6% (12-23 trips)	Report forthcoming in 2023

[7] There are three categories of emissions in GHG accounting. Under Second Nature, scope three is comprised of commuting, business travel, study abroad, downstream waste emissions, and transmission and distribution loss from electricity, as well as occasionally other sectors.

Mode Split (future data may be reported as SOV & Non-SOV)	*Single-Occupancy Vehicle*	75%	70%	Report forthcoming in 2023
	Non-SOV	25%	30%	Report forthcoming in 2023
	Carpool	8%	Not specific	Report forthcoming in 2023
	Bicycle	*11% (shared with walk)	Not specific	Report forthcoming in 2023
	Walk	*11% (shared with bike)	Not specific	Report forthcoming in 2023
	Transit	6%	Not specific	Report forthcoming in 2023
On-site Parking (Peak)		1,435	10-14% (144-201)	Report forthcoming in 2023
GHG Emissions Targets		2 MT of CO2e per capita	20% (or .4 MT of CO2e per capita)	Report forthcoming in 2023
Other:_____				

6

Trip, Parking, Mode Split and GHG Reduction Strategies

The USM TDM Plan establishes an aspirational vision and set of goals for transportation, mobility, and sustainability. The Plan builds off USM's multimodal strengths but pushes forward-thinking and multifaceted solutions.

Ultimately, USM will achieve success if one keeps in mind the following key concepts:

There is no "silver bullet" in TDM. The recommendations represent a package of reforms; implementing only one or two items will not solve USM's parking challenges.

Behavior change is difficult, but critical if USM would like to realize its vision. Future growth at the University will present critical challenges with parking. USM will need to depart from the status quo and rethink parking and transportation in order to grow sustainably.

The Plan is a "living" document. Key to the success of this plan is to implement, measure, learn, and adjust. Over time as the transportation context, technology, institutional culture, and user preferences change, so may the types of strategies that are pursued. This is true now, more than ever, given the current global pandemic, and the need to remain adaptable.

What is presented here is the University's current plan for Transportation Demand Management. It is subject to change as the global pandemic unfolds, as financial constraints

dictate, and as annual survey data and parking counts inform what is working and what is not working among USM's unique population.

Therefore, the University is not committing to launch every one of these initiatives necessarily or committing to keeping every initiative in place permanently if they prove to not be feasible. Rather, the University is aiming to achieve trip, parking, and greenhouse gas emissions reduction targets using the most effective suite of technologies and policies available and achievable for a particular year. That said, it is the desire of the University to launch most of these initiatives in order to provide a multi-modal suite of options to students, staff and faculty, not all of which have the privilege of owning a personal vehicle. Moreover, the University has identified certain initiatives as "core" initiatives that it is committed to implementing. These are indicated with an asterisk in Table 3.

The matrix below introduces a snapshot of the initiatives that USM hopes to implement. Following the matrix is a section outlining descriptions of the initiatives. To the extent possible, strategies are grouped by categories reflected in the *City of Portland's Technical Manual*. For each strategy, an anticipated launch date is provided.

Most of the initiatives described here were first conceived and published in the 2020 version of the TDM Plan. Therefore, progress has been made toward many of them over the two years since the plan was released. Some of the initiatives have even been fully implemented. For annual initiatives or initiatives that require ongoing management, they are considered "ongoing". The implementation status is indicated in the "Launch Date" column below.

Table 5: Overview of TDM Initiatives for USM

STRATEGY	LAUNCH DATE	INFRASTRUCTURE	INCENTIVES	EDUCATION
Walking				
Participate in the "Complete City Project"	Completed in 2020			X
Hold Fitness Challenges	Completed in 2022 & Ongoing		X	
Biking				
*Co-launch City Bikeshare	Completed in 2022 & Ongoing	X		
Build Bicycle Repair Station	Fall 2023	X		X
Promote Local Bike Activities	Completed in 2022 & Ongoing		X	X
*Improve Bike Infrastructure	Fall 2023	X		
Apply for Bike Friendly University Certification	Fall 2023	X	X	X
Transit				
*Continue METRO Pass Program	Completed in 2022 & Ongoing	X	X	

Promote & Market METRO to University Students, Staff & Faculty	Completed in Fall 2021 & Ongoing		X	X
Work with METRO to Incentivize Travel of Community Members to USM Events	Fall 2025		X	X
Propose Transit Service Expansion Beyond Husky Line	Completed in Fall 2022	X		
Install Transit Screen on Portland Campus	Spring 2024	X		
Subsidize City-Link passes for Lewiston-Auburn College students	Spring 2024		X	
Carpooling, Telecommuting & Time-of-Day				
Designate Carpool Spaces	Completed in Fall 2022	X	X	
Expand Rideshare Matching Opportunities	Fall 2024	X		
Promote Telework & Flexwork	Completed in Spring 2020 & Ongoing		X	X
Restructure Course Schedule	Completed in Fall 2020	X		
Parking Pricing				
*Establish Residential Parking Buyout Program	Fall 2023		X	
Host Carshare Program to Support Buyouts	Fall 2023	X	X	
*Unbundle Student Parking Fees	TBD		X	X
Build Additional EV Charging Stations	Spring 2023 & Ongoing	X		
Review Parking Price Levels	Completed in Fall 2020 & Ongoing		X	
Communications & Marketing				
*Hold New Student & Employee Orientations for Transportation	Completed in Fall 2022 & Ongoing		X	X
*Revise Transportation Website	Completed in Fall 2022 & Ongoing			X
*Publish Access Guide	Completed in Fall 2021 & Ongoing			X
Offer Emergency Ride Home Service	Fall 2023		X	

*Core strategies that the University is committing to are indicated by *. In the case of the Carpooling, Telecommuting & Time-of-Day category, the category itself is considered core, but the University will maintain flexibility in which of these strategies it implements, depending on future conditions

Walking Initiatives

Participate in "The Complete City" project: A class led by Dr. Yuseung Kim collaborated with the Portland Society for Architecture (PSA) to carry out this project. The goal of the project was to make the Greater Portland community area more accessible, more attractive, more just, and equitable. This includes creating what they (and others) describe as "The Complete City," where within the city, each neighborhood has all it needs within a half mile, incentivizing alternative transportation by intentionally planning communities. Having one's needs within a half mile makes a community walkable. Six graduate students worked on the project and helped deliver a 130-page report and a 15-page executive summary. More about the Complete City Project can be found here: https://thecompletecity.com/disconnected/.

Hold Fitness Challenges: In the Spring of 2022, the Office of Sustainability launched its first sustainable-fit commute challenge. The purpose of the challenge was to incentivize students, staff, and faculty to try walking or biking to campus in order to better their health and the health of the planet. Over 100 people signed up for the four-week challenge, which took place between April and May. Participants were asked to fill out a form at the end of each week to self-report their mileage or steps.

The winning walker and biker each week received a prize of Husky Bucks, which are University dollars that can be used in the campus bookstore or dining facilities. As an additional incentive, employees and eligible spouses, who participated each of the four weeks, were granted achievement of their level 2 health incentive with the University's health program, which comes with a $100 reward. The Employees Benefits Center, Human Resources Departments, and the University's Health Committee all partnered on the initiative. The University intends to continue holding the event annually.

Biking Initiatives

Co-Launch City Bikeshare: Over the Fall of 2021 and the Spring of 2022, the University helped the City of Portland research and develop its RFP for bikeshare services. The RFP effort was successful and the chosen vendor, Tandem Mobility, begin installing bikes across the City in 2022. In the Fall of 2022, the University established two bikeshare locations on the Portland campus, including Skywalk Landing by Masterton Hall and a location by Sullivan Gym. The University endeavors to move one or both of these stations to locations that are anticipated to see higher foot traffic after the McGoldrick Center, residence hall and center for the arts buildings come online. The current plan is to have one bikeshare station on each end of campus, serving the two new quads. The University promotes the bikeshare program on its website, through Instagram, and in direct emails to the University community. USM will continue working with Tandem Mobility and the City of Portland to support and expand the program, including the potential to integrate bikeshare incentives into the campus' broader parking management strategies.

Build Bicycle Repair Station: In the early summer of 2023, the new structured parking garage on Bedford Street will open on the Portland campus. Contained within this structure is a dedicated bike repair room that is adjacent to the bike-storage room. This covered room, with electrical outlets and lighting, will be outfitted with basic tools and stands, so that students, staff, and faculty may conduct basic bike repairs. At a minimum, the space will be set up to operate in a self-serve capacity. However, if funding and expertise can be acquired in future years, the room may be able to house a bike repair shop.

Promote Local Bicycle Activities: The University will promote the participation in (and facilitation of) local bike activities such as the Portland Slow Ride, Smart Cycling Traffic Skills 101, and Cycling Savvy events. At least one opportunity or event will take place each semester. In the Spring of 2022, the University co-hosted three bike activities with the Bicycle Coalition of Maine: a Great Maine Bike Swap on the Lewiston campus, a Great Maine Bike Swap on the Gorham campus, and a bike-in-traffic workshop on the Portland campus. In the Spring of 2023, the University has two fix-it workshops planned with Bicycle Coalition of Maine, with planning taking place for another bike-in-traffic workshop. The number of activities and types of bike activities offered each year will depend on current demand and availability of instructors.

Improve Bicycle Infrastructure: The University plans to increase bicycle parking spaces to 2.5 times what is currently offered on the Portland campus. Currently there are 250 spaces.

In the summer of 2023, USM plans to add 122 short-term (uncovered spaces) to campus, with a lot of them slated for the new quad and some of them being distributed throughout campus to fill in gaps. USM also plans to add 288 long-term (covered and secured) spaces at the same time. Approximately 38 of these long-term spaces are being built inside a bike room within the Portland Commons residence hall, and 250 long-term spaces are being installed in a dedicated bike room in the new structured parking garage. Bikeshare notwithstanding, the total spaces on campus by the Fall of 2023 is planned to be 670. Then, in the Fall of 2024, another 10 bike spaces are planned to be installed near the new center for the arts.

These volumes of new bike parking meet or exceed several important standards that align with the University's aggressive plan to increase biking among its students, staff, and faculty:

- 5.5 times higher than City of Portland's Technical Specs, campus-wide[8]
- Double the amount suggested by APBP for short-term parking for students and employees[9]
- Meets APBP's recommended long-term space allocation per bed[10]
- Exceeds City of Washington D.C.'s requirement by over 50% for long-term spaces per dwelling units in residential apartments[11]

[8] Per City of Portland Code of Ordinances, Section 14-526

[9] Per Association of Pedestrian & Bicycle Professionals' Bicycle Parking Guidelines, 2nd Edition, assuming that student & faculty vehicle spaces are a reasonable proxy for individuals on campus at one time

[10] Per Association of Pedestrian & Bicycle Professionals' Bicycle Parking Guidelines, 2nd Edition multi-family housing criteria of .5 spaces per bed

[11] Per Table 1: https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/DDOT%20bike%20parking%20guide_060118_Screen.pdf

- Double City of Cambridge, MA's requirements for short-term spaces and exceeds their requirements for long-term spaces.[12]

Off campus, the University will collaborate with the City of Portland on identifying improvements to bicycling infrastructure along corridors traveled by USM commuters through the annual transportation survey.

Apply for Bike Friendly University Certification: The University plans to apply for Bike Friendly University Certification. The application process, completed every four years, will help the University identify areas for improvement, and inform the types of questions that need to be asked in the annual survey of students, faculty and staff. Preliminary work began in the Fall of 2021 to identify where to find and how to compile the necessary data in order to apply. The University plans to draft an application in the Summer of 2023.

Transit Initiatives

Bus ridership has obviously been impacted by the global pandemic by some customers deciding not to ride the bus and by temporary restrictions on being issued by the Federal Government. Despite these challenges, VHB believes that transit ridership demand will fully rebound again within a couple of years, so they do not recommend changes to long-term ridership predictions at this point. However, they note that the ability for ridership to be accommodated depends on supply of seats being available, which could possibly be impacted by future policy decisions coming from the Federal government. For the time being, the University is not adjusting expected transit impact for TDM goals set on a 2023 horizon.

Continue METRO Pass Program: In 2018, the University established a program with the Greater Portland METRO to allow students, staff, and faculty to ride any METRO route for no cost to the individual, so long as they show a USM ID. The program has been popular for students, as it increased the number of trips offered between Portland and Gorham via the newly established limited stop Husky line. Post pandemic, it has great potential to shift USM commuters out of personal vehicles if they live on or near an existing line. In the Fall of 2022, the University activated its last option year under the existing contract and is working with METRO on a contract renewal to keep service operating beyond the Summer of 2023.

Promote & Market METRO to University Students, Staff & Faculty: The University will work with METRO to promote use of the Husky Line as well as the system as a whole. In the last couple of years, the University has promoted bus ridership on social media and hosted group rides through new student orientation. Use of the METRO is also being planned as part of a focused sustainable transportation orientation.

[12] Per College or University Student Activity Facilities, page 4: https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Bike/Bicycle_Parking_Guide_20130926_2017PictureEdits.pdf

Work with METRO to Incentivize Travel of Community Members to USM Events: The University is working with METRO to explore grant or METRO-funded discounts on fares through ticket purchases for the general public attending University events, such as events that will be hosted in the new center for the arts or athletic events. METRO and the University meet quarterly to discuss improvements to service and to share ideas for broadening ridership.

Propose Transit Service Expansion Beyond Husky Line: In 2022, the University of Southern Maine and the Maine Law School met with METRO multiple times to discuss expansion of the Husky Line deeper into downtown Portland. Discussions have centered around advancing the route down Congress Street and Franklin Arterial in order to serve the Fore Street and waterfront neighborhood, before traveling back to Elm Street. Such an expansion would assist University students, staff, and faculty in accessing downtown businesses without bringing a single occupancy vehicle onto the peninsula. METRO is taking multiple stakeholders into consideration before it finalizes any plans for route expansion. The University remains available and willing to assist with data collection or analysis.

Install Transit Screen: The University plans to install a real-time transit screen near the center of campus. Discussions with METRO and various University stakeholders have identified the new Career and Student Success Center, the bus stop, or the new structured parking garage as potential locations. Installation may not take place until after the new buildings have opened and pedestrian routes through campus have been established, so that the University can decide which location would achieve the highest visibility.

Carpooling, Telecommuting and Time of Day Initiatives

The initiatives below are paired together here so that they can be substituted for one another when responding to the risks created by the Covid-19 pandemic and future pandemics. For example, under non-pandemic circumstances, the telework initiative may only constitute 25% of the demand management that this category is capable of, while under a pandemic scenario it may need to constitute 100% of the demand management.

Designate Carpool Spaces: In the Fall of 2022, the University designated 50 prime parking spaces for carpool on the Portland campus. Three spots have been signed in the Masterton Lot, two spots in the Human Resources Lot, one in the Payson Smith Hall Lot, six in the Law School Lot, and 38 in the parking garage. Each location allows carpoolers to park close to the adjacent building. Students, staff, and faculty parking in the spaces are required to display two valid parking passes within the vehicle to prove that a second vehicle is being left at home. Non drivers are allowed to apply for a non-driver carpool pass that can be displayed as the second parking pass. To advertise the launch of the program, the Director of Sustainability and the Associate Vice President of Operations informed drivers entering the parking garage during the first week of classes, and a narrative describing the program was emailed to the entire University along with other transportation-related notifications. Usage of the spots has not yet reached its full potential, so the Office of Sustainability will continue marketing efforts in future semesters. Future expansion of the program will be considered if space counts demonstrate high usage and if survey data provides evidence that expansion will incentivize more carpooling.

Expand Rideshare-Matching Opportunities: The University advertises the Maine Turnpike Authority's rideshare matching platform through Go Maine. Information about Go Maine is available on the University's transportation website, sustainable transit quick access guide, and other mass communication. However, the University does not yet have a formal partnership with Go Maine. Research into the benefits and risks of a partnership have been ongoing since 2019. The University is exploring whether or not it wants to pursue development of or a subscription to a private rideshare-matching application, and aims to make a decision by the Fall of 2024, assuming that the Covid-19 pandemic has leveled out by then. The carpooling mode share at the University is relatively high (8% in 2019 and 6% in 2022), so efforts to assist in ride-matching are not as high of a priority as some other TDM initiatives.

Promote Telework and Flexwork: The University of Southern Maine will continue promoting its existing voluntary telecommuting policy issued by the University of Maine System. Over the last two years, the Human Resources department has issued several notifications to employees about how to apply for telework.

Restructure Course Schedule: In the Fall of 2020, the University's Registrar's Office led a restructuring of the course schedule to spread out enrollment throughout the day and to better align with the METRO schedule in order to assist students wanting to take the bus from Gorham to their classes in Portland. In addition to impacting peak parking demand in the middle of the day, the effort was also meant to reduce demand on available classroom space, and to give students more options for when to take courses. The new course schedule starts 45 minutes earlier in the morning, lengthening the day. It also adds an additional early morning time block and an additional evening time block when courses can be booked. The full effects of this restructuring will not fully seen until after the University's ratio of online/hybrid courses to in-person-only courses falls back to pre-pandemic levels.

Parking Pricing Initiatives

Establish Residential Parking Buyout Program: The University plans to launch a parking buyout program to encourage student residents on the Portland campus to give up their parking pass for a year in exchange for a cash incentive and value toward bikeshare and/or carshare services. The current proposal, subject to change, is to offer up to 100 buy-outs that include both the cash incentive and value toward alternative transportation services. The second 100 buy-outs would be just for alternative transportation services. Additionally, the first 30 applicants would get secure, covered parking inside Portland Commons. The second 170 applicants would get secure, covered parking inside the bike room of the parking garage. All participants would receive a limited number of one-day vehicle passes to assist them through unplanned life events or emergencies. The amounts of the financial incentives are still being finalized and are subject to the forthcoming budget approval process culminating in May of 2023. The University will monitor this program over time and adjust the number of buy-outs and the financial incentive to respond to changing conditions.

Host Carshare Program to Support Buyouts: The University will attempt to establish a carshare program that would be utilized as part of the residential student buy-out program

(in subsidized form), as well as by commuter students, staff, faculty and non-USM community members. The University recognizes that the carshare business plan has been challenged by Covid-19 due to the financial losses sustained by car rental businesses, so this initiative may not prove reliable. To that end, it is not a critical leverage point within this TDM plan; rather it is supplemental to the buy-out initiative. The hope is that the industry will rebound in 2023. Effort will be made to partner with the City of Portland if it develops an interest in establishing a carshare program.

Unbundle Student Parking Fees: The Office of Sustainability endeavors to find a way to either unbundle the student transportation fee from their other tuition-related fees or make the parking-related portion of the transportation fee more transparent, so that the payment for a parking permit becomes a more conscious action. This action which will draw attention to the cost of those applying and serve as a disincentive to some. Because of the fact that University of Southern Maine fees are established through Board of Trustee (BOT) approval, and BOT processes are longer than most other approval processes at the University, it is unclear when the next opportunity to achieve this goal will arise.

Build Additional EV Charging Stations: The University has purchased 29 level-2 charging stations with 58 plugs to have installed in the new structured parking garage upon opening. There are already two level-2 charging stations on the Portland campus and one on the Gorham campus. In future years, the University's goal is to ensure there are enough charging stations available to meet the next year's expected demand of students, staff, and faculty driving EV vehicles to campus (as indicated by available data from charging station software, parking permits and the annual transportation survey), so that spaces to park do not limit potential EV drivers. Stations will charge customers to charge.

Review Parking Price Levels: The University has carried out recent reviews of parking pricing in an effort to discourage single occupancy vehicles and increase revenue. In 2020, the University Auxiliary Services division reviewed parking pricings at the University and surveyed the Greater Portland market. The findings influenced operation of the parking garage on the Portland campus over the following two years. In the Fall of 2022, the Operations division increased pricing for non-permit holders from $2 per hour to $3 per hour. The goal will be to achieve greater parity between employee and student parking pricing. When the new residence hall opens on the Portland campus, the University intends to charge a premium for students parking overnight. Future considerations are being made for efforts to increase parking price parity between students and employees.

Communications and Marketing Initiatives

Communications & Marketing: The University plans to hold new student and employee orientations for alternative transportation modes, infrastructure, resources, and incentives. In 2022, the University developed two different orientation models (an in-person and a virtual). During the Fall semester, the Office of Sustainability launched the virtual orientation, which comprised of providing participants with sustainable transportation tutorial information, a code for two hours of free bikeshare, and a request to post a picture of themselves on a bikeshare bike with a hashtag linking the post to the Office of Sustainability's Instagram page. The Office of Sustainability plans to conduct an in-person orientation during warmer

months. These new orientation programs will supplement existing group bus rides that occur during new-student orientation programming.

Revise Transportation Website: In the Fall of 2022, the University launched a new transportation website, its second major revision in the last three years. The latest website offers targeted information on how visitors to campus can ride a bike, take a bus, take a train, carpool, or drive an electric vehicle. Separate pages on each of these alternative modes covers infrastructure, incentives, local resources such as maps, and estimated greenhouse gas emissions saved. The Office of Sustainability and Parking Office will update this website over time.

Publish Access Guide: In 2021, the Office of Sustainability developed a "slick sheet" access guide summarizing ways to travel to campus and nearby destinations, using alternative modes. The guide was printed as a flyer and hung around campus. It has also been incorporated into new student orientation packets. The Office of Sustainability will update this guide over time and continually evaluate the best venues to use for publicizing it.

Offer Emergency Ride Home Service: The University plans to promote the "guaranteed ride home" program from Go Maine and consider supplementing this service with a University-funded budget for additional guaranteed rides home. The service would likely be structured as reimbursement for a taxi, private bus, or a rideshare service, such as Uber or Lyft. It would provide security to students, staff and faculty who choose not to bring their single occupancy vehicle to campus. If they experience an emergency that requires them to get a ride home, to a doctor's appointment, or to pick up a child, they would be able to apply for reimbursement if they meet certain minimum requirements.

Potential Greater Portland Initiatives

The University recognizes that it is only one entity within a much larger complex system of transportation within the greater Portland. Toward that end, VHB researched potential improvements that could be considered by the METRO, the City of Portland, and other supporting entities to support USM's TDM plan. VHB also estimated the potential impact these initiatives could have on USM's trip generation and parking goals. The proposed initiatives and their potential impacts are summarized here:

- **Increase frequency of Husky Line to 15 minutes:** Reduction of 39 (2.5%) to 79 (5%) Peak Hour Parking Spaces
- **Increase frequency of METRO Routes 2 and 4 to 15 minutes**: Reduction of 39 (2.5%) to 79 (5%) Peak Hour Parking Spaces
- **Restructure departures and arrivals of all METRO routes serving the Portland campus in order to create 10 minute headways to downtown:** Reduction of 8 (0.5%) to 16 (1%) Peak Hour Parking Spaces, with even greater reductions possible if all routes were routed to serve the same stop on campus
- **Create local on-demand circulator route (shuttle):** Reduction of 56 (3.5%) to 111 (7%) Peak Hour Parking Spaces
- **Improve downtown METRO loop (Route 8) and route it through the USM campus:** Reduction of 43 (2.7%) to 86 (5.4%) Peak Hour Parking Spaces

- **In support of the above initiatives, METRO could begin to plan around USM as an anchor node in their network when the new residence hall comes online**
- **Create a better defined and safer bicycle/pedestrian corridor from USM to downtown:** Reduction too difficult to estimate until the goal is more defined

The reduction ranges featured above should be considered for each initiative individually, as opposed to being additive if all initiatives were implemented. In other words, some individual riders may be affected by more than one initiative. To further explore these initiatives, the University recommends that a coalition of METRO, the City, the University, and others research what the potential cost per rider would be for implementing these strategies, in order to determine which may warrant further consideration.

7

Monitoring and Reporting Plan

Program monitoring and evaluation are important components of any successful TDM Program, because they provide a quantitative benchmark of the program's effectiveness in reducing single occupancy vehicle trips and parking demand. The Transportation Demand Management Coordinator can use the information gathered via the monitoring plan to direct the ongoing implementation of the TDM Program, allowing for adjustments and the introduction of new strategies. Furthermore, via regular periodic reports, USM will provide

evidence to the City of the applicant's diligence in implementing the program.

There are different methods for collecting the data necessary to monitor a TDM Program, including surveys, program participation documentation, vehicle parking counts, and activity logs. USM's TDM program monitoring will use trip generation counts, vehicle parking counts and person surveys in evaluating the effectiveness of the program. Each of these tools is discussed below.

Trip Generation Counts

Trip generation counts refer to estimating the potential contribution of USM students, staff, and faculty to the total volume of vehicles on the roads feeding the Portland campus. The peak trip hours will be used as the boundary for this metric, and the data will originate from recorded vehicles entering and exiting the parking garage structures on campus. The University will then apply the ratio of trips per parking spaces calculated from the garage data to the surface lots on campus, in order to estimate trip counts to/from the surface lots as well. The parking garages will represent the supermajority of parking for the foreseeable future (e.g. 87% of the parking in 2024), which provides the University confidence that this method will yield a reasonable estimate of trip generation for the entire campus.

The peak hours will be assumed to be between the hours of 7:30-8:30 am and 4:30-5:30 pm, Monday through Wednesday, in October, unless future analysis shows they should be at a different time. These hours were determined by the Traffic Movement Permit published in 2021 and updated in 2022.

The Manager of Parking and Transportation Services at USM will provide vehicle count data from the automated garage entry systems. In the event that the automated garage entry system is broken, then visual counts or traffic strips may be used.

The report generated in the Spring of 2023 will show percentage change relative to 2022, given that the baseline year for this metric does not occur until the Fall of 2023. From 2024 onward, the percentage change will be based on a baseline year of 2024.

Parking Occupancy Counts

Parking counts refer to an accounting of the number of occupied and/or empty parking spaces. These data are used to ensure that the amount of parking supply (spaces) on site is appropriate to meet peak hour parking demand (parked vehicles).

Under the direction of the TDM Coordinator or the Manager of Parking and Transportation Services, the University will collect observations of vehicle parking during a representative (typically busy, classes-in-session) 3-day period in October. Observations of spaces occupied will be made during each hour in a ten-hour period of 8:00 AM to 6:00 PM.

The automated garage entry system at the gates to the parking garages will be used to collect the data, provided it is functioning at the time. If it is not functioning, then a visual

count or traffic strip will be utilized. The parking supply in the parking garages will represent the supermajority of available parking on campus for the foreseeable future (e.g. in 2024, 87% of the parking will be in the parking garages). An occupancy ratio will be determined from this data set that will then be applied to the surface lots on the Portland campus, in order to estimate the approximate occupancy counts of those spaces.

The reporting of parking transactions and garage use should distinguish, to the extent possible, those users who are USM employees, students, and transient/visitors (hourly, public) users.

A parking occupancy rate relative to total supply of parking on campus will be reported by the University for the three days of data. The University will also report the raw data for these counts when requested to do so by the City of Portland.

Survey of Commuting Patterns, Mode Split and GHG Emissions

The Office of Sustainability or Parking Services will administer a survey of both employees and students of USM Portland.

Surveys provide a qualitative understanding of how well TDM (and Parking Management) program elements are working. The survey will also be used to estimate greenhouse gas emissions associated with commuting, as well as the current mode split.

The TDM Coordinator will conduct the surveys in either the Spring or Fall session (e.g., March or October), depending on available resources and labor relative to the resources and labor required to conduct the trip generation and parking analysis. The survey will be completed during a week without any holidays and when classes are in session.

Survey questions will incorporate the following components, in addition to others:

- Type and frequency of modes of transportation used in a typical week
- Destinations traveled to via particular modes
- Reasons why people are driving alone
- Reasons why people are not driving alone
- Level of enthusiasm for incentives that would encourage drive-alone respondents to use an alternative mode
- Ideas for improvements to transportation system, including ideas for incentives
- Routes traveled by foot or bike and associated improvements desired
- Trip generation during time of day (in order to supplement USM-generated contribution to peak traffic generation)
- Ownership of electric vehicles
- Questions required for Bike Friendly University application
- Questions about health concerns (e.g. Covid-19) with different modes and how that is impacting behavior and expected to impact behavior in the future

Status and Monitoring Report

Each year, after data are collected, the Office of Sustainability or Parking Services will prepare a report summarizing TDM program status and monitoring results. In addition to reporting the results of the data collection, the report will detail (1) what/when strategies were implemented, (2) an estimate of how many individuals participated in certain programs, and (3) the lessons learned regarding the most effective TDM strategies, including barriers to not driving alone from the survey.

A core summary table of the goals will be provided in the report that includes baseline numbers, progress to date, goal numbers, and dates by which the University is striving to reach the goals. Goals included will be trip generation, parking counts, mode split, and greenhouse gases.

In addition to reporting on electric vehicle data collected through the annual survey, the University will provide an EV Use and Forecast Report to the City on or before May 15th of each year beginning in calendar year 2024, summarizing EV ownership and EV charging station use statistics. The Report will also include a proposal regarding the number of EV charging stations for the coming school year, based upon the supply and demand statistics from the previous year. In alignment with the other reporting activities outlined in the TDM plan, the University commits to annual reporting through 2030, the horizon of the Facilities Master Plan, after which a new TDM plan may be proposed.

The University will submit the report to the City of Portland's TDM Program Manager (a position currently staffed in the Planning and Transportation Division of the Planning and Urban Development Department). A report should be issued on or before May 15th. The University will work with the City every year to ensure it is meeting expectations of the City regarding format of the report. The TDM Coordinator will meet with the City of Portland Planning Department, as needed, to discuss suggestions for changes to the TDM Program, and will make adjustments before the start of the Fall semester if necessary.

Monitoring Schedule

Monitoring (survey, parking, and traffic data collection) will begin the year this plan is published (2023). Monitoring will occur according to the schedule detailed below, until the year 2030, the horizon year of the *Facilities Master Plan*. Updates to the *Sustainability Strategic Plan* and/or *Facilities Master Plan* may conclude that further monitoring is warranted.

Annually, the University will:

- Conduct analysis of trip generation (as described above)
- Conduct parking occupancy observations (as described above)
- Conduct a travel survey (as described above)
- Prepare a TDM monitoring report (as described above)

Section 9 – Environmental Standards

The project has been designed to meet the City's Site Plan Review Standards. Compliance with the Environmental Standards (14-14.6.2) are summarized below:

Preservation of Significant Natural Features (14-14.6.2(A))

This project will occur in a previously developed lawn area between the existing farmhouse and parking lot. No significant natural features have been identified in this area. Like the previously approved parking garage project, this project site is within the zone for the Northern Long-Eared Bat. This project involves very little tree clearing, and it is not anticipated to have an impact on the Northern Long-Eared Bat species. A copy of the Department of Inland Fisheries and Wildlife Official Species List is included in this section.

Landscape Preservation (14-14.6.2(B))

Tree clearing and turf removal have been kept to the minimum amount practicable for the project, including making site planning and building design/layout decisions that will protect significant beech and oak trees both on campus (near Luther Bonney Hall) and in Noyes Park. Tree protection fence will be placed around trees to remain that are near the work area to further protect them from damage. The project will involve removal of trees greater than 10" DBH in the Bedford Street right of way. As discussed in Section 5, a waiver has been requested to account for the tree removal, and new trees are proposed that will comply with the City's requirements.

Site Landscaping and Buffers (14-14.6.2(C))

Several planted areas will be provided around the building. The plants serve several functions on the site, including providing screening of the loading area from the Noyes Park side of the site, visual interest near the building entrance, a buffer in locations to discourage pedestrian cut-throughs, and preventing outdoor gathering near windows at interior assembly spaces. USM has a desire to provide a plant palette that includes edible plants and plants that are native to New England, and the landscape is designed accordingly. Proposed street trees are provided along Bedford Street, except where proximity to stormwater treatment facilities (under drained subsurface sand filter) preclude them. Street tree species are listed on the *City of Portland Recommended Tree List.*

The site is not located within a Historic District and will therefore not impact any trees designated by the City as heritage trees. The properties across Bedford Street from the new building appear to be residential but are non-residential buildings owned by USM. Therefore, no buffers are required along Bedford Street.

Water Quality, Stormwater Management and Erosion Control (14-14.6.2(D))

The project is not located in an urban impaired stream watershed, there will be no on-site wastewater disposal, and it is not anticipated that the project will create any groundwater contamination during or post-construction.

The project will conform to the Maine DEP and City's requirements for stormwater management and erosion control as set forth in the DEP's Stormwater Management Rules (Chapter 500) and the City's Technical Manual. The project is also subject to the requirements associated with the Minor Amendment to USM's Site Location of Development Permit, bound separately in this Application Package.

The storm drainage system on the site will generally consist of a closed drainage system connected to the University's existing internal storm drain system and a underdrained subsurface sand filter that will collect and treat roof runoff form the building before discharging into the separated storm drain system beneath Bedford Street. Refer to the Stormwater Management Report, bound separately in this Application Package.

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

In Reply Refer To:
Project Code: 2023-0015382
Project Name: USM CFA and Farmhouse

November 14, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The 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 website 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/or 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 and/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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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 Code 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:

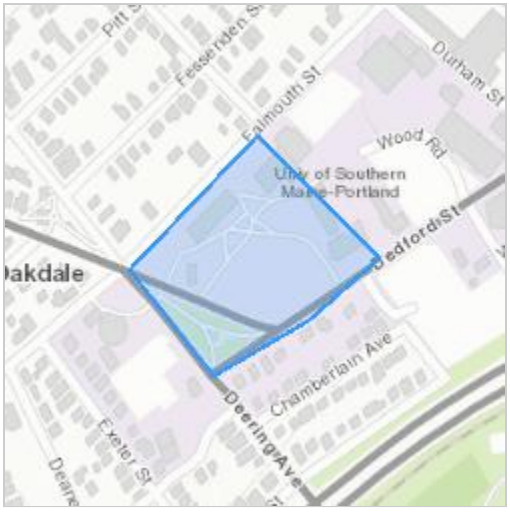
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Project Code: 2023-0015382
Project Name: USM CFA and Farmhouse
Project Type: Commercial Development
Project Description: Construction of Center for the Arts Building and Relocation of existing farmhouse

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.66184115,-70.27700297721564,14z



Counties: Cumberland County, Maine

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Oak Point Associates
Name: Jonah DeWaters
Address: 231 Main Street
City: Biddeford
State: ME
Zip: 04005
Email jdewaters@oakpoint.com
Phone: 2078314728

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

November 14, 2022

Allison Dimatteo
Oak Point Associates
231 Main Street
Biddeford, ME 04005

RE: Information Request – USM Center for Performing Arts Project, Portland

Dear Allison:

Per your request received on November 10, 2022, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *USM Center for Performing Arts* project in Portland.

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats or inland fisheries habitats that would be directly affected by your project.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

Becca Settele
Wildlife Biologist



Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: USM Center for Performing Arts, Portland (Version 1)

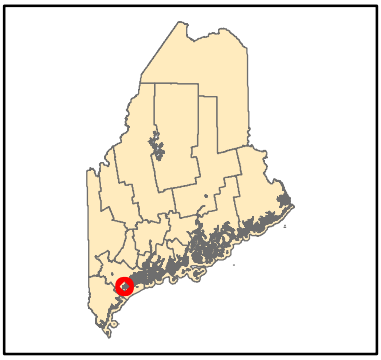
Maine Department of Inland Fisheries and Wildlife

0 0.125 0.25 0.5 0.75 1 Miles

Projection: UTM, NAD83, Zone 19N

Date: 11/15/2022

- ProjectSearchAreas - All Versions
- Maine Cliff and Talus Areas
- Deer Winter Area
- LUPC p-fw
- Cooperative DWAs
- Seabird Nesting Islands
- Shorebird Areas
- Inland Waterfowl and Wading Bird
- 2008 Iwwh - Shoreland Zoning
- Tidal Waterfowl and Wading Bird
- Significant Vernal Pools
- Environmental Review Polygons
- Roseate Tern
- Piping Plover and Least Tern
- Aquatic ETSc - 2.5 mi review
- Rare Mussels - 5 mi review
- Maine Heritage Fish Waters
- Arctic Charr Habitat
- Redfin Pickerel and Swamp Darter Habitats - buffer100ft
- Special Concern occupied habitats - 100ft buffer
- Wild Lake Trout Habitats



Section 10 – Public Infrastructure and Community Safety Standards

The project has been designed to meet the City's Site Plan Review Standards. Compliance with the Environmental Standards (14-14.6.3) are summarized below:

Consistency with City Master Plans (14-14.6.3(A))
The proposed project is consistent with the City's Comprehensive Plan by supporting the growth of the University's campus and student body.

Public Safety and Fire Prevention (14-14.6.3(B))
The building will be visible from the surrounding streets and designed to be consistent with the overall aesthetic of the campus. Visibility both through and around the building will be accomplished through strategic use of glazing, internal and external lighting. Additional exterior lights are proposed on the sidewalks within the campus green to further enhance safety. Proposed exterior lighting will also conform to the City's requirements.

The building itself will be unlocked during normal school hours and events. Outside of these hours, keycard access will restrict unauthorized entry to the building.

Emergency vehicle access will be from the pull-off on Bedford Street that doubles as a passenger loading/unloading zone. No parking will be allowed in the pull-off. The building will also have an NFPA-compliant sprinkler system, with fire department connections on the Bedford Street side of the building.

Availability and Adequacy of Public Utilities (14-14.6.3(D))
The building will be connected to the existing water and gas infrastructure beneath Falmouth Street, building sewer and storm drainage lines will drain into the existing sanitary sewer and storm drain lines beneath Bedford Street, and electrical and communications service will be from USM's campus-wide electrical and communications infrastructure. Included in this application package are a letter indicating capacity to serve for natural gas service, City of Portland Public Works Department for sewer service, and Portland Water District for potable water and fire protection service. The points of connection and routing of the utilities are indicated on the drawings included with this application package.

Solid waste and recyclable materials produced at the building will be disposed of in accordance with State and City requirements.

Once the project is completed, trash receptacles will be located in a room within the building near the loading zone, with recyclable and non-recyclable material separated into different containers. External

dumpsters are not being proposed. University maintenance staff will collect the trash daily and transport it to the McGoldrick Student Success Center where it will be placed into compactors (one for recycling and one for trash). Both trash and recycling are transported by Troiano Waste Services to the Ecomaine Facility in Portland, Maine.

October 6, 2022

Oak Point Associates
Attn: Jonah DeWaters, P.E.
231 Main St.
Biddeford, Maine 04005

Subject: University of Southern Maine “Farmhouse and “Center for the Arts building”, Portland, Maine
Re: Ability to Serve

Dear Jonah,

Thank you for your interest in using natural gas for the two above referenced projects.

This is to confirm that Unitil has natural gas on Falmouth St. in close proximity to the two proposed projects as shown on your plan and that the routing that you presented to us is acceptable. We don’t anticipate any issues servicing the two buildings. Once engineering has completed their study of the gas main and two services I can circle back with you.

If you have any further questions or require additional information, please contact me at 207-541-2543 or email at carpenters@unitil.com.

Sincerely,

Scott Carpenter

Scott Carpenter
Senior Business Development Representative
Unitil Corporation
Unitil
Northern Utilities, Inc.
(O) 207-541-2543

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

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

Date: 12/2/2022

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

Site Address: 111 Bedford Street, Portland

Chart Block Lot Number: 114A A001001

Proposed Use: Center for the Arts/Classroom Bldg
Previous Use: Vacant
Existing Sanitary Flows: 0 GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
8" Sewer main beneath Bedford Street

Site Category		
	Commercial *(see part 4 below)*	✔
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	
	Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: Kevin Kraft Phone: 207-874-8430
Owner/Developer Name: University of Southern Maine, C/O Alexander Porteous
Owner/Developer Address: 246 Deering Avenue, Portland, ME 04102
Phone: (207) 780-4497 Fax: E-mail: alexander.porteous@maine.edu
Engineering Consultant Name: Jonah DeWaters, PE (Oak Point Associates)
Engineering Consultant Address: 231 Main Street, Biddeford, ME 04005
Phone: (207) 283-0193 Fax: (207) 283-4283 E-mail: jdewaters@oakpoint.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: 2,540 GPD
Peaking Factor/ Peak Times: Weekdays, Normal Business Hours (+/- 8am to 5pm)
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine,"*
"*Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, __ Other (specify)*
Handbook of Subsurface Wastewater Disposal in Maine

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

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

Flow Calculation (non-simultaneous use - uses do not occur at the same time)

USE 1 - Classroom use (Weekdays during normal business hours)

Code Flow (based on K-12 school use, no showers or cafeteria): 10 GPD per student, 12 GPD per staff

Student/Staff count: 230 Students, 20 Staff

Daily flow: 230 students x 10 GPD per student + 20 staff x 12 GPD per staff = **2,540 GPD**

USE 2 - Event use (Evenings/Weekends)

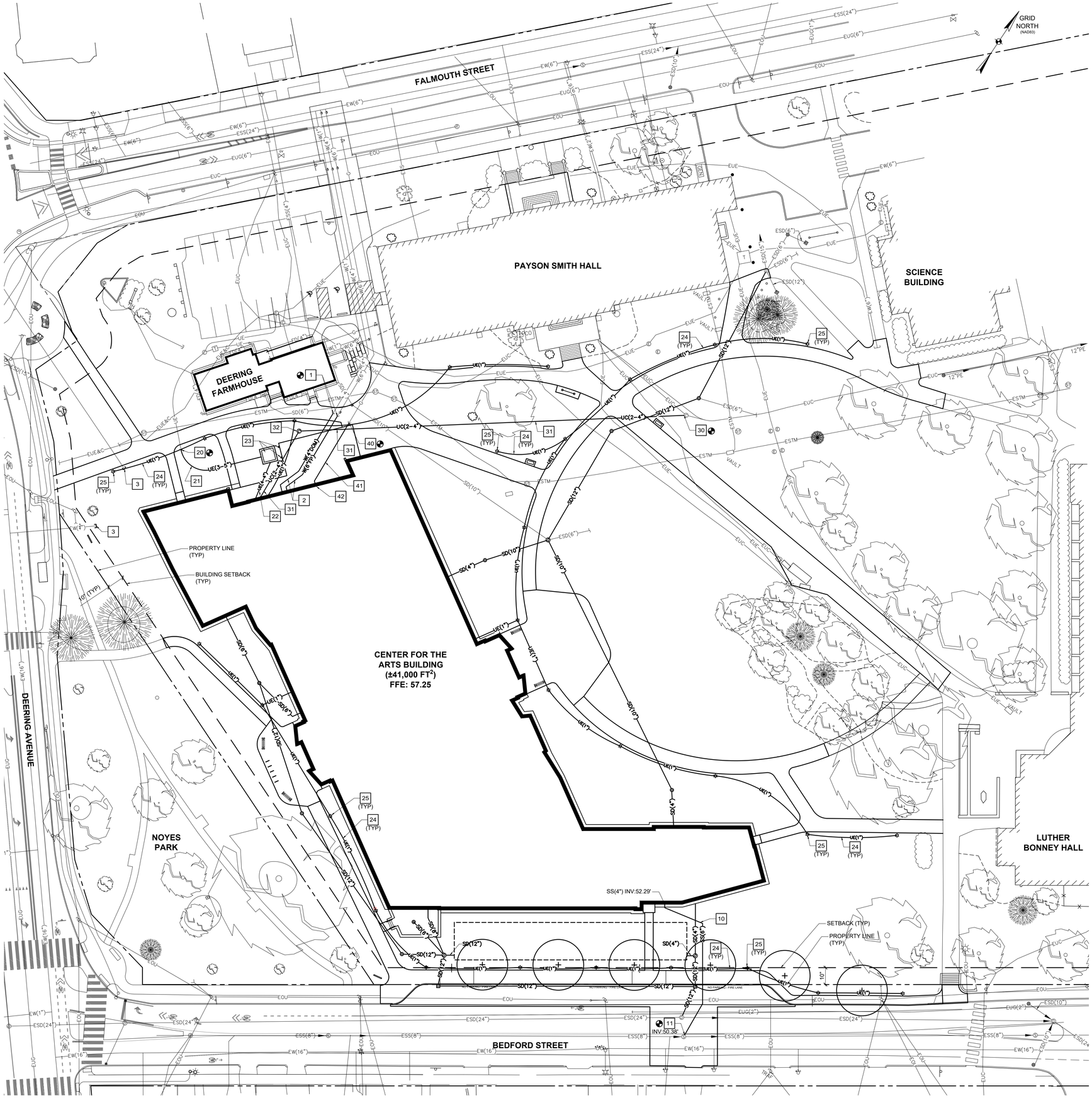
Code flow:
Assembly areas (no seats) = 2 GPD per person
Theater, Indoor = 5 GPD per seat plus 12 GPD per staff member

-Assembly space (Gallery) = 154 people

-Theater Space:
Performance Hall = 188 seats
Arts Lab (performance space) = 80 seats
Rehearsal Hall = 126 seats
Total Theater Seats = 394 Seats

Staff (assuming 5 staff per space) = 20 people

Daily Flow =
Assembly Space = 154 people x 2 GPD per person = 308 GPD
Theater Spaces = 394 seats x 5 GPD per seat = 1,970 GPD
Theater Staff = 5 staff x 12 GPD per staff = 60 GPD
Total Flow = **2,518 GPD**



1 CU101 UTILITY PLAN
SCALE: 1"=20'

NOTE: REFER TO SHEET CG101 FOR STORM DRAIN LINE INFORMATION.

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

KEYNOTES: (THIS SHEET ONLY)

1. CONNECT WATER LINE TO CAPPED END OF EXISTING WATER LINES (INSTALLED AS PART OF FARMHOUSE RELOCATION PROJECT).
2. WATER LINE IN PIPE TRENCH. SEE DETAIL 1/C-503
3. REMOVE PORTION OF EXISTING WATER MAIN AS NECESSARY TO FACILITATE BUILDING CONSTRUCTION AND UTILITY INSTALLATION. PLUG END OF PIPE TO REMAIN.
4 - 9. NOT USED THIS SHEET.
10. SEWER LINE IN PIPE TRENCH. SEE DETAIL 1/C-503
11. CORE HOLE IN EXISTING SEWER MANHOLE AND CONNECT SANITARY SEWER LINE. SEE DETAIL 2/C-503 (SIM)
12 - 19. NOT USED THIS SHEET.
20. CONNECT TO CAPPED END OF EXISTING CONDUIT (INSTALLED AS PART OF FARMHOUSE RELOCATION PROJECT).
21. PRIMARY ELECTRICAL LINES IN CONDUIT TRENCH. SEE DETAIL 6/C-503
22. SECONDARY ELECTRICAL LINES IN CONDUIT TRENCH. SEE DETAIL 5/C-503
23. TRANSFORMER ON 9' SQUARE TRANSFORMER PAD. PROVIDE BOLLARDS BETWEEN TRANSFORMER AND EDGE OF PAVEMENT. SEE DETAILS 9/C-502 AND 7/C-503
24. UNDERGROUND LIGHTING LINE IN CONDUIT TRENCH. SEE DETAIL 5/C-503
25. PRECAST CONCRETE LIGHTPOLE BASE. SEE DETAIL 8/C-503
26 - 29. NOT USED THIS SHEET.
30. CORE HOLE IN EXISTING COMMUNICATIONS MANHOLE AND CONNECT COMMUNICATIONS CONDUIT.
31. COMMUNICATIONS LINES IN CONDUIT TRENCH. SEE DETAIL 5/C-503
32. COMMUNICATIONS SPLICE BOX. SEE DETAIL 4/C-503
33 - 39. NOT USED THIS SHEET.
40. EXPOSE CAPPED END OF EXISTING CONDUIT (INSTALLED AS PART OF FARMHOUSE RELOCATION PROJECT) FOR CONNECTION OF GAS MAIN (TO BE PERFORMED BY UNITIL. COORDINATE TIMING OF EXCAVATION AND CONNECTION WITH UNITIL.
41. GAS LINE IN PIPE TRENCH. PIPING AND CONNECTIONS BY UNITIL. COORDINATE TIMING OF EXCAVATION WITH UNITIL. SEE DETAIL 1/C-503
42. BUILDING-MOUNTED GAS REGULATOR AND METER (BY UNITIL) WITH TWO 6" SCHEDULE 40 STEEL BOLLARDS. SEE DETAIL 9/C-502

UNIVERSITY OF SOUTHERN MAINE
CENTER FOR THE ARTS
Portland, Maine
CBL: 114A,A001001 (ZONE R5 W/ USM OVERLAY)
Client:
University of Southern Maine
P.O. Box 9300
Portland, ME 04104

pfeiffer — A PERKINS EASTMAN STUDIO
PFEIFFER
700 SOUTH FLOWER STREET
SUITE 1150
LOS ANGELES, CA 90017
PHONE: 213.624.2775
FAX: 213.895.0923

OAK POINT ASSOCIATES — architecture engineering planning
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, ME 04005
PHONE: 207.283.0193
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LANDSCAPE ARCHITECT/
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LIGHTING:
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NEW YORK, NY 10016
PHONE: 212.741.3280

COST CONSULTANT:
VENUE
226 5TH AVE N, SUITE 705
ST PETERSBURG, FL 33701
PHONE: 727.498.1091

SEAL:

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

UTILITY PLAN

SCALE: As indicated

CU101

PFEIFFER PARTNERS PROJECT NUMBER 6170.00

Department of Public Works
Mike Murray
Acting Director

Date: January 3, 2023
Re: Wastewater Capacity Authorization
Address: 111 Bedford Street- USM Center for the Arts
Applicant: University of Southern Maine
Planner: TBD

Estimate of Anticipated Wastewater Flows				
Development	**Unit Size**	**Number of Units**	**Gallons per Day per Unit**	**Total Gallons per Day**
Existing Flow to Remain				
Vacant				
Proposed flow				
School – Students	# Students	230	10 GPD	2300
School - Staff	# Staff	20	12 GPD	240
Assembly Area - Gallery	# Persons	154	2 GPD	308
Theater – Indoor-Performance Hall	# Seats	188	5 GPD	940
Theater – Indoor-Arts Lab	# Seats	80	5 GPD	400
Theater – Indoor-Rehearsal Hall	# Seats	126	5 GPD	630
Theater – Indoor-Staff	# Staff	20	12 GPD	240
Net Change				**+ 5,058**
*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,



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

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

January 30, 2023

Jonah DeWaters, P.E. (ME), LEED AP BD+C
Oak Point Associates

Re: USM CFA 96 Falmouth Street, Portland
Ability to Serve with PWD Water

Dear Mr. DeWaters:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on September 28, 2022. Based on the information provided per plans dated January 27, 2023, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed and is valid for eighteen (18) months after the date of issue. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service and a 4-inch domestic water service, with a 1.5-inch meter, may be installed from the water main in Falmouth Street to serve the USM Center For The Arts building. The service should enter through the property's frontage on Falmouth Street at least 10-feet from any side property lines. An approved testable double check valve assembly backflow prevention device must be installed on each service line directly after the meter and before the sprinkler riser prior to service activation.
- A new 1-inch domestic water service, with a 5/8-inch meter, may be installed from the water main in Falmouth Street to serve the existing Deering Farmouse building onsite. The service should enter through the property's frontage on Falmouth Street at least 10-feet from any side property lines. An approved testable double check valve assembly backflow prevention device must be installed on the service line directly after the meter prior to service activation.
- 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.
- The Portland Water District does not manage sewer collection in this area.

Prior to construction, the owner or contractor will need to complete a Service Application and pay all necessary fees for each proposed service. When the project is ready for construction, an Application for each service can be requested by contacting the MEANS Group at MEANS@pwd.org or 207-774-5961 ext. 3199. Once a completed Application has been submitted with payment, please allow seven (7) days for processing.

Existing Site Service

According to District records, the project site does not currently have existing water service.

Water System Characteristics

According to District records, there is an 6-inch diameter cast iron water main in Falmouth Street and a public fire hydrant located adjacent to the site. The estimated static pressure in the area is 91 psi.

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 City of 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

Section 11 – Site Design Standards

The project has been designed to meet the City's Site Plan Review Standards. Compliance with the Site Design Standards (14-14.6.4) are summarized below:

Massing, Ventilation and Wind Impact (14-14.6.4(A))
The building's massing has been designed to fit contextually within the University of Southern Maine's Portland Campus and surrounding City of Portland community. It is oriented to be parallel to the Bedford Street and Noyes Park property lines to maximize the size of the campus green to the north and create a more defined courtyard-style campus green ringed by Payson Smith Hall, Luther Bonney Hall and the proposed building. This location also provides substantial open space between existing buildings while complementing the surrounding landscape edges without impeding the existing wind climate or ventilation.

The building is a single story, but there are four double-height spaces: the central Gallery, Performance Hall, Arts Lab, and Rehearsal Hall. These spaces reflect greater than typical volumes, based on the needs for acoustics, performance technologies, and display in these spaces. These larger volume roofs have been shaped to bridge between the larger spaces and smaller teaching studio and support spaces. Roof-mounted HVAC units will be provided that have been strategically located over non-acoustically critical spaces. The units will be screened by parapet screen walls that are designed to protect the units, provide adequate ventilation and access, and provide screening from the view of public spaces and residential properties. Renderings demonstrating how the mechanical equipment will be screened from public views are included in the plans submitted with this application package.

Shadows (14-14.6.4(B))
The new building is designed to avoid the adverse impacts of shadows on publicly accessible open space in accordance with the shadow standards of the Technical Manual. Sun and shadow studies for various times throughout the year are included in the plans submitted with this application package.

Snow and Ice Loading (14-14.6.4(C))
Building roofs have been designed to prevent significant amounts of accumulated snow and ice from falling on adjacent properties and public space, and no roof has been designed to drain to the public way. The high gallery roof is sloped down away from perimeter edges with interior roof drains, and overflows onto adjacent roofs. The higher volume roofs are also sloped to adjacent roofs with interior drains. At the lower-level roofs, there will be interior roof drains with low level overflow. Interior roof drains flow into the stormwater treatment area between the building and Bedford Street.

View Corridors (14-14.6.4(D))
This standard is not applicable.

Historic Resources (14-14.6.4(E))

There are no historic resources on site. The existing farmhouse within the proposed building footprint is being relocated under a separate project in a way that is acceptable to the City's Historic Preservation Department.

Exterior Lighting (14-14.6.4(F))

Exterior lighting for this project includes building-mounted fixtures to illuminate entries, site lighting to illuminate pathways, and architectural accent lighting to illuminate select building features. Proposed exterior lighting is indicated on the included drawings. A Photometric Plan, details, and cutsheets for the proposed light fixtures are included in this section.

Architectural lighting has been strategically placed to accentuate the some of the building elements, particularly some of the overhangs on the side of the building facing Noyes Park, while minimizing light trespass beyond the building elements. Product data and a rendering of the lighted areas demonstrating how the building elements will be lit while controlling spillage onto other elements is also included in this section.

Meetings with representatives from the City revealed that the existing beech tree in Noyes park has a higher degree of sensitivity to excess artificial light. While the sidewalk between the building and the tree is being lit by pedestrian-scale lights for safety and to conform to City requirements and Illuminating Engineering Society (IES) standards, the following measures are being taken to reduce light trespass beyond the building or toward the beech tree:

- There are no artificial lights aimed, directed, are mounted near this tree.
- Any nearby exterior lighting is aimed to light the underside of the building soffits with a narrow beam. Any wall packs mounted on the building are full cutoff and directed downwards.
- The lighting within the nearby classrooms and gallery will not have any direct lighting aimed at the tree. In addition, the window glass will diminish the transmission of artificial light.
- The building's lights will be controlled by a combination timeclock/scheduling and occupancy sensors, allowing the classrooms and gallery lights turn off or dim during off-peak hours to minimize any glow from these areas. In addition, the classrooms closest to this tree can be on a different schedule from the other rooms as well to further minimize any possible glow.
- All light sources are LED with no UV.
- Light emanating from the building will generally be limited to soft, indirect lighting (bounce and reflected lighting from interior sources).

Noise and Vibration (14-14.6.4(G))

The building will be constructed to minimize the amount of interior noise that can be heard outside through the use of thick glazing and acoustical door assemblies. Further, exterior noise-producing

mechanical equipment will be minimal, and it will be mounted on the roof. The building will not have a standby generator.

Exceptions to this may include outdoor concerts and after-hours events, which will be in accordance with the City's written requirements. Further, USM has a strong relationship with the neighboring properties, which gives the neighbors the ability to communicate directly with University officials in the event they are dissatisfied with the noise levels.

Prior to occupancy, noise generated during construction activities will be in accordance with the City's noise requirements.

Signage and Wayfinding (14-14.6.4(H))

The project includes building-mounted fabricated dimensional lettering showing the building's address and building name, post-mounted pedestal-type street signs along the Bedford Street pull-off, and freestanding building signs facing Bedford Street and Deering Avenue. Information on these signs is included on the drawings included with this application package.

Zone-Related Design Standards (14-14.6.4(I))

Refer to Section 12 of this permit application package.

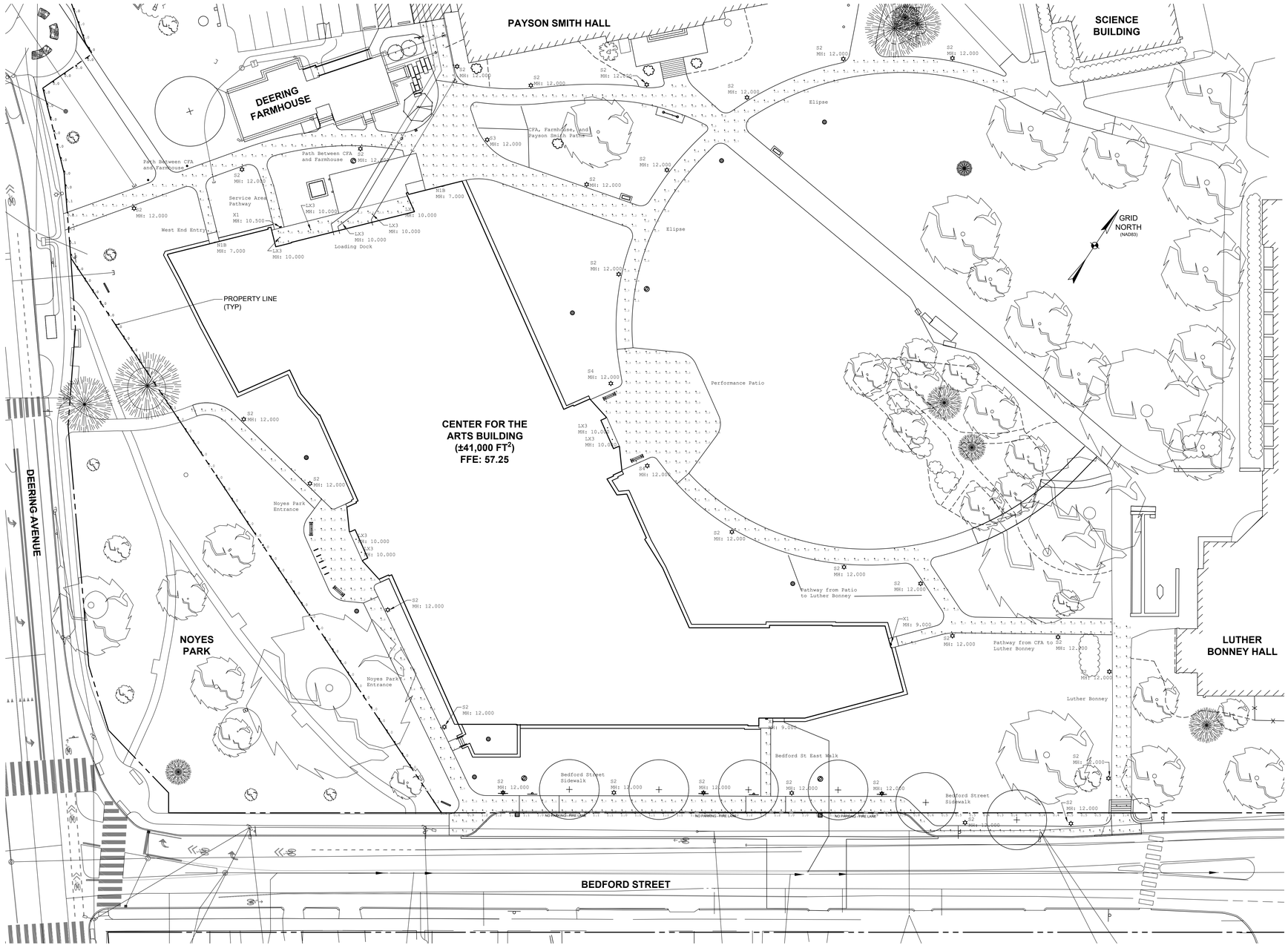
Appendix A – Photometric Plan and Site Lighting Information

Luminaire Schedule

LABEL	DESCRIPTION	LUM. LUMENS	LUMINAIRE WATTS	[MANUFAC]	CATALOG NUMBER	MOUNTING HEIGHT	MOUNTING TYPE	BUG RATING	LLF	FULL CUTOFF	CONTROLS
N1B	LINEAR, WALL MOUNT, LED	392	7.2	Nanometer Lighting	L18W-HO-30-14_76-8-XXX-XX	7	BUILDING WALL MOUNT	-	2.500	YES	PHOTOCELL/TIMECLOCK
S4	POST TOP, PEDESTRIAN SCALE SITE LED	3056	25	KIM LIGHTING	UR20-24L-25-3K7-4-PT	12	POLE MOUNT	B0-U0-G1	0.900	YES	PHOTOCELL/TIMECLOCK
S3	POST TOP, PEDESTRIAN SCALE SITE LED	3008	25	KIM LIGHTING	UR20-24L-25-3K7-3-PT	12	POLE MOUNT	B1-U0-G1	0.450	YES	PHOTOCELL/TIMECLOCK
S2	POST TOP, PEDESTRIAN SCALE SITE LED	2943	25	KIM LIGHTING	UR20-24L-25-3K7-2-PT	12	POLE MOUNT	B1-U0-G1	0.450	YES	PHOTOCELL/TIMECLOCK
X1	WALL MOUNT LED, WALLPACK	1024	20.5	BEGA	22360	9, 10.5	BUILDING WALL MOUNT	B1-U0-G0	0.900	YES	PHOTOCELL/TIMECLOCK
LX3	RECESSED, ROUND DOWNLIGHT, LED	1320	15.4	Visual Comfort & Co.	ENCL3RFD-930W - 15W - 40deg	10	BUILDING, RECESSED CANOPY MOUNT	B2-U0-G0	0.900	YES	PHOTOCELL/TIMECLOCK

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Notes
Bedford St East Walk	Illuminance	Fc	0.64	2.0	0.1	6.40	20.00	
Bedford Street Sidewalk	Illuminance	Fc	1.37	2.2	0.2	6.85	11.00	
CFA Farmhouse Payson Paths	Illuminance	Fc	1.08	3.1	0.2	5.40	15.50	
Elispe	Illuminance	Fc	1.31	2.1	0.4	3.28	5.25	
Loading Dock	Illuminance	Fc	8.69	18.5	1.0	8.69	18.50	IES RECOMMENDATION FOR LOADING DOCK IS 10FC.
Luther Bonney	Illuminance	Fc	1.37	1.7	1.0	1.37	1.70	
Noyes Park Entrance	Illuminance	Fc	1.06	3.4	0.2	5.30	17.00	
Path Between CFA and Farmhouse	Illuminance	Fc	1.14	2.0	0.3	3.80	6.67	
Pathway from CFA to Luther Bonne	Illuminance	Fc	1.47	3.3	0.9	1.63	3.67	
Pathway from Patio to Luther Bon	Illuminance	Fc	1.35	2.1	0.7	1.93	3.00	
Performance Patio	Illuminance	Fc	1.37	4.5	0.3	4.57	15.00	
Property Line	Illuminance	Fc	0.31	1.4	0.0	N.A.	N.A.	
Service Area Pathway	Illuminance	Fc	0.89	2.8	0.2	4.45	14.00	
West End Entry	Illuminance	Fc	0.83	2.4	0.2	4.15	12.00	



1 ES101 PHOTOMETRIC PLAN
SCALE: 1"=20'

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

DRAWING NOTE

1. MH = MOUNTING HEIGHT.

UNIVERSITY OF SOUTHERN MAINE
CENTER FOR THE ARTS
111 Bedford Street, Portland, Maine
CBL: 114A A001001 (ZONE RS W/ USM OVERLAY)
Client:
University of Southern Maine
P.O. Box 9300
Portland, ME 04104

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PFEIFFER
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SUITE 1150
LOS ANGELES, CA 90017
PHONE: 213.624.2775
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PHONE: 212.741.3280

COST CONSULTANT:
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226 5TH AVE N, SUITE 705
ST PETERSBURG, FL 33701
PHONE: 727.498.1091

SEAL:
STATE OF MAINE — DALE C. LINCOLN, II — No. 10443 — 11/1/23 — LICENSED PROFESSIONAL ENGINEER

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

PHOTOMETRIC PLAN 1

SCALE: As indicated

ES101

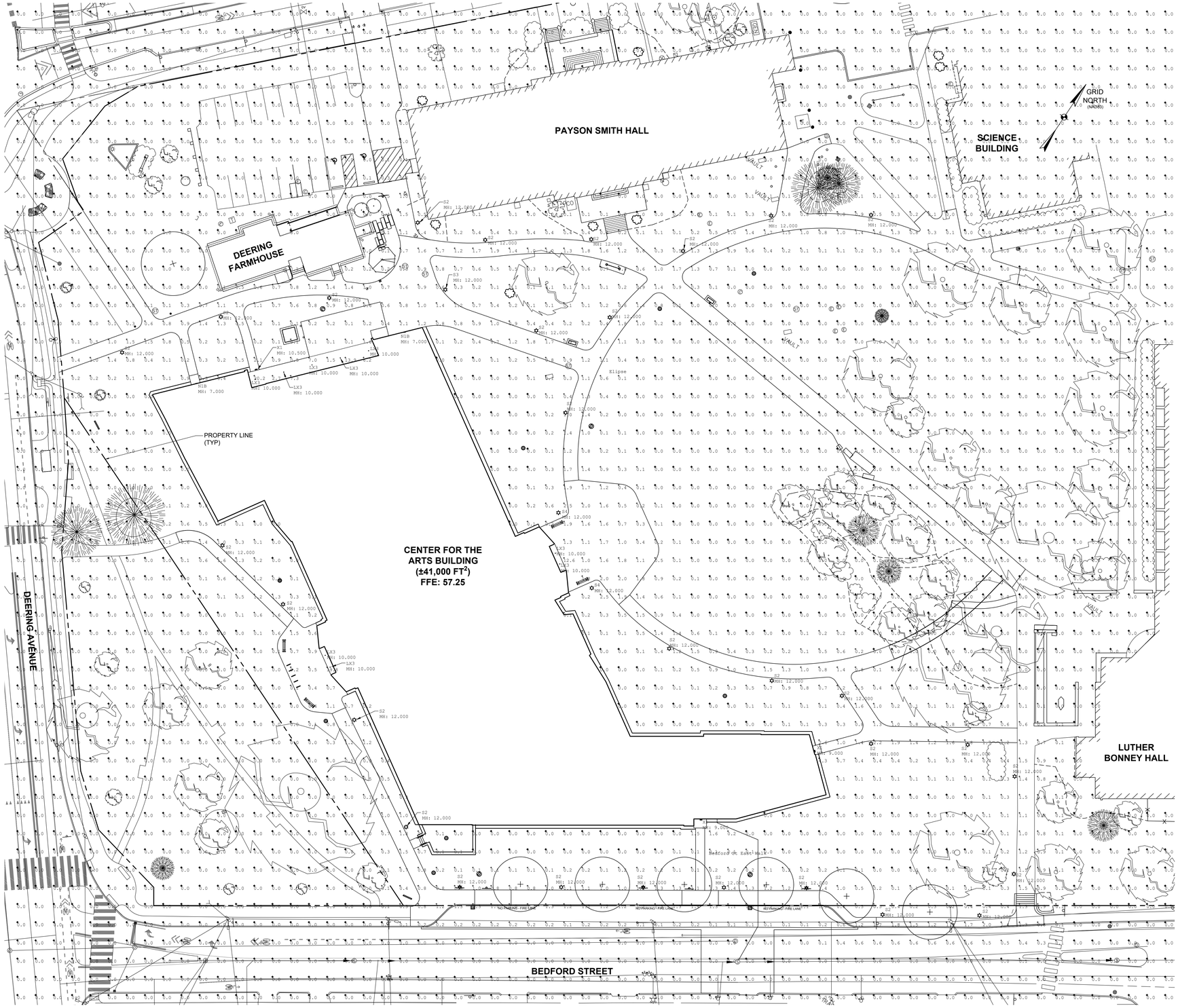
PFEIFFER PARTNERS PROJECT NUMBER 6170.00

Luminaire Schedule

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N1B	LINEAR, WALL MOUNT, LED	392	7.2	Nanometer Lighting	L18W-HO-30-14_76-8-XXX-XX	7	BUILDING WALL MOUNT	-	2.500	YES	PHOTOCELL/TIMECLOCK
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LX3	RECESSED, ROUND DOWNLIGHT, LED	1320	15.4	Visual Comfort & Co.	ENCL3RFD-930W - 15W - 40deg	10	BUILDING, RECESSED CANOPY MOUNT	B2-U0-G0	0.900	YES	PHOTOCELL/TIMECLOCK

DRAWING NOTE

1. MH = MOUNTING HEIGHT.



1 ES102 PHOTOMETRIC PLAN
SCALE: 1"=20'

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

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SEAL:

STATE OF MAINE
DALE C. LINCOLN, II
No. 10443
LICENSED
PROFESSIONAL ENGINEER

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

PHOTOMETRIC PLAN 2

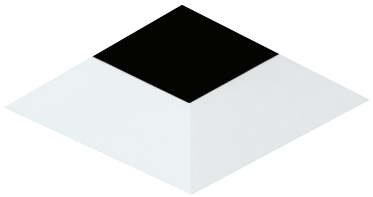
SCALE: As indicated

ES102

PFEIFFER PARTNERS PROJECT NUMBER 6170.00

TECH LIGHTING

ELEMENT™ 3" LED
FIXED DOWNLIGHT



SHOWN IN FLANGELESS BEVEL SQUARE

The ELEMENT 3" Next Generation Fixed recessed downlight features a patented high/low lamp positioning which allows the LED to be positioned closer to the aperture for maximum light output and efficiency or higher in the ceiling to minimize glare and flash on the trim. LED options include premium warm dimming, tunable white, Xicato and Xicato Artist Series. Trim options include flanged or flangeless and flangeless in wood ceiling.

- Housing reduced by 60%
- Patented high/low lamp positioning
- 2-step standard
- Standard dimming down to 1%
- Trim reflector options
- Solite Soft Focus lens option

LUMEN MULTIPLIER (CRI/CCT)

CCT	80 CRI MULTIPLIER	90 CRI MULTIPLIER
2700K	0.95	0.80
3000K	1.00	0.85
3500K	1.05	0.90

Lumen output will vary by CCT and CRI.
See photometric charts for output information.

SPECIFICATIONS

	STATIC WHITE		XICATO		WARM DIM		TUNABLE WHITE	
	HIGH OUTPUT	LOW OUTPUT	STANDARD SERIES	ARTIST SERIES	HIGH OUTPUT	LOW OUTPUT	HIGH OUTPUT (5000K)	HIGH OUTPUT (4000K)
DELIVERED LUMENS	1800/1450	1319/1124	1129	945	1300	900	1272	1150
WATTS	17	12	15	15	17	12	18	18
EFFICACY	106/85	110/94	75	63	76	75	72	64
CRI	80+/90+		80+	95+	90+		90+	
CBCP	10° - 19,414 | 18° - 5,848 25° - 5,416 | 40° - 3,230 60° - 2,305		21° - 3,184 43° - 2,733 60° - 1,014		18° - N/A | 25° - N/A | 40° - 1,622 | 60° - N/A			
CCT	2700K, 3000K, or 3500K		2700K, 3000K, or 3500K[3]		3000K - 1800K		5000K - 2700K	4000K - 1800K
COLOR CONSISTENCY	2-step		1 X 2-step		3-step		2-step	
VOLTAGE	120V or 277V							
DIMMING[1]	Standard reverse-phase, forward-phase, TRIAC, and 0-10V dimming (down to 1%) eldoLED 0-10V or DALI-2 (down to 0.1%) Lutron has placed their LTEA (2-Wire) and 0.1% PEQ eco drivers on indefinite hold. Please consult Factory for alternative Lutron drivers (e.g. LDE 1%) or other driver solutions.						eldoLED 0-10V or DALI-2 (down to 0.1%)	
POWER SUPPLY	Constant current driver with +.9 power factor and +80% efficiency							
OPTICS	Field changeable: 10°, 18°, 25°, 40°, or 60° TIR		Field changeable: 21°, 43°, or 60° Reflector		Field changeable: 18°, 25°, 40°, or 60° TIR			
ADJUSTABILITY	High/low lamp positioning; 45° collar rotation							
CEILING APPEARANCE	Flanged, flangeless or flangeless in wood ceiling							
CEILING THICKNESS	Flanged: Up to 2-1/2" Flangeless: No ceiling thickness limitations | Flangeless in wood ceiling: 1/2" to 1-1/2" Note: Thicker ceilings impact light cutoff							
CEILING APERTURE	3-7/8" ceiling cutout							
HOUSING	IC Airtight, Non-IC Airtight, Chicago Plenum. IC suitable up to R60 spray foam insulation. Sauna/Steam-room use available only with combination of H Shower trim, LO Low Output housing, and I IC housing rating.							
CONSTRUCTION	Housing: Heavy-Gauge, Cold-Rolled Steel | Trim: Die-Cast Aluminum							
FINISH	Housing: Black powder coat | Trim: Antique Bronze, Black, Satin Nickel, or White (paintable)							
GENERAL LISTINGS	ETL Listed. Damp Location. Shower version Wet Listed.							
CALIFORNIA TITLE 24	Registered CEC Appliance Database. Can be used to comply with CEC 2019 Title 24 Part 6 (JA8-2016, JA8-2019) (for 90 CRI versions).							
L70	50,000 hours min							
WARRANTY[2]	5 years							

Data in chart reflect 3000K/80 CRI values unless noted.
Custom output/custom RAL/custom CCT available, contact Quotes Department
Ordering grids available on page 2.
Accepts two optical controls and an optional trim-mounted lens.
[1]See ELEMENT-Lighting.com for dimmer compatibility.
[2]Visit ELEMENT-Lighting.com for specific warranty limitations and details.
[3]3500K Xicato module not available for Artist series.

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Tech Lighting reserves the right to change specifications for product improvements without notification.

UPDATED 10/31/22

ELEMENT™ 3" LED
FIXED DOWNLIGHT

ORDERING GRIDS

HOUSING

PRODUCT	CEILING APPEARANCE	OUTPUT	LAMP	BEAM SPREAD	FUNCTION	HOUSING RATING	DRIVER
E3R ELEMENT 3" ROUND **E3S** ELEMENT 3" SQUARE	**LF** FLANGELESS **FF** FLANGED **WC** WOOD CEILING[1]	**-LH** HIGH OUTPUT, 17W[2] **-LO** LOW OUTPUT, 12W[3]	**827** 80 CRI, 2700K, 2-STEP **830** 80 CRI, 3000K, 2-STEP **835** 80 CRI, 3500K, 2-STEP **927** 90 CRI, 2700K, 2-STEP **930** 90 CRI, 3000K, 2-STEP **935** 90 CRI, 3500K, 2-STEP **WD** 90 CRI, 3000-1800K, WARM DIM, 3-STEP **TW52** 90 CRI, 5000K-2700K, TUNABLE WHITE, 2-STEP[4] **TW41** 90 CRI, 4000K-1800K, TUNABLE WHITE, 2-STEP[4]	**0** 10°[5] **1** 18° **2** 25° **4** 40° **6** 60°	**D** DOWNLIGHT	**I** IC AIRTIGHT **N** NON-IC AIRTIGHT **C** CHICAGO PLENUM	**INTEGRATED DRIVERS 120V/277V** UNIVERSAL PHASE/0-10V 1% (LEAVE BLANK)[6] **-ELD0** ELDOLED 0.1% 0-10V LINEAR[7] **-ELD0A** ELDOLED 0.1% 0-10V LOGARITHMIC[7] **-ELDD** ELDOLED 0.1% DALI-2[7] **-ELT0** ELDOLED TUNABLE WHITE 0.1% 0-10V LINEAR[4,7] **-ELTD** ELDOLED TUNABLE WHITE 0.1% DALI-2[4,7]
		-X XICATO, HIGH OUTPUT, 14W[8]	**I27** 80 CRI, 2700K, 1X2-STEP, XICATO **I30** 80 CRI, 3000K, 1X2-STEP, XICATO **I35** 80 CRI, 3500K, 1X2-STEP, XICATO **A27** 95 CRI, 2700K, 1X2-STEP, XICATO ARTIST **A30** 95 CRI, 3000K, 1X2-STEP, XICATO ARTIST	**21** 21° XICATO **43** 43° XICATO **60** 60° XICATO			
		-			D		

Trims are required and must be ordered separately.
For dimming details, refer to dimmer compatibility chart.

Lutron has placed their LTEA (2-Wire) and 0.1% PEQ eco drivers on indefinite hold. Please consult Factory for alternative Lutron drivers (e.g. LDE 1%) or other driver solutions.

[1]WC - Wood ceiling option accommodates flangeless trims only.
[2]LH - High output available for wet applications. Not available for sauna/steam-room.
[3]LO - Sauna/steam-room use available only with combination of H shower trim, LO low output housing, and I IC housing rating.
[4]TW52/TW41/ELT0/ELTD - Tunable white only available in high output, only available with ELT0 (0-10V, linear), or ELTD (DALI-2). For 0-10V logarithmic dimming consult Quotes Department.
[5]0 - 10° optic has a unique LED module not available with warm dim or tunable white. Changing optics to 18°, 25°, 40° or 60°, will require a new LED module.
[6]Universal dimming is reverse-phase, forward-phase, TRIAC and 0-10V. 277V is only compatible with 0-10V dimming.
[7]EldoLED drivers not compatible with round flangeless (E3RLF) or round wood ceiling (E3RWC) housings.
[8]X - Xicato housings utilize dedicated standard phase, 0-10V, 120V and 277V drivers. If ordering Xicato with standard drivers (non-Lutron or eldoLED), at the end of the item number please specify: **-010** for 0-10V 120V, **-277** for phase 277V or **-010-277** for 0-10V 277. For example: E3RLF-XA2743DI**-010** or E3RLF-XA2743DI**-277** or E3RLF-XA2743DI**-010-277**. Due to the size of some of the Xicato Reflectors, it may not be feasible to tilt the fixture in the 'low' position. It is still tiltable in the 'high' position.

TRIM

PRODUCT	CEILING APPEARANCE	STYLE	APERTURE	FINISH
E3R ELEMENT 3" ROUND **E3S** ELEMENT 3" SQUARE	**L** FLANGELESS **F** FLANGED UP TO 1" CEILING THICKNESS **F15** FLANGED 1.1"-1.5" CEILING THICKNESS **F20** FLANGED 1.6"-2.0" CEILING THICKNESS **F25** FLANGED 2.1"-2.5" CEILING THICKNESS	**B** BEVEL **F** FLAT	**-O** NO LENS **-H** SHOWER[1,2] **-L** LENSED[2]	**Z** ANTIQUE BRONZE **B** BLACK **S** SATIN NICKEL **W** WHITE
			-	

Wood ceiling option accommodates flangeless trims only.
[1]H - Sauna/steam-room use available only with combination of H shower trim, LO low output housing, and I IC housing rating.
[2]H, L - Lensed products come with Solite Soft Focus lens.

FROSTED BOROSILICATE LENS KIT

PRODUCT	
240E3SBLSP-B	BOROSILICATE LENS KIT | E3 SQUARE BEVEL TRIM
240E3SQLSP-B	BOROSILICATE LENS KIT | E3 SQUARE FLAT TRIM
240E3RBLSP-B	BOROSILICATE LENS KIT | E3 ROUND BEVEL TRIM
240E3RDLSP-B	BOROSILICATE LENS KIT | E3 ROUND FLAT TRIM

Includes frosted borosilicate lens, lens spring, and screws to mount to ELEMENT 3" trim.

PLASTER PLATES

PRODUCT	
150E3RPPLT-A	3" PLASTER PLATE | ROUND DIE-CAST METAL[1]
150E3SPPLT-A	3" PLASTER PLATE | SQUARE DIE-CAST METAL[1]
150E3RTPPLT-W	3" PLASTER PLATE | ROUND SHEET METAL[2]
150E3STPPLT-W	3" PLASTER PLATE | SQUARE SHEET METAL[2]

Plaster plates are used to convert flanged housings into flangeless housings.
[1]Ships standard with flangeless housings. Round not compatible with Lutron Hi-lume or eldoLED drivers.
[2]Optional, thinner, meshed sheet-metal mud plates available for minimized plaster feathering to meet installer preference. Round not compatible with Lutron Hi-lume or eldoLED drivers. Square not compatible with eldoLED drivers.

PREMIUM LENS HOLDER

PRODUCT	LENSES
240E3LENSHLDR	**1** ONE LENS **2** TWO LENSES

240E3LENSHLDR

Provides more secure mounting of additional lenses than the lens holder that ships with each fixture.
Not compatible with the 10° beam spread.

REPLACEMENT OPTICS

PRODUCT	BEAM SPREAD
353E4LEDCOPT	**18** 18° **25** 25° **40** 40° **60** 60°

353E4LEDCOPT

LENSES / LOUVERS[1]

PRODUCT	
140MR16SF	SOLITE SOFT FOCUS LENS
140MR16SB	SANDBLASTED LENS
140MR16LL	LINEAR SPREAD LENS
140MR16DF	DIFFUSER SPREAD LENS
EL2RHCBK	EGGCRATE/HEXCELL LOUVER

[1]For additional lenses, louvers, optical controls and accessories, reference ELEMENT-lighting.com/Products/Accessories. ELEMENT allows up to two lenses or louvers per fixture.

REPLACEMENT REFLECTORS[1]

PRODUCT	BEAM SPREAD
352LEDXREF	**21** 21° **43** 43° **60** 60°

352LEDXREF

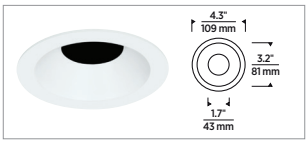
[1]For use with Xicato modules only.

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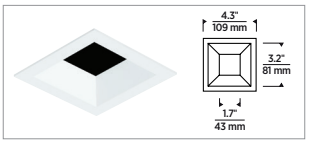
ELEMENT™ 3" LED
FIXED DOWNLIGHT

TRIMS

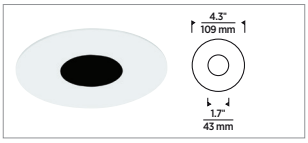
FLANGED



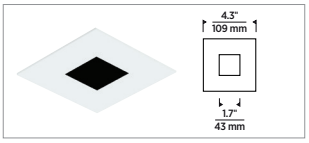
ROUND BEVEL



SQUARE BEVEL

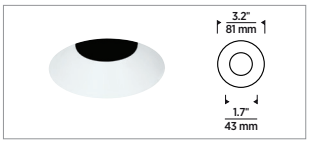


ROUND FLAT

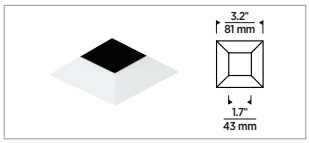


SQUARE FLAT

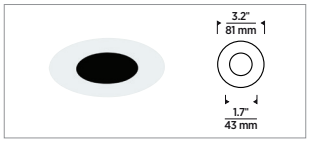
FLANGELESS



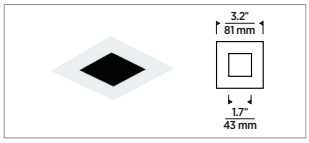
ROUND BEVEL



SQUARE BEVEL



ROUND FLAT



SQUARE FLAT

FINISH


ANTIQUE BRONZE


BLACK

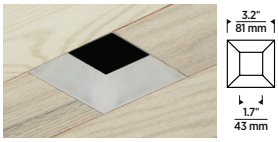

SATIN NICKEL


WHITE (PAINTABLE)

FLANGELESS IN WOOD CEILING



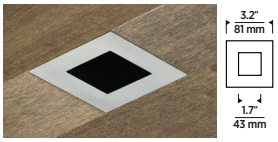
ROUND BEVEL (ANTIQUE BRONZE)



SQUARE BEVEL (SATIN NICKEL)



ROUND FLAT (ANTIQUE BRONZE)



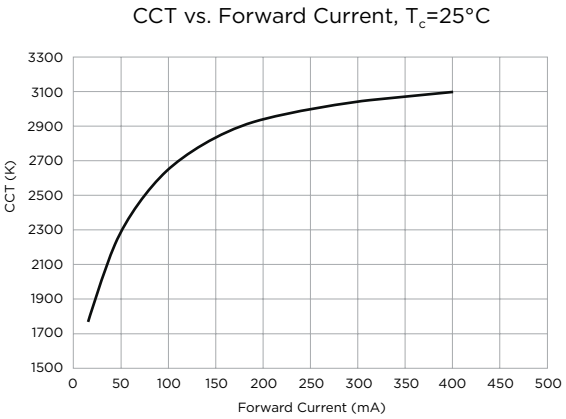
SQUARE FLAT (SATIN NICKEL)

LENS OPTION

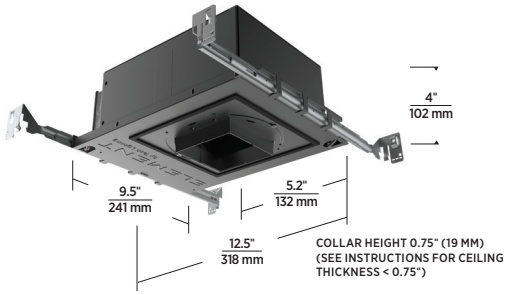

SHOWN WITH AND WITHOUT A LENS (SQUARE FLANGED BEVEL)


SHOWN WITH AND WITHOUT A LENS (ROUND FLANGELESS BEVEL)

WARM DIM CURVE



HOUSING



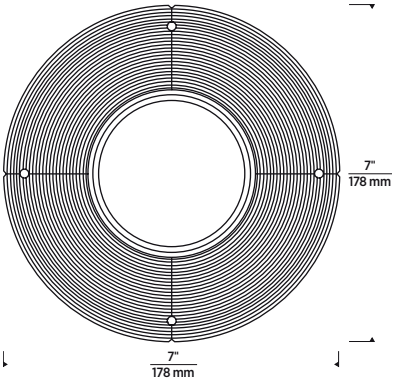
IC AIRTIGHT / NON-IC AIRTIGHT / CHICAGO PLENUM

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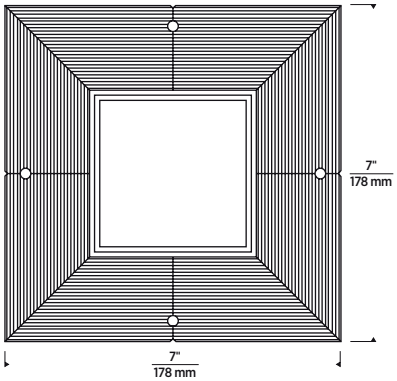
ELEMENT™ 3" LED
FIXED DOWNLIGHT

PLASTER PLATES

INCLUDED DIE-CAST

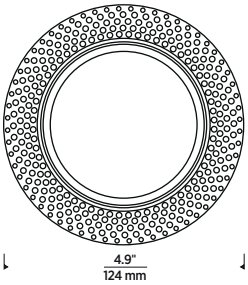


ROUND DIE-CAST (INCLUDED FOR FLANGELESS INSTALLATION)

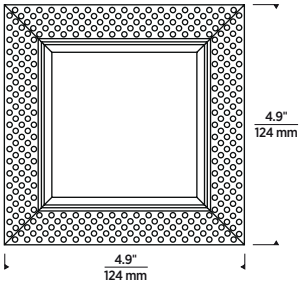


SQUARE DIE-CAST (INCLUDED FOR FLANGELESS INSTALLATION)

OPTIONAL SHEET METAL

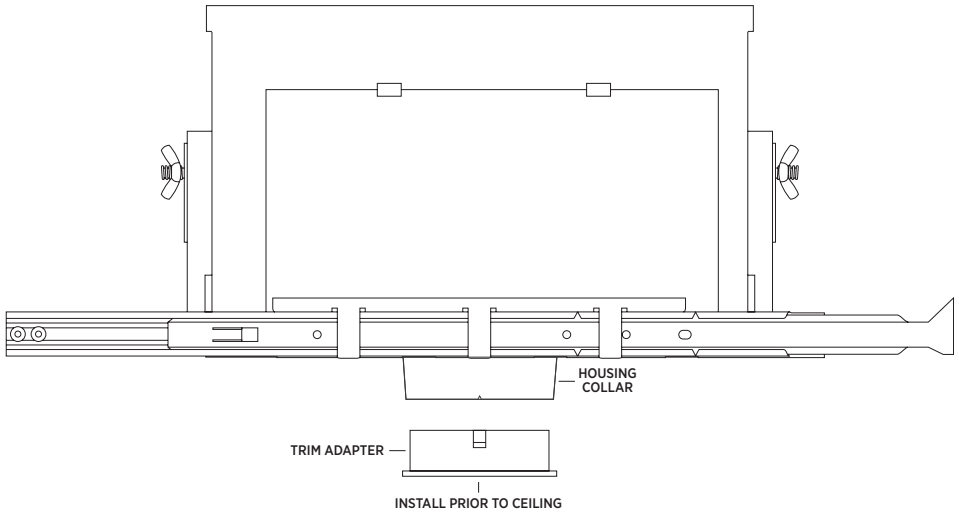


ROUND SHEET METAL (OPTIONAL FOR FLANGELESS INSTALLATION)

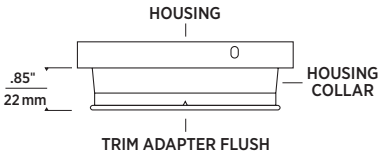


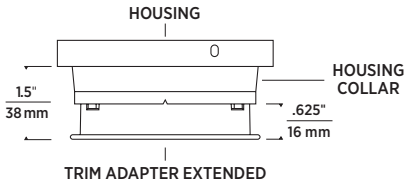
SQUARE SHEET METAL (OPTIONAL FOR FLANGELESS INSTALLATION)

FLANGELESS IN WOOD CEILING TRIM ADAPTER



TRIM ADAPTER INSTALLED





Wood ceiling housings ("WC" designation in the ordering grid) ship with an adjustable trim adapter that inserts into the housing aperture and allows standard ELEMENT 3" flangeless trims to achieve a truly flangeless, flush ceiling appearance in special applications such as wood or stone installation. For use in new construction. Consult installation instructions regarding plenum requirements and ceiling thickness ratios.

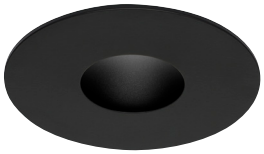
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ELEMENT™ 3" LED
FIXED DOWNLIGHT

TRIM-MOUNTED REFLECTORS

ELEMENT Specular Reflectors reduce glare while creating a clean, quiet ceiling appearance. Available finishes include Anodized Silver for a decorative accent or Anodized Black for an ultimate quite ceiling aesthetic. These beautiful trim accessories have been specifically designed to minimize any effect on light performance, color and output. Specular Reflectors are available for both adjustable and fixed downlights and are compatible with ELEMENT 3" trims and housings.

- Can be easily installed or removed
- Assembles to existing trim
- Compatible with fixed and adjustable housings
- Finish Options: Anodized Black (B) or Anodized Silver (S)



SHOWN IN ANODIZED BLACK
(BELOW CEILING VIEW)



SHOWN IN ANODIZED SILVER
(BELOW CEILING VIEW)



SHOWN IN ANODIZED SILVER
(BELOW CEILING VIEW)



SHOWN IN ANODIZED BLACK
(TRIM MOUNTED)

SPECIFICATIONS

COMPATIBLE TRIMS		NON-SLOTTED (FOR FIXED)
	3" round, flanged, bevel	 **E3TREFNS1 (B OR S)**
	3" square, flanged, bevel	 **E3TREFNS5 (B OR S)**
	3" round, flanged, flat	 **E3TREFNS1 (B OR S)**
	3" square, flanged, flat	 **E3TREFNS3 (B OR S)**
	3" round, flangeless, bevel	 **E3TREFNS2 (B OR S)**
	3" square, flangeless, bevel	 **E3TREFNS6 (B OR S)**
	3" round, flangeless, flat	 **E3TREFNS4 (B OR S)**
	3" square, flangeless, flat	 **E3TREFNS3 (B OR S)**

May require lamp to be placed in high position.
Not compatible with lensed trims.



SHOWN IN ANODIZED BLACK AND
SILVER (REFLECTOR ONLY)

ORDERING GRID

E3 TRIM-MOUNTED REFLECTORS

PRODUCT	STYLE	FINISH
E3TREF	**NS1** NON-SLOTTED	**B** ANODIZED BLACK
	NS2 NON-SLOTTED	**S** ANODIZED SILVER
	NS3 NON-SLOTTED	
	NS4 NON-SLOTTED	
	NS5 NON-SLOTTED	
	NS6 NON-SLOTTED	

E3TREF

Reflectors are placed on top of the inside of the trim or affixed via screws (only if provided).

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ELEMENT™ 3" LED

FIXED DOWNLIGHT

PHOTOMETRICS

Description:	3" LED Module 10° Beam - 0° Tilt, 80 CRI, 3000K
Model:	E3 Citizen LED
Input Power (Watts):	16.3
Input Power Factor:	0.98
Absolute Luminous Flux (Lumens):	1337
Lumen Efficacy (Lumens per Watt):	82

Description:	3" LED Module 18° Beam - 0° Tilt, 80 CRI, 3000K
Model:	E3 Citizen LED
Input Power (Watts):	18.1
Input Power Factor:	0.98
Absolute Luminous Flux (Lumens):	1598
Lumen Efficacy (Lumens per Watt):	88.1

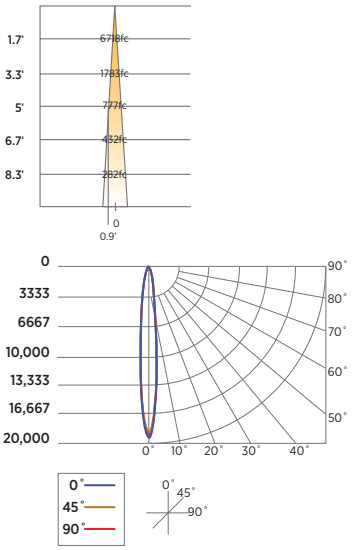
Description:	3" LED Module 25° Beam - 0° Tilt, 80 CRI, 3000K
Model:	E3 Citizen LED
Input Power (Watts):	18.3
Input Power Factor:	0.98
Absolute Luminous Flux (Lumens):	1754
Lumen Efficacy (Lumens per Watt):	95.5

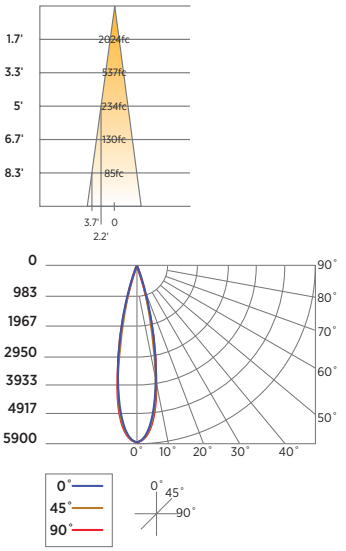
Output difference between CCTs - 5%, CRIs - 15%.

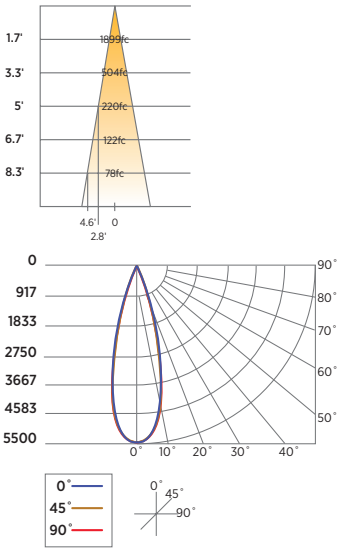
ANGLE	0°	45°	90°
0°	19414	19414	19414
5°	10254	10254	10254
10°	3511	3511	3511
15°	1342	1342	1342
20°	383	383	383
25°	126	126	126
30°	84	84	84
35°	54	54	54
40°	31	31	31
45°	22	22	22
50°	18	18	18
55°	11	11	11
60°	6	6	6
65°	3	3	3
70°	2	2	2
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0

ANGLE	0°	45°	90°
0°	5848	5848	5848
5°	5500	5478	5491
10°	3919	3944	3905
15°	2103	2212	2149
20°	1058	1199	1075
25°	507	548	508
30°	250	237	250
35°	148	140	141
40°	93	98	94
45°	51	69	61
50°	33	46	37
55°	21	27	24
60°	4	15	10
65°	2	3	2
70°	2	2	2
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0

ANGLE	0°	45°	90°
0°	5422	5416	5427
5°	4916	4872	4888
10°	3800	3718	3721
15°	2040	2115	2016
20°	870	979	900
25°	400	441	414
30°	190	190	196
35°	103	103	105
40°	60	65	61
45°	27	43	31
50°	16	25	17
55°	7	12	7
60°	2	5	2
65°	2	2	2
70°	1	1	2
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0







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ELEMENT™ 3" LED
FIXED DOWNLIGHT

PHOTOMETRICS

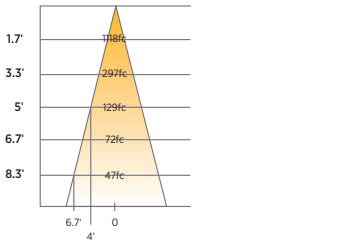
Description:	3" LED Module 40° Beam - 0° Tilt, 80 CRI, 3000K
Model:	E3 Citizen LED
Input Power (Watts):	16.9
Input Power Factor:	0.98
Absolute Luminous Flux (Lumens):	1774
Lumen Efficacy (Lumens per Watt):	104.6

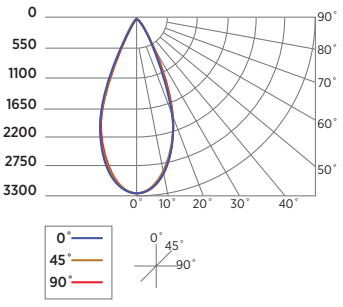
Description:	3" LED Module 60° Beam - 0° Tilt, 80 CRI, 3000K
Model:	E3 Citizen LED
Input Power (Watts):	18.4
Input Power Factor:	0.98
Absolute Luminous Flux (Lumens):	1536
Lumen Efficacy (Lumens per Watt):	83.5

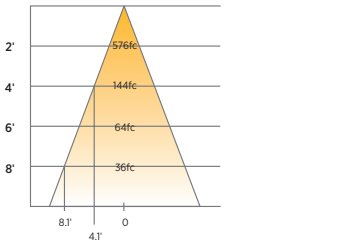
Output difference between CCTs - 5%, CRIs - 15%.

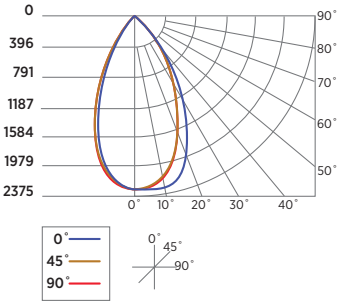
ANGLE	0°	45°	90°
0°	3230	3230	3230
5°	3107	3126	3159
10°	2824	2830	2871
15°	2415	2407	2463
20°	1863	1866	1937
25°	1111	1125	1128
30°	490	521	479
35°	221	232	205
40°	115	114	110
45°	65	64	59
50°	30	38	22
55°	14	22	11
60°	6	9	4
65°	1	3	1
70°	1	1	1
75°	1	1	1
80°	0	0	0
85°	0	0	0
90°	0	0	0

ANGLE	0°	45°	90°
0°	2305	2305	2305
5°	2313	2298	2268
10°	2295	2248	2155
15°	2219	2116	1938
20°	1964	1876	1714
25°	1548	1544	1330
30°	1113	1176	1013
35°	749	835	704
40°	450	511	428
45°	230	283	221
50°	94	140	91
55°	38	69	35
60°	18	31	16
65°	8	13	6
70°	0	4	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0









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ELEMENT™ 3" LED
FIXED DOWNLIGHT

PROJECT INFORMATION

JOB NAME AND INFORMATION

FIXTURE TYPE AND QUANTITY

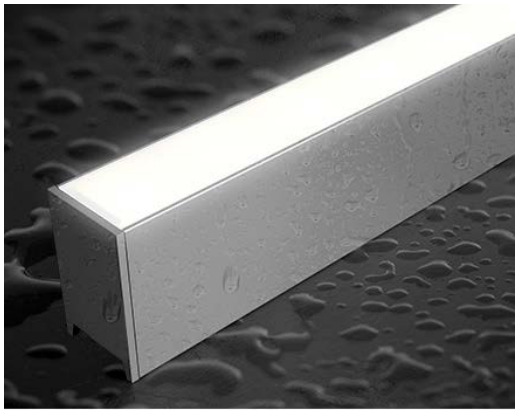
NOTES

TECH LIGHTING
7400 Linder Ave., Skokie, IL 60077
T 847.410.4400
www.techlighting.com

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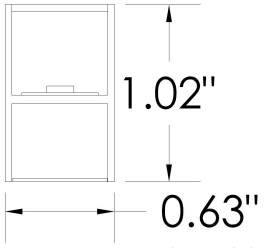
Type | **Project Name**

L18W
Static White



shown with endcap

QUICK VIEW



shown with the optic layer

QUICK FACTS

35 diodes per foot, 8 MM on-center

80+ CRI - Standard
90+ CRI - Optional

Fully Configurable in 2.46" Increments
Available in 2700K, 3000K, 3500K, 4000K

Plug and play long continuous runs

0-10V, ELV, DMX Controlled Dimming

Operating temperature -10F to 102F

Beam Angle 120 degrees

UL Listed Wet Location

Allow 1/2" Spacing at end of Run

032520

APPLICATION

UL Listed for Wet Location, L18W offers static white single-color linear fixture. With its sleek look, the L18W can be used to create lighting settings enhancing the experience in any outdoor space, efficiently and effectively. Product is designed for a variety of applications; hospitality, corporate, retail, commercial and residential. Fixtures may be joined together for long continuous runs with our unique plug and play system with all wires contained within the channel below or used as individual luminaires. LED's are mounted in aluminum extrusion with opal encapsulation and silicon end caps. Great for mill work, niches, suspended lines, coves and decorative materials.

The L18W is a low voltage, remote driver system bright enough for general illumination or available with lower outputs for a warm glow.

LIGHT OUTPUT & POWER CONSUMPTION

		HIGH OUTPUT		MEDIUM OUTPUT		STANDARD OUTPUT	
Nominal (Inches)	Actual (Inches)	Lumens	Watts	Lumens	Watts	Lumens	Watts
6"	5.4"	HO 449 lm	2.9W	MO 341 lm	2.2W	SO 237 lm	1.5W
12"	10.3"	HO 898 lm	5.8W	MO 683 lm	4.4W	SO 475 lm	2.9W
18"	17.7"	HO 1347 lm	8.7W	MO 1023 lm	6.6W	SO 711 lm	4.5W
24"	22.6"	HO 1796 lm	11.6W	MO 1366 lm	8.8W	SO 950 lm	5.8W
36"	34.9"	HO 2694 lm	17.4W	MO 2048 lm	13.2W	SO 1422 lm	9.0W
48"	47.2"	HO 3592 lm	23.2W	MO 2730 lm	17.6W	SO 1900 lm	11.6W
60"	59.5"	HO 4490 lm	29.0W	MO 3412 lm	22.0W	SO 2375 lm	14.5W
72"	71.8"	HO 5388 lm	34.8W	MO 4096 lm	26.4W	SO 2844 lm	17.4W

Data Based on 80+ CRI and 3000K

ELECTRICAL
Auto-ranging 120V to 277V mains
24V DC Constant Voltage Output

DIMMING
0-10V, ELV, DMX Controlled Dimming

FINISH
Anodized Aluminum Finish

ORDERING INFORMATION

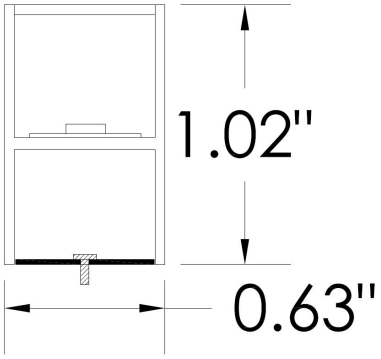
L18W - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

- OUTPUT: HO - High Output; MO - Medium Output; SO - Standard Output
- CCT: 27 - 2700K; 30 - 3000K; 35 - 3500K; 40 - 4000K; 55 - 5500K**
- LENGTH: In Inches
- CRI: 8 = 80+; 9 = 90+*
- OPTIONS: 010 - 010V Dimming; ELV - Electronic Low Voltage Dimming; DM4- DMX Dimming
- ACCESSORIES: MC - Mounting Clip

* Lumen Loss apply
20% Watts increased
**Consult factory for custom CCT and lengths

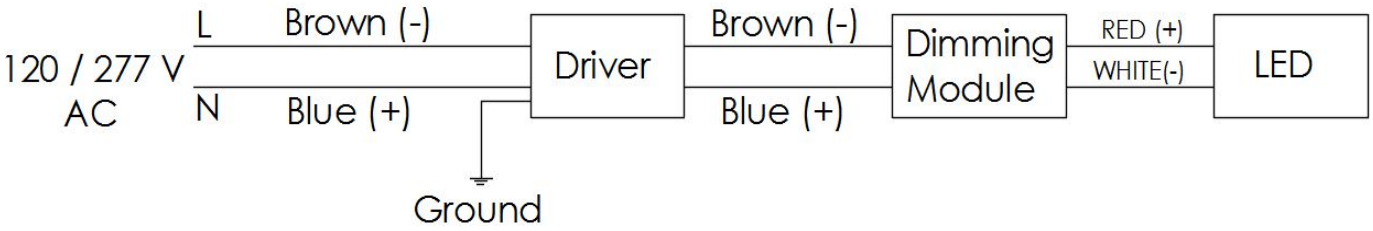
nanometer lighting
57-10 49th place
maspeth, ny 11378
p. 718.497.0394
f. 718.821.9316

SECTIONAL END VIEW

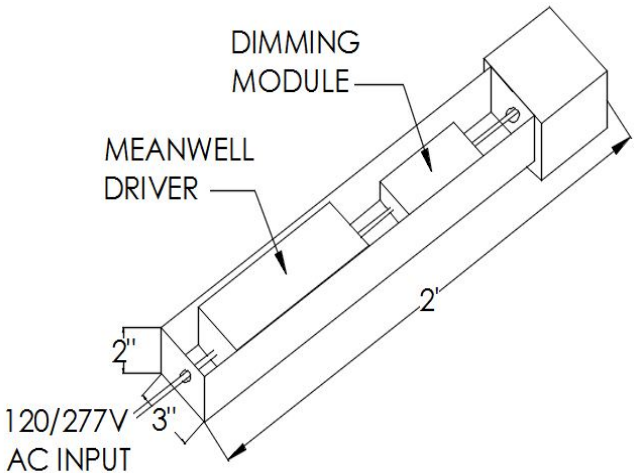


With Mounting Clip

WIRING DIAGRAM



POWERBOX DIAGRAM



Standard 10' 18 AWG with Driver provided

Driver can be remoted at various maximum distance*

Wire Size (AWG)	Distance (feet)
18	25
14	50
10	100

*DISTANCE VARY WITH LOAD. PLEASE VARIFY IT BEFORE RELEASE.

DISCLAIMER:

BE SURE TO VERIFY ALL WATTAGES, DIMENSIONS AND LENGTHS DUE TO RAPIDLY CHANGING TECHNOLOGY

032520

nanometer lighting
57-10 49th place
maspeth, ny 11378
p. 718.497.0394
f. 718.821.9316

KIM LIGHTING®

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

UR20 - Post Top

ARCHITECTURAL AREA/SITE

Ouro™

FEATURES

- 20” size in single/dual arm post top, pole and wall mount
- High performance optics up to 16,874 delivered lumens
- Elegant form factor
- Diffusion lens option
- UL/cUL listed for wet locations, IP66 and 4G/1.5G vibration rated

3000K and warmer CCTs only

See Certification Specifications



Ouro Post Top

CONTROL TECHNOLOGY

NX LIGHTING CONTROLS wiSCAPE

RELATED PRODUCTS

Ouro Small Arm Mount

Ouro Large Post Top

Ouro Large Arm Mount

SPECIFICATIONS

CONSTRUCTION

- Low copper aluminum alloy die-casting is designed as one-piece.
- Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
- All external fasteners are stainless steel.
- Cover is secured to Lens frame by the latch and hinge.

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB).
- Optical lenses are clear injection molded PMMA acrylic.
- Optional Backlight Control on each LED module to completely control unwanted backlight.
- Optional fixture finish optical surfaces will not exceed BUG ratings of the standard white finish.

LENS

- Standard lens (CLR) IK08
- Clear Polycarbonate Lens (CP) IK10

INSTALLATION

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

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed.
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed.
- "Thermal Shield”, secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- Surge protection: 10,000k in parallel, 20,000k in series
- Wiring: No. 18AWM rated 105°C, wet rating.

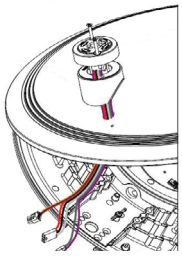
CONTROLS

7PR

- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others.

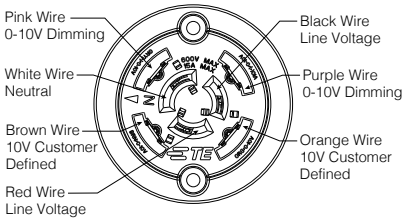
Standard customer operation modes:

- Traditional on/off photoelectric control.
- 5-pin wireless photoelectric control for added dimming feature.
- 7-pin wireless photoelectric control for for dimming and additional I/O connections for customer use.



7-Pin receptacle placement

KEY DATA	
Lumen Range	2694 – 16874
Wattage Range	25 – 150
Efficacy Range (LPW)	95 – 133
Reported Life (Hours)	L70/>60,000
Weight	35 lbs – 15.8 Kg
EPA	0.608



[1] Clear Polycarbonate Lens (CP) IK10, Standard lens (CLR) IK08, Consult factory for details

(Specifications continued on page 3)

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KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

UR20 - Post Top

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: UR20-24L-25-3K8-3-L-UNV-FMSA33-BLT-7PR-BC

CATALOG #

HOUSING

UR20

Model		LED Engine	CCT/CRI	Distribution	Rotation	Voltage
UR20	Ouro	**No Lens or Clear Lens**	**AM** [11] Amber, 595nm	**No Lens or Clear Lens**	**(Blank)** Blank for no rotation	**UNV** 120-277V
		24L-25 3,000 lm	**27K8** 2700K, 80 CRI	**FR** Type 1/Front Row		**347** 347V
		24L-65 7,000 lm	**3K7** 3000K, 70 CRI	**2** Type II	**L** [1] Optic rotation left	**480** 480V
		56L-75 10,000 lm	**3K8** 3000K, 80 CRI	**3** Type III	**R** [1] Optic rotation right	**DALI** 120-277V
		56L-110 15,000 lm	**35K8** 3500K, 80 CRI	**4** Type IV		**Consult factory**
		56L-140 17,000 lm	**3K9** 3000K, 90 CRI	**4W** Type IV Wide		
		HDL - High Diffusion Lens	**4K7** 4000K, 70 CRI	**5QM** Type V Square Medium		
		28L-30 3,000 lm	**4K8** 4000K, 80 CRI	**5QN** Type V Square Narrow		
		28L-70 7,000 lm	**5K7** 5000K, 70 CRI	**5R** Type V Rectangular		
		68L-80 9,000 lm	Consult factory for other CCTs and CRIs	**5W** Type V Wide (Round)		
		68L-115 13,000 lm		**HDL - High Diffusion Lens**		
		68L-150 15,000 lm		**3** Type III/Asymmetric		
				5W Type V/Symmetric		

Mounting		Fixture Finish		Control Options		Options		Control Accessories	
FM33	Flush mt 3.0" OD pole, 3" fixture base	**BLS**	Black Gloss Smooth	**7PR-TL**	7 pin PCR with twist lock photocontrol	**BC** [6]	Back-light Control	**WIR-RME-L**	wiSCAPE External Fixture Module
FM44	Flush mt 3.6" to 4.0" OD pole, 4" fixture base	**BLT**	Black Matte Textured	**7PR-SC**	7 pin PCR with shorting cap	**SF**	Single Fuse	**SCH-R**	Occ. Sensor for Round Pole (up to 30' MH)
PT23	3" Post Top mount for 2 3/8" OD x 4" Long Tenon Tenon	**DBS**	Dark Bronze Gloss Smooth	**7PR**	7 pin PCR, wireless control enabled	**DF**	Double Fuse	**SCH-S**	Occ. Sensor for Square Pole (up to 30' MH)
PT24	4" Post Top mount for 2 3/8" OD T x 4" Long Tenon	**DBT**	Dark Bronze Matte Textured	**AD-01** [2]	AstroDIM: 50% output at midnight	**CLR** [5,6,13]	Clear Lens	**NXOFM-1R1D-UNV**	NX 7-Pin Twist-Lock® with NX Networked Wireless Radio, Integral Automatic Dimming Photocell, Integral Single Pole Relay with Dimming, and Bluetooth Programming
PT34	4" Post Top mount for 2 7/8" OD x 4" Long Tenon Tenon	**GTT**	Graphite Matte Textured	**AD-02** [2]	AstroDIM: 50% output midnight to 4 AM	**TPL**	Tamper proof latch		
FMSA33	Solo Arm Post Top Flush Mount 3.0" OD Pole, 3" fixture base	**LGS**	Light Grey Gloss Smooth	**AD-03** [2]	AstroDIM: 50% output 10PM	**CP** [5, 6, 12]	Clear Polycarbonate Lens		
FMSA34	Solo Arm Post Top Flush Mount 3.6" to 4.0" OD Pole, 4" fixture base	**LGT**	Light Grey Matte Textured	**AD-04** [2]	AstroDIM: 50% output 10PM to 4AM	**WBFM3** [14]	3" Solo Arm/ Standard Post Top Mount Wall Bracket		
PTSA23	3" Solo Arm Post Top Mount for 2-3/8" OD x 4" Long Tenon	**PSS**	Platinum Silver Gloss Smooth	**NXW** [15]	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	**WBFM4** [14]	4" Solo Arm/ Standard Post Top Mount Wall Bracket		
PTSA24	4" Solo Arm Post Top Mount for 2-3/8" OD x 4" Long Tenon	**VGT**	Verde Green Matte Textured	**WSP-40F-1** [2,5]	Dimming Occ. Sensor for up to 40' MH, 120/277/347V	**TAFM3** [14, 16]	3" Solo Arm/ Standard Post Top Mount Twin Arm Mount		
PTSA34	4" Solo Arm Post Top Mount for 2-7/8" OD x 4" Long Tenon	**WHS**	White Gloss Smooth	**WSP-40F-2** [2,5]	Dimming Occ. Sensor for up to 40' MH, 208/240V	**TAFM4** [14, 16]	4" Solo Arm/ Standard Post Top Mount Twin Arm Mount		
		WHT	White Matte Textured	**WSP-40F-3** [2,5]	Dimming Occ. Sensor for up to 40' MH, 480V				
		Color Option		**NXWS16F** [2,5,15]	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming				
		CC [7]	Custom Color	**NXWS40F** [2,5,15]	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming				

1 Not available with 5QM, 5QN, and 5W distributions.
2 Not available with other sensor or wireless control options.
4 Not available with 347V and 480V.
5 24L and 56L only
6 Not available with HDL option.
7 Consult factory for custom color, marine and corrosive finish options.
8 Turtle Friendly.
9 Please see Delivered Lumens chart on Page 5 for lumen
10 Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
11 Not available with 24L-65 and the 56L-140 configuration of the LED Engine
12 IK10 rated. Consult factory for details
13 IK08 rated. Consult factory for details
14 Must order with Flush Mount "FM" mounting option and correct pole diameter.
15 Not available with Solo Arm Post Top (FMSA/PTSA)
16 Order one for each pair of fixtures per pole.

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UR20 - Post Top

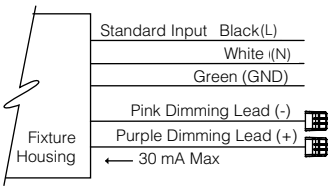
ARCHITECTURAL AREA/SITE

SPECIFICATIONS (CONTINUED)

CONTROLS (CONTINUED)

DIMMING:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver.
- Modular wiring harness in the service area provides user access to the dimming circuitry.
- Dimming circuitry compatible with 0-10V, user-defined control devices.
- Optional factory programmed dimming profile.



WIRELESS CONTROLS

WISCAPE™

- wiSCAPE™ wireless control modules allow an individual fixture to managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The wiSCAPE modules provide on/off/dim control, external device input, alerts and metering.

WIR-RME-L

- wiSCAPE External Module,120-480V, 1000ft range (LOS), Internal Photocell, 1 Digital Input, Compatible with the A-25-7H option

NX LIGHTING CONTROLS

- NX lighting controls platform utilizes a Distributed Network Architecture (DNA) that connects intelligent devices including luminaires, controllers, panels, occupancy sensors, photocells, wall switches and dimmers, creating a system with an unmatched level of reliability, scalability and simplicity

POLE MOUNTED

ROUND POLE-MOUNTED OCCUPANCY

- Sensor up to 30'. Select voltage and finish color.

SCH-R

- Round Pole-Mounted Occupancy Sensor: up to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.
- Ordering Example: SCH-R4[4]/277[2]/BL[3]

SQUARE POLE-MOUNTED OCCUPANCY

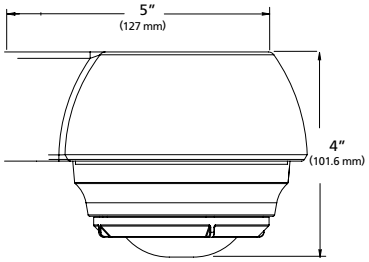
Sensor up to 30'. Select voltage and finish color.

SCH-S

- Square Pole-Mounted Occupancy Sensor: up to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.
- Ordering Example: SCH-S/277[2]/BL[3]

ASTRODIM

- AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times.



OPTIONAL FUSING:

- SF for 120, 277, and 347 Line volts

CAUTION:

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

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- ANSI C136.31-2010 Vibration tested and compliant 1.5G and 4G reference page 4
- IEC 66262 Mechanical Impact Code IK08, IK10
- IDA approved, 3000K and warmer CCTs only
- IP66 rated
- RoHS compliant
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. See Buy American Solutions

WARRANTY

- 5 year warranty

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KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

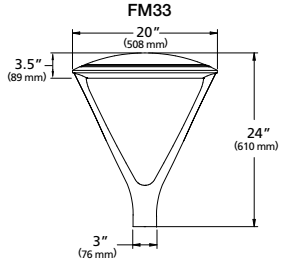
CATALOG #:

UR20 - Post Top

ARCHITECTURAL AREA/SITE

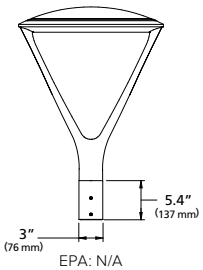
DIMENSIONS

FM33



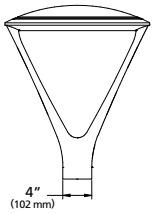
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PT23



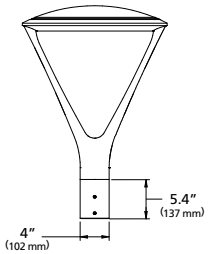
EPA: N/A

FM44



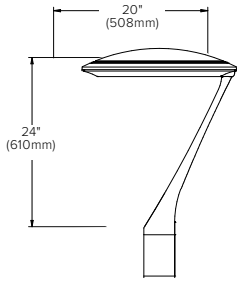
EPA: .534

PT24 / PT34



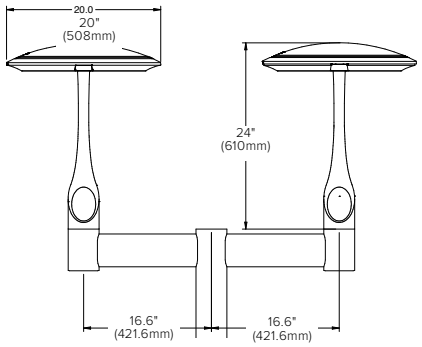
EPA: .424 / .608

FMSA33/PTSA23
FMSA34, PTSA24, PTSA34

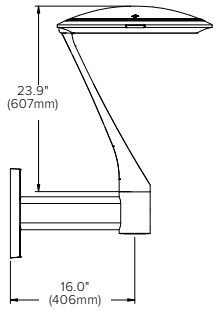


ARM	DIAMETER
FMSA33	3" diameter
FMSA34	4" diameter
PTSA23	3" diameter with Tenon mount
PTSA24	4" diameter with Tenon mount
PTSA34	4" diameter with tenon mount

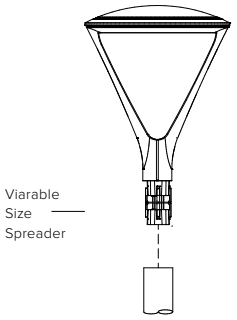
TAFM3/TAFM4



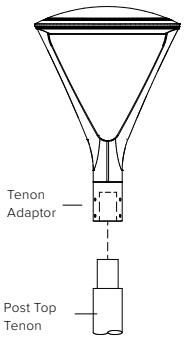
WBFM3/WBFM4



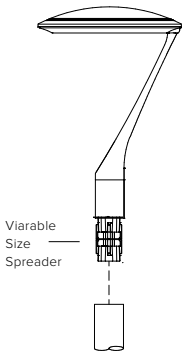
MOUNTING INSTALLATION



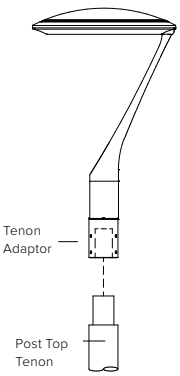
Flush Mount
FM33/44



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PT23/24/34

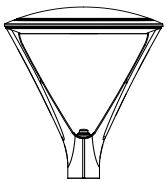


Flush Mount
FMSA33/34

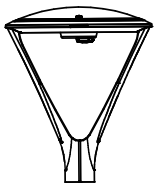


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PTSA23/24/34

SENSOR PLACEMENT



NXW



WSP-40F

MOUNTING VIBRATION RATINGS

UR 20 Arm		UR28 Arm		UR 20 Post Top		UR 28 Post Top		UR 20 Solo Arm	
Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating
ASQ	4G	ASQ	4G	FM33	4G	FM44	1.5G	FMSA33	1.5G
A34	4G	A34	4G	FM44	1.5G	FM45	1.5G	FMSA34	1.5G
A46	4G	A46	4G	PT23	4G	PT24	1.5G	PTSA23	1.5G
MAF	4G	MAF	4G	PT24	4G	PT34	1.5G	PTSA24	1.5G
				PT34	1.5G	PT25	1.5G	PTSA34	1.5G

For the 4 G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Normal Applications, Vibration Test Level 2 Bridge/Overpass Applications, and Vibration Test Level 3

For the 1.5G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Level 1 Bridge/Overpass Applications

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DELIVERED LUMENS

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
24L	3,000	298mA	25	No lens	FR	2932	0	0	1	115	3119	0	0	1	123	3098	0	0	1	124
					FR-BC	1994	0	0	0	78	2121	0	0	0	83	2107	0	0	0	83
					2	2943	1	0	1	116	3099	1	0	1	122	3110	1	0	1	124
					2-BC	1724	0	0	1	68	1834	0	0	1	72	1822	0	0	1	72
					3	3007	1	0	1	118	3200	1	0	1	126	3178	1	0	1	127
					3-BC	1830	0	0	1	73	1947	0	0	1	78	1934	0	0	1	77
					4	3056	0	0	1	120	3251	0	0	1	128	3229	0	0	1	129
					4-BC	2235	0	0	1	88	2377	0	0	1	93	2362	0	0	1	93
					4W	3171	1	0	1	125	3374	1	0	1	133	3351	1	0	1	134
					4W-BC	1912	0	0	1	75	2034	0	0	1	80	2020	0	0	1	79
					5QM	2931	2	0	1	115	3119	2	0	1	123	3098	2	0	1	124
					5QN	2694	2	0	1	106	2866	2	0	1	113	2847	2	0	1	114
					5R	3054	2	0	2	120	3250	2	0	2	128	3228	2	0	2	129
					5W	3043	2	0	1	120	3237	2	0	1	127	3216	2	0	1	129
				Clear lens	FR	2773	0	0	1	109	2951	0	0	1	116	2930	0	0	1	117
					FR-BC	1886	0	0	1	74	2007	0	0	1	79	1993	0	0	1	78
					2	2784	1	0	1	109	2963	1	0	1	116	2942	1	0	1	118
					2-BC	1631	0	0	1	64	1736	0	0	1	68	1723	0	0	1	67
					3	2845	1	0	1	111	3028	1	0	1	119	3007	1	0	1	120
					3BC	1806	0	0	1	72	1922	0	0	1	77	1909	0	0	1	76
					4	2891	0	0	1	113	3076	0	0	1	120	3055	0	0	1	122
					4-BC	2114	0	0	1	83	2250	0	0	1	88	2234	0	0	1	88
					4W	2999	1	0	1	117	3192	1	0	1	125	3169	1	0	1	127
					4W-BC	1808	0	0	1	71	1924	0	0	1	75	1911	0	0	1	76
					5QM	2773	1	0	1	109	2950	2	0	1	116	2931	2	0	1	117
					5QN	2549	1	0	0	100	2712	2	0	1	106	2693	2	0	1	108
					5R	2890	2	0	2	113	3075	2	0	2	120	3054	2	0	2	122
					5W	2879	2	0	1	113	3064	2	0	1	120	3042	2	0	1	122
28L		298mA	30	HDL lens	3	2816	1	0	1	96	2997	1	0	1	102	3020	1	0	1	101
					5W	2917	1	0	1	100	3105	1	0	1	106	3084	1	0	1	103

Scaling factors 27K8 = 0.859, 35K8 = 0.906 of 5K7 lumen packages

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DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
24L	7,000	800mA	65	No lens	FR	6754	1	0	1	104	7187	1	0	1	111	7138	1	0	1	110
					FR-BC	4392	0	0	1	68	4673	0	0	1	72	4641	0	0	1	71
					2	6571	1	0	2	101	6992	1	0	2	108	6944	1	0	2	107
					2-BC	3799	0	0	1	58	4042	0	0	1	62	4014	0	0	1	62
					3	6625	1	0	2	102	7051	1	0	2	108	7002	1	0	2	108
					3BC	4032	0	0	1	62	4291	0	0	1	66	4261	0	0	1	66
					4	6788	1	0	2	104	7223	1	0	2	111	7174	1	0	2	110
					4-BC	4924	0	0	2	76	5239	0	0	2	81	5203	0	0	2	80
					4W	6900	1	0	2	106	7343	1	0	2	113	7291	1	0	2	112
					4W-BC	4212	0	0	2	65	4482	0	0	2	69	4451	0	0	2	68
					5QM	7025	3	0	1	108	7477	3	0	1	115	7425	3	0	1	114
					5QN	6964	3	0	1	107	7410	3	0	1	114	7323	3	0	1	113
					5R	7038	3	0	3	108	7489	3	0	3	115	7437	3	0	3	114
					5W	7011	3	0	2	108	7460	3	0	2	115	7409	3	0	2	114
				Clear lens	FR	6432	1	0	1	97	6844	1	0	1	104	6798	1	0	1	105
					FR-BC	4182	0	0	1	63	4450	0	0	1	67	4420	0	0	1	67
					2	6258	1	0	1	95	6659	1	0	2	101	6613	1	0	2	102
					2-BC	3617	0	0	1	55	3849	0	0	1	58	3823	0	0	1	58
					3	6310	1	0	2	96	6714	1	0	2	102	6668	1	0	2	103
					3-BC	3599	0	0	1	55	3829	0	0	1	59	3803	0	0	1	59
					4	6465	1	0	2	98	6879	1	0	2	104	6832	1	0	2	105
					4-BC	4688	0	0	2	71	4990	0	0	2	76	4955	0	0	2	75
					4W	6572	1	0	2	100	6993	1	0	2	106	6944	1	0	2	107
					4W-BC	4011	0	0	2	61	4268	0	0	2	65	4238	0	0	2	64
					5QM	6691	3	0	1	101	7119	3	0	1	108	7070	3	0	1	109
					5QN	6632	2	0	1	100	7058	3	0	1	107	7009	3	0	1	108
					5R	6702	3	0	3	102	7131	3	0	3	108	7082	3	0	3	109
					5W	6676	3	0	2	101	7104	3	0	2	108	7055	3	0	2	109
28L		700mA	70	HDL lens	3	6047	2	0	2	92	6047	2	0	2	92	6236	2	0	2	89
					5W	6221	2	0	1	94	6619	2	0	1	100	6525	2	0	1	93

Scaling factors 27K8 = 0.859, 35K8 = 0.906 of 5K7 lumen packages

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DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
56L	10,000	420mA	75	No lens	FR	9315	1	0	1	124	9913	1	0	1	132	9845	1	0	1	131
					FR-BC	6058	0	0	1	81	6445	0	0	1	86	6402	0	0	1	85
					2	9063	2	0	2	120	9644	2	0	2	128	9578	2	0	2	128
					2-BC	5239	0	0	1	70	5575	0	0	1	74	5536	0	0	1	74
					3	9139	2	0	2	125	9725	2	0	2	134	9657	2	0	2	129
					3-BC	5561	0	0	2	74	5877	0	0	2	78	5561	0	0	2	74
					4	9362	1	0	2	124	9362	1	0	2	124	9876	1	0	2	132
					4-BC	6791	0	0	2	90	7226	0	0	2	96	7168	0	0	2	96
					4W	9518	1	0	2	126	10129	1	0	2	135	10058	1	0	2	134
					4W-BC	5809	0	0	2	77	6181	0	0	2	82	6138	0	0	2	82
					5QM	9691	3	0	1	129	10312	3	0	1	137	10240	3	0	1	137
					5QN	9606	3	0	1	128	10222	3	0	1	136	10151	3	0	1	135
					5R	9706	3	0	3	129	10328	3	0	3	137	10258	3	0	3	137
					5W	9669	4	0	2	129	10289	4	0	2	137	10217	4	0	2	136
				Clear lens	FR	8871	1	0	1	117	9760	1	0	1	129	9374	1	0	1	125
					FR-BC	5769	0	0	1	76	6138	0	0	1	81	6096	0	0	1	81
					2	8631	2	0	2	114	9183	2	0	2	121	9121	2	0	2	122
					2-BC	4989	0	0	1	67	5309	0	0	1	71	5272	0	0	1	62
					3	8703	1	0	2	115	9260	2	0	2	122	9197	2	0	2	123
					3-BC	4964	1	0	1	66	5282	1	0	2	70	5245	1	0	2	69
					4	8916	1	0	2	118	9487	1	0	2	125	9423	1	0	2	126
					4-BC	6467	0	0	2	85	6881	0	0	2	91	6834	0	0	2	90
					4W	9065	1	0	2	120	9646	1	0	2	128	9579	1	0	2	128
					4W-BC	5532	0	0	2	74	5887	0	0	2	78	5845	0	0	2	78
					5QM	9228	3	0	1	122	9820	3	0	1	130	9752	3	0	1	130
					5QN	9147	3	0	1	121	9734	3	0	1	129	9668	3	0	1	129
					5R	9244	3	0	3	122	9836	3	0	3	130	9769	3	0	3	130
					5W	9208	4	0	2	122	9798	4	0	2	130	9732	4	0	2	130
68L		350mA	80	HDL lens	3	7853	2	0	2	99	8356	2	0	2	106	8299	2	0	2	104
					5W	8080	2	0	2	102	8684	3	0	2	110	8684	3	0	2	109

Scaling factors 27K8 = 0.859, 35K8 = 0.906 of 5K7 lumen packages

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DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
56L	15,000	600mA	110	No lens	FR	13533	1	0	1	125	14399	1	0	2	133	14301	1	0	2	130
					FR-BC	8799	1	0	1	81	9363	1	0	1	86	9300	1	0	1	85
					2	13165	2	0	2	121	14009	2	0	2	129	13913	2	0	2	126
					2-BC	7611	1	0	2	70	8098	1	0	2	75	8042	1	0	2	74
					3	13275	2	0	3	122	14126	2	0	3	130	14030	2	0	3	128
					3-BC	8079	1	0	2	73	8596	1	0	2	78	8538	1	0	2	78
					4	13601	1	0	3	125	14472	1	0	3	133	14373	1	0	3	131
					4-BC	9865	1	0	2	91	10497	1	0	3	97	10425	1	0	3	96
					4W	13827	2	0	3	127	14713	2	0	3	136	14611	2	0	3	133
					4W-BC	8437	0	0	2	78	8978	0	0	2	83	8916	0	0	2	82
					5QM	14077	4	0	2	130	14979	4	0	2	138	14876	4	0	2	135
					5QN	13953	4	0	1	129	14848	4	0	1	137	14747	4	0	1	134
					5R	14100	4	0	4	130	15004	4	0	4	138	14901	4	0	4	135
					5W	14046	4	0	2	129	14946	4	0	2	138	14844	4	0	3	135
				Clear lens	FR	12803	1	0	1	118	13624	1	0	1	126	13531	1	0	1	123
					FR-BC	9298	1	0	1	86	8325	1	0	1	77	8798	1	0	1	81
					2	12455	2	0	2	115	13254	2	0	2	123	13164	2	0	2	120
					2-BC	7200	1	0	1	67	7661	1	0	2	71	7610	1	0	2	70
					3	12560	2	0	3	116	13365	2	0	3	124	13273	2	0	3	121
					3-BC	7163	1	0	2	65	7622	1	0	2	69	7570	1	0	2	69
					4	12868	1	0	3	119	13692	1	0	3	127	13599	1	0	3	124
					4-BC	9333	1	0	2	86	9931	1	0	2	92	9864	1	0	2	90
					4W	13081	2	0	3	121	13920	2	0	3	129	13823	2	0	3	126
					4W-BC	7983	0	0	2	74	8495	0	0	2	79	8436	0	0	2	78
					5QM	13318	3	0	2	123	14172	4	0	2	131	14075	4	0	2	128
					5QN	13202	3	0	1	122	14048	4	0	1	130	13951	4	0	1	127
					5R	13341	4	0	4	123	14195	4	0	4	131	14099	4	0	4	128
					5W	13290	4	0	2	123	14141	4	0	2	131	14044	4	0	2	128
68L		500mA	115	HDL lens	3	11577	2	0	2	102	12320	2	0	2	109	12236	2	0	2	106
					5W	11912	3	0	2	105	12676	3	0	2	112	12588	3	0	2	109

Scaling factors 27K8 = 0.859, 35K8 = 0.906 of 5K7 lumen packages

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DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
56L	17,000	750mA	140	No lens	FR	15323	2	0	2	111	16306	2	0	2	118	16194	2	0	2	116
					FR-BC	9964	1	0	1	72	10603	1	0	1	77	10530	1	0	1	76
					2	14897	2	0	2	108	15852	2	0	2	115	15743	2	0	2	112
					2-BC	8618	1	0	2	63	9169	1	0	2	67	9107	1	0	2	66
					3	15032	2	0	3	109	15996	2	0	3	116	15886	2	0	3	113
					3-BC	9147	1	0	2	65	9733	1	0	2	70	9667	1	0	2	69
					4	15400	1	0	3	112	16387	1	0	4	119	16275	1	0	4	116
					4-BC	11170	1	0	3	81	11886	1	0	3	86	11804	1	0	3	86
					4W	15656	2	0	3	114	16660	2	0	4	121	16544	2	0	4	118
					4W-BC	9554	0	0	2	69	10166	0	0	2	74	10095	0	0	2	73
					5QM	15939	4	0	2	116	16962	4	0	2	123	16845	4	0	2	120
					5QN	15801	4	0	1	115	16813	4	0	1	122	16698	4	0	1	119
					5R	15966	4	0	4	116	16990	4	0	4	123	16874	4	0	4	121
					5W	15906	4	0	3	115	16925	4	0	3	123	16808	4	0	3	120
				Clear lens	FR	14541	1	0	2	105	15473	2	0	2	111	15367	2	0	2	110
					FR-BC	9456	1	0	1	68	10061	1	0	1	72	9993	1	0	1	72
					2	14146	2	0	2	102	15053	2	0	2	108	14950	2	0	2	107
					2-BC	8178	1	0	2	59	8702	1	0	2	63	8642	1	0	2	62
					3	14265	2	0	3	103	15179	2	0	3	109	15076	2	0	3	108
					3BC	8136	1	0	2	58	8657	1	0	2	62	8598	1	0	2	61
					4	14614	1	0	3	105	15551	1	0	3	112	15445	1	0	3	110
					4-BC	10600	1	0	3	76	11279	1	0	3	81	11203	1	0	3	81
					4W	14858	2	0	3	107	15811	2	0	3	114	15700	2	0	3	112
					4W-BC	9067	0	0	2	65	9649	0	0	2	70	9581	0	0	2	69
					5QM	15126	4	0	2	109	16095	4	0	2	116	15985	4	0	2	114
					5QN	14994	4	0	1	108	15955	4	0	1	115	15846	4	0	1	113
					5R	15152	4	0	4	109	16122	4	0	4	116	16012	4	0	4	114
					5W	15094	4	0	3	109	16061	4	0	3	116	15951	4	0	3	114
68L		625mA	150	HDL lens	3	13240	2	0	2	89	13992	3	0	3	95	13897	3	0	3	93
					5W	13623	3	0	2	92	14396	3	0	2	97	14298	3	0	2	95

Scaling factors 27K8 = 0.859, 35K8 = 0.906 of 5K7 lumen packages

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DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

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ARCHITECTURAL AREA/SITE

PHOTOMETRY

UR20-56L-140-4K7-FR-PT

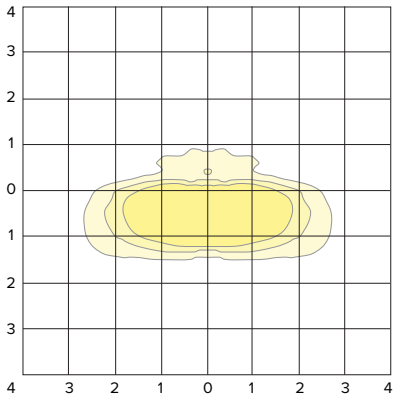
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16306**
Watts	**140**
Efficacy	**116.5**
IES Type	**II**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14198	87.1%
Downward House Side	2108	12.9%
Downward Total	16306	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16306	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-2-PT

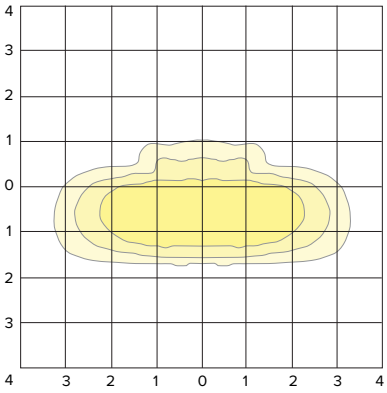
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**15852**
Watts	**140**
Efficacy	**113.2**
IES Type	**II**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	12851	81.1%
Downward House Side	3001	18.9%
Downward Total	15852	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	15852	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-3-PT

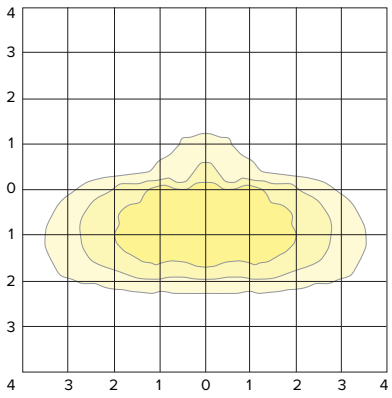
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**15996**
Watts	**140**
Efficacy	**114.3**
IES Type	**III**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	13422	83.9%
Downward House Side	2574	16.1%
Downward Total	15996	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	15996	100%

ISOFOOT CANDLE PLOT



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ARCHITECTURAL AREA/SITE

PHOTOMETRY

UR20-56L-140-4K7-4-PT

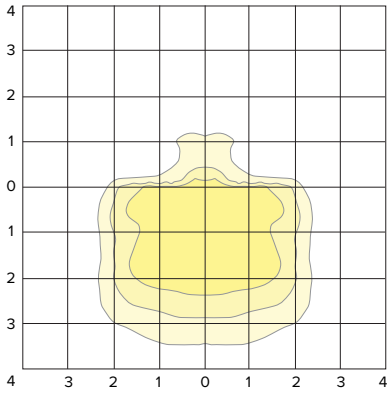
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16387**
Watts	**140**
Efficacy	**117.1**
IES Type	**IV**
BUG Rating	**B1-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14697	89.7%
Downward House Side	1690	10.3%
Downward Total	16387	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16387	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-4W-PT

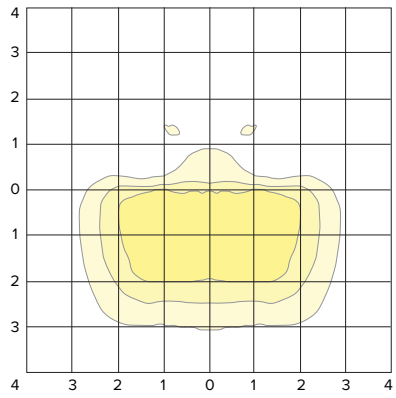
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16660**
Watts	**138**
Efficacy	**120.7**
IES Type	**IV**
BUG Rating	**B2-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14955	89.8%
Downward House Side	1705	10.2%
Downward Total	16660	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16660	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-5QM-PT

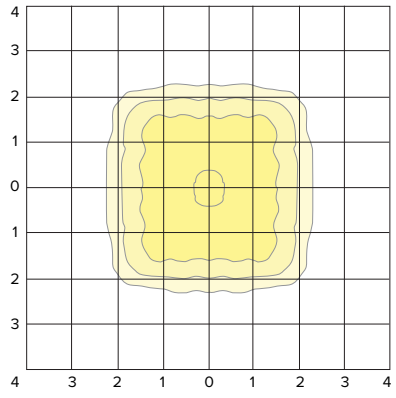
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16962**
Watts	**140**
Efficacy	**121.2**
IES Type	**VS**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8481	50.0%
Downward House Side	8481	50.0%
Downward Total	16962	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16962	100%

ISOFOOT CANDLE PLOT



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ARCHITECTURAL AREA/SITE

PHOTOMETRY

UR20-56L-140-4K7-5QN-PT

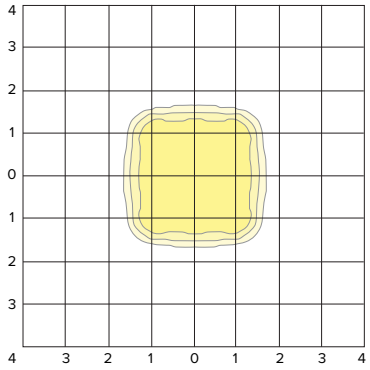
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16813**
Watts	**140**
Efficacy	**120.1**
IES Type	**VS**
BUG Rating	**B4-U0-G1**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8407	50.0%
Downward House Side	8407	50.0%
Downward Total	16813	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16813	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-5R-PT

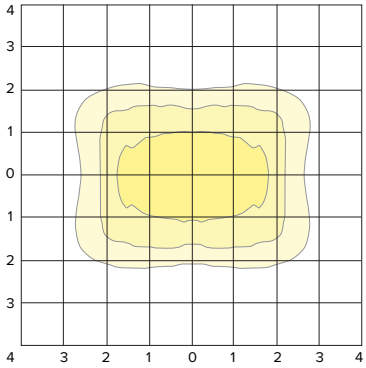
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16990**
Watts	**140**
Efficacy	**121.4**
IES Type	**III**
BUG Rating	**B4-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8495	50.0%
Downward House Side	8495	50.0%
Downward Total	16990	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16990	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-5W-PT

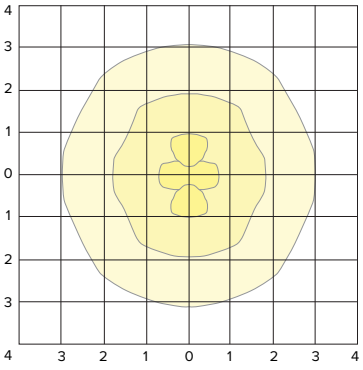
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16925**
Watts	**140**
Efficacy	**120.9**
IES Type	**VS**
BUG Rating	**B4-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8463	50.0%
Downward House Side	8463	50.0%
Downward Total	16925	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16925	100%

ISOFOOT CANDLE PLOT



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KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

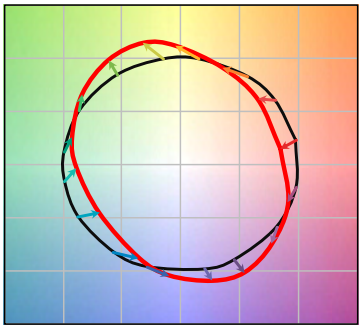
CATALOG #:

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ARCHITECTURAL AREA/SITE

TM-30 DATA

COLOR VECTOR GRAPHIC

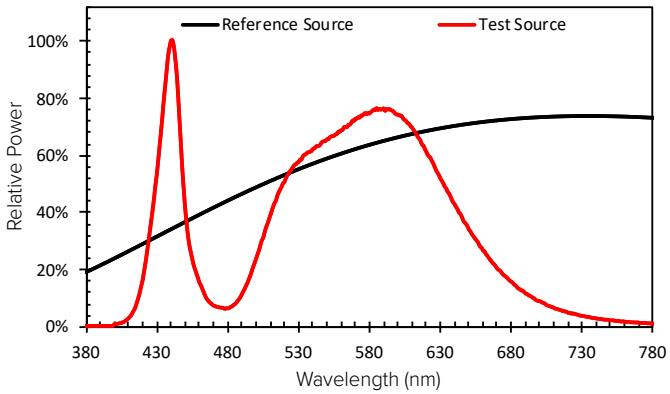


Reference Illuminant — Test Source

TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Drive Current	LED Count	System Watts	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming				
													Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
298mA	24	25	120-480	50/60	0.21	0.12	0.10	0.09	0.07	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
298mA	28	30			0.25	0.14	0.13	0.11	0.09	0.06							
800mA	24	65			0.54	0.31	0.27	0.23	0.19	0.14							
700mA	28	70			0.58	0.34	0.29	0.25	0.20	0.15							
420mA	56	75			0.63	0.36	0.31	0.27	0.22	0.16							
350mA	68	80			0.67	0.38	0.33	0.29	0.23	0.17							
600mA	56	110			0.92	0.53	0.46	0.40	0.32	0.23							
500mA	68	115			0.96	0.55	0.48	0.42	0.33	0.24							
850mA	56	140			1.17	0.67	0.58	0.51	0.40	0.29							
675mA	68	150			1.25	0.72	0.63	0.54	0.43	0.31							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Ambient Temp.	0	25,000	36,000	50,000	100,000	Reported L70
25°C / 77°F	100%	97%	95%	93%	87%	60khrs

CRI Lumen Multiplier				
CCT	Amber	70 CRI	80 CRI	90 CRI
Amber	0.1727s	—	—	—
2700K	—	—	0.859	—
3000K	—	1	0.9119	0.7033
3500K	—	—	0.906	
4000K	—	1	0.8941	0.734
5000K	—	1	0.879	0.7712

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Type:
BEGA Product:
Project:
Modified:

Application
This LED wall mounted luminaire has light output in one direction. Arranged individually or in groups, it is a great design element for a host of lighting applications. Downward orientation only.

Materials
Luminaire housing and constructed of die-cast marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Matte safety glass
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65
Weight: 4.2 lbs

Electrical

Operating voltage	120-277V AC
Minimum start temperature	-20° C
LED module wattage	15.4 W
System wattage	20.5 W
Controllability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	1024 lumens (3000K)
LED service life (L70)	60,000 hours

LED color temperature

☐ 4000K - Product number + **K4**
○ 3500K - Product number + **K35**
○ 3000K - Product number + **K3** ***(EXPRESS)***
○ 2700K - Product number + **K27**
○ Amber - Product number + **AMB**

Wildlife friendly amber LED - Optional
Luminaire is optionally available with a narrow bandwidth, amber LED source (585-600nm) approved by the FWC. This light output is suggested for use within close proximity to sea turtle nesting and hatching habitats. Electrical and control information may vary from standard luminaire.

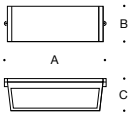
LED module wattage	12.0 W (Amber)
System wattage	15.0 W (Amber)
Luminaire lumens	243 lumens (Amber)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors ☐ Black (BLK) ○ White (WHT) ○ RAL:
○ Bronze (BRZ) ○ Silver (SLV) ○ CUS:





LED wall luminaire · light output on one side

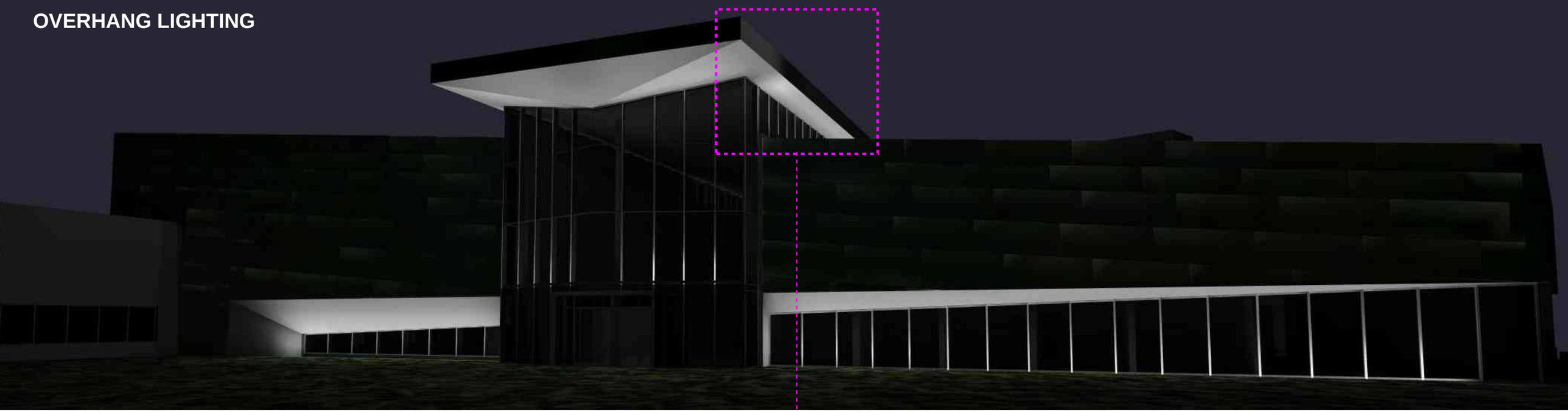
		LED	A	B	C
22 360	ADA	15.4 W	12 ½	4 ⅜	4

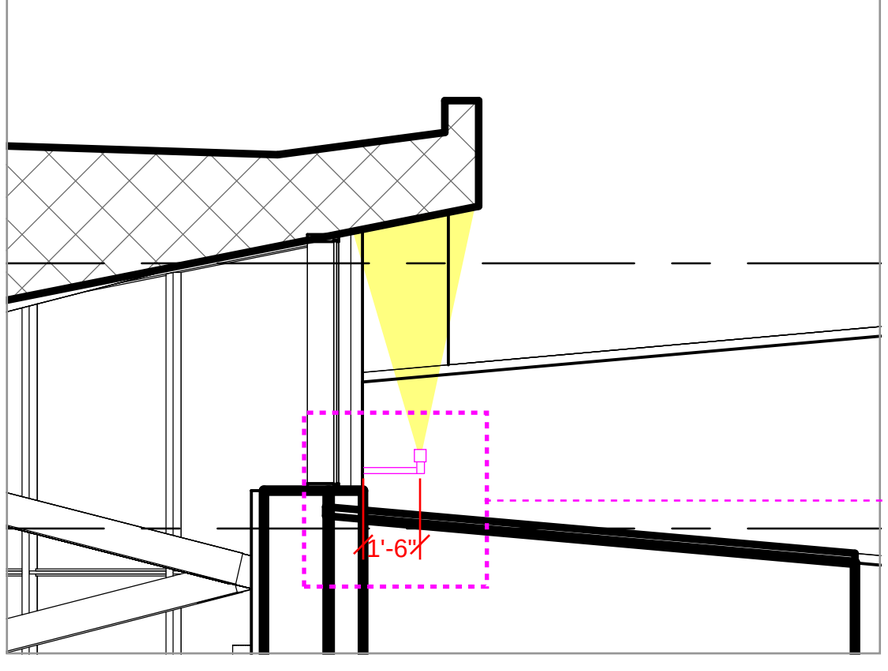
BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

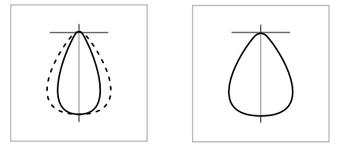
Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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Updated 03/19/19

Appendix B – Architectural Lighting Information

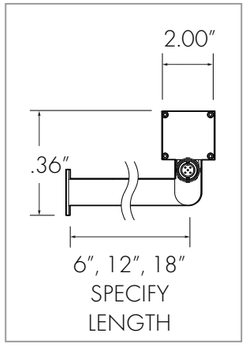
OVERHANG LIGHTING

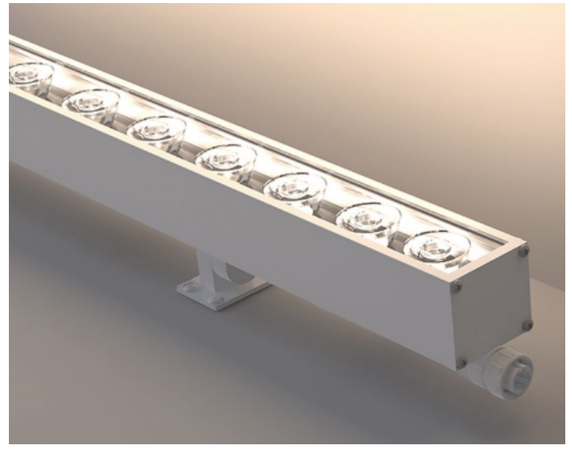




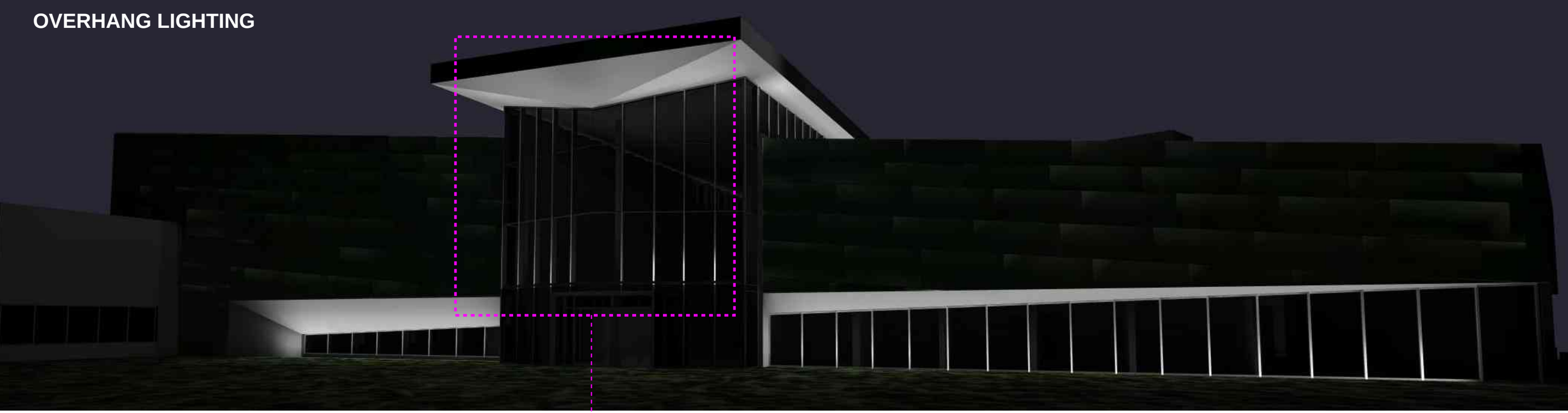


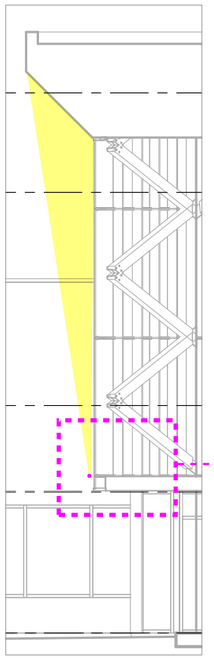
ARM BRACKET MOUNTED
LINEAR UPLIGHT
TO ILLUMINATE THE SIDE
OVERHANGS

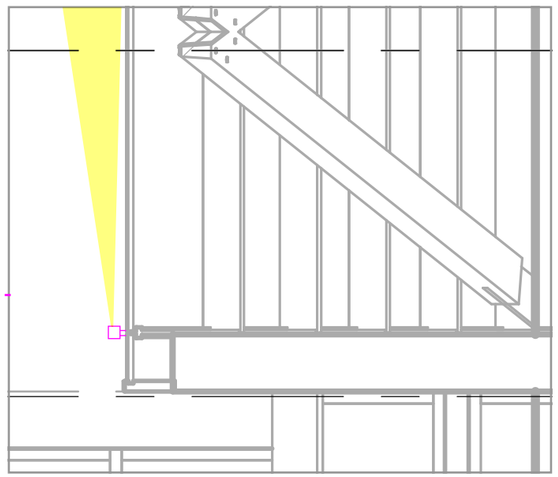


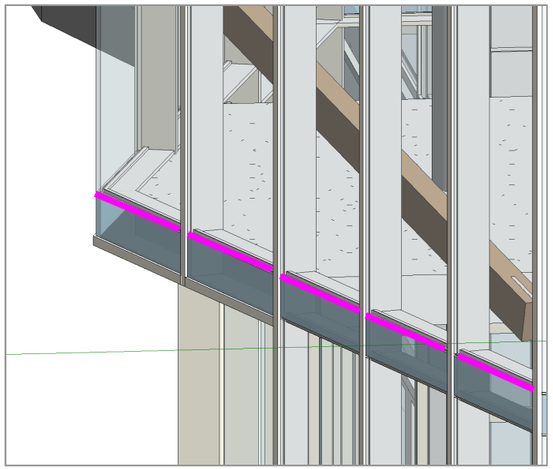


OVERHANG LIGHTING

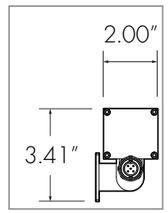


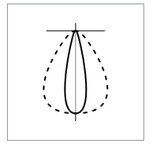


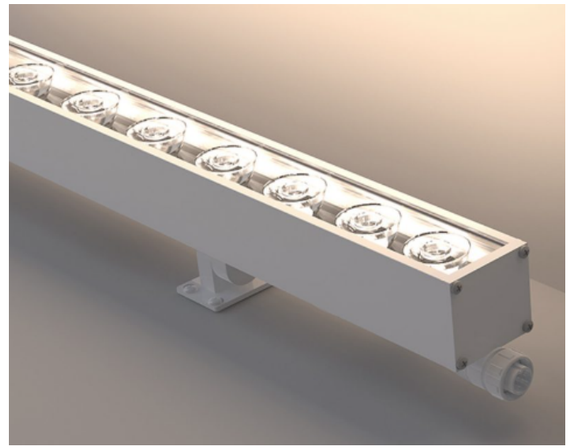




SURFACE MOUNTED
LINEAR UPLIGHT
TO ILLUMINATE THE
FRONT OVERHANG

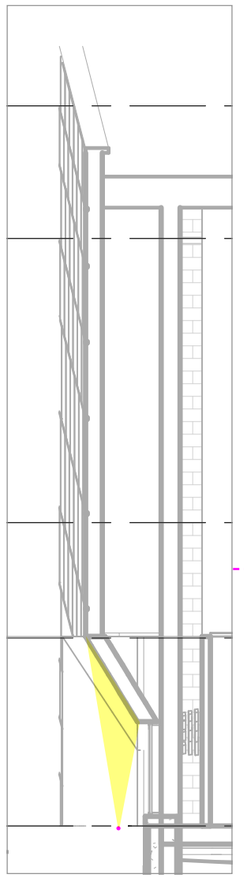


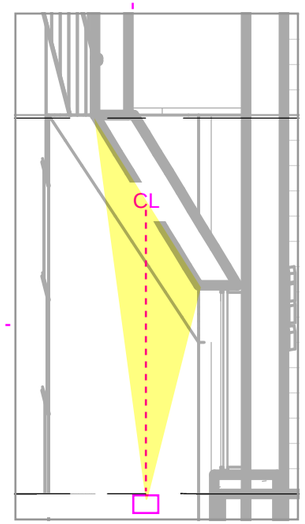




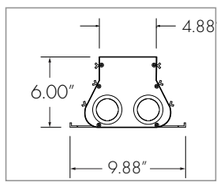
CHAMFERED SOFFIT LIGHTING



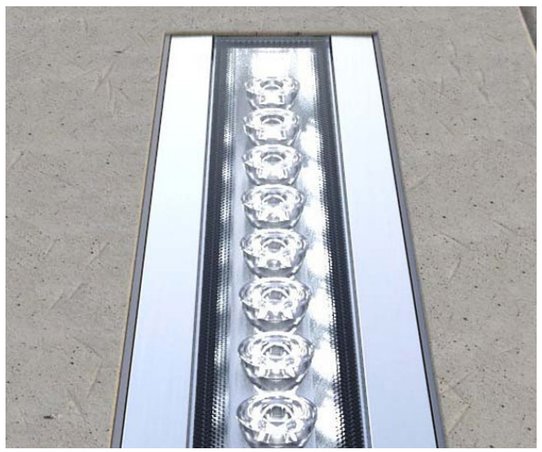




INGROUND LINEAR
UPLIGHT
TO ILLUMINATE THE
CHAMFERED EDGE



80 x 80 deg



PROJECT: TYPE: CATALOG #: MER- - - - - TYPE EX1 SERIES

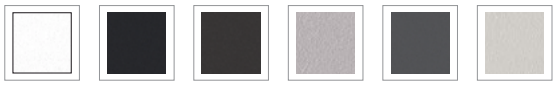
PROFILE

LIGHT SOURCE	3.5 W/FT, 9.0 W/FT, 15.0 W/FT
OPTICS	7° X 60°, 10° X 10°, 10° X 60°, 10° X 90°, 20° X 20°, 20° X 60°, 40° X 40°, 40° X 60°, 40° X 90°, 60° X 60°, 90° X 90° 80° X 80°, ASY
CCT	27K, 30K, 35K, 40K, RED, GREEN, BLUE, AMBER
CRI	82 (OPTIONAL 90+)
PERFORMANCE	UP TO 117530 PEAK CANDELA
VOLTAGE	UNIVERSAL 120-277 V
POWER	REMOTE POWER SUPPLY
CONTROL	0-10V, DMX, LUTRON HI-LUME
DIMENSIONS	1.85" X 2.00"
HOUSING	PRECISION EXTRUDED ALUMINUM
LENS	HIGH DENSITY TEMPERED GLASS
FINISH	HIGH DURABILITY POWDER COATING
OPERATING TEMP	-20° C TO 50° C
WARRANTY	5-YEAR LIMITED
LUMEN MAINTENANCE	75,000 HOURS
CERTIFICATION	ETL AND cETL FOR IP67, IK07, 5G/3G OPTIONS

Intertek · RoHS · made in USA · IP67 · IK07 · 3G ANSI C136.3 · 5G ANSI C136.31



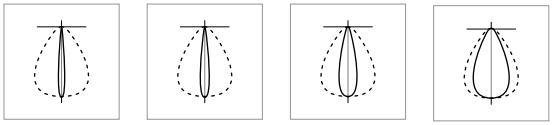
STANDARD FINISHES



TEXTURED WHITE · TEXTURED BLACK · TEXTURED BRONZE · TEXTURED L. BRONZE · TEXTURED GRAY · TEXTURED S. STONE

OPTICS

Not all available optics shown



7°x 60° · 10°x 60° · 20°x 60° · 40°x 60°



60°x 60° · 10°x 10° · 20°x 20° · 40°x 40°

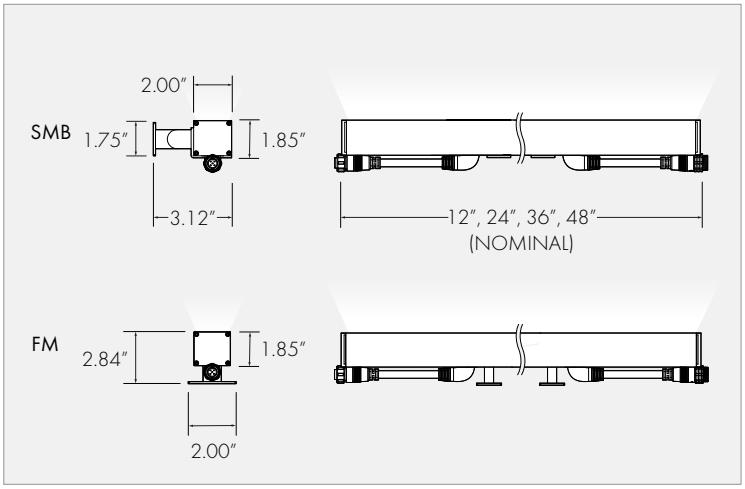
PERFORMANCE SAMPLE

Go to Performance Data >

40K, HO, 48.00"	10°X 10°	10°X 60°	20°X 20°	80°X 80°	100°
LUMENS	6316	5417	6475	6161	6459
CANDELA	117530	19943	52385	3960	2739
EFFICACY	91.2 LM/W	77.3 LM/W	93.3 LM/W	88.8 LM/W	94.4 LM/W

PROFILE

Go to Fixture Dimensions >



OPTIONS

*Shown with white diffusing lense



LOUVER · DIRECT VIEW DOME LENS · CONCEALED WIRING · VISOR

PROJECT: TYPE: CATALOG #: MER- - - - - - - - -

SPECIFICATION

Separate options with dashes

MER								
1	2	3	4	5	6	7	8	9

1 FIXTURE

MEDLEY EXTERIOR REMOTE	MER

2 WATTAGE

LOW OUTPUT 3.5 W/FT	LO
MEDIUM OUTPUT 9.0 W/FT	MO
HIGH OUTPUT 15.0 W/FT	HO

3 CCT

2700K	27K
3000K	30K
3500K	35K
4000K	40K
RED	R
GREEN	G
BLUE	B
AMBER	A

4 OPTIC

7° X 60°	760
10° X 10° 10° X 10° optic is intended for a 6.00" fixture setback from the surface	1010
10° X 60°	1060
10° X 90°	1090
20° X 20°	2020
20° X 60°	2060
20° X 90°	2090
40° X 40°	4040
40° X 60°	4060
40° X 90°	4090
60° X 60°	6060
60° X 90°	6090
80° X 80°	8080
100° X 100°	100
ASYMMETRIC DIRECT Direct = down-light Asymmetric distribution is intended for a wall height of 10.0 FT to 12.0 FT with the fixture setback 18.00" from the wall	AD
ASYMMETRIC INDIRECT Indirect = up-light Asymmetric distribution is intended for a wall height of 10.0 FT to 12.0 FT with the fixture setback 18.00" from the wall	AI

5 MOUNTING

SURFACE MOUNT 5G Ansi C136.31 rated	SM
GROUND MOUNT	GM
EXTENDED ARM X = extended arm length specify 6", 12" or 18" 6.00" arm is 3G Ansi C136.3 rated	EA-X
EXTENDED ARM, BACK X = extended arm length specify 6", 12" or 18"	EAB-X
SURFACE BACK MOUNT	SMB
FIXED MOUNT Not intended for continuous run applications	FM
END MOUNT Not intended for continuous run applications	EM
STAKE MOUNT	STM

6 FIXTURE LENGTH

12"	12
24"	24
36"	36
48" Nominal lengths	48

7 CONTROL OPTIONS

NO DIMMING	NO
0-10V DIMMING (1%)	DIM
DMX DIMMING DMX controls are required and must be ordered seperately **DMX Programming Kit** required - see below	DMX
LUTRON L3D0E - Hi-lume Premier 0.1% EcoSystem 24V constant voltage LED driver with Soft-on, Fade to Black dimming technology All power supplies must be ordered - see below	L3DOE

8 FINISH

TEXTURED WHITE	TW
TEXTURED BLACK	TB
TEXTURED BRONZE	TBR
TEXTURED LIGHT BRONZE	TLB
TEXTURED GRAY	TG
TEXTURED SANDSTONE	TS
ANODIZED ALUMINUM Includes CRF finish	AA
CUSTOM COLOR Contact factory for custom color - additional charges will apply	CC

9 OPTIONS

HIGH CRI, 90+	HCRI
LOUVER Field installable snooted louver LLF of 10% - 15% depending on color	LV
VISOR Field installable visored louver LLF of 10% - 15% depending on color	VS
DIRECT VIEW DOME LENS Field installable Only available with 100° X 100°	DVD
WHITE LENS LLF OF 30% Only available with 100° X 100°	WL
CONCEALED WIRING Not available with 12" fixtures	CW
WHITE CABLING White cabling is standard with textured white finish	WC
CORROSION RES. FINISH Recommended for coastal or extreme exterior environments	CRF

POWER SUPPLY & CONTROL ORDER OPTIONS

Go to DMX Guide >

REMOTE POWER SUPPLY OPTIONS - WET LOCATION - REQUIRED

CONTRA EXTERIOR LOW POWER, 96W OUTPUT (120V-277V)	CEL
CONTRA EXTERIOR STANDARD POWER, 240W OUTPUT (120V-277V)	CES
CONTRA EXTERIOR HIGH POWER, (2)-240W OUTPUT (120V-277V)	CEH

Above wattage is based on 75% of the Power Supply's total wattage capacity

See page 3 for maximum fixture per power supply.

For specific and case by case requirements, please contact factory for assistance

DMX DISTRIBUTION & PROGRAMMING KIT - REQUIRED

DMX/RDM DISTRIBUTION KIT (4 OUTPUTS) - IP67	CDS-RDM

DMX/RDM **Distribution Kit** consists of four outputs

Each output is limited to (1) run per output - up to 32 fixtures max

Four terminators are included for end of line termination

Go to Cable Guide >

EXTERIOR LEADER CABLE - REQUIRED

5.0 FT LEADER CABLE	LC-5

A leader cable is required for each single fixture and for each fixture run for connection from the first fixture to the j-box

Black cables are standard unless White Cabling (**WC**) option or Textured White (**TW**) fixture finish is selected

EXTERIOR JUMPER CABLES

1.0 FT JUMPER CABLE	JC-1
2.0 FT JUMPER CABLE	JC-2
5.0 FT JUMPER CABLE	JC-5
10.0 FT JUMPER CABLE	JC-10
25.0 FT JUMPER CABLE	JC-25

Required if fixtures are not mounted in an end-to-end continuous manner and for line voltage only

Black cables are standard unless White Cabling (**WC**) option or Textured White (**TW**) fixture finish is selected

PERFORMANCE

Nominal lengths

CCT AND LENGTH	OPTIC	LOW OUTPUT (3.5 W/FT) DELIVERED LUMENS	LUMINARE EFFICACY	PEAK CANDELA	MEDIUM OUTPUT (9.0 W/FT) DELIVERED LUMENS	LUMINARE EFFICACY	PEAK CANDELA	HIGH OUTPUT (15.0 W/FT) DELIVERED LUMENS	LUMINARE EFFICACY	PEAK CANDELA
4000K 24"	7° X 60°	998 LM	107.0 LM/W	3662	1685 LM	110.0 LM/W	6189	3366 LM	98.0 LM/W	12363
	10° X 10°	932 LM	100.5 LM/W	17011	1566 LM	103.0 LM/W	28686	3158 LM	91.2 LM/W	58765
	10° X 60°	804 LM	86.6 LM/W	2905	1348 LM	88.4 LM/W	4871	2709 LM	77.3 LM/W	9972
	20° X 20°	948 LM	102.1 LM/W	7658	1601 LM	102.4 LM/W	12983	3238 LM	93.3 LM/W	26193
	20° X 60°	862 LM	92.8 LM/W	1893	1451 LM	96.2 LM/W	3207	2914 LM	84.6 LM/W	6379
	40° X 40°	1001 LM	108.0 LM/W	1395	1688 LM	111.0 LM/W	2338	3392 LM	98.8 LM/W	4733
	40° X 60°	896 LM	96.7 LM/W	724	1497 LM	98.6 LM/W	1211	3039 LM	88.1 LM/W	2470
	60° X 60°	993 LM	107.1 LM/W	882	1666 LM	109.3 LM/W	1485	3354 LM	97.7 LM/W	2999
	80° X 80°	912 LM	98.2 LM/W	585	1525 LM	100.1 LM/W	976	3081LM	88.8 LM/W	1980
	100° X 100°	620 LM	86.8 LM/W	263	1964 LM	93.3 LM/W	829	3230 LM	94.4 LM/W	1370
	ASY	888 LM	96.3 LM/W	3134	1473 LM	97.8 LM/W	5199	2890 LM	88.2 LM/W	9369
4000K 36"	7° X 60°	1496 LM	107.0 LM/W	5492	2527 LM	110.0 LM/W	9283	5048 LM	98.0 LM/W	18544
	10° X 10°	1398 LM	100.5 LM/W	25516	2349 LM	103.0 LM/W	43029	4737 LM	91.2 LM/W	88148
	10° X 60°	1205 LM	86.6 LM/W	4357	2022 LM	88.4 LM/W	7306	4063 LM	77.3 LM/W	14957
	20° X 20°	1421 LM	102.1 LM/W	11486	2402 LM	102.4 LM/W	19474	4856 LM	93.3 LM/W	39289
	20° X 60°	1292 LM	92.8 LM/W	2840	2177 LM	96.2 LM/W	4810	4371 LM	84.6 LM/W	9569
	40° X 40°	1502 LM	108.0 LM/W	2093	2531 LM	111.0 LM/W	3506	5088 LM	98.8 LM/W	7100
	40° X 60°	1344 LM	96.7 LM/W	1086	2245 LM	98.6 LM/W	1817	4559 LM	88.1 LM/W	3704
	60° X 60°	1489 LM	107.1 LM/W	1322	2499 LM	109.3 LM/W	2228	5031LM	97.7 LM/W	4499
	80° X 80°	1368 LM	98.2 LM/W	877	2287 LM	100.1 LM/W	1464	4621 LM	88.8 LM/W	2970
	100° X 100°	929 LM	86.8 LM/W	394	2946 LM	93.3 LM/W	1244	4844 LM	94.4 LM/W	2054
	ASY	1332 LM	96.3 LM/W	4700	2209 LM	97.8 LM/W	7798	4335LM	88.2 LM/W	14053
4000K 48"	7° X 60°	1995 LM	107.0 LM/W	7323	3369 LM	110.0 LM/W	12377	6731 LM	98.0 LM/W	24725
	10° X 10°	1864 LM	100.5 LM/W	34021	3132 LM	103.0 LM/W	57372	6316 LM	91.2 LM/W	117530
	10° X 60°	1607 LM	86.6 LM/W	5809	2696 LM	88.4 LM/W	9741	5417 LM	77.3 LM/W	19943
	20° X 20°	1895 LM	102.1 LM/W	15315	3202 LM	102.4 LM/W	25965	6475 LM	93.3 LM/W	52385
	20° X 60°	1723 LM	92.8 LM/W	3786	2902 LM	96.2 LM/W	6413	5828 LM	84.6 LM/W	12758
	40° X 40°	2002 LM	108.0 LM/W	2790	3375 LM	110.7 LM/W	4675	6784 LM	98.8 LM/W	9466
	40° X 60°	1792LM	96.7 LM/W	1448	2993 LM	98.6 LM/W	2422	6078 LM	88.1 LM/W	4939
	60° X 60°	1985 LM	107.1 LM/W	1763	3332 LM	109.3 LM/W	2970	6708 LM	97.7 LM/W	5998
	80° X 80°	1824 LM	98.2 LM/W	1169	3049 LM	100.1 LM/W	1952	6161 LM	88.8 LM/W	3960
	100° X 100°	1239 LM	86.8 LM/W	525	3928 LM	93.3 LM/W	1658	6459 LM	94.4 LM/W	2739
	ASY	1776 LM	96.3 LM/W	6267	2945 LM	97.8 LM/W	10397	5780 LM	88.2 LM/W	18787

WIRING

MAXIMUM FIXTURES PER POWER SUPPLY (CIRCUITS MAY NOT BE LOADED OVER 10 AMPS)

Data provided is based on 75% of the Power Supply's total wattage capacity

	LOW OUTPUT (3.5 W/FT)			MEDIUM OUTPUT (9.0 W/FT)			HIGH OUTPUT (15.0 W/FT)		
NOMINAL FIXTURE LENGTH	CONTRA STAND. POWER 96W OUTPUT	CONTRA HIGH POWER 240W OUTPUT	CONTRA DUAL HIGH POWER (2)-240W	CONTRA STAND. POWER 96W OUTPUT	CONTRA HIGH POWER 240W OUTPUT	CONTRA DUAL HIGH POWER (2)-240W	CONTRA STAND. POWER 96W OUTPUT	CONTRA HIGH POWER 240W OUTPUT	CONTRA DUAL HIGH POWER (2)-240W
12"	27	68	136	10	26	52	5	14	28
24"	13	34	68	5	13	26	2	7	14
36"	9	23	46	3	8	16	2	4	8
48"	6	17	34	2	6	12	1	3	6

REMOTE DISTANCE LIMITS

Noncompliance with recommended remote wiring distances may void warranty

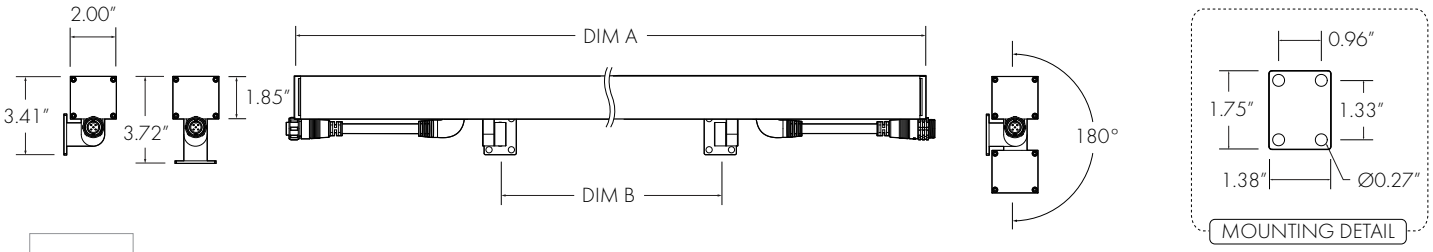
WIRE GAUGE	MAX DISTANCE
20 AWG	25.0 FT
18 AWG	30.0 FT
16 AWG	40.0 FT
14 AWG	60.0 FT
12 AWG	100.0 FT

PROJECT: TYPE: CATALOG #: MER- - - - - TYPE EA1 SERIES

DIMENSIONS

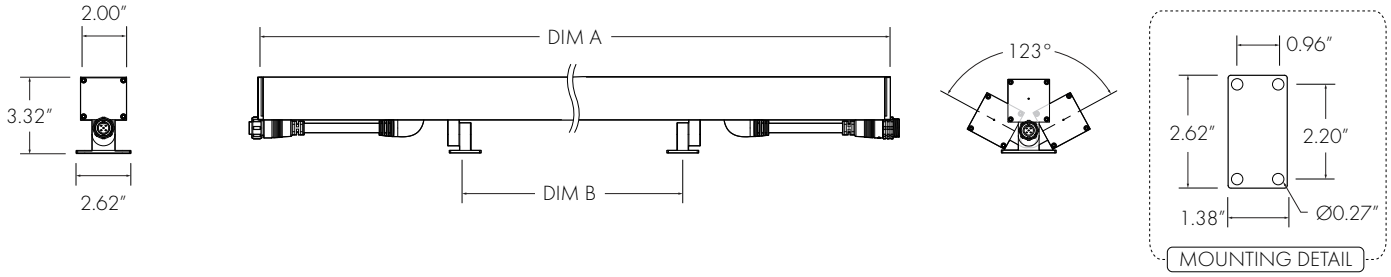
	12"	24"	36"	48"
DIM A	12.10"	23.85"	35.60"	47.35"
DIM B	9.28"	4.00" MIN | 6.00" MAX	12.00" MIN | 18.00" MAX	18.00" MIN | 30.00" MAX

SURFACE MOUNT (SM)

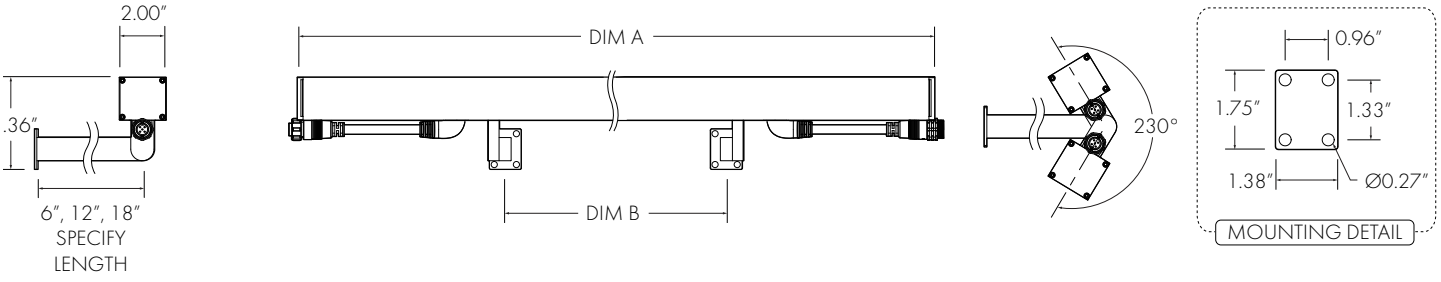


5G
ANSI C136.31

GROUND MOUNT (GM)



EXTENDED ARM (EA-X)



3G
ANSI C136.3

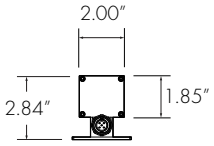
3G RATED WITH 6.00" ARM

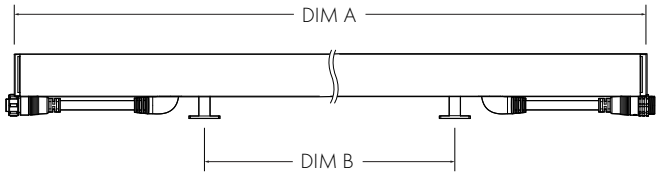
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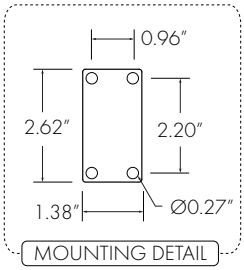
DIMENSIONS

	12"	24"	36"	48"
DIM A	12.10"	23.85"	35.60"	47.35"
DIM B	9.28"	4.00" MIN | 6.00" MAX	12.00" MIN | 18.00" MAX	18.00" MIN | 30.00" MAX

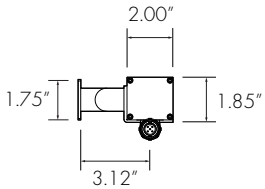
FIXED MOUNT (FM)

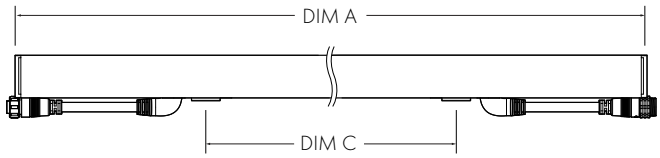


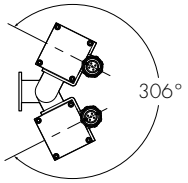


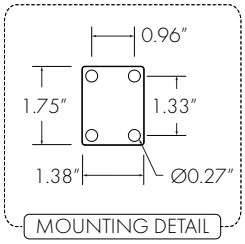


SURFACE, BACK MOUNT (SMB)

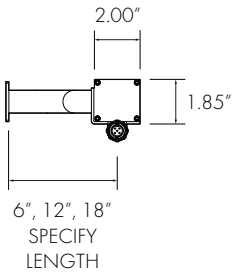


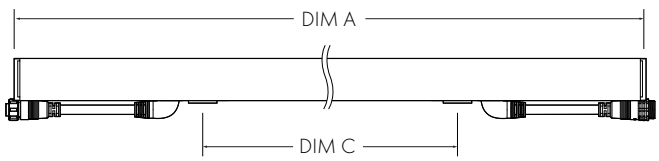


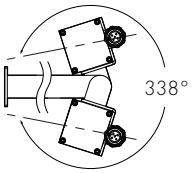


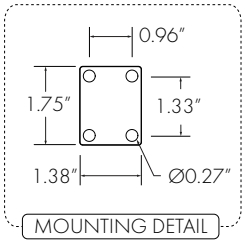


EXTENDED ARM, BACK MOUNT (EAB-X)







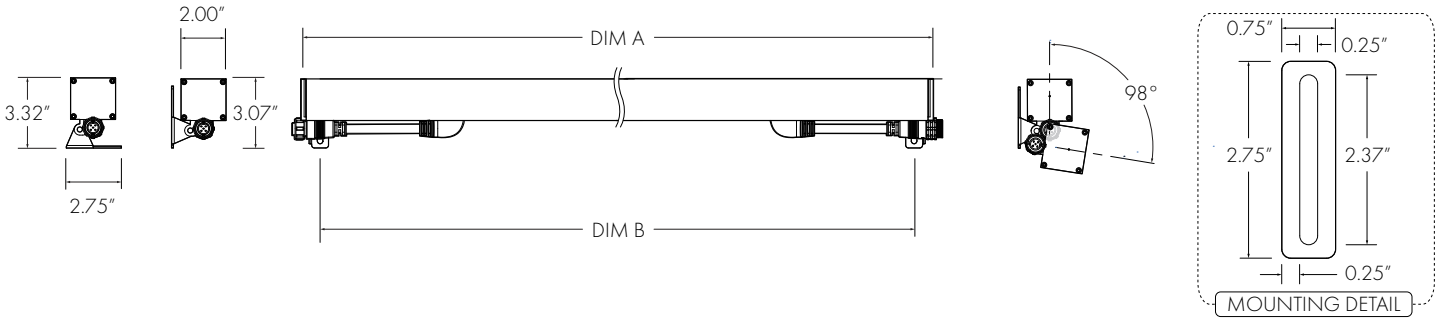


PROJECT: TYPE: CATALOG #: MER- - - - - TYPE EX1 SERIES

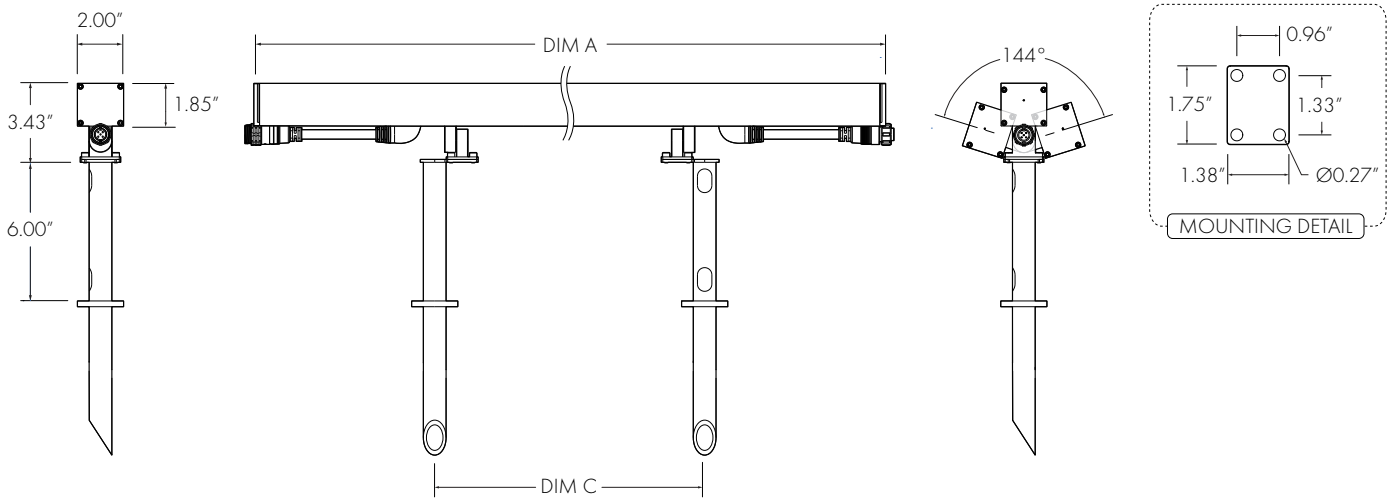
DIMENSIONS

	12.00"	24.00"	36.00"	48.00"
DIM A	12.10"	23.85"	35.60"	47.35"
DIM B	11.65	22.31"	34.06"	45.81"
DIM C	10.56"	4.00" MIN | 6.00" MAX	12.00" MIN | 18.00" MAX	18.00" MIN | 30.00" MAX

END MOUNT (EM)



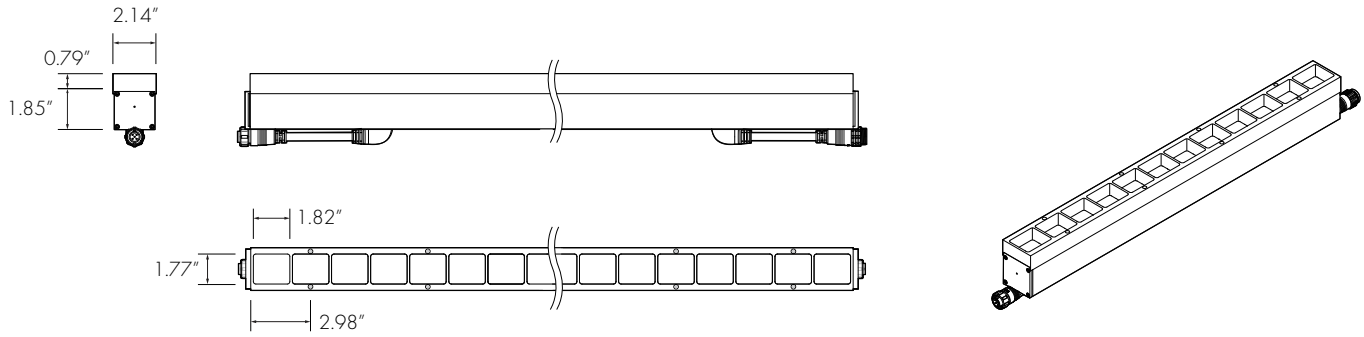
STAKE MOUNT (STM)



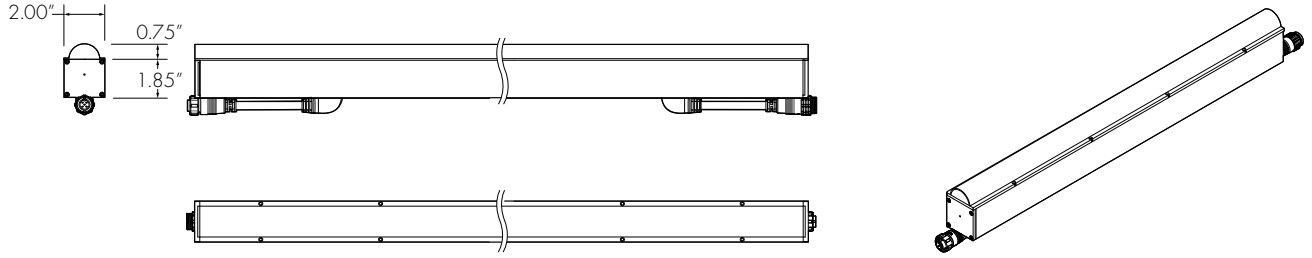
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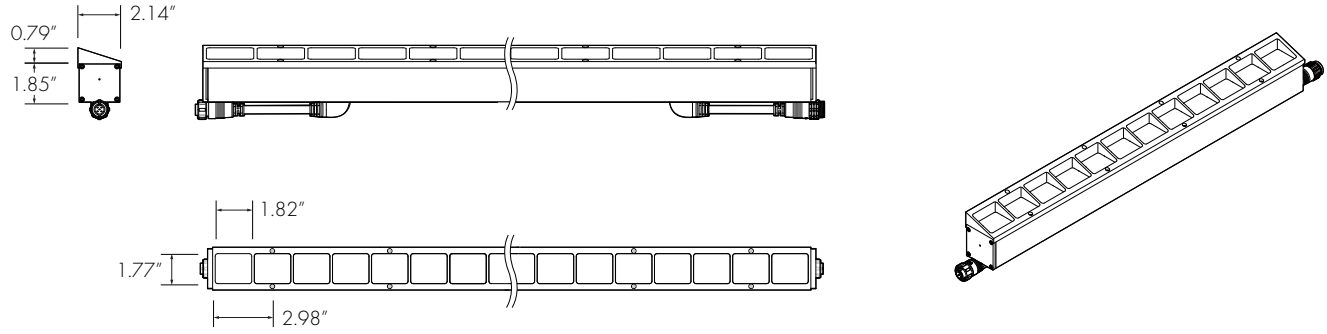
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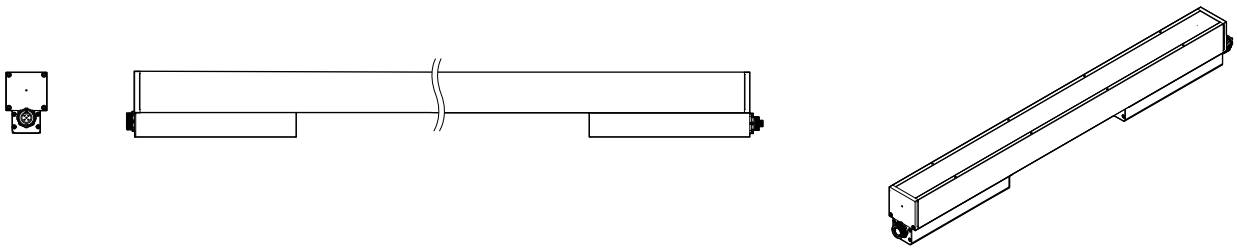
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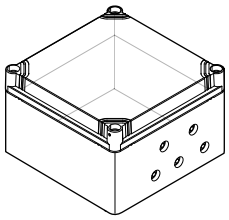
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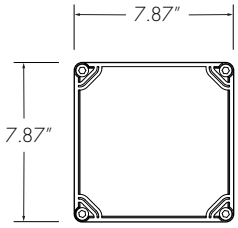


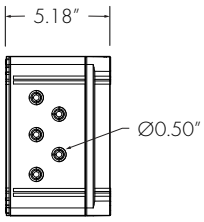
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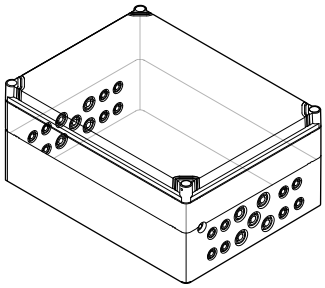
CONTRA EXTERIOR LOW POWER SUPPLY - CEL

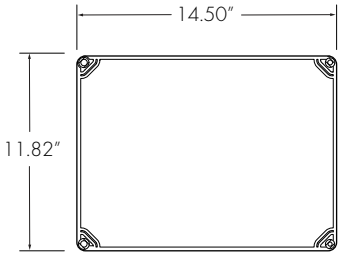


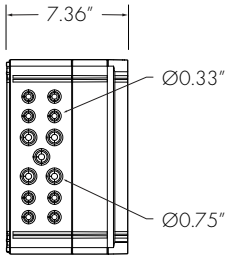




CONTRA EXTERIOR STANDARD AND HIGH POWER SUPPLY - CES / CEH







Section 12 – USM Overlay Zone Standards

The City has adopted specific additional standards for projects on the USM campus to ensure that new development is sensitive to the surrounding residential neighborhoods and commercial development. This project has been designed with these additional standards in mind.

Principle A – Campus Design

Standards A-1, Campus Edges: The building overlooks Noyes Park and is stepped back on Bedford Street to be in keeping with the setback of Luther Bonney Hall. Further, the building will be single-story construction, which softens the scale of the new building relative to the houses and smaller buildings on Bedford Street and Deering Avenue. New sidewalks on Bedford Street and connection to sidewalks in Noyes Park provides a direct pedestrian connection between the building and the neighborhood.

As an intersection building with multiple front doors, the building's massing and exterior materiality have been designed to fit contextually within USM's Portland Campus and surrounding City of Portland's community. The building utilizes durable, long-lasting, maintainable materials: predominantly an aluminum composite material (ACM) metal panel system (ACM rain screen), energy-efficient curtain wall and storefront glazing, with the highly visual central Gallery space expressed primarily by a wood-framed ceiling and vertical curtainwall.

Standard A-2, Building Orientation: The building is oriented to be parallel to the Bedford Street and Noyes Park property lines which serves to maximize the size of the campus green to the north and create a more defined courtyard-style campus green ringed by Payson Smith Hall, Luther Bonney Hall and the proposed building. Orienting the building so that the main entrances face both Noyes Park and the campus green provides a direct connection between the two green spaces through the building.

Standard A-3, Pedestrian Environment: The project includes maintaining pedestrian connections through the campus green between the Law School and adjacent parking to the south and Luther Bonney Hall to the north as well as providing pedestrian access to Falmouth Street and Payson Smith Hall. Further, the project will construct a new sidewalk on Bedford Street, providing a link between the existing sidewalk along Bedford Street to the north and Noyes Park to the south.

Standards A-4, Gateways and A-5, Views and Landmarks: The building has been sited to provide a new "front door" to the campus from Deering Avenue and the Bedford Street/Deering Avenue Intersection, enhancing the views on Bedford Street and Noyes Park.

The fundamental configuration of the CFA represents simultaneous intersections from the City to the campus with a central Gallery becoming a gateway from Noyes Park to campus. The Gallery is an exhibition space for the visual arts, open to passersby. It also serves as a threshold between the campus

and the CFA, opening out onto a newly defined campus green and bringing the arts outside and connecting to the purpose-built spaces for teaching, rehearsal, and practice.

Principle B – Access and Circulation

Standards B-1, Connectivity and B-2, Circulation: As indicated elsewhere in this Application, the project will maintain pedestrian pathways through the campus green, providing linkages between the Law School and adjacent parking lot and the proposed building, Luther Bonney Hall, and Payson Smith Hall. Entrances on the north and south sides of the buildings will provide a linkage between the proposed building and the external pedestrian pathways. The project will also construct a new sidewalk on Bedford Street to provide a link between the existing sidewalk along Bedford Street to the north and Noyes Park to the south.

Standard B-3, Multi-modality: The site will be connected to the campus' pedestrian circulation system and include bicycle racks near one of the building entrances. Compliant access will also be maintained to the existing bus stop on the north side of Deering Avenue, approximately 65' from the building.

Standard B-4, Traffic-calming: This standard is not applicable.

Standard B-5, Sidewalks: A section of sidewalk on Bedford Street is proposed to link existing sidewalks north and south of the project site. The sidewalk will be constructed from reinforced concrete to match the existing sidewalks it is being connected to as well as sidewalks on the opposite side of the street.

Standard B-6, Street Lights: Exterior pedestrian-scale lights are being provided along the sidewalk on Bedford Street within the project area, starting at the existing sidewalk across from Surrenden Street and the existing sidewalk on Noyes Park. Illumination levels and additional information on the lights being used are included in Section 11 of this application package.

Principle C – Parking, Loading and Service Areas

Standard C-1, Structures: This standard is not applicable.

Standard C-2, Active Uses: This standard is not applicable.

Standard C-3, Decks and Ramps: This standard is not applicable.

Standard C-4, Surface Lots: This standard is not applicable.

Standard C-5, Loading and Service Areas: A small loading area is proposed on the north side of the building that will be accessed from Falmouth Street via a widened sidewalk on the south side of the parking lot adjacent to Payson Smith Hall. This sidewalk has been designed to accommodate the turning movements of a 30-foot box trucks, ensuring that the truck will not have to back out into Falmouth Street. Use of the loading area will likely be limited to occasional deliveries of musical equipment and

trash collection by USM facilities staff (using pickup trucks and similarly sized vehicles). A plan showing the turning movements of trucks using the loading zone is included in Section 8 of this application package.

Standard C-6, Utility Services: A natural-gas regulator and pad-mounted transformer will be located on the northwest side of the building, neither of which produce noise. Both of these have been strategically screened and located in areas where their visual impact on the building and the surroundings will be minimal. Mechanical equipment will be placed on the building roof to minimize impact on the building's façades and the campus. The noise associated with this equipment will also be minimal.

Principle D – Architectural Design

Standard D-1, Height:
The building is a single-story, but there are four double-height spaces: the central Gallery, Performance Hall, Arts Lab and Rehearsal Hall, which reflect greater than typical volumes, based on the needs for acoustics, performance technologies and display in these spaces. These larger volume roofs have been shaped to bridge between the larger spaces and smaller teaching studio and support spaces. Parapet screening is also utilized to screen mechanical equipment and support these transitions. The highest points of the building are at the large volumes and range from 40'-0" to 44'-0" tall, and the height at the Gallery is 44'-0". At the lowest point, the building is at 22'-0" tall.

Standard D-2, Setbacks: The building has been positioned as close to the property line setback on Noyes Park as possible without causing damage to a significant Beech tree in the park. The building's setback on Bedford Street is generally similar to the setback between Luther Bonney Hall and Bedford Street while maintaining enough space on the northwest side of the building to provide adequate space for pedestrian circulation and separation from the farmhouse that will be relocated prior to the beginning of this project.

Standard D-3, Stepbacks: This standard is not applicable.

Standard D-4, Massing:
The massing and form of the Center for the Arts expresses the logic of its internal function. From the Gallery, the two major venues serving as the organization drivers are the Performance Hall, which is entered from the west side of the gallery, rises up to support the classroom and rehearsal spaces eastward; and the Arts Lab, which is entered from the east side of the Gallery, is a counterpoint to the Performance Hall, anchoring the teaching and support spaces westward. Together, these two programmatic elements intersect – and are captured by – the central Gallery volume.

Standard D-5, Entrances: The primary entrances to the building face Noyes Park and the campus green and connect to a main spine/lobby that runs through the building. Both entrances will be directly connected to the campus' internal pedestrian circulation system and the sidewalks within Noyes Park. There are also pedestrian connections to Bedford Street from each of the building entrances.

Standard D-6, Windows:
As an Arts building, natural lighting is highly desired and aids in achieving USM's goal to display arts activities and encourage campus and community engagement. The central Gallery celebrates this experience, which is framed by 20' high vertical glazing at each end. The vertical enclosure of this space is a curtainwall with structurally glazed joints on the horizontal. Along the length of the gallery, there are upper clerestory faces, with shadow-box glazing assemblies with backlight, where adjacent roofing abuts. Ten-foot-high storefront glazing creates a ribbon around the perimeter studio spaces, where a ceramic frit pattern will be applied to the inner layer of glazing to provide a level of privacy for the programmatic uses while also providing a visual connection between the interior and exterior. This frit pattern consists of a white, opaque, dot matrix pattern ranging from 1/8" to 1" in diameter. The pattern will decrease in opacity from the lowest edge to fully transparent at 5'-6". The activities at the Performance Hall, Arts Lab and Recital Hall are also placed on display with larger punched curtainwall openings. Windows have been designed to meet increased acoustical criteria at acoustically sensitive rooms.

The proposed window glazing system for the CFA is designed to meet the .7 visible transmittance for glazing, along with the programmatic acoustical requirements for sound isolation and the current 2021 IECC U-factor for energy compliance. Use of glazing around the façade includes three main systems: (1) the double height curtainwall at each end of the central Gallery / main entrance facing Noyes Park and the inner campus green, (2) large curtainwall picture windows at the Rehearsal Hall at the southeast corner, facing Bedford Street and into the campus and at the Arts Lab, also facing into the campus. (3) 10 feet high ribbon windows, which surround the remaining facades at the perimeter classrooms, studios and offices and Performance Hall. The glazing is a Vitro Solar Ban 60 at all systems.

Information on the frit system and glazing are included in this section.

Standard D-7, Materials:
The exterior wall approach extends the logic of the massing and planning organization. The building utilizes the use of durable, long-lasting, and maintainable materials. The central Gallery space is expressed primarily by a wood-framed ceiling and vertical curtainwall. The outer forms of the building are predominantly a metal panel system (ACM rain screen) The campus-facing mass, including the Arts Lab, has a vertically-oriented ACM rain screen enclosure. The park-facing mass including the Performance Hall has a diagonally-biased variant of the ACM rain screen system.

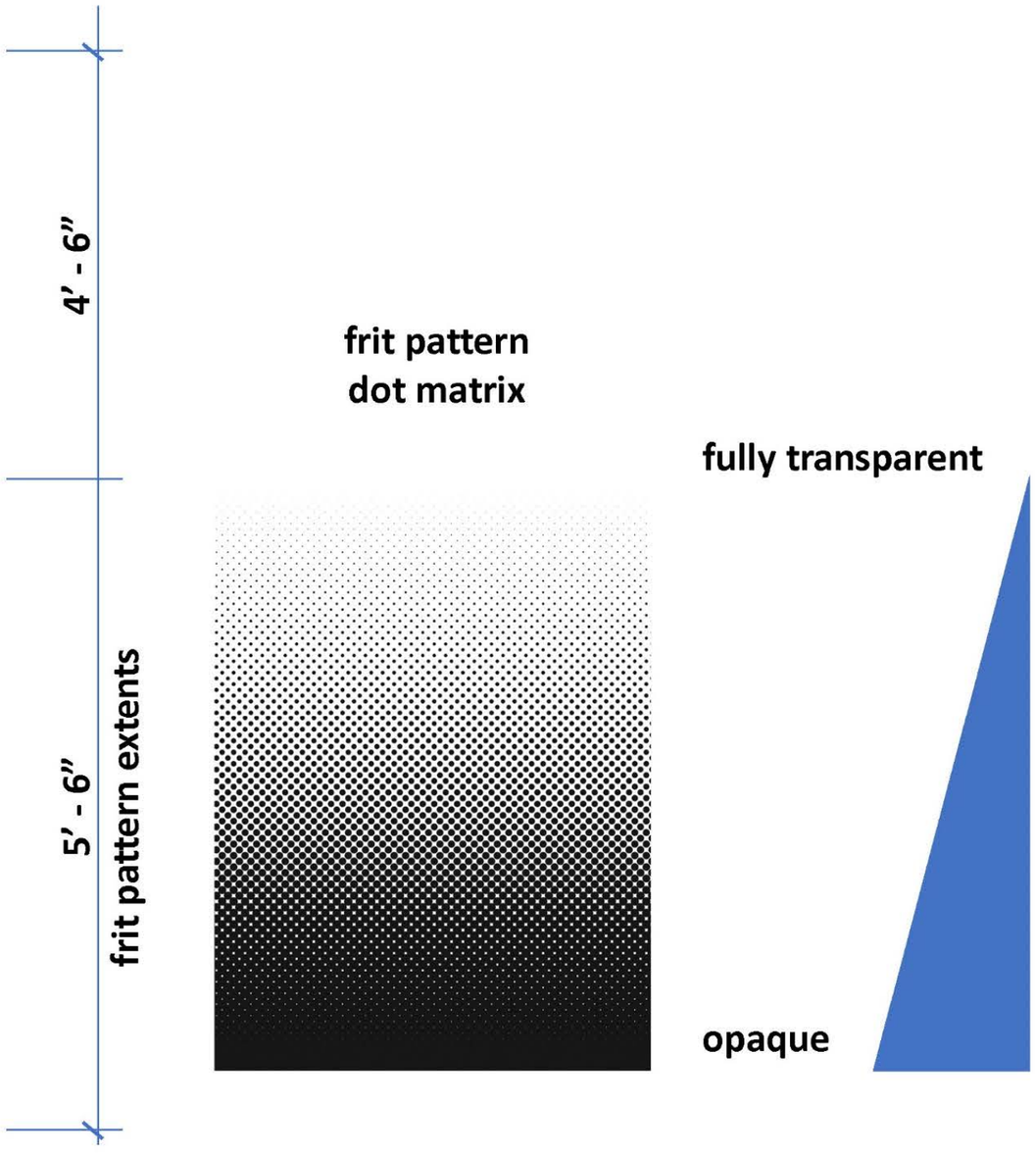
Standard D-8, Signage: As indicated on the building elevations and renderings included with this application package, the building name and street number will be clearly visible on the exterior of the building. Materials used will be consistent in quality and design with the other materials used on the building façade.

Standard D-9, Historic Structures: There are no historic resources on site. The existing farmhouse within the proposed building footprint is being relocated under a separate project in a way that is acceptable to the City's Historic Preservation Department.

Standard D-10, Original Residential Structures: This standard is not applicable.

Appendix A – Frit Pattern and Glazing Information


Proposed Frit


4’ - 6”
frit pattern
dot matrix
fully transparent
5’ - 6”
frit pattern extents
opaque

.7 VT & Energy Code to meet .34

Curtain Wall System	System depth	Glass Type	Fill + Spacer	U-Factor *(.34)*	SHGC	Glass VT *(.70)*	System VT
Arcadia **OPG1900**	**7 ½”**	*Vitro* **Solar Ban 60 #2 + Clear**	*Argon + Thermal Spacer*	.37	.36	**.70**	.64
Arcadia **OPG3000**	**10”**	*Vitro* **Solar Ban 70 #2 + Clear**	*Argon + Thermal Spacer*	**.33**	.25	.64	.57
Old Castle **Reliance TC - TYPE I**	**10 1/8”**	*Vitro* **Solar Ban 60 #2 + Clear**	*Argon + Thermal Spacer*	**.34**	.36	**.70**	.64
Old Castle **Reliance TC - TYPE II**	**7 ½”**	*Vitro* **Solar Ban 60 #2 + Clear**	*Argon + Thermal Spacer*	**.32**	.36	**.70**	.64

To meet 2021 iecc (energy code) – meet u-factor of .34

.70 glass VT is achievable for glass only, but once in framing system, reduces.

Designed by/for: Pfeiffer
USM

Date: 3/3/2023

ARCHITECTURAL GUIDE SPECIFICATION
SECTION 088000 GLAZING

Note to Specifiers:
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APPROVED GLASS FABRICATOR Oldcastle BuildingEnvelope®

GLAZING PRODUCTS

Glass Standards

1. USA - Annealed float glass shall comply with ASTM C1036, Type I, Class 1 (clear), Class 2 (tinted), Quality-Q3. Canada - Annealed float glass shall comply with CAN/CGSB-12.3-M, Quality-Glazing.
2. USA - Heat-strengthened float glass shall comply with ASTM C1048, TypeI, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind HS.
   Canada - Heat-strengthened float glass shall comply with CAN/CGSB-12.9-M, Type 2-Heat-Strengthened Glass, Class A-Float Glass.
3. USA - Tempered float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind FT. Canada - Tempered float glass shall comply with CAN/CGSB-12.1M, Type 2-Tempered Glass, Class B-Float Glass.
4. USA - Laminated glass to comply with ASTM C1172. Canada - Laminated glass to comply with CAN/CGSB-12.1-M, Type 1-Laminated glass, Class B-Float Glass.
5. USA & Canada - Glass shall be annealed, heat-strengthened or tempered as required by codes, or as required to meet thermal stress and wind loads.

Contact Oldcastle BuildingEnvelope® at 866-OLDCASTLE (653-2278) for samples or additional information. SystemSelect™ calculates center of glass (COG) and total product data using the Lawrence Berkeley National Laboratory (LBNL) Berkeley Lab WINDOW Calc Engine (WinCalc). Glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) v71.0; 2. Vendor supplied data; 3. LBNL Optics 6. Based on original laboratory testing per AAMA 1503, validated per NFRC 100, 200, 500 and AAMA 507 simulations. Framing system values and glass spacer values determined per LBNL THERM 7.4. as validated inÂ total product simulations. All values are determined in accordance with the aforementioned procedures and valid for use in R&D, bidding and investigative purposes. For NFRC certified values, contact Oldcastle BuildingEnvelope®.

Sealed Insulating Glass (IG)
Vision Glass (Vertical)

1. IG units consist of glass lites separated by a dehydrated airspace that is hermetically dual sealed with a primary seal of polyisobutylene (PIB) or Thermoplastic Spacer (TPS) a and a secondary seal of silicone or an organic sealant depending on the application.
2. USA - Insulating glass units are certified through the Insulating Glass Certification Council (IGCC) to ASTM E2190. Canada - Insulating Glass units are certified through the Insulating Glass Manufacturers Alliance (IGMA) to either the IGMAC certification program to CAN/CGSB-12.8, or through the IGMA program to ASTM E2190.

IG VISION UNIT PERFORMANCE CHARACTERISTICS

1. Exterior Lite: 6mm (1/4") Vitro Solarban® 60 on Clear Low-E #2
2. Cavity: 1/2" Argon (90%) / Air (10%)
3. Interior Lite: 6mm (1/4") Vitro Clear
4. Center of Glass (COG) Performance Characteristics

Thermal		Optical	
Winter U-factor (Btu/h·ft^2·F):	0.24	Visible Light Transmittance:	70%
Winter U-factor (W/m^2·K):	1.39	Visible Light Reflectance (outside):	11%
Solar Heat Gain Coefficient:	0.39	Visible Light Reflectance (inside):	12%
Shading Coefficient:	0.44	Total Solar Transmittance:	34%
Light to Solar Gain:	1.82	Total Solar Reflectance (outside):	28%
		Ultraviolet Transmittance:	18%

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APPROVED FRAMING PROVIDER **Oldcastle BuildingEnvelope®**

FRAMING PRODUCTS

Framing System	Reliance TC - TYPE I - FRP (2-1/2" x 7-1/4")
Framing Size	NFRC 100 Standard Size
Framing Metal	Aluminum

TOTAL PRODUCT PERFORMANCE CHARACTERISTICS (FRAMING + GLASS)

Winter U-factor (Btu/h·ft^2·F) (IP):	0.333
Winter U-factor (W/m^2·K) (SI):	1.89
Solar Heat Gain Coefficient (SHGC):	0.35
Visible Light Transmittance (VT):	0.63
Condensation Resistance (CR):	55

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Designed by/for: Pfeiffer
USM

Date: 3/3/2023

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Vision Glass (Vertical)

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IG VISION UNIT PERFORMANCE CHARACTERISTICS

1. Exterior Lite: 6mm (1/4") Vitro Solarban® 60 on Clear Low-E #2
2. Cavity: 1/2" Argon (90%) / Air (10%)
3. Interior Lite: 6mm (1/4") Vitro Clear
4. Center of Glass (COG) Performance Characteristics

Thermal		Optical	
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Winter U-factor (W/m^2·K):	1.39	Visible Light Reflectance (outside):	11%
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SystemSelect™

ARCHITECTURAL GUIDE SPECIFICATION

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APPROVED FRAMING PROVIDER **Oldcastle BuildingEnvelope®**

FRAMING PRODUCTS

Framing System	Reliance TC - TYPE I - Aluminum Pressure Plate (2-1/2" x 10-1/8")
Framing Size	NFRC 100 Standard Size
Framing Metal	Aluminum

TOTAL PRODUCT PERFORMANCE CHARACTERISTICS (FRAMING + GLASS)

Winter U-factor (Btu/h·ft^2·F) (IP):	0.342
Winter U-factor (W/m^2·K) (SI):	1.94
Solar Heat Gain Coefficient (SHGC):	0.36
Visible Light Transmittance (VT):	0.64
Condensation Resistance (CR):	58

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SITE LOCATION OF DEVELOPMENT – MINOR AMENDMENT

University of Southern Maine

246 Deering Avenue, Portland, Maine

Center for the Arts
111 Bedford Street, Portland, Maine

Prepared For:

University of Southern Maine
25 Bedford Street
Portland, Maine

December 15, 2022



Prepared By:

OAK POINT ASSOCIATES
architecture
engineering
planning

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Tangible Benefits 28 (N/A)
Decommissioning 29 (N/A)
General Facility - Visual Quality and Scenic Character 30 (N/A)

Department of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, Maine 04333
Telephone: 207-287-3901

FOR DEP USE **FORM A PAGE 1**
ATS # _____
L-_____
Total Fees: _____
Date: Received _____

****

SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION 38 M.R.SA. §§481-490

PLEASE TYPE OR PRINT IN *INK ONLY*

This application is for: (CHECK THE ONE THAT APPLIES)	☐ **20 acre development** ☐ **Planning Permit** ☐ **Metallic Mining**	☐ **Marine Oil Terminal** ☐ **Structure** ☐ **Subdivision**	☐ **Major Amendment** ☒ **Minor Amendment**

1. Name of Applicant:	University of Southern Maine	**6. Name of Agent (if applicable):**	Jonah DeWaters, PE (OPA)
2. Applicant's Mailing Address:	25 Bedford Street, Portland, ME	**7. Agent's Mailing Address:**	231 Main Street, Biddeford, ME
3. Applicant's Daytime Phone #:	(207) 780-4177	**8. Agent's Daytime Phone # :**	(207) 283-0193
4. Applicant's Fax # (if available):	N/A	**9. Agent's Fax # (if available):**	(207) 283-4283
5. Applicant's *e-mail address* (REQUIRED -license will be sent via: e-mail):	john.souther@maine.edu	**10. Agent's *e-mail address* (REQUIRED - license will be sent via e-mail):**	jdewaters@oakpoint.com

PROJECT INFORMATION

11. Name of Development:	Center for the Arts						
12. Map and Lot #'s:	**Map #:** 114	**Lot #:** A001	**13. Deed Reference #'s:**		**Book #:** 29219	**Page #:** 218	
14. Location of Project City/Town:	Portland	**15. County:**	Cumberland	**16. UTM Northing**	4835062	**17. UTM Easting**	397022
18. Brief Description of Project including total parcel size:	Construction of a new Center for the Arts Building and associated site amenities on the southwest side of the campus near the intersections of Bedford Street and Deering Avenue						

19. Type of Direct Watershed: (Check all that apply)

☐ Lake not most at risk ☐ River, stream or brook ☒ Coastal wetland
☐ Lake most at risk ☐ Urban impaired stream ☐ Wellhead or public water
☐ Lake most at risk, severely blooming ☐ Freshwater wetland

20. Name of Waterbody Project Site drains to:	Casco Bay		
21. Amount of Developed Area:	Total acres: 3.92	Existing Developed area: 3.92 acres	New Developed area: 0 acres
22. Amount of Impervious Area:	Total acres: 1.6	Existing Impervious areas 0.4 acres	New Impervious area: 1.6 acres (0.4 acre removed)

23. Development started prior to obtaining a license?:	☐ **Yes** ☒ **No**				
24. .Development or any portion of the site subject to enforcement action?	☐ **Yes** ☒ **No**	**If yes**, name of enforcement staff involved?			
25. Common scheme of development?:	☐ **Yes** ☒ **No**	**26. Title, Right or Interest:**	☒ **own** ☐ **lease**	☐ **purchase option** ☐ **written agreement**	
27. Natural Resources Protection Act permit required?:	☐ **Yes** ☒ **No**	**If yes:** ☐ **PBR**	☐ **Tier 1** ☐ **Tier 2**	☐ **Full Permit**	
28. Existing DEP Permit number (if applicable):	L-20438-22-D-A				
29. Names of DEP staff person(s) present at the pre-application meeting:	N/A (reviewed and approved by the City of Portland)				
30. Does agent have an interest in project? If yes, what is the interest?	☐ **Yes** ☒ **No**				

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

CERTIFICATIONS / SIGNATURES

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the electronic address located on the front page of this application (see #5 for the applicant and #10 for the agent)"..

Signed: _____ **Title** Cvil Engineer/Agent **Date:** 12/15/2022

Notice of Intent to Comply with Maine Construction General Permit	**With this Site Law application form and my signature, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.** **If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.** **Signed** _____ **Date:** 12/15/2022

NOTE: You must file a MCGP Notice of Termination (Form K) within 20 days of completing permanent stabilization of the project site.

CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for development approval is complete and accurate to the best of his/her knowledge.

Signature: _____

Name (print): Jonah DeWaters, PE

Date: 12/15/22

Re/Cert/Lic No.: _____
Engineer 12273 (Maine)
Geologist _____
Soil Scientist _____
Land Surveyor _____
Site Evaluator _____
Active Member of the Maine Bar _____
Professional Landscape Architect _____
Other _____

DocuSign Envelope ID: 5055615B-E4C7-4826-B314-32B9DAB333C9

November 15, 2022

To: Local, State, and Federal Review Officials

RE: AUTHORIZED REPRESENTATIVE – USM Center for the Arts

The University of Southern Maine, a member of the University of Maine System, is preparing plans for construction of a new Center for the Arts located on the University of Southern Maine, Portland Campus. The University has retained Pfeiffer, a studio of Perkins Eastman Architects DPC, as our Designer of Record and Oak Point Associates as the Engineering Consultant, to assist in the preparation of the applications associated with permitting approvals for this project. When necessary, Oak Point Associates is authorized as the agent to represent the University in addressing questions on the plans, or applicable application for this project.

Sincerely,

DocuSigned by:
C68AD86AE7CA431...

John M. Souther,
Executive Director of Facilities Management,
University of Southern Maine for the
University of Maine System

Cc: to file.

FORM D

SUBMISSIONS CHECKLIST

If a provision is not applicable, put "NA"

Section 1. Development description

A. Narrative

X 1. Objectives and details

X 2. Existing facilities (with dates of construction)

B. Topographic map

X 1. Location of development boundaries

X 2. Quadrangle name

C. Construction plan

X 1. Outline of construction sequence (major aspects)

2. Dates

D. Drawings

X 1. Development facilities

X a. Location, function and ground area

N/A b. Length/cross-sections for roads

X 2. Site work (nature and extent)

X 3. Existing facilities (location, function ground area and floor area)

4. Topography

X a. Pre- and post-development (contours 2 ft or less)

X b. Previous construction, facilities and lot lines

X **Section 2. Title, right or interest** (copy of document)

Section 3. Financial capacity

X A. Estimated costs

B. Financing

X 1. Letter of commitment to fund

2. Self-financing

N/A a. Annual report

N/A b. Bank statement

3. Other

N/A a. Cash equity commitment

N/A b. Financial plan

X c. Letter

N/A 4. Affordable housing information

Section 4. Technical ability (description)

X A. Prior experience (statement)

X B. Personnel (documents)

Section 5. Noise

X A. Developments producing a minor noise impact (statement)

N/A 1. Residential developments

N/A 2. Certain non-residential subdivisions

X 3. Schools and hospitals

N/A 4. Other developments

N/A a. Type, source and location of noise

N/A b. Uses, zoning and plans

N/A c. Protected locations

N/A d. Minor nature of impact

N/A e. Demonstration
N/A B. Developments producing a major noise impact (full noise study)
N/A 1. Baseline
N/A a. Uses, zoning and plans
N/A b. Protected locations
N/A c. Quiet area
X 2. Noise generated by the development
X a. Type, source and location of noise
N/A b. Sound levels
N/A c. Control measures
N/A d. Comparison with regulatory limits
N/A e. Comparison with local limits

X **Section 6. Visual quality and scenic character**(narrative, description, visual impact analysis)

X **Section 7. Wildlife and fisheries** (narrative)

X **Section 8. Historic sites** (narrative)

X **Section 9. Unusual natural areas** (narrative)

Section 10. Buffers
X A. Site plan and narrative

Section 11. Soils
X A. Soil survey map and report
X 1. Soil investigation narrative
X 2. Soil survey map
X B. Soil survey intensity level by development type
N/A 1. Class A (High Intensity) Soil Survey
N/A 2. Class B (High Intensity) Soil Survey
N/A 3. Class C (Medium High-Intensity) Soil Survey
X 4. Class D (Medium Intensity) Soil Survey
X C. Geotechnical Investigation
N/A D. Hydric soils mapping

Section 12. Stormwater management
X A. Narrative
X 1. Development location
X 2. Surface water on or abutting the site
X 3. Downstream ponds and lakes
X 4. General topography
X 5. Flooding
N/A 6. Alterations to natural drainage ways
X 7. Alterations to land cover
X 8. Modeling assumptions
X 9. Basic standard
X 10. Flooding standard
X 11. General standard
X 12. Parcel size
X 13. Developed area
X 14. Disturbed area
X 15. Impervious area
X B. Maps
X 1. U.S.G.S. map with site boundaries
X 2. S.C.S. soils map with site boundaries
X C. Drainage Plans (a pre-development plan and a post-development plan)

X 1. Contours
X 2. Plan elements
X 3. Land cover types and boundaries
X 4. Soil group boundaries
X 5. Stormwater quantity subwatershed boundaries
X 6. Stormwater quality subwatershed boundaries
X 7. Watershed analysis points
X 8. Hydrologic flow lines (w/flow types and flow lengths labeled)
X 9. Runoff storage areas
X 10. Roads and drives
X 11. Buildings, parking lots, and other facilities
X 12. Drainage system layout for storm drains, catch basins, and culverts
N/A 13. Natural and man-made open drainage channels
N/A 14. Wetlands
N/A 15. Flooded areas
X 16. Benchmark
N/A 17. Stormwater detention, retention, and infiltration facilities
X 18. Stormwater treatment facilities
N/A 19. Drainage easements
X 20. Identify reaches, ponds, and subwatersheds matching stormwater model
N/A 21. Buffers

X D. Runoff analysis (pre-development and post development)
X 1. Curve number computations
X 2. Time of concentration calculations
X 3. Travel time calculations
X 4. Peak discharge calculations
N/A 5. Reservoir routing calculations

X E. Flooding Standard
N/A 1. Variance submissions (if applicable)
N/A a. Submissions for discharge to the ocean, great pond, or major river
N/A i. Map
N/A ii. Drainage plan
N/A iii. Drainage system design
N/A iv. Outfall design
N/A v. Easements
N/A b. Insignificant increase
N/A i. Downstream impacts

X c. Submissions for discharge to a public stormwater system
X i. Letter of permission
X ii. Proof of capacity
X ii. Outfall analysis and design (pictures)
X 2. Sizing of storm drains and culverts
N/A 3. Stormwater ponds and basins
N/A a. Impoundment sizing calculations
N/A b. Inlet calculations
N/A c. Outlet calculations
N/A d. Emergency spillway calculations
N/A e. Subsurface investigation report
N/A f. Embankment specifications
N/A g. Embankment seepage controls
N/A h. Outlet seepage controls
N/A i. Detail sheet
N/A j. Basin cross sections
N/A k. Basin plan sheet
N/A 4. Infiltration systems
N/A a. Well locations map
N/A b. Sand and gravel aquifer map
N/A c. Subsurface investigation report with test pit or boring logs

N/A d. Permeability analysis
N/A e. Infiltration structure design
N/A f. Pollutant generation and transport analysis
N/A g. Monitoring and operations plan
N/A i. Locations of storage points of potential contaminants
N/A ii. Locations of observation wells and infiltration monitoring plan
N/A iii. Groundwater quality monitoring plan
N/A 5. Drainage easement declarations.
X F. Stormwater quality treatment plan peak discharge calculations
X 1. Basic stabilization plan
X a. Ditches, swales, and other open channel stabilization
X b. Culvert and storm-drain outfall stabilization
X c. Earthen slope and embankment stabilization
X d. Disturbed area stabilization
N/A e. Gravel roads and drives stabilization

X 2. General Standard
X a. Calculations for sizing BMP
X b. Impervious area calculation
X c. Developed area calculation
X d. Summary spreadsheet of calculations

N/A 3. Phosphorus control plan
N/A a. Calculations for the site's allowable phosphorus export
N/A b. Calculations for determining the developed site's phosphorus export
N/A c. Calculations for determining any phosphorus compensation fees
N/A 4. Offset Credits
N/A a. Urban impaired stream
N/A Offset credit calculation
N/A b. Phosphorus credit determination
N/A i. Location map
N/A ii. Scaled plan
N/A iii. Title and right
N/A iv. Demolition plan
N/A v. Vegetation plan
N/A vi. Offset credit calculation
N/A vii. Calculation for the new allowable export
X 5. Runoff treatment measures
X a. structural measures
X i. Design drawings and specifications
X ii. Design calculations
X iii. Maintenance plan
N/A iv. TSS removal or phosphorus treatment factor determinations
X v. Stabilization plan
N/A b. Vegetated buffers
N/A i. Soil survey
N/A ii. Buffer plan
N/A iii. Turnout and level spreader designs
N/A iv. Deed restrictions
N/A 6. Control plan for thermal impacts to coldwater fisheries
N/A 7. Control plan for other pollutants
X 8. Engineering inspection of stormwater management facilities

X G. Maintenance of common facilities or property
X 1. Components of the maintenance plan
X A. Maintenance of facilities by owner or operator
X 1. Site owner or operator (name legally responsible party)
X 2. Contact person responsible for maintenance
N/A 3. Transfer mechanism

X 4. List of facilities to be maintained
X 5. List of inspection and maintenance tasks for each facility
X 6. Identifications of any deed covenants, easements, or restrictions
X 7. Sample maintenance log
N/A 8. Copies of any third-party maintenance contracts
N/A B. Maintenance of facilities by homeowner's association
N/A 1. Incorporation documents for the association
N/A 2. Membership criteria
N/A 3. Association officer responsible for maintenance
N/A 4. Establishment of fee assessment for maintenance work
N/A 5. Establishment of lien system
N/A 6. Reference to department order(s) in association charter
N/A 7. Transfer mechanism from developer to association
N/A 8. List of facilities to be maintained
N/A 9. Identification of any deed covenants, easements, or restrictions
N/A 10. Renewal of covenants and leases
N/A 11. List of inspection and maintenance tasks for each facility
N/A 12. Sample maintenance log
N/A 13. Copies of any third-party maintenance contracts
N/A C. Maintenance of facilities by municipality or municipal district
N/A 1. Identification of the municipal department or utility district
N/A 2. Contact person responsible for maintenance
N/A 3. Evidence of acceptance of maintenance responsibility
N/A 4. Transfer mechanism from developer
N/A 5. List of facilities to be maintained
N/A 6. List of inspection and maintenance tasks for each facility
N/A 7. Identifications of any deed covenants, easements, or restrictions
N/A 8. Sample maintenance log
X 2. General inspection and maintenance requirements
X a. Drainage easements
X b. Ditches, culverts, and catch-basin systems
X c. Roadways and parking surfaces
N/A d. Stormwater detention and retention facilities
N/A 1. Embankment inspection and maintenance
N/A 2. Outlet inspection and clean-out
N/A 3. Spillway maintenance
N/A 4. Sediment removal and disposal
N/A e. Stormwater infiltration facilities
N/A 1. Sediment protection plan
N/A 2. Infiltration rehabilitation plan
N/A 3. Sediment removal and disposal
N/A 4. Groundwater monitoring plan
N/A f. Proprietary treatment devices
N/A g. Buffers
X h. Other practices and measures

Section 13. Urban Impaired Stream Submissions

N/A 1. Off-site credits
N/A 2. Compensation fees (Urban Impaired Stream/Phosphorus)
N/A 3. Development impacts

Section 14. Basic Standards

X A. Narrative
X 1. Soil types
N/A 2. Existing erosion problems
N/A 3. Critical areas
N/A 4. Protected natural resources
X 5. Erosion control measures

X 6. Site stabilization
X B. Implementation schedule
X C. Erosion and sediment control plan
X 1. Pre-development and post-development contours
X 2. Plan scale and elements
X 3. Land cover types and boundaries
X 4. Existing erosion problems
X 5. Critical areas
X 6. Protected natural resources
X 7. Locations (general)
X 8. Locations of controls
X 9. Disturbed areas
10. Stabilized construction entrance
X D. Details and specifications (for both temporary and permanent measures)
X E. Design calculations
X F. Stabilization plan
X 1. Temporary seeding
X 2. Permanent seeding
X 3. Sodding
X 4. Temporary mulching
X 5. Permanent mulching
X G. Winter construction plan
X 1. Dormant seeding
X 2. Winter mulching
X H. Third-party inspections
X 1. Inspector's name, address, and telephone number
X 2. Inspector's qualifications
X 3. Inspection schedule
X 4. Contractor contact
X 5. Reporting protocol

Section 15. Groundwater

X A. Narrative
N/A 1. Location and maps
N/A 2. Quantity
N/A 3. Sources
N/A 4. Measures to prevent degradation
N/A B. Groundwater protection plan
N/A C. Monitoring plan
N/A 1. Monitoring points
N/A 2. Monitoring frequency
N/A 3. Background conditions
N/A 4. Monitoring parameters
N/A 5. Personnel qualifications
N/A 6. Proof of training
N/A 7. Equipment and methods
N/A 8. Quality assurance/quality control
N/A 9. Reporting requirements
N/A 10. Remedial action plan
N/A D. Monitoring well installation report
N/A 1. Well location map
N/A 2. Elevation data
N/A 3. Well installation data
N/A 4. Well construction details
N/A 5. Borehole logs
N/A 6. Summary of depth measurements
N/A 7. Characteristics of subsurface strata
N/A 8. Well installation contract

N/A 9. Schematic cross-sections
N/A 10. Monitoring point summary table
N/A 11. Protective casing
N/A 12. On-site well identification

Section 16. Water supply

X A. Water supply method
N/A 1. Individual wells (evidence of sufficient/healthful supply)
N/A a. Support of findings by well drillers
N/A b. Support of findings by geologist
N/A 2. Common well(s) (reports)
N/A a. Hydrogeology report
N/A b. Engineering report
N/A c. Well installation report
N/A d. Long-term safe yield and zone of influence determination
N/A e. Public water supply
N/A i. Proposed well or wells
N/A ii. Existing well or wells
N/A iii. Water quality analysis
N/A 3. Well construction in shallow-to-bedrock areas
N/A 4. Additional information
X 5. Off-site utility company or public agency
N/A 6. Other sources
N/A B. Subsurface wastewater disposal systems (locations of systems and wells)
X C. Total usage (statement re: total anticipated water usage)

Section 17. Wastewater disposal

N/A A. On-site subsurface wastewater disposal systems (investigation results)
N/A 1. Site plan
2. Soil conditions summary table
N/A 3. Logs of subsurface explorations
4. Additional test pits, borings or probes
N/A a. Soil conditions A
N/A b. Soils with Profiles 8 and 9 parent material
N/A c. Soil conditions D
N/A d. Disposal field length 60 feet or greater
N/A 5. 3-bedroom design
N/A 6. Larger disposal systems
a. System design details
N/A b. Plan view
N/A c. Cross sections
N/A d. Test pit data
N/A e. Mounding analysis
N/A B. Nitrate-nitrogen impact assessment
N/A 1. When required
N/A a. Exempted____
i. Conventional systems meeting certain setbacks
N/A ii. Denitrification systems
N/A b. Special conditions and other exemptions
N/A 2. Assumptions
N/A a. Initial concentration
N/A b. Background concentration
N/A c. Contribution from development
N/A d. Mixing and dilution
N/A e. Severe-drought scenario
N/A f. Wastewater flow to subsurface wastewater disposal fields

N/A 3. Assessment report minimum requirements
N/A a. Narrative and calculations
N/A b. Site plan
N/A i. Well locations
N/A ii. 10 mg/l and 8 mg/l isocons
N/A iii. Groundwater contours and groundwater flow divides
N/A c. References
N/A 4. Denitrification systems
N/A a. Design plans and specifications
N/A b. Installation information
N/A c. Monitoring plan
N/A d. Maintenance
N/A e. Backup system
X D. Municipal facility or utility company letter
N/A E. Storage or treatment lagoons

X **Section 18. Solid waste** (list: type, quantity, method of collection and location)
X A. Commercial solid waste facility (final disposal location)
X B. Off-site disposal of construction/demolition debris (final disposal location)
C. On-site disposal of woodwaste/land clearing debris
X 1. Applicability of rules (evidence re: applicability of rules)
2. Burning of wood wastes
N/A a. Delineation on site plan
N/A b. Plans for handling unburned woodwaste and woodash
N/A c. Evidence of capacity to accept waste (approved facility)
N/A d. Usage of materials
N/A e. Data on mixing ratios and application rates
X D. Special or Hazardous Waste

Section 19. Flooding
N/A A. Explanation of flooding impact
N/A B. Site plan showing 100-year flood elevation
N/A C. Hydrology analysis
N/A D. FEMA flood zone map with site boundaries

Section 20. Blasting
N/A A. Site Plan or map
N/A B. Report
1. Assessment
2. Blasting plan

Section 21. Air emissions (narrative and summary)
X A. Point and non-point sources identified
N/A B. Emission components (point sources)

Section 22. Odors
N/A A. Identification of nature/source
N/A B. Estimate of areas affected
N/A C. Methods of control)

N/A **Section 23. Water vapor** (narrative)

N/A **Section 24. Sunlight** (statement and drawing, if required)

Section 25. Notices
N/A A. Evidence that notice sent
N/A B. List of abutters for purposes of notice

Supplemental requirements for Wind Energy Developments only:

Section 26. Shadow flicker

N/A A. A copy of the Windpro Analysis and associated narrative

Section 27. Public Safety

N/A A. Design safety certifications or other documents attesting to the safety of the wind turbine equipment.
N/A B. Evidence pertaining to overspeed controls
N/A C. Site plan documenting safety setbacks zones for each wind turbine
N/A D. Other documents as necessary to demonstrate safety considerations

Section 28. Tangible Benefits

N/A A. Narrative demonstration of tangible benefits

Section 29. Decommissioning

N/A A. Description of implementation trigger for decommissioning
N/A B. Description of extent of decommissioning
N/A C. Itemization of total cost to complete decommissioning
N/A D. Demonstration of financial assurance for completeness of decommissioning plan

Section 30. Generating Facility-visual Quality and Scenic Character

N/A A. (narrative, description, visual impact analysis)

Development Description

Project Objective

This amendment package is for work associated with the construction of a new Center for the Arts (CFA) building and the relocation/addition of a small building, referred to as the "Deering Farmhouse" on the University of Southern Maine (USM) campus in Portland, Maine.

The project site is located in the greenspace on the southwest side of USM's Portland campus, bounded by Falmouth Street to the northwest, Deering Avenue and Noyes Park to the west, and Bedford Street to the south. A portion of the site occupies the former Brighton Avenue right-of-way, which is in the process of being formally transferred to USM following the completion of the Deering's Corner Roundabout project in late 2021/early 2022. Once completed, the CFA will have a street address of 111 Bedford Street and the Deering Farmhouse will have an address of 104 Falmouth Street.

The project will result in a total disturbance of approximately 3.7 acres, including the removal of approximately 0.4 acre of impervious area and the creation of approximately 1.6 acres of impervious area (a net increase of approximately 1.2 acres). All construction will take place in previously developed areas.

Existing Facilities

The existing conditions on the site consist of a large lawn (or turfgrass) area, the farmhouse (a small two-story building with a 1,332 ft^2 footprint that was constructed in the 1800's), and several sidewalks, which appear to have been constructed prior to 1970.

Proposed Facilities

The proposed site generally consists of the single-story relocated farmhouse and addition (1,894 ft^2) and the CFA building, which will be a single-story building with a +/-40,000 ft^2 footprint. The site will also consist of re-routed pedestrian pathways that will provide access to the new buildings and connections through the site between the parking lot and USM Law School building to the southwest (across Deering Avenue) and the rest of the campus to the northeast. A widened section of Bedford Street is proposed along the south side of the building that will function as a drop-off area and fire department access. Parking areas are not proposed as part of the project.

Existing/Proposed Utility Connections

The existing Deering Farmhouse was previously connected to the water main under Deering Avenue, and the electrical service was via an overhead line on Brighton Avenue. Both of these services were disconnected in 2021. The building's sewer line is connected to the existing 24" sewer line under Falmouth Street, and the building is connected to USM's on-campus communications infrastructure. It is heated by an oil-fired boiler, with a small oil storage tank in the crawlspace beneath the building.

Once the Deering Farmhouse is relocated/added on to, the sewer service will remain connected to the existing sewer main in Falmouth Street. Water and natural gas service will be via underground 6" water and gas mains in Falmouth Street, and the electrical and communications service will be connected to USM's existing on-campus electrical and communications infrastructure. Additionally, a portion of the building's roof runoff will be connected to USM's existing on-campus storm drain system.

Similar to the Deering Farmhouse, water and natural gas service to the CFA will be via the 6" water and gas mains under Falmouth Street, and electrical and communications service will be connected to USM's existing on-campus electrical and communications infrastructure. Storm drainage for both the Deering Farmhouse and the area north of the CFA will be connected to USM's on-campus storm drainage system, while roof runoff from the CFA will be routed through a subsurface sand filter then into the existing 24" storm drain line in Bedford Street. The CFA's sewer system will be connected to the 8" sewer main in Bedford Street.

Topographic Map

Attached is a copy of a portion of the USGS Quadrangle Map entitled "Portland West, Maine", with the approximate project location indicated.

Phasing/Construction Plan

The work in this amendment package is generally split into two parts:

Part I (Spring 2023 – Summer/Fall 2024): Consists of relocating a portion of the Deering Farmhouse and constructing an addition on to it. The permitting/design process is anticipated to be completed in Fall/Winter 2022, and construction is slated to begin in Spring 2023 so that the building can be relocated prior to the start of construction for the CFA project. The general construction timeline is as follows:

Part I (Farmhouse Relocation) Construction Timeline	Spring 2023 – Summer/Fall 2024
• Contract award	Spring 2023
• Install erosion control, strip existing turf, and general site demolition	Spring 2023
• Relocate portion of existing building	Spring 2023

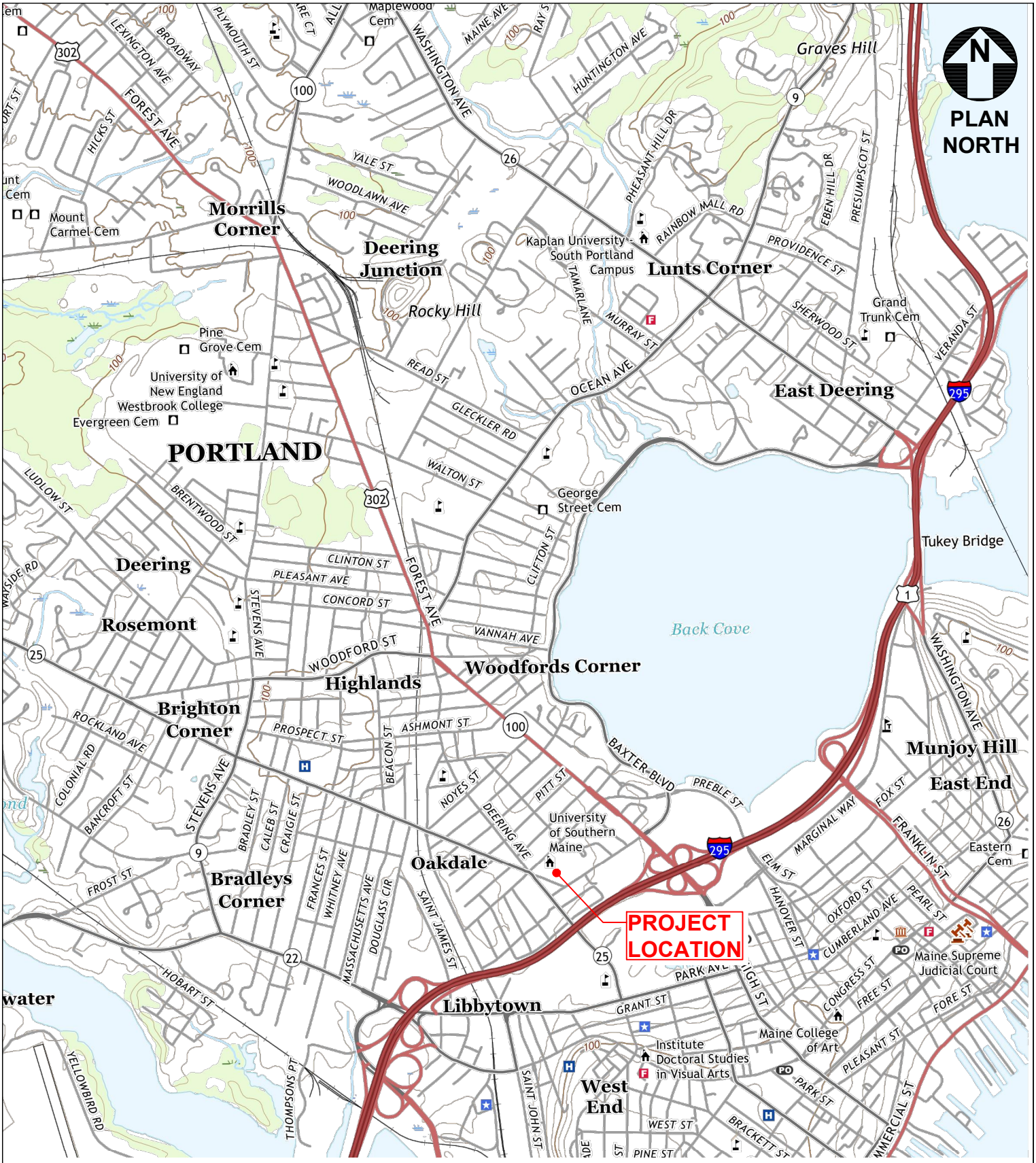
• Construct footings and building addition	Summer 2023 – Fall 2023
• Stabilize Site (winter)	Winter 2023
• Sitework and utility connections	Summer 2023 – Summer 2024
• Stabilize site (final)	Summer/Fall 2024

Part II (Spring/Summer 2023 – Summer 2025): consists of construction of the CFA and associated site amenities. The permitting/design process is anticipated to be completed in Spring 2023, and construction is slated to begin immediately following obtaining the permits. The general construction timeline is as follows:

Part II (CFA Construction) Construction Timeline	Spring/Summer 2023 – Summer 2025
• Install erosion control, strip existing turf, and general site demolition	Summer 2023
• Building Footings/envelope and Utilities	Summer 2023 - Summer 2024
• Stabilize Site (winter)	Winter 2023, Winter 2024
• Utility Work in Bedford Street	Spring 2024
• Stormwater Treatment Area	Spring/Summer 2024
• Sitework	Fall 2023 – Summer 2025
• Stabilize site (final)	Summer 2025

Drawings

Full-size drawings are included with this application package that depict the existing and proposed site features.



NOTE: USGS TOPOGRAPHIC QUADRANGLE OBTAINED ON OCTOBER 3, 2022

SCALE: 1"=2,000'
DATE: 11-01-2022

Q1

USGS LOCUS MAP

CENTER FOR THE ARTS

UNIVERSITY OF SOUTHERN MAINE PORTLAND CAMPUS

104 Falmouth Street, Portland Maine 04103

DESIGNED BY: JSD
DRAWN BY: JSD
CHECKED BY: JSD

PROJECT: 21904.10

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
231 Main Street, Biddeford, Maine 04005 (T) 207.283.0193 (F) 207.283.4283
www.oakpoint.com

Section 2 – Right, Title and Interest

The Center for the Arts will be constructed on USM property at the corner of Bedford Street and Brighton Avenue. A portion of the property is yet to be conveyed to the University, and it is the subject of a 2018 Land Exchange Agreement between the City and the University System related to the Deering's Corner Roundabout Project. The actions that still need to occur under the agreement are the discontinuance of the former Brighton Avenue extension and a conveyance by the City of its portion of the former road to the University. The City's Corporation Counsel has been made aware of these outstanding items and is working to begin the discontinuance process with the Council. Once the conveyances from the Roundabout Project are fully executed, the total area of the USM campus will have grown by approximately 0.5 acres to approximately 29.33 acres. The plans included with this application show property lines in a post-conveyance condition.

A small amount of grading will occur within Noyes Park, which is owned by the City of Portland. The University has requested a temporary construction and grading easement from the City, which is in process and will be obtained prior to the start of construction.

Copies of the deed for the campus and a copy of the Land Exchange Agreement as well as a boundary survey conducted in 2019 are included in this section.

(90) 135

Know all Men by these Presents,

That Portland Junior College ~~Company~~,

a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine in consideration of one dollar and other valuable considerations

paid by University of Maine, a corporation organized and existing under the laws of the State of Maine and located at Orono in the County of Penobscot and State of Maine

the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said University of Maine its successors ~~heirs~~ and assigns forever,

a certain lot or parcel of land with the buildings thereon situated in Portland aforesaid bounded and described as follows:

Beginning at a pipe set in the ground at the corner formed by the intersection of the easterly side of Brighton Avenue and the southerly side of Falmouth Street; thence by said southerly side of Falmouth Street in an easterly direction nine hundred eighty-two and sixty-seven hundredths (982.67) feet to a pipe set in the ground on said southerly side of Falmouth Street; thence southerly with an included angle of ninety-four degrees thirty-eight minutes (94° 38') three hundred fifty-two and eighty-nine hundredths (352.89) feet to a pipe; thence westerly on a line parallel with Falmouth Street and at an included angle of eighty-five degrees twenty-two minutes (85° 22') one hundred sixty-four and sixty-five hundredths (164.65) feet to a point, said point being on the line of a row of trees running approximately north and south; thence southwardly along the line of said row of trees two hundred forty-five (245) feet more or less to the northerly side of Bedford Street; thence westerly along the northerly side of said Bedford Street six hundred (600) feet more or less to the easterly side of Brighton Avenue; thence along the easterly side of Brighton Avenue four hundred eighty-seven and thirty-eight hundredths (487.38) feet more or less to the point of beginning.

Reference is made to three deeds to Portland University Extension Courses, Inc., the name of which, subsequently, by act of the Legislature has been changed to Portland Junior College, and a fourth deed to Portland Junior College, all from Edward Deering Noyes dated and recorded as follows: December 28, 1946, Book 1854 Page 424, June 30, 1947, Book 1875 Page 227, July 1, 1948, Book 1916 Page 364, and December 31, 1956, Book 2332 Page 151.

Portland Junior College to University of Maine -- War

136 **To have and to hold,** the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said

University of Maine, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And the said Grantor Corporation does hereby COVENANT with the said Grantee , its successors ~~heirs~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances;
that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that if and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee , its successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Portland Junior College ~~Company~~ has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Philip I. Milliken , its Treasurer, thereunto duly authorized, this 28th day of August in the year one thousand nine hundred and fifty-seven.

Signed, Sealed and Delivered
in presence of

Jane C. Magnusson

~~Company~~.
PORTLAND JUNIOR COLLEGE
By Philip I. Milliken
Treasurer.

Countersigned
Raymond S. Hastings
President

(CORPORATE SEAL)

State of Maine

County of Cumberland ss. August 28, 1957

Then personally appeared the above named Philip I. Milliken Treasurer of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

Jane C. Magnusson Justice of the Peace.
~~Notary Public~~

AUG 28 1957
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 12 H 27 M P.M., and recorded in
BOOK 2370 PAGE 135 Register

QUITCLAIM DEED WITH COVENANT

DLN# _____

UNIVERSITY OF MAINE SYSTEM (f/k/a University of Maine, reference being made to a notice of name change dated June 13, 1988 and recorded in the Cumberland County Registry of Deeds in Book 8331, Page 89), a body politic and corporate and an instrumentality and agency of the State of Maine, with a mailing address of 5703 Alumni Hall, Orono, Maine 04469 (hereinafter "Grantor") for good and valuable consideration paid, grants to the **CITY OF PORTLAND**, a body corporate and politic and Maine municipal corporation having a mailing address of 389 Congress Street, Portland, Maine 04101 (hereinafter "Grantee"), with quitclaim covenant, certain real property located in the City of Portland, County of Cumberland and State of Maine and more particularly described on **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed by its duly authorized representative as of this 22 day of March, 2019.

WITNESS:

UNIVERSITY OF MAINE SYSTEM

By: _____
Name: M.F. Chip Gavin
Its: Chief Facilities Management and General Services Officer

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. MARCH 22, 2019

PERSONALLY APPEARED the above-named M.F. Chip Gavin, Chief Facilities Management and General Services Officer of the University of Maine System, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the University of Maine System.

Before me,

_____
Notary Public/Attorney at Law
Commission Expires:
Print Name: ME BAR # 5646
SARA MCNAMARCHEK

EXHIBIT A

UNIVERSITY OF MAINE SYSTEM
TO
CITY OF PORTLAND

PARCEL ONE:

A certain lot or parcel of land located on the southeasterly side of Falmouth Street, the southwesterly side of Brighton Avenue and the southwesterly side of Deering Avenue in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point on the southeasterly sideline of Falmouth Street, said point of beginning located N 48°34'53" E a distance of sixty-nine and 93/100 (69.93) feet from the intersection of the northeasterly sideline of Exeter Street with the southeasterly sideline of said Falmouth Street. Thence:

1. N 48°34'53" E by said Falmouth Street a distance of two hundred forty-three and 79/100 (243.79) feet to a point on the southerly sideline of Brighton Avenue;

2. S 67°27'04" E by said Brighton Avenue a distance of eleven and 80/100 (11.80) feet to a point on the southwesterly sideline of Deering Avenue;

3. S 38°46'34" E by said Deering Avenue a distance of one hundred eleven and 32/100 (111.32) feet to a point;

4. N 47°34'40" W through land of the Grantor a distance of sixty-five and 82/100 (65.82) feet to a point;

5. N 88°45'17" W through said land of the Grantor a distance of seventy-one and 00/100 (71.00) feet to a point;

6. S 40°44'35" W through said land of the Grantor a distance of forty-nine and 84/100 (49.84) feet to a point;

7. S 48°14'39" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

8. S 57°25'25" W through said land of the Grantor a distance of ninety-nine and 27/100 (99.27) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 4,513 square feet, more or less, and being a portion of the premises as described in deeds to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 3047, Page 354, Book 3053, Page 326, Book 3056, Page 504 and Book 3079, Page 537.

PARCEL TWO:

A certain lot or parcel of land located on the southeasterly side of Falmouth Street and the northeasterly side of Brighton Avenue in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the southeasterly sideline of Falmouth Street with the northeasterly sideline of Brighton Avenue. Thence:

1. N 45°03'56" E by said Falmouth Street a distance of sixty-seven and 91/100 (67.91) feet to a point;

2. S 25°30'06" W through land of the Grantor a distance of twenty-one and 27/100 (21.27) feet to a point;

3. S 05°00'58" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

4. S 53°19'05" E through said land of the Grantor a distance of twenty-five and 06/100 (25.06) feet to the northeasterly sideline of said Brighton Avenue;

5. N 67°27'04" W by said Brighton Avenue a distance of sixty and 39/100 (60.39) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 1,099 square feet, more or less, and being a portion of the premises as described in a deed to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 2370, Page 135.

Received
Recorded Register of Deeds
Mar 28,2019 01:01:34P
Cumberland County
Nancy A. Lane

NOTICE OF LAYOUT AND TAKING

The State of Maine by its Department of Transportation does hereby give notice to all whom it may concern:

That the Department of Transportation in accordance with the authority of Title 23 M.R.S. Section 651, has determined that public exigency requires the altering, widening, changing the grade, changing the drainage, laying out and establishing of a portion of State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street in the City of Portland, County of Cumberland.

That the Department of Transportation, in accordance with Title 23 M.R.S. Sections 701 and 651, hereby lays out the location of a portion of State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street in the City of Portland.

That the Department of Transportation, in accordance with Title 23 M.R.S. Sections 651 and 151 to 159, has determined that public exigency requires the taking in fee simple all lands as hereinafter described, and all rights in land as specified and as shown on a Right-of-Way Map, State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street, City of Portland, Federal Aid Project No. 1862400, (W.I.N. 018624.00), dated October 2019, on file in the Office of the Department of Transportation, (D.O.T. File No. 3-641) and to be recorded in the Registry of Deeds of Cumberland County, a print of which is on file in the office of the County Commissioners of Cumberland County.

The Base Line of location of the portions of State Highway "12" (Brighton Avenue), State Highway "76" (Deering Avenue) and Falmouth Street hereby laid out being described as follows:

Base Line Descriptions

State Highway "12" (Brighton Avenue)/State Highway "76" (Deering Avenue) Base Line

Beginning at a point in the present traveled way of State Highway "12" (Brighton Avenue) and designated as P.T. Sta.1+05.88;

Thence S. 64°47'30" E. one hundred fifty-eight and no hundredths (158.00) feet to P.C. Sta. 2+63.88;

Thence southeasterly by a 28°38'52" curve to the left, seven and thirty-two hundredths (7.32) feet to P.T. Sta. 2+71.20;

Thence S. 66°53'17" E. thirty-seven and twenty-two hundredths (37.22) feet to P.C. Sta. 3+08.42;

Thence southeasterly by a 28°38'52" curve to the left, twenty-one and sixty-eight hundredths (21.68) feet to P.T. Sta. 3+30.10;

Thence S. 73°05'57" E. eighty and four hundredths (80.04) feet to P.C. Sta. 4+10.14;

Thence southeasterly by a 57°17'45" curve to the right, forty-one and sixty-three hundredths (41.63) feet to P.T. Sta. 4+51.77 at the point of intersection with State Highway "76" (Deering Avenue);

Thence S. 49°14'49" E. ninety-two and ninety-four hundredths (92.94) feet to P.C. Sta. 5+44.71;

Thence southeasterly by a 14°19'26" curve to the right, seventy-three and sixty-seven hundredths (73.67) feet to P.T. Sta. 6+18.38;

Thence S. 38°41'41" E. two hundred sixty-six and forty hundredths (266.40) feet to P.C. Sta. 8+84.78;

Thence southeasterly by a 28°38'52" curve to the right, three and ten hundredths (3.10) feet to P.T. Sta. 8+87.88;

Thence S. 37°48'26" E. one hundred ninety-six and twenty-four hundredths (196.24) feet to P.C. Sta. 10+84.12 at a point in the present traveled way of State Highway "76" (Deering Avenue).

State Highway "76" (Deering Avenue) Segment II Base Line

Beginning at a point in the intersection of State Highway "76" (Deering Avenue) and Fessenden Street and designated as Sta. 0+00.00;

Thence S. 38°16'29" E. one hundred one and forty-seven hundredths (101.47) feet to P.C. Sta. 1+01.47;

Thence southeasterly by a 28°38'52" curve to the left, nine and fifty hundredths (9.50) feet to P.T. Sta. 1+10.97;

Thence S. 40°59'49" E. seventy-six and seventy hundredths (76.70) feet to P.C. Sta. 1+87.67;

Thence southeasterly by a 38°11'50" curve to the right, fifty-seven and fifty-one hundredths (57.51) feet to P.T. Sta. 2+45.18;

Thence S. 19°01'49" E. fifty and thirty-three hundredths (50.33) feet to Sta. 2+95.51 which point equals Sta. 4+19.27 on the State Highway "12" (Brighton Avenue)/State Highway "76" (Deering Avenue) Base Line.

Falmouth Street Base Line

Beginning at a point in the present traveled way of Falmouth Street, said point being about three hundred twenty-five (325) feet southwesterly of its intersection with State Highway "12" (Brighton Avenue) and State Highway "76" (Deering Avenue) and designated as Sta. 0+50.00;

Thence N. 48°26'52" E. fifty-seven and ninety-four hundredths (57.94) feet to P.C. Sta. 1+07.94;

Thence northeasterly by a 57°17'45" curve to the right, seventeen and twenty-four hundredths (17.24) feet to P.T. Sta. 1+25.18;

Thence N. 58°19'22" E. forty-seven and seven hundredths (47.07) feet to P.C. Sta. 1+72.25;

Thence northeasterly by a 20°27'46" curve to the left, ninety-six and seventy-three hundredths (96.73) feet to P.T. Sta. 2+68.98;

Thence N. 38°31'40" E. and passing through Sta. 3+67.34 which point equals Sta. 4+35.95 on the State Highway "12" (Brighton Avenue) Base Line, one hundred and seventy-one hundredths (100.71) feet to P.C. Sta. 3+69.69;

Thence northeasterly by a 57°17'45" curve to the right, nineteen and twenty-eight hundredths (19.28) feet to P.T. Sta. 3+88.97;

Thence N. 49°34'30" E. sixty-two and twenty-one hundredths (62.21) feet to P.C. Sta. 4+51.18;

Thence northeasterly by a 28°38'52" curve to the left, fourteen and sixty-seven hundredths (14.67) feet to P.T. Sta. 4+65.85;

Thence N. 45°22'19" E. one hundred thirty-four and fifteen hundredths (134.15) feet to Sta. 6+00.00 at a point in the present traveled way of Falmouth Street.

Bedford Street Base Line

Beginning on the State Highway "76" (Deering Avenue) Base Line at Sta. 9+38.26 which point equals Sta. 40+50.00 on the Bedford Street Base Line;

Thence N. 56°14'54" E. three hundred thirty and no hundredths (330.00) feet to Sta. 43+80.00 at a point in the present traveled way of Bedford Street.

DESCRIPTION OF FEE TAKING

All land, buildings, and rights in land within the following described boundaries, are hereby taken in fee simple:

Area 1

Beginning at a point in the present northwesterly line of Falmouth Street, said point being about thirty-four (34) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base line at Sta. 2+88;

Thence northerly by a direct course about twenty-six (26) feet to a point forty and seventy-five hundredths (40.75) feet southwesterly from and as measured along a line at right angles to the State Highway "12" (Brighton Avenue) Base Line at Sta. 3+66;

Thence northwesterly by a direct course twenty-two and seventy-five hundredths (22.75) feet to a point thirty-two (32) feet southwesterly from and as measured along a line at right angles to the State Highway "12" (Brighton Avenue) Base Line at Sta. 3+45;

Thence northwesterly by a direct course, about one hundred seven (107) feet to a point in the present northwesterly line of land now or formerly of Mark E. High, et al, and the present southeasterly line of land now or formerly of Francis Schwanauer, et al, said point being twenty-nine (29) feet southwesterly from and as measured along a line at right angles to the State Highway "12" (Brighton Avenue) Base Line at about Sta. 2+42;

Thence northeasterly along the present northwesterly line of land of said High, et al, and along the present southeasterly line of land of said Schwanauer, et al, about three (3) feet to a point in the present southwesterly line of State Highway "12" (Brighton Avenue), said point being about twenty-six (26) feet southwesterly from and as measured along a line at right angles to said Base Line at about Sta. 2+42;

Thence southeasterly along the present southwesterly line of State Highway "12" (Brighton Avenue), about one hundred fifty-seven (157) feet to the point of intersection with the present northwesterly line of Falmouth Street, said point being about twenty-seven (27) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at about Sta. 3+25;

Thence southwesterly along the present northwesterly line of Falmouth Street, about thirty-nine (39) feet to the point of beginning. Being shown on the beforementioned right-of-way map as Parcel Nos. (3) and (4).

Area 2

Beginning at a point in the present northwesterly line of Falmouth Street, said point being about thirty-one (31) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at Sta. 4+70;

Thence southwesterly along the present northwesterly line of Falmouth Street, about sixty (60) feet to the point of intersection with the present northeasterly line of State Highway "76" (Deering Avenue), said point being about twenty-seven (27) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at about Sta. 4+08;

Thence northwesterly along the present northeasterly line of State Highway "76" (Deering Avenue), about one hundred forty-seven (147) feet to a point about twenty-four (24) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 1+30;

Thence southeasterly by a direct course, about forty-three (43) feet to a point twenty-six (26) feet northwesterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 1+75;

Thence S. 49°40'39" E. sixty and forty-one hundredths (60.41) feet to a point forty-one (41) feet northeasterly from and as measured along a line normal to the State Highway "76" (Deering Avenue) Base Line at Sta. 2+25;

Thence S. 75°12'58" E. forty-three and nineteen hundredths (43.19) feet to a point thirty-four (34) feet northwesterly from and as measured along a line at right angles to the Falmouth Street Base Line at Sta. 4+50;

Thence northeasterly by a direct course, about eighteen (18) feet to the point of beginning. Being shown on the beforementioned right-of-way map as Parcel Nos. (5) and (6).

Area 3

Beginning at a point, forty (40) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 6+67;

Thence S. 29°25'19" E. forty-nine and sixty-five hundredths (49.65) feet to a point thirty-two (32) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 7+16;

Thence S. 38°41'41" E. one hundred twenty-one and no hundredths (121.00) feet to a point thirty-two (32) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 8+37;

Thence S. 50°40'15" E. thirty-three and seventy-three hundredths (33.73) feet to a point thirty-nine (39) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at Sta. 8+70;

Thence S. 77°38'06" E. forty-three and sixty hundredths (43.60) feet to a point forty (40) feet northwesterly from and as measured along a line at right angles to Bedford Street Base Line at Sta. 41+14;

Thence southeasterly along said right angle line, about ten (10) feet to a point in the present northwesterly line of Bedford Street;

Thence southwesterly along the present northwesterly line of Bedford Street, about thirty-six (36) feet to the point of intersection with the present northeasterly line of State Highway "76"

(Deering Avenue), said point being about thirty (30) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at about Sta. 9+10;

Thence northwesterly along the present northeasterly line of State Highway "76" (Deering Avenue), about three hundred (300) feet to the point of intersection with the present southwesterly line of State Highway "3" (Brighton Avenue), said point being about twenty-nine (29) feet northeasterly from and as measured along a line normal to the State Highway "76" (Deering Avenue) Base line at about Sta. 6+11;

Thence southeasterly along the present southwesterly line of State Highway "3" (Brighton Avenue), about twenty-four (24) feet to a point about forty-one (41) feet northeasterly from and as measured along a line at right angles to the State Highway "76" (Deering Avenue) Base Line at about Sta. 6+32;

Thence S. 37°55'44" E. about thirty-five (35) feet to the point of beginning. Being shown on the beforementioned right-of-way map as Parcel No. (9).

Area 4

"Beginning at a point on the southeasterly sideline of Falmouth Street, said point of beginning located N 48°34'53" E a distance of sixty-nine and 93/100 (69.93) feet from the intersection of the northeasterly sideline of Exeter Street with the southeasterly sideline of said Falmouth Street. Thence:

1. N 48°34'53" E by said Falmouth Street a distance of two hundred forty-three and 79/100 (243.79) feet to a point on the southerly sideline of Brighton Avenue;

2. S 67°27'04" E by said Brighton Avenue a distance of eleven and 80/100 (11.80) feet to a point on the southwesterly sideline of Deering Avenue;

3. S 38°46'34" E by said Deering Avenue a distance of one hundred eleven and 32/100 (111.32) feet to a point;

4. N 47°34'40" W through land of the Grantor a distance of sixty-five and 82/100 (65.82) feet to a point;

5. N 88°45'17" W through said land of the Grantor a distance of seventy-one and 00/100 (71.00) feet to a point;

6. S 40°44'35" W through said land of the Grantor a distance of forty-nine and 84/100 (49.84) feet to a point;

7. S 48°14'39" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

8. S 57°25'25" W through said land of the Grantor a distance of ninety-nine and 27/100 (99.27) feet to the point of beginning."

Being the same as the first parcel of land described and conveyed from University of Maine System to City of Portland by Quitclaim Deed with Covenant dated March 22, 2019 and recorded at the Cumberland County Registry of Deeds in Book 35543, Page 338 and being shown on the beforementioned right-of-way map as Parcel No. (13).

Area 5

"Beginning at the intersection of the southeasterly sideline of Falmouth Street with the northeasterly sideline of Brighton Avenue. Thence:

1. N 45°03'56" E by said Falmouth Street a distance of sixty-seven and 91/100 (67.91) feet to a point;

2. S 25°30'06" W through land of the Grantor a distance of twenty-one and 27/100 (21.27) feet to a point;

3. S 05°00'58" W through said land of the Grantor a distance of thirty-seven and 10/100 (37.10) feet to a point;

4. S 53°19'05" E through said land of the Grantor a distance of twenty-five and 06/100 (25.06) feet to the northeasterly sideline of said Brighton Avenue;

5. N 67°27'04" W by said Brighton Avenue a distance of sixty and 39/100 (60.39) feet to the point of beginning."

Being the same as the second parcel of land described and conveyed from University of Maine System to City of Portland by Quitclaim Deed with Covenant dated March 22, 2019 and recorded at the Cumberland County Registry of Deeds in Book 35543, Page 338 and being shown on the beforementioned right-of-way map as Parcel No. (14).

EXCEPTIONS AND RESERVATIONS

There is excepted and reserved from the before described taking in fee simple:

All existing utility company rights-of-way and/or easements, however acquired, and located within the aforedescribed boundaries, EXCEPTING any that may be specifically set forth in the hereinafter Informative Summary.

DESCRIPTIONS OF EASEMENT AND/OR RIGHTS TAKING

The following described easement and/or rights in land are taken at the locations, in the manner, to the extent specified and as shown on the right-of-way map hereinbefore mentioned:

TEMPORARY CONSTRUCTION RIGHTS

The right, for the duration of the period of the Project construction as determined by the date of completion of construction according to the records of the Department of Transportation, to enter upon land outside of and adjoining the boundary lines of the above-referenced highway to perform the work as set forth below within the limits defined as "Temporary Construction Limits" as shown on the above-referenced Right-of-Way map.

Said right may include, but is not limited to, necessary excavating, placing of fill material, curbing, loaming, seeding, paving, installation of structures, removal of trees, shrubs, bushes and other growth, selective cutting, trimming, and other necessary incidental work in grading said adjoining land, in addition to the temporary placement of utility poles including all related fixtures, overhead wires, guys, etc. in order to allow for project construction in accordance with all governing regulations and other requirements of law.

Parcel/ Item	**Apparent Owner**	**Location: Lt./Rt.**
2	Francis Schwanauer Johanna M. Schwanauer	Sta. 1+76 to Sta. 2+42 Rt. (S.H."12"/Brighton Avenue)
3	Mark E. High Mary Elizabeth Woodbury	Sta. 2+42 to Sta. 3+15 Rt. (S.H."12"/Brighton Avenue)
4	Donnabeth Davis	Sta. 3+14 to Sta. 3+53 Rt. (S.H."12"/Brighton Avenue) Sta. 2+23 Lt. (Falmouth Street) to Sta. 3+63 Rt. (S.H."12"/Brighton Avenue)
5	Richard T. Boles	Sta. 1+25 to Sta. 1+75 Lt. (S.H."76"/Deering Avenue)
6	257 Deering LLC	Sta. 1+75 Lt. (S.H."76"/Deering Avenue) to Sta. 4+70 Lt. (Falmouth Street)

Parcel/ Item	Apparent Owner	Location: Lt./Rt.
7	University of Maine System	Sta. 1+04 to Sta. 2+05 Rt. (Falmouth Street) Sta. 2+13 to Sta. 2+52 Rt. (Falmouth Street) Sta. 2+61 to Sta. 2+93 Rt. (Falmouth Street) Sta. 5+16 to Sta. 8+18 Rt. (S.H."76"/Deering Avenue)
8	University of Maine System	Sta. 5+12 Rt. (Falmouth Street) to Sta. 5+43 Lt. (S.H."76"/Deering Avenue) Sta. 6+84 to Sta. 7+08 Lt. (S.H."76"/Deering Avenue)
9	City of Portland	Sta. 6+32 to Sta. 8+03 Lt. (S.H."76"/Deering Avenue) Sta. 8+12 Lt. (S.H."76"/Deering Avenue) to Sta. 41+00 Lt. (Bedford Street)
10	University of Maine System	Sta. 8+18 to Sta. 8+94 Rt. (S.H."76"/Deering Avenue)
11	University of Maine System	Sta. 8+94 to Sta. 9+13 Rt. (S.H."76"/Deering Avenue)
12	Vincent A. Ciampi, Jr.	Sta. 40+94 Rt. (Bedford Street) to Sta. 9+84 Lt. (S.H."76"/Deering Avenue)

INFORMATIVE SUMMARY

The following is a list summarizing the parcel or item numbers, names of apparent owners of record of land and rights involved, estimated areas, and rights affected, within and adjacent to the before-referenced highway boundaries, as shown on the beforementioned right-of-way map:

Parcel/ Item No.	Apparent Owner	Area	Slopes	Drainage	Temp. Const. Rights	Other Rights & Bldgs.
2	Francis Schwanauer Johanna M. Schwanauer	None	None	None	Yes	None
3	Mark E. High Mary Elizabeth Woodbury	240 ± Sq. Ft.	None	None	Yes	None

Parcel/ Item No.	Apparent Owner	Area	Slopes	Drainage	Temp. Const. Rights	Other Rights & Bldgs.
4	Donnabeth Davis	854 ± Sq. Ft.	None	None	Yes	None
5	Richard T. Boles	93 ± Sq. Ft.	None	None	Yes	None
6	257 Deering LLC	1868 ± Sq. Ft.	None	None	Yes	None
7	University of Maine System	None	None	None	Yes	None
8	University of Maine System	None	None	None	Yes	None
9	City of Portland	2433 ± Sq. Ft.	None	None	Yes	None
10	University of Maine System	None	None	None	Yes	None
11	University of Maine System	None	None	None	Yes	None
12	Vincent A. Ciampi, Jr.	None	None	None	Yes	None
13	City of Portland	4513 ± Sq. Ft. (Entire Lot)	None	None	None	None
14	City of Portland	1099 ± Sq. Ft. (Entire Lot)	None	None	None	None

Pursuant to Title 23 M.R.S. Section 651, that portion of State Highway "3"/Brighton Avenue, which lies southeasterly of the beforedescribed and redefined right of way limits of State Highway "76" (Deering Avenue) from about Sta. 5+43 Lt. of the State Highway "76"/Deering Avenue Base Line southeasterly to its intersection with Bedford Street, as shown on the before referenced Right of Way Map (D.O.T. File No. 3-641), upon completion of the project, shall hereafter be the responsibility of the City of Portland.

DOC :4635 BK:36372 PG:11
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
01/27/2020, 09:49:26A
Register of Deeds Nancy A. Lane E-RECORDED

PORTLAND
1862400
WIN: 018624.00

The Department of Transportation directs that this Notice of Layout and Taking be recorded in the Registry of Deeds of Cumberland County and filed with the City Clerk of the City of Portland and with the County Commissioners of Cumberland County and published in "The Portland Press Herald" a newspaper of general circulation in the County where said highway is located, and also directs that a copy of the Right-of-Way Map be filed with the County Commissioners of said County and also that Notice be sent by Certified Mail to any Owners and Mortgagees of Record.

Dated at Augusta, Maine

12/10/19
Date

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

Bruce A. Van Note, Commissioner

STATE OF MAINE
COUNTY OF KENNEBEC

Date December 18, 2019

Personally appeared the above named Bruce A. Van Note, Commissioner, Department of Transportation, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the State of Maine.

Before me, Shelly Wood
Notary Public
Print Name:
My Commission Expires:

SHELLY WOOD
NOTARY PUBLIC
KENNEBEC COUNTY
MAINE
MY COMMISSION EXPIRES DECEMBER 26, 2025

APPROVED BY
AWARDED BY
CONCURRED
NOTED
COMMISSIONER OF TRANSPORTATION
12/18/19
DATE

SHELLY WOOD
NOTARY PUBLIC
KENNEBEC COUNTY
MAINE
MY COMMISSION EXPIRES DECEMBER 26, 2025

LAND EXCHANGE AGREEMENT
BETWEEN
CITY OF PORTLAND AND
THE UNIVERSITY OF MAINE SYSTEM

THIS AGREEMENT is made this 12th day of March, 2018 between the City of Portland, a body politic and corporate with a mailing address of 389 Congress Street, Portland, Maine 04101("City"), and the University of Maine System, acting through the University of Southern Maine, with a mailing address of, 5703 Alumni Hall, Orono, Maine 04469 ("University").

RECITALS

Whereas, by Order 26-13/14 dated August 5, 2013, the City approved the Brighton-Deering-Falmouth Intersection Study as a Master Plan in substantially the form included in a certain August 2013 Final Report prepared by Vanasse Hangen Brustlin, Inc. (the "Report"); and

Whereas, the City, through a separate agreement with the Maine Department of Transportation, desires to construct, operate, and maintain a proposed roundabout at the intersection of Brighton Avenue/Deering Avenue/Falmouth Street (the "Project") as generally depicted sheet 1 of the plan entitled State of Maine Department of Transportation Right Of Way Map, Project No._____, dated July 2017, a copy of which is attached hereto as Exhibit A and made a part hereof (the "Plan"); and

Whereas, portions of the Project are to be constructed on land owned by the University, which land is depicted on the Plan as Parcel No. (7) and Parcel No. (8) and more particularly described in Exhibits B and C attached hereto and made a part hereof, and which the University shall convey to the City pursuant to the terms of this Agreement; and

Whereas, in exchange for such conveyances, the City shall pursue the discontinuance of the green shaded portion of Brighton Avenue between Falmouth Street and Bedford Street on sheet 2 of the Plan, which portion is more particularly described in D attached hereto and made a part hereof (the "Brighton Avenue Land"), and convey the City's interest in the Brighton Avenue Land to the University.

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, City and University hereby agree as follows:

1. Conveyance of University Property to City. For the sum of one dollar and other valuable consideration,

    a. The University will convey to City the parcel of land depicted on Exhibit A as Parcel No. (7), which parcel contains approximately 4,513 square feet and is a portion of property conveyed to the University of Maine by deeds recorded in

the Cumberland County Registry of Deeds in Book 3047, Page 354; Book 3053, Page 326; Book 3056, Page 504; and Book 3079, Page 537.

b. The University will convey to City the parcel of land depicted on Exhibit A as Parcel No. (8), which parcel contains approximately 1,099 square feet and is a portion of property conveyed to the University of Maine by deed recorded in the Cumberland County Registry of Deeds in Book 2370, Page 135. Parcels No. (7) and (8) are referred to herein as the "University Property."

c. In the event that updates to the plan require adjustments to the descriptions of the University Property described in Exhibits B & C, the parties shall agree on revised on descriptions to be included in the deed conveying the University Property to the City.

2. Discontinuance of Brighton Avenue Land; Conveyance of City Property to University.

a. Upon completion of the Project, and subject to the State lifting its state highway designation and the reversion of jurisdiction to the City, and subject to the City obtaining all other necessary approvals, the City will discontinue the "Brighton Avenue Land" subject to any utility easements of record and a utility easement and public easement to be retained by the City. Provided that the City discontinues the Brighton Avenue Land, the University shall waive its right to any damages resulting from the discontinuance.

b. Within 180 days after completion of the Project, and provided that the City Council has discontinued the Brighton Avenue Land and any applicable appeal periods have passed, the City shall convey to the University, by municipal quitclaim deed, its interest in the Brighton Avenue Land (the "City Property").

c. Subject to the provisions of section 9 below, in the event that the City does not discontinue the Brighton Avenue Land and convey its interest in the Brighton Avenue Land land to the University: (1) the City will hire a licensed appraiser, to be agreed upon by the parties, to prepare an appraisal report for the University Property at the City's expense; and (2) within 30 days of receipt of the appraiser's final report, the City will pay the University the appraised value of the University Property.

3. Title And Due Diligence.

a. Each party will have from the date first set forth above (the "Effective Date") until 4:00 PM Eastern Daylight Savings Time on the day that is ninety (90) days after the Effective Date (the "Due Diligence Period") to complete any survey, environmental review and title examinations, and to undertake such other investigations, testing or inspections as it shall deem appropriate.

b. During the Due Diligence Period, the University agrees to provide the City with open access, during normal business hours, to any and all of the University's files containing information about the University Property, including, without limitation, reports on soil conditions or other kinds of technical reports regarding the University Property, any information related to infrastructure on the University Property or infrastructure agreements and any information regarding restrictions, covenants or conditions affecting the University Property or the City's intended use of the University Property for roundabout purposes.

c. Each party will have until the end of the Due Diligence Period to deliver to the other any written objections to title, environmental, or survey matters that the party determines materially affects the use or the cost of development of or construction on the property. Objections not made prior to the end of the Due Diligence Period will be deemed waived; provided, however, that objections pertaining to matters of record first appearing after the end of the Due Diligence Period may be made at any time prior to the closing.

d. Option to Cure. In the event of a title, survey or environmental objection by a party, the conveying party will have the option, but not the obligation, to cure the objection and will notify other of its election within ten (10) business days after receipt of the objection. In the event that the conveying party elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the parties may agree, to cure the objection. In the event that the conveying party does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to the other's reasonable satisfaction, the objecting party will have the option to (1) terminate this Agreement, after which neither party will have any further obligation or liability to the other under this Agreement, (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so).

4. Conditions Precedent to Closing.

a. The City shall have no obligation to close on the transactions contemplated by this Agreement if the City decides, in its sole discretion, not to proceed with the construction of the Project. In the event the City decides not to proceed with the Project, this Agreement shall terminate and the parties shall have no further obligations to each other. Provided, however, that in the event that the City terminates this Agreement after the University has conveyed the University Property to the City, the City shall reconvey the University Property to the City as set forth in section 9(e).

5. University's Representations. The University represents to City that the following are true as of the date of this Agreement and will be true as of the dates of the City Property Closing and University Property Closing:

   a. It has full power and authority to enter into this Agreement and to carry out its obligations under this Agreement.

   b. This Agreement has been duly authorized, executed, and delivered and is a legal, valid, and binding agreement of University, enforceable in accordance with its terms, subject to the University of Maine System Board of Trustees approval. The execution, delivery, and performance of this Agreement by University will not violate any judgment or order applicable to University or University's instruments of organization, governance or operation, and will not result in any material breach of, or constitute a material default under, or result in the creation of any material lien, charge, security interest, or other encumbrance upon the University Property or any note, bond, indenture, mortgage, deed of trust, bank loan, or credit agreement to which University is a party or by which the University Property is bound.

   c. University has not received any written notice of any pending condemnation, violation of law, or other legal action of any kind materially and adversely affecting the University Property.

   d. University has no knowledge of any pending or threatened litigation, administrative action, or governmental investigation or examination (including, but not limited to, environmental investigations, examinations, claims, and demands) concerning the University Property.

   e. No third party has any right to acquire all or any part of the University Property.

6. City's Representations. City represents to the University that the following are true as of the date of this Agreement and will be true as of the dates of the City Property Closing and the University Property Closing:

   a. It has full power and authority to enter into this Agreement and to carry out its obligations under this Agreement.

   b. This Agreement has been duly authorized, executed, and delivered and is a legal, valid, and binding agreement of City, enforceable in accordance with its terms. The execution, delivery, and performance of this Agreement by City will not violate any judgment or order applicable to City or City's instruments of organization, governance or operation, and will not result in any material breach of, or constitute a material default under, or result in the creation of any material lien, charge, security interest, or other encumbrance upon the City Property or any note, bond, indenture, mortgage, deed of trust, bank loan,

or credit agreement to which City is a party or by which the City Property is bound.

c. City has not received any written notice of any pending condemnation, violation of law, or other legal action of any kind materially and adversely affecting the City Property.

d. University has no knowledge of any pending or threatened litigation, administrative action, or governmental investigation or examination (including, but not limited to, environmental investigations, examinations, claims, and demands) concerning the City Property.

7. Property Conveyed As Is, Where Is. Each party acknowledges that it will have an opportunity to inspect the property being conveyed to it, and to hire professionals to do so, and that the properties will be conveyed "as is, where is" and "with all faults." Neither party makes any representations or warranties with respect to the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the property, or as to the fitness of the property for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues, or the environmental, mechanical, or structural condition of the property. Acceptance by the parties of the respective deeds at the closings shall be deemed to be full performance and discharge by the conveying party of every agreement and obligation contained herein except as expressly set forth herein.

8. Closing For The University Property. Time is of the essence in the performance of this Agreement. The closing for the University Property shall be held at City Hall, 389 Congress Street, Portland, Maine at a time agreeable to the parties on or before the day that is 30 days after the end of the Due Diligence Period (the "University Property Closing Date"). At the Closing:

a. The University shall convey the University Property to City by quitclaim deed with covenant. Title shall be good and insurable title, free and clear of all liens and encumbrances except (i) easements described herein; (ii) easements for utilities servicing the property, and (iii) City ordinances.

b. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement, and for the City to obtain owners title insurance in form reasonably acceptable to the City.

c. Each party shall deliver to the other evidence, reasonably satisfactory to other's counsel, that the transaction has been approved by the parties' respective governing bodies, and that the individuals acting with respect to the Closing and executing documents on behalf the parties are authorized to do so.

d. The recording fee for the deed of conveyance shall be paid for by the City.

9. Closing For The City Property. Subject to the provisions of section 2 above, the closing for the City Property shall be held at City Hall, 389 Congress Street, Portland, Maine at a time agreeable to the parties on or before the day that is 180 days after completion of the Project, provided that the City Council has discontinued the Brighton Avenue Land and any applicable appeal periods have passed. At the closing:

   a. The City shall convey the City Property to the University by municipal quitclaim deed. Title shall be good and insurable title, free and clear of all liens and encumbrances except (i) the public and utility easements retained by the City; (ii) easements for utilities servicing the property, and (iii) City ordinances.

   b. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement, and for the University to obtain owners title insurance in form reasonably acceptable to the University.

   c. Each party shall deliver to the other evidence, reasonably satisfactory to other's counsel, that the transaction has been approved by the parties' respective governing bodies, and that the individuals acting with respect to the Closing and executing documents on behalf the parties are authorized to do so.

   d. The recording fee for the deed of conveyance shall be paid for by the University.

   e. Notwithstanding anything to the contrary herein, in the event that the City or the Maine Department of Transportation decide not to fund or otherwise proceed with the Project, the City shall have the right to reconvey the University Property to the University in lieu of making the payment described in section 2(c). The University will cooperate with the City in obtaining any regulatory approvals required for the reconveyance, which shall be obtained at the City's expense.

10. Post-Closing Matters:

   a. During construction of the Project, the University will cede its use of a 9,500 square foot parking lot adjacent to the Brighton Avenue Land (the "Brighton Avenue Parking Lot Property"), resulting in the elimination of 26 parking spaces. The Brighton Avenue Parking Lot Property will be graded, loamed, and seeded as part of the Project by the City and at no cost to the University. Title to this Brighton Avenue Parking Lot Property will remain in the

University. The parties shall enter into a separate license agreement to allow the City or its contractors to enter the University's land to perform such grading, loaming, and seeding and other work associated with the Project.

b. Subject to applicable zoning and land use regulations and any other applicable laws, rules and regulations, the University and the City will work cooperatively to create signage and landscaping for the Project.

c. While the streets are open during construction of the Project, the City will allow the University, at the University's sole expense, to update and replace various utility lines connecting the University's Law School with the core of the University Campus, provided that such work does not delay the Project schedule.

d. The University and the City will work cooperatively on the Project's construction schedule in order to minimize scheduling conflicts during major University and City events.

e. Subject to applicable zoning and land use regulations and any other applicable laws, rules, and regulations, the City will support the University in its efforts to locate parking spaces to replace the Brighton Avenue Parking Lot on other parcels within the University campus should the University choose to do so. All costs associated with replacing the Brighton Avenue Parking Lot will be borne by the University.

11. Miscellaneous.

a. This Agreement constitutes the entire agreement between the parties relating to the subject hereof, and any prior agreements pertaining thereto, whether oral or written, have been merged and integrated into this Agreement. No subsequent modification of any of the terms of this Agreement shall be valid, binding upon the parties or enforceable unless made in writing and signed by the parties.

b. Any obligations in this Agreement that by its terms are intended to be performed after termination or Closing shall survive the same.

c. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the recipient at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

For The City:	City of Portland ATTN: City Manager 389 Congress Street Portland, ME 04101
With a copy to:	The Office of the Corporation Counsel at the same address.
For The University:	M. F. Chip Gavin Chief Facilities Management and General Services Officer 25 Bedford Street Portland, ME 04101
With a copy to:	General Counsel Office 46 University Dr. Augusta ME, 04330

d. As an alternative to physical delivery, any signed document and written notice may be delivered in electronic form by facsimile or email. Documents with original signatures shall be provided upon request of any party.

e. This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. All parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

f. This contract shall be binding upon and inure to the benefit of the successors and assigns of the parties.

g. No waiver of any breach of any one or more of the conditions of this Agreement by either party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.

h. The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.

i. The City and Buyer each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.

j. This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

IN WITNESS WHEREOF, the said CITY OF PORTLAND has caused this Agreement to be signed and sealed by Jon P. Jennings, its City Manager, thereunto duly authorized, and UNIVERSITY OF MAINE SYSTEM has caused this Agreement to be signed and sealed by M.F. Chip Gavin, its Chief Facilities Management and General Services Officer, thereunto duly authorized, as of the day and date first above written.

CITY OF PORTLAND

Witness: _____ By: _____
Jon P. Jennings
Its City Manager

UNIVERSITY OF MAINE SYSTEM

Witness: _____ By: _____
M.F. Chip Gavin
Its Chief Facilities Management and General Services Officer

Approved as to form:

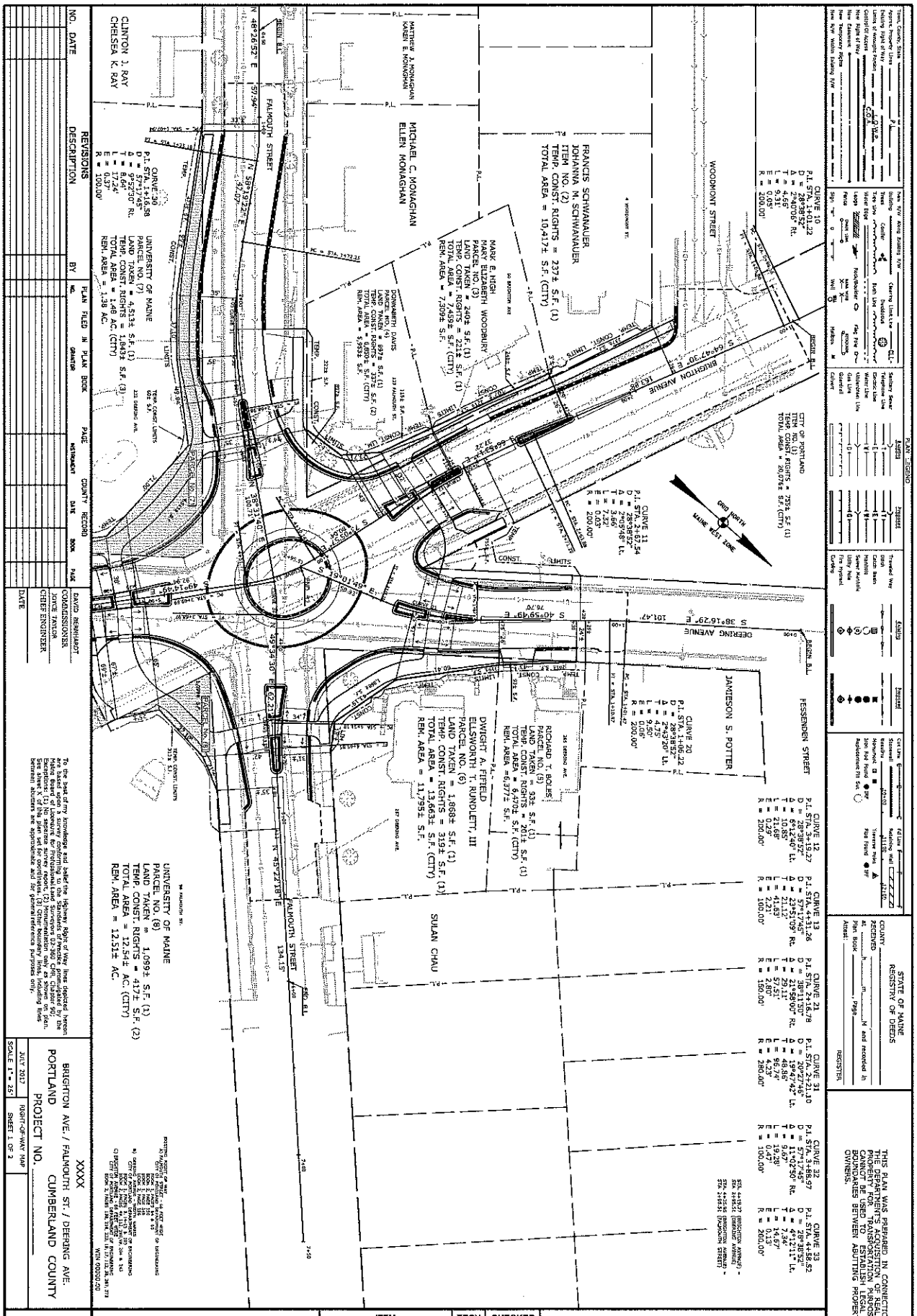
_____
City Corporation Counsel's Office

EXHIBIT A

(Copy of State of Maine Department of Transportation Right Of Way Map, Project No._____, dated July 2017)

Filename: ...\Microstation\001_RWPlan1.dgn Division: HIGHWAY Username: common Date: 9/15/2017

EXHIBIT A



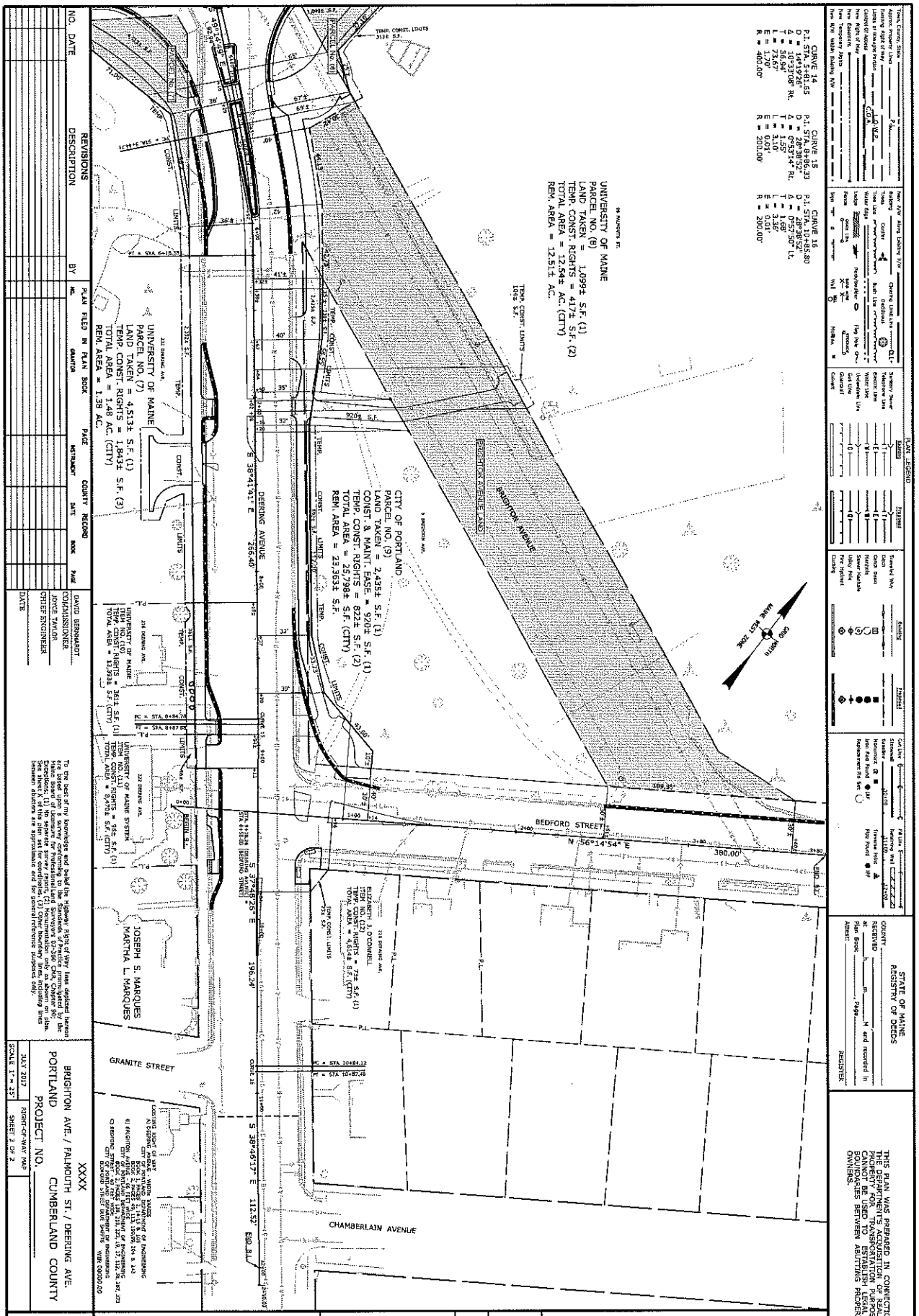

CURVE 14
P.I. STA. 5+81.55
D = 14°19'26"
T = 10.05'
L = 20.04'
R = 400.00'
CURVE 15
P.I. STA. 8+86.33
D = 28°38'52"
T = 102.34'
L = 199.97'
R = 400.00'
CURVE 16
P.I. STA. 10+85.80
D = 28°38'52"
T = 102.34'
L = 199.97'
R = 400.00'
99 HANCOCK ST.
UNIVERSITY OF MAINE
PARCEL NO. (6)
LAND TAKEN = 1,099± S.F. (1)
TEMP. CONST. RIGHTS = 417± S.F. (2)
TOTAL AREA = 12.54± AC. (CITY)
REM. AREA = 12.51± AC.
UNIVERSITY OF MAINE
PARCEL NO. (7)
LAND TAKEN = 4,513± S.F. (1)
TEMP. CONST. RIGHTS = 1,843± S.F. (3)
TOTAL AREA = 1.48 AC. (CITY)
REM. AREA = 1.38 AC.
CITY OF PORTLAND
PARCEL NO. (9)
LAND TAKEN = 2,435± S.F. (1)
CONST. & MAINT. EASE. = 920± S.F. (2)
TEMP. CONST. RIGHTS = 822± S.F. (2)
TOTAL AREA = 25,798± S.F. (CITY)
REM. AREA = 23,363± S.F.
BRIGHTON AVENUE
BRIGHTON AVENUE LAND
DEERING AVENUE
BEDFORD STREET
GRANITE STREET
CHAMBERLAIN AVENUE
JOSEPH S. MARQUES
MARTHA L. MARQUES
ELIZABETH J. O'CONNELL
ITEM NO. (12)
TEMP. CONST. RIGHTS = 756± S.F. (1)
TOTAL AREA = 0.65± S.F. (CITY)
UNIVERSITY OF MAINE SYSTEM
ITEM NO. (11)
TEMP. CONST. RIGHTS = 761± S.F. (1)
TOTAL AREA = 0.70± S.F. (CITY)
REM. AREA = 0.70± S.F.
UNIVERSITY OF MAINE
ITEM NO. (10)
TEMP. CONST. RIGHTS = 261± S.F. (1)
TOTAL AREA = 13,932± S.F. (CITY)
REM. AREA = 13,670± S.F.
N 56°14'54" E 380.00'
S 37°48'26" E 196.24'
S 38°45'17" E 112.52'
N 38°41'41" E 266.40'
309.31'
PLAN LEGEND
Boundary
Property
Existing
Proposed
Traveled Way
Curb
Catch Basin
Manhole
Sewer Manhole
Utility Pole
Pavement Cutting
Gas Line
Guardrail
Retaining Wall
Jaw Rod Found
Pipe Found
Monument Set
Transit Point
Pipe Found
Plan Book
Page
Address
REGISTER
STATE OF MAINE
REGISTRY OF DEEDS
COUNTY
RECEIVED
at
and recorded in
THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY INTERESTS. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.
REVISIONS
NO. DATE DESCRIPTION BY
PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD
GRANTOR INSTRUMENT DATE BOOK PAGE
DAVID BERNHARDT
COMMISSIONER
JOYCE TAYLOR
CHIEF ENGINEER
DATE
To the best of my knowledge and belief this Highway Right of Way lines depicted hereon are based upon a survey conforming to the Standards of Practice promulgated by the Board of Licensure for Professional Surveyors. Exceptions: (1) the separate survey report, (2) Monumentation only as shown on plan. See sheet X of this plan set for coordinates, (3) Other boundary lines, including lines between abutters are approximate and for general reference purposes only.
XXXX
BRIGHTON AVE. / FALMOUTH ST. / DEERING AVE.
PORTLAND
PROJECT NO.
CUMBERLAND COUNTY
JULY 2017
SCALE 1" = 25'
RIGHT-OF-WAY MAP
SHEET 2 OF 2
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
PORTLAND
RIGHT OF WAY MAP
SHEET NUMBER
2
OF 2
ITEM | TECH | CHECKED
EXISTING CONDITION PLAN | NSE | T.A.
FINAL RIGHT OF WAY | NSE | T.A.
AREAS | NSE | T.A.
PRELIMINARY PLAN

EXHIBIT B

Description of Parcel No. (7)

A certain lot or parcel of land located on the southeasterly side of Falmouth Street, southwesterly side of Brighton Avenue and the southwesterly side of Deering Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at point on the southeasterly sideline of Falmouth Street, said point of beginning being located N 48°34'53" E a distance of Sixty-Nine and 93/100 (69.93) feet from the intersection of the northeasterly sideline of Exeter Street with the southeasterly sideline of said Falmouth Street. Thence:

1. N 48°34'53" E by said Falmouth Street a distance of Two Hundred Forty-Three and 79/100 (243.79) feet to a point on the southerly sideline of Brighton Avenue;

2. S 67°27'04" E by said Brighton Avenue a distance of Eleven and 80/100 (11.80) feet to a point on the southwesterly sideline of Deering Avenue;

3. S 38°46'34" E by said Deering Avenue a distance of One Hundred Eleven and 32/100 (111.32) feet to a point;

4. N 47°34'40" W through land of the Grantor a distance of Sixty-Five and 82/100 (65.82) feet to a point;

5. N 88°45'17" W though said land of the Grantor a distance of Seventy-One and 00/100 (71.00) feet to a point;

6. S 40°44'35" W through said land of the Grantor a distance of Forty-Nine and 84/100 (49.84) feet to a point;

7. S 48°14'39" W through said land of the Grantor a distance of Thirty-Seven and 10/100 (37.10) feet to a point;

8. S 57°25'25" W through said land of the Grantor a distance of Ninety-Nine and 27/100 (99.27) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 4,513 square feet, more or less, and being a portion of property as described in deeds to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 3047, Page 354, Book 3053, Page 326, Book 3056, Page 504 and Book 3079, Page 537.

EXHIBIT C

Description of Parcel No. (8)

A certain lot or parcel of land located on the southeasterly side of Falmouth Street and the northeasterly side of Brighton Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at the intersection of the southeasterly sideline of Falmouth Street with the northeasterly sideline of Brighton Avenue. Thence:

1. N 45°03'56" E by said Falmouth Street a distance of Sixty-Seven and 91/100 (67.91) feet to a point;

2. S 25°30'06" W through land of the Grantor a distance of Twenty-One and 27/100 (21.27) feet to a point;

3. S 05°00'58" W through said land of the Grantor a distance of Thirty-Seven and 10/100 (37.10) feet to a point;

4. S 53°19'05" E through said land of the Grantor a distance of Twenty-Five and 06/100 (25.06) feet to the northeasterly sideline of said Brighton Avenue;

5. N 67°27'04" W by said Brighton Avenue a distance of Sixty and 39/100 (60.39) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 1,099 square feet, more or less, and being a portion of property as described in a deed to the University of Maine recorded in the Cumberland County Registry of Deeds in Book 2370, Page 135.

EXHIBIT D

Description of the Brighton Avenue Land

A certain portion of a right of way known as Brighton Avenue located in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at the intersection of the northeasterly side of Brighton Avenue with the northwesterly sideline of Bedford Street. Thence:

1. S 56°16'26" W by the northwesterly side of said Bedford Street a distance of One Hundred Nine and 35/100 (109.35) feet to a point at land now or formerly of the City of Portland as described in a deed recorded in the Cumberland County Registry of Deeds in Book 1290, Page 35;

2. N 67°27'04" W by said land of the City of Portland a distance of Three Hundred Thirty-Four and 98/100 (334.98) feet to a point;

3. N 38°17'00" W through said Brighton Avenue a distance of Forty-Two and 75/100 (42.75) feet to a point;

4. N 47°55'58" W through said Brighton Avenue a distance of Forty-Four and 13/100 (44.13) feet to a point;

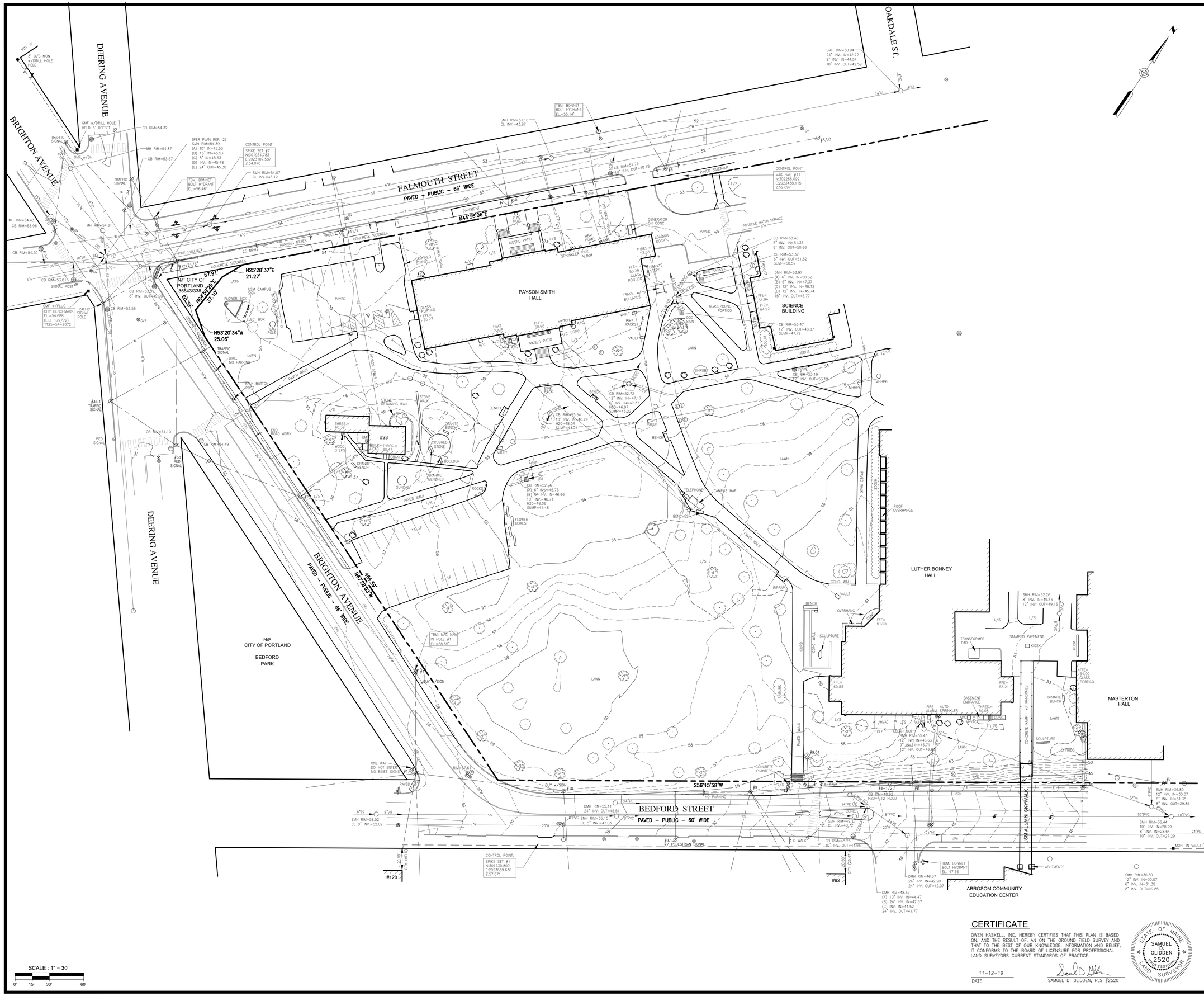
5. N 22°06'16" E through said Brighton Avenue a distance of Thirty and 42/100 (30.42) feet to a point on the northeasterly sideline of said Brighton Avenue and land now or formerly of the University of Maine as described in a deed recorded in said Registry in Book 2370, Page 135;

6. S 67°27'04" E by said land of the University of Maine a distance of Four Hundred Twenty-Eight and 19/100 (428.19) feet to a point;

7. N 84°24'41" E by said land of the University of Maine a distance of Fifty-Two and 91/100 (52.91) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

The above described parcel contains 27,587 square feet, more or less, and being a portion of Brighton Avenue.


DEERING AVENUE
BRIGHTON AVENUE
FALMOUTH STREET
PAVED – PUBLIC – 66' WIDE
OAKDALE ST.
N44°56'06"E
N25°28'37"E 21.27'
67.91'
N03°59'28"E 37.10'
60.78'
N53°20'34"W 25.06'
PAYSON SMITH HALL
SCIENCE BUILDING
LUTHER BONNEY HALL
MASTERTON HALL
ABROSOM COMMUNITY EDUCATION CENTER
USM ALUMNI SKYWALK
BEDFORD STREET
PAVED – PUBLIC – 60' WIDE
S56°15'58"W
N65°58'03"W 454.59'
BRIGHTON AVENUE
PAVED – PUBLIC – 66' WIDE
N/F CITY OF PORTLAND
BEDFORD PARK
N/F CITY OF PORTLAND 35543/338
USM CAMPUS SIGN
FLOWER BOX
ELEC. BOX
CROSSWALK
BIKE, NO PARKING
TRAFFIC SIGNAL
PAVED WALK
CONCRETE SIDEWALK
CRUSHED STONE
GRANITE BENCH
GRANITE BENCHES
BOULDER
ROCKS
STONE RETAINING WALL
STONE WALK
WOOD STEPS
GRANITE STEPS
GLASS PORTICO
GLASS/CONC. PORTICO
RAISED PATIO
HEAT PUMP
SPRINKLER FIRE ALARM
LOADING DOCK
BIKE RACKS
DOG SIGN
TRANS. w/ BOLLARDS
CONCRETE PLANTERS
RAMP
HEDGE
SHRUB
LAWN
SHRUBS
BENCH
VAULT
SCULPTURE
CONC. WALL
RIPRAP
OVERHANGS
ROOF OVERHANGS
TELEPHONE
CAMPUS MAP
FLOWER BOXES
TRANSFORMER PAD
STAMPED PAVEMENT
KIOSK
BASEMENT ENTRANCE
CONCRETE RAMP w/ HANDRAILS
GRANITE BENCH
FIRE ALARM
HVAC
CLEAN OUT
ABUTMENTS
ONE WAY DO NOT ENTER NO BIKES SIGN
GUY w/SIGN
X-WALK
#9 PEDESTRIAN SIGNAL
#23
#33.1 TRAFFIC SIGNAL
#32 PED. SIGNAL
#120
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Section 3 – Financial Capacity

The estimated cost of this project is between $56 million and $59 million. Attached is a copy of the University's commitment to fund the project.

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UNIVERSITY OF
SOUTHERN MAINE
Finance and Administration

October 31, 2022

Mr. Jonah DeWaters
Oak Point Associates
231 Main Street
Biddeford, ME 04005

Dear Mr. DeWaters:

The University of Southern Maine expects the Center for the Arts project to cost approximately $56 million to $59 million.

To fund the project, the University would utilize philanthropy and other University resources pursuant to approval by the University of Maine System Board of Trustees.

Thank you for your consideration.

Sincerely,

DocuSigned by:
Alexander E Porteous
73AFFEE3455845F...

Alexander E. Porteous
Chief Operation Officer & Chief Business Officer

Section 4 – Technical Ability

The University of Southern Maine (USM) is a public university with over 8,000 undergraduate and graduate students taking courses online and at campuses in Portland, Gorham, and Lewiston. Known for its academic excellence, student focus, and engagement with the community, USM provides students with hands-on experience that complements classroom learning and leads to employment opportunities in one of the nation's most desirable places to live. USM is a member of the University of Maine System, the State's largest educational enterprise that includes seven universities and an annual enrollment of nearly 30,000 students.

Oak Point Associates is a 75-employee, full-service interdisciplinary design and consulting organization providing a wide range of architectural, engineering, and planning services and an advantageous integrated design approach. These services include civil engineering, stormwater management design, municipal and state environmental permitting, and construction administration/management. With offices in Biddeford, Maine, and Portsmouth, New Hampshire, Oak Point Associates and has been serving the public and private sector for over 40 years. Our capabilities have been demonstrated through successful and award-winning projects for clients that include municipalities, universities and other educational institutions, state agencies, and private entities, as well as federal agencies such as the U.S. Navy, U.S. Fish and Wildlife Service, and U.S. General Services Administration.

Pfeiffer is a specialty design studio of Perkins Eastman providing architectural, interior design, programming, and master planning from locations in Los Angeles and New York City, supporting the firm's 24 offices. Our work is focused on new and existing educational and cultural buildings for non-profit, private and public clients. Fundamental to our design philosophy is our abiding sense of design as a collaborative undertaking. From this perspective, we approach each project without preconceived notions about style and aesthetics, responding uniquely to our client's ideas, site conditions, historic considerations and functional requirements.

Pfeiffer has planned and designed facilities for fine and performing arts for over 50 years. This work has spanned theaters of every shape and size for communities and academic institutions across the country and encompasses over five million square feet of space in projects ranging from feasibility studies to the renovation and reuse of existing facilities to design of new buildings for civic and academic use. Our architects, planners and interior designers have a particular passion for the arts and thrive on creating unique yet functional spaces for teaching, learning, production and design, practice, and performance.

Section 5 – Noise

The building will be constructed to minimize the amount of interior noise that can be heard outside through the use of thick glazing and acoustical door assemblies. Further, exterior noise-producing mechanical equipment will be minimal, and it will be mounted on the roof. The building will not have a standby generator.

Exceptions to this may include outdoor concerts and after-hours events, which will be in accordance with the City's written requirements. Further, USM has a strong relationship with the neighboring properties, which gives the neighbors the ability to communicate directly with University officials in the event they are dissatisfied with the noise levels.

The farmhouse is also not anticipated to create a noticeable increase in noise. Mechanical equipment consisting of a condensing unit for a heat pump will be building-mounted above the roof of the connector between the existing building and the addition.

Prior to occupancy, noise generated during construction activities for both parts of the project will be in accordance with the City's noise requirements.

Section 6 – Visual Quality and Scenic Character

The proposed buildings have been sited and designed to be consistent with other buildings on the campus and to meet the City's requirements for the USM Overlay Zone. It is not anticipated that the buildings and site amenities will result in negative or inconsistent visual impacts to the campus.

Section 7 – Wildlife and Fisheries

The project area has been previously developed, and it does not contain wetlands or other significant natural features. Like the previously approved parking garage project, this project site is within the zone for the Northern Long-Eared Bat. This project involves very little tree clearing, and it is not anticipated to have an impact on the Northern Long-Eared Bat species. Correspondence from the US Fish and Wildlife Service and the Maine Department of Inland Fisheries and Wildlife is included in this section.

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

In Reply Refer To:
Project Code: 2023-0015382
Project Name: USM CFA and Farmhouse

November 14, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The 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 website 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/or 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 and/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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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 Code 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:

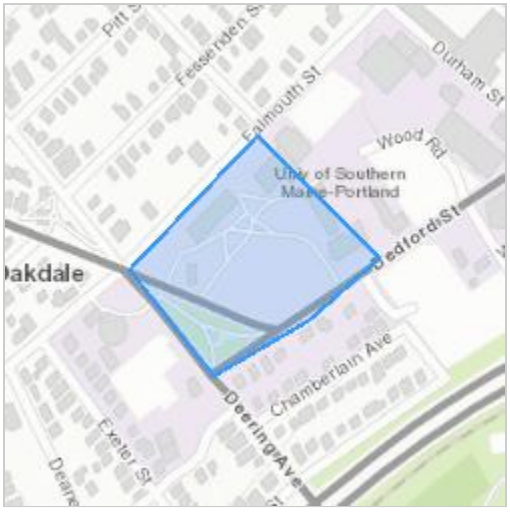
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Project Code: 2023-0015382
Project Name: USM CFA and Farmhouse
Project Type: Commercial Development
Project Description: Construction of Center for the Arts Building and Relocation of existing farmhouse

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.66184115,-70.27700297721564,14z



Counties: Cumberland County, Maine

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Oak Point Associates
Name: Jonah DeWaters
Address: 231 Main Street
City: Biddeford
State: ME
Zip: 04005
Email jdewaters@oakpoint.com
Phone: 2078314728

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

November 14, 2022

Allison Dimatteo
Oak Point Associates
231 Main Street
Biddeford, ME 04005

RE: Information Request – USM Center for Performing Arts Project, Portland

Dear Allison:

Per your request received on November 10, 2022, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *USM Center for Performing Arts* project in Portland.

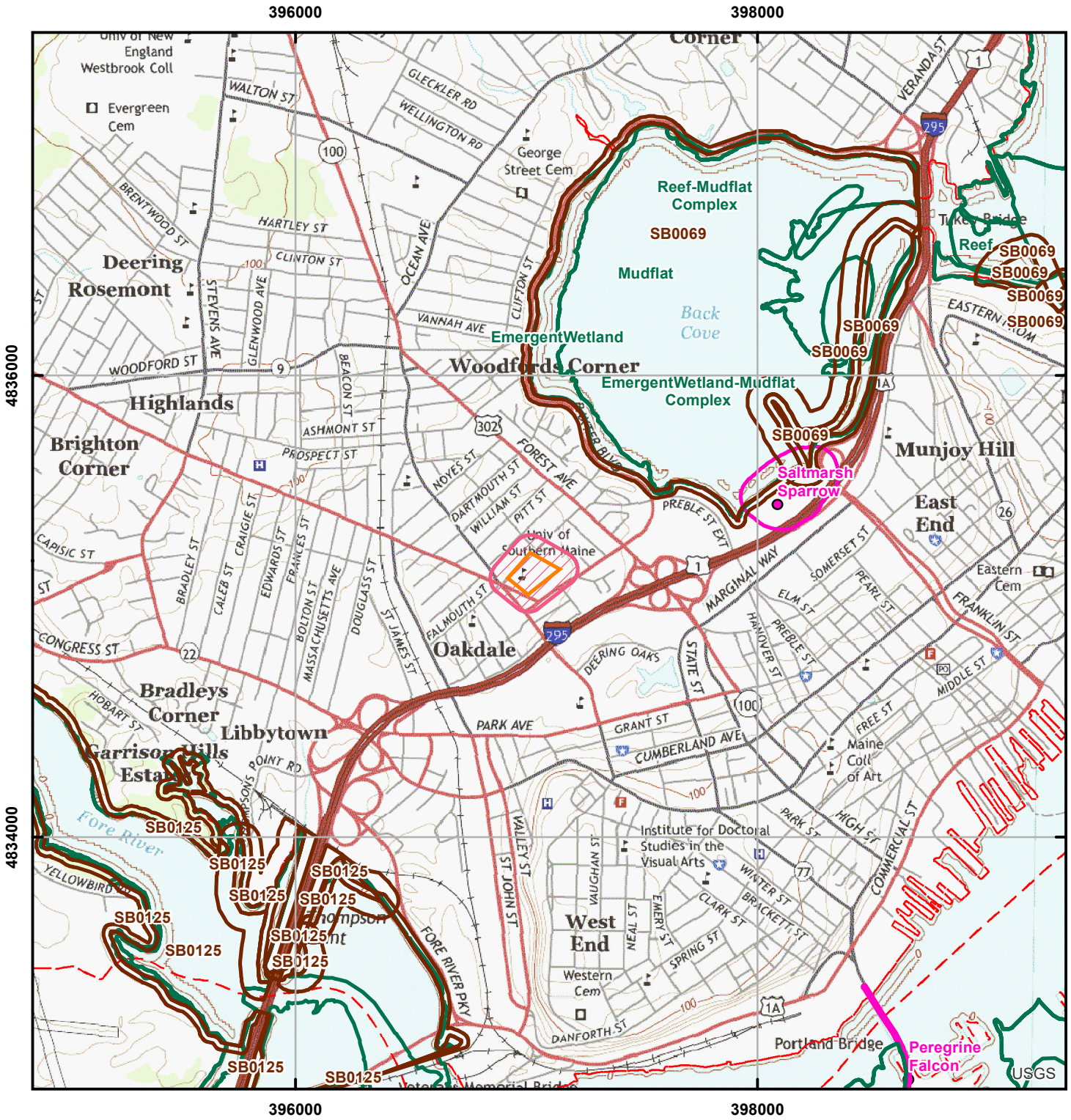
Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats or inland fisheries habitats that would be directly affected by your project.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

Becca Settele
Wildlife Biologist



Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: USM Center for Performing Arts, Portland (Version 1)

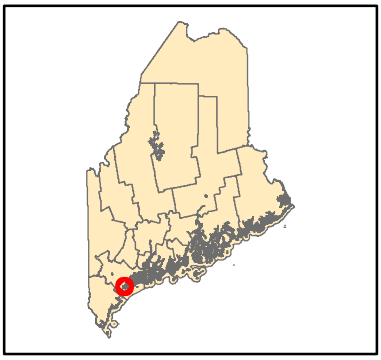
Maine Department of Inland Fisheries and Wildlife

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Projection: UTM, NAD83, Zone 19N

Date: 11/15/2022

- ProjectSearchAreas - All Versions
- Maine Cliff and Talus Areas
- Deer Winter Area
- LUPC p-fw
- Cooperative DWAs
- Seabird Nesting Islands
- Shorebird Areas
- Inland Waterfowl and Wading Bird
- 2008 Iwwh - Shoreland Zoning
- Tidal Waterfowl and Wading Bird
- Significant Vernal Pools
- Environmental Review Polygons
- Roseate Tern
- Piping Plover and Least Tern
- Aquatic ETSc - 2.5 mi review
- Rare Mussels - 5 mi review
- Maine Heritage Fish Waters
- Arctic Charr Habitat
- Redfin Pickerel and Swamp Darter Habitats - buffer100ft
- Special Concern occupied habitats - 100ft buffer
- Wild Lake Trout Habitats



Section 8 – Historic Sites

The existing Deering Farmhouse was identified as potentially endangered by Greater Portland Landmarks in its 2019 annual list of “Places in Peril.” However, the City of Portland’s Historic Preservation Department has determined that special review of the project by the State Historic Preservation Office is not required. Instead, the project team has worked closely with Evan Schueckler in the City’s Historic Preservation Department to make sure that the building is relocated, renovated, and added on to in a way that remains sensitive to the historic nature of the original farmhouse building. A copy of the Historic Structures Report prepared by Kleinfelder has been provided to the City’s Historic Preservation Department.

Section 9 – Unusual Natural Areas

The site is previously developed, and there are no known unusual natural areas within the project area. The Maine Natural Areas Program was contacted about the project and did not identify any unusual natural areas on the site. A copy of their correspondence is included in this section.

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 16, 2022

Jonah DeWaters
Oak Point Associates
231 Main Street
Biddeford, ME 04005

Via email: jdewaters@gmail.com

Re: Rare and exemplary botanical features in proximity to: University of Southern Maine, Center for Performing Arts, Portland, Maine

Dear Mr. DeWaters:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received November 15, 2022 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. Based on the information in our files and the landscape context of this project, there is a low probability that rare or significant botanical features occur at this project location.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Section 10 – Buffers

The site is previously developed, and the project will result in very minimal tree removal. There are no existing or proposed buffers.

Section 11 – Soils

Soil Survey Report

A Class D Medium Intensity Soil Survey for the site was performed in fall 2022. A copy of the soil survey is attached in Appendix A of this section. As indicated in the survey, the soils in the vicinity of where the project will occur consist of the following:

- Hinckley loamy sand (3%-8% slopes, Hydrologic Soil Group A), abbreviated HIB
- Lyman-Tunbridge complex, rocky (0%-8% slopes, Hydrologic Soil Group D), abbreviated HrB

Geotechnical Investigation

Geotechnical evaluations were performed in December 2020 and November 2022. The investigations revealed that the soils on the site generally consist of topsoil overlying granular fill, which overlies sands and silts and probable bedrock. The bedrock surface encountered is generally at depths greater than 6', though there are some places within the building footprint where it was encountered at shallower depths. A copy of the report is attached in Appendix B of this section.

Hydric Soils

No hydric soils were identified on the site.

Appendix A – Class D Medium Intensity Soil Survey

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

USM CFA



November 7, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


70° 16' 47" W
70° 16' 28" W
43° 39' 46" N
43° 39' 37" N
396820
396860
396900
396940
396980
397020
397060
397100
397140
397180
397220
4835240
4835200
4835160
4835120
4835080
4835040
4835000
4834960
Deering
Falmouth St
25
Falmouth
Brighton
Bedford
Surrenden St
Cu
HrC
HrB
HrC
HIB
WmC
Soil Map may not be valid at this scale.
Map Scale: 1:2,000 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 25 50 100 150
Feet
0 50 100 200 300
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 19, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	0.0	0.0%
HlB	Hinckley loamy sand, 3 to 8 percent slopes	4.8	59.2%
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	3.0	37.0%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	0.2	2.6%
WmC	Windsor loamy sand, 8 to 15 percent slopes	0.1	1.2%
Totals for Area of Interest		**8.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

Cu—Cut and fill land

Map Unit Composition

Cut and fill land: 90 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cut And Fill Land

Typical profile

H1 - 0 to 65 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 20.00 in/hr)

Depth to water table: About 24 to 42 inches

Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

HlB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8

Elevation: 0 to 1,430 feet

Mean annual precipitation: 36 to 53 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash plains, eskers, moraines, kame terraces, kames, outwash terraces, outwash deltas

Landform position (two-dimensional): Summit, shoulder, backslope, footslope

Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread

Down-slope shape: Concave, convex, linear

Across-slope shape: Convex, linear, concave

Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 8 inches: loamy sand

Bw1 - 8 to 11 inches: gravelly loamy sand

Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cx
Elevation: 0 to 520 feet
Mean annual precipitation: 36 to 65 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lyman and similar soils: 50 percent
Tunbridge and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loam
E - 3 to 5 inches: fine sandy loam
Bhs - 5 to 7 inches: loam
Bs1 - 7 to 11 inches: loam
Bs2 - 11 to 18 inches: channery loam
R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 11 to 24 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144BY702ME - Shallow and Moderately-deep Till
Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
Oa - 3 to 5 inches: highly decomposed plant material
E - 5 to 8 inches: fine sandy loam
Bhs - 8 to 11 inches: fine sandy loam
Bs - 11 to 26 inches: fine sandy loam
BC - 26 to 28 inches: fine sandy loam
R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 41 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144BY702ME - Shallow and Moderately-deep Till
Hydric soil rating: No

HrC—Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cy
Elevation: 0 to 520 feet
Mean annual precipitation: 36 to 65 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Lyman and similar soils: 45 percent
Tunbridge and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loam
E - 3 to 5 inches: fine sandy loam
Bhs - 5 to 7 inches: loam
Bs1 - 7 to 11 inches: loam
Bs2 - 11 to 18 inches: channery loam
R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144BY702ME - Shallow and Moderately-deep Till
Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
Oa - 3 to 5 inches: highly decomposed plant material
E - 5 to 8 inches: fine sandy loam
Bhs - 8 to 11 inches: fine sandy loam
Bs - 11 to 26 inches: fine sandy loam
BC - 26 to 28 inches: fine sandy loam
R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 41 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144BY702ME - Shallow and Moderately-deep Till
Hydric soil rating: No

WmC—Windsor loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svkq
Elevation: 0 to 1,260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Windsor and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor

Setting

Landform: — error in exists on —
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, riser
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
Ap - 1 to 11 inches: loamy sand
Bw - 11 to 31 inches: loamy sand
C - 31 to 65 inches: sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Soil Physical Properties

This folder contains a collection of tabular reports that present soil physical properties. The reports (tables) include all selected map units and components for each map unit. Soil physical properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Engineering Properties (USM CFA)

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission

rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

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

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

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

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

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
Cu—Cut and fill land														
Cut and fill land	90		0-65	Very gravelly sandy loam	GM, GP, ML, SM	A-4, A-3, A-2, A-1	—	0-15- 30	25-63-100	20-60-100	10-50-90	2-41- 80	15-25 -35	NP-5 -10

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
HlB—Hinckley loamy sand, 3 to 8 percent slopes														
Hinckley	85	A	0-1	Highly decomposed plant material, slightly decomposed plant material, moderately decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			1-8	Very gravelly sandy loam, loamy fine sand, very fine sandy loam, sandy loam, coarse sandy loam, loamy sand, loamy coarse sand, fine sandy loam, gravelly loamy sand	GM, GW-GM, SM, SW-SM, SP-SM, GP-GM	A-3, A-1-a, A-2-4, A-1-b	0- 0- 3	0- 0- 37	50-86-100	37-78-92	25-61-78	7-20- 32	0-0 -59	NP-0 -2
			8-11	Cobbly loamy coarse sand, loamy sand, gravelly loamy sand, sand, very gravelly sandy loam, coarse sandy loam, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam	SM, GW-GM, GP-GM, GM, SW-SM, SP-SM	A-2-4, A-1-a, A-1-b, A-3	0- 0- 3	0- 0- 37	51-78-100	38-71-92	25-55-78	7-18- 32	0-0 -21	NP-0 -2

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
			11-16	Cobbly loamy coarse sand, loamy fine sand, extremely gravelly coarse sand, loamy sand, sand, gravelly loamy sand, loamy coarse sand	GP-GM, GM, SW-SM, SP-SM, SM, GW-GM	A-2-4, A-1-a, A-1-b, A-3	0- 0- 3	0- 0- 34	45-73-100	31-66-92	20-51-77	5-17- 31	0-0 -18	NP-0 -2
			16-19	Cobbly loamy coarse sand, loamy fine sand, extremely gravelly coarse sand, loamy sand, sand, loamy coarse sand, extremely cobbly loamy coarse sand, very gravelly sand, very gravelly loamy sand	SP-SM, GW-GM, GP-GM, GM, SW-SM, SM, GW, GP, SW, SP	A-2-4, A-1-b, A-3, A-1-a	0- 0- 3	0- 0- 34	45-62-100	31-49-92	18-36-75	4- 9- 24	0-0 -14	NP
			19-65	Extremely gravelly coarse sand, extremely cobbly loamy coarse sand, very gravelly loamy coarse sand, extremely gravelly sand, very gravelly sand, stratified gravel to very gravelly sand	GW-GM, GP-GM, SW-SM, GW, SP-SM, SP, GP	A-1-a, A-1-b	0- 0- 5	7-12- 33	39-52-70	25-38-59	13-25-44	1- 3- 11	0-0 -14	NP

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky														
Lyman	50	D	0-1	Moderately decomposed plant material, highly decomposed plant material, slightly decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			1-3	Loam, fine sandy loam, very fine sandy loam, gravelly sandy loam	ML	A-4	0- 0- 28	0- 0- 18	55-100-100	53-100-100	38-82-90	22-55-62	0-35 -65	NP-3 -5
			3-5	Fine sandy loam, very fine sandy loam, loam, gravelly sandy loam	SC-SM	A-4	0- 0- 22	0- 0- 14	64-84-98	63-84-98	46-69-89	23-41-57	0-23 -34	NP-4 -6
			5-7	Gravelly sandy loam, loam, very fine sandy loam, fine sandy loam	SM	A-4	0- 0- 28	0- 0- 18	77-89-99	53-77-97	38-64-88	22-42-60	0-40 -76	NP-3 -5
			7-11	Loam, fine sandy loam, very fine sandy loam, gravelly sandy loam	SM	A-4	0- 0- 27	0- 0- 18	77-89-99	53-77-97	38-64-88	22-42-60	0-34 -61	NP-3 -5
			11-18	Channery loam, fine sandy loam, sandy loam, very fine sandy loam	SM	A-4	0- 0- 25	0-14- 30	52-84-99	50-83-99	36-69-89	21-46-61	0-26 -36	NP-4 -6

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
			18-79	Bedrock	—	—	—	—	—	—	—	—	—	—
Tunbridge	30	C	0-3	Moderately decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			3-5	Highly decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			5-8	Fine sandy loam, very fine sandy loam, loam, gravelly sandy loam	SC-SM	A-4	0- 0- 0	0- 8- 24	53-91-96	51-91-96	37-75-87	19-45-55	0-23 -34	NP-4 -6
			8-11	Loam, very fine sandy loam, fine sandy loam, gravelly sandy loam	SM	A-4	0- 0- 0	0- 4- 30	43-78-90	41-77-90	30-64-81	15-38-52	0-40 -76	NP-3 -5
			11-26	Very fine sandy loam, fine sandy loam, loam, gravelly sandy loam	SM	A-4	0- 0- 0	0- 6- 30	43-78-91	41-77-90	30-64-82	15-38-52	0-31 -60	NP-3 -5
			26-28	Fine sandy loam, very fine sandy loam, loam, gravelly sandy loam	SC-SM	A-4	0- 0- 0	0- 0- 25	52-91-91	50-91-91	36-75-83	19-45-53	0-21 -30	NP-4 -6
			28-79	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
HrC—Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky														
Lyman	45	D	0-1	Moderately decomposed plant material, highly decomposed plant material, slightly decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			1-3	Loam, fine sandy loam, very fine sandy loam, gravelly sandy loam	ML	A-4	0- 0- 28	0- 0- 18	55-100-100	53-100-100	38-82-90	22-55-62	0-35 -65	NP-3 -5
			3-5	Very fine sandy loam, loam, fine sandy loam, gravelly sandy loam	SC-SM	A-4	0- 0- 22	0- 0- 14	64-84-98	63-84-98	46-69-89	23-41-57	0-23 -34	NP-4 -6
			5-7	Fine sandy loam, very fine sandy loam, loam, gravelly sandy loam	SM	A-4	0- 0- 28	0- 0- 18	77-89-99	53-77-97	38-64-88	22-42-60	0-40 -76	NP-3 -5
			7-11	Loam, fine sandy loam, very fine sandy loam, gravelly sandy loam	SM	A-4	0- 0- 27	0- 0- 18	77-89-99	53-77-97	38-64-88	22-42-60	0-34 -61	NP-3 -5
			11-18	Fine sandy loam, channery loam, very fine sandy loam, sandy loam	SM	A-4	0- 0- 25	0-14- 30	52-84-99	50-83-99	36-69-89	21-46-61	0-26 -36	NP-4 -6

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
			18-79	Bedrock	—	—	—	—	—	—	—	—	—	—
Tunbridge	40	C	0-3	Moderately decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			3-5	Highly decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			5-8	Loam, fine sandy loam, very fine sandy loam, gravelly sandy loam	SC-SM	A-4	0- 0- 0	0- 8- 24	53-91-96	51-91-96	37-75-87	19-45-55	0-23 -34	NP-4 -6
			8-11	Gravelly sandy loam, fine sandy loam, loam, very fine sandy loam	SM	A-4	0- 0- 0	0- 4- 30	43-78-90	41-77-90	30-64-81	15-38-52	0-40 -76	NP-3 -5
			11-26	Very fine sandy loam, fine sandy loam, loam, gravelly sandy loam	SM	A-4	0- 0- 0	0- 6- 30	43-78-91	41-77-90	30-64-82	15-38-52	0-31 -60	NP-3 -5
			26-28	Fine sandy loam, very fine sandy loam, loam, gravelly sandy loam	SC-SM	A-4	0- 0- 0	0- 0- 25	52-91-91	50-91-91	36-75-83	19-45-53	0-21 -30	NP-4 -6
			28-79	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties–Cumberland County and Part of Oxford County, Maine														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
WmC—Windsor loamy sand, 8 to 15 percent slopes														
Windsor	85	A	0-1	Moderately decomposed plant material, highly decomposed plant material, slightly decomposed plant material	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			1-11	Loamy sand, loamy fine sand, fine sand, sand	SP-SM, SM, SW-SM	A-1, A-4, A-2-4, A-2	0- 0- 0	0- 0- 0	85-100-100	70-100-100	50-83-100	12-25-37	0-0 -30	NP-0 -2
			11-31	Loamy sand, loamy fine sand, coarse sand, loamy coarse sand, fine sand, sand	SP-SM, SM, SW-SM, SC-SM	A-2, A-2-4, A-4, A-1, A-3	0- 0- 0	0- 0- 0	86-100-100	72-100-100	45-75-98	10-22-36	0-0 -23	NP-0 -4
			31-65	Coarse sand, gravelly coarse sand, loamy fine sand, loamy sand, fine sand, sand	SC-SM, SW, SW-SM, SP-SM, SP, SM	A-3, A-1, A-2-4, A-2	0- 0- 0	0- 0- 0	81-100-100	63-100-100	40-78-100	4-12- 33	0-0 -20	NP-0 -4

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Appendix B – Geotechnical Information

Section 12 – Stormwater

Refer to the Stormwater Report included with the City of Portland Site Plan Review Application package for stormwater analysis and documentation of conformance with applicable MDEP requirements for stormwater discharge.

Section 13 – Urban Impaired Streams

The project is not located within an urban impaired stream watershed.

Section 14 – Basic Standards

Narrative

The proposed project will be conducted such that erosion and sedimentation is avoided. A site-specific Erosion and Sedimentation Control Plan, including notes, details and a schedule, has been prepared for this project and is shown on the drawings included with this application. It is anticipated that the project will begin in Spring 2023 and be completed in Summer 2025.

During construction and prior to the completion of permanent stabilization, the contractor will inspect disturbed and impervious areas, erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the parcel. These inspections must be performed at least once a week and before and after each storm event greater than 0.5 inch.

The erosion and sedimentation control measures for this project have been designed in accordance with the "Maine Erosion and Sediment Control Field Guide for Contractors". All work performed will be in general conformance with the practices presented in this reference. Drawings CD101 and CG101 include specific measures that will be implemented. In general, erosion and sedimentation control will consist of detaining and filtering runoff from disturbed areas prior to discharge to existing storm drain systems.

The following basic principles will be met by the erosion and sedimentation control plan for this project:

1. The extent of area exposed and its duration in this condition will be minimized to the extent practicable.
2. Erosion control practices and measures will be applied to prevent erosion and transport of any such sediment off site.
3. Perimeter control practices will be applied to protect disturbed areas from off-site runoff and to prevent sedimentation damage to downstream areas.
4. Runoff velocities will be kept low to minimize the potential for erosive activity.
5. During construction, maintenance, inspection, and follow-up efforts will be implemented and documented.

Soil Types

The project site is situated in a previously developed area. A Class D soil survey indicates that the area has the following soil classifications:

- Hinckley loamy sand (3%-8% slopes)
- Lyman-Tunbridge complex, rocky (0%-8% slopes)

Existing Erosion Problems

There are no existing on-site erosion problems.

Critical Areas

There are no critical areas on the site.

Protected Natural Resources

There are no wetlands or vernal pools within the project area.

Erosion and Sedimentation Control Measures

A site-specific Erosion and Sedimentation Control Plan, including plan, notes and details has been prepared for this project and is indicated on Drawings CD101, CG101, C-501 and C-502. Erosion and sediment control methods will meet current MEDEP standards.

Erosion control measures must be maintained for the life of the project and until permanent stabilization of the entire site is established. Permanent stabilization must consist of at least 90-percent vegetation or pavement.

Site Stabilization

All temporary erosion control measures will be maintained for the life of the project and until permanent stabilization of the entire site is established. Permanent stabilization must consist of at least 90-percent vegetation, pavement, gravel base or rip-rap.

Implementation Schedule

In general, the erosion control measures schedule is as follows:

Initial & Temporary Erosion Control Measures	Spring 2023
Stabilize Site for Winter	Fall (October) 2023 and 2024
Install Permanent Erosion Control Measures	Spring/Summer 2025

To minimize areas of exposed soil, continuation of earthwork operations on additional areas will not begin until the exposed surface on the area being worked has been stabilized. Final stabilization of the site is expected to be complete by summer 2025.

Following is a summary of the implementation schedule for the temporary and permanent erosion controls.

Item	Implementation Schedule
Silt Fence/Sediment Control Wattles	Install as first order of work and as necessary to control erosion from the work area.
Construction Entrance	Construct after installing silt fence and prior to earthwork operations.
Catch Basin Inlet Protection	Install same day that backfill is placed around structure.
Stabilization of Inactive Areas	Mulch areas that remain un-worked for more than 14 days and will be stabilized within 30 days.
Swales, Steep Slopes	Install riprap or erosion control blanket/netting (as indicated on drawings) the same day final grade is established.
Turf Establishment	Seed and mulch disturbed areas within 7 days of being brought to final grade.

The implementation schedule for all erosion control measures is identified on the Erosion Control Notes and Details Plans along with temporary, permanent, and winter stabilization measures. The contractor must install any additional measures which may be necessary to control erosion/sedimentation from the site dependent upon the actual site and weather conditions.

Maintenance measures will be applied as needed during the entire construction period. Before and after each rainfall, and at least once per week the site contractor will perform a visual inspection of all installed erosion control measures. The contractor will perform repairs as needed to allow continued proper functioning of the erosion control measures. As indicated on drawing C-501, the contractor will provide written documentation describing dates of inspection and necessary follow-up work to maintain erosion and sediment control measures meeting the requirements of this plan. See Maintenance of Common Facilities or Property in the Stormwater Report for maintenance and inspection requirements and sample inspection logs.

Erosion and Sediment Control Plan

Best Management Practices (BMP's) have been incorporated into the drainage design to provide for temporary erosion control during construction and permanent erosion control after construction is complete. All measures must be in accordance with "Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices (E&S-BMP Manual)." Erosion control measures are detailed on Drawings CD101, CG101, C-501 and C-502. Temporary measures to be used include the following:

- Silt fence/sediment control wattles downgrade of exposed soils
- Stabilized construction exit
- Temporary mulch or rip-rap on disturbed slopes

- Catch basin inlet protection
- Stabilization of inactive areas
- Construction phasing
- Erosion control blankets/netting or riprap in erosion-prone areas (e.g. steep slopes and vegetated ditches)

The Contractor is required to submit a dewatering plan for handling of dewatering water prior to discharge from the site and ensuring suspended clay and silt particles are not exported from the site. This plan is particularly important because some of the excavations will extend into the soft clay layer. Concrete wash water will not be released to the storm drain system, sewer systems, roadways, or other uncontained impervious surfaces.

Details and Specifications

Refer to Drawings CD101, CG101, C-501 and C-502 for Erosion and Sedimentation Plan and Details.

Stabilization Plan

Permanent stabilization measures to be used include the following:

- Erosion control blanket/netting or riprap on slopes 3:1 (horizontal:vertical) or steeper and where indicated
- Establishment of turf or mulch in all disturbed areas not otherwise stabilized

See drawing C-501 for requirements for temporary seeding, permanent seeding, sodding, temporary mulching, and permanent mulching.

Winter Construction Plan

See Drawing C-501 for winter construction period and required winter stabilization.

Third Party Inspections

If third party inspections are required, they must comply with the conditions of the "Special Condition for Third Party Inspection Program" as set forth by the DEP. The DEP will also be provided with the inspector's name, contact information and qualifications as well as an inspection schedule, reporting protocol, and contact information for the contractor responsible for erosion and sedimentation control.

Section 15 – Groundwater

The project is not anticipated to impact groundwater. It is not located within a significant sand and gravel aquifer; it will not use, discharge or otherwise extract any groundwater; and hazardous materials will not be stored within the project area.

Section 16 – Water Supply

Fire protection and domestic water will be connected to the existing 6-inch water main under Falmouth Street. The Portland Water District has reviewed and approved the proposed connection.

Section 17 – Wastewater Disposal

Wastewater disposal for the project will connected to the existing 8-inch sanitary sewer main under Bedford Street. A copy of the capacity application filed with the City is attached.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

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

Date: 12/2/2022

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

Site Address: 111 Bedford Street, Portland

Chart Block Lot Number: 114A A001001

Proposed Use: Center for the Arts/Classroom Bldg
Previous Use: Vacant
Existing Sanitary Flows: 0 GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
8" Sewer main beneath Bedford Street

Site Category

Commercial *(see part 4 below)*	✔
Industrial *(complete part 5 below)*	
Governmental	
Residential	
Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: Kevin Kraft Phone: 207-874-8430
Owner/Developer Name: University of Southern Maine, C/O Alexander Porteous
Owner/Developer Address: 246 Deering Avenue, Portland, ME 04102
Phone: (207) 780-4497 Fax: E-mail: alexander.porteous@maine.edu
Engineering Consultant Name: Jonah DeWaters, PE (Oak Point Associates)
Engineering Consultant Address: 231 Main Street, Biddeford, ME 04005
Phone: (207) 283-0193 Fax: (207) 283-4283 E-mail: jdewaters@oakpoint.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: 2,540 GPD
Peaking Factor/ Peak Times: Weekdays, Normal Business Hours (+/- 8am to 5pm)
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine,"*
"*Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, __ Other (specify)*
Handbook of Subsurface Wastewater Disposal in Maine

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

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

Flow Calculation (non-simultaneous use - uses do not occur at the same time)

USE 1 - Classroom use (Weekdays during normal business hours)

Code Flow (based on K-12 school use, no showers or cafeteria): 10 GPD per student, 12 GPD per staff

Student/Staff count: 230 Students, 20 Staff

Daily flow: 230 students x 10 GPD per student + 20 staff x 12 GPD per staff = **2,540 GPD**

USE 2 - Event use (Evenings/Weekends)

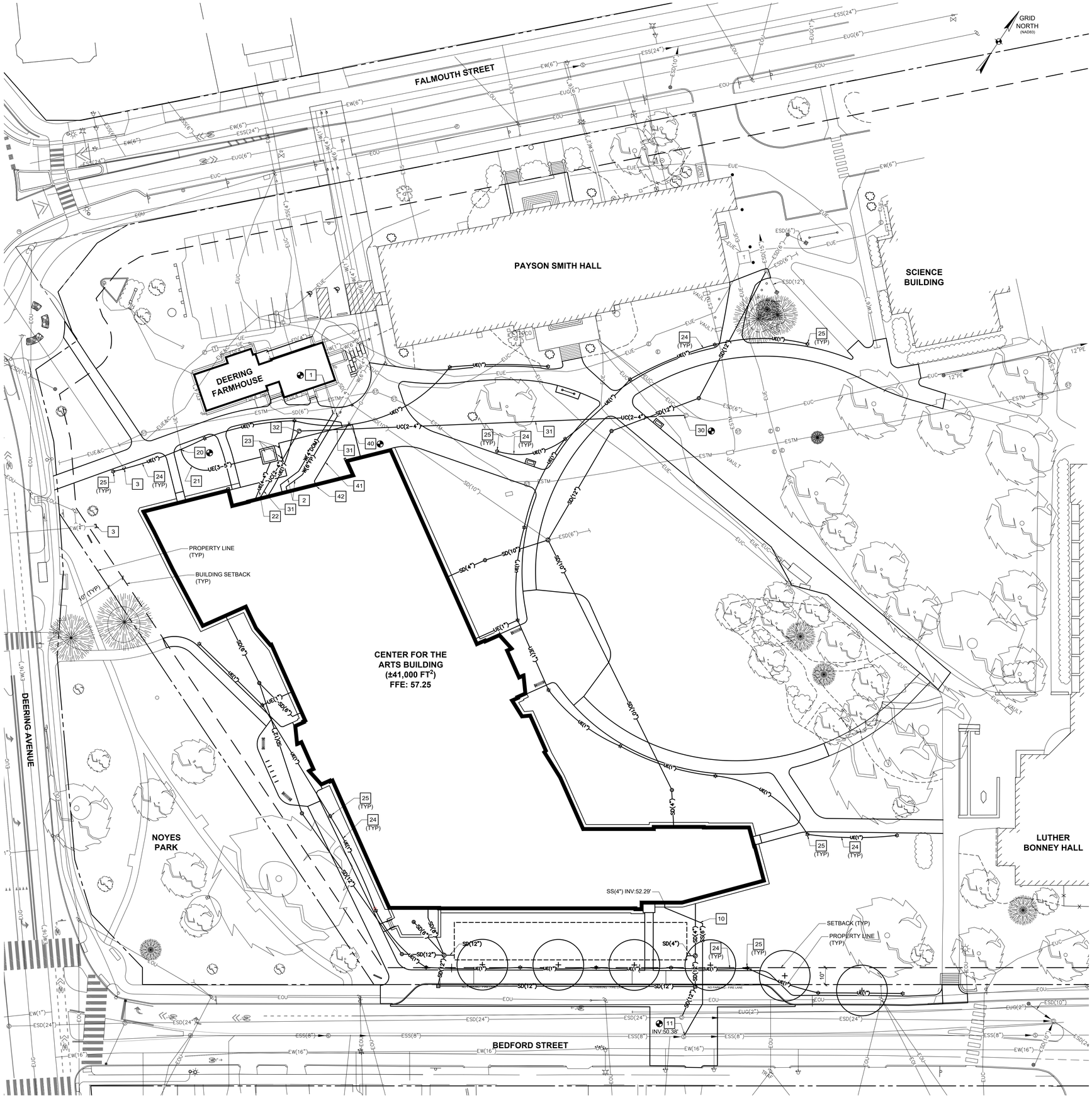
Code flow:
Assembly areas (no seats) = 2 GPD per person
Theater, Indoor = 5 GPD per seat plus 12 GPD per staff member

-Assembly space (Gallery) = 154 people

-Theater Space:
Performance Hall = 188 seats
Arts Lab (performance space) = 80 seats
Rehearsal Hall = 126 seats
Total Theater Seats = 394 Seats

Staff (assuming 5 staff per space) = 20 people

Daily Flow =
Assembly Space = 154 people x 2 GPD per person = 308 GPD
Theater Spaces = 394 seats x 5 GPD per seat = 1,970 GPD
Theater Staff = 5 staff x 12 GPD per staff = 60 GPD
Total Flow = **2,518 GPD**



1 CU101 UTILITY PLAN
SCALE: 1"=20'

NOTE: REFER TO SHEET CG101 FOR STORM DRAIN LINE INFORMATION.

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

KEYNOTES: (THIS SHEET ONLY)

1. CONNECT WATER LINE TO CAPPED END OF EXISTING WATER LINES (INSTALLED AS PART OF FARMHOUSE RELOCATION PROJECT).
2. WATER LINE IN PIPE TRENCH. SEE DETAIL 1/C-503
3. REMOVE PORTION OF EXISTING WATER MAIN AS NECESSARY TO FACILITATE BUILDING CONSTRUCTION AND UTILITY INSTALLATION. PLUG END OF PIPE TO REMAIN.
4 - 9. NOT USED THIS SHEET.
10. SEWER LINE IN PIPE TRENCH. SEE DETAIL 1/C-503
11. CORE HOLE IN EXISTING SEWER MANHOLE AND CONNECT SANITARY SEWER LINE. SEE DETAIL 2/C-503 (SIM)
12 - 19. NOT USED THIS SHEET.
20. CONNECT TO CAPPED END OF EXISTING CONDUIT (INSTALLED AS PART OF FARMHOUSE RELOCATION PROJECT).
21. PRIMARY ELECTRICAL LINES IN CONDUIT TRENCH. SEE DETAIL 6/C-503
22. SECONDARY ELECTRICAL LINES IN CONDUIT TRENCH. SEE DETAIL 5/C-503
23. TRANSFORMER ON 9' SQUARE TRANSFORMER PAD. PROVIDE BOLLARDS BETWEEN TRANSFORMER AND EDGE OF PAVEMENT. SEE DETAILS 9/C-502 AND 7/C-503
24. UNDERGROUND LIGHTING LINE IN CONDUIT TRENCH. SEE DETAIL 5/C-503
25. PRECAST CONCRETE LIGHTPOLE BASE. SEE DETAIL 8/C-503
26 - 29. NOT USED THIS SHEET.
30. CORE HOLE IN EXISTING COMMUNICATIONS MANHOLE AND CONNECT COMMUNICATIONS CONDUIT.
31. COMMUNICATIONS LINES IN CONDUIT TRENCH. SEE DETAIL 5/C-503
32. COMMUNICATIONS SPLICE BOX. SEE DETAIL 4/C-503
33 - 39. NOT USED THIS SHEET.
40. EXPOSE CAPPED END OF EXISTING CONDUIT (INSTALLED AS PART OF FARMHOUSE RELOCATION PROJECT) FOR CONNECTION OF GAS MAIN (TO BE PERFORMED BY UNITIL. COORDINATE TIMING OF EXCAVATION AND CONNECTION WITH UNITIL.
41. GAS LINE IN PIPE TRENCH. PIPING AND CONNECTIONS BY UNITIL. COORDINATE TIMING OF EXCAVATION WITH UNITIL. SEE DETAIL 1/C-503
42. BUILDING-MOUNTED GAS REGULATOR AND METER (BY UNITIL) WITH TWO 6" SCHEDULE 40 STEEL BOLLARDS. SEE DETAIL 9/C-502

UNIVERSITY OF SOUTHERN MAINE
CENTER FOR THE ARTS
Portland, Maine
CBL: 114A,A001001 (ZONE R5 W/ LISM OVERLAY)
Client:
University of Southern Maine
P.O. Box 9300
Portland, ME 04104

pfeiffer — A PERKINS EASTMAN STUDIO
PFEIFFER
700 SOUTH FLOWER STREET
SUITE 1150
LOS ANGELES, CA 90017
PHONE: 213.624.2775
FAX: 213.895.0923

OAK POINT ASSOCIATES architecture engineering planning
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, ME 04005
PHONE: 207.283.0193
FAX: 207.283.4283

LANDSCAPE ARCHITECT/
CIVIL/ STRUCTURAL/ MEP ENGINEER
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, ME 04005
PHONE: 207.283.0193

THEATRICAL:
THEATRE PROJECTS
47 WATER STREET
SOUTH NORWALK, CT 06854
PHONE: 203.299.0835

ACOUSTICS/ AUDIO-VISUAL:
JAFFE HOLDEN
114A WASHINGTON STREET
NORWALK, CT 06854
PHONE: 203.838.4167

LIGHTING:
CLINE BETTRIDGE BERNSTEIN
116 EAST 27TH STREET, 4TH FLOOR
NEW YORK, NY 10016
PHONE: 212.741.3280

COST CONSULTANT:
VENUE
226 5TH AVE N, SUITE 705
ST PETERSBURG, FL 33701
PHONE: 727.498.1091

SEAL:

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

UTILITY PLAN

SCALE: As indicated

CU101

PFEIFFER PARTNERS PROJECT NUMBER 6170.00

Section 18 – Solid Waste

Solid Waste Disposal

Solid waste and recyclable materials produced at the building will be disposed of in accordance with State and City requirements.

Once the project is completed, trash receptacles will be located in a room within the building near the loading zone, with recyclable and non-recyclable material separated into different containers. University maintenance staff will collect the trash daily and transport it to the McGoldrick Student Success Center where it will be placed into compactors (one for recycling and one for trash). Both trash and recycling are transported by Troiano Waste Services to the Ecomaine Facility in Portland, Maine.

Construction and Demolition Debris Disposal

The project timeline is such that construction is scheduled to begin in the Summer 2023 and finish by Summer 2025.

This project will include demolishing a portion of the existing Deering Farmhouse, removing existing asphalt concrete pavement, removing asphalt concrete and reinforced concrete sidewalks, clearing and grubbing of existing trees, removing of existing underground utilities and stripping of existing turf areas. The approximate anticipated amount of debris is as follows:

Building Demolition (non-hazardous building materials): +/- 250 CY

This waste shall be separated into recyclable and non-recyclable material. Recyclable material will be delivered to the applicable licensed recycling facility, such as Schnitzer Steel (metals) or Riverside Recycling (general recyclable materials, including plastic and other building materials) in Portland, Maine. Non-recyclable materials will be trucked to a licensed landfill (a list of probable landfills is located at the end of this section).

Asphalt Pavement/Concrete walks: +/- 200 CY

Asphalt pavement and asphalt curbing will be trucked off-site by the Contractor and recycled into new asphalt concrete pavement where possible. Recyclable asphalt materials will be delivered to the Pike Industries plant in Westbrook, Maine or another asphalt batch plant that is able to receive asphaltic materials for recycling. Reinforcing will be separated from concrete and recycled, and the remaining (non-hazardous) concrete material may be either recycled or ground up and mixed with other soil materials to be used as inert fill.

Miscellaneous Construction/Demolition Debris: +/- 200 CY

This waste shall be separated into recyclable and non-recyclable material. Recyclable material will be delivered to the applicable licensed recycling facility, such as Schnitzer Steel (metals) or Riverside Recycling (general recyclable materials, including plastic and other building materials) in Portland, Maine. Non-recyclable materials will be trucked to a licensed landfill (a list of probable landfills is located at the end of this section).

Wood waste (stumps, brush, etc.): +/- 50 CY

Wood waste shall not be permitted to be buried on site. Merchantable trees will be cut and removed from the site and sold as firewood, pulpwood, or saw logs, as applicable. The stumps are to be ground on-site and used for erosion control purposes. Brush and trees shall be either ground up on-site or trucked off-site by the contractor to a MDEP-permitted stump/wood waste disposal site, such as the sites listed at the end of this section. Excess grindings not used for erosion control purposes shall also be trucked off-site by the contractor to one of these sites or another MDEP-permitted stump/wood waste disposal site.

Topsoil/Screenings: +/- 450 CY

Existing topsoil will be processed on site and stockpiled to be reused as topsoil. Tailings and woody material not suitable for use as topsoil will be trucked off-site by the Contractor and disposed of at an MDEP-permitted stump/wood waste disposal site, such as those listed at the end of this section. Aggregate separated from the topsoil will be mixed with suitable material and re-used on site (where permitted) or trucked to offsite to a licensed soil stockpile facility.

Excavated Soil: +/- 8,000 CY

Excavated soil will be stored on site and reused as fill material. Excavated soil that is not suitable or not needed for use as fill material will be trucked off-site by the Contractor and delivered to a local gravel pit or soil storage area, where it can be blended with other soil material and used on future projects.

All other recyclable material will be recycled to the maximum extent practicable and non-recyclable material will be likely be disposed at one of the locations listed at the end of this section.

No burning or burial of construction demolition debris will be allowed on-site except as indicated above.

Because of the time frame for the project, it is difficult to estimate the amount of each type of debris that will be generated and exactly where it will be taken for disposal with enough accuracy to obtain letters from potential disposal sites. However, a list of likely solid waste disposal facilities is included at the end of this section. All waste shall be disposed of at the applicable MDEP licensed facility.

Non-Hazardous Waste Transport

It is anticipated that construction/demolition will be transported from the site by the contractor using trucks weighing not more than 26,000 lbs. If larger vehicles are used, the contractor shall be required to be a licensed transporter of non-hazardous waste or utilize an entity that possesses this license.

Hazardous Waste Disposal

Hazardous wastes will be removed and disposed of by qualified contractors. Hazardous waste encountered will be handled and disposed of in accordance with State and Federal regulations and will be disposed of at one of the special waste disposal facilities listed in this section. Hazardous waste anticipated to be present on the site will be from the demolition of the interior of the existing farmhouse, and it is assumed to consist of the following:

- Lead Paint +/- 1 cy
- An existing 275 gallon fuel oil tank in the basement of the farmhouse is slated to be removed as part of this project. The remaining oil in the tank will be pumped out and the tank will be removed in accordance with DEP regulations.

A hazardous material survey will be conducted within the farmhouse prior to the start of demolition. Hazardous materials noted during the survey will be handled and disposed of in accordance with State and Federal regulations and will be disposed of at one of the special waste disposal facilities listed in this section.

An environmental site assessment is being conducted for the site. It is not anticipated that any previous site uses that produced hazardous materials or are associated with soil contamination will be uncovered. However, similar to other redevelopment sites on the campus and within the city, the urban nature of the project increases the chances urban fill may be encountered. Should this occur, it will be classified as special waste and disposed of in accordance with State and Local regulations.

Active/Licensed Landfills
(Construction/Demolition Debris, Municipal Solid Waste, Hazardous Waste)

Regional Waste Systems Inc. (EcoMaine) 64 Blueberry Rd Portland, Maine 04102 (207) 773-6465
Turnkey Landfill 90 Rochester Neck Road Rochester, New Hampshire 03839
Juniper Ridge Landfill (Located in Old Town, ME) 38 State House Station Augusta, Maine 04333 (207) 394-4372
Waste Management Disposal Services of Maine - Crossroads PO Box 629 Norridgewock, Maine 04957 (207) 623-2714

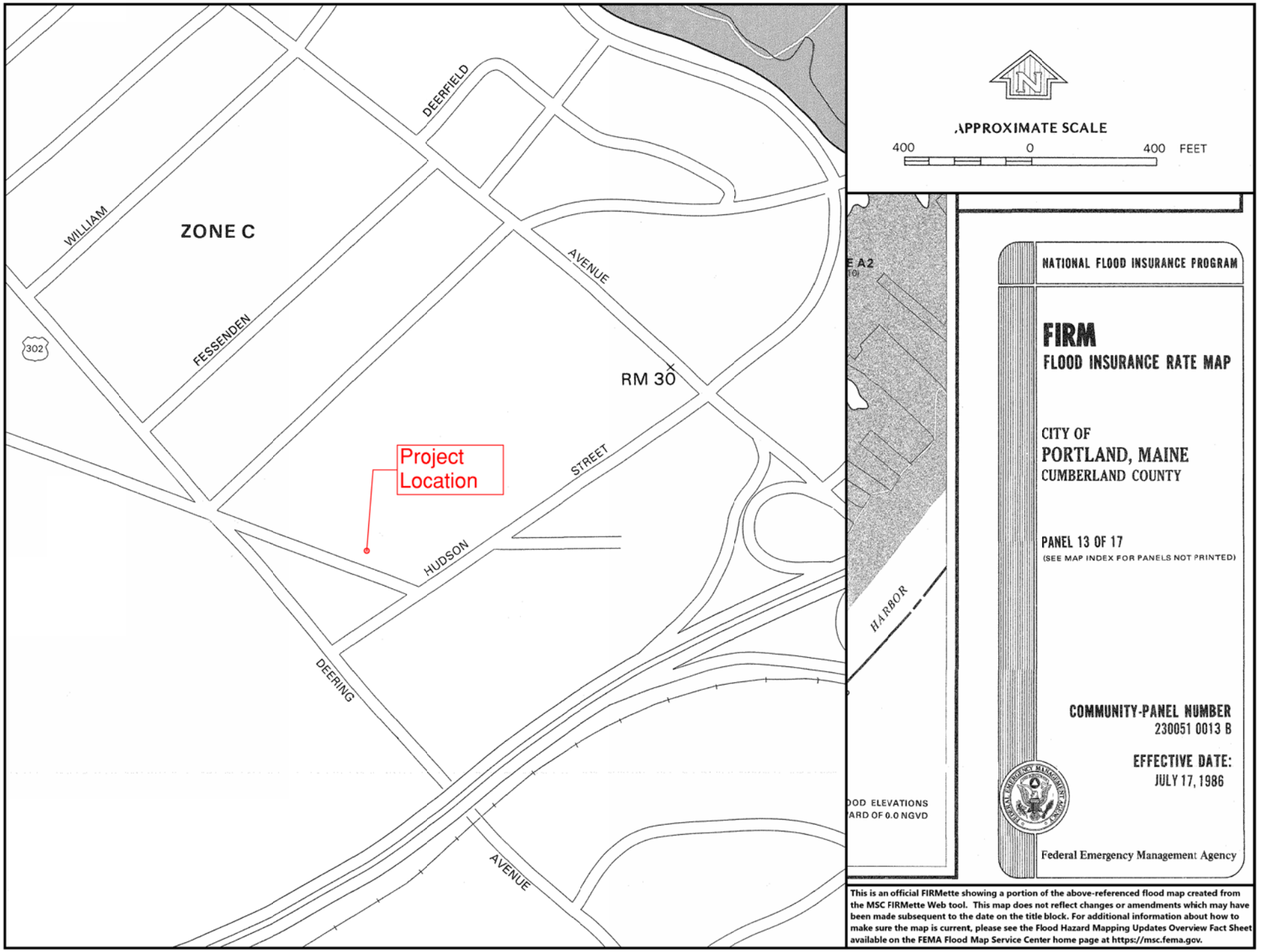
Likely Wood Waste and Aggregate Disposal Sites

Arundel Labbe Excavation, Inc PO Box 1111 Biddeford, Maine
Buxton Gorham Sand and Gravel 939 Parker Farm Rd, Buxton, ME 04093
Gorham Shaw Bros. PO Box 69 Gorham, Maine
Waterboro Dearborn Bros. 999 Narragansett Trail Buxton, Maine
Wells Brex Corporation 258 Maguire Road Kennebunk, Maine
Windham R.J. Grondin & Sons 11 Bartlett Road Gorham, Maine

Section 19 - Flooding

The development will not cause or increase flooding, nor will it cause any flood hazards to other structures

As indicated on the attached portion of FEMA flood zone map community panel 2300510031B, the site is outside the 0.2% annual chance floodplain (Zone X).


ZONE C
WILLIAM
DEERFIELD
AVENUE
FESSENDEN
302
RM 30
Project Location
STREET
HUDSON
DEERING
AVENUE
APPROXIMATE SCALE
400 0 400 FEET
E A2
HARBOR
OOD ELEVATIONS
ARD OF 0.0 NGVD
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 FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

Section 20 - Blasting

Due to the site's urban location, blasting will not be used on this project.

Section 21 – Air Emission

The only potential air emission point sources for the project are natural gas boilers for both the CFA and the farmhouse, which will have relatively low emissions. The University's existing air emissions permit will be updated to include the additional point sources.

Potential air emission non-point sources include emissions created by construction equipment, worker travel, and VOC emissions from building materials during construction as well as occupant travel to and from the facility once it is completed.

Section 25 – Notices

Because the City of Portland has Delegated Review Authority for this application, and notices are being sent to abutters by the City as part of the Major Site Plan Review Application being submitted at the same time as this application package. Therefore, this section is not applicable.



Department of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, Maine 04333
Telephone: 207-287-3901

FOR DEP USE **FORM A PAGE 1**
ATS # _____
L-_____
Total Fees: _____
Date: Received _____

****

SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION 38 M.R.SA. §§481-490

PLEASE TYPE OR PRINT IN *INK ONLY*

This application is for: (CHECK THE ONE THAT APPLIES)	☐ **20 acre development** ☐ **Planning Permit** ☐ **Metallic Mining**	☐ **Marine Oil Terminal** ☐ **Structure** ☐ **Subdivision**	☐ **Major Amendment** ■ **Minor Amendment**

1. Name of Applicant:	University of Southern Maine	**6. Name of Agent (if applicable):**	Jonah DeWaters, PE (OPA)
2. Applicant's Mailing Address:	25 Bedford Street, Portland, ME	**7. Agent's Mailing Address:**	231 Main Street, Biddeford, ME
3. Applicant's Daytime Phone #:	(207) 780-4177	**8. Agent's Daytime Phone # :**	(207) 283-0193
4. Applicant's Fax # (if available):	N/A	**9. Agent's Fax # (if available):**	(207) 283-4283
5. Applicant's *e-mail address* (REQUIRED -license will be sent via: e-mail):	john.souther@maine.edu	**10. Agent's *e-mail address* (REQUIRED - license will be sent via e-mail):**	jdewaters@oakpoint.com

PROJECT INFORMATION

11. Name of Development:	Center for the Arts						
12. Map and Lot #'s:	**Map #:** 114	**Lot #:** A001	**13. Deed Reference #'s:**		**Book #:** 29219	**Page #:** 218	
14. Location of Project City/Town:	Portland	**15. County:**	Cumberland	**16. UTM Northing**	4835062	**17. UTM Easting**	397022
18. Brief Description of Project including total parcel size:	Construction of a new Center for the Arts Building and associated site amenities on the southwest side of the campus near the intersections of Bedford Street and Deering Avenue						

19. Type of Direct Watershed: (Check all that apply)

☐ Lake not most at risk ☐ River, stream or brook ■ Coastal wetland
☐ Lake most at risk ☐ Urban impaired stream ☐ Wellhead or public water
☐ Lake most at risk, severely blooming ☐ Freshwater wetland

20. Name of Waterbody Project Site drains to:	Casco Bay		
21. Amount of Developed Area:	Total acres: 3.92	Existing Developed area: 3.92 acres	New Developed area: 0 acres
22. Amount of Impervious Area:	Total acres: 1.6	Existing Impervious areas 0.4 acres	New Impervious area: 1.6 acres (0.4 acre removed)

23. Development started prior to obtaining a license?:	☐ **Yes** ■ **No**		
24. .Development or any portion of the site subject to enforcement action?	☐ **Yes** ☐ **No**	**If yes**, name of enforcement staff involved?	
25. Common scheme of development?:	☐ **Yes** ☐ **No**	**26. Title, Right or Interest:**	■ **own** ☐ **lease** ☐ **purchase option** ☐ **written agreement**
27. Natural Resources Protection Act permit required?:	☐ **Yes** ☐ **No**	**If yes:** ☐ **PBR** ☐ **Tier 1** ☐ **Tier 2** ☐ **Full Permit**	
28. Existing DEP Permit number (if applicable):	L-20438-22-D-A		
29. Names of DEP staff person(s) present at the pre-application meeting:	N/A (reviewed and approved by the City of Portland)		
30. Does agent have an interest in project? If yes, what is the interest?	☐ **Yes** ■ **No**		

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

CERTIFICATIONS / SIGNATURES

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the electronic address located on the front page of this application (see #5 for the applicant and #10 for the agent)"..

Signed:_____ **Title** Cvil Engineer/Agent **Date:** 12/15/2022

Notice of Intent to Comply with Maine Construction General Permit	**With this Site Law application form and my signature, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.** **If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.** **Signed**_____ **Date:** 12/15/2022

NOTE: You must file a MCGP Notice of Termination (Form K) within 20 days of completing permanent stabilization of the project site.

CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for development approval is complete and accurate to the best of his/her knowledge.

Signature: _____

Name (print): Jonah DeWaters, PE

Date: 12/15/22

Re/Cert/Lic No.: _____
Engineer 12273 (Maine)
Geologist_____
Soil Scientist _____
Land Surveyor _____
Site Evaluator _____
Active Member of the Maine Bar _____
Professional Landscape Architect _____
Other_____

STORMWATER REPORT

University of Southern Maine

246 Deering Avenue, Portland, Maine

Center for the Arts
111 Bedford Street, Portland, Maine

Prepared For:

University of Southern Maine
25 Bedford Street
Portland, Maine

December 15, 2022
(REVISED February 23, 2023)



Prepared By:

OAK POINT ASSOCIATES
architecture
engineering
planning

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NARRATIVE

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POST-DEVELOPMENT RUNOFF CALCULATIONS (REVISED February 23, 2023) APPENDIX B

REDEVELOPMENT AND TREATMENT CALCULATIONS (REVISED February 23, 2023) APPENDIX C

Development Location

The new building will be located on the southwest edge of the USM campus, along Bedford Street and adjacent to Noyes Park. A portion of the building will be in the former Brighton Avenue roadway that was removed in 2021 as part of the Deering's Corner Roundabout project. The work in this application package consists of the relocation/addition of a small building, referred to as the Deering Farmhouse, and construction of the Center for the Arts (CFA) Building. Demolition is generally limited to topsoil stripping and removal of sidewalks necessary to accommodate the buildings and pedestrian circulation. A vehicular pull-off on Bedford Street is also proposed that will provide a drop-off area and fire department access for the Center for the Arts Building. Most of the work will occur on USM-owned property which has a total area of 29.33 acres including the portion of the Brighton Avenue right of way that is being conveyed to the University from the City. However, some grading will occur in Noyes Park, and the vehicular pull-off and some sidewalk work will occur in the Bedford Street right-of-way.

The project will result in a total disturbance of approximately 3.7 acres, including the removal of approximately 0.4 acres of impervious area and the creation of approximately 1.6 acres of impervious area (a net increase of approximately 1.2 acres). All construction will take place in previously developed areas. Additional information on developed area, disturbed area, and impervious area can be found in Appendix C of this section.

Surface Water on or abutting the Site

There is no surface water on or abutting the site.

General Topography

The site is situated along the southwest edge of the campus green on USM's Portland campus. It is generally bounded by Falmouth Street and the Science Building to the north, Luther Bonney Hall and Bedford Street to the east, Noyes Park to the south, and Falmouth Street and Payson Smith Hall to the west. The terrain on the site is generally rolling, with a mound/high point on its southeast side near Noyes Park and the former Bedford Street/Brighton Avenue intersection. The interior and northwest portions of the site impacted by this project drain to the northwest into a closed drainage system on campus, which flows into the combined sewer/storm drain line in Falmouth Street. The edges of the site along Noyes Park and Bedford Street drain south/southeast into the closed drainage systems in Deering Avenue and Bedford Street

The drainage areas affected by this project are indicated on Drawing WS101 ("Pre-Development Watershed Plan"), included in Appendix A of this section. As indicated on this drawing, there are two different discharge points within the project area:

DPA consists of runoff primarily from Noyes Park, the former Brighton Avenue right-of-way, and the portion of the USM campus bordering Bedford Street. The Noyes Park portion of this drainage area flows into the storm

drain system beneath Deering Avenue, which is connected to the storm drain system beneath Bedford Street. The remainder of the watershed drains overland to the southeast directly into the storm drain system beneath Bedford Street.

DPB consists mostly of the existing storm drain system that collects runoff from the campus green before flowing northwest into the combined sewer/storm drain line beneath Falmouth Street. This drainage area also includes the area around the parking lot adjacent to Payson Smith Hall, which flows into Falmouth Street and into catch basins in the street that are also connected to the combined sewer/storm drain line.

Flooding

Based on FEMA flood zone map community panel 2300510031B, the site is outside the 0.2% annual chance floodplain (Zone X), and no areas of significant flooding have been reported on the site.

Alterations to Natural Drainage ways

The project does not propose to alter any existing natural drainage ways.

Alterations to Land Cover

As see on the drawings in appendix C, the project proposed to change existing turfgrass and sidewalk areas to a combination of building roof, sidewalks, and turfgrass. The only paved area intended for normal vehicular use is a small pull-off between the building and Bedford Street.

Modeling Assumptions

Pre- and post-development runoff from the site has been modeled using the HydroCAD Stormwater Modeling System. The HydroCAD program is based largely on hydrology techniques developed by the Soil Conservation Service, primarily TR-55. In the HydroCAD Stormwater Model, it was assumed that all land cover types were in "good" condition as defined in U.S. Department of Agriculture Soil Conservation Services (SCS) publications. Additionally for stormwater modeling purposes, a maximum sheet flow distance of 100' and minimum Time of Concentration (TC) of three minutes were used.

Basic Standards

In accordance with the Maine Stormwater Management Rules (Chapter 500 and 502), the project requires compliance with the Basic Standards. This will be achieved through the use of Maine Erosion and Sedimentation Control Best Management Practices. The methods that will be used are described in Section 14 of the Site Location of Development Minor Amendment package and shown in detail on the included drawings. They include the following:

- Sediment barriers placed on the down-gradient of exposed soils
- Inlet protection on downstream structures
- Mulch or temporary seeding for temporary stabilization
- Erosion control blankets, netting, or riprap in erosion-prone areas (e.g. steep slopes and vegetated ditches)
- Excavation dewatering (silt bags or sediment ponds), for excavations below the groundwater elevation and in areas where groundwater is encountered.

General standards

In accordance with Maine Stormwater Management Rules (Chapter 500 and 502), the project must comply with the General Standards which include water quantity and water quality control. The standards will be achieved using Best Management Practices for Stormwater Management.

Stormwater Quantity (Flooding Standard)

Pre- and Post-development watershed models were developed for the work as indicated on Drawings WS101 and WS102. Copies of these drawings, as well as of the curve number, time of concentration, and peak discharge calculations can be found in Appendices A and B of this section. As indicated on these drawings, the primary measure being used to reduce post-development peak rates of runoff is an underdrained subsurface sand filter located between the building and Bedford Street.

The table below summarizes the pre- and post-development peak flow rates at the point of analysis for the project area depicted on the Watershed Plans. This table is also included on sheets WS101 and WS102.

Pre- and Post-Development Peak Runoff Rates (ft^3/s)

Discharge Point	2-Year Storm		10-Year Storm		25-Year Storm	
	Pre	Post	Pre	Post	Pre	Post
DP-A	1.1	1.2	2.3	2.8	3.7	4.3
DP-B	2.8	1.9	6.3	4.7	9.4	7.3
Total	3.8	2.9	8.4	6.9	12.7	10.8

As indicated on the above table, post-development peak runoff rates are less than the pre-development rates for the entire site and Discharge Point DP-B (Falmouth Street). Runoff rates to Discharge Point DP-A are larger due to the preference to direct runoff into the separated storm drainage system in Bedford Street instead of the combined sewer/storm drainage system in Falmouth Street. The City has confirmed that the storm drain line in Bedford Street has enough capacity to accommodate the slight increase in peak flows.

Pipe Sizing Calculations

Proposed drainage pipes have been designed to effectively convey runoff from the 25-year storm event without causing disruptions to the surrounding infrastructure (e.g. flooding at buildings or parking lots). Calculations are included in the post-development runoff calculations in Appendix B of this section.

Water Quality Treatment (Stormwater Quality)

The general (stormwater quality) standard for this project will be achieved using an underdrained subsurface sand filter located between the building and Bedford Street that collects runoff from the roof of the Center for the Arts building and small amount of the sidewalks and turf area on the south side of the Center for the Arts building. This treatment area drains into the storm drain line beneath Bedford Street.

A summary of the disturbed areas and the necessary treatment calculations can also be found in Appendix C of this section, and construction details for the treatment areas are included in the drawing set. As these calculations show, the required treatment is being calculated using the DEP's requirements for a "Redevelopment Project." Based on these calculations, at least 50% of the redevelopment area is being treated.

Pre-Treatment

The majority of the runoff flowing to the treatment area will be from the building roof, and the rest will be from sidewalks and turf areas. Because of this, the amount of pre-treatment required to remove pollutants from the runoff before it enters the treatment area will be minimal. The turf areas between the sidewalks and the storm drain structures will serve to remove sediment from runoff from the sidewalks, and the catch basins will contain 2' deep sumps to provide another level of protection for the treatment area. Also, there is not anticipated to be any sediment in the runoff from the roof. Even with these pre-treatment structures, the nature of the type of treatment being proposed area makes it extremely difficult to remove sediment that accumulates within it. Because of this, the treatment area also includes a MDEP-approved pre-treatment chamber row (Cultec R330-XLHD or similar) with a drain manhole access point on one end for cleaning and inspection.

Maps

See Sections 1 and 11 for USGS quad and Soils Maps.

Drainage Plans

See Appendices A and B of this Section.

Subsurface Investigation

Test pits were not specifically performed in the vicinity of the treatment area. However, due to the proximity of the treatment area to the building and street, an impermeable liner around the treatment area and underdraining around its perimeter are proposed.

Stormwater Maintenance / Inspection Plan

This Maintenance Plan has been prepared as part of the Maine Department of Environmental Protection MDEP Site Location of Development Permit Amendment Application. In accordance with the Site Location of Development Law, regular maintenance of the on-site stormwater facilities is required to ensure they are functioning as intended and to prevent re-suspension and transport of sediment to existing downstream watercourses.

Maintenance of the stormwater management system components will be the responsibility of the University of Southern Maine's facilities department. The University has a contract with Aqualis for maintenance of their stormwater treatment systems, and this system will be added to the contract once the project is complete. The person responsible for implementing the maintenance plan and coordinating maintenance procedures with contracted entities is as follows:

John M. Souther, Executive Director of Facilities Management
University of Southern Maine
25 Bedford Street
Portland, ME 04101
Phone: 207-780-4585 (Office), 207-805-4107 (cell)
Fax: 207-780-4538
Email: john.souther@maine.edu

Records of all stormwater facilities inspections and maintenance work accomplished must be kept on file, retained for a minimum period of five years and made available to the MDEP upon request. A sample maintenance log is attached.

During construction of the proposed treatment areas, inspection and maintenance of erosion and sedimentation control practices and stormwater treatment practices will be the responsibility of the contractor. Refer to the attached drawings for inspection and maintenance requirements during construction.

Facilities that will require regular maintenance after the project has been accepted by the City are listed below along with a description of the required maintenance. The specified maintenance tasks and schedule are intended to identify the minimum requirements. Additional maintenance may be required based on site specific conditions

Sweeping

Paved surfaces must be swept or vacuumed at least annually in the spring to remove all winter sand, and periodically during the year on an as-needed basis to minimize transportation of sediment during rainfall events.

Roadways and Parking Surfaces			
	Spring	Fall or Yearly	After a Major Storm
Clear accumulated winter sand in parking lots and along walkways.	X		
Sweep pavement to remove sediment.	X		
Ensure that stormwater is not impeded by accumulations of material.	X		

Vegetated Areas

Areas of maintained lawn are to be inspected regularly for signs of erosion and channelization. Areas where erosion is occurring or areas of sparse growth must be replanted and stabilized.

Vegetated Areas			
	Spring	Fall or Yearly	After a Major Storm
Inspect all slopes and embankments.	X		
Replant bare areas or areas with sparse growth.	X		
Armor areas with rill erosions with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows.	X		

Catch Basins

Catch basins must be inspected annually for debris and the accumulation of sediments. Large debris and debris blocking inlet grates must be removed immediately. Sediment accumulations must be removed when sediment reaches two thirds of the total volume of the sump. Vacuuming sediments from catch basins must be done by a vacuum truck. The removed material must be disposed of in accordance with Maine's Solid Waste Disposal Rules.

Catch Basin Systems				
	Spring	Fall or Yearly	After a Major Storm	As Needed
Inspect for accumulation of sediments		X		
Remove and legally dispose of accumulated sediments and debris from the bottom of the basin, inlet grates, inflow channels to the basin, and pipes between basins.				X
Inspect sumps annually and clean with vacuum pump when sediment occupies more than two thirds of the sump capacity. Clean drain lines when sediment occupies more than 20% of pipe diameter.	X	X		X

Ditches, Swales and Culverts				
	Spring	Fall or Yearly	After a Major Storm	As Needed
Inspect and remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.	X	X		X
Repair any erosion damage at the culvert's inlet and outlet.				X
Inspect after major rainfall event*. Repair erosion and sedimentation immediately			X	X

*A major storm event is classified as a rainfall total of 3.0 inches or more in a 24-hour period (a 2-year storm event).

Underdrained Subsurface Sand Filter

Requirements for engineering inspection of the underdrained subsurface sand filter during the construction phase are indicated on Drawing C-504.

The sand filter must be inspected after every major storm in the first year to ensure proper function. A ball valve located on the outlet of the underdrain piping in the outlet control structure can be adjusted to ensure that the filter drains slowly over a period of 24-48 hours. Thereafter, the filter must be inspected at least annually to ensure that it is draining within 48 hours following a one-inch storm or greater. Following storms that fill the system to overflow, the system must drain in no less than 48 hours.

Pre-Treatment – Underdrained subsurface sand filters

Regular inspection and cleaning of the primary treatment row is critical to ensure that the system functions properly. During the first year of service, the primary treatment row must be inspected every six months. The frequency of future inspections can be adjusted based on previous inspections, but the system must be inspected at least once a year. Inspections will be via a manhole on one end of the isolator row and inspection port risers installed during construction. Contractors performing the inspections and required maintenance must be OSHA certified for confined space entry. When sediment accumulations exceed 3", the sediment must be removed from the chambers using a manufacturer-approved high-pressure water sediment removal device (JetVac or similar).

Underdrained Subsurface Sand Filter					
	Initial Start-Up*	Spring	Fall or Yearly	After a Major Storm	As Needed
Inspect drain dry time (24-48 hours) after 1" or greater storm and adjust flow rate by adjusting ball valve.	X		X		
Inspect primary treatment row for accumulated sediment. Clean with manufacturer-approved high pressure water system when accumulated sediment reaches 3" or more. Inspect semiannually for first year of use an d at least annually thereafter.	X		X		X

*Initial start-up includes all major storm events (rainfall greater than 3.0 inches in a 24-hour period (a 2-year storm event) for the first year of operation.

Sample

Stormwater Maintenance/Erosion & Sediment Control
Maintenance Log

This sample Maintenance Log is intended to accompany the Stormwater Management Facilities Maintenance Plan. The contractor must maintain this log (or a similar log) from the start of construction through acceptance of the facilities by the City. Following acceptance of the facilities, the City must be responsible for maintenance and updating the maintenance log. This log must be kept on file for a minimum of five years and must be available for review by MDEP. A certified post-construction stormwater inspector must perform all inspections. A list of these individuals can be found on the MDEP website.

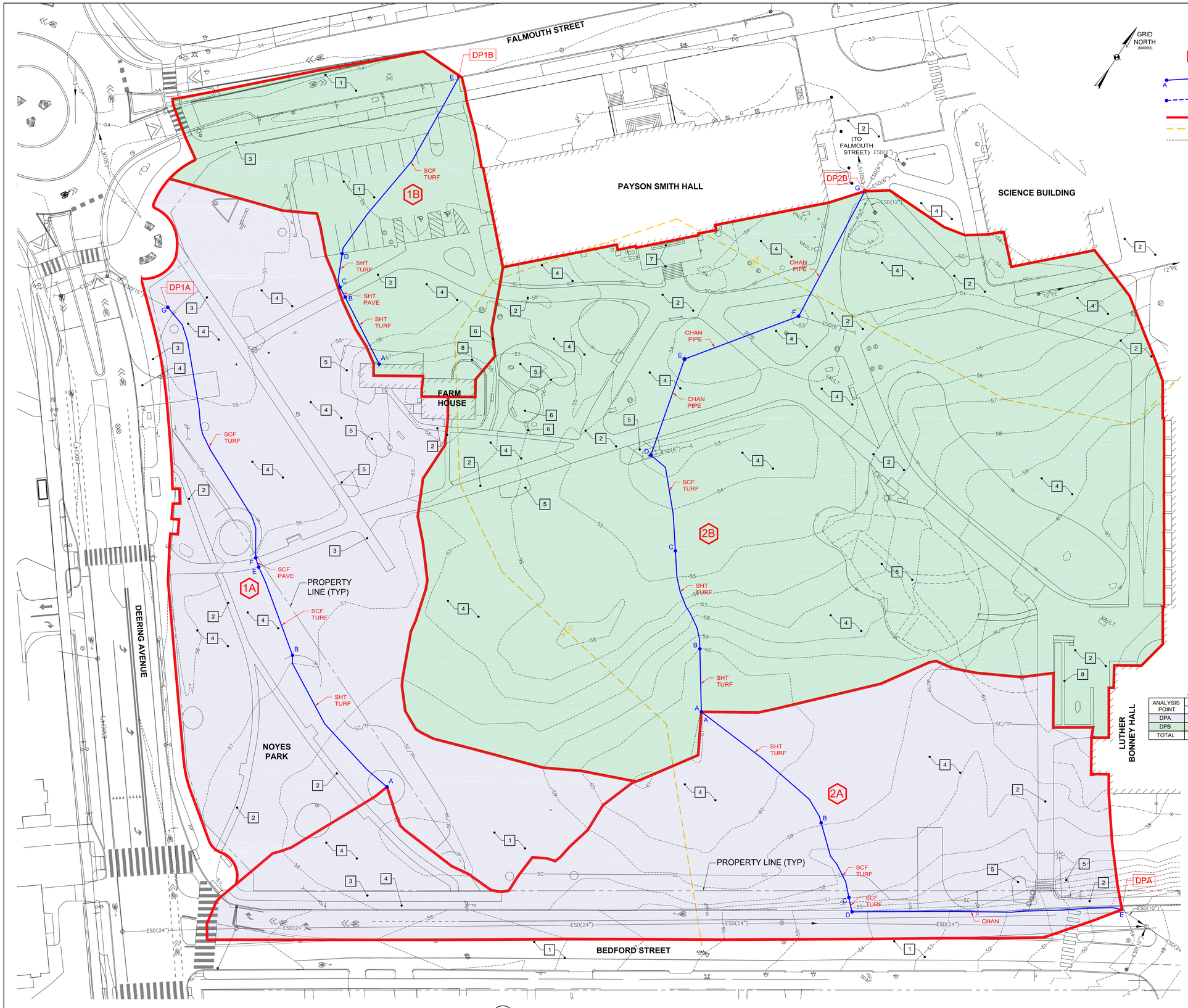
The following items must be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and/or as described in the table below.

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Vegetated Areas	Inspect all slopes and embankments (annually in spring).			
	Replant bare areas or areas with sparse growth (annually in spring).			
	Armor areas with rill erosions with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows (annually in spring).			
Catch Basins & Drain Lines	Inspect sump skimmers in catch basins in paved areas (annually in spring). Replace when saturated.			
	Inspect sumps (annually in spring). Clean with vacuum pump when sediment occupies more than two thirds of the sump capacity.			
	Inspect drain lines (annually in spring). Clean when sediment occupies more than 20% of pipe diameter.			
	Inspect drain line inlets/outlets (annually in spring). Remove accumulated sediments when needed.			

Sample (continued…)

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Catch Basins & Drain Lines	Inspect drain line inlets/outlets (annually in spring). Repair any erosion damage at the culvert's inlet and outlet as needed.			
Ditches, Swales and Culverts	Inspect after major rainfall event*. Repair debris, erosion and sedimentation immediately.			
Under-drained Subsurface Sand Filter	Inspect drain dry time (annually in spring). If necessary, adjust flow rate by adjusting ball valve.			
	Inspect primary treatment row for accumulated sediment (annually in spring). Clean with manufacturer-approved high pressure water system when accumulated sediment reaches 3" or more.			
*A major storm event is classified as a rainfall total of 3.0 inches or more in a 24-hour period (a 2-year storm event).				

Appendix A -
Pre-Development Runoff Calculations



LEGEND

- SUBAREA NUMBER
- TIME OF CONCENTRATION FLOW PATH
- CATCH BASIN/REACH FLOW PATH
- WATERSHED BOUNDARY
- HYDROLOGIC SOIL GROUP BOUNDARY
- EXISTING CONTOUR LINE
- DISCHARGE POINT (POINT OF ANALYSIS)
- CATCH BASIN/POND ROUTING
- REACH ROUTING
- SHT — SHEET FLOW
- SCF — SHALLOW CONCENTRATED FLOW
- CHAN — CHANNEL FLOW

KEYNOTES: (THIS SHEET ONLY)

1. ASPHALT CONCRETE PAVEMENT.
2. ASPHALT CONCRETE SIDEWALK.
3. REINFORCED CONCRETE SIDEWALK.
4. TURF.
5. MULCH AREA.
6. CRUSHED STONE WALK/SEATING AREA.
7. GRANITE STAIRS.
8. RETAINING WALL.

NOTES:

1. HYDROLOGIC SOIL GROUP BOUNDARIES INDICATED ARE BASED ON THE NRCS WEB SOIL SURVEY (CLASS D MEDIUM INTENSITY SOIL SURVEY)
2. THE PROJECT BENCHMARKS ARE:

   TBM1 IS A 3' OFFSET BRASS MONUMENT AT THE INTERSECTION OF BRIGHTON AVENUE AND FALMOUTH STREET REFERENCED ABOVE. BENCHMARK ELEVATION: 54.688'

   TBM2 IS A BONNET BOLT ON FIRE HYDRANT ON THE NORTH SIDE OF FALMOUTH STREET ACROSS FROM PAYSON SMITH HALL. BENCHMARK ELEVATION: 55.14'

   TBM3 IS A BONNET BOLT ON FIRE HYDRANT ON THE SOUTHEAST CORNER OF THE INTERSECTION OF BEDFORD STREET AND SURRENDEN STREET. BENCHMARK ELEVATION: 47.66'.

PEAK RATE OF RUNOFF (CFS)

ANALYSIS POINT	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE	POST	PRE	POST	PRE	POST
DPA	1.1	1.2	2.3	2.8	3.7	4.3
DPB	2.8	1.9	6.3	4.7	9.4	7.3
TOTAL	3.8	2.9	8.4	6.9	12.7	10.8

1 WS101 PRE-DEVELOPMENT WATERSHED PLAN
SCALE: 1"=20'

GRAPHIC SCALE

CHECK GRAPHIC SCALE BEFORE USING

UNIVERSITY OF SOUTHERN MAINE
CENTER FOR THE ARTS

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231 MAIN STREET
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CIVIL/ STRUCTURAL/ MEP ENGINEER
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THEATRICAL:
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ACOUSTICS/ AUDIO-VISUAL:
JAFFE HOLDEN
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PHONE: 203.838.4167

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116 EAST 27TH STREET, 4TH FLOOR
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COST CONSULTANT:
VENUE
226 5TH AVE N, SUITE 705
ST PETERSBURG, FL 33701
PHONE: 727.498.1091

SEAL:

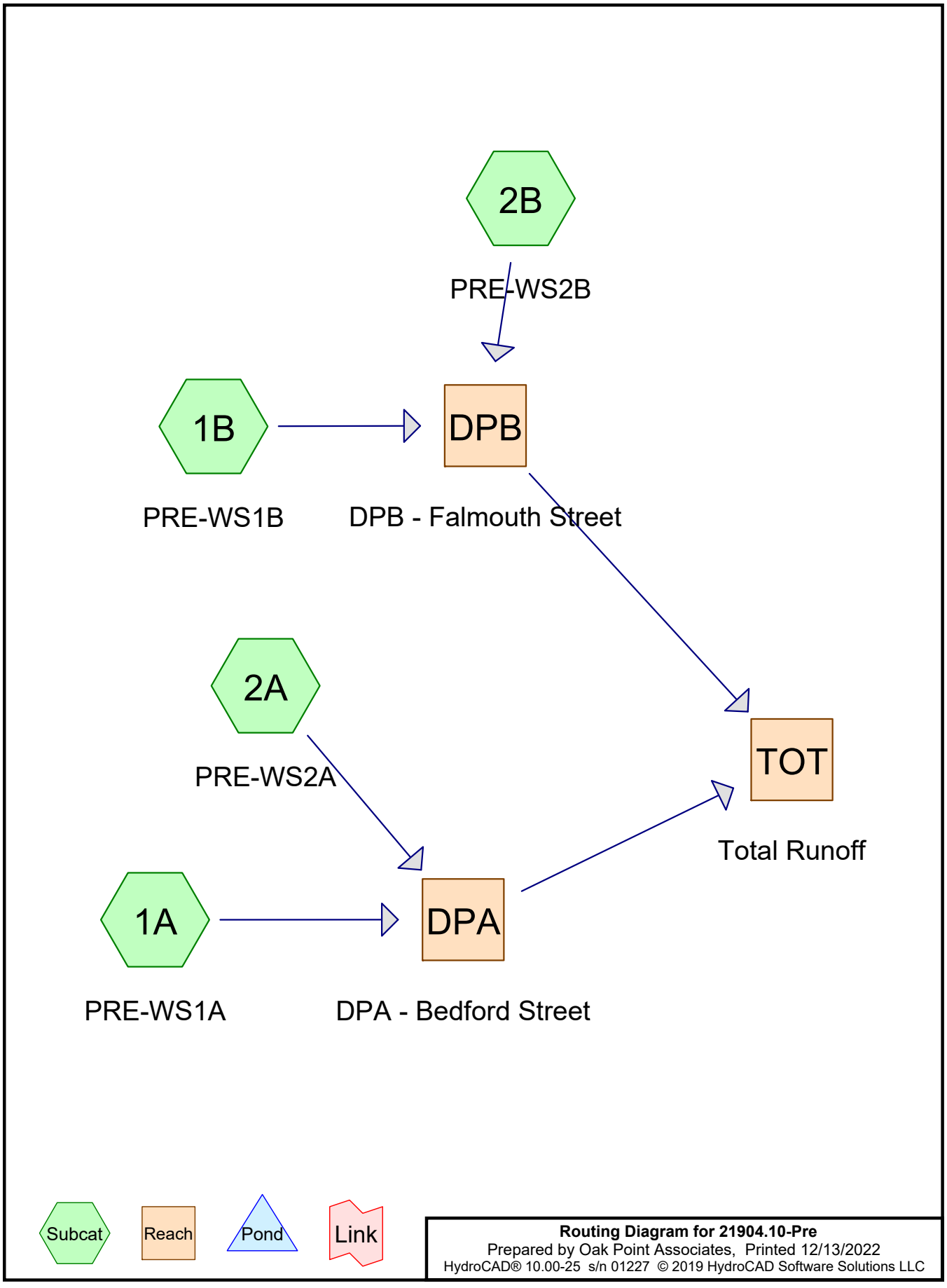
STATE OF MAINE — JONAH DeWATERS — No. 12273 — LICENSED PROFESSIONAL ENGINEER — 12/15/2022

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

SCALE: As indicated

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00


2B
PRE-WS2B
1B
DPB
PRE-WS1B
DPB - Falmouth Street
2A
TOT
PRE-WS2A
Total Runoff
1A
DPA
PRE-WS1A
DPA - Bedford Street
Subcat
Reach
Pond
Link
Routing Diagram for 21904.10-Pre
Prepared by Oak Point Associates, Printed 12/13/2022
HydroCAD® 10.00-25 s/n 01227 © 2019 HydroCAD Software Solutions LLC

Summary for Subcatchment 1A: PRE-WS1A

Runoff = 0.01 cfs @ 15.81 hrs, Volume= 167 cf, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	552	98	Roofs
*	4,701	98	Paved surfaces
	53,839	39	>75% Grass cover, Good, HSG A
*	784	74	Mulch, HSG A
	59,876	45	Weighted Average
	54,623		91.23% Pervious Area
	5,253		8.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0280	0.12		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
1.5	57	0.0080	0.63		**Shallow Concentrated Flow, BC** Short Grass Pasture Kv= 7.0 fps
0.0	6	0.0220	3.01		**Shallow Concentrated Flow, CD** Paved Kv= 20.3 fps
3.6	164	0.0120	0.77		**Shallow Concentrated Flow, DE** Short Grass Pasture Kv= 7.0 fps
0.1	41	0.0100	5.26	6.46	**Pipe Channel, EF** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
18.8	368	Total			

Summary for Subcatchment 1B: PRE-WS1B

Runoff = 0.44 cfs @ 12.19 hrs, Volume= 1,833 cf, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	557	98	Roofs
*	12,565	98	Paved surfaces
	9,529	39	>75% Grass cover, Good, HSG A
	860	80	>75% Grass cover, Good, HSG D
*	403	74	Mulch, HSG A
*	12	90	Mulch, HSG D
	23,926	73	Weighted Average
	10,804		45.16% Pervious Area
	13,122		54.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	45	0.0400	0.12		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.2	8	0.0150	0.68		**Sheet Flow, BC** Smooth surfaces n= 0.011 P2= 2.70"
5.7	20	0.0100	0.06		**Sheet Flow, CD** Grass: Dense n= 0.240 P2= 2.70"
0.8	129	0.0180	2.72		**Shallow Concentrated Flow, DE** Paved Kv= 20.3 fps
12.9	202	Total			

Summary for Subcatchment 2A: PRE-WS2A

Runoff = 1.05 cfs @ 12.28 hrs, Volume= 4,955 cf, Depth= 1.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	12,504	98	Paved surfaces
	11,108	39	>75% Grass cover, Good, HSG A
	30,003	80	>75% Grass cover, Good, HSG D
*	1,286	90	Mulch, HSG D
	54,901	76	Weighted Average
	42,397		77.22% Pervious Area
	12,504		22.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0190	0.11		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.6	49	0.0420	1.43		**Shallow Concentrated Flow, BC** Short Grass Pasture Kv= 7.0 fps
0.0	9	0.3200	3.96		**Shallow Concentrated Flow, CD** Short Grass Pasture Kv= 7.0 fps
2.7	163	0.0310	1.00	0.00	**Trap/Vee/Rect Channel Flow, DE** Bot.W=0.00' D=0.15' Z= 0.3 & 0.0 '/' Top.W=0.04' n= 0.013 Asphalt, smooth
19.2	321	Total			

Summary for Subcatchment 2B: PRE-WS2B

Runoff = 2.37 cfs @ 12.21 hrs, Volume= 10,130 cf, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	223	98	Roofs
*	20,105	98	Paved surfaces
	29,075	39	>75% Grass cover, Good, HSG A
	65,733	80	>75% Grass cover, Good, HSG D
*	542	74	Mulch, HSG A
*	9,346	90	Mulch, HSG D
	125,024	74	Weighted Average
	104,696		83.74% Pervious Area
	20,328		16.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	38	0.0250	0.10		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
5.8	62	0.0900	0.18		**Sheet Flow, BC** Grass: Dense n= 0.240 P2= 2.70"
0.4	62	0.1260	2.48		**Shallow Concentrated Flow, CD** Short Grass Pasture Kv= 7.0 fps
0.4	61	0.0040	2.54	1.39	**Pipe Channel, DE** 10.0" Round Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.013 Clay tile
0.4	74	0.0040	2.87	2.25	**Pipe Channel, EF** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Clay tile
0.5	85	0.0040	2.87	2.25	**Pipe Channel, FG** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Clay tile
14.1	382	Total			

Summary for Reach DPA: DPA - Bedford Street

Inflow Area = 114,777 sf, 15.47% Impervious, Inflow Depth = 0.54" for 2-Year event
Inflow = 1.05 cfs @ 12.28 hrs, Volume= 5,121 cf
Outflow = 1.05 cfs @ 12.28 hrs, Volume= 5,121 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Summary for Reach DPB: DPB - Falmouth Street

Inflow Area = 148,950 sf, 22.46% Impervious, Inflow Depth = 0.96" for 2-Year event
Inflow = 2.80 cfs @ 12.21 hrs, Volume= 11,963 cf
Outflow = 2.80 cfs @ 12.21 hrs, Volume= 11,963 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Summary for Reach TOT: Total Runoff

Inflow Area = 263,727 sf, 19.42% Impervious, Inflow Depth = 0.78" for 2-Year event
Inflow = 3.77 cfs @ 12.22 hrs, Volume= 17,084 cf
Outflow = 3.77 cfs @ 12.22 hrs, Volume= 17,084 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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

Subcatchment 1A: PRE-WS1A Runoff Area=59,876 sf 8.77% Impervious Runoff Depth=0.03"
Flow Length=368' Tc=18.8 min CN=45 Runoff=0.01 cfs 167 cf

Subcatchment 1B: PRE-WS1B Runoff Area=23,926 sf 54.84% Impervious Runoff Depth=0.92"
Flow Length=202' Tc=12.9 min CN=73 Runoff=0.44 cfs 1,833 cf

Subcatchment 2A: PRE-WS2A Runoff Area=54,901 sf 22.78% Impervious Runoff Depth=1.08"
Flow Length=321' Tc=19.2 min CN=76 Runoff=1.05 cfs 4,955 cf

Subcatchment 2B: PRE-WS2B Runoff Area=125,024 sf 16.26% Impervious Runoff Depth=0.97"
Flow Length=382' Tc=14.1 min CN=74 Runoff=2.37 cfs 10,130 cf

Reach DPA: DPA - Bedford Street Inflow=1.05 cfs 5,121 cf
Outflow=1.05 cfs 5,121 cf

Reach DPB: DPB - Falmouth Street Inflow=2.80 cfs 11,963 cf
Outflow=2.80 cfs 11,963 cf

Reach TOT: Total Runoff Inflow=3.77 cfs 17,084 cf
Outflow=3.77 cfs 17,084 cf

Total Runoff Area = 263,727 sf Runoff Volume = 17,084 cf Average Runoff Depth = 0.78"
80.58% Pervious = 212,520 sf 19.42% Impervious = 51,207 sf

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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

Subcatchment 1A: PRE-WS1A Runoff Area=59,876 sf 8.77% Impervious Runoff Depth=0.32"
Flow Length=368' Tc=18.8 min CN=45 Runoff=0.14 cfs 1,612 cf

Subcatchment 1B: PRE-WS1B Runoff Area=23,926 sf 54.84% Impervious Runoff Depth=1.97"
Flow Length=202' Tc=12.9 min CN=73 Runoff=1.00 cfs 3,931 cf

Subcatchment 2A: PRE-WS2A Runoff Area=54,901 sf 22.78% Impervious Runoff Depth=2.21"
Flow Length=321' Tc=19.2 min CN=76 Runoff=2.23 cfs 10,110 cf

Subcatchment 2B: PRE-WS2B Runoff Area=125,024 sf 16.26% Impervious Runoff Depth=2.05"
Flow Length=382' Tc=14.1 min CN=74 Runoff=5.28 cfs 21,354 cf

Reach DPA: DPA - Bedford Street Inflow=2.27 cfs 11,723 cf
Outflow=2.27 cfs 11,723 cf

Reach DPB: DPB - Falmouth Street Inflow=6.27 cfs 25,284 cf
Outflow=6.27 cfs 25,284 cf

Reach TOT: Total Runoff Inflow=8.35 cfs 37,007 cf
Outflow=8.35 cfs 37,007 cf

Total Runoff Area = 263,727 sf Runoff Volume = 37,007 cf Average Runoff Depth = 1.68"
80.58% Pervious = 212,520 sf 19.42% Impervious = 51,207 sf

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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

Subcatchment 1A: PRE-WS1A Runoff Area=59,876 sf 8.77% Impervious Runoff Depth=0.72"
Flow Length=368' Tc=18.8 min CN=45 Runoff=0.49 cfs 3,607 cf

Subcatchment 1B: PRE-WS1B Runoff Area=23,926 sf 54.84% Impervious Runoff Depth=2.92"
Flow Length=202' Tc=12.9 min CN=73 Runoff=1.50 cfs 5,829 cf

Subcatchment 2A: PRE-WS2A Runoff Area=54,901 sf 22.78% Impervious Runoff Depth=3.21"
Flow Length=321' Tc=19.2 min CN=76 Runoff=3.25 cfs 14,678 cf

Subcatchment 2B: PRE-WS2B Runoff Area=125,024 sf 16.26% Impervious Runoff Depth=3.02"
Flow Length=382' Tc=14.1 min CN=74 Runoff=7.86 cfs 31,438 cf

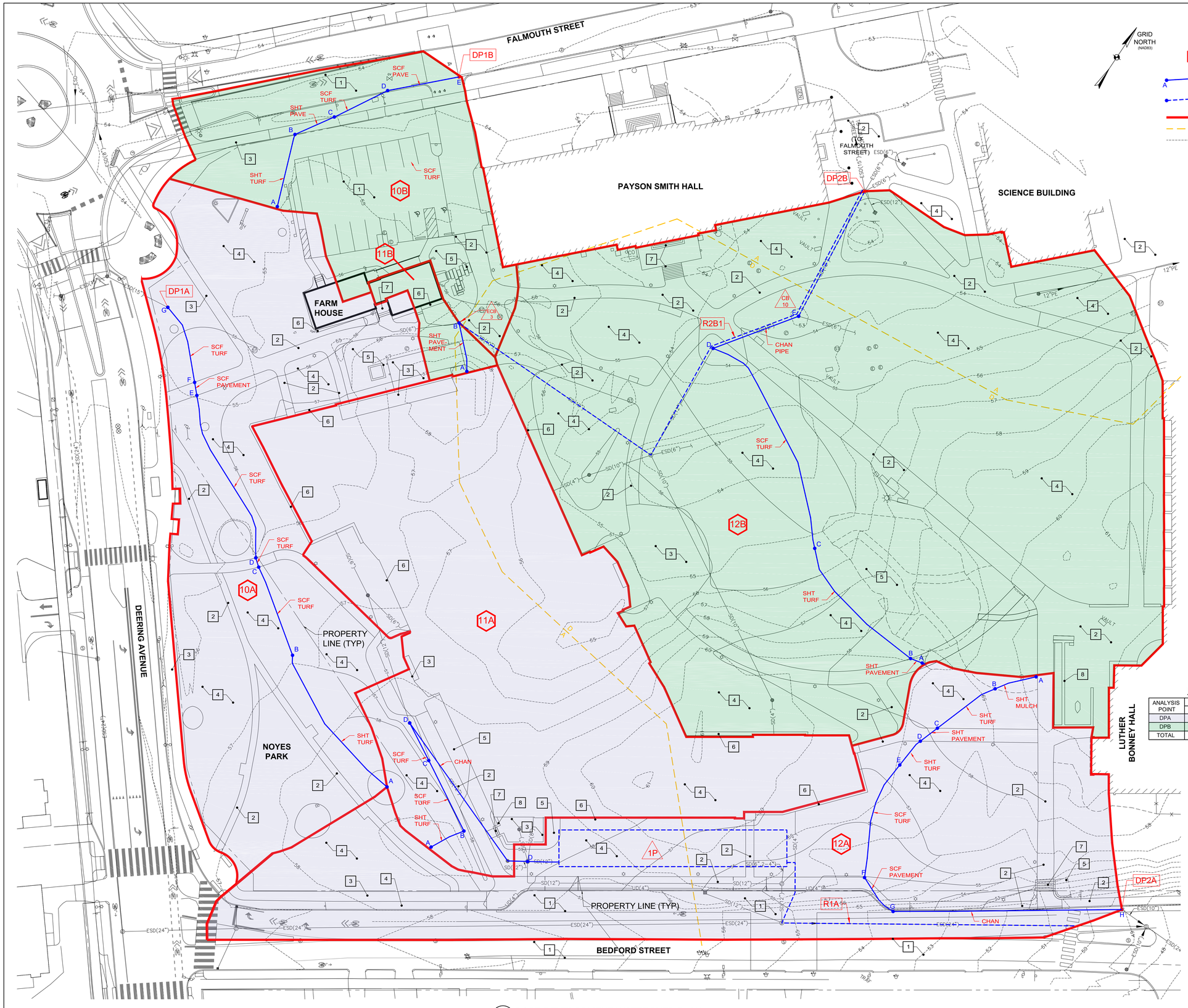
Reach DPA: DPA - Bedford Street Inflow=3.66 cfs 18,284 cf
Outflow=3.66 cfs 18,284 cf

Reach DPB: DPB - Falmouth Street Inflow=9.35 cfs 37,266 cf
Outflow=9.35 cfs 37,266 cf

Reach TOT: Total Runoff Inflow=12.65 cfs 55,551 cf
Outflow=12.65 cfs 55,551 cf

Total Runoff Area = 263,727 sf Runoff Volume = 55,551 cf Average Runoff Depth = 2.53"
80.58% Pervious = 212,520 sf 19.42% Impervious = 51,207 sf

Appendix B -
Post-Development Runoff Calculations



LEGEND

- 1 — SUBAREA NUMBER
- A — B — TIME OF CONCENTRATION FLOW PATH
- CATCH BASIN/REACH FLOW PATH
- WATERSHED BOUNDARY
- A / D — HYDROLOGIC SOIL GROUP BOUNDARY
- 405 — EXISTING CONTOUR LINE
- DP1 — DISCHARGE POINT (POINT OF ANALYSIS)
- CB 1 — CATCH BASIN/POND ROUTING
- 1R — REACH ROUTING
- SHT — SHEET FLOW
- SCF — SHALLOW CONCENTRATED FLOW
- CHAN — CHANNEL FLOW

KEYNOTES: (THIS SHEET ONLY)

1. ASPHALT CONCRETE PAVEMENT.
2. ASPHALT CONCRETE SIDEWALK.
3. REINFORCED CONCRETE SIDEWALK.
4. TURF.
5. MULCH AREA.
6. CRUSHED STONE DRIP EDGE.
7. CONCRETE STAIRS.
8. RETAINING WALL.

NOTES:

1. HYDROLOGIC SOIL GROUP BOUNDARIES INDICATED ARE BASED ON THE NRCS WEB SOIL SURVEY (CLASS D MEDIUM INTENSITY SOIL SURVEY)
2. THE PROJECT BENCHMARKS ARE:

TBM1 IS A 3' OFFSET BRASS MONUMENT AT THE INTERSECTION OF BRIGHTON AVENUE AND FALMOUTH STREET REFERENCED ABOVE. BENCHMARK ELEVATION: 54.688'

TBM2 IS A BONNET BOLT ON FIRE HYDRANT ON THE NORTH SIDE OF FALMOUTH STREET ACROSS FROM PAYSON SMITH HALL. BENCHMARK ELEVATION: 55.14'

TBM3 IS A BONNET BOLT ON FIRE HYDRANT ON THE SOUTHEAST CORNER OF THE INTERSECTION OF BEDFORD STREET AND SURRENDEN STREET. BENCHMARK ELEVATION: 47.66'.

PEAK RATE OF RUNOFF (CFS)

ANALYSIS POINT	2-YEAR STORM		10-YEAR STORM		25-YEAR STORM	
	PRE	POST	PRE	POST	PRE	POST
DPA	1.1	1.2	2.3	2.8	3.7	4.3
DPB	2.8	1.9	6.3	4.7	9.4	7.3
TOTAL	3.8	2.9	8.4	6.9	12.7	10.8

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

1 WS102 POST-DEVELOPMENT WATERSHED PLAN
SCALE: 1"=20'

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SEAL:
STATE OF MAINE — JONAH DeWATERS — No. 12273 — LICENSED PROFESSIONAL ENGINEER — 10/19/2023
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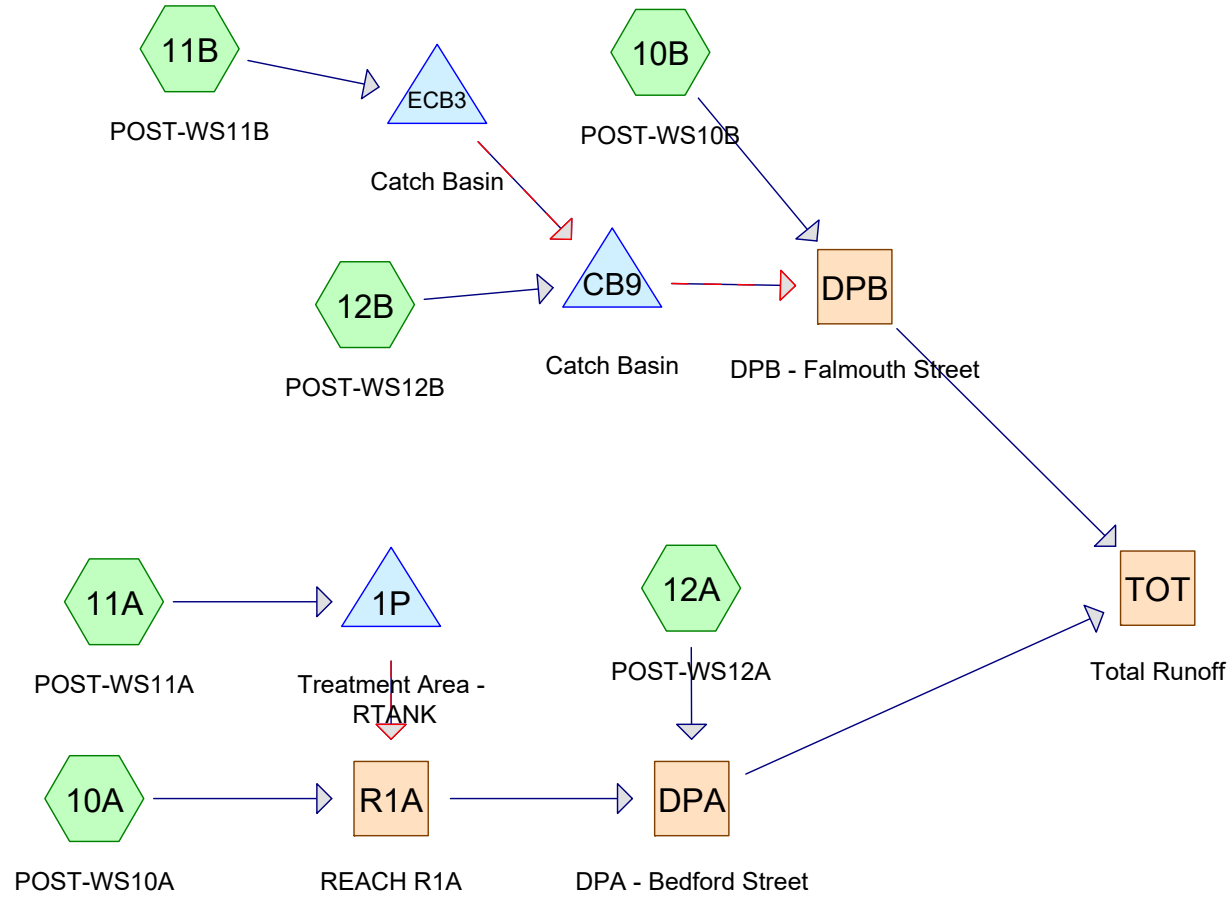
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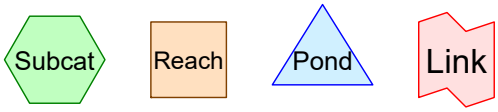
NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022
2.	REVISED UTILITY CONNECTIONS	01/27/2023
3.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT RESUBMISSION	02/23/2023

POST-DEVELOPMENT WATERSHED PLAN

SCALE:
WS102

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00





Routing Diagram for 21904.10-Post
Prepared by Oak Point Associates, Printed 2/22/2023
HydroCAD® 10.00-25 s/n 01227 © 2019 HydroCAD Software Solutions LLC

Summary for Subcatchment 10A: POST-WS10A

Runoff = 0.01 cfs @ 13.99 hrs, Volume= 317 cf, Depth= 0.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	5,966	98	Paved surfaces
	34,488	39	>75% Grass cover, Good, HSG A
	0	80	>75% Grass cover, Good, HSG D
*	559	74	Mulch, HSG A
*	0	90	Mulch, HSG D
*	857	98	Roofs
	41,870	49	Weighted Average
	35,047		83.70% Pervious Area
	6,823		16.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0280	0.12		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
1.5	57	0.0080	0.63		**Shallow Concentrated Flow, BC** Short Grass Pasture Kv= 7.0 fps
0.0	6	0.0220	3.01		**Shallow Concentrated Flow, CD** Paved Kv= 20.3 fps
2.3	107	0.0120	0.77		**Shallow Concentrated Flow, DE** Short Grass Pasture Kv= 7.0 fps
0.1	8	0.0170	2.65		**Shallow Concentrated Flow, EF** Paved Kv= 20.3 fps
1.1	49	0.0110	0.73		**Shallow Concentrated Flow, FG** Short Grass Pasture Kv= 7.0 fps
18.6	327	Total			

Summary for Subcatchment 10B: POST-WS10B

Runoff = 0.57 cfs @ 12.16 hrs, Volume= 2,119 cf, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	232	98	Roofs
*	12,993	98	Paved surfaces
	6,029	39	>75% Grass cover, Good, HSG A
*	894	74	Mulch, HSG A
	20,148	79	Weighted Average
	6,923		34.36% Pervious Area
	13,225		65.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	45	0.0150	0.08		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.6	26	0.0080	0.67		**Sheet Flow, BC** Smooth surfaces n= 0.011 P2= 2.70"
0.7	34	0.0140	0.83		**Shallow Concentrated Flow, CD** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.0120	2.22		**Shallow Concentrated Flow, DE** Paved Kv= 20.3 fps
10.8	149	Total			

Summary for Subcatchment 11A: POST-WS11A

Runoff = 2.99 cfs @ 12.07 hrs, Volume= 9,007 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,534	98	Paved surfaces
	5,797	39	>75% Grass cover, Good, HSG A
	0	80	>75% Grass cover, Good, HSG D
*	839	74	Mulch, HSG A
*	0	90	Mulch, HSG D
*	40,762	98	Roofs
	49,932	91	Weighted Average
	6,636		13.29% Pervious Area
	43,296		86.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	30	0.1000	0.16		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
1.0	50	0.0130	0.80		**Shallow Concentrated Flow, BC** Short Grass Pasture Kv= 7.0 fps
0.4	25	0.0200	0.99		**Shallow Concentrated Flow, CD** Short Grass Pasture Kv= 7.0 fps
0.3	133	0.0200	6.42	5.04	**Pipe Channel, DE** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Clay tile
4.8	238	Total			

Summary for Subcatchment 11B: POST-WS11B

Runoff = 0.14 cfs @ 12.04 hrs, Volume= 406 cf, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	740	98	Roofs
*	1,072	98	Paved surfaces
	116	39	>75% Grass cover, Good, HSG A
*	234	74	Mulch, HSG A
	2,162	92	Weighted Average
	350		16.19% Pervious Area
	1,812		83.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0380	1.28		**Sheet Flow, AB** Smooth surfaces n= 0.011 P2= 2.70"
0.4	30	Total, Increased to minimum Tc = 3.0 min			

Summary for Subcatchment 12A: POST-WS12A

Runoff = 1.10 cfs @ 12.30 hrs, Volume= 5,228 cf, Depth= 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	18,797	98	Paved surfaces
	8,559	39	>75% Grass cover, Good, HSG A
	18,838	80	>75% Grass cover, Good, HSG D
*	0	74	Mulch, HSG A
*	1,134	90	Mulch, HSG D
*	0	98	Roofs
	47,328	80	Weighted Average
	28,531		60.28% Pervious Area
	18,797		39.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	26	0.0260	0.06		**Sheet Flow, AB** Woods: Light underbrush n= 0.400 P2= 2.70"
6.4	42	0.0330	0.11		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
0.2	13	0.0290	0.97		**Sheet Flow, AB** Smooth surfaces n= 0.011 P2= 2.70"
3.7	19	0.0260	0.09		**Sheet Flow, AB** Grass: Dense n= 0.240 P2= 2.70"
1.0	73	0.0330	1.27		**Shallow Concentrated Flow, DE** Short Grass Pasture Kv= 7.0 fps
0.1	27	0.0270	3.34		**Shallow Concentrated Flow, EF** Paved Kv= 20.3 fps
2.2	138	0.0330	1.03	0.00	**Trap/Vee/Rect Channel Flow, FG** Bot.W=0.00' D=0.15' Z= 0.3 & 0.0 '/' Top.W=0.04' n= 0.013
20.8	338	Total			

Summary for Subcatchment 12B: POST-WS12B

Runoff = 1.29 cfs @ 12.18 hrs, Volume= 5,787 cf, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,223	98	Paved surfaces
	32,669	39	>75% Grass cover, Good, HSG A
	58,423	80	>75% Grass cover, Good, HSG D
*	488	74	Mulch, HSG A
*	7,484	90	Mulch, HSG D
	102,287	68	Weighted Average
	99,064		96.85% Pervious Area
	3,223		3.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	6	0.0080	0.50		**Sheet Flow, AB** Smooth surfaces n= 0.011 P2= 2.70"
7.8	91	0.0360	0.19		**Sheet Flow, BC** Grass: Short n= 0.150 P2= 2.70"
2.8	142	0.0150	0.86		**Shallow Concentrated Flow, CD** Short Grass Pasture Kv= 7.0 fps
0.3	55	0.0040	2.87	2.25	**Pipe Channel, EF** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Clay tile
0.5	85	0.0040	2.87	2.25	**Pipe Channel, FG** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Clay tile
11.6	379	Total			

Summary for Reach DPA: DPA - Bedford Street

Inflow Area = 139,130 sf, 49.53% Impervious, Inflow Depth > 1.18" for 2-Year event
Inflow = 1.20 cfs @ 12.30 hrs, Volume= 13,662 cf
Outflow = 1.20 cfs @ 12.30 hrs, Volume= 13,662 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Summary for Reach DPB: DPB - Falmouth Street

Inflow Area = 124,597 sf, 14.66% Impervious, Inflow Depth = 0.80" for 2-Year event
Inflow = 1.91 cfs @ 12.18 hrs, Volume= 8,256 cf
Outflow = 1.91 cfs @ 12.18 hrs, Volume= 8,256 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

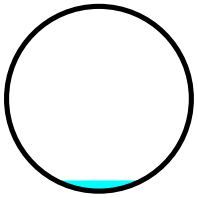
Summary for Reach R1A: REACH R1A

Inflow Area = 91,802 sf, 54.59% Impervious, Inflow Depth > 1.10" for 2-Year event
Inflow = 0.19 cfs @ 13.86 hrs, Volume= 8,442 cf
Outflow = 0.19 cfs @ 13.87 hrs, Volume= 8,434 cf, Atten= 0%, Lag= 0.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.62 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 2.06 fps, Avg. Travel Time= 1.4 min

Peak Storage= 13 cf @ 13.87 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 29.16 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 177.0' Slope= 0.0166 '/'
Inlet Invert= 45.51', Outlet Invert= 42.57'



Summary for Reach TOT: Total Runoff

Inflow Area = 263,727 sf, 33.06% Impervious, Inflow Depth > 1.00" for 2-Year event
Inflow = 2.93 cfs @ 12.20 hrs, Volume= 21,918 cf
Outflow = 2.93 cfs @ 12.20 hrs, Volume= 21,918 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Treatment Area - RTANK

Inflow Area = 49,932 sf, 86.71% Impervious, Inflow Depth = 2.16" for 2-Year event
Inflow = 2.99 cfs @ 12.07 hrs, Volume= 9,007 cf
Outflow = 0.18 cfs @ 13.85 hrs, Volume= 8,125 cf, Atten= 94%, Lag= 106.7 min
Primary = 0.08 cfs @ 13.85 hrs, Volume= 738 cf
Secondary = 0.10 cfs @ 13.85 hrs, Volume= 7,387 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 51.65' @ 13.85 hrs Surf.Area= 3,051 sf Storage= 4,640 cf
Flood Elev= 56.00' Surf.Area= 3,051 sf Storage= 9,834 cf

Plug-Flow detention time= 380.3 min calculated for 8,125 cf (90% of inflow)
Center-of-Mass det. time= 332.5 min (1,135.0 - 802.6)

Volume	Invert	Avail.Storage	Storage Description
#1B	49.46'	1,362 cf	**6.33'W x 138.00'L x 5.04'H Field B** 4,406 cf Overall - 1,002 cf Embedded = 3,404 cf x 40.0% Voids
#2A	49.46'	2,154 cf	**15.81'W x 137.71'L x 5.04'H Field A** 10,981 cf Overall - 5,596 cf Embedded = 5,385 cf x 40.0% Voids
#3A	49.96'	5,316 cf	**ACF R-Tank HD 2.5** x 513 Inside #2 Inside= 15.7"W x 42.5"H => 4.42 sf x 2.35'L = 10.4 cf Outside= 15.7"W x 42.5"H => 4.65 sf x 2.35'L = 10.9 cf 513 Chambers in 9 Rows
#4B	49.96'	1,002 cf	**Cultec R-330XLHD** x 19 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 1 rows
		9,834 cf	Total Available Storage

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

Device	Routing	Invert	Outlet Devices
#1	Primary	49.96'	**12.0" Round Bypass Line to DMH1** L= 164.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 49.96' / 45.61' S= 0.0265 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	51.46'	**4.0" Vert. Bypass Orifice** C= 0.600
#3	Device 1	54.30'	**6.0' long x 1.0' breadth Emergency Overflow Weir in DMH2** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#4	Secondary	49.46'	**1.330 in/hr Treated Runoff to DMH1 over Surface area** Conductivity to Groundwater Elevation = 1.00' Phase-In= 0.01'

Primary OutFlow Max=0.08 cfs @ 13.85 hrs HW=51.65' TW=45.62' (Dynamic Tailwater)
└─**1=Bypass Line to DMH1** (Passes 0.08 cfs of 4.13 cfs potential flow)
  ├─**2=Bypass Orifice** (Orifice Controls 0.08 cfs @ 1.50 fps)
  └─**3=Emergency Overflow Weir in DMH2** (Controls 0.00 cfs)

Secondary OutFlow Max=0.10 cfs @ 13.85 hrs HW=51.65' TW=45.62' (Dynamic Tailwater)
└─**4=Treated Runoff to DMH1** (Controls 0.10 cfs)

Summary for Pond CB9: Catch Basin

Inflow Area = 104,449 sf, 4.82% Impervious, Inflow Depth = 0.71" for 2-Year event
Inflow = 1.35 cfs @ 12.18 hrs, Volume= 6,162 cf
Outflow = 1.35 cfs @ 12.18 hrs, Volume= 6,137 cf, Atten= 0%, Lag= 0.1 min
Primary = 1.35 cfs @ 12.18 hrs, Volume= 6,137 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 46.88' @ 12.18 hrs Surf.Area= 13 sf Storage= 34 cf

Plug-Flow detention time= 3.5 min calculated for 6,135 cf (100% of inflow)

Center-of-Mass det. time= 1.2 min (887.8 - 886.6)

Volume	Invert	Avail.Storage	Storage Description
#1	44.24'	1,008 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.24	13	0	0
46.24	13	26	26
52.72	13	84	110
53.00	86	14	124
53.83	1,450	637	762
54.00	1,450	247	1,008

Device	Routing	Invert	Outlet Devices
#1	Primary	46.16'	**12.0" Round Storm Drain** L= 83.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 46.16' / 45.74' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	53.90'	**12.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=1.35 cfs @ 12.18 hrs HW=46.88' TW=0.00' (Dynamic Tailwater)
↑—**1=Storm Drain** (Barrel Controls 1.35 cfs @ 3.13 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.24' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond ECB3: Catch Basin

Inflow Area = 2,162 sf, 83.81% Impervious, Inflow Depth = 2.26" for 2-Year event
Inflow = 0.14 cfs @ 12.04 hrs, Volume= 406 cf
Outflow = 0.14 cfs @ 12.05 hrs, Volume= 375 cf, Atten= 0%, Lag= 0.2 min
Primary = 0.14 cfs @ 12.05 hrs, Volume= 375 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Peak Elev= 48.17' @ 12.05 hrs Surf.Area= 13 sf Storage= 35 cf

Plug-Flow detention time= 62.1 min calculated for 375 cf (92% of inflow)
Center-of-Mass det. time= 22.3 min (818.4 - 796.1)

Volume	Invert	Avail.Storage	Storage Description
#1	45.50'	151 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.50	13	0	0
47.50	13	26	26
56.10	13	112	138
57.10	13	13	151

Device	Routing	Invert	Outlet Devices
#1	Primary	47.91'	**10.0" Round Storm Drain** L= 271.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.91' / 47.11' S= 0.0030 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Secondary	56.10'	**4.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.14 cfs @ 12.05 hrs HW=48.17' TW=46.65' (Dynamic Tailwater)
1=Storm Drain (Barrel Controls 0.14 cfs @ 1.48 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.50' TW=44.24' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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

Subcatchment 10A: POST-WS10A Runoff Area=41,870 sf 16.30% Impervious Runoff Depth=0.09"
Flow Length=327' Tc=18.6 min CN=49 Runoff=0.01 cfs 317 cf

Subcatchment 10B: POST-WS10B Runoff Area=20,148 sf 65.64% Impervious Runoff Depth=1.26"
Flow Length=149' Tc=10.8 min CN=79 Runoff=0.57 cfs 2,119 cf

Subcatchment 11A: POST-WS11A Runoff Area=49,932 sf 86.71% Impervious Runoff Depth=2.16"
Flow Length=238' Tc=4.8 min CN=91 Runoff=2.99 cfs 9,007 cf

Subcatchment 11B: POST-WS11B Runoff Area=2,162 sf 83.81% Impervious Runoff Depth=2.26"
Flow Length=30' Slope=0.0380 '/' Tc=3.0 min CN=92 Runoff=0.14 cfs 406 cf

Subcatchment 12A: POST-WS12A Runoff Area=47,328 sf 39.72% Impervious Runoff Depth=1.33"
Flow Length=338' Tc=20.8 min CN=80 Runoff=1.10 cfs 5,228 cf

Subcatchment 12B: POST-WS12B Runoff Area=102,287 sf 3.15% Impervious Runoff Depth=0.68"
Flow Length=379' Tc=11.6 min CN=68 Runoff=1.29 cfs 5,787 cf

Reach DPA: DPA - Bedford Street Inflow=1.20 cfs 13,662 cf
Outflow=1.20 cfs 13,662 cf

Reach DPB: DPB - Falmouth Street Inflow=1.91 cfs 8,256 cf
Outflow=1.91 cfs 8,256 cf

Reach R1A: REACH R1A Avg. Flow Depth=0.11' Max Vel=2.62 fps Inflow=0.19 cfs 8,442 cf
24.0" Round Pipe n=0.013 L=177.0' S=0.0166 '/' Capacity=29.16 cfs Outflow=0.19 cfs 8,434 cf

Reach TOT: Total Runoff Inflow=2.93 cfs 21,918 cf
Outflow=2.93 cfs 21,918 cf

Pond 1P: Treatment Area - RTANK Peak Elev=51.65' Storage=4,640 cf Inflow=2.99 cfs 9,007 cf
Primary=0.08 cfs 738 cf Secondary=0.10 cfs 7,387 cf Outflow=0.18 cfs 8,125 cf

Pond CB9: Catch Basin Peak Elev=46.88' Storage=34 cf Inflow=1.35 cfs 6,162 cf
Primary=1.35 cfs 6,137 cf Secondary=0.00 cfs 0 cf Outflow=1.35 cfs 6,137 cf

Pond ECB3: Catch Basin Peak Elev=48.17' Storage=35 cf Inflow=0.14 cfs 406 cf
Primary=0.14 cfs 375 cf Secondary=0.00 cfs 0 cf Outflow=0.14 cfs 375 cf

Total Runoff Area = 263,727 sf Runoff Volume = 22,864 cf Average Runoff Depth = 1.04"
66.94% Pervious = 176,551 sf 33.06% Impervious = 87,176 sf

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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

Subcatchment 10A: POST-WS10A Runoff Area=41,870 sf 16.30% Impervious Runoff Depth=0.49"
Flow Length=327' Tc=18.6 min CN=49 Runoff=0.21 cfs 1,712 cf

Subcatchment 10B: POST-WS10B Runoff Area=20,148 sf 65.64% Impervious Runoff Depth=2.46"
Flow Length=149' Tc=10.8 min CN=79 Runoff=1.14 cfs 4,131 cf

Subcatchment 11A: POST-WS11A Runoff Area=49,932 sf 86.71% Impervious Runoff Depth=3.59"
Flow Length=238' Tc=4.8 min CN=91 Runoff=4.85 cfs 14,957 cf

Subcatchment 11B: POST-WS11B Runoff Area=2,162 sf 83.81% Impervious Runoff Depth=3.70"
Flow Length=30' Slope=0.0380 '/' Tc=3.0 min CN=92 Runoff=0.23 cfs 666 cf

Subcatchment 12A: POST-WS12A Runoff Area=47,328 sf 39.72% Impervious Runoff Depth=2.55"
Flow Length=338' Tc=20.8 min CN=80 Runoff=2.15 cfs 10,045 cf

Subcatchment 12B: POST-WS12B Runoff Area=102,287 sf 3.15% Impervious Runoff Depth=1.60"
Flow Length=379' Tc=11.6 min CN=68 Runoff=3.50 cfs 13,642 cf

Reach DPA: DPA - Bedford Street Inflow=2.79 cfs 25,176 cf
Outflow=2.79 cfs 25,176 cf

Reach DPB: DPB - Falmouth Street Inflow=4.72 cfs 18,383 cf
Outflow=4.72 cfs 18,383 cf

Reach R1A: REACH R1A Avg. Flow Depth=0.22' Max Vel=3.96 fps Inflow=0.75 cfs 15,139 cf
24.0" Round Pipe n=0.013 L=177.0' S=0.0166 '/' Capacity=29.16 cfs Outflow=0.75 cfs 15,131 cf

Reach TOT: Total Runoff Inflow=6.95 cfs 43,559 cf
Outflow=6.95 cfs 43,559 cf

Pond 1P: Treatment Area - RTANK Peak Elev=52.76' Storage=7,064 cf Inflow=4.85 cfs 14,957 cf
Primary=0.45 cfs 5,476 cf Secondary=0.10 cfs 7,950 cf Outflow=0.55 cfs 13,427 cf

Pond CB9: Catch Basin Peak Elev=48.07' Storage=50 cf Inflow=3.59 cfs 14,277 cf
Primary=3.59 cfs 14,252 cf Secondary=0.00 cfs 0 cf Outflow=3.59 cfs 14,252 cf

Pond ECB3: Catch Basin Peak Elev=48.24' Storage=36 cf Inflow=0.23 cfs 666 cf
Primary=0.23 cfs 635 cf Secondary=0.00 cfs 0 cf Outflow=0.23 cfs 635 cf

Total Runoff Area = 263,727 sf Runoff Volume = 45,154 cf Average Runoff Depth = 2.05"
66.94% Pervious = 176,551 sf 33.06% Impervious = 87,176 sf

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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

Subcatchment 10A: POST-WS10A Runoff Area=41,870 sf 16.30% Impervious Runoff Depth=0.98"
Flow Length=327' Tc=18.6 min CN=49 Runoff=0.56 cfs 3,415 cf

Subcatchment 10B: POST-WS10B Runoff Area=20,148 sf 65.64% Impervious Runoff Depth=3.50"
Flow Length=149' Tc=10.8 min CN=79 Runoff=1.62 cfs 5,879 cf

Subcatchment 11A: POST-WS11A Runoff Area=49,932 sf 86.71% Impervious Runoff Depth=4.76"
Flow Length=238' Tc=4.8 min CN=91 Runoff=6.33 cfs 19,813 cf

Subcatchment 11B: POST-WS11B Runoff Area=2,162 sf 83.81% Impervious Runoff Depth=4.87"
Flow Length=30' Slope=0.0380 '/' Tc=3.0 min CN=92 Runoff=0.30 cfs 878 cf

Subcatchment 12A: POST-WS12A Runoff Area=47,328 sf 39.72% Impervious Runoff Depth=3.60"
Flow Length=338' Tc=20.8 min CN=80 Runoff=3.04 cfs 14,203 cf

Subcatchment 12B: POST-WS12B Runoff Area=102,287 sf 3.15% Impervious Runoff Depth=2.47"
Flow Length=379' Tc=11.6 min CN=68 Runoff=5.55 cfs 21,039 cf

Reach DPA: DPA - Bedford Street Inflow=4.27 cfs 35,550 cf
Outflow=4.27 cfs 35,550 cf

Reach DPB: DPB - Falmouth Street Inflow=7.25 cfs 27,740 cf
Outflow=7.25 cfs 27,740 cf

Reach R1A: REACH R1A Avg. Flow Depth=0.29' Max Vel=4.67 fps Inflow=1.30 cfs 21,355 cf
24.0" Round Pipe n=0.013 L=177.0' S=0.0166 '/' Capacity=29.16 cfs Outflow=1.30 cfs 21,347 cf

Reach TOT: Total Runoff Inflow=10.77 cfs 63,290 cf
Outflow=10.77 cfs 63,290 cf

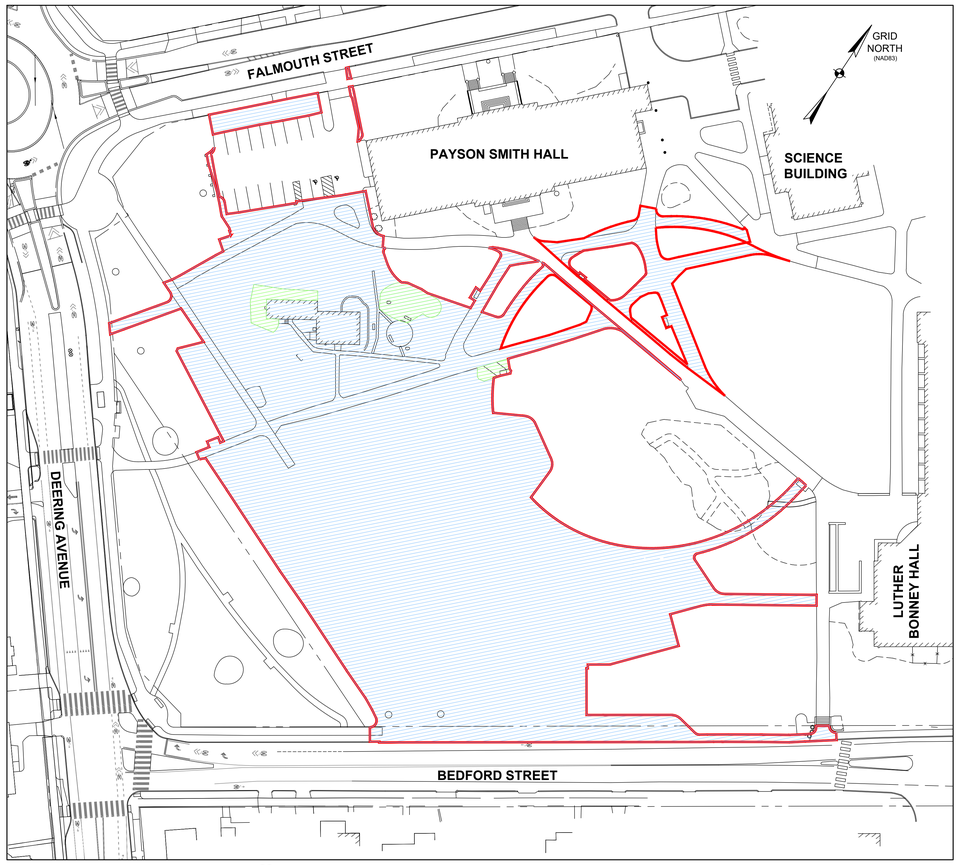
Pond 1P: Treatment Area - RTANK Peak Elev=54.26' Storage=9,542 cf Inflow=6.33 cfs 19,813 cf
Primary=0.68 cfs 9,618 cf Secondary=0.10 cfs 8,322 cf Outflow=0.79 cfs 17,940 cf

Pond CB9: Catch Basin Peak Elev=50.05' Storage=76 cf Inflow=5.66 cfs 21,886 cf
Primary=5.66 cfs 21,861 cf Secondary=0.00 cfs 0 cf Outflow=5.66 cfs 21,861 cf

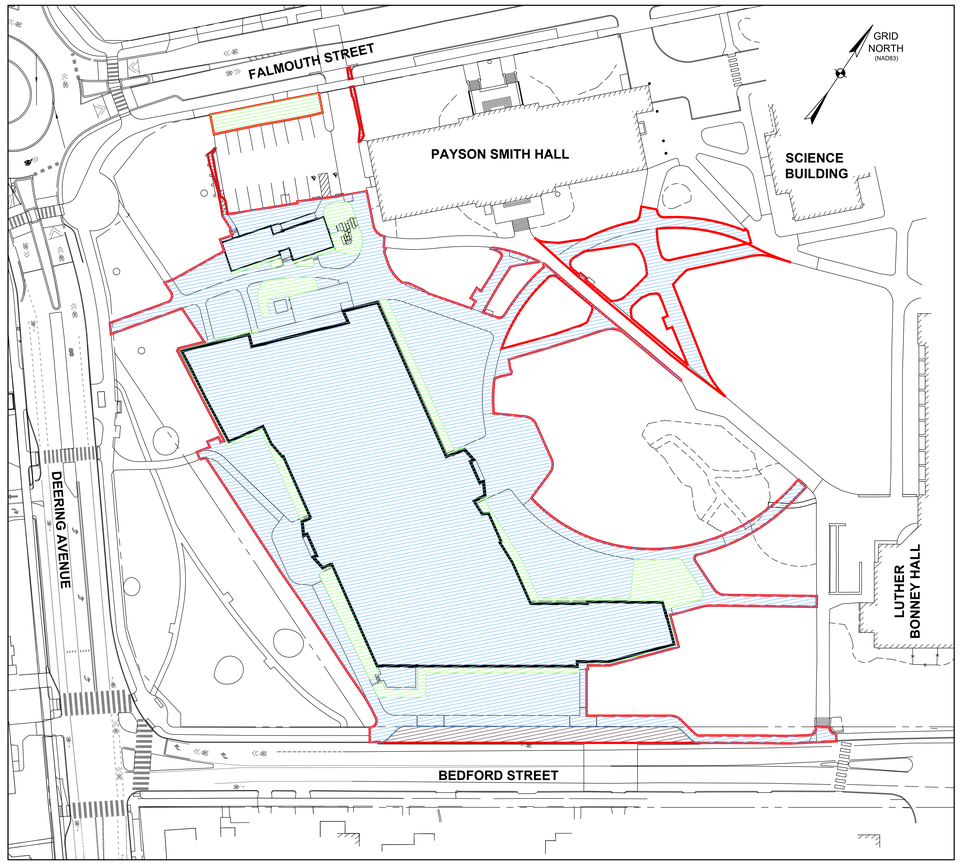
Pond ECB3: Catch Basin Peak Elev=50.06' Storage=59 cf Inflow=0.30 cfs 878 cf
Primary=0.29 cfs 847 cf Secondary=0.00 cfs 0 cf Outflow=0.29 cfs 847 cf

Total Runoff Area = 263,727 sf Runoff Volume = 65,228 cf Average Runoff Depth = 2.97"
66.94% Pervious = 176,551 sf 33.06% Impervious = 87,176 sf

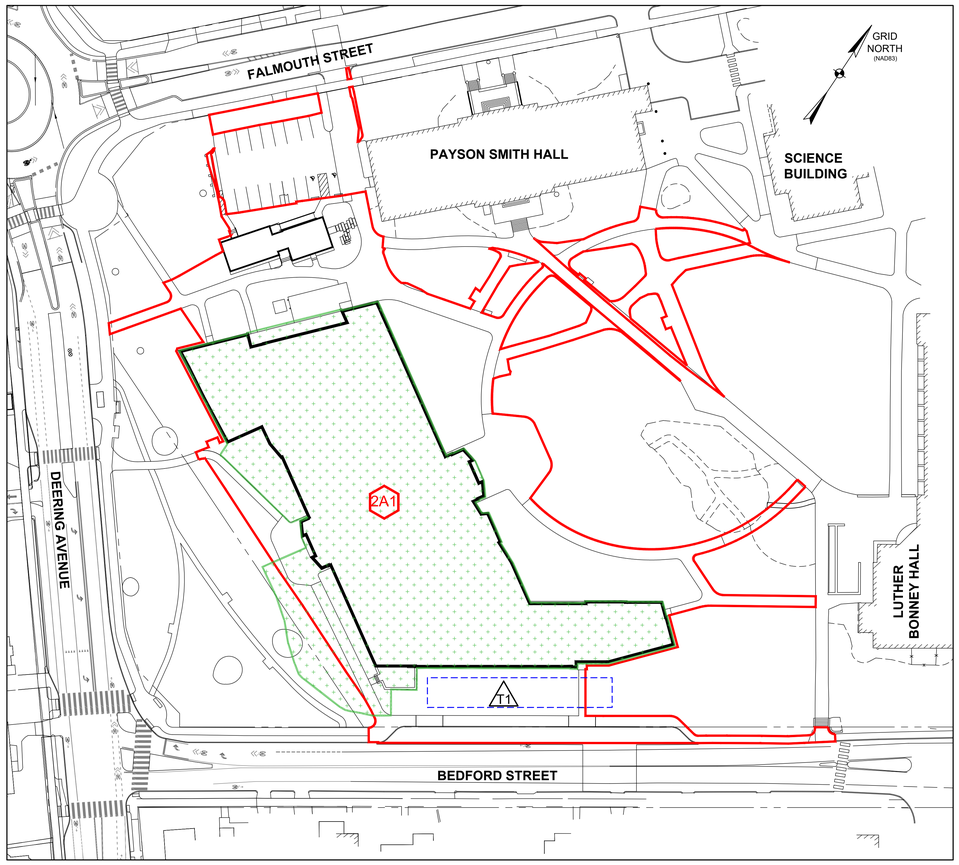
Appendix C - Redevelopment and Treatment Calculations



1 WS102 REDEVELOPMENT CALCULATIONS: PRE-DEVELOPMENT CONDITIONS
SCALE: 1"=40'



2 WS102 REDEVELOPMENT CALCULATIONS: POST-DEVELOPMENT CONDITIONS
SCALE: 1"=40'



3 WS102 TREATMENT PLAN
SCALE: 1"=40'

Pollutant Ranking Calculations						
Land Use		Pollutant Ranking*	Existing Area (SF)	Existing Impact Rating	Proposed Area (SF)	Proposed Impact Rating
Roads where idling may occur periodically due to traffic volume and intersections, High use parking lots		5	0	0	0	0
Other roads, Medium use parking lots		4	0	0	0	0
Other parking lots and driveways, Flat asphalt rooftops, Roofs on an industrial facility		3	0	0	2,835	8,505
Other rooftops, Bikeways, Grassed areas mowed more than twice per year, Walkways/foot traffic-only pavement		2	97,893	195,786	88,722	177,444
Non-grass landscaped areas, Stormwater treatment/storage systems (except buffers)		1	1,955	1,955	8,291	8,291
Forest, Meadow mowed no more than twice per year;		0	0	0	0	0
*From Chapter 500, Section 4.C.2.d.i, Table 2		Total	99,848	197,741	99,848	194,240

Weighted Ranking and Treatment Requirements		
Existing Weighted Impact Rating	1.98	Existing Impact Rating/Total Area
Proposed Weighted Impact Rating	1.95	Proposed Impact Rating/Total Area
Ranked Impact Change	-0.04	Proposed Rating - Existing Rating
Percentage of Area requiring Treatment (Site Law Projects)	50%	Per Chapter 500, Section 4.C.2.d.i, Table 3

TREATMENT REQUIREMENTS		
TOTAL DEVELOPED AREA	99,848	SF
PERCENTAGE OF DEVELOPED AREA REQUIRING TREATMENT	50%	(See Weighted Ranking Results)
DEVELOPED AREA REQUIRING TREATMENT	49,924	SF
DEVELOPED AREA BEING TREATED	49,929	SF

TREATMENT SUMMARY								
SUBAREA	DEVELOPED AREA (SF)	DEVELOPED IMPERVIOUS AREA (SF)	EXISTING IMPERVIOUS AREA (SF)	TOTAL IMPERVIOUS AREA (SF)	DEVELOPED LANDSCAPED AREA (SF)	EXISTING LANDSCAPED AREA (SF)	TOTAL LANDSCAPED AREA (SF)	BMP TYPE
2A1	49,929	43,131	0	43,131	4,179	2,619	6,798	SUBSURFACE SAND FILTER
TOTAL	49,929	43,131	0	43,131	4,179	2,619	6,798	

TREATMENT AREA SIZING										
TREATMENT AREA	IMPERVIOUS AREA (SF)	LANDSCAPED AREA (SF)	REQUIRED VOLUME (IMPERVIOUS AREA X 1"/12) (CF)	REQUIRED VOLUME (LANDSCAPED AREA X .4"/12) (CF)	TOTAL VOLUME REQUIRED (CF)	VOLUME PROVIDED (CF)	REQUIRED SURF AREA (5% OF IMPERVIOUS AREA) (SF)	REQUIRED SURF AREA (2% OF LANDSCAPED AREA) (SF)	TOTAL SURF AREA REQUIRED (SF)	SURF AREA PROVIDED (SF)
T1	43,131	6,798	3,594	227	3,821	4,188	2,157	136	2,293	3,051

LEGEND

- TREATED AREA
- TREATED AREA BOUNDARY
- DEVELOPED AREA BOUNDARY
- 11 — TREATED AREA NUMBER
- T1 — STORMWATER TREATMENT AREA NUMBER

GRAPHIC SCALE
40' 20' 0 40' 80'
1"=40'
CHECK GRAPHIC SCALE BEFORE USING

UNIVERSITY OF SOUTHERN MAINE
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111 BEDFORD STREET, PORTLAND, MAINE

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ACOUSTICS/ AUDIO-VISUAL:
JAFFE HOLDEN
114A WASHINGTON STREET
NORWALK, CT 06854
PHONE: 203.838.4167

LIGHTING:
CLINE BETTRIDGE BERNSTEIN
116 EAST 27TH STREET, 4TH FLOOR
NEW YORK, NY 10016
PHONE: 212.741.3280

SEAL:
STATE OF MAINE — JONAH DeWATERS — No. 12273 — LICENSED PROFESSIONAL ENGINEER
FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022
2.	REVISED UTILITY CONNECTIONS	01/27/2023
3.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT RESUBMISSION	02/23/2023

REDEVELOPMENT AND TREATMENT PLANS

SCALE:
WS103

PFEIFFER PARTNERS PROJECT NUMBER 6170.00



OAK POINT ASSOCIATES architecture engineering planning

March 20, 2023

Ms. Maya Balassa
City of Portland Planning Authority
4th Floor, City Hall
389 Congress Street
Portland, ME 04101

Re: Responses to Planning Board Comments
Application for Major Site Plan Review
Center for the Arts, University of Southern Maine
111 Bedford Street, Portland, Maine

Dear Ms. Balassa:

The following are our responses to the outstanding comments made by Planning Department Review staff and comments made during the Planning Board Workshop on February 28 for the Center for the Arts project:

Responses to outstanding Planning Review Staff comments dated February 14, 2023

Standard D-6

- *The applicant shall submit proposed translucent ceramic frit film application to clear glazing to meet .7 or greater visible transmittance.*
  OPA RESPONSE: Information added to the application. See revised Section 12

Standard D-7

- *The applicant shall submit proposed window screen specification to observe level of tint for staff review.*
  OPA RESPONSE: Information added to the application. See revised Section 12

Responses to outstanding Planning Board comments made during the February 28, 2023 Workshop

- *The applicant should consider using a window glazing pattern that will reduce bird strikes.*
  OPA RESPONSE: Although not currently a City of Portland requirement, the building design has integrated the following features to support bird safety:
  - **The ceramic frit pattern along the ribbon windows provides preventive visible collision measures along most of the perimeter glazing.**
  - **The deep roof overhang and the cross-brace patterning of wood glulam curtainwall support assists in breaking up the reflections to help birds recognize glass as a barrier.**

- *Provide better clarity regarding how the building and adjacent greenspace will be used for events.*
  OPA RESPONSE: Due to the locations of the classrooms relative to the performance spaces, the University will only hold events in the evenings after 6pm and during times where classes are not in session (e.g. weekends and school vacations). Outdoor events will be non-amplified and required to conform with the City's noise requirements. As noted in the permit application, USM has a strong relationship with the neighboring properties, including hosting regular neighborhood meetings. This relationship provides direct lines of communication should neighbors feel that the noise levels and/or disruptions are exceeding the City's requirements.

- *Confirm that there is adequate parking on site during events.*
  OPA RESPONSE: The following table demonstrates parking usage during events. This table assumes an unlikely "worst case scenario" where weekday events are being held simultaneously at both the CFA and in Hannaford Hall that start exactly at 6pm when there are still commuters parked on campus (note that the number of commuters parked on campus drops dramatically after 7pm).

	# of Spaces
Supply	1910
Demand	
Residential Students	394
Commuters	431
Hannaford Hall	512
CFA	200
Net Spaces Available	374

*USM plans to limit CFA events to 6 pm or later, Mon-Fri , or the weekend

If you have any questions/comments on these changes or need additional information, please do not hesitate to contact me.

Sincerely,



Jonah DeWaters, P.E., LEED AP BD+C
Civil Engineer

OAK POINT ASSOCIATES
architecture
engineering
planning

February 9, 2023

Ms. Maya Balassa
City of Portland Planning Authority
4th Floor, City Hall
389 Congress Street
Portland, ME 04101

Re: Certification of Neighborhood Meeting
Center for the Arts Building, University of Southern Maine
111 Bedford Street, Portland, Maine

Dear Ms. Balassa:

This memo shall serve as certification that a neighborhood meeting was held on February 2, 2023 at the Abromson Community Education Center on USM's Portland Campus at 6pm for the above referenced project. The meeting was also hosted on zoom to allow abutters and interested parties to attend it remotely. A notification letter was mailed on January 18, 2023 to the abutters and interested parties lists provided by the City of Portland Planning Division.

Also included with this memo are the following:

1. A copy of the letter mailed to abutting property owners and interested parties.
2. An attendance record for the meeting.
3. Record of feedback and discussions that occurred at the meeting.

If you have any questions or need more information, please do not hesitate to contact me

Sincerely,

Jonah DeWaters, P.E., LEED AP BD+C
Civil Engineer

OAK POINT ASSOCIATES
architecture
engineering
planning

January 18, 2023

Dear Neighbor:

On behalf of the University of Southern Maine, please join us for a neighborhood meeting to discuss our plans for construction of a Center for the Arts building at 111 Bedford Street in Portland, Maine. A Major Site Plan Application for this project has also been filed with the City of Portland Planning Department.

Meeting Location: Abromson Hall (88 Bedford Street), Room 109/110
Meeting Date: Thursday, February 2, 2023
Meeting Time: 6pm – 7pm

There is also an option to attend the meeting remotely. A link to the meeting will be e-mailed to you after completing the RSVP form located here: bit.ly/3WpisCB

The Land Use Code requires that neighboring property owners and residents on an "interested parties list" be invited to participate in this neighborhood meeting. A sign-in sheet will be circulated, and a record of the meeting will be taken. Both the sign-in sheet and record will be submitted to the Planning Board.

Accommodations can be provided upon request. If you require additional accommodations, please contact Katie Andrews at (207) 780-4484 by 5pm on Monday February 1 to ensure that we have sufficient time to make necessary arrangements.

If you have any questions or need additional information, please contact me via e-mail at jdewaters@oakpoint.com

Sincerely,

Jonah DeWaters, P.E., LEED AP BD+C
Civil Engineer

Note: Under the City of Portland Land Use Code, an applicant for a Major Site Plan, Master Development Plan, Subdivision of over five lots, or Zoning Map Amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven days before a public hearing. Should you wish to officer additional comments on the proposed development, you may forward them by email to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

OAK POINT ■ ASSOCIATES

SUMMARY OF PUBLIC COMMENTS FROM NEIGHBORHOOD MEETING

Date: February 2, 2023 **Time:** 6 pm

Location: Abromson Community Education Center (88 Bedford Street), Room 109/111 and Zoom Meeting (address provided by USM)

Project: Center for the Arts Building – University of Southern Maine, Portland Campus

Meeting Intent:

This neighborhood meeting was held as required by the City of Portland to review the Center for Arts (CFA) building project. Presenters at the meeting included representatives from USM, Oak Point Associates (Civil Engineer of Record), Consigli Construction (Building General Contractor), Pfeiffer Partners (Architect of Record) and Vanasse Hangen Brustlin (VHB, Traffic Consultant for the Project).

Notification and Attendance

A notification letter was mailed to the list of abutters and interested parties provided by the City of Portland. A list of attendees is attached.

Summary of Public Comment

Below is a summary of public questions and how there were answered during the meeting:

1. *How will drop off occur for vehicles approaching from Deering Avenue?*

   There is a pull off adjacent to the building on the north side of Bedford Street to allow for dropping off passengers. Parking for the building will be in one of USM's existing parking lots or the parking garage. Patrons approaching from Deering Avenue that intend to utilize the drop off will need to drive down Falmouth Street to Forest Avenue, then up Bedford Street so that they can approach the site from the southeast (from Forest Avenue).

2. *Describe the connection between the CFA project and the Farmhouse.*

   The farmhouse will contain administrative offices for programs in the CFA Building and reference materials. Because of this, it is important that the two buildings be complementary to each other and easily accessible. The farmhouse is being relocated to the northwest to allow for construction of the CFA building, but it is being preserved, renovated and added onto so that it can continue to be an asset to the campus.

231 Main Street, Biddeford, Maine 04005 TEL 207.283.0193 FAX 207.283.4283 www.oakpoint.com

3. *Is there anything historic inside the farmhouse? Has it been moved before?*

   There are items within the building that were deemed to be of importance by the City's Historic Preservation Program Manager (Evan Schueckler) such as a hearth and second floor. They are being maintained as part of the project. Kate Willis, an Architectural Historical with Kleinfelder, was hired to study the building's historical significance. Based on her research and her discussions with representatives from USM's Osher Map Library, the portion of the farmhouse being relocated was built in the early 1800's, with a small addition constructed afterwards that is being demolished. There is a high degree of confidence that the building has not been previously moved.

4. *Is it possible for someone to break the windows on the building?*

   The window glass is thicker than a typical window to limit sound transmission through them and contain fritted patterns and specific glazing to increase the privacy of the building's occupants. While it is possible for someone to break the windows, the urban location of the building and proposed site lighting are anticipated to provide an effective vandalism deterrent.

5. *Was the potential for bird strikes considered when designing/selecting the building's windows?*

   Similar to the McGoldrick Center, the City's requirements and other applicable codes will be followed. Additionally, fritted patters on the glass are being utilized.

6. *It appears that several trees are being removed. Is it possible to relocate any of them? The trees being proposed will not reach maturity for many years.*

   The University worked with Oak Point and Pfeiffer to carefully place the building to minimize the impact to as many large trees as possible and to be sensitive to preserving plantings of native herbaceous plants, including the area known as "The Food Forest."

   USM and Oak Point also consulted with the City Arborist several times to discuss strategies for minimizing damage to existing trees, such as to the existing beech tree in Noyes Park and several significant trees on the USM campus near Luther Bonney Hall. Most of trees within the work area are over 10' tall and would likely not survive if relocated. Oak Point and USM will look at the existing smaller trees to see if they can be relocated.

   In addition to landscaping around the building, several street trees are proposed along Bedford Street, and plantings are proposed on the east and west sides of the farmhouse, including a walnut tree to replace the one that will be removed when the building is relocated.

   The landscape plan for the farmhouse project includes repurposing of some of the existing granite foundation blocks as pavers, and there is a large maple tree being removed whose trunk will be salvaged for reuse inside the CFA. A similar requirement will be added for the existing walnut tree that is being removed as part of the farmhouse project.

7. *Is any work being done to upgrade Noyes Park so that is more cohesive with the CFA?*

   The park is not on the University's property, and renovations to it are outside of the scope of the project. However, Oak Point Associates is doing a "Pro Bono" project with the City of Portland to develop concept site plans for upgrades and revisions to the park to make the pedestrian pathways more compatible with the sidewalks on Deering Avenue and Falmouth Street as well as the

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CFA/USM Campus. Once these plans are developed, the City has indicated it will work with representatives from the Noyes family and the community to review the plans and determine next steps, including allocating funding for the work and developing a timeline for its construction.

8. *How is this building usable to all of the arts? Is there a possibility of adding a recording studio in the future?*

   Spaces for the arts will continue to be provided on the Gorham Campus. Additionally, the programming of the building, including the art studio (flex studio) to house the book arts program are intended to draw people into the building. Outdoor sculpture gardens and a gallery space will showcase interactive artwork.

9. *How will traffic get from the drop off on Bedford Street into the parking lot adjacent to the Law School?*

   After turning onto Deering avenue, cars can either turn left into the parking lot from Deering Avenue or utilize the roundabout to turn right into the parking lot.

10. *How will the space be used for outdoor concerts?*

    Outdoor concerts currently occur on USM's Gorham campus approximately once per year, and they will occur on the campus green once the CFA is completed. These events will be conform to the City's noise ordinance requirements, and the public is welcome to attend them. USM will continue to communicate with the neighborhood to ensure that concerns can be mitigated.

    Minimizing sound transmission was also an important design consideration, and care has been taken to limit noise that can be heard outside the building.

11. *(From representatives from Oakhurst Dairy) How do the Traffic Movement Permit and Transportation Demand Management Plan account for growth? Are the predicted parking increases realistic?*

    The answer to this question is not easy to explain at the neighborhood meeting. Instead, USM will follow up directly with Oakhurst representatives to discuss and to review how growth was incorporated into the plans.

12. *Why aren't the overhead wires on Bedford Street being put underground instead being relocated to the opposite side of the Street?*

    The locations are the result of several meetings with Central Maine Power, Spectrum and Consolidated Communications. The project will not connect to the utilities on these poles. They are being relocated to the opposite side of the street to avoid conflicts between the pull-off and sidewalk on Bedford Street and required sidewalk lighting and street trees. Putting the wires underground will involve a significant amount of disturbance to Bedford Street (which is currently under a paving moratorium), requires re-feeding several buildings on Bedford Street, and would be a considerable expense to the project. Oak Point will follow up with the City to discuss further.

The above items are true to the best of the writer's knowledge. If there are errors or omissions, please notify Jonah DeWaters at Oak Point Associates within seven (7) calendars of receipt. If no corrections or additions are made to this document by that date, they will become permanent record.

231 Main Street, Biddeford, Maine 04005 TEL 207.283.0193 FAX 207.283.4283 www.oakpoint.com

USM CFA Neighborhood Meeting Attendance List

Time/Date Thursday, February 2, 2023, 6pm
Location Abromson Hall Rm 109/111 and via Zoom

Name	Affiliation	Address	E-mail	Attendance Type
Adam Tuchinsky	Presenter - USM	Wischamper Center, Room 124E, Portland, ME	adam.tuchinsky@maine.edu	In Person
Michael Hudson	Presenter - USM	246 Deering Avenue, Portland, ME	michael.hudson@maine.edu	In Person
Aaron Witham	Presenter - USM	51 Westminster St, Lewiston, ME	aaron.z.witham@maine.edu	Virtual
Bill Murray	Presenter - Pfieffer Partners	700 South Flower Street, Suite 1150, Los Angeles, CA	bmurray@pfeifferpartners.com	Virtual
Jonah DeWaters	Presenter - Oak Point Associates	231 Main Street, Biddeford, ME	jdewaters@oakpoint.com	In Person
Christopher Brown	Presenter - Consigli Construction	15 Franklin Street, Portland, ME	CBrown@consigli.com	In Person
Jenn Conley	Presenter - Vanasse Hangen Brustlin (VHB)	40 IDX Drive, Building 100 Suite 200, South Burlington, VT	jconley@vhb.com	Virtual
Dorothy VanDine	Owner - USM	PO Box 9300, Portland, ME	dorothy.vandine@maine.edu	In Person
Katie Andrews	Owner - USM	246 Deering Avenue, Portland, ME	katie.andrews@maine.edu	In Person
Thomas Blanchard	Owner - USM	25 Bedford Street, Portland, ME	thomas.blanchard@maine.edu	Virtual
David Burrows	Owner - USM	25 Bedford Street, Portland, ME	david.m.burrows@maine.edu	Virtual
Sonya Julian Lester	Consultant - Pfieffer Partners	700 South Flower Street, Suite 1150, Los Angeles, CA	SLester@pfeifferpartners.com	In Person
Thomas Chan	Consultant - Pfieffer Partners	700 South Flower Street, Suite 1150, Los Angeles, CA	TChan@pfeifferpartners.com	In Person
Allison Dimatteo	Consultant - Oak Point Associates	231Main Street, Biddeford, ME	atowne@oakpoint.com	In Person
Tyler Barter	Consultant - Oak Point Associates	231 Main Street, Biddeford, ME	tbarter@oakpoint.com	In Person
Peter MacGovern	Consultant - Oak Point Associates	85 Middle Street Portsmouth, NH	pmacgovern@oakpoint.com	Virtual
Mary Costigan	Consultant - Burnstein Shur	100 Middle Street, West Tower, Portland, ME	mcostigan@bernsteinshur.com	Virtual
Maya Balassa	City of Porltand Planning Department	None Given	mbalassa@portlandmaine.gov	Virtual
Ian Stevenson	City of Porltand Landmarks	None Given	istevenson@portlandlandmarks.org	Virtual
Nancy Ellenberger	Neighbor/Citizen	29 Falmouth Street, Unit 3, Portland, ME	None Given	In Person
Matt Ellenberger	Neighbor/Citizen	29 Falmouth Street, Unit 3, Portland, ME	None Given	In Person
Hazel Macdonald	Neighbor/Citizen	30 Falmouth Street, Unit 1, Portland, ME	None Given	In Person
Dawn Gay	Neighbor/Citizen	42 Chamberlain Avenue, Portland, ME	None Given	In Person
Susan Brennan	Neighbor/Citizen	105 Fessenden Street, Portland, ME	None Given	In Person
Leonard Brennan	Neighbor/Citizen	106 Fessenden Street, Portland, ME	None Given	In Person
Sally Walker	Neighbor/Citizen	92 Fessenden Street, Portland, ME	None Given	In Person
Anna Woldarczyk	Neighbor/Citizen	124 Bolton Street, Portland, ME	Annawoldarczyk@hotmail.com	In Person
Mark Page	Neighbor/Citizen	364 Forest Avenue, Portland, ME	None Given	In Person
Paul Connolly	Neighbor/Citizen	364 Forest Avenue, Portland, ME	None Given	In Person
E.L. Whitman	Neighbor/Citizen	48 Pitt Street, Portland, ME	None Given	In Person
Lisa Bloss	Neighbor/Citizen	35 Washburn Avenue, Portland, ME	None Given	In Person
George Rheault	Neighbor/Citizen	28 Hanover Street, Portland, ME	None Given	In Person
Carol Schiller	Neighbor/Citizen	7 Longfellow Street , Portland, ME	schiller.carol@yahoo.com	Virtual
Elizabeth Swain	Neighbor/Citizen	22 Wilson Road, Portland, ME	elizabeth.swain@powereng.com	Virtual
Kristin G Sweeney	Neighbor/Citizen	167 Caleb St, Portland, ME	sweeneykg@gmail.com	Virtual
Kimberlee Elder	Neighbor/Citizen	30 Chamberlain, Portland, ME	Kimberlee.elder@gmail.com	Virtual
Jamie Bryant	Neighbor/Citizen	332 Palmer Ave, Portland, ME	jamie.lisa.bryant@gmail.com	Virtual
John Stevens	Neighbor/Citizen	None Given	johncstevens3@gmail.com	Virtual
Julianne Opperman	Neighbor/Citizen	25 Woodmont Street, Portland, ME	Julianne.r.opperman@gmail.com	Virtual
John Opperman	Neighbor/Citizen	25 Woodmont Street, Portland, ME	None Given	Virtual

Greater Portland Landmarks
Historic character enriches our lives

February 7, 2023

Chair Stanley and members of the Planning Board:

Founded in 1964, Greater Portland Landmarks is a non-profit advocacy organization that works toward the preservation and revitalization of greater Portland's built environment. Our goal is to save greater Portland's historic places through preservation and adaptive use while promoting creative new architecture that enhances historic neighborhoods. We appreciate the opportunity to comment on projects that impact the historic character of the city.

The University of Southern Maine's site plan for 111 Bedford Street (USM Center for the Arts) is predicated on relocating the historic Deering Farmhouse (built 1807) by about sixty feet on the university campus. We are writing to express our support for that decision. Landmarks has met with and discussed at length the proposal to move and restore the historic farmhouse. This plan will re-activate the structure as a functional space and will create opportunities for public history. We also understand the move will create the ability for this historic structure to become more integral to the campus and interface with newer buildings, such as the proposed Center for the Arts. We ask you to consider these comments as you deliberate on the scope of the proposed Center for the Arts Major Site Plan.

Thank you,

C. Ian Stevenson, PhD
Director of Advocacy

511 Congress Street, Ste. 502, Portland ME 04101 | 207.774.5561 | info@portlandlandmarks.org | portlandlandmarks.org

Maya Balassa <mbalassa@portlandmaine.gov>

Fwd: USM performing arts center

Kevin Kraft <kkraft@portlandmaine.gov> Tue, Mar 14, 2023 at 5:44 PM
To: Maya Balassa <mbalassa@portlandmaine.gov>, Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ---------
From: **Janette Gustafson** <rg787878@hotmail.com>
Date: Tue, Mar 14, 2023 at 5:23 PM
Subject: RE: USM performing arts center
To: planningboard@portlandmaine.gov <planningboard@portlandmaine.gov>

Good afternoon,

I attended the planning board meeting on February 28th and have a concern regarding the glass enclosed entryway's danger to the bird population.

I really appreciated the interest expressed for preserving the trees in the immediate area surrounding the proposed building, but trees growing in close proximity to glass windows pose a danger to birds. Birds will be drawn closer to the building because of the trees, they will see the trees reflected in the glass, but will not able to discern the presence of window glass.

A billion birds are killed by window strikes annually, adding to the many stressors which have reduced the bird population over 30% in the last 50 years.

https://www.audubon.org/news/building-collisions-kill-hundreds-millions-birds-year

I have been a wildlife/bird lover for most of my life and was heartbroken when several birds died after striking the windows in my solarium. Thankfully, I was able to remediate the problem by moving the bird feeders away from my house, then applying reflective tape on the windows.

I would ask the builders to use bird safe glass or some other type of window treatment so that birds "see" this obstruction. https://abcbirds.org/blog20/make-windows-safe/

I urge the planning board to take this very important issue into consideration.

Thank you for your time,

Janette Gustafson

Parent of a USM graduate

--
Kevin Kraft, AICP
Deputy Director Planning & Urban Development Department
389 Congress Street
Portland, Maine 04101
Phone: 207.874.8430
kkraft@portlandmaine.gov

University of Southern Maine Center For the Arts

University of Southern Maine

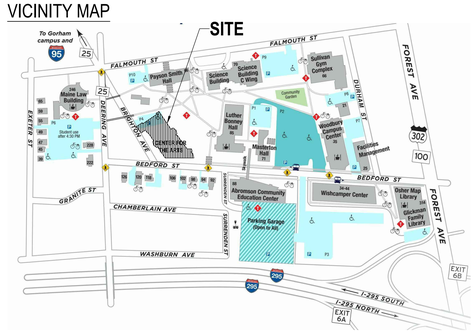
111 Bedford Street, Portland, Maine

CBL: 114A A001001
ZONE R5 W/ USM OVERLAY



MAJOR SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT - MINOR AMENDMENT

VICINITY MAP



15 DECEMBER 2022

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CU101	UTILITY PLAN
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C501	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C502	SITE DETAILS-1
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ARCHITECTURAL

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AA201	EXTERIOR ELEVATIONS
AA901	RENDERED VIEWS
AA902	RENDERED VIEWS
AA903	RENDERED VIEWS
AA904	SOLAR STUDIES

CLIENT
UNIVERSITY OF SOUTHERN MAINE
P.O. BOX 9300
PORTLAND, MAINE 04104

ARCHITECTURE
PFEIFFER
700 SOUTH FLOWER STREET
SUITE 1150
LOS ANGELES, CA 90017
P. 213.624.2775
F. 213.895.0923

DESIGN, CIVIL, LANDSCAPE, MEPFP
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, MAINE 04005
P. 207.283.0193
F. 207.283.4283

THEATRICAL
THEATRE PROJECTS
47 WATER STREET
SOUTH NORWALK, CT 06854
T. 203.299.0635

ACOUSTICS, AUDIO-VISUAL DESIGN
JAFFE HOLDEN
114A WASHINGTON STREET
NORWALK, CT 06854
O. 203.838.4167

LIGHTING
CLINE BETTRIDGE BERNSTEIN
116 EAST 27TH STREET
4TH FLOOR
NEW YORK, NY 10016
P. 212.741.3280

COST CONSULTANT
VENUE
226 5TH AVE N, SUITE 705
ST. PETERSBURG, FL 33701
P. 727.498.1091

STATE OF MAINE
JONAH DeWATERS
No. 12273
LICENSED
PROFESSIONAL ENGINEER
12 / 15 / 2022

pfeiffer
— A PERKINS EASTMAN STUDIO

GI100

CIVIL NOTES

GENERAL

1. INFORMATION SHOWN HEREON IS BASED ON THE FOLLOWING:
   a. "BOUNDARY AND TOPOGRAPHIC SURVEY, USM PORTLAND CAMPUS" BY OWEN HASKELL, INC, 390 US ROUTE 1, FALMOUTH, ME. DATED NOVEMBER 12, 2019..
   b. "DEERING'S CORNER ROUNDABOUT," BY RANSOM CONSULTING, INC, 400 COMMERCIAL STREET, SUITE 404, PORTLAND, ME. DATED DECEMBER 18, 2019.
   c. "BEDFORD STREET SEWER SEPARATION PROJECT" BY CITY OF PORTLAND MAINE PUBLIC WORKS DEPARTMENT WATER RESOURCES DIVISION. DATED FEBRUARY 16, 2018. LAST REVISED MARCH 7, 2018.
   d. "UNIVERSITY OF SOUTHERN MAINE PORTLAND CAMPUS UTILITIES MASTER PLAN" BY HARRIMAN ASSOCIATES, 123 MIDDLE STREET, PORTLAND, ME. DATED APRIL 28, 2011
   e. SITE RECONNAISSANCE AND TOPOGRAPHIC SURVEY PERFORMED BY OAK POINT ASSOCIATES IN SPRING/SUMMER, 2022.
   f. SUBSURFACE UTILITY LOCATION SERVICES PROVIDED BY BLOODHOUND UTILITY LOCATION IN SUMMER 2022.
   g. INFORMATION PROVIDED BY THE PORTLAND WATER DISTRICT WINTER, 2019.

3. PROPERTY LINES SHOWN ARE BASED ON PLAN REFERENCE 3a ABOVE.

4. ELEVATIONS SHOWN HEREON ARE BASED ON THE CITY OF PORTLAND DATUM. THE PROJECT BENCHMARKS ARE AS FOLLOWS (SEE ALSO 1/C-001):
   a. TBM1 IS A 3' OFFSET BRASS MONUMENT AT THE INTERSECTION OF DEERING AVENUE AND FALMOUTH STREET. BENCHMARK ELEVATION: 54.10'
   b. TBM2 IS A BONNET BOLT ON FIRE HYDRANT ON THE NORTH SIDE OF FALMOUTH STREET ACROSS FROM PAYSON SMITH HALL. BENCHMARK ELEVATION: 55.14'
   c. TBM3 IS A BONNET BOLT ON FIRE HYDRANT ON THE SOUTHEAST CORNER OF THE INTERSECTION OF BEDFORD STREET AND SURRENDEN STREET. BENCHMARK ELEVATION: 47.66'

5. BEARINGS, COORDINATES AND NORTH ROTATION ARE BASED ON GRID NORTH, NAD83 (1983 WEST ZONE). PROVIDED TO OWEN HASKELL INC BY THE CITY OF PORTLAND AS PART OF THE BOUNDARY AND TOPOGRAPHIC SURVEY LISTED AS PLAN REFERENCE 1a, ABOVE.

6. THIS PROJECT IS SUBJECT TO THE FOLLOWING PERMITS, WHICH MUST BE OBTAINED BY THE OWNER/ARCHITECT PRIOR TO THE START OF CONSTRUCTION. KNOWN CONDITIONS OF THE PERMITS HAVE BEEN INCLUDED IN THE CONTRACT DRAWINGS AND SPECIFICATIONS. ABIDE BY CONDITIONS OF THESE PERMITS:
   a. CITY OF PORTLAND MAJOR SITE PLAN APPROVAL.
   b. MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION SITE LOCATION OF DEVELOPMENT ACT, MINOR AMENDMENT.
   c. MAINE CONSTRUCTION GENERAL PERMIT.

7. OBTAIN ADDITIONAL PERMITS NECESSARY FOR CONSTRUCTION. THESE PERMITS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   a. CITY OF PORTLAND BUILDING PERMIT.
   b. CITY OF PORTLAND STREET OPENING PERMIT.

9. REVIEW MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION SITE LOCATION OF DEVELOPMENT APPROVAL AND CONDITIONS (PROVIDED IN THE PROJECT SPECIFICATIONS). PRIOR TO COMMENCING ANY SITEWORK, PROVIDE A SIGNED COPY OF THE CERTIFICATION FORM INCLUDED IN THE PROJECT SPECIFICATIONS TO THE ARCHITECT FOR FILING WITH THE CITY OF PORTLAND AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

10. PERFORM WORK WITHIN PUBLIC RIGHT OF WAYS (FALMOUTH STREET AND BEDFORD STREET) IN ACCORDANCE WITH CITY OF PORTLAND'S WRITTEN REQUIREMENTS.

11. REPAIR OR REPLACE DAMAGE RESULTING FROM CONTRACTOR OPERATIONS, AS APPROVED BY THE OWNER, AT NO ADDITIONAL COST TO THE OWNER.

12. DO NOT PLACE, PUT OR DUMP CONSTRUCTION MATERIALS OR DEMOLITION DEBRIS IN AREAS THAT COULD DRAIN INTO THE MUNICIPAL STORM DRAIN SYSTEM.

UTILITY NOTES

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY AND ARE BASED ON FIELD RECONNAISSANCE, PLAN REFERENCES AND PRIVATE SUBSURFACE UTILITY LOCATIONS PERFORMED IN FALL 2019 AND SPRING 2022. PRIOR TO COMMENCING EXCAVATION OPERATIONS ON THE SITE, DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES IN THE WORK UTILIZING A PRIVATE UTILITY LOCATING SERVICE, CONTACT "OK TO DIG" AT 1-866-658-6344, CONTACT "DIG SAFE" AT 811 TO OBTAIN A "DIGSAFE" PERMIT. REPORT DISCREPANCIES BETWEEN THE PLANS AND THE EXACT UTILITY LOCATIONS TO THE OWNER PRIOR TO DISTURBING AREAS SURROUNDING THE UNDERGROUND UTILITIES.

2. UTILITIES IN THE PROJECT MUST REMAIN LIVE AT ALL TIMES DURING CONSTRUCTION UNLESS SHUTDOWNS ARE COORDINATED WITH AND APPROVED IN WRITING BY THE UNIVERSITY OF SOUTHERN MAINE.

3. NOTIFY ARCHITECT AND UNIVERSITY OF SOUTHERN MAINE FACILITIES DEPARTMENT AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO COMMENCING EXCAVATION AND HOLD A PRE-EXCAVATION CONFERENCE TO REVIEW REQUIREMENTS FOR UTILITY SERVICE INTERRUPTIONS AND PROCEDURE FOR REPAIRING ACCIDENTAL DAMAGE TO EXISTING UTILITIES.

4. PERFORM SANITARY SEWER WORK IN ACCORDANCE WITH CITY OF PORTLAND'S WRITTEN REQUIREMENTS. NOTIFY CITY OF PORTLAND DEPARTMENT OF PUBLIC SERVICES ONCE FINAL CONNECTIONS HAVE BEEN MADE, THE LINE HAS BEEN BACKFILLED, AND INSPECT THE LINES WITH A CAMERA IN THE PRESENCE OF A REPRESENTATIVE FROM THE CITY OF PORTLAND TO CONFIRM COMPLIANCE WITH CITY OF PORTLAND STANDARDS AND SPECIFICATIONS. REPORT DEFICIENCIES TO THE ARCHITECT AND THE CITY OF PORTLAND.

5. PERFORM GAS SERVICE WORK IN ACCORDANCE WITH UNITIL REQUIREMENTS. OBTAIN APPROVAL FROM UNITIL PRIOR TO CONSTRUCTION.

6. PERFORM WATER SERVICE WORK IN ACCORDANCE WITH PORTLAND WATER DISTRICT REQUIREMENTS.

7. COORDINATE TIMING OF WORK ON BEDFORD STREET RIGHT-OF-WAY WITH OVERHEAD UTILITY WORK BEING CONDUCTED BY CENTRAL MAINE POWER, SPECTRUM AND CONSOLIDATED COMMUNCAITONS.

PHASING, CONSTRUCTION ACCESS AND CONSTRUCTION MANAGEMENT NOTES

1. MINIMIZE DISRUPTIONS TO EXISTING PARKING AND VEHICULAR AND PEDESTRIAN CIRCULATION. OBTAIN WRITTEN PERMISSION FROM THE UNIVERSITY OF SOUTHERN MAINE PRIOR TO BLOCKING PARKING AREAS OR SHUTTING DOWN SIDEWALKS.

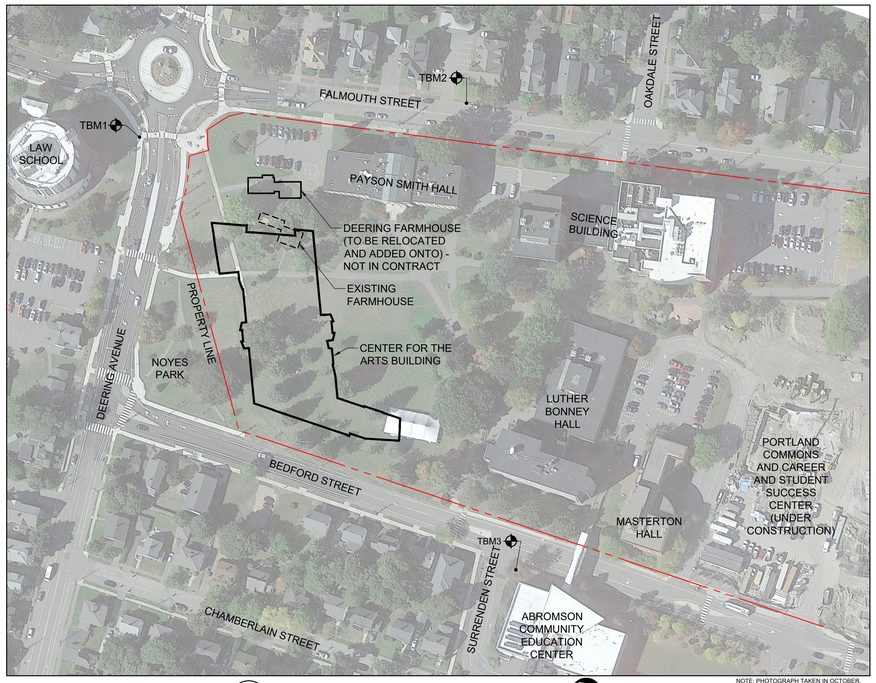
NOTIFICATION REQUIREMENTS

1. IN ADDITION TO THE NOTIFICATION REQUIREMENTS IN THE PROJECT SPECIFICATIONS, PROVIDE THE FOLLOWING NOTIFICATIONS. DO NOT PROCEED WITHOUT ACKNOWLEDGMENT THAT THE NOTIFICATION HAS BEEN RECEIVED AND AUTHORIZATION TO PROCEED HAS BEEN GRANTED AND DOCUMENTED IN WRITING:
   a. NOTIFY USM AT LEAST FIVE BUSINESS DAYS PRIOR TO MAKING CONNECTIONS TO ON CAMPUS ELECTRICAL OR COMMUNICATIONS INFRASTRUCTURE.
   b. INSPECTION OF WATER MAINS AND TEMPORARY WATER SERVICE (IF REQUIRED): PROVIDE WRITTEN NOTIFICATION TO PORTLAND WATER DISTRICT, OWNER, AND ARCHITECT AT LEAST 5 BUSINESS DAYS IN ADVANCE OF BEGINNING WORK ASSOCIATED WITH TEMPORARY OR PERMANENT WATER MAINS OR APPURTENANCES.
   c. INSTALLATION OF SEWER AND STORM DRAIN LINES: NOTIFY CITY OF PORTLAND DEPARTMENT OF PUBLIC SERVICES ONCE FINAL CONNECTIONS HAVE BEEN MADE, THE LINE HAS BEEN BACKFILLED, AND ACCESS IS AVAILABLE TO ALLOW FOR CAMERA INSPECTION OF THE LINES TO CONFIRM COMPLIANCE WITH CITY OF PORTLAND STANDARDS AND SPECIFICATIONS.
   d. INSTALLATION OF GAS MAINS: NOTIFY UNITIL AT LEAST 21 BUSINESS DAYS IN ADVANCE OF REQUIRING GAS MAIN INSTALLATION TO COORDINATE TRENCH EXCAVATION. INSTALLATION OF PIPES AND CONNECTIONS ARE BY UNITIL. BACKFILL TRENCH ONCE UNITIL HAS INSTALLED AND TESTED PIPING AND CONNECTIONS AS REQUIRED.
   e. PLANTING SOIL INSTALLATION: PROVIDE WRITTEN NOTICE TO OWNER AND ARCHITECT AT LEAST 14 BUSINESS DAYS PRIOR TO INSTALLATION OF PLANTING SOIL.

SOIL AND SOIL EXPLORATION NOTES

1. PREPARE AND SUBMIT A DEWATERING PLAN TO THE ARCHITECT AND OWNER PRIOR TO BEGINNING EXCAVATION. SHOULD GROUNDWATER BE ENCOUNTERED DURING EXCAVATION, PERFORM DEWATERING ACTIVITIES IN ACCORDANCE WITH THE APPROVED DEWATERING PLAN AND THE WRITTEN REQUIREMENTS OF BOTH THE MAINE DEP AND THE CITY OF PORTLAND. SEE SHEET C-501 FOR ADDITIONAL CONSTRUCTION DEWATERING REQUIREMENTS.

2. REFER TO THE FOUNDATION PREP AND DRAIN DETAIL FOR ADDITIONAL EXCAVATION AND BACKFILL REQUIREMENTS ASSOCIATED WITH BUILDING FOOTINGS AND FOUNDATIONS



1 C-001 OVERALL EXISTING CONDITIONS PLAN
SCALE: 1"=80'

N GRID NORTH

NOTE: PHOTOGRAPH TAKEN IN OCTOBER, 2021 AND OBTAINED FROM GOOGLE EARTH.

LEGEND

- 147.37'E / 145.55'F — EXISTING GRADE SPOT ELEVATION
- FINISHED GRADE SPOT ELEVATION
- 1 — EXISTING KEYNOTE
- A — REMOVAL KEYNOTE
- 1 — KEYNOTE
- 2 CAP — PLANT KEYNOTE
- 1 — LAYOUT POINT
- 124 — EXISTING CONTOUR LINE
- 124 — FINISH GRADE LINE
- EXISTING PROPERTY LINE
- EXISTING BUILDING LINE
- BUILDING LINE
- EXISTING EDGE OF ASPHALT CONCRETE PAVEMENT
- EDGE OF ASPHALT CONCRETE PAVEMENT
- EXISTING UTILITIES ABANDONED IN-PLACE (CUT AND CAP)
- REMOVALS (DRAWINGS CD101 ONLY)
- SAWCUT
- DRAINAGE FLOW ARROW
- FENCE
- EXISTING UTILITY POLE
- EXISTING DECIDUOUS TREE
- UTILITY POLE
- EXISTING CONIFEROUS TREE
- EXISTING CATCH BASIN
- EXISTING SHRUB
- CATCH BASIN
- SHRUB
- EXISTING STEAM MANHOLE
- EXISTING SEWER MANHOLE
- GROUNDCOVERS / PERENNIALS
- SEWER MANHOLE
- EXISTING WATER SHUT-OFF VALVE
- DECIDUOUS TREE
- WATER SHUT-OFF VALVE
- EOU — EXISTING OVERHEAD UTILITY LINE
- TRAFFIC SIGN (TEXT GIVEN AT SIGN LOCATION)
- EOE — EXISTING OVERHEAD ELECTRIC LINE
- UTILITY POINT OF CONNECTION
- EOU — EXISTING OVERHEAD UTILITY LINE
- B-1 — SOIL TEST BORING LOCATION
- EUE(2-2") — EXISTING UNDERGROUND ELECTRIC LINE (SIZE AND NUMBER AS NOTED, IF KNOWN)
- EUC — EXISTING UNDERGROUND COMMUNICATIONS LINE (SIZE AND NUMBER AS NOTED, IF KNOWN)
- EUE/C — EXISTING UNDERGROUND ELECTRIC/COMMUNICATIONS LINE (SIZE AND NUMBER AS NOTED, IF KNOWN)
- ESS(4") — EXISTING SANITARY SEWER LINE (SIZE AS NOTED)
- ESD(12") — EXISTING STORM DRAIN LINE (SIZE AS NOTED)
- EUG(6") — EXISTING NATURAL GAS LINE (SIZE AS NOTED)
- EW(6") — EXISTING WATER LINE (SIZE AS NOTED)
- ESTM — EXISTING STEAM AND CONDENSATE LINES (SIZE AS NOTED IF KNOWN)
- UE(2-4") — UNDERGROUND ELECTRIC LINES (SIZE AND NUMBER AS NOTED)
- UC(2-4") — UNDERGROUND COMMUNICATIONS LINES (SIZE AND NUMBER AS NOTED)
- SS(4") — SANITARY SEWER LINE (SIZE AS NOTED)
- SD(12") — STORM DRAIN LINE WITH FLOW DIRECTION ARROW
- UG — NATURAL GAS LINE (SIZE AS NOTED)
- W(6") — WATER LINE (SIZE AS NOTED)
- FD(4") — FOUNDATION DRAIN LINE
- SC — SEDIMENT CONTROL WATTLE OR SILT FENCE

ABBREVIATIONS

%	PERCENT	DMH	DRAIN MANHOLE	LT	LEFT	PVC	POLYVINYL CHLORIDE	T	TRANSFORMER
#	NUMBER	E	EAST	MAG	MAGNETIC	PWD	PORTLAND WATER DISTRICT	TBM	TEMPORARY BENCH MARK
±	PLUS OR MINUS	EA	EACH	MAX	MAXIMUM	R	RADIUS	TEMP	TEMPORARY
℄	CENTERLINE	ELEV	ELEVATION	MDOT	MAINE DEPARTMENT OF TRANSPORTATION	REINF	REINFORCED, REINFORCING	TP	TEST PIT
ABAN	ABANDONED	EP	EDGE OF PAVEMENT	MTL	METAL	RGS	RIGID GALVANIZED STEEL	TYP	TYPICAL
ADA	AMERICAN'S WITH DISABILITIES ACT	EQ	EQUAL	MIL	1/1000"	ROW	RIGHT-OF-WAY	USM	UNIVERSITY OF SOUTHERN MAINE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS	EW	EACH WAY	MIN	MINIMUM	RSF	REINFORCED SILT FENCE	W/	WIDTH, WATER, WEST,WITH
		EXIST	EXISTING	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	RT	RIGHT	WWF	WELDED WIRE FABRIC
CF	CONSTRUCTION FENCE	FG	FINISHED GRADE			S	SOUTH		
CJ	CONTROL JOINT	FFE	FINISH FLOOR ELEVATION	N	NORTH	SD	STORM DRAIN		
CLR	CLEAR	FT	FEET, FOOT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	SF	SILT FENCE		
CMP	CENTRAL MAINE POWER	Fy	YIELD STRENGTH			SIM	SIMILAR		
CO	CLEAN OUT	GAL	GALLON	NO	NUMBER	SMH	SEWER MANHOLE		
CONC	CONCRETE	GALV	GALVANIZED	OC	ON CENTER	SQ	SQUARE		
CONT	CONTINUOUS	HC	HANDICAP	OD	OUTSIDE DIAMETER	SF,SQ FT	SQUARE FEET		
DEP	DEPARTMENT OF ENVIRONMENTAL PROTECTION	IN	INCH(ES)	OZ	OUNCES	STA	STATION		
		INV	INVERT	PE	POLYETHYLENE	SS	SANITARY SEWER, STAINLESS STEEL		
DIA	DIAMETER	L	LENGTH	PSI	POUNDS PER SQUARE INCH				
		LBS	POUNDS	PSIG	POUNDS PER SQUARE INCH GAUGE				

GRAPHIC SCALE

1"=80' — 80' 40' 0 80' 160'

CHECK GRAPHIC SCALE BEFORE USING

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ISSUE NAME:

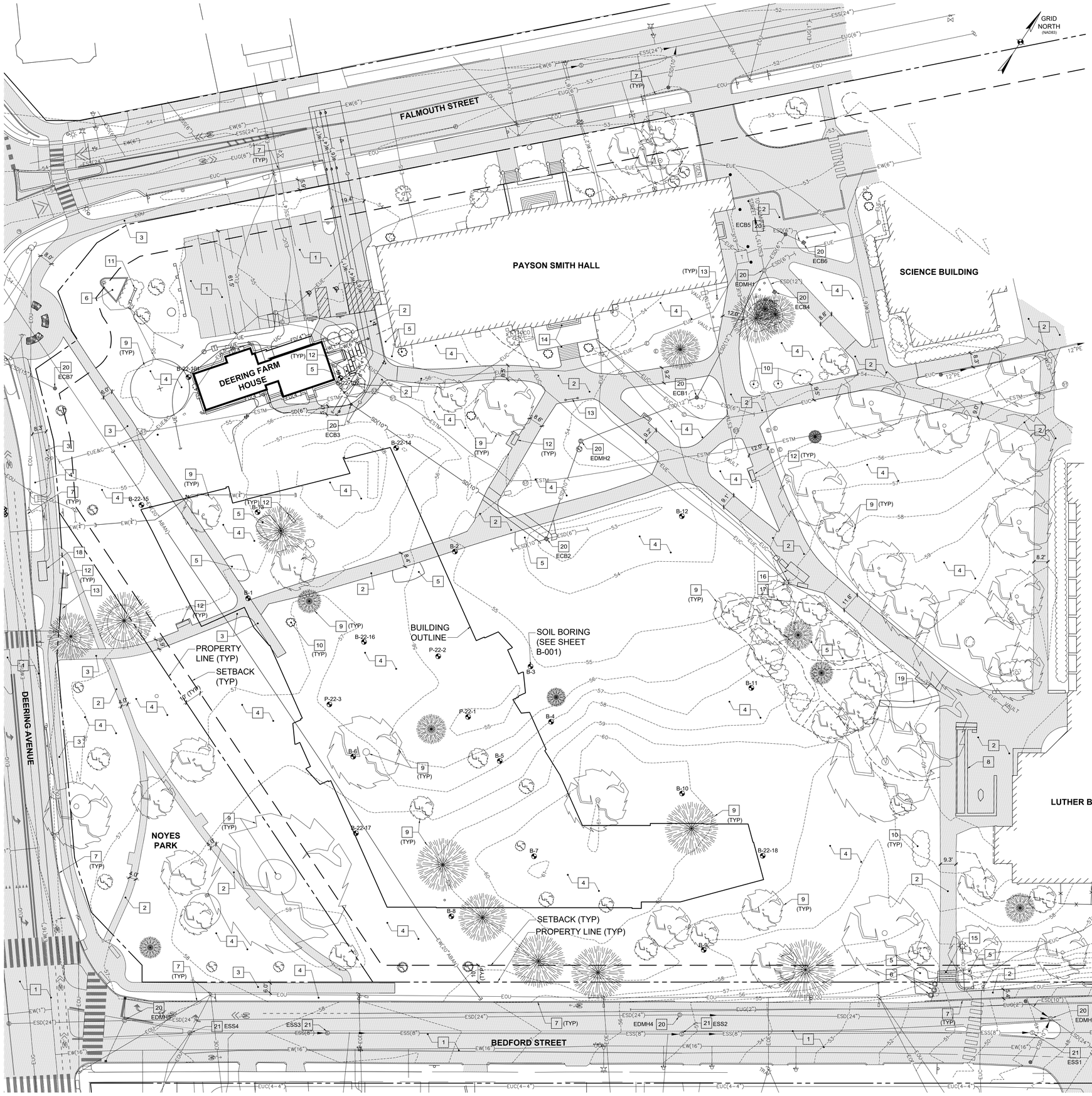
NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

CIVIL NOTES, LEGEND AND ABBREVIATIONS

SCALE: As indicated

C-001

PFEIFFER PARTNERS PROJECT NUMBER - 6170.00



1 CS101 EXISTING CONDITIONS PLAN
SCALE: 1"=20'

NOTES:
1. REFER TO DRAWING B-001 FOR SOIL BORING INFORMATION.

GRAPHIC SCALE
1"=20' 20' 10' 0 20' 40'
CHECK GRAPHIC SCALE BEFORE USING

KEYNOTES: (THIS SHEET ONLY)

1. EXISTING ASPHALT CONCRETE PAVEMENT.
2. EXISTING ASPHALT CONCRETE SIDEWALK.
3. EXISTING REINFORCED CONCRETE SIDEWALK.
4. EXISTING TURF.
5. EXISTING MULCH AREA.
6. EXISTING PLANTER.
7. EXISTING CURB.
8. EXISTING RETAINING WALL.
9. EXISTING TREE.
10. EXISTING SHRUB/BUSH.
11. EXISTING ILLUMINATED SIGN.
12. EXISTING BENCH.
13. EXISTING BICYCLE RACK.
14. EXISTING GRANITE STEPS.
15. EXISTING CONCRETE STEPS.
16. EXISTING SIGN/KIOSK.
17. EXISTING EMERGENCY CALL BOX.
18. EXISTING METRO BUS STOP.
19. EXISTING RIPRAP DRAINAGE SWALE.
20. EXISTING DRAINAGE STRUCTURE. SEE STRUCTURE SCHEDULE, THIS SHEET
21. EXISTING SANITARY SEWER STRUCTURE. SEE STRUCTURE SCHEDULE, THIS SHEET

EXISTING STRUCTURE SCHEDULE

STRUCTURE	RIM ELEVATION	INVERT IN (SIZE)	INVERT OUT (SIZE)	REMARKS
ECB1	52.72	47.37 (6")	47.05± (12")	FROM NORTH
-	-	47.13 (12")	-	FROM EDMH2
ECB2	52.26	47.11 (10")	46.76 (10")	FROM ECB3
-	-	46.96 (6")	-	FROM NORTH
-	-	46.71 (10")	-	FROM SOUTH
ECB3	56.10	47.91 (4")	47.81' (10")	FARMHOUSE FOUNDATION DRAIN
-	-	47.91 (6")	-	FARMHOUSE ROOF DRAIN
ECB4	53.47	-	48.87 (12")	
ECB5	53.46	51.36 (6")	50.66 (6")	FROM ECB6
ECB6	53.37	-	51.52 (6")	
ECB7	54.28	-	49.79± (15")	
EDMH1	53.97	50.32 (6")	45.77 (15")	FROM ECB5
-	-	48.12 (12")	-	FROM ECB4
-	-	47.37 (6")	-	FROM NORTH
-	-	45.74 (12")	-	FROM ECB1
EDMH2	53.54	46.29 (10")	48.08± (12")	FROM ECB2
EDMH3	48.57	44.52 (10")	41.77 (24")	FROM CURB INLET - NORTH
-	-	44.47 (10")	-	FROM CURB INLET - SOUTH
-	-	42.57 (24")	-	FROM EDMH4
EDMH4	55.11	45.61 (24")	45.51 (24")	FROM EDMH5
EDMH5	56.63±	52.27 (12")	47.01 (24")	FROM CURB INLET - NORTH
-	-	51.49 (12")	-	FROM CURB INLET - SOUTH
-	-	47.01 (24")	-	FROM DEERING AVENUE
ESS1	49.17	40.77 (8")	40.67 (8")	FROM ESS2, CL INV 40.72
ESS2	55.15	47.08 (8")	46.98 (8")	FROM ESS3, CL INV 47.03
ESS3	58.15	52.07 (8")	51.97 (8")	FROM ESS4, CL INV 52.02
ESS4	57.29	52.79± (8")	52.69 (8")	FROM DEERING AVENUE
-	-	-	UNKNOWN	FROM RESIDENCE TO SOUTH

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ISSUE NAME:

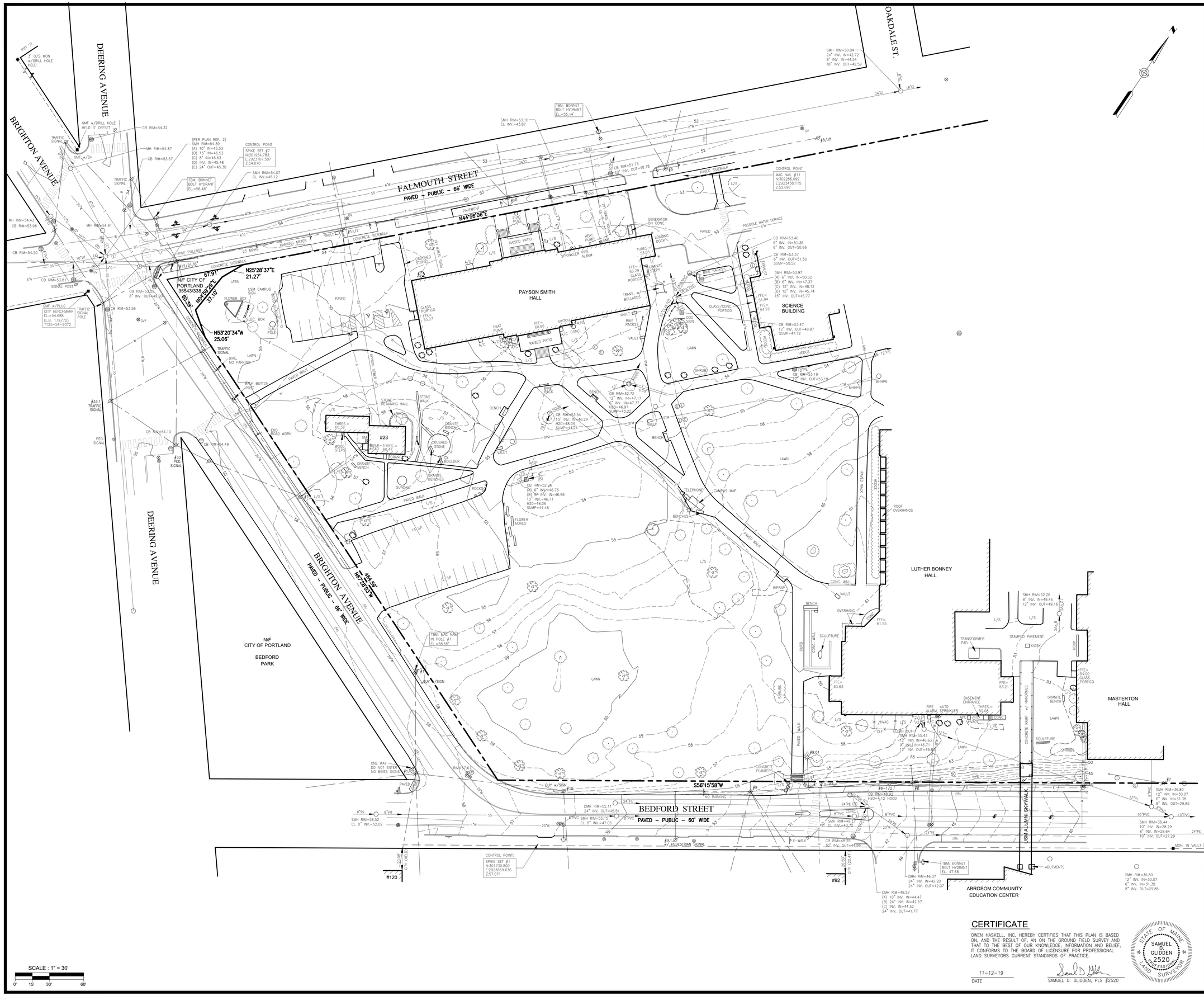
NO.	DESCRIPTION	DATE
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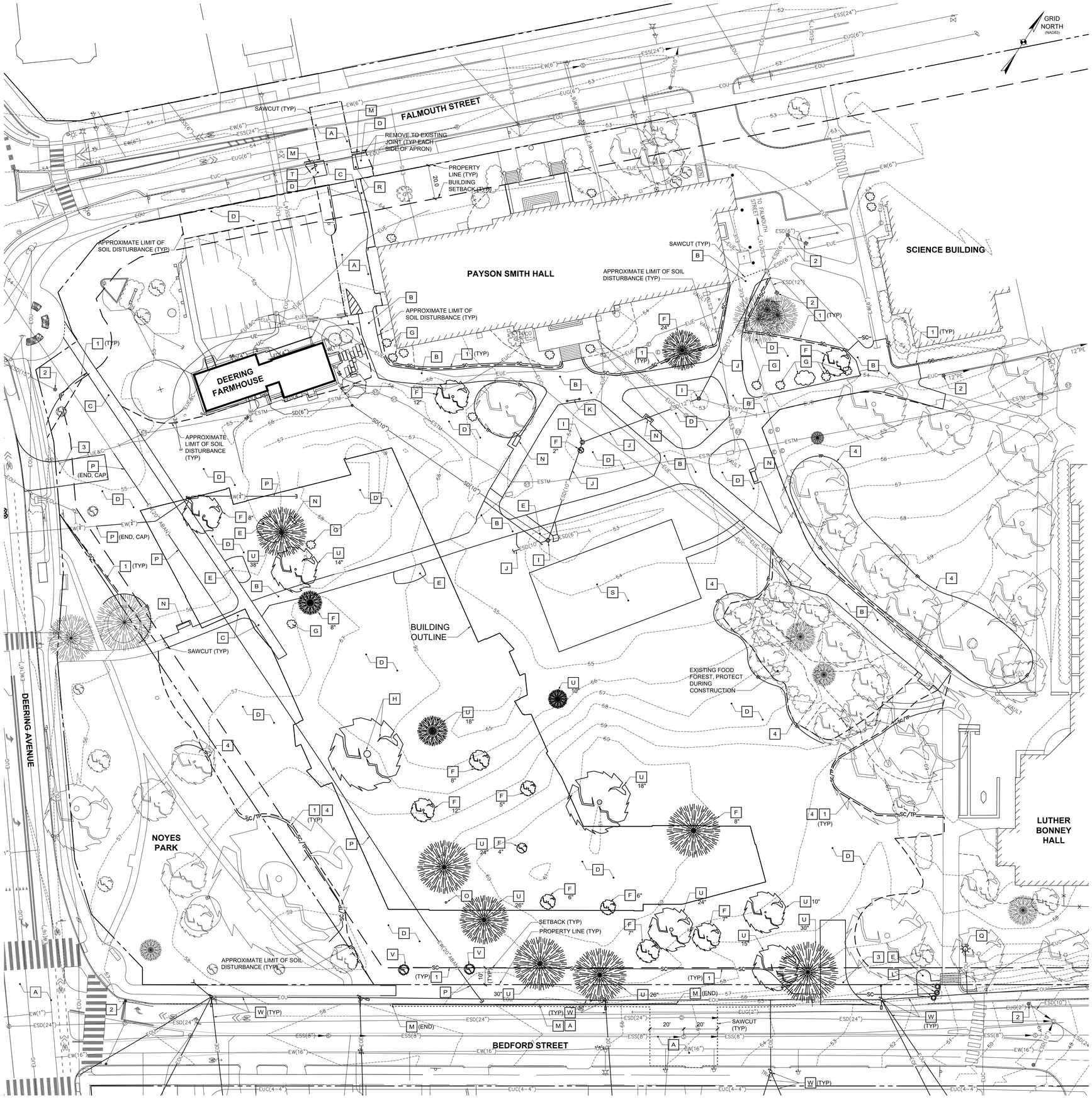
EXISTING CONDITIONS PLAN

SCALE: As indicated

CX101

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00


DEERING AVENUE
BRIGHTON AVENUE
FALMOUTH STREET
PAVED – PUBLIC – 66' WIDE
BEDFORD STREET
PAVED – PUBLIC – 60' WIDE
OAKDALE ST.
PAYSON SMITH HALL
SCIENCE BUILDING
LUTHER BONNEY HALL
MASTERTON HALL
ABROSOM COMMUNITY EDUCATION CENTER
USM ALUMNI SKYWALK
N/F CITY OF PORTLAND 35543/338
N/F CITY OF PORTLAND BEDFORD PARK
N44°56'06"E
N25°28'37"E 21.27'
67.91'
N03°59'28"E 37.10'
60.78'
N53°20'34"W 25.06'
S56°15'58"W
N67°28'03"W 164.59'
CONTROL POINT SPIKE SET #7 N:301954.783 E:2923107.587 Z:54.070
CONTROL POINT MAG. NAIL #11 N:302286.099 E:2923438.115 Z:52.697
CONTROL POINT: SPIKE SET #1 N:301730.850 E:2923659.636 Z:57.071
TBM: BONNET BOLT HYDRANT EL=55.14'
TBM: BONNET BOLT HYDRANT EL=56.46'
TBM: MAG NAIL IN POLE #1 EL =58.55'
GMF w/DRILL HOLE HELD 3' OFFSET
GMF w/DRILL HOLE HELD
GMF w/PLUG CITY BENCHMARK EL =54.688 (L.B. 179/72) 1125-54-2072
SMH RIM=50.94 24" INV. IN=42.72 8" INV. IN=44.54 18" INV. OUT=42.59
SMH RIM=53.16 CL INV.=43.87
SMH RIM=54.39 (A) 10" IN=45.53 (B) 15" IN=45.53 (C) 8" IN=45.63 (D) INV. IN=45.48 (E) 24" OUT=45.38
SMH RIM=54.07 CL INV.=45.12
CB RIM=54.32
MH RIM=54.87
CB RIM=53.57
MH RIM=54.43
CB RIM=53.96
MH RIM=54.61
CB RIM=54.20
CB RIM=53.81
SIGNAL POST
CB RIM=53.55 8" INV. OUT=49.80
CB RIM=53.56
CB RIM=54.10
CB RIM=54.49
CB RIM=51.75 12" INV. OUT=48.18
CB RIM=53.46 6" INV. IN=51.36 6" INV. OUT=50.66
CB RIM=53.37 6" INV. OUT=51.52 SUMP=50.52
DMH RIM=53.97 (A) 6" INV. IN=50.32 (B) 6" INV. IN=47.37 (C) 12" INV. IN=48.12 (D) 12" INV. IN=45.74 15" INV. OUT=45.77
CB RIM=53.47 12" INV. OUT=48.87 SUMP=47.72
CB RIM=52.72 12" INV. IN=47.17 6" INV. IN=47.37 H20=46.97 SUMP=47.72
CB RIM=53.54 10" INV. IN=46.29 H20=48.04 SUMP=44.24
CB RIM=52.24 (A) 6" INV=46.76 (B) 6" INV. IN=46.96 10" INV.=46.71 H20=48.06 SUMP=44.46
CB RIM=53.19 12" INV. OUT=53.19
CB RIM=48.92 12" INV. H20=4.12 HOOD
CB RIM=48.25 10" INV. OUT=44.25
DMH RIM=48.57 (A) 10" INV. IN=44.47 (B) 24" INV. IN=42.57 (C) INV. IN=44.52 24" INV. OUT=41.77
DMH RIM=46.37 24" INV. IN=42.20 24" INV. OUT=42.07
SMH RIM=52.26 8" INV. IN=49.46 12" INV. OUT=49.16
SMH RIM=55.43 12" INV. IN=46.63 9" INV. IN=46.71 12" INV. OUT=46.93
SMH RIM=36.80 12" INV. IN=30.07 6" INV. IN=31.38 8" INV. OUT=29.85
SMH RIM=36.44 10" INV. IN=28.29 8" INV. IN=28.64 10" INV. OUT=27.29
SMH RIM=58.52 CL 8" INV.=52.02
DMH RIM=55.11 24" INV. OUT=45.51
8"PVC SMH RIM=55.15 CL 8" INV.=47.03
DMH RIM=49.07 CL INV.=40.77
DMH RIM=35.16
MON. IN VAULT (HELD)
MON. IN VAULT (HELD)
103.51'
#1 TRAFFIC SIGNAL
#2 TRAFFIC SIGNAL
#3 TRAFFIC SIGNAL
#4 TRAFFIC SIGNAL
#5 TRAFFIC SIGNAL
#6 TRAFFIC SIGNAL
#7 TRAFFIC SIGNAL
#8 TRAFFIC SIGNAL
#9 TRAFFIC SIGNAL
#9.01 TRAFFIC SIGNAL
#9.02 PEDESTRIAN SIGNAL
#10 TRAFFIC SIGNAL
#11 TRAFFIC SIGNAL
#11/7 TRAFFIC SIGNAL
#12/21/6 TRAFFIC SIGNAL
#33.1 TRAFFIC SIGNAL
#32 PED. SIGNAL
PED. SIGNAL
#23
#120
#92
#8/28
#8-1/2
#9.01
#1/70
#10
#9
#9.02
#8
#7
#6
#5
#4
#3
#2
#1
#11/7
#12/21/6
#33.1
#32



A REMOVALS PLAN
CD101 SCALE: 1"=20'

KEYNOTES: (THIS SHEET ONLY)

- A SAWCUT AND REMOVE EXISTING ASPHALT CONCRETE PAVEMENT, ±5" THICK.
- B SAWCUT AND REMOVE EXISTING ASPHALT CONCRETE SIDEWALK, ±2" THICK.
- C SAWCUT AND REMOVE EXISTING REINFORCED CONCRETE SIDEWALK, ±4" THICK.
- D STRIP AND STOCKPILE EXISTING TURF. COORDINATE SOIL STOCKPILE LOCATION WITH OWNER.
- E STRIP EXISTING MULCH, ±4" THICK AND REMOVE SHRUB PLANTINGS.
- F REMOVE EXISTING TREE (DBH <10") AND GRUB OUT STUMP. DBH AS INDICATED.
- G REMOVE EXISTING SHRUB/BUSH AND GRUB OUT STUMP.
- H REMOVE EXISTING 48" DIAMETER MAPLE TREE AND GRUB OUT STUMP. SALVAGE TRUNK AND DELIVER TO OWNER.
- I REMOVE EXISTING BRICK CATCH BASIN AND FRAME/COVER.
- J REMOVE EXISTING STORM DRAIN LINE.
- K REMOVE EXISTING METAL BICYCLE RACK AND CONCRETE FOOTINGS.
- L REMOVE EXISTING PRECAST CONCRETE PLANTER.
- M REMOVE EXISTING GRANITE CURB.
- N RELOCATE EXISTING BENCH TO OTHER LOCATION ON CAMPUS. COORDINATE FINAL LOCATION WITH OWNER.
- O REMOVE EXISTING ±4" DIAMETER METAL POLE (FORMER SIGN POST).
- P REMOVE PORTION OF EXISTING ABANDONED WATER MAIN. CAP ENDS TO REMAIN.
- Q REMOVE EXISTING LIGHT POLE, FIXTURE, AND OVERHEAD WIRING.
- R REMOVE EXISTING CRUSHED STONE SURFACE, ±4" THICK.
- S AREA OF POORLY DRAINED SOIL (POSSIBLE TEMPORARY PARKING LOT). OVEREXCAVATE AND REMOVE 12" MIN TOPSOIL AND SUBGRADE SOILS AND REFILL WITH COMMON BORROW.
- T REMOVE EXISTING SIGN AND STORE FOR REINSTALLATION.
- U REMOVE EXISTING TREE (DBH ≥10") AND GRUB OUT STUMP. DBH AS INDICATED.
- V RELOCATE EXISTING RED MAPLE TREE, DBH ±1.5". SEE SHEET LS101
- W COORDINATE REMOVAL OF EXISTING UTILITY POLES AND RELOCATION OF OVERHEAD WIRES WITH CENTRAL MAINE POWER, CONSOLIDATED COMMUNICATIONS AND SPECTRUM. OVERHEAD WIRE RELOCATION MUST BE BY UTILITY COMPANY, AND POLES MUST BE REMOVED BY CENTRAL MAINE POWER UNLESS APPROVED IN WRITING BY EACH UTILITY COMPANY.

- 1 SILT FENCE OR SEDIMENT CONTROL FILTER SOCK. SEE DETAILS 1/C-501 AND 2/C-501
- 2 CATCH BASIN INLET PROTECTION. SEE DETAIL 3/C-501
- 3 STABILIZED CONSTRUCTION ENTRANCE/EXIT. SEE DETAIL 4/C-501
- 4 TREE PROTECTION FENCE. SEE DETAIL 6/L-501

GRAPHIC SCALE
1"=20' 20' 10' 0 20' 40'
CHECK GRAPHIC SCALE BEFORE USING

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STATE OF MAINE — JONAH DAWTERS — 13273 — LICENSED PROFESSIONAL ENGINEER — 12/15/2022
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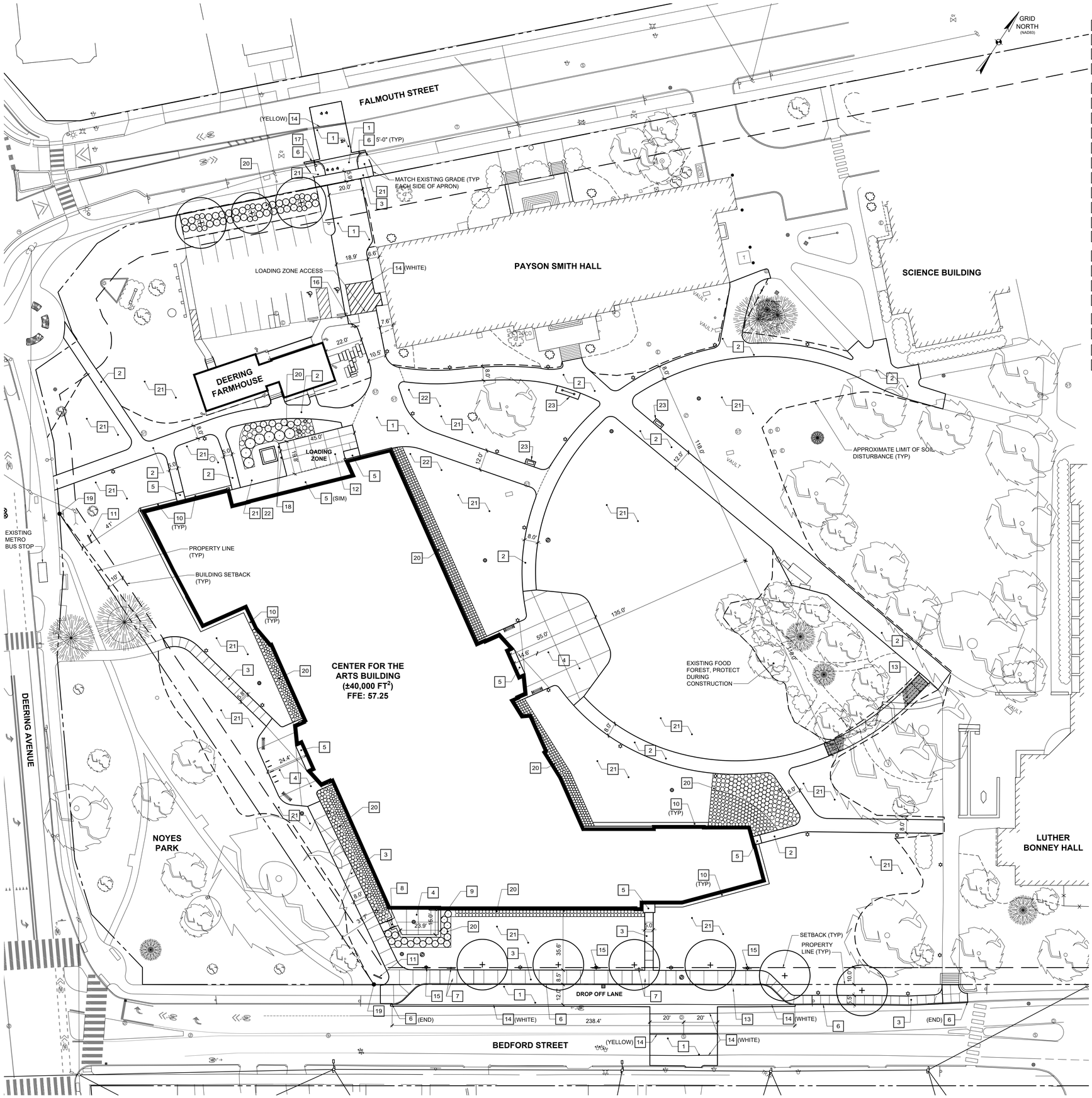
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3.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT RESUBMISSION	02/23/2023

REMOVALS PLAN

SCALE:
CD101

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00



1 CS101 SITE PLAN
SCALE: 1"=20'

KEYNOTES: (THIS SHEET ONLY)

1. ASPHALT CONCRETE PAVEMENT. SEE DETAIL 1/C-502
2. ASPHALT CONCRETE SIDEWALK. SEE DETAIL 3/C-502
3. REINFORCED CONCRETE SIDEWALK. SEE DETAIL 4/C-502
4. INTEGRALLY-COLORED, SANDBLASTED, DECORATIVE CONCRETE WITH SAW-CUT CONTROL JOINTS. SEE DETAIL 4/C-502
5. REINFORCED CONCRETE STOOP. REFER TO FOUNDATION PLANS.
6. GRANITE CURB. SEE DETAIL 6/C-502
7. ACCESSIBLE LOADING ZONE. SEE DETAIL 7/C-502
8. CONCRETE STAIRS AND DECORATIVE STAINLESS STEEL RAILING.
9. CAST-IN-PLACE CONCRETE SEAT WALL WITH CAST STONE COPING.
10. CRUSHED STONE MOW STRIP. SEE DETAIL 7/L-501
11. INTERNALLY ILLUMINATED BUILDING SIGN.
12. REINFORCED CONCRETE PAVEMENT. SEE DETAIL 2/C-502
13. WOODEN BOARDWALK. SEE DETAIL 12/C-502
14. PAVEMENT MARKING: 4" WIDE, COLOR INDICATED WITH KEYNOTE
15. "DROP-OFF ZONE" SIGN MOUNTED TO LIGHTPOLE. MOUNT SO THAT BOTTOM IS 5' ABOVE GRADE AT BACK OF SIDEWALK. SEE DETAIL 8/C-502
16. "AUTHORIZED VEHICLES ONLY" SIGN. SEE DETAIL 8/C-502
17. REINSTALL EXISTING SIGN. SEE DETAIL 8/C-502 (SIM)
18. BOLLARD. SEE DETAIL 9/C-502
19. ENGAGE A PROFESSIONAL LAND SURVEYOR TO SET GRANITE PROPERTY MARKERS AT EACH END OF THE USM/NOYES PARK PROPERTY LINE.
20. PLANTING BED (SHRUB/PERENNIAL/GROUNDCOVER). SEE SHEET LS101
21. 6" PLANTING SOIL AND TURFGRASS (SOD) ALL DISTURBED AREAS UNLESS INDICATED OTHERWISE.
22. POSSIBLE SNOW STORAGE AREA.
23. REINFORCED CONCRETE PAD FOR SITE FURNISHING. SEE DETAIL 11/C-502 AND SHEET LS101

NOTES:
1. REFER TO DRAWING LS101 FOR PLANTINGS AND SITE FURNISHING INFORMATION.
2. REFER TO DRAWING CU101 FOR EXTERIOR LIGHTING.

GRAPHIC SCALE
20' 10' 0 20' 40'
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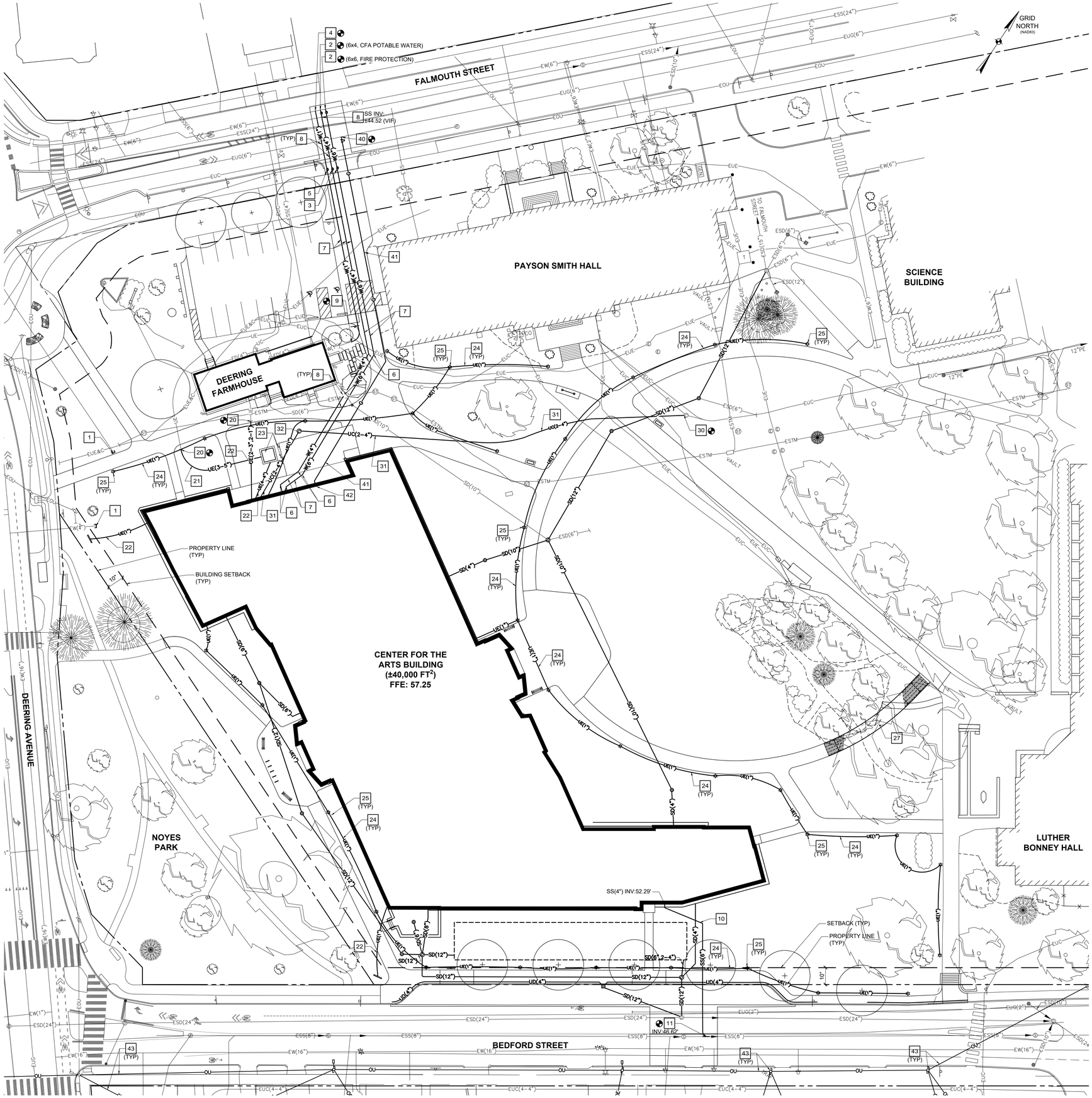
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SITE PLAN

SCALE:

CS101

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00



1 CU101 UTILITY PLAN
SCALE: 1"=20'

NOTE: REFER TO SHEET CG101 FOR STORM DRAIN LINE INFORMATION.

KEYNOTES: (THIS SHEET ONLY)

1. REMOVE PORTION OF EXISTING WATER MAIN AS NECESSARY TO FACILITATE BUILDING CONSTRUCTION AND UTILITY INSTALLATION. PLUG END OF PIPE TO REMAIN.
2. TAPPING SLEEVE AND VALVE. SEE DETAIL 6/C-503
3. WATER SHUT OFF VALVE. SEE DETAIL 6/ C-503 (SIM)
4. 1" SERVICE TAP (POTABLE WATER SERVICE TO FARMHOUSE). INSTALL IN ACCORDANCE WITH CURRENT VERSION OF PORTLAND WATER DISTRICT'S WRITTEN REQUIREMENTS.
5. CURB STOP AND SERVICE BOX WITH ROD. INSTALL SERVICE BOX AND ROD INSIDE TRAFFIC RATED VALVE BOX AND COVER. INSTALL IN ACCORDANCE WITH CURRENT VERSION OF PORTLAND WATER DISTRICT'S WRITTEN REQUIREMENTS.
6. THRUST BLOCK. SEE DETAIL 7/C-503
7. WATER LINE IN PIPE TRENCH (SIZE AS INDICATED). PROVIDE 3' HORIZONTAL SEPARATION BETWEEN WATER LINES INSTALLED IN THE SAME TRENCH. SEE DETAIL 1/C-503
8. WATER LINE CROSSING WITH EXISTING UTILITY. PROVIDE 12" MINIMUM VERTICAL SEPARATION AT THE CROSSING. FOR THE SEWER LINE CROSSING, INSTALL WATER LINE ABOVE THE EXISTING SEWER LINE. APPROXIMATE SEWER LINE INVERT AS NOTED.
9. CONNECT TO EXISTING WATER LINE STUB (INSTALLED DURING FARMHOUSE RELOCATION/ADDITION PROJECT).
10. SEWER LINE IN PIPE TRENCH. SEE DETAIL 1/C-503
11. CONNECT TO EXISTING SEWER LINE. CUT AND REMOVE PORTION OF EXISTING SEWER LINE AND PROVIDE A SOLID 6x8 WYE AND SOLID SLEEVE PVC COUPLINGS
12. - 19. NOT USED THIS SHEET.
20. CONNECT TO CAPPED END OF EXISTING CONDUIT (INSTALLED AS PART OF FARMHOUSE RELOCATION PROJECT).
21. PRIMARY ELECTRICAL LINES IN CONDUIT TRENCH. SEE DETAIL 3/C-503
22. SECONDARY ELECTRICAL LINES IN CONDUIT TRENCH. SEE DETAIL 3/C-503
23. TRANSFORMER ON 9' SQUARE TRANSFORMER PAD. PROVIDE BOLLARDS BETWEEN TRANSFORMER AND EDGE OF PAVEMENT. SEE DETAILS 9/C-502 AND 4/C-503
24. UNDERGROUND LIGHTING LINE IN CONDUIT TRENCH. SEE DETAIL 3/C-503
25. PRECAST CONCRETE LIGHTPOLE BASE. SEE DETAIL 10/C-502
26. - 29. NOT USED THIS SHEET.
30. CORE HOLE IN EXISTING COMMUNICATIONS MANHOLE AND CONNECT COMMUNICATIONS CONDUIT. SEE DETAIL 2/C-503 (SIM)
31. COMMUNICATIONS LINES IN CONDUIT TRENCH. SEE DETAIL 3/C-503
32. COMMUNICATIONS MANHOLE. SEE DETAIL 5/C-503
33. - 39. NOT USED THIS SHEET.
40. APPROXIMATE NATURAL GAS MAINE CONNECTION AND VALVE. FINAL LOCATION AND INSTALLATION BY UNITIL. SEE NOTIFICATION NOTES, SHEET C-001
41. GAS LINE IN PIPE TRENCH. PROVIDE TRENCH EXCAVATION AND REFILL ONLY. INSTALLATION OF GAS VALVES, PIPING, CONNECTIONS TO EXISTING GAS MAIN, GAS METER ON BUILDING, AND REQUIRED TESTING TO BE PERFORMED BY UNITIL. PROVIDE 6' MIN SEPARATION BETWEEN GAS LINE AND WATER LINES. SEE NOTIFICATION NOTES, SHEET C-001. SEE DETAIL 1/C-503
42. BUILDING-MOUNTED GAS REGULATOR AND METER (BY UNITIL) WITH TWO 6" SCHEDULE 40 STEEL BOLLARDS. SEE DETAIL 9/C-502
43. UTILITY POLES (BY CMP) AND RELOCATED OVERHEAD WIRING (BY CMP, SPECTRUM AND CONSOLIDATED COMMUNICATIONS). COORDINATE TIMING OF WORK WITH CENTRAL MAINE POWER, CONSOLIDATED COMMUNICATIONS AND SPECTRUM.

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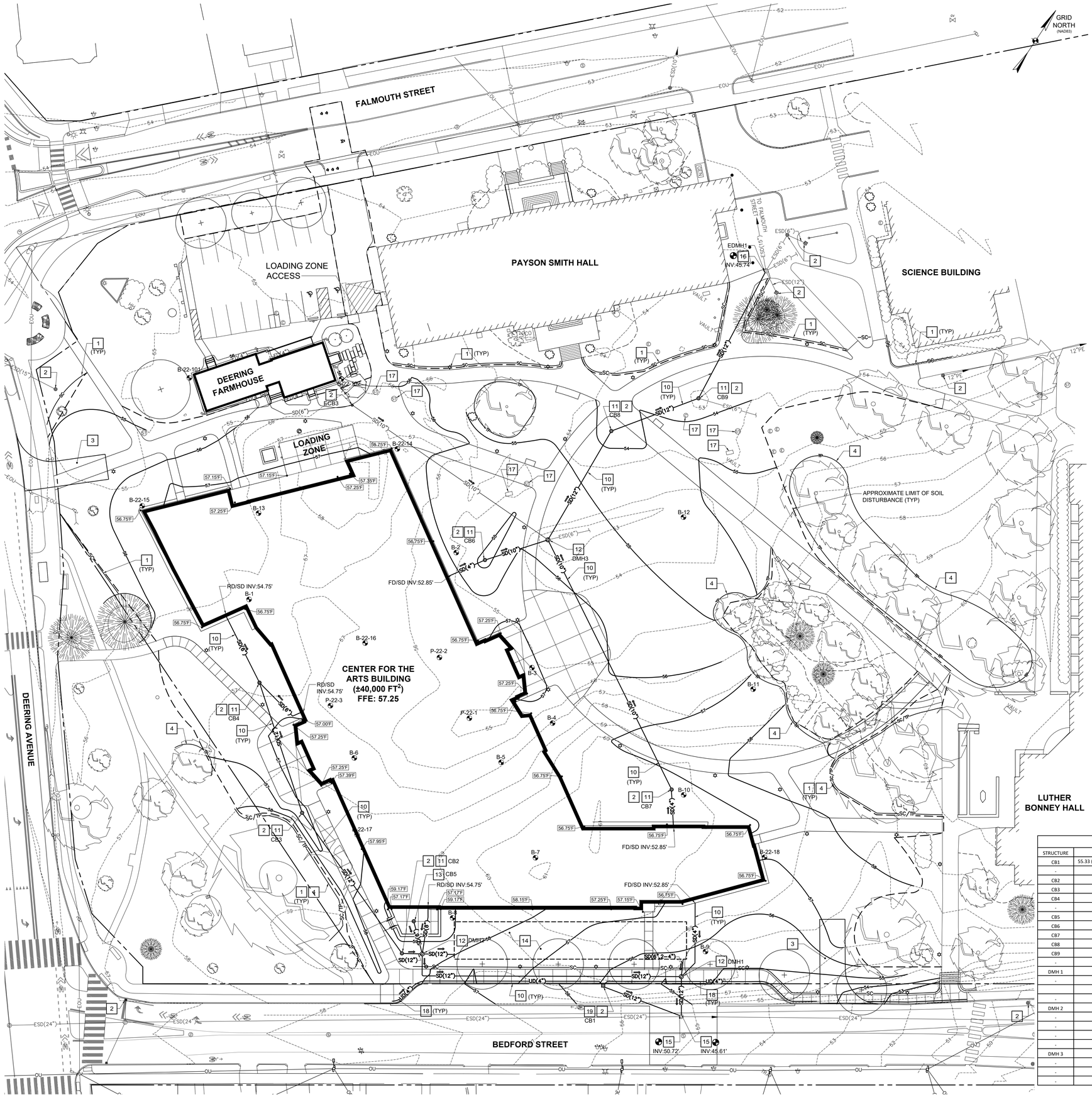
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UTILITY PLAN

SCALE:

CU101

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00



1 (CS101) GRADING AND DRAINAGE PLAN
SCALE: 1"=20'

KEYNOTES: (THIS SHEET ONLY)

1. SILT FENCE OR SEDIMENT CONTROL FILTER SOCK. SEE DETAILS 1/C-501 AND 2/C-501
2. CATCH BASIN INLET PROTECTION. SEE DETAIL 3/C-501
3. STABILIZED CONSTRUCTION ENTRANCE/EXIT. SEE DETAIL 4/C-501
4. TREE PROTECTION FENCE. SEE DETAIL 6/L-501
5 - 9. NOT USED THIS SHEET.
10. STORM DRAIN LINE IN PIPE TRENCH. SEE DETAIL 1/C-503
11. CATCH BASIN. SEE DRAINAGE STRUCTURE SCHEDULE, THIS SHEET, AND DETAIL 2/C-504
12. DRAIN MANHOLE. SEE DRAINAGE STRUCTURE SCHEDULE, THIS SHEET, AND DETAIL 2/C-504
13. AREA DRAIN WITH HEELPROOF GRATE. SEE DRAINAGE STRUCTURE SCHEDULE, THIS SHEET.
14. STORMWATER TREATMENT AREA: UNDERDRAINED SUBSURFACE SAND FILTER. SEE DETAIL 1/C-504
15. CORE HOLE IN EXISTING DRAINAGE STRUCTURE FOR STORM DRAIN PIPING (INVERT INDICATED WITH KEYNOTE). SEE DETAIL 2/C-503.
16. CONNECT STORM DRAIN PIPING TO EXISTING MANHOLE. MATCH EXISTING INLET INVERT (INVERT AS NOTED). SEE DETAIL 2/C-503 (SIM)
17. ADJUST FRAME AND COVER ON EXISTING STRUCTURE TO MATCH FINISHED GRADE.
18. SIDEWALK UNDERDRAIN. SEE DETAIL 4/C-502
19. CURB INLET. SEE DRAINAGE STRUCTURE SCHEDULE, THIS SHEET, AND DETAILS 2/C-504 AND 3/C-504

DRAINAGE STRUCTURE SCHEDULE

STRUCTURE	RIM ELEVATION	INVERT IN (SIZE)	INVERT OUT (SIZE)	REMARKS
CB1	55.33 (0.13' BELOW GUTTER LINE)	-	51.67 (12")	SEE 3/C-504, HOODED OUTLET
-	-	51.77 (4")	-	SIDEWALK UNDERDRAINS
CB2	58.00	51.87 (12")	51.77 (12")	FROM CB3
CB3	56.50	52.97 (12")	52.87 (12")	FROM CB4
CB4	56.27	53.86 (8")	53.76 (12")	ROOF DRAIN OUTLET
-	-	53.86 (6")	-	ROOF DRAIN OUTLET
CB5	57.00	-	54.75 (6")	AREA DRAIN WITH HEELPROOF GRATE
CB6	54.75	50.42 (4")	49.92 (10")	FOUNDATION DRAIN OUTLET
CB7	56.09	51.76 (4")	51.26 (10")	FOUNDATION DRAIN OUTLET
CB8	53.33	46.53 (12")	46.48 (12")	FROM DMH3, HOODED OUTLET
CB9	52.80	46.21 (12")	46.16 (12")	FROM CB8, HOODED OUTLET
-	-	47.37 (6") VIF	-	CONNECT TO EXIST 6" LINE
DMH 1	55.45	46.71 (6")	46.61 (12")	TREATMENT AREA DRAIN W/ VALVE
-	-	46.71 (2-4")	-	TREATMENT AREA OUTER UNDERDRAINS
		46.71 (12")		TREATMENT AREA OVER FLOW FROM DMH2
-	-	50.62 (4")	-	FOUNDATION DRAIN OUTLET
DMH 2	58.59	-	49.96 (12")	TREATMENT AREA OVERFLOW TO DMH1
-	-	-	49.96 (12")	6' DIA, TO TREATMENT AREA. SEE 2/C-504
-	-	53.11 (8")	-	ROOF DRAIN OUTLET
-	-	53.11 (6")	-	FROM CB5
-	-	51.63 (12")		FROM CB2
DMH 3	55.60	46.96 (6") VIF	46.89 (12")	CONNECT TO EXIST 6" LINE (VIF)
-	-	47.11 (10")	-	CONNECT TO EXIST 10" LINE FROM ECB3
-	-	48.07 (10")	-	FROM CB7
-	-	48.07 (10")	-	FROM CB6

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GRADING AND DRAINAGE PLAN

SCALE:

CG101

PFEIFFER PARTNERS PROJECT NUMBER: 6110.00

EROSION AND SEDIMENT CONTROL NOTES

A. GENERAL NOTES

1. DURING CONSTRUCTION AND THEREAFTER, IMPLEMENT EROSION CONTROL MEASURES AS INDICATED AND SPECIFIED. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH THE CURRENT EDITION "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS" BY THE MAINE DEP.

2. IMPLEMENT NECESSARY MEASURES TO CONTROL EROSION AND SEDIMENTATION FROM THE PROJECT SITE AS REQUIRED PURSUANT TO THE MAINE EROSION AND SEDIMENTATION CONTROL LAW.

3. LIMIT AREAS OF EXPOSED SOILS TO THOSE AREAS THAT WILL ACTIVELY BE WORKED. TEMPORARILY STABILIZE ANY AREA OF DISTURBED SOIL THAT REMAINS UNWORKED FOR MORE THAN 7 DAYS USING TEMPORARY MULCHING (IF THE SOIL WILL BE PERMANENTLY STABILIZED WITHIN 30 DAYS) OR TEMPORARY SEEDING AND MULCHING (IF THE SOIL WILL NOT BE PERMANENTLY STABILIZED WITHIN 30 DAYS). PERMANENTLY STABILIZE ANY AREA OF DISTURBED SOIL BROUGHT TO FINAL GRADE WITHIN 7 DAYS. DISTURBED SOILS DO NOT INCLUDE COMPACTED STRUCTURAL FILLS USED FOR ROADS, PARKING LOTS, AND BUILDING FOUNDATIONS.

4. TEMPORARY EROSION CONTROL MEASURES INCLUDE THE USE OF EROSION CONTROL DEVICES, TEMPORARY SEEDING AND MULCHING, CONSTRUCTION PHASING, AND PROVISIONS FOR STABILIZING INACTIVE AREAS. PERMANENT EROSION CONTROL MEASURES INCLUDE THE USE OF EROSION CONTROL BLANKETS, RIPRAP OUTLET PROTECTION, AND PERMANENT SEEDING AND MULCHING.

5. PROVIDE INLET PROTECTION FOR EACH CATCH BASIN ON THE SAME DAY THAT BACKFILL IS PLACED AROUND THE CATCH BASIN.

6. PROVIDE PLANTING SOIL, SEED, FERTILIZER, AND MULCH ON DISTURBED AREAS NOT OTHERWISE SPECIFIED. PERMANENT SEEDING MUST BE ACCOMPLISHED BETWEEN THE DATES OF APRIL 15 AND JUNE 1 OR AUGUST 15 AND OCTOBER 1. WATER VEGETATED AREAS AS NECESSARY TO ESTABLISH A VIGOROUS GRASS.

B. INSPECTION AND MAINTENANCE

1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORMWATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE PARCEL AT LEAST ONCE A WEEK AND BEFORE AND AFTER EACH STORM EVENT, GREATER THAN 0.1 INCH, PRIOR TO COMPLETION OF PERMANENT STABILIZATION. ENGAGE A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) STANDARDS AND ANY DEPARTMENTAL COMPANION DOCUMENT TO THIS PERMIT, TO 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. KEEP A LOG (REPORT) 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. 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.

3. MAINTAIN EROSION CONTROL MEASURES FOR THE LIFE OF THE PROJECT AND UNTIL PERMANENT STABILIZATION OF THE ENTIRE SITE IS ESTABLISHED. PERMANENT STABILIZATION MUST CONSIST OF AT LEAST 90-PERCENT VEGETATION, PAVEMENT, GRAVEL BASE, OR RIPRAP.

1. REMOVE SEDIMENT ACCUMULATIONS FROM SILT FENCES, HAY BALE BARRIERS, AND STONE CHECK DAMS WHEN THE SEDIMENT DEPTH APPROACHES 6 INCHES, OR AS INDICATED ON DETAILS ON DRAWINGS 1/C-501 AND 2/C-501.

2. INSPECT THE AREAS OF BARE SOIL AND EMBANKMENTS WEEKLY AND AFTER EACH STORM EVENT. PROMPTLY SEEDED AND MULCH EROSION AND AREAS OF EXPOSED SOILS.

3. PROTECT STABILIZED AREAS FROM EROSION AND IMMEDIATELY REPAIR / REVEGETATE ERODED AREAS.

4. REMOVE TEMPORARY EROSION CONTROL MEASURES WITHIN 30 DAYS AFTER THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

C. CONSTRUCTION DEWATERING

1. IF DEWATERING OF EXCAVATIONS ARE NECESSARY, UTILIZE BAG-TYPE DEWATERING SEDIMENT FILTERS. DEWATERING SEDIMENT FILTERS MUST BE LOCATED A MINIMUM OF 100 FEET FROM ANY WATER BODY OR WETLAND AND AS FAR AWAY FROM DRAINAGE STRUCTURES AS PRACTICABLE. SEE DETAIL 4/C-501.

D. SEQUENCE OF CONSTRUCTION

1. PHASE CONSTRUCTION TO DISTURB THE LEAST PRACTICAL AREA AT A TIME AND MINIMIZE DISRUPTION TO THE EXISTING CAMPUS. CONSTRUCTION IS EXPECTED TO BEGIN IN THE SUMMER 2023 AND BE COMPLETED BY SUMMER 2025. INITIAL OPERATIONS INCLUDE LAYOUT OF CLEARING LIMITS AND INSTALLATION OF EROSION CONTROL MEASURES.

2. CLEAR TREES, GRUB OUT STUMPS, AND STRIP TOPSOIL. REMOVE WOODY DEBRIS FROM THE PROJECT SITE. STOCKPILE TOPSOIL AS SHOWN ON REMOVALS SITE PLAN AND GRADING PLAN. PROVIDE SILT FENCE DOWNGRADE OF ALL STOCKPILES AND COVER STOCKPILES WITH MULCH.

3. COMMENCE EARTH MOVING OPERATIONS AND CONSTRUCT TEMPORARY SEDIMENT BASINS (IF NEEDED). AS AREAS APPROACH FINISH GRADE, AND CONSTRUCT STORM DRAINAGE SYSTEM BEGINNING AT THE LOW POINT IN THE SYSTEM. PROVIDE TEMPORARY INLET AND OUTLET PROTECTION AS SOON AS PIPES ARE INSTALLED AND MAINTAIN UNTIL THEY ARE CONNECTED TO THE BUILDING AND DRAINAGE STRUCTURES

4. CONTINUE WITH OTHER UTILITY (WATER, SEWER, ELECTRICAL, ETC.) AND BUILDING CONSTRUCTION. PROVIDE VEGETATION, TEMPORARY SEEDING, MULCHING, OR OTHER SURFACE TREATMENTS AS INDICATED IMMEDIATELY UPON ESTABLISHMENT OF FINISH GRADES.

E. SOIL STOCKPILE STABILIZATION

1. COVER SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 30 DAYS WITH HAY MULCH (AT 90 LBS HAY/1000 SF) OR COVERED WITH A 4 MIL POLYETHYLENE SHEETING, WOVEN OR NON-WOVEN GEOTEXTILE FABRIC WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

2. CONTINUOUSLY ANCHOR POLYETHYLENE SHEETING OR GEOTEXTILE FABRIC ON ALL SIDES AND 12" TO 24" OVERLAP AT SEAMS IN THE DIRECTION OF THE RUNOFF. PROVIDE ADDITIONAL ANCHORS ON THE WINDY SIDE OF THE STOCKPILE.

3. SEED SOIL AND FILL STOCKPILES EXPECTED TO REMAIN LONGER THAN 30 DAYS WITH A CONSERVATION MIX OF ANNUAL RYE GRASS (AT 0.9 LBS/1000 SF) AND HAY MULCHED (AT 90 LBS HAY/1000 SF) WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

4. AT SOIL AND FILL STOCKPILES, INSTALL A SEDIMENT BARRIER (e.g. HAY-BALE BARRIER OR SILT FENCING) AROUND THE DOWNHILL EDGE OF THE STOCKPILE TO TRAP SEDIMENTS.

F. TEMPORARY SEEDING - (DURING CONSTRUCTION AND PRIOR TO PERMANENT SEEDING) WITHIN 14 DAYS OF INACTIVITY OR 7 DAYS AFTER BEING BROUGHT TO FINISH GRADE.

1. BEDDING - REMOVE STONES AND TRASH WITHIN SEEDING THE AREA. TILL THE SOIL TO A DEPTH OF ABOUT 3" TO PREPARE SEED BED AND MIX THE FERTILIZER INTO THE SOIL.

2. FERTILIZER - UNIFORMLY SPREAD FERTILIZER OVER THE AREA PRIOR TO BEING TILLED INTO THE SOIL. APPLY A 10-10-10 MIX OF FERTILIZER AT A RATE OF 300 POUNDS PER ACRE (OR 7 LBS/1,000 SF).

3. SEED MIXTURE - USE ANY OF THE FOLLOWING IN UPLAND AREAS:

TEMPORARY SEEDING RATES			
SPECIES	PER ACRE	PER 1,000 SF	SEEDING DATES
WINTER RYE	112 LBS	2.6 LBS	8/15-10/1
OATS	80 LBS	1.8 LBS	4/1-7/1 & 8/15-9/15
ANNUAL RYE GRASS	40 LBS	0.9 LBS	4/1-7/1 WITH MULCH

4. MULCHING FOR TEMPORARY SEEDING - WHERE IT IS IMPRACTICAL TO INCORPORATE FERTILIZER AND SEED INTO MOIST SOIL, MULCH THE SEEDED AREA TO FACILITATE GERMINATION. MULCH IN THE FORM OF HAY OR STRAW MUST BE APPLIED AT A RATE OF 70 TO 90 LBS PER 1,000 SF.

G. MULCHING

USE TEMPORARY MULCHING ON SLOPES, CHANNELS, OTHER EROSION PRONE AREAS, AND ALL EXPOSED SOILS THAT CANNOT RECEIVE PERMANENT COVER WITH 14 DAYS OF DISTURBANCE OR WITHIN 7 DAYS IN AREAS WITHIN 100' OF A NATURAL RESOURCE. ALSO USE MULCH FOLLOWING TEMPORARY AND PERMANENT SEEDING AS SPECIFIED. USE MULCH ANCHORS ON SLOPES GREATER THAN 5% IN FALL (PAST SEPTEMBER 15 AND OVER WINTER TO APRIL 15).

MULCHING RATES		
MULCH TYPE	RATE PER 1,000 SF	USE AND COMMENTS
HAY OR STRAW	70 TO 90 LBS * * DOUBLE THE RATE FOR OVER WINTER STABILIZATION	MOLD FREE AND DRY, MUST BE USED WITH PLANTINGS. ANCHOR IN AREAS OF STRONG WIND AND SLOPES GREATER THAN 5%.
WOOD CHIPS OR BARK MULCH	3" THICK OR MORE	USE IN FLAT AREAS AND SHORT 4:1 SLOPES.
EROSION CONTROL BLANKETS / MATS	SEE DETAIL 5/C-501	DITCHES, STEEP SLOPES, AND WHERE INDICATED.
EROSION CONTROL MIX	2" FOR SLOPES FLATTER THAN 3:1 OR 4" FOR SLOPES GREATER THAN 3:1. ADD AND ADDITIONAL 1/2" PER 20' OF SLOPE UP TO 100' IF SLOPE IS STEEPER THAN 3:1	FOR USE ON SLOPES LESS THAN 45%.

H. TEMPORARY EROSION CONTROL BLANKET SPECIFICATIONS (SEE DETAIL 5/C-501)

1. EXCELSIOR EROSION CONTROL BLANKET MUST CONSIST OF A MACHINE PRODUCED MAT OF CURLED WOOD EXCELSIOR COVERED WITH EITHER A 3 BY 1 INCH WEAVE OF TWISTED CRAFT PAPER OR A 2 BY 1 INCH BIODEGRADABLE EXTRUDED PLASTIC MESH. THE BLANKET MUST BE OF CONSISTENT THICKNESS WITH FIBERS EVENLY DISTRIBUTED THROUGHOUT. 80 PERCENT OF THE FIBERS MUST BE OVER 6 INCHES IN LENGTH. MINIMUM WIDTH: 48 INCHES, MINIMUM WEIGHT: 0.8 POUNDS PER SQUARE YARD.

2. STRAW-COCONUT EROSION CONTROL BLANKET MUST CONSIST OF A MACHINE PRODUCED BLANKET OF 70 PERCENT WHEAT STRAW AND 30 PERCENT COCONUT FIBER WITH PHOTODEGRADABLE NETTING ON BOTH SIDES AND SEWN TOGETHER WITH COTTON THREAD. MINIMUM WIDTH: 48 INCHES, MINIMUM WEIGHT: 0.75 POUNDS PER SQUARE YARD.

I. EXTENDED USE EROSION CONTROL BLANKET SPECIFICATION

1. JUTE EROSION CONTROL BLANKETS MUST BE OF UNIFORM PLAIN WEAVE SINGLE JUTE YARN AVERAGING APPROXIMATELY 130 POUNDS PER SPINDLE OF 14,400 YARDS. THE YARN MUST BE LOOSELY TWISTED AND WOVEN INTO 48 INCH WIDE BLANKETS WITH A MINIMUM AVERAGE WEIGHT OF 1.0 POUNDS PER SQUARE YARD.

J. OVER WINTER CONSTRUCTION (NOVEMBER 1 THROUGH APRIL 15)

PROVIDE ADDITIONAL STABILIZATION MEASURES BY NOVEMBER 1 FOR WINTER AND SPRING SNOW MELT IF THE CONSTRUCTION SITE IS NOT PERMANENTLY STABILIZED WITH PAVEMENT, GRAVEL ROAD BASE, 90% MATURE VEGETATION COVER, EROSION CONTROL MULCH, OR RIPRAP. PERMANENT SEEDING MUST OCCUR BY AUGUST 15 (45 DAYS BEFORE THE FIRST KILLING FROST), OTHERWISE, OVER WINTER MULCHING IS REQUIRED.

1. DITCHES AND CHANNELS :
   CONSTRUCT AND STABILIZE DITCHES AND CHANNELS BY SEPTEMBER 1.

2. FOR A DITCH OR CHANNEL TO BE GRASS-LINED (75% COVER) THAT IS NOT STABILIZED BY NOVEMBER 15, TAKE THE FOLLOWING ACTION TO STABILIZE THE DITCH FOR WINTER AND SPRING:

   2.1. STONE RIPRAP LINING IN THE DITCH OR CHANNEL: LINE THE DITCH OR CHANNEL WITH STONE RIPRAP BY NOVEMBER 15. USE ANGULAR D50 = 6" STONE FOR STONE RIPRAP OVER FILTER FABRIC. IF NECESSARY, REGRADE THE DITCH / CHANNEL PRIOR TO PLACING THE STONE RIPRAP LINING TO PREVENT THE STONE RIPRAP LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

3. VEGETATED AREAS WITH SLOPES OF 15% SLOPE OR LESS MUST HAVE 90% GRASS COVER BY NOVEMBER 1st OR BE SEEDED WITH WINTER RYE AT 3 LBS PER 1,000 SF, MULCHED WITH HAY AT 75 LBS PER 1,000 SF, AND ANCHORED WITH NETTING OR, BY NOVEMBER 15th, TAKE ONE OF THE THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR WINTER AND SPRING:

   3.1. EROSION CONTROL BLANKET - SEE DETAIL 5/C-501

   3.2. EROSION CONTROL MIX -
   THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX MUST BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>3") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND MUST NOT BE REMOVED BEFORE GRINDING. THE MIX MUST BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS). APPLY A THICKNESS OF 2" ON 3:1 SLOPES OR LESS AND ADD AN ADDITIONAL 1/2" PER 20' OF SLOPE OR UP TO 4" FOR A 100' SLOPE.

   3.3. HAY MULCH -
   APPLY AT A RATE OF 150 LBS PER 1,000 SF (3 TONS PER ACRE) AND ANCHORED WITH NETTING (PEG AND TWINE) OR A TACKIFIER TO PREVENT MULCH DISPLACEMENT BEFORE FREEZING CONDITIONS. NO SOIL MUST BE VISIBLE THROUGH THE MULCH AND HAY MULCH CAN NOT BE APPLIED OVER SNOW.

4. SEED AND MULCH VEGETATED SLOPES GREATER THAN 15% BY SEPTEMBER 1. ON A SLOPE THAT IS NOT STABILIZED BY OCTOBER 15, SEED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 SF AND PROTECTED WITH EROSION CONTROL BLANKETS. IF THE RYE FAILS TO GROW 3" OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 15, TAKE ONE OF THE THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR WINTER AND SPRING:

   4.1. EROSION CONTROL BLANKET - SEE DETAIL 5/C-501.

   4.2. EROSION CONTROL MIX - THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX MUST BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>3") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND MUST NOT BE REMOVED BEFORE GRINDING. THE MIX MUST BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS). APPLY A THICKNESS OF 4" ON GREATER THAN 3:1 AND AND IF SLOPES ARE GREATER THAN 60' LONG, 5" IS NEEDED.

   4.3. RIPRAP - ANGULAR STONE WITH SIZE AND THICKNESS APPROPRIATE TO STABILIZE THE SLOPE.

5. SOIL STOCKPILES MUST BE MULCHED FOR OVER WINTER PROTECTION WITH HAY AT TWICE THE NORMAL RATE (150 LBS PER 1,000 SF), OR WITH 4" LAYER OF EROSION CONTROL MIX. DO NOT LEAVE STOCKPILES, EVEN OVER WINTER (EVEN MULCHED), WITHIN 100' OF OF A PROTECTED RESOURCE.

K. PERMANENT SEEDING - (SEEDING DATES APRIL 15 TO JUNE 1 OR AUGUST 15 TO OCTOBER 1 ONLY)

1. PERMANENT SEEDING MUST OCCUR BY OCTOBER 1 TO ALLOW FOR 90% STAND OF TURF TO ESTABLISH PRIOR TO NOVEMBER 1.

2. SITE PREPARATION - INSTALL NEEDED SURFACE WATER CONTROL MEASURES PRIOR TO SEEDING. GRADE TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR SEED-BED PREPARATION. PROVIDE ADEQUATE DRAINAGE WHERE INTERNAL WATER MOVEMENT MUST CAUSE SEEPS OR SLIPPAGE BEFORE SEEDING IS WELL ESTABLISHED.

3. BEDDING - REMOVE STONES, TRASH, ROOTS, AND OTHER DEBRIS THAT WILL INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, TILL THE SOIL TO A DEPTH OF 4" TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL. WHEN PRACTICAL, PERFORM CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE. PROVIDE THE BEST CONDITIONS POSSIBLE FOR SEEDING.

4. FERTILIZER - APPLY LIME AND FERTILIZER EVENLY OVER THE AREA PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. BASE KINDS AND AMOUNTS OF LIME AND FERTILIZER ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM MUST BE APPLIED:

   4.1. GROUND LIMESTONE AT A RATE OF 138 LBS PER 1,000 SF (3 TONS PER ACRE) 10-20-20 FERTILIZER OR EQUIVALENT AT 18.4 LBS PER 1,000 SF (800 LBS PER ACRE) WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4" EITHER BEFORE OR DURING THE FINAL SEEDBED PREPARATIONS.

5. SEED MIXTURE: SEE SPECIFICATIONS AND DRAWINGS FOR SEEDING MIXTURES AND LOCATIONS OF SEED MIXTURE TYPES.

L. OFF-SITE VEHICLE TRACKING

1. USE STABILIZED CONSTRUCTION ENTRANCE/EXIT CONFORMING TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S WRITTEN REQUIREMENTS AT EACH SITE ACCESS POINT.

M. HOUSEKEEPING

1. COLLECT WASTE MATERIALS AND STORE IN SECURELY LIDDED RECEPTACLES. DEPOSIT TRASH AND CONSTRUCTION DEBRIS FROM THE SITE IN A DUMPSTER. DO NOT BURY CONSTRUCTION WASTE MATERIALS ON SITE.

2. DISPOSE OF HAZARDOUS WASTE MATERIALS IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS OR BY THE MANUFACTURER.

3. COLLECT SANITARY WASTE FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

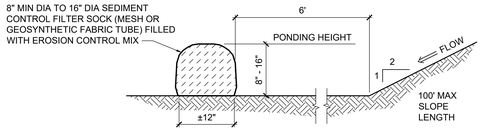
4. STORE MATERIALS STORED ON SITE IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINER, AND IF POSSIBLE UNDER A ROOF OR OTHER ENCLOSURE. STORE ONLY SUFFICIENT AMOUNTS OF MATERIALS TO COMPLETE THE JOB.

5. DISPOSE OF NOT TO BE USED SURPLUS MATERIALS OFF SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND STATE AND FEDERAL CODES.

6. MONITOR CONSTRUCTION RELATED EQUIPMENT AND VEHICLES FOR LEAKS AND PROVIDE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE LEAKAGE.

7. DISCHARGE AND WASH OUT SURPLUS CONCRETE FROM CONCRETE TRUCKS OR DRUM WASH WATER IN A CONTAINED AREA ON SITE. COORDINATE AREA WITH OWNER.

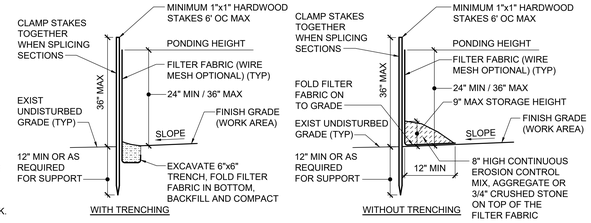
8. CLEAN UP SPILLS IMMEDIATELY AFTER DISCOVERY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED METHODS. KEEP MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP IN THE MATERIAL STORAGE AREA ON SITE. MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC OR METAL TRASH CONTAINERS. REPORT SPILLS OF TOXIC OR HAZARDOUS MATERIALS S TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY AND OWNER IMMEDIATELY REGARDLESS OF THE SIZE.



SEDIMENT CONTROL FILTER SOCK NOTES:

1. SEDIMENT CONTROL FILTER SOCKS MUST BE MANUFACTURED FOR THE PURPOSE OF TEMPORARY SEDIMENT CONTROL AND INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.
2. REMOVE ROOTS, ROCKS, MOW OR FLATTEN GRASS TO MAINTAIN FULL CONTACT WITH GROUND AND FILTER SOCK.
3. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE HALF THE FILTER SOCK HEIGHT.
4. SEDIMENT CONTROL FILTER SOCKS MUST REMAIN IN PLACE UNTIL ALL AREAS ARE STABILIZED.
5. SECURE SEDIMENT CONTROL FILTER SOCKS WITH CONCRETE BLOCKS AND/OR WOOD STAKES IN LOCATIONS WHERE SOCK FAILS TO REMAIN IN PLACE DUE TO HYDRAULIC FORCE. SPACE BLOCKS/STAKES AT INTERVALS NECESSARY TO KEEP FILTER SOCK FROM MOVING.
6. EROSION CONTROL MIX MUST CONSIST PRIMARILY OF WELL GRADED ORGANIC MATERIAL AND MUST INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR OTHER PRODUCTS BASED ON A SIMILAR RAW SOURCE. SILT, CLAY, OR FINE SAND ARE NOT ACCEPTABLE IN THE FILTER SOCK EROSION CONTROL MIX.

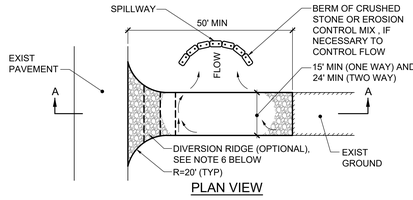
1 SEDIMENT CONTROL FILTER SOCK DETAIL
CD101,CG101 / C-501 — NOT TO SCALE

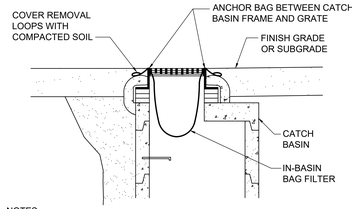


SILT FENCE NOTES

1. REMOVE SEDIMENT DEPOSITS WHEN DEPOSITS EXCEED 6" IN DEPTH.
2. INSPECT SILT FENCES AFTER EACH RAINFALL AND ALL NECESSARY REPAIRS/REPLACEMENT MADE IMMEDIATELY.
3. REMOVE SILT FENCES AFTER SATISFACTORY VEGETATIVE COVER IS ESTABLISHED. PROVIDE TOPSOIL, FINISH GRADE, SEED, AND MULCH DISTURBED AREAS.
4. IN AREAS WHERE SILT FENCE CAN NOT BE TRENCHED SUCH AS FROZEN GROUND, BEDROCK, STONY SOIL, ROOTS OR NEAR A PROTECTED RESOURCE ANCHOR THE SILT FENCE USING THE "WITHOUT TRENCHING" METHOD SHOWN ABOVE.

2 SILT FENCE DETAIL
CD101,CG101 / C-501 — NOT TO SCALE

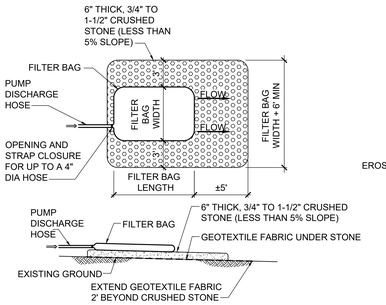




NOTES

1. IN-BASIN BAG FILTERS MUST BE A WOVEN POLYPROPYLENE WITH THE FOLLOWING MINIMUM PROPERTIES:
   a. GRAB TENSILE STRENGTH ACCORDING TO ASTM D4632: 300 LBS
   b. PUNCTURE RESISTANCE ACCORDING TO ASTM D4833: 120 LBS
   c. MULLEN BURST ACCORDING TO ASTM D3786: 800 PSI
   d. FLOW RATE ACCORDING TO ASTM D4491: 44 GAL/MIN/SF
2. BAG FILTER SEAMS MUST BE DOUBLE STITCHED WITH HIGH-STRENGTH NYLON THREAD AND MUST HAVE AN AVERAGE WIDE WIDTH STRENGTH PER ASTM D4884 OF 165 LBS/INCH.
3. PROVIDE TYPE A INLET PROTECTION IN EXISTING OR NEWLY PAVED AREAS WITH NON-STABILIZED TRIBUTARY WATERSHEDS.
4. REMOVE ACCUMULATED SEDIMENTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DO NOT PUNCTURE BAG FILTER TO CLEAN OUT SEDIMENT.

3 CATCH BASIN INLET PROTECTION DETAIL
CD101,CG101 / C-501 — NOT TO SCALE



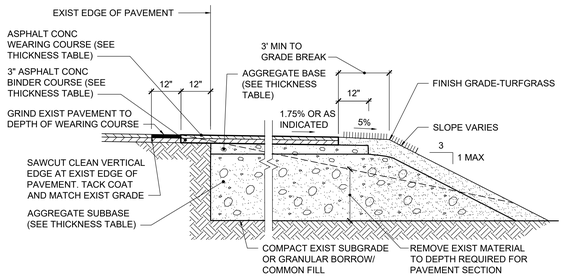
GEOTEXTILE FILTER BAG NOTES:

1. LOCATE DEWATERING SEDIMENT FILTERS A MINIMUM OF 100 FEET FROM ANY WATER BODY, WETLAND OR DRAINAGE STRUCTURE. DEWATERING SEDIMENT FILTERS MUST BE A NON-WOVEN GEOTEXTILE FABRIC WITH THE FOLLOWING MINIMUM PROPERTIES:
   a. FLOW RATE IN ACCORDANCE WITH ASTM D4491: 60 GAL/MIN/SF
   b. AOS % RETAINED IN ACCORDANCE WITH ASTM D4751: 100 US SIEVE
   c. MULLEN BURST STRENGTH IN ACCORDANCE WITH ASTM D3786: 350 PSI MIN
   d. PUNCTURE RESISTANCE IN ACCORDANCE WITH ASTM D4833: 110 LBS MIN
   e. WEIGHT IN ACCORDANCE WITH ASTM D3776: 8 OZ/YARD MIN
   f. GRAB TENSILE STRENGTH IN ACCORDANCE WITH ASTM D4632: 205 LBS MIN
2. INSTALL, OPERATE AND REMOVE DEWATERING SEDIMENT FILTERS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PRINTED INSTRUCTIONS.

4 TYP GEOTEXTILE FILTER BAG DETAIL
C-501 / C-501 — NOT TO SCALE

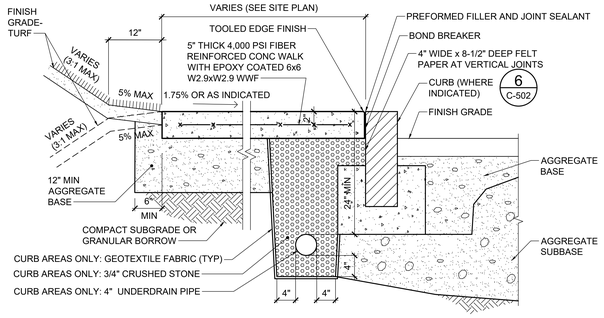
STABILIZED CONSTRUCTION ENTRANCE / EXIT NOTES

1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE / EXIT MUST BE ANGULAR 2 TO 3 INCH STONE OR APPROPRIATE RECLAIMED CONCRETE MATERIAL.
2. THE LENGTH OF THE STABILIZED ENTRANCE / EXIT MUST NOT BE LESS THAN 50 FEET.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE / EXIT MUST NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE / EXIT MUST NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 20 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER FABRIC MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE / EXIT MUST BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRAC



PAVEMENT SECTION MINIMUM MATERIAL THICKNESS		
MATERIAL	WITHIN RIGHT OF WAY	OUTSIDE OF RIGHT OF WAY
AGGREGATE SUB BASE	BEDFORD STREET: 21" FALMOUTH STREET: 15"	12"
AGGREGATE BASE	3"	6"
ASPHALT CONCRETE BINDER COURSE	3"	2-1/2"
ASPHALT CONCRETE WEARING COURSE	2"	1-1/2"

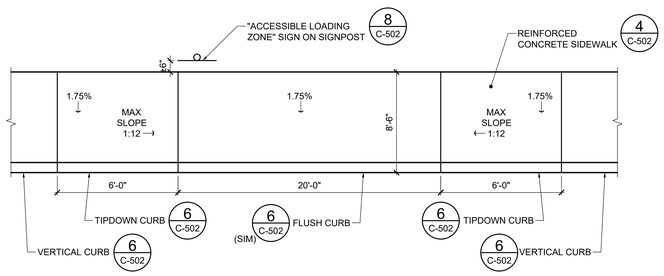
1 C-502 ASPHALT CONCRETE PAVEMENT SECTION
CS101,C-502,C-503 NOT TO SCALE



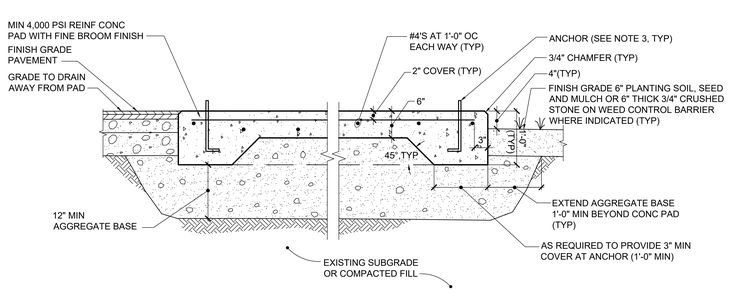
CONCRETE WALK NOTES:

1. PROVIDE MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL.
2. PROVIDE TOOLED CONTROL JOINTS AT 5'-0" TO 6'-0" ON CENTER, EQUALLY SPACED, UNLESS INDICATED OTHERWISE, AND AT ALL EDGES. (5 C-502)
3. PROVIDE EXPANSION JOINTS IN CONCRETE AT THE FOLLOWING: (5 C-502)
   a. AT 25'-35' ON CENTER EQUALLY SPACED UNLESS INDICATED OTHERWISE
   b. AT JOINT BETWEEN SIDEWALK AND STOOP
   c. WHERE INDICATED.
4. PROVIDE 1/2" PREFORMED FILLER AND JOINT SEALER WHERE WALK ABUTS THE BUILDING, CURBING, CANOPY COLUMNS, EXISTING REINFORCED CONCRETE SIDEWALKS, AND EQUIPMENT PADS.

4 C-502 TYPICAL REINFORCED CONCRETE WALK DETAIL
CS101,CG101,C-502,C-503 NOT TO SCALE



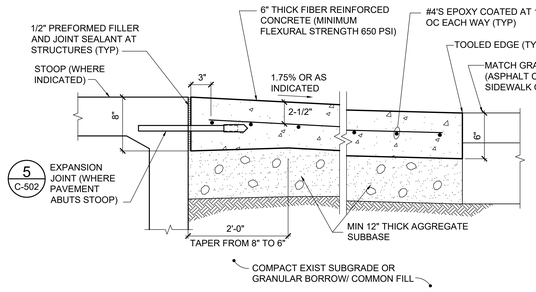
7 C-502 ACCESSIBLE LOADING ZONE DETAIL
CS101 C-502 NOT TO SCALE



11 C-502 REINFORCED CONCRETE PAD DETAIL
CS101,LS101 NOT TO SCALE

CONCRETE PAD NOTES

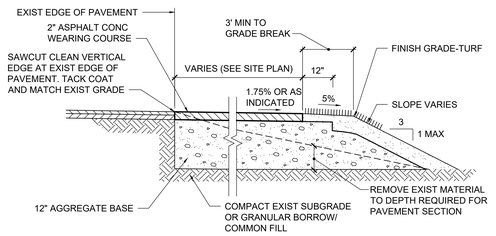
1. COORDINATE EXACT PAD DIMENSIONS WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR EQUIPMENT SELECTED.
2. COORDINATE SLEEVE OR CONDUIT PENETRATIONS THROUGH CONCRETE PADS WITH EQUIPMENT SELECTED.
3. MOUNT/ANCHOR ALL EQUIPMENT TO PADS WITH GALVANIZED CONCRETE ANCHORS IN ACCORDANCE WITH MANUFACTURER'S/SUPPLIER'S REQUIREMENTS.
5. PROVIDE CONTROL JOINTS EVENLY SPACED AT 12' O.C. MAX ON PADS WITH A DIMENSION LARGER THAN 12' IN ANY DIMENSION AND WHERE THE PAD ABUTS CONCRETE SIDEWALKS



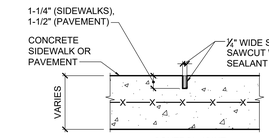
2 C-502 TYP REINFORCED CONCRETE PAVEMENT DETAIL
CS101,C-503 C-502 NOT TO SCALE

CONCRETE PAVEMENT NOTES:

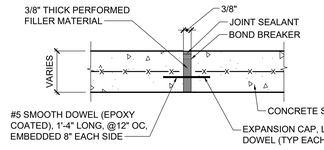
1. PROVIDE MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL.
2. PROVIDE CONTROL JOINTS AT 6-0" TO 10'-0" ON CENTER, EQUALLY SPACED, UNLESS INDICATED OTHERWISE, AND AT ALL EDGES. (5 C-502)
3. PROVIDE EXPANSION JOINTS IN CONCRETE WHERE PAVEMENT ABUTS STOOPS. (5 C-502)
4. PROVIDE 1/2" PREFORMED FILLER AND JOINT SEALER WHERE PAVEMENT ABUTS THE BUILDING, CURBING, CANOPY COLUMNS, EXISTING REINFORCED CONCRETE SIDEWALKS, AND EQUIPMENT PADS.



3 C-502 TYP ASPHALT CONCRETE SIDEWALK SECTION
CS101,C-503 NOT TO SCALE



CONTROL JOINT

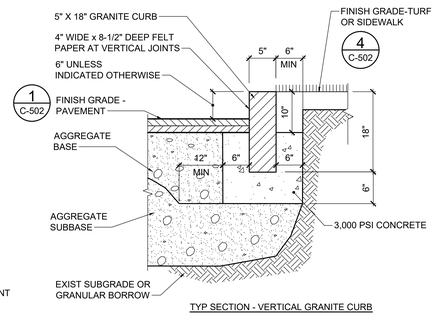


EXPANSION JOINT

CONCRETE JOINT NOTES:

1. PROVIDE TOOLED EDGES AT JOINTS WITH A 1/4" RADIUS
2. SURFACE MUST BE SMOOTH AND AT A CONSTANT DEPTH
3. BREAK REINFORCING AT EXPANSION JOINTS.

5 C-502 TYP CONCRETE JOINT DETAILS
C-502 NOT TO SCALE

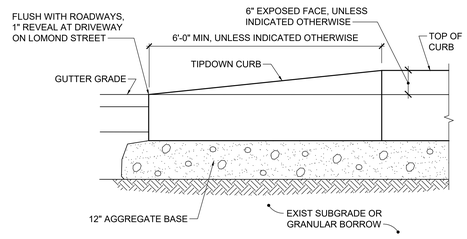


TYP SECTION - VERTICAL GRANITE CURB

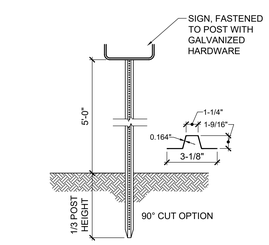
GRANITE CURB NOTES:

1. JOINTS: PROVIDE 4" WIDE x 8-1/2" DEEP FELT PAPER OR FILTER FABRIC ON BACKSIDE OF CURB JOINTS.
2. PROVIDE CURVED SECTIONS OF CURBING FOR ALL CURVES WITH RADII OF 60'-0" OR LESS THAT MATCHES THE RADII OF THE CURVES INDICATED. SEE SHEETS CL101 AND CL102 FOR LAYOUT INFORMATION.

6 C-502 TYP GRANITE CURB DETAILS
CS101,C-503,C-504 NOT TO SCALE



TIPDOWN CURB



LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN).
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: MUST CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070-1080)
FINISH: GALVANIZED



ACCESSIBLE DROP OFF (WHITE TEXT AND BORDER, BLUE BACKGROUND) 12' x 18'

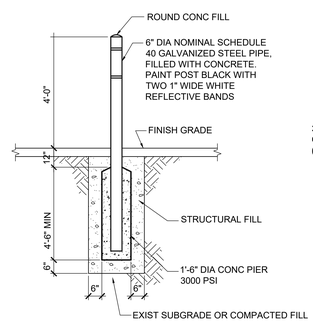


DROP OFF (GREEN TEXT AND BORDER, WHITE BACKGROUND) 12' x 18'

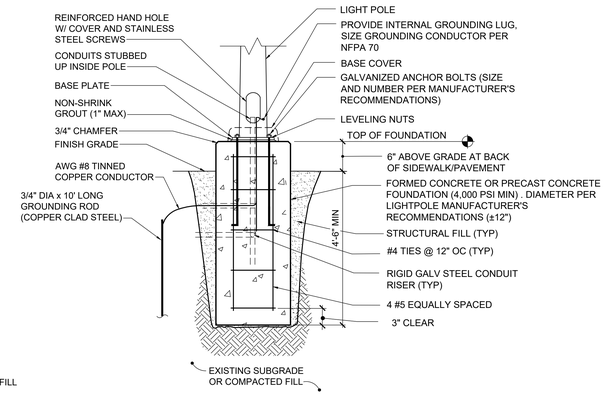


AUTHORIZED VEHICLES ONLY (RED TEXT AND BORDER, WHITE BACKGROUND) 12' x 18'

8 C-502 SIGN AND POST DETAILS
CS101,C-502 NOT TO SCALE



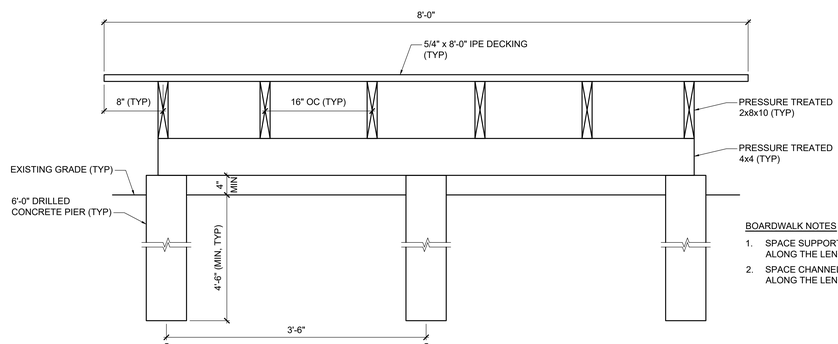
9 C-502 TYP BOLLARD DETAIL
CS101,CU101 NOT TO SCALE



LIGHT POLE LOCATION NOTE:

1. POSITION LIGHTPOLES SO THAT THE CENTER OF THE BASE IS 18" FROM THE BACK OF THE ADJACENT SIDEWALK.

10 C-502 LIGHT POLE FOUNDATION DETAIL
CU101 NOT TO SCALE



BOARDWALK NOTES

1. SPACE SUPPORT POSTS 10'-0" OC MAX ALONG THE LENGTH OF THE BOARDWALK
2. SPACE CHANNEL SUPPORTS 2'-0" MAX OC ALONG THE LENGTH OF THE BOARDWALK

12 C-502 LIGHTED BOARDWALK DETAIL
CS101 NOT TO SCALE

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SEAL:
STATE OF MAINE — JONAH DeWATERS — 12273 — LICENSED PROFESSIONAL ENGINEER
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ISSUE NAME:

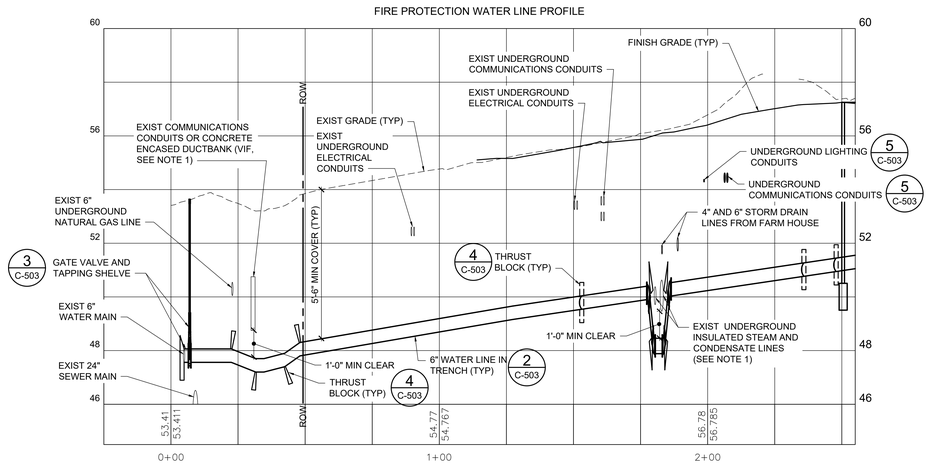
NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022
2.	REVISED UTILITY CONNECTIONS	01/27/2023
3.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT RESUBMISSION	02/23/2023

SITE DETAILS-1

SCALE:

C-502

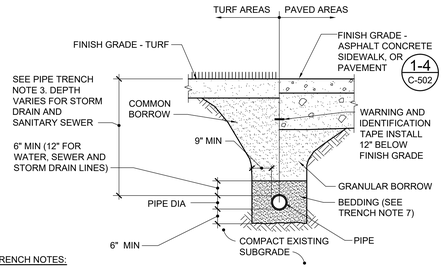
PFEIFFER PARTNERS PROJECT NUMBER: 6170.00



UTILITY CROSSING NOTE:

1. PRIOR TO INSTALLING WATER LINES, VERIFY HORIZONTAL LOCATION, VERTICAL LOCATION, AND NUMBER OF EXISTING UTILITIES AT EACH CROSSING. PROVIDE 12" MIN VERTICAL SEPARATION AT EACH CROSSING

1 C-503 CU101 **WATER LINE PROFILE**
SCALE: 1"=20" H & 1"=2" V



PIPE TRENCH NOTES:

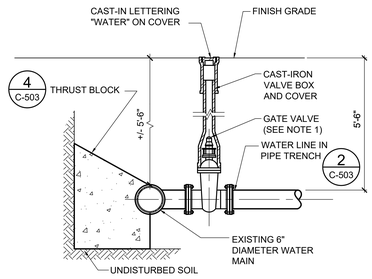
1. INSTALL THERMOPLASTIC (PVC, HDPE) GRAVITY PIPING IN ACCORDANCE WITH ASTM D 2321. SEE ALSO PIPE TRENCH BEDDING NOTES.
2. INSTALL WATER SUPPLY PIPING IN ACCORDANCE WITH PORTLAND WATER DISTRICT WRITTEN INSTRUCTIONS. BEDDING REQUIRED IS INDICATED IN PIPE TRENCH BEDDING NOTES.
3. MAINTAIN THE FOLLOWING DEPTH OF COVER FOR EACH SERVICE:

SERVICE	MIN DEPTH OF COVER
WATER SUPPLY	5'-6" (6'-0" MAX)*
SANITARY SEWER	4'-6"
NATURAL GAS (ON SITE)	2'-0"
STORM DRAIN	AS INDICATED

*MAXIMUM COVER OVER WATER SUPPLY LINE IS 6'-0" UNLESS SPECIFICALLY INDICATED OTHERWISE

4. PROVIDE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN WATER LINES AND ANY PIPES THAT CROSS THEM. PROVIDE A MINIMUM OF 6" VERTICAL CLEARANCE BETWEEN ALL OTHER CROSSING PIPES.
5. PROVIDE MIN 0.005'/FT (0.5%) PITCH ON ALL GRAVITY PIPING.
6. WRAP ALL DUCTILE IRON WATER PIPING IN MIN 8 MIL POLYETHYLENE SHEETING AND TAPE SECURELY BEFORE BURYING IN ACCORDANCE WITH PWD'S WRITTEN REQUIREMENTS.
7. PIPE BEDDING MUST BE ASTM D 2321, CLASS 1B OR II BEDDING, EXCEPT WITH 100 PERCENT PASSING A 1" SIEVE AND GREATER THAN 75 PERCENT PASSING A NO. 4 SIEVE, EXCEPT AT SEWER AND STORM DRAINAGE PIPING, WHERE 3/4" CRUSHED STONE MUST BE USED.
8. EXCAVATION WORK MUST COMPLY WITH OSHA STANDARDS. TRENCH SIDEWALLS MUST BE VERTICAL FROM TRENCH BOTTOM TO 12" ABOVE TOP OF PIPE.

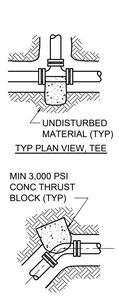
2 C-503 CU101,CG101,C-503,C-504 **PIPE TRENCH DETAIL**
NOT TO SCALE



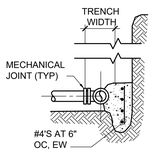
GATE VALVE NOTES:

1. VALVE MUST BE TURN RIGHT TO OPEN.
2. WRAP ALL PIPE AND FITTINGS IN MIN 8 MIL POLYETHYLENE SHEETING AND TAPE SECURELY BEFORE BURYING IN ACCORDANCE WITH PORTLAND WATER DISTRICT'S WRITTEN REQUIREMENTS.
3. VALVES, FITTINGS AND PIPE MUST CONFORM TO CURRENT PORTLAND WATER DISTRICT STANDARDS.

3 C-503 CU101,C-503 **GATE VALVE AND TAPPING SLEEVE DETAIL**
NOT TO SCALE



TYP PLAN VIEW, TEE



TYP SECTION (TEE OR BEND)



TYP PLAN VIEW, BEND, VERTICAL AND HORIZONTAL

THRUST BLOCK SCHEDULE
BASED ON 100 PSI WORKING PRESSURE
(SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL)

REACTION TYPE	PIPE SIZE (INCHES) 4"	6"	8"	10"	12"
90° BEND	1.9	4.0	6.8	10.3	14.5
TEE	1.4	2.8	4.8	7.3	10.3
45° BEND	1.0	2.2	3.7	5.6	7.9
22.5° BEND	0.5	1.1	1.9	2.8	4.0
11.25° BEND	0.3	0.6	1.0	1.4	2.0

NOTES:
1. FOR OTHER PRESSURES, AREA OF CONCRETE THRUST BLOCKING IS DIRECTLY PROPORTIONAL TO AREAS SHOWN IN ABOVE TABLE.
2. AREA OF THRUST BLOCKS SHOWN ARE BASED ON A MINIMUM SOIL BEARING CAPACITY OF 2,000 POUNDS PER SQUARE FOOT AND 1.5 SAFETY FACTOR. BEARING CAPACITY MAY BE ALTERED BY THE OWNER/ARCHITECT BASED ON CONDITIONS ENCOUNTERED.

THRUST BLOCK NOTES:

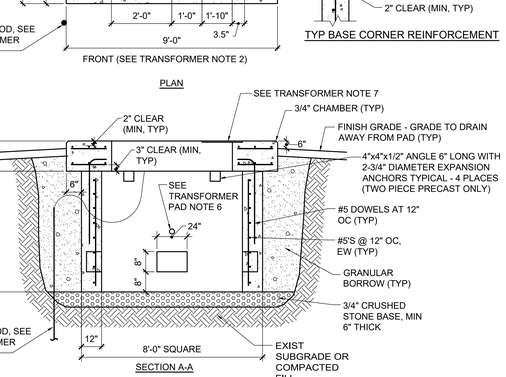
1. PROVIDE CONCRETE THRUST BLOCKING IN ACCORDANCE WITH NFPA 24.
2. CONCRETE THRUST BLOCKING (MIN 3,000 PSI) IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, AND PLUGS.
3. PLACE CONCRETE PAVERS OR BRICK IN FRONT OF ALL PLUGS BEFORE PLACING THRUST BLOCKS.
4. WRAP FITTINGS IN POLYETHYLENE PRIOR TO INSTALLATION OF CONCRETE THRUST BLOCKING.
5. PLACE THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND CONCRETE THRUST BLOCK TO UNDISTURBED MATERIAL.
6. EXTEND CONCRETE THRUST BLOCKING THE ENTIRE LENGTH OF THE FITTING. DO NOT COVER ANY PART OF THE JOINT WITH CONCRETE.
7. INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
8. GRIP-RING RESTRAINT SYSTEMS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE SYSTEMS DO NOT REDUCE THE REQUIREMENTS FOR THRUST BLOCKING.
9. PROVIDE ADDITIONAL JOINT RESTRAINT WHERE INDICATED ON DRAWINGS.

4 C-503 CU101,C-503 **THRUST BLOCK DETAIL**
NOT TO SCALE

CONDUIT TRENCH NOTES:

1. MINIMUM COVER IS AS FOLLOWS:
   PRIMARY ELECTRICAL CONDUIT: 30"
   SECONDARY ELECTRICAL CONDUIT:24"
   LIGHTING CONDUIT: 24"
   COMMUNICATIONS CONDUIT: 24"
2. VERTICAL CONDUIT BENDS, RISERS, AND ABOVE GRADE CONDUIT MUST BE RIGID GALVANIZED STEEL.
3. PROVIDE 24" MIN SEPARATION BETWEEN GAS LINES AND ELECTRICAL/COMMUNICATIONS CONDUITS.

5 C-503 CU101 **CONDUIT TRENCH DETAIL**
NOT TO SCALE



PLAN

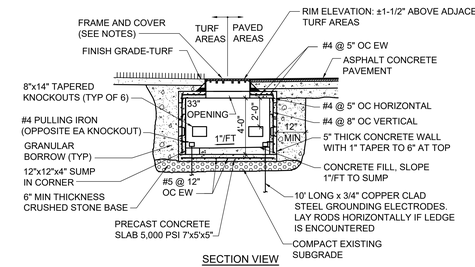
TYP BASE CORNER REINFORCEMENT

SECTION A-A

TRANSFORMER PAD NOTES:

1. TRANSFORMER PAD MUST COMPLY WITH ILLUSTRATION NO. 25, "LARGE (9'x9') THREE PHASE TRANSFORMER FOUNDATION" OF THE "CENTRAL MAINE POWER HANDBOOK OF REQUIREMENTS FOR ELECTRIC SERVICE AND METER INSTALLATIONS."
2. "FRONT" DENOTES THE SIDE ON WHICH THE ACCESS DOORS ARE LOCATED AND MUST FACE ADJACENT ROADWAY UNLESS INDICATED OTHERWISE.
3. PROVIDE A 3/4" DIA. x 8' LONG COPPER CLAD GROUND ROD. INSTALL 6" IN FRONT OF THE LEFT FRONT CORNER OF THE FOUNDATION. THE TOP OF THE GROUND ROD MUST BE 6" BELOW FINAL GRADE. A GROUND WIRE MUST BE INSTALLED FROM THE GROUND ROD THROUGH THE CABLE HOLE AT THE BOTTOM OF THE PAD. 20' OF GROUND WIRE MUST BE PROVIDED SO THAT IT CAN BE INSTALLED THROUGH THE TWO GROUNDING LUGS AND CONNECTED TO THE NEUTRAL SPADE.
4. CONCRETE COMPRESSIVE STRENGTH MUST BE 4,000 PSI @ 28 DAYS. FOR CAST-IN-PLACE EARLY HIGH STRENGTH MAY BE USED WITH A MINIMUM OF SEVEN DAY CURE TIME. REINFORCING STEEL MUST BE Fy = 60KSI
5. FOR PRECAST UNITS: THE PRECAST SUPPLIER MUST PROVIDE LIFTING LUGS IN THE SLAB (FOUNDATION) AND BASE; THE PRECAST SUPPLIER MUST ASSEMBLE THE SLAB TO THE BASE PRIOR TO SHIPPING TO THE SITE TO ENSURE THAT THE SLAB AND BASE FIT PROPERLY (WITH NO ROCKING OF THE SLAB EVIDENT).
6. PULLING EYE INSERT, FOR USE WITH 3/4" NATIONAL COURSE THREAD EYE-BOLT (RICHMOND LCB-1 OR EQUIVALENT) LOCATED OPPOSITE EACH CABLE HOLE AND 2' FROM BOTTOM.
7. USE A 24"x24"x1/4" THICK GALVANIZED STEEL PLATE TO COVER A PORTION OF THE CABLE HOLE WHEN THE TRANSFORMER DOES NOT COMPLETELY COVER IT. CUT THE STEEL PLATE TO FIT, IF NECESSARY. GALVANIZE ALL CUT EDGES OF THE PLATE.

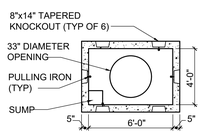
6 C-503 CU101 **TRANSFORMER PAD DETAIL**
NOT TO SCALE



SECTION VIEW

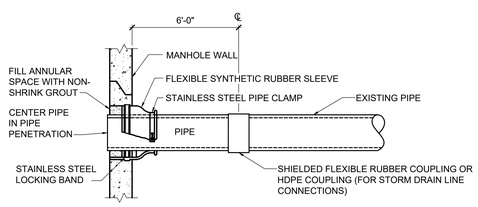
ELECTRICAL SPLICE BOX NOTES:

1. DESIGN TO WITHSTAND H-20 WHEEL LOADING WITH 6" OF OVERBURDEN AND COMPLY WITH NATIONAL ELECTRICAL SAFETY CODE SECTION 323A.
2. PROVIDE WITH 32" COVER MARKED "COMMUNICATIONS" (MIN ONE COURSE OF BRICK TO GRADE).
3. SEAL KNOCKOUTS WATERTIGHT AFTER INSTALLING CONDUIT.



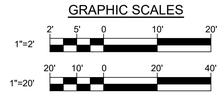
PLAN VIEW

7 C-503 CU101 **COMMUNICATIONS MANHOLE DETAIL**
NOT TO SCALE



8 C-503 CU101,CG101 **TYP PIPE PENETRATION AND CONNECTION DETAIL**
NOT TO SCALE

GRAPHIC SCALES



CHECK GRAPHIC SCALES BEFORE USING

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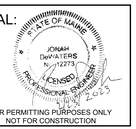
LANDSCAPE ARCHITECT/
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SEAL:



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ISSUE NAME:

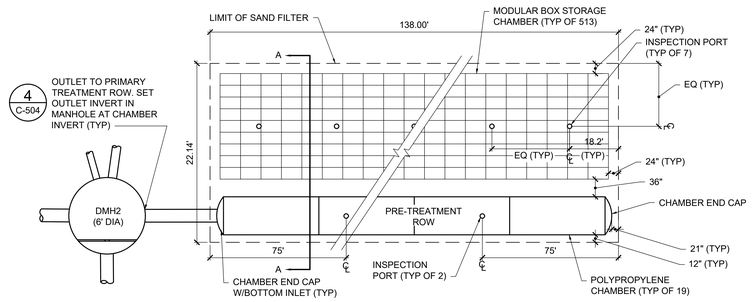
NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022
2.	REVISED UTILITY CONNECTIONS	01/27/2023
3.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT RESUBMISSION	02/23/2023

SITE DETAILS-2

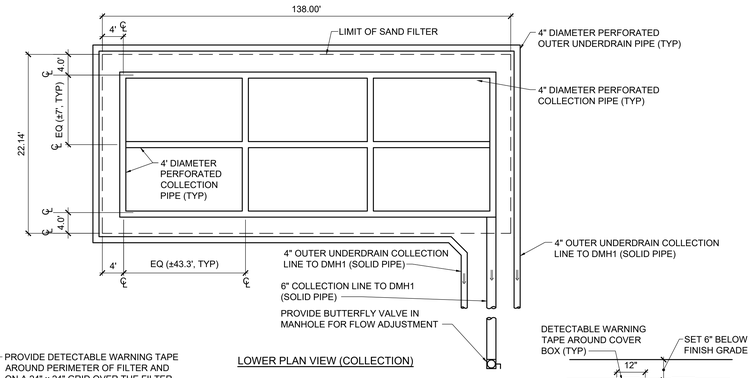
SCALE:

C-503

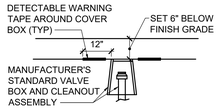
PFEIFFER PARTNERS PROJECT NUMBER: 6170.00



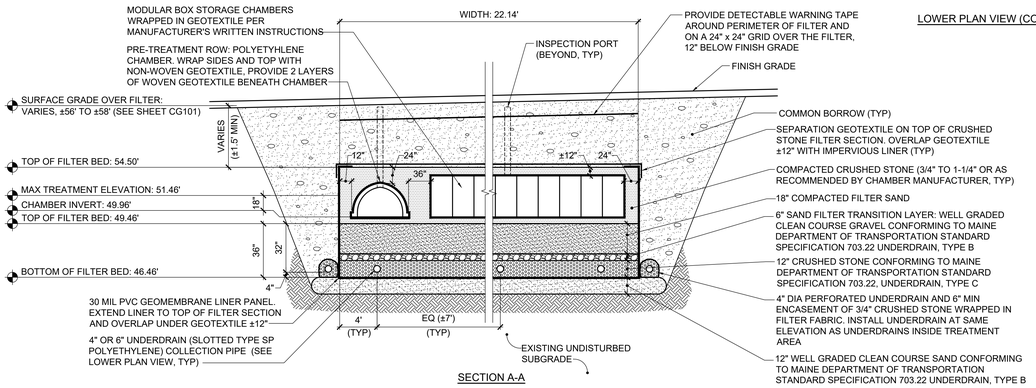
UPPER PLAN VIEW (DISTRIBUTION)



LOWER PLAN VIEW (COLLECTION)



TYP INSPECTION PORT DETAIL



SECTION A-A

SOIL AND SAND FILTER INSTALLATION/INSPECTION/MATERIAL NOTES:

INSTALLATION AND COMPACTION

1. INSTALL MATERIALS IN 2" TO 9" LIFTS.
2. COMPACT MATERIALS IN ACCORDANCE WITH ASTM D698 TO THE FOLLOWING LEVELS:
   a. SAND FILTER: 92% TO 95% STANDARD PROCTOR
   b. SAND FILTER TRANSITION LAYER: 90% TO 92% STANDARD PROCTOR
   c. UNDERDRAIN BEDDING: 90% TO 92% STANDARD PROCTOR

CONSTRUCTION INSPECTION/OVERSIGHT

1. THE OWNER MUST RETAIN THE SERVICES OF AN INSPECTOR (DESIGN ENGINEER) TO INSPECT/OVERSEE THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. ONCE THE STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND TRIBUTARY AREAS ARE STABILIZED, THE INSPECTOR (OR OWNER) MUST NOTIFY THE DEP IN WRITING TO STATE THAT CONSTRUCTION OF THE TREATMENT AREA HAS BEEN COMPLETED. ACCOMPANYING THE NOTIFICATION MUST BE A LOG OF THE INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, THE ITEMS INSPECTED ON EACH VISIT, AND THE RESULTS OF THE INSPECTION. INCLUDE IN THE NOTIFICATION TESTING DATA/SIEVE ANALYSIS DATA OF MATERIALS THAT MAKE UP THE SOIL FILTER (TYPE B AND TYPE C UNDERDRAIN MATERIAL AND FILTER MEDIA).
2. INSPECTION OF THE FILTER BASIN MUST BE PROVIDED FOR EACH PHASE OF CONSTRUCTION, WITH REQUIRED REPORTING TO THE DEP. AT A MINIMUM, INSPECTIONS WILL OCCUR:
   a. AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED;
   b. AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA/FILTER SAND;
   c. AFTER THE FILTER MEDIA/FILTER SAND HAS BEEN INSTALLED.
   d. AFTER THE SAND FILTER CHAMBERS HAVE BEEN INSTALLED BUT NOT BACKFILLED.
   e. AFTER BACKFILLING OVER THE SAND FILTER CHAMBERS BUT PRIOR TO INSTALLING TOPSOIL.
   f. ALL MATERIAL USED FOR THE CONSTRUCTION OF THE SAND FILTER IS SUBJECT TO APPROVAL BY THE INSPECTOR AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.
3. NOTIFY THE OWNER/INSPECTOR AT LEAST 72 HOURS PRIOR TO THE ANTICIPATED COMPLETION OF EACH OF THE ITEMS LISTED ABOVE TO COORDINATE TIMING OF INSPECTIONS.

TESTING AND SUBMITTALS

1. TESTING AND SUBMITTALS: IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE SOIL FILTER SYSTEMS. SAMPLES USED FOR ANALYSIS MUST BE A COMPOSITE OF AT LEAST THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE (SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY). SUBMIT ALL RESULTS OF THE FOLLOWING FIELD AND LABORATORY TESTING TO THE OWNER/ARCHITECT FOR REVIEW AND APPROVAL:
   a. PERFORM AND SUBMIT A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES; 1996A) FOR MATERIALS INDICATED TO CONFIRM THE MEET THE REQUIRED GRADATIONS.
   b. PERFORM A PERMEABILITY TEST ON THE FILTER SAND CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 92-95% OF MAXIMUM DRY DENSITY BASED ON ASTM D698. THE RESULTING PERMEABILITY MUST BE BETWEEN 1 AND 2 INCHES PER HOUR.

UNDERDRAINED SUBSURFACE SAND FILTER NOTES:

1. SEE SOIL AND SAND FILTER INSTALLATION/INSPECTION/MATERIAL NOTES, THIS SHEET.
2. CHAMBERS SELECTED MUST ACCOMMODATE HS-20 LOADING.
3. DIMENSIONS ARE BASED ON ONE MANUFACTURER. BASIS OF DESIGN IS AS FOLLOWS: PRE-TREATMENT CHAMBERS: CULTEC 330XLHD MODULAR BOX CHAMBERS: ACF ENVIRONMENTAL R-TANK HD (DOUBLE+MINI).
4. REQUIRED STORAGE VOLUME INSIDE CHAMBERS IS AS FOLLOWS: PRE-TREATMENT (EFFECTIVE STORAGE AFTER OVERLAP): 52.2 CF PER CHAMBER (38.6 CF AT 18") MODULAR BOX CHAMBERS (ASSUMES 95% VOID SPACE): 10.4 CF PER CHAMBER (4.4 CF AT 18")
5. INSTALL CHAMBERS AND CONNECT PIPING TO CHAMBERS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
6. INSTALL INSPECTION AND CLEANOUT PORTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
7. GEOTEXTILES USED AROUND CHAMBERS MUST CONFORM TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.
8. SEE DRAWING CG101 FOR DRAINAGE STRUCTURE SCHEDULE.

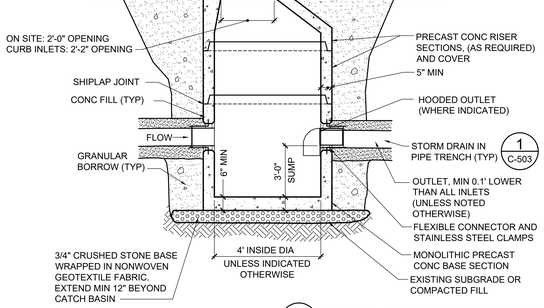
MATERIAL GRADATION REQUIREMENTS

SIEVE SIZE	% PASSING BY WEIGHT		
	MDOT 703.22, TYPE B	MDOT 703.22, TYPE C	FILTER SAND (MDOT 703.01)
2"	-	-	-
1"	95-100	100	-
3/4"	-	90-100	-
1/2"	75-100	-	-
3/8"	-	0-75	100
#4	50-100	0-25	95-100
#8	-	-	80-100
#10	-	0-5	-
#16	-	-	50-85
#20	15-80	-	-
#30	-	-	25-60
#40	-	-	-
#50	0-15	-	-
#60	-	-	10-30
#100	-	-	2-10
#200	0-5	-	0-5 (8-10% PREFERRED)
CLAY	-	-	-

**PERMEABILITY OF FILTER SAND BE BETWEEN 1 AND 2 INCHES PER HOUR.

1 UNDERDRAINED SUBSURFACE SAND FILTER DETAILS

CG101,C-504 (1 C-504) NOT TO SCALE

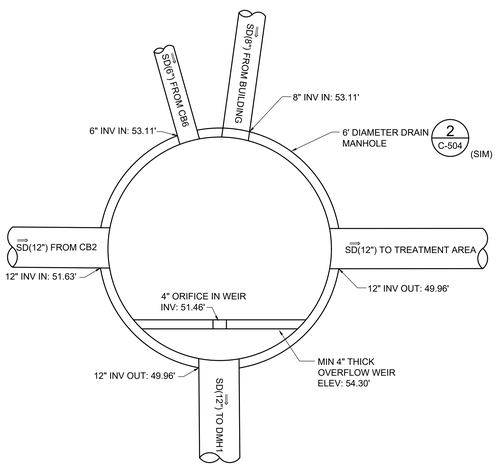


CATCH BASIN NOTES:

1. CONCRETE MUST BE MIN F'c=5,000 PSI.
2. DIMENSIONS INDICATED ARE MINIMUMS. PROVIDE REINFORCING AND CONCRETE THICKNESS TO ACHIEVE AASHTO HS-20 LOADING CLASSIFICATION (32,000 POUND AXLE LOAD).
3. CATCH BASINS MUST CONFORM TO ASTM C478, UNLESS INDICATED OTHERWISE.
4. PROVIDE PIPE PENETRATIONS AS INDICATED ON PLANS.
5. SHIPLAP JOINTS MUST HAVE 2 STRIPS OF 1" DIA BUTYL RUBBER SEALANT, RAM-NEK GASKET OR APPROVED EQUAL.
6. PROVIDE LOCK JOINT FLEXIBLE PIPE SLEEVES, CAST IN OR GASKET WITH EXPANSION SLEEVE.
7. EACH CASTING TO HAVE LIFTING HOLES CAST IN. PLUG LIFTING HOLES WITH GROUT AFTER PLACING MANHOLE.
8. PROVIDE SQUARE GRATES IN PAVED AREAS AND ROUND GRATES IN TURF AREAS.

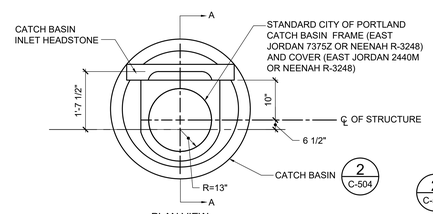
2 TYPICAL CATCH BASIN/DRAIN MANHOLE DETAILS

CG101,C-504 (2 C-504) NOT TO SCALE

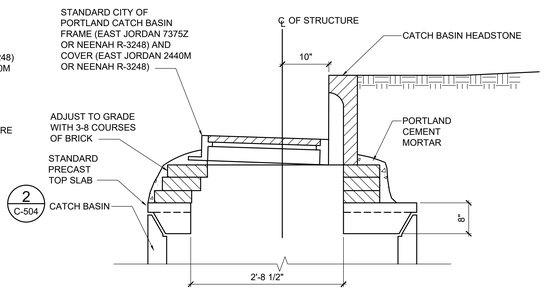


4 DMH 2 DETAIL

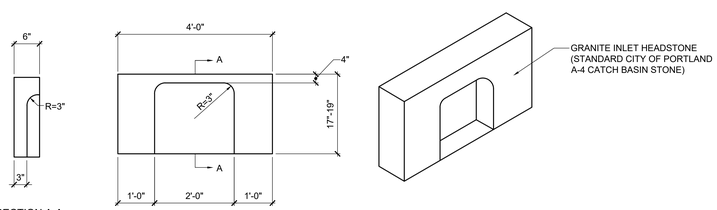
CG101,C-504 (4 C-504) NOT TO SCALE



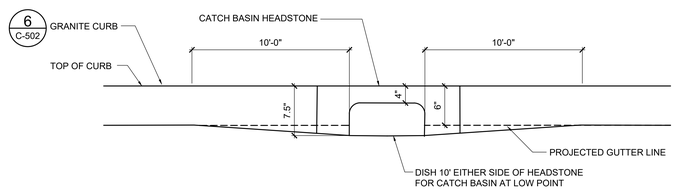
PRECAST CONCRETE CATCH BASIN - TYPE "E"



CATCH BASIN INLET SECTION A-A



4' GRANITE HEADSTONE FOR CATCH BASIN INLET



TYPICAL PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET

CURB INLET NOTE:
1. CURB INLET SHALL BE ACCORDANCE WITH CITY OF PORTLAND'S WRITTEN REQUIREMENTS (TECHNICAL MANUAL FIGURES II-2, II-4, II-7, II-8, II-10, AND II-11)

3 CURB INLET DETAILS

CG101 (3 C-504) NOT TO SCALE

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PFEIFFER
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OAK POINT ASSOCIATES architecture engineering planning
OAK POINT ASSOCIATES
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LANDSCAPE ARCHITECT/
CIVIL/ STRUCTURAL/ MEP ENGINEER
OAK POINT ASSOCIATES
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THEATRICAL:
THEATRE PROJECTS
47 WATER STREET
SOUTH NORWALK, CT 06854
PHONE: 203.299.0835

ACOUSTICS/ AUDIO-VISUAL:
JAFFE HOLDEN
114A WASHINGTON STREET
NORWALK, CT 06854
PHONE: 203.838.4167

LIGHTING:
CLINE BETTRIDGE BERNSTEIN
116 EAST 27TH STREET, 4TH FLOOR
NEW YORK, NY 10016
PHONE: 212.741.3280

SEAL:



FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022
2.	REVISED UTILITY CONNECTIONS	01/27/2023
3.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT RESUBMISSION	02/23/2023

SITE DETAILS-3

SCALE:

C-504

PFEIFFER PARTNERS PROJECT NUMBER 6170.00

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B-1
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/18/2020
DATE FINISH: 11/18/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 58' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 8.0
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/0	2-2-2			Loose, dark brown silty SAND with fat clay, trace roots		
50	5		2D	5-7	24/16	5-19-33-33			Dense, brown gravelly silty SAND; crushing gravel with spoon		
									Auger Into Probable bedrock		

Bottom of Exploration at 8.0 feet
Auger Refusal - Probable bedrock

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- 1

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 2
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/18/2020
DATE FINISH: 11/18/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 60' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 8.5
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/12	2-2-2-2			Loose, dark brown silty SAND with fat clay and trace roots		
50	5		2D	5-7	24/18	5-4-8-11	q_u=0.6 tsf		Stiff, grey-brown sandy clayey SILT with sand seams		
									Medium dense, brown silty SAND with gray sandy SILT layers		
									Auger into Probable bedrock		

Bottom of Exploration at 8.5 feet
Auger Refusal - Probable bedrock

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- 2

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 3
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/18/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): Soils wet at 10' and saturated below 10'
ELEVATION (FT): 50' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 20.1
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/15	2-4-4-4			Very loose, dark brown silty SAND and SILT		
50	5		2D	5-7	24/20	5-7-10-13			Loose, brown gravelly silty SAND (FILL/REWORKED)		
45	10		3D	10-12	24/15	5-14-24-22			Loose, gray sandy SILT, some clay		
40	15		4D	15-17	24/16	13-13-9-14			Stiff, brown silty CLAY, some sand with frequent sand seams		
35	20		5D	20-20.1	1/1	50/1"			Auger into Probable bedrock		

Bottom of Exploration at 20.1 feet
Auger Refusal - Probable bedrock

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- 3

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 4
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 55' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 8.0
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/13	2-2-2-5			Very loose, dark brown silty SAND		
50	5		2D	5-7	24/16	4-5-6-9			Loose, brown silty SAND, some gravel		
									Auger into Probable bedrock		

Bottom of Exploration at 8.0 feet
Auger Refusal - Probable bedrock

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- 4

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 5
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 57' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 2.5
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/12	3-1-2-4			Very loose, dark brown silty SAND (REWORKED)		
									Bottom of Exploration at 2.5 feet Auger Refusal - Probable bedrock		

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- 5

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 6
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/20/2020
DATE FINISH: 11/20/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed; Soils moist
ELEVATION (FT): 57' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.1/2 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 8.5
DRILLING METHOD: Solid Stem Auger
SAMPLER:
CASING ID/OD: N/A /N/A
LOGGED BY: Eric Baron
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/12	2-2-2-2			Very loose, brown silty SAND with organics		
50	5		2D	5-7	24/16	15-11-11-25			Loose, brown gravelly SAND; some silt		
45	10		3D	10-12	24/13	11-14-11-4			Loose, gray-brown SAND and SILT; some clay with occasional sand layers		
40	15		4D	15-17	24/12	5-7-15-19			Medium dense, brown silty gravelly SAND		
35	20		5D	20-21.5	18/15	16-20-47			Auger into probable WEATHERED BEDROCK 17 TO 17.5'		
30	25		6D	25-27	24/15	13-16-19-19			Medium dense to dense, gray-brown sandy SILT, some gravel		

Bottom of Exploration at 27.0 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- 6

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 7
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): Soils wet at 9.5' and saturated at 17.5'
ELEVATION (FT): 60' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 17.5
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL: NQ2 / 2

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/9	2-2-2-4			Very loose, dark brown silty SAND (TOPSOIL)		
50	5		2D	5-6.1	13/6	10-34-25/1"			Medium dense to dense, brown SAND and SILT; some gravel		
			R1	7.1-7.5	60	8	w=16.7 %		Bedrock:		
45	10		R2	12.5-17.5	60	66			Grey Schist, moderately hard, fractured		
									Bottom of Exploration at 17.5 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- 7

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 8
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 58.6' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 3.5
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/12	1-2-3-4			Loose, brown SAND and SILT; some gravel		
									Bottom of Exploration at 3.5 feet Auger Refusal - Probable bedrock		

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- 8

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B- 9
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 58' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 8.5
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/12	1-2-2-4			Loose, brown SAND and SILT		
50	5		2D	5-7	24/16	6-11-12-17			Very loose, gray-brown silty SAND; some gravel		
									Bottom of Exploration at 8.5 feet Auger Refusal - Probable bedrock		

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- 9

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B-10
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 58' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 3.5
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/12	1-1-2-3			Very loose, dark brown silty SAND (TOPSOIL)		
50	5		2D	5-7	24/24	13-13-14-16			Very loose, orange-brown silty SAND and SILT (REWORKED)		
									Medium dense, gray-brown SAND and SILT		
									Medium dense, brown silty SAND; trace gravel with silt layers		
									Auger into Probable bedrock		

Bottom of Exploration at 8.0 feet
Auger Refusal - Probable bedrock

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-10

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B-11
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/20/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 57.6' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 7.2
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/2	1-2-3-4			Very loose, dark brown silty SAND (TOPSOIL)		
50	5		2D	5-7	24/6	7-11-12-19			Loose, brown gravelly SAND and SILT; some clay with occasional sand layers		
									Bottom of Exploration at 7.2 feet Auger Refusal - Probable bedrock		

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-11

BORING LOG

S.W.COLE ENGINEERING INC

CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B-12
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/19/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
HAMMER TYPE: Automatic
HAMMER EFFICIENCY FACTOR:
WATER LEVEL DEPTHS (ft): No free water observed
ELEVATION (FT): 56' +/-
DRILLER: Sam Shaw
AUGER ID/OD: 2 1/4 in./ 3.5/8 in.
HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
TOTAL DEPTH (FT): 27.0
DRILLING METHOD: Hollow Stem Auger
SAMPLER: Standard Split-Spoon
CASING ID/OD: N/A /N/A
LOGGED BY: Patrick Otis
CORE BARREL:

GENERAL NOTES

ADD TO NOTES AND SYMBOLS: Water Level at time of Drilling ▼ At Completion of Drilling ▽ After Drilling; D = Split Spoon Sample; V = Thin Walled 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_u = Field Vane Shear Strength, kips/sq ft; S_u = Unconfined Compressive Strength, kips/sq ft; Ø = Friction Angle (Estimated); N/A = Not Applicable

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Casing Blow Cnt.	Sample No.	Sample Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H.S. Depth	Remarks
55	0		1D	0-2	24/2	1-2-3-4			Loose, brown SAND and SILT with organics		
50	5		2D	5-7	24/15	10-11-11-25			Medium dense, brown SAND; some gravel, some silt		
45	10		3D	10-12	24/13	11-14-11-4			Loose, gray-brown SAND and SILT; some clay with occasional sand layers		
40	15		4D	15-17	24/12	5-7-15-19			Medium dense to dense, gray-brown sandy SILT, some gravel		
35	20		5D	20-21.5	18/15	8-13-15-19			Auger into probable WEATHERED BEDROCK 17 TO 17.5'		
30	25		6D	25-27	24/15	13-16-19-19			Refusal at 17.5 feet Probable bedrock		

Bottom of Exploration at 27.0 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-12

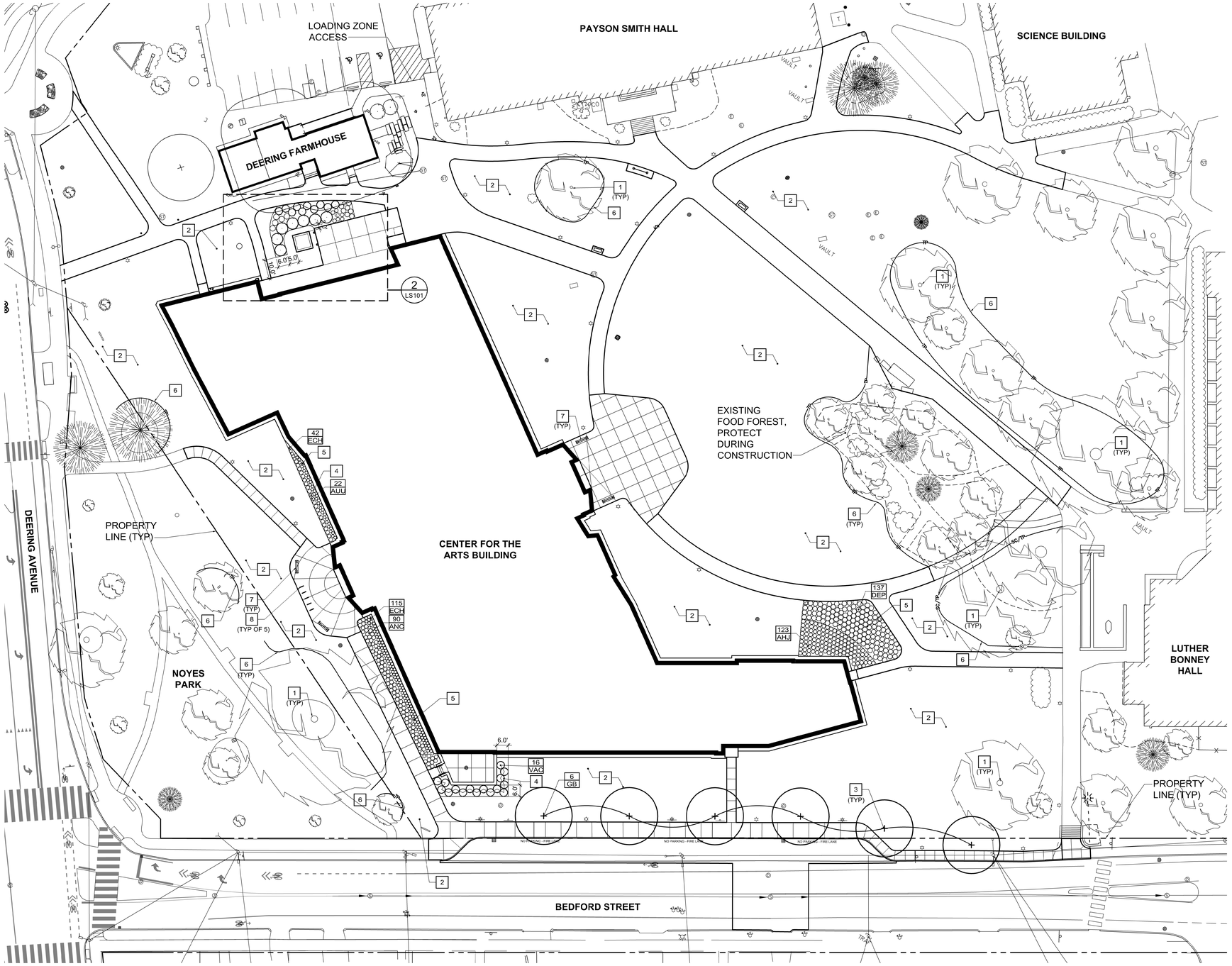
BORING LOG

S.W.COLE ENGINEERING INC

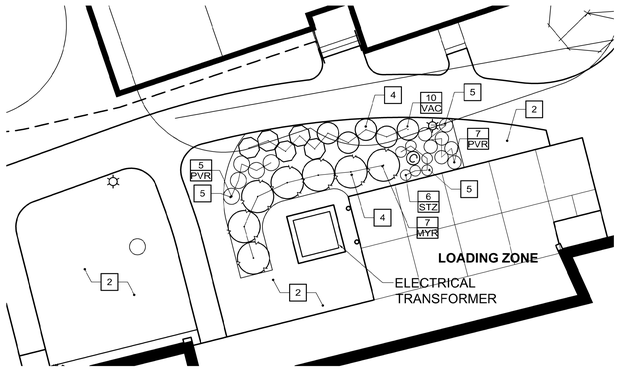
CLIENT: University of Southern Maine
PROJECT: Proposed Center for the Arts
LOCATION: Bedford Street, Portland, Maine

BORING NO.: B-13
SHEET: 1 of 1
PROJECT NO. 20-1470
DATE START: 11/18/2020
DATE FINISH: 11/19/2020

Drilling Information
LOCATION: See Exploration Location Plan
DRILLING CO.: S. W. Cole Explorations, LLC
RIG TYPE: Track Mounted Mobile Drill B-53
**HAMMER T



1 LS101 LANDSCAPE PLAN
SCALE: 1"=20'



2 LS101 LOADING AREA LANDSCAPE PLAN
SCALE: 1"=10'

KEYNOTES: (THIS SHEET ONLY)

1. PROTECT EXISTING TREE TO REMAIN.
2. TURFGRASS (SOD) ALL DISTURBED AREAS UNLESS INDICATED OTHERWISE.
3. TREE PLANTING. SEE DETAILS 1/L-501 AND 2/L501.
4. SHRUB PLANTING. SEE DETAIL 3/L-501.
5. PERENNIAL/GROUNDCOVER PLANTING. SEE DETAIL 4/L-501.
6. TREE PROTECTION FENCE. SEE DETAIL 5/L-501.
7. BENCH.
8. BICYCLE RACKS.

PLANT LIST:

	SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENT
TREES	GB	6	GINGKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE	2" CAL.	45' O.C.	
SHRUBS	AUU	22	ARCTOSTAPHYLOS VAR UVA-URSI	BEARBERRY	2 QT	24" O.C.	
	MYR	7	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	6'-7' B&B	AS SHOWN	
	VAC	26	VACCINIUM CORYMBOSUM 'NORTHLAND'	HIGH-LOW BLUEBERRY	18"-24" HT.	AS SHOWN	
PERENNIALS	ANC	90	ANENOME CANADENSIS	CANADIAN WINDFLOWER	2 QT	24" O.C.	
	AHJ	123	ANENOME X HYBRIDA 'HONORINE JOBERT'	HONORINE JOBERT WINDFLOWER	#1	24" O.C.	
	DEP	137	DENNSTAEDTIA PUNCTILOBA	HAYSCENTED FERN	2 QT	30" O.C.	
	ECH	157	ECHINACEA PURPUREA 'GREEN JEWEL'	GREEN JEWEL CONEFLOWER	#1	18" O.C.	
	PVR	12	PANICUM VIRGATUM 'ROTSTRAHLBUSCH'	ROTSTRAHLBUSCH SWITCHGRASS	2 GAL	36" O.C.	
	STZ	6	SCHIZACHYIRUM 'THE BLUES'	THE BLUES LITTLE BLUESTEM	2 GAL	18" O.C.	

GRID NORTH (NAD83)

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

UNIVERSITY OF SOUTHERN MAINE
CENTER FOR THE ARTS

111 Bedford Street, Portland, Maine
CBL: 114A A001001 (ZONE R5 W/ USM OVERLAY)
Client:
University of Southern Maine
P.O. Box 9300
Portland, ME 04104

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LANDSCAPE ARCHITECT/
CIVIL/ STRUCTURAL/ MEP ENGINEER
OAK POINT ASSOCIATES
231 MAIN STREET
BIDDEFORD, ME 04005
PHONE: 207.283.0193

THEATRICAL:
THEATRE PROJECTS
47 WATER STREET
SOUTH NORWALK, CT 06854
PHONE: 203.299.0835

ACOUSTICS/ AUDIO-VISUAL:
JAFFE HOLDEN
114A WASHINGTON STREET
NORWALK, CT 06854
PHONE: 203.838.4167

LIGHTING:
CLINE BETTRIDGE BERNSTEIN
116 EAST 27TH STREET, 4TH FLOOR
NEW YORK, NY 10016
PHONE: 212.741.3280

COST CONSULTANT:
VENUE
226 5TH AVE N, SUITE 705
ST PETERSBURG, FL 33701
PHONE: 727.498.1091

SEAL:



FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

ISSUE NAME:

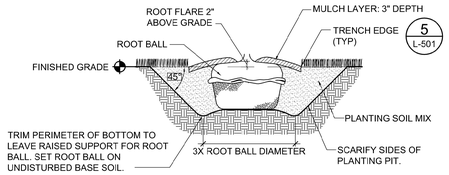
NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

LANDSCAPE PLAN

SCALE: As indicated

LS101

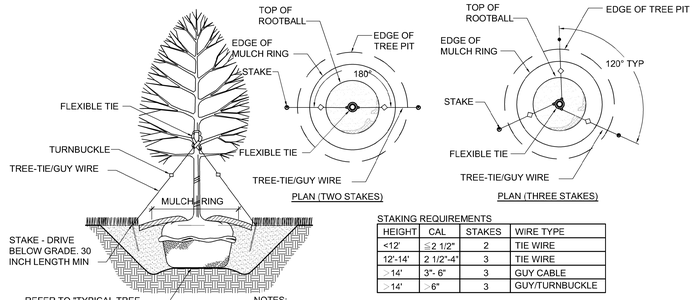
PFEIFFER PARTNERS PROJECT NUMBER: 6170.03



PLANTING PROCEDURE:

1. EXCAVATE CIRCULAR PLANTING PIT 3X THE DIAMETER OF ROOTBALL WITH SIDES SLOPING INWARD AT 45°ANGLE.
2. FILL EXCAVATIONS WITH WATER AND ALLOW TO PERCOLATE. NOTIFY ARCHITECT OF UNEXPECTED WATER SEEPAGE OR RETENTION OF WATER.
3. SET TREE WITH ROOT FLARE 2" ABOVE SURROUNDING FINISHED GRADE. DO NOT BREAK ROOTBALL.
4. REMOVE BURLAP, STRAPS, WIRE CAGE AND OTHER MATERIALS FROM TOP 1/4 OF ROOTBALL.
5. BACK FILL WITH PLANTING SOIL MIX IN LAYERS. TAMP LIGHTLY TO ELIMINATE VOIDS AND AIR POCKETS.
6. WATER THOROUGHLY WHEN ONE-HALF OF PLANTING PIT IS FILLED.
7. PLACE FERTILIZER TABLETS ONE INCH FROM ROOTBALL WHEN ONE-HALF OF PLANTING PIT IS FILLED.
8. PLACE REMAINDER OF FILL AND WATER THOROUGHLY.
9. CONSTRUCT TRENCH EDGE AND MULCH AS SPECIFIED. DO NOT PLACE MULCH WITHIN 3 INCHES OF TRUNK.
10. STABILIZE TREE AS SPECIFIED.

1 TYPICAL TREE ROOTBALL PIT
LS101 L-501 NOT TO SCALE

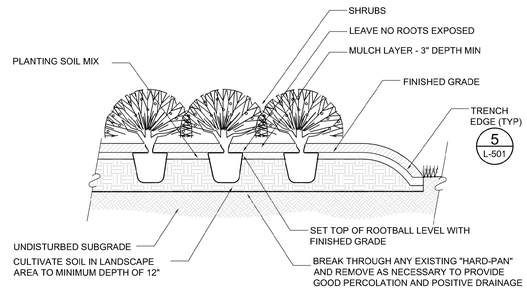


STAKING REQUIREMENTS

HEIGHT	CAL	STAKES	WIRE TYPE
<12'	≤ 2 1/2"	2	TIE WIRE
12'-14'	2 1/2"-4"	3	TIE WIRE
14'	3"- 6"	3	GUY CABLE
14'	6"	3	GUY/TURNBUCKLE

NOTES:
1. SET TREE PLUMB PRIOR TO STAKING.
2. ON MULTI-STEM TREES, ATTACH GUYS TO THE LARGEST TRUNK.
3. ON EVERGREEN TREES, ATTACH GUYS 1/2 WAY UP HEIGHT OF TREE.
4. REMOVE STAKING AND GUYING AFTER ONE YEAR.

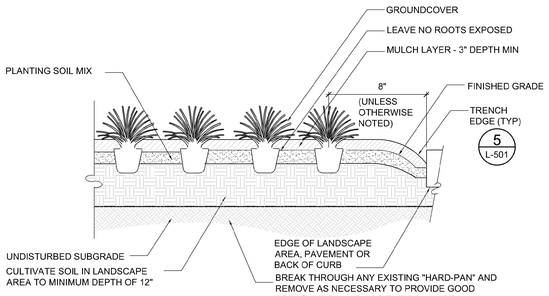
2 TREE STAKING AND GUYING
LS101 L-501 NOT TO SCALE



PLANTING PROCEDURE

1. LAY OUT BED AND OUTLINE WITH TRENCH EDGE. PLACE SOIL FROM EDGE WITHIN BED.
2. ROTOTILL BED TO 12" DEPTH. SPREAD 3" MIN. LAYER OF PLANTING SOIL MIX OVER BED. ROTOTILL SOIL MIX INTO TOP OF BED. INSTALL PLANTS AND MULCH. WATER THOROUGHLY.

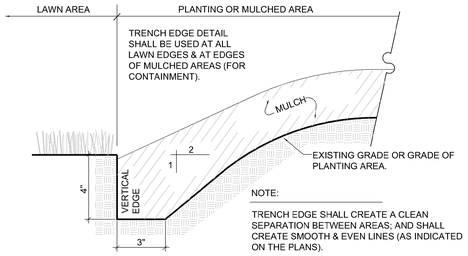
3 GROUP SHRUB PLANTING
LS101 L-501 NOT TO SCALE



PLANTING PROCEDURE

1. LAY OUT BED AND OUTLINE WITH TRENCH EDGE. PLACE SOIL FROM EDGE WITHIN BED.
2. ROTOTILL BED TO 12" DEPTH. SPREAD 3" MIN. LAYER OF PLANTING SOIL MIX OVER BED. ROTOTILL SOIL MIX INTO TOP OF BED. INSTALL PLANTS AND MULCH. WATER THOROUGHLY.

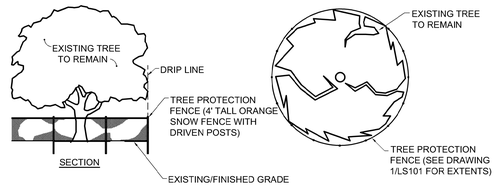
4 GROUNDCOVER/PERENNIAL PLANTING
LS101 L-501 NOT TO SCALE



NOTE:

TRENCH EDGE SHALL CREATE A CLEAN SEPARATION BETWEEN AREAS; AND SHALL CREATE SMOOTH & EVEN LINES (AS INDICATED ON THE PLANS).

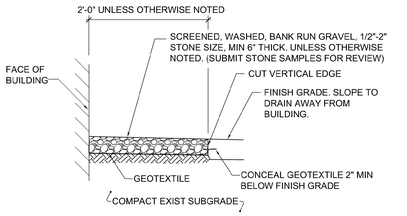
5 TRENCH EDGE - SECTION
L-501 L-501 NOT TO SCALE



TREE PROTECTION NOTES:

1. DO NOT STORE MATERIALS OR EQUIPMENT WITHIN TREE PROTECTION ZONES.
2. EXCAVATE ONLY BEYOND DRIP LINE OF TREE UNLESS INDICATED OTHERWISE ON DRAWINGS. PRUNE ROOTS IF EXPOSED.
3. DIRECT VEHICLE EXHAUST AWAY FROM TREE PROTECTION ZONES.
4. HAND EXCAVATE WITHIN TREE PROTECTION ZONES WHERE EXCAVATION IS INDICATED ON DRAWINGS.
5. REQUIRED ROOT CUTTING AND REMOVAL OF DEAD OR DAMAGED BRANCHES SHALL BE APPROVED BY THE CITY OF PORTLAND ARBORIST PRIOR TO BEING PERFORMED.

6 TREE PROTECTION FENCE DETAIL
CD101,CG101,LS101 L-501 NOT TO SCALE



7 STONE DRIP EDGE/MOW STRIP DETAIL
CS101,LS101 L-501 NOT TO SCALE

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VENUE
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ST PETERSBURG, FL 33701
PHONE: 727.498.1091

SEAL:

LICENSED LANDSCAPE ARCHITECT
12-15-22
ALLISON TOWNE DIMATTEO
No. 2403
STATE OF MAINE

FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

ISSUE NAME:

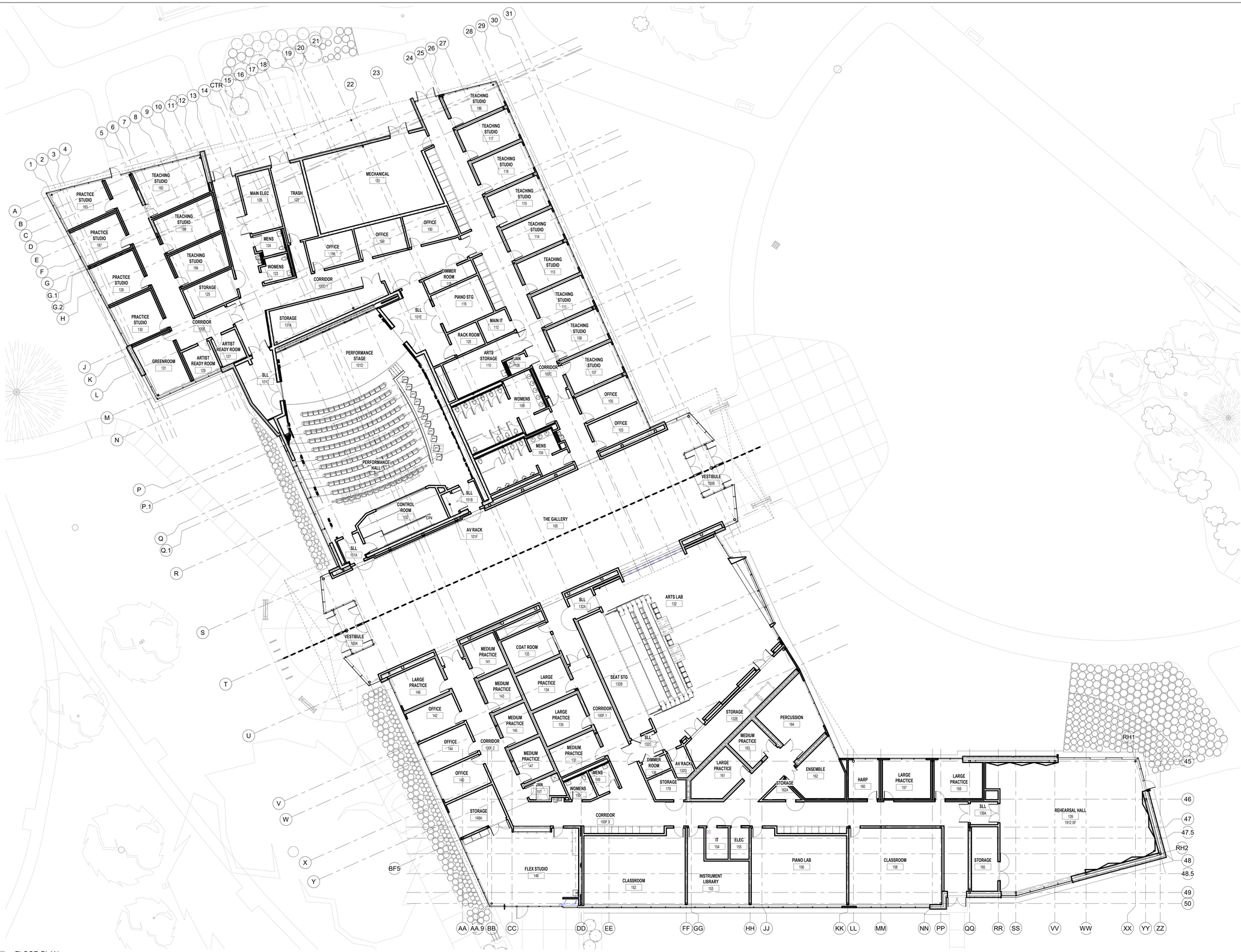
NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

LANDSCAPE DETAILS

SCALE: As indicated

L-501

PFEIFFER PARTNERS PROJECT NUMBER: 6170.02



GENERAL NOTES

1. ALL WALLS AND PARTITIONS SHOWN ARE FULL HEIGHT U.N.O.
2. INSULATE WALLS TO THE UNDERSIDE OF STRUCTURE, U.N.O.
3. ALL INTERIOR SURFACES ARE TO BE PAINTED U.N.O. REFER TO SHEET A661 FOR FINISH SCHEDULE.
4. EXPOSED STRUCTURE, DUCTWORK, PIPING, EQUIPMENT, ETC TO BE PAINTED, U.N.O.
5. REFER TO STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATIONS.
6. USE MOISTURE RESISTANT GYPSUM BOARD AT WET LOCATIONS.
7. FOR ACCESSIBLE PLUMBING FIXTURES, REFER TO SHEET G004.
8. WHERE WALLS ARE INDICATED TO BE FIRE-RESISTANCE RATED, PROVIDE AN APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED TO ASTM E814 OR UL1479.
9. DIMENSIONS ARE TO FACE OF FINISH OF SCHEDULED PARTITION U.N.O.
10. SEE FINISH SCHEDULE A661 FOR INTERIOR FINISHES. REFERENCE ACOUSTIC MATRIX IN PROJECT MANUAL FOR ADDITIONAL FINISH GUIDELINES
11. SEE ACOUSTIC NARRATIVE FOR DESIGN NOISE CRITERIA FOR SPACES.
12. SEE PROJECT MANUAL FOR SUPPLEMENTAL INFO NOT SHOWN ON DRAWINGS.

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SEAL:

ISSUE NAME:

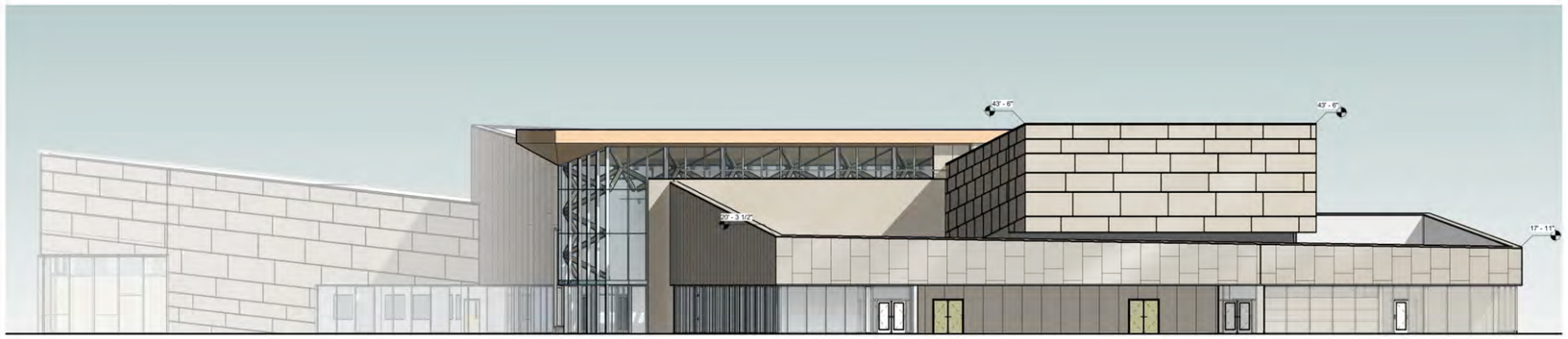
NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

FLOOR PLAN

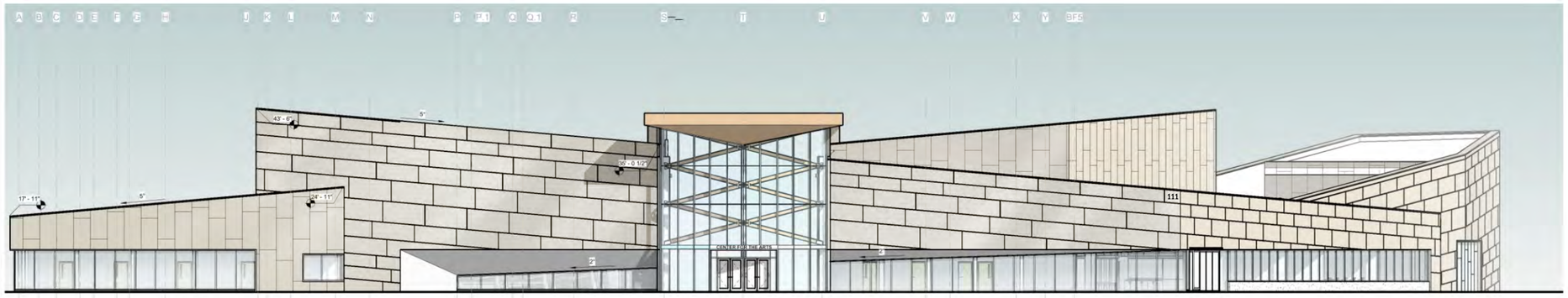
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AA101

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00



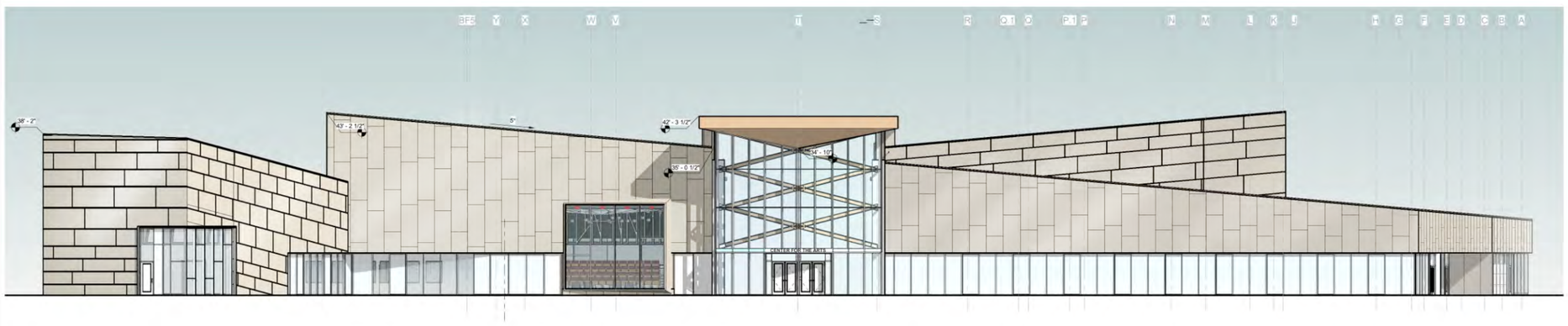
4 WEST ELEVATION
3/32" = 1'-0"



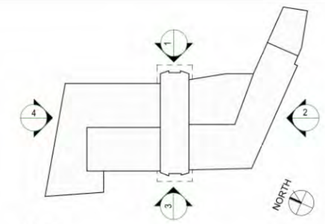
3 SOUTH ELEVATION
3/32" = 1'-0"



2 EAST ELEVATION
3/32" = 1'-0"



1 NORTH ELEVATION
3/32" = 1'-0"



KEYPLAN

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1	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

EXTERIOR ELEVATIONS

SCALE: As indicated

AA201

PFEIFFER PROJECT NUMBER: 6370.02

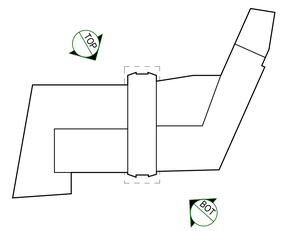
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VIEW FROM CAMPUS GREEN



VIEW FROM NOYES PARK



KEY PLAN

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RENDERED VIEWS

SCALE: As indicated

AA901

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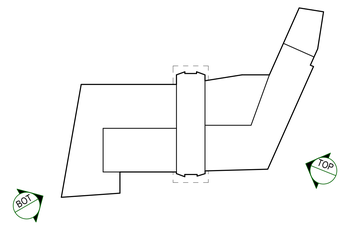
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VIEW FROM BEDFORD STREET



VIEW FROM DEERING AVE



KEY PLAN

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NO.	DESCRIPTION	DATE
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RENDERED VIEWS

SCALE: As indicated

AA902

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00

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1 - VIEW FROM BEDFORD STREET



2 - VIEW FROM NOYES PARK



3 - VIEW FROM DEERING AVE WALKWAY



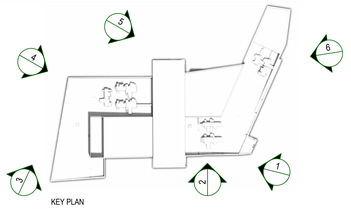
4 - VIEW FROM FARMHOUSE PATHWAY



5 - VIEW FROM CAMPUS GREEN



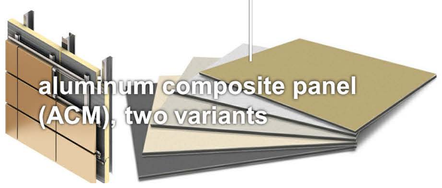
6 - VIEW FROM BEDFORD STREET



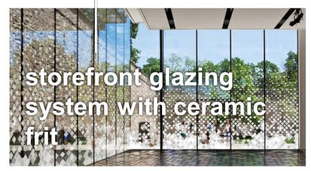
KEY PLAN

ROOFTOP HVAC VISIBILITY STUDIES









BUILDING MATERIALS DIAGRAM

UNIVERSITY OF SOUTHERN MAINE
CENTER FOR THE ARTS

111 Bedford Street, Portland, Maine

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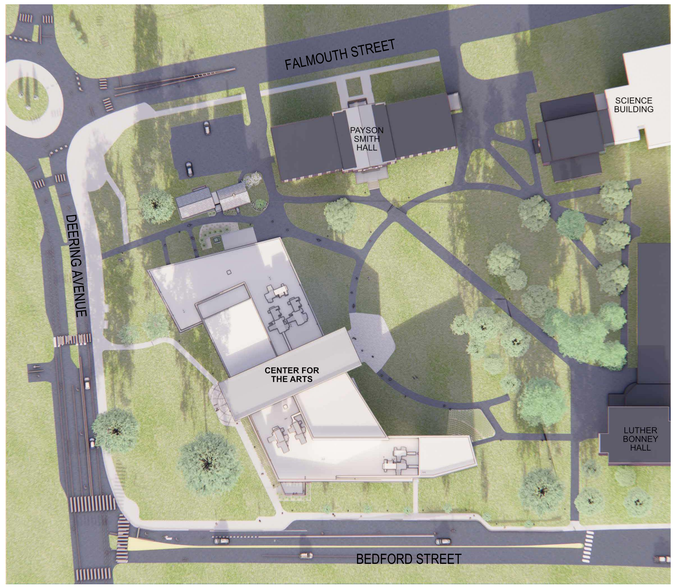
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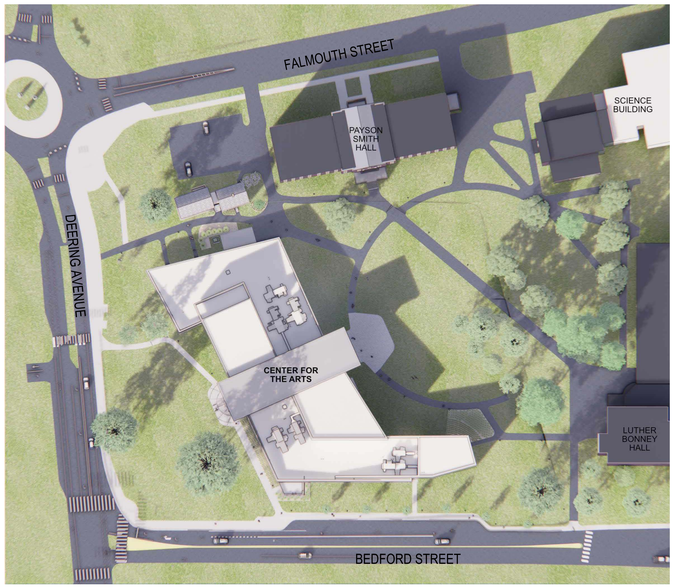
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PFEIFFER PARTNERS PROJECT NUMBER: 6170.00

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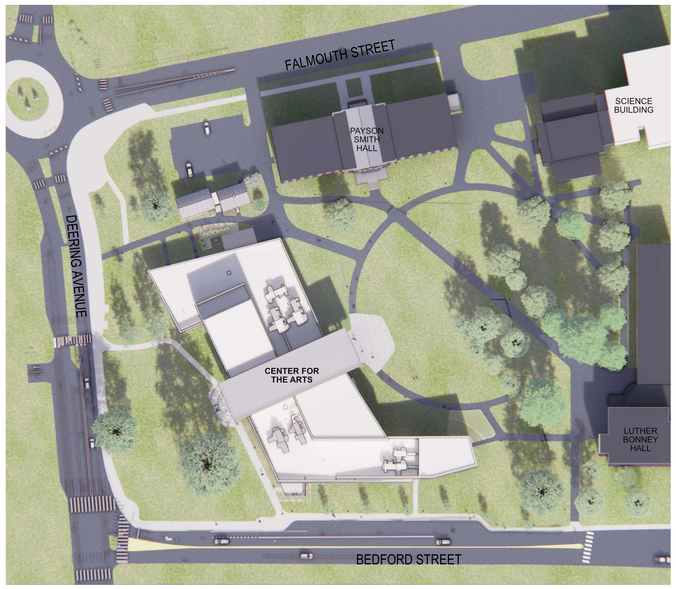
9AM - WINTER SOLSTICE



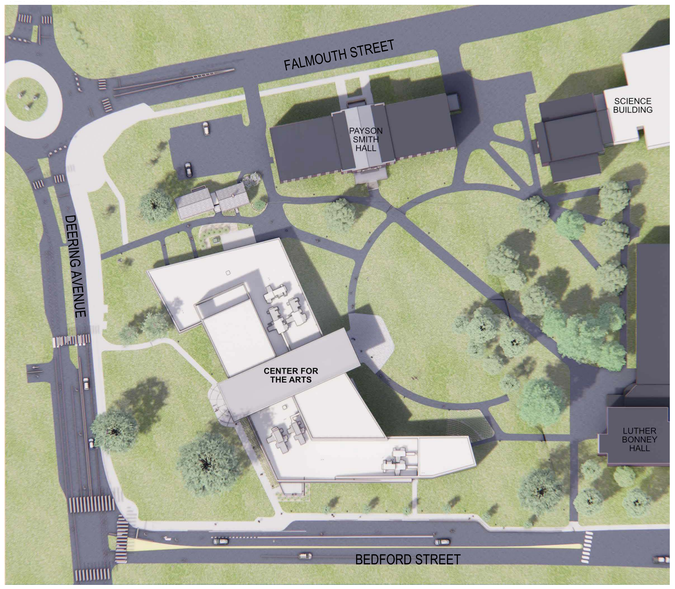
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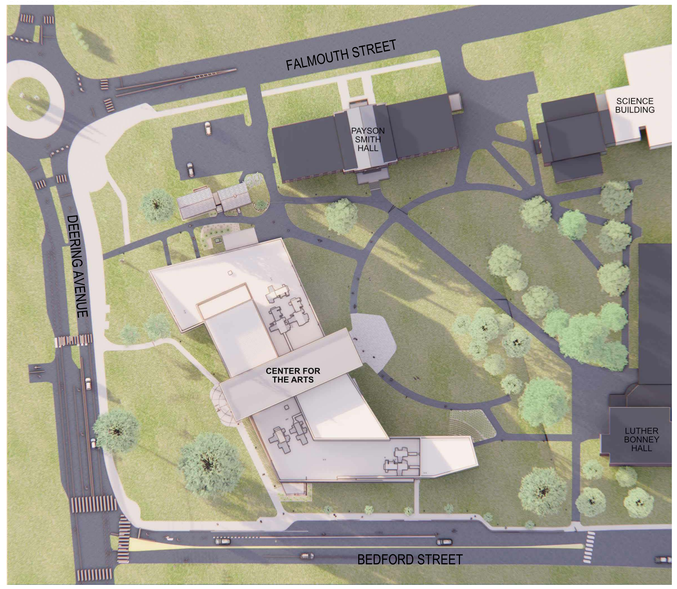
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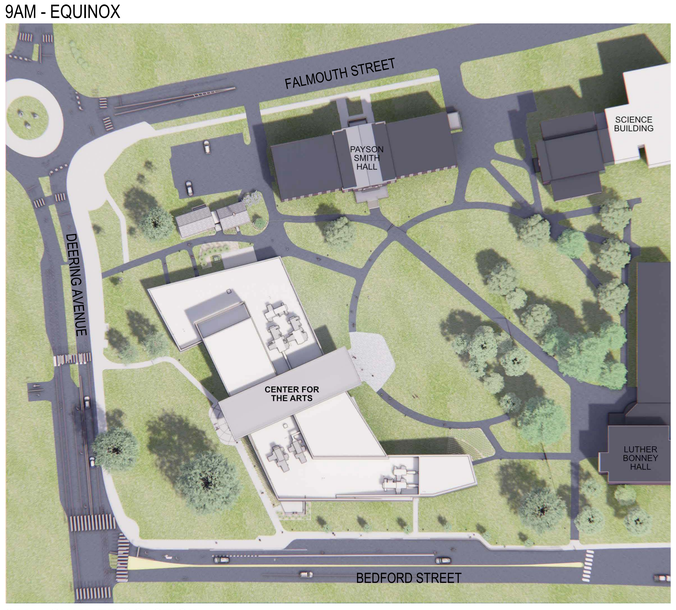
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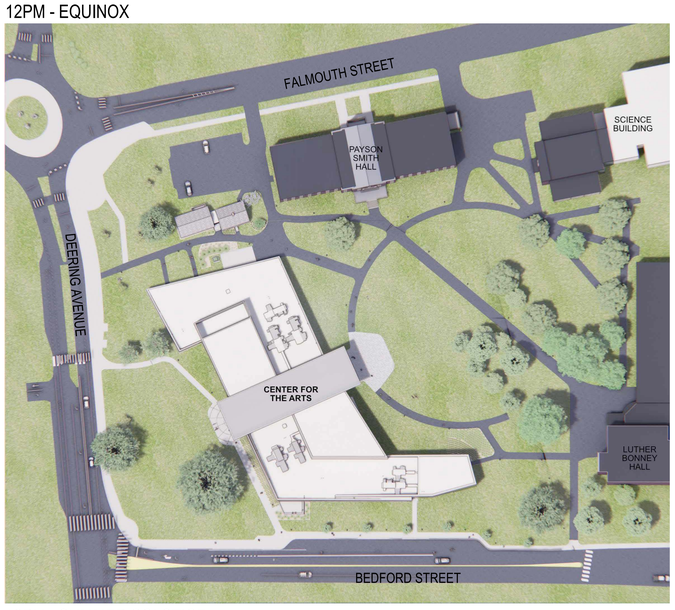
12PM - EQUINOX



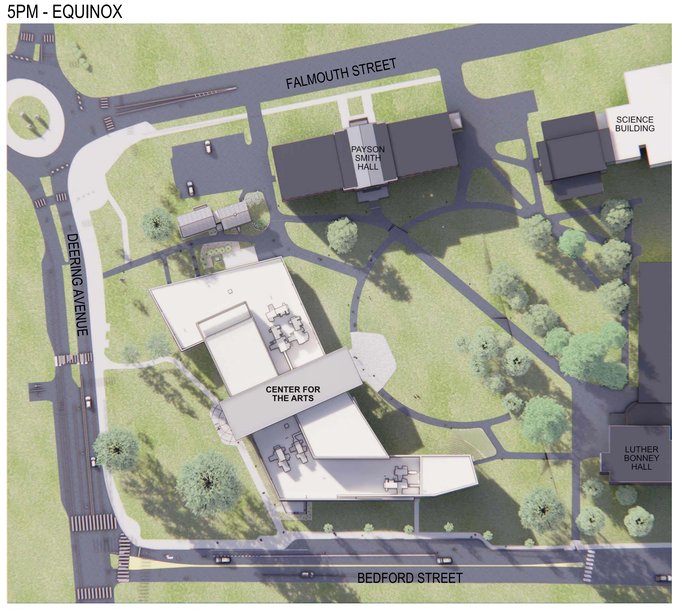
5PM - EQUINOX



9AM - SUMMER SOLSTICE



12PM - SUMMER SOLSTICE



5PM - SUMMER SOLSTICE

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PHONE: 203.299.0835

ACOUSTICS/ AUDIO-VISUAL:
JAFFE HOLDEN
114A WASHINGTON STREET
NORWALK, CT 06854
PHONE: 203.838.4167

LIGHTING:
CLINE BETTRIDGE BERNSTEIN
116 EAST 27TH STREET, 4TH FLOOR
NEW YORK, NY 10016
PHONE: 212.741.3260

COST CONSULTANT:
VENUE
226 5TH AVE N, SUITE 705
ST PETERSBURG, FL 33701
PHONE: 727.498.1091

SEAL:

ISSUE NAME:

NO.	DESCRIPTION	DATE
1.	SITE PLAN REVIEW/ SITE LOCATION OF DEVELOPMENT	12/15/2022

SOLAR STUDIES

SCALE: 3" = 1'-0"

AA904

PFEIFFER PARTNERS PROJECT NUMBER: 6170.00

BIM 360://USM/6170.00 - USM Center for Arts-2021.rvt

12/14/2022 12:38:53 AM

Planning and Urban Development
Kevin Kraft, AICP
Deputy Director

To: Maggie Stanley, Chair and member of the Portland Planning Board

From: Kevin Kraft, Deputy Director, Planning and Urban Development Department

Date: March 24, 2023

Re: Tabling Request for Major Site Plan; 73 Powsland Street; STJ, Inc, Applicant

Project #: PL-001808-2022

Meeting date: March 28, 2023

Planning & Urban Development staff are requesting that the Planning Board table this item on March 28, 2023 at 7:00 pm in order for the applicant to finalize additional material for staff review and the Board's consideration. City staff is recommending to the Planning Board that the Major Site application PL-001808-2021 be rescheduled to the April 11, 2023 public hearing.

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8430 | kkraft@portlandmaine.gov

Conditional Use Application
178-184 Middle Street
CU-002393-2023
Fresnell, LLC and Abatose, LLC, Co-applicants

Submitted to:	Portland Planning Board	**Prepared By:**	Matthew Grooms
Public Hearing Date:	March 28, 2023	**Date:**	March 24, 2023

I. INTRODUCTION

Fresnell, LLC and Abatose, LLC have submitted a hotel inclusionary zoning conditional use application to facilitate the conversion of existing Class B office space into a 19-room hotel at 178-184 Middle Street. The property is located in the Old Port neighborhood, is zoned B-3 Downtown Business, and is further located within the Downtown Entertainment Overlay Zone (DEOZ), the Pedestrian Activities District (PAD) and the Old Port Historic District.



Figure 1: Aerial view of the 178-184 Middle Street property

Article 18.2.5.C. of the City's Land Use Code, states that all hotel development totaling 10 or more hotel rooms is considered a conditional use subject to Planning Board review under the requirements listed in Article 18.2.5. As a conditional use, this application is also subject to the general conditional use standards, listed under Section 6.5.6.

The Planning and Urban Development Department mailed 172 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the March 17, 2023 and March 18, 2023 editions of the *Portland Press Herald*.

Agent: Ryan Kanteres, Simons Architects

II. REQUIRED REVIEWS

Review	*Applicable Standards*
General Conditional Use Standards	*Chapter 14, 6.5.2 General Conditional Use*
Supplemental Use-Specific Conditional Use Standards	*Chapter 14, 18.2.5 Hotel Inclusionary Zoning Standards*

III. PROJECT DATA

Existing Zoning	B-3 Downtown Business
Overlay Zones	Downtown Entertainment Overlay Zone, Pedestrian Activities District
Historic District	Old Port Historic District
Property Size	5,787 sq. ft.
Existing Use	Office
Proposed Use	Hotel (19 rooms)

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The development site encompasses two separate mixed-use buildings featuring a shared party wall, which were developed in the early 20th century (1900 and 1926 respectively). The properties are located at the intersection of Middle Street and Exchange Street, in the Old Port neighborhood, and feature four ground floor retail spaces, and 20,246 square feet of Class B office space on the upper floors.



Figure 2: Street view of the 178-184 Middle Street buildings from Exchange Street

Situated in the Old Port neighborhood, the surrounding context can generally be described as dense, mixed-use development featuring a variety of active ground floor uses such as retail, restaurant, and service uses, with upper floors being predominantly occupied by residential and office uses in the vicinity of the project site. This neighborhood is highly walkable, and is located within walking distance of fixed transit stops for all Greater Portland METRO routes, as well as all South Portland Bus connections available within Portland.

Much of the Old Port, including the subject property, is located within the Old Port Historic District, a multi-block area of cohesive Victorian Era architecture, characterized by three- to five-story buildings of with brick and occasionally stone facades. The Old Port Historic District developed following the Great Fire of 1866, with most contributing structures completed by the early 20th century.

V. PROPOSED DEVELOPMENT

The proposal before the Planning Board involves the conversion of all existing Class B office space within the buildings at 178-184 Middle Street, into a 19-room hospitality/hotel use. The property at 178 Middle Street will be converted into 16 hotel rooms, comprised of eight one-bedroom and eight two-bedroom

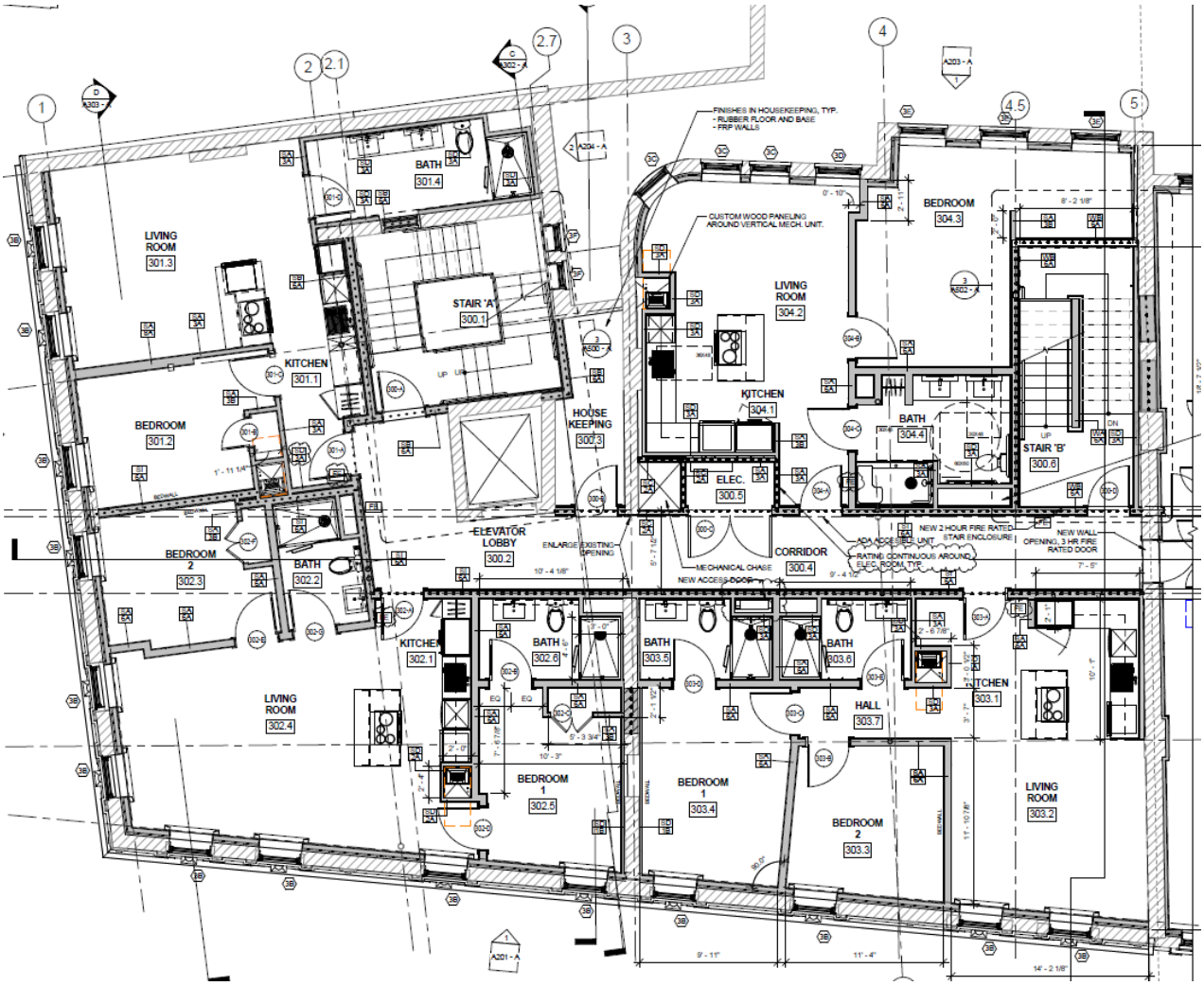


Figure 3: Typical Floor Plan of 178 Middle Street

suites. The property at 184 Middle Street will be converted into three hotel rooms, comprised of two one-bedroom and one two-bedrooms suites. The hotel use will feature no on-site parking or valet service, and both patrons and hotel staff will be responsible for finding parking off-site.

Aside from the Planning Board's conditional use review of this proposal, the applicant has also secured building permits for interior demolition (BLDC2021-02238 and BLDC2022-02967), and a separate building permit for interior fit-up (BLDC2022-02890). The proposal also underwent Historic Preservation review (HPAR-002198-2022), primarily with respect to the exterior rehabilitation of the two buildings, and was issued a Certificate of Appropriateness on November 22, 2022. Issuance of the Certificate of Occupancy for the hotel use is contingent upon the applicant receiving a conditional use approval from the Planning Board and the satisfying of all inclusionary zoning requirements.

VI. RIGHT, TITLE, & INTEREST

The applicant has submitted quitclaim deeds for each respective property, demonstrating adequate right, title, and interest for the property at 178-184 Middle Street (Attachment C).

VII. ZONING ANALYSIS

The proposed hotel use is a permitted use within the B-3 zone. However, per Article 18.2.5.C., all hotel developments exceeding 10 rooms are to be considered conditional uses, subject to Planning Board review for inclusionary zoning compliance.

With respect to dimensional requirements, the development is occurring entirely within two existing buildings, and involves no building additions. The existing buildings comply with all current dimensional requirements, which include restrictions related to street frontage, maximum front setbacks, length of undifferentiated wall, lot coverage and building height.

A. Downtown Entertainment Overlay Zone (DEOZ) – Section 8.2.5

The purpose of the Downtown Entertainment Overlay Zone is to regulate the location of businesses with entertainment licenses in order to prevent an overconcentration of such uses within the downtown. At this time, no tenant within the subject property has or is seeking an entertainment license, and therefore, the review standards associated with this overlay zone are not applicable.

B. Pedestrian Activities District (PAD) – Section 8.7

The Pedestrian Activities District, is intended to ensure ground-level activation along prominent streets within downtown Portland. This overlay zone requires that ground level spaces be occupied by certain uses which enhance the pedestrian experience, such as retail, services, restaurants, cultural facilities and artists studios. The overlay zone requires that 75% of a building's street level frontage be occupied by one of these permitted uses at a depth of 20 feet or more.

As stated above, the two buildings feature four separate commercial spaces, which will remain in commercial use. In the event that there is a change in tenant, the Permitting & Inspections Department will confirm that such change continues to comply with PAD requirements.

VIII. CONDITIONAL USE STANDARDS

This project has been reviewed by staff for conformance with the relevant review standards of Portland's Land Use Code Chapter 14, Section 6.5.2 (General Conditional Use Standards), and Chapter 14, Section 18.2.5 (Inclusionary Zoning for Hotel Projects). Staff comments are below:

A. General Conditional Use Standards (6.5.2)

1. *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.*

   Discussion: The hotel use is a permitted use within the B-3 zone, and as proposed, does not involve either on-site parking or valet service, which typically produce a more pronounced traffic impact. The applicant's submittal includes a brief narrative in response to this standard, and states that the conversion will serve to significantly reduce the building's occupancy load from a maximum occupancy of 203 individuals for the office use, down to 60 occupants for the hotel use. Further, the distribution of trips associated with a hotel use is generally more likely to fall outside of peak hour times.

Staff Finding: This conditional use application features no site alterations and does not increase the amount of pavement or parking spaces on site. Furthermore, the hotel use is expected to result in an overall reduction in the number of peak hour trips. Staff finds the proposal to meet this review standard.

2. *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.*

Discussion: This proposal will not impact exterior site conditions, nor expand the building's footprint. The proposed hotel use is unlikely to produce any unsanitary or harmful conditions which would impact abutters. The applicant has contracted with a waste removal service to remove waste from the building on a regular basis.

Staff Finding: The applicant has secured all necessary permits aside from their conditional use approval, and is expected to be fully compliant with City building codes and zoning performance standards related to lighting, odor, and noise. Therefore, staff find that the proposal meets this review standard.

3. *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.*

Discussion: The proposed hotel use is anticipated to have minimal support services, with guests checking in using a self-service system. Further, no valet service is proposed, and guests will be responsible for finding parking off-site. As the project site is fully built-out, the only perceived changes will be rehabilitation of the building's façade, which has already been approved by both the Permitting & Inspections Department and Historic Preservation staff. On-site waste will be removed by a third-party service during off-peak times as was done previously for the office use.

Staff Finding: The proposed conditional use will have no additional or greater impact on surrounding properties than other uses permitted within the B-3 zone, including the current office use. Therefore, staff find that the proposal meets this review standard.

4. *The proposed use will meet any additional zone or use-specific standards identified in Table 6-A to 6-F and Subsections 6.5.6 and 6.5.7.*

The Hotel Inclusionary Zoning Conditional Use Standards are discussed in the following section.

B. Hotel Inclusionary Zoning (Section 18.2.5)

Discussion: Article 18.2.5.C. states that all hotel projects of 10 or more rooms within the City of Portland are to be considered conditional uses, subject to Planning Board review for compliance with hotel inclusionary zoning requirements. Article 18.2.5.D. states that all hotel projects are required to provide one unit of low-income housing for rent in the City of Portland for every 28 rooms in the hotel projects or pay an equivalent fee in-lieu into the Jill C. Duson Housing Trust Fund. The fee, which was first

established in 2018, is listed under Article 18.2.5.E. as $3,806 per hotel room, which is then adjusted annually in accordance with Article 18.1.8. The adjusted fee amount for 2023 is $4,558 per hotel room.

Staff Finding: The applicant has elected to pay the fee in-lieu of providing a low-income housing unit on-site. Based upon there being 19 hotel rooms, the applicant will be responsible for paying $86,602 into the Jill C. Duson Housing Trust Fund.

IX. PUBLIC COMMENT

As of the writing of this report, no public comment has been submitted to the Planning & Urban Development Department.

X. STAFF RECOMMENDATION

Subject to the proposed motion listed below, Planning staff recommends that the Planning Board find that the proposed 178-184 Middle Street hotel inclusionary zoning conditional use application (CU-002393-2023) meets the applicable standards of Portland's Land Use Code.

XI. PROPOSED MOTIONS

A. CONDITIONAL USE – HOTEL INCLUSIONARY ZONING

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 March 28, 2023, for application CU-002393-2023, relevant to Land Use Code Sections 6.5.2 and 18.2.5 and the testimony presented at the Planning Board hearing, the Planning Board finds that the **plan [is/is not]** in conformance with the Conditional Use standards of the Land Use Code subject to the following condition of approval:

Prior to the Issuance of a Certificate of Occupancy

1. The applicant shall contribute $86,602 into the City's Jill C. Duson Housing Trust Fund to satisfy the inclusionary zoning requirements for a 19-room hotel development.

XII. ATTACHMENTS

APPLICANT SUBMITTAL

A. Conditional Use Narrative
B. Conditional Use Checklist
C. Right, Title, and Interest

PLANS

Plan 1. Floor Plans and Building Elevations

Att. A

simons architects
designed for human potential

Mar 28, 2023

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

RE: 178-184 Middle Street Hospitality Conversation Project – Conditional Use Application

This Conditional Use Application for the change of use on behalf of Fresnel, LLC and Abatose, LLC for hospitality conversion project at the properties at 178 – 184 Middle street. The project will renovate the upper floor interiors, converting existing offices to a 19-unit hospitality occupancy. The project will also restore the exterior masonry on both buildings, include window replacement and storefront revisions. These renovations and this proposed change of use will occur across the upper floors of both178 and 184 Middle street which are owned by Fresnel LLC and Abatose LLC respectively. 16,820 square feet of class B office space in 178 Middle street will be converted to a total of 16 hotel rooms comprised of 8 1-bedroom room and 8 2-bedroom suites. 3,426 square feet of class B office space in 184 Middle street will be converted to a total of 3 hotel rooms comprised of 2 1-bedroom room and1 2-bedroom suites.

Specific responses to the conditional use standards and criteria including off-site parking (staff and guest), housekeeping and waste removal can be found below. Please feel free to reach out with any questions or concerns.

Sincerely,



Ryan Kanteres, AIA, Principal + Partner

simons architects 75 york street portland, maine 04101 207.772.4656 simonsarchitects.com

TRAFFIC

The conversation of the upper-floors of the exiting building from a business occupancy to a hospitality occupancy will result in a net reduction to the number of generated trips and overall traffic. The 20,246 sf of business occupancy would have a calculated occupant load of 203 occupants. (calculated at 100 sf per occupant) 19 hotel rooms, with a total of 28 beds would have a Max occupancy of 56 guest and with 4 FTE employees would result in a total occupant load of 60 occupants. In addition to the significantly lower occupant load hotel guest would have a lower trip generation rate than an office occupants as daily commutes and professional service customers would all contribute to great traffic impact. Parking will be the guest the responsibility and valet service will be not provided. Staff parking will not be provided as part of this project, though staff resources will be share across the various Old Port facilities managed in the Docent Collection portfolio.

ENVIRONMENTAL IMPACTS

The project will not impact the landscape, building footprint, glare, noise or dust generated on site. The water, power, and sewer usage of this project have been designed by licensed professionals to integrate with available utility infrastructure and meet required standards.

DESIGN AND OPERATIONS

The changed occupancy of this project will be accessed along middle street at the same doorway that served the upstairs offices. Guest access with controlled by a self-service basis and no parking or valet services will be provide. The operation of this building will be handled similarly to the operation of the hospitality project at 121 middle street. Lower level support spaces will be provided to the hospitality group responsible for operations, an additional accessible lift to the lower floor will be provided as a part of this project. Supply and removals from the building can be serviced from both the street and lower levels. Minimal deliveries are expected and all deliveries and removals will be coordinated to avoid hours of peak activity. No dumpster or exterior waste collection area will be required, space to support housekeeping and managed waste removal activates is provide within the building.

USE AND ZONE-SPECIFIC CRITERIA

Hospitality use is permitted in this zone. However, under the provisions of Chapter 14 Land Use Recode Article 18.2.5 Inclusionary Zone for Hotel Projects section E the project is required to pay a fee-in-lieu of providing low-income housing. The $4,558 fee per unit for the 19 hotel rooms will require a total fee of $ $86.602 be paid into the City's Housing Trust Fund by the property owner. Please provide additional information regarding how this fee should be paid to the city to facilitate this payment

simons architects 75 york street portland, maine 04101 207.772.4656 simonsarchitects.com

CITY OF PORTLAND
Planning & Urban Development Department

CONDITIONAL USE – PLANNING BOARD REVIEW SUBMISSION CHECKLIST Please submit each document as a separate PDF file. Please confirm by electronically checking the boxes in the left-hand column.	
Conditional uses are listed in the land use code for each zone. The applicant must address the general standards as well as any use- or zone-based conditional use standards contained in Article 6.5 of the land use code in the written application.	
GENERAL APPLICATION DOCUMENTS	
Yes ~~N/A~~	**Project Description** • Cover letter with detailed project description
Yes ~~N/A~~	**Completed Checklist – Conditional Use** (this document)
Yes ~~N/A~~	**Evidence of Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
CONDITIONAL USE STANDARDS AND CRITERIA	
Yes ~~N/A~~	**Traffic** • Demonstrate that the 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 ~~N/A~~	**Environmental Impacts** • Demonstrate that the proposed use will not create any unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.
Yes ~~N/A~~	**Design and Operation** • Demonstrate that 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.
Yes ~~N/A~~	**Use- and Zone-Specific Criteria** • Address any use- or zone-specific standards in Sections 6.5.6 and 6.5.7 of the land use code.

Att. C

MAINE REAL ESTATE TAX-Paid

QUITCLAIM DEED WITH COVENANT

DLN 1002140129378

THAT **MIDDLE STREET HOLDINGS LLC**, a Delaware limited liability company, with a principal place of business and mailing address of 475 Greenwich Street, Suite #7N, New York, NY 10013 (the "Grantor"),

For Consideration Paid, GRANTS with QUITCLAIM COVENANT to:

FRESNEL LLC, a Maine limited liability company, with a principal place of business in the City of Portland, County of Cumberland and State of Maine, with a mailing address of 100 Commercial Street, Portland, ME 04101 (the "Grantee"),

A certain lot or parcel of land with the buildings and improvements thereon, situated in the City of **Portland**, County of **Cumberland** and State of Maine, bounded and described in Exhibit A annexed hereto and made a part hereof.

Grantee by acceptance of this deed is hereby responsible to pay real estate taxes for the period of January 1, 2021, and thereafter.

IN WITNESS WHEREOF, the said **MIDDLE STREET HOLDINGS LLC** has caused this instrument to be signed and sealed by **Fabian Friedland,** its **Manager,** thereunto duly authorized, this 19th day of January, 2021.

MIDDLE STREET HOLDINGS LLC

By: Fabian Friedland, its Manager

STATE OF NEW YORK
Kings (county) SS. Date: January 13, 2021

Then personally appeared the above-named Fabian Friedland, Manager of MIDDLE STREET HOLDINGS LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company. Before me,

Notary Public
Printed Name: Nicholas Prunty
My Commission Expires: 11/3/22

NICHOLAS PRUNTY
Notary Public, State of New York
Reg. No. 01PR6314309
Qualified In Kings County
Commission Expires 11/03/2022

DOC :4344 BK:37715 PG:75
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
01/20/2021, 09:54:06A
Register of Deeds Nancy A. Lane E-RECORDED

EXHIBIT A

A certain lot, or parcel of land, located on the southeasterly side of Middle Street and the southwesterly side of Exchange Street, in the City of Portland, County of Cumberland, State of Maine, being bound and described as follows:

Beginning at the intersection of the southeasterly side of Middle Street and the southwesterly side of Exchange Street;

THENCE: S 65°10'04" W, along said Middle Street, 75.43', to the northerly corner of "184 Middle Street", as shown on plan entitled "Legal Description Sketch, 178 Middle Street, Portland, Maine", by Northeast Civil Solutions, Inc., dated January 6, 2021, NCS Project No. 42346;

THENCE: S 30°14'53" E, through a party wall, 64.99', to a point;

THENCE: N 61°53'30" E, 23.93', to a point;

THENCE: N 28°06'30" W, 0.80', to a point;

THENCE: N 61°53'30" E, 3.91', to the southwesterly line of land now or formerly (N/F) Old Port Arms, as described in Book 4890, Page 343;

THENCE: N 29°24'59" W, along said Old Port Arms, 2.30', to a point;

THENCE: N 50°04'38" E, along said Old Port Arms, 11.68', to a point;

THENCE: S 39°55'22" E, along said Old Port Arms, 0.67', to a point;

THENCE: N 52°51'33" E, along said Old Port Arms, 42.41', to the southwesterly line of said Exchange Street;

THENCE: N 37°45'44" W, along said Exchange Street, 49.85', to the POINT of BEGINNING.

The above-described parcel contains 4,556 square feet, more or less.

The bearings for the above-described parcel are based on Magnetic North, 1967.

Together with easements benefitting the insured premises as set forth in a deed from Canal National Bank to Marsha L. Higgins dated March 14, 1974 and recorded in said Registry of Deeds in Book 3519, Page 165.

Being a portion of the property conveyed in a deed to Middle Street Holdings LLC from Buckstar LLC, dated August 13, 2014, recorded in the Cumberland County Registry of Deeds in Book 31707, Page 84, and as further set forth in Confirmatory Deed recorded in Book 31724, Page 277.

The premises herein are subject to a Party Wall and Reciprocal Easements Agreement of even or near date to be recorded herewith.

MAINE REAL ESTATE TAX-Paid

QUITCLAIM DEED WITH COVENANT

DLN: 1002140154108

COW PLAZA 4 LLC, a Maine limited liability company with a place of business in Portland, Maine ("Grantor"), FOR CONSIDERATION PAID, grants to **ABATSOBE LLC**, a Maine limited liability company with a mailing address of 100 Commercial Street, Portland, Maine 04101 ("Grantee"), with QUITCLAIM COVENANT certain real property together with the buildings and improvements thereon, located in the City of Portland, County of Cumberland and State of Maine, and more particularly bounded and described on Exhibit A attached hereto and made a part hereof.

IN WITNESS WHEREOF, COW PLAZA 4 LLC has caused this instrument to be executed under seal by J. Tim Soley, Manager of East Brown Cow Holdings II LLC, its Sole Member, thereunto duly authorized, as of this 21st day of July, 2021.

COW PLAZA 4 LLC
By East Brown Cow Holdings II LLC
Its Sole Member

By: _____
J. Tim Soley, its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. Date: July 21, 2021

Then personally appeared the above-named J. Tim Soley, Manager of East Brown Cow Holdings II LLC, the Sole Member of COW PLAZA 4 LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,

_____
Notary Public/ Attorney-at-Law
Printed Name: **William M. Welch, Esq.**
My Commission Expires:

DOC :52221 BK:38454 PG:18
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
07/22/2021, 09:51:50A
Register of Deeds Jessica M. Spaulding E-RECORDED

EXHIBIT A

A certain lot, or parcel of land, located on the southeasterly side of Middle Street, in the City of Portland, County of Cumberland, State of Maine, being Lot "B" as shown on that certain subdivision plan entitled "Proposed Subdivision, 178-188 Middle Street, Portland, Maine", by Northeast Civil Solutions, Inc., NCS Project No. 42346, dated February 3, 2021, last revised July 12, 2021, approved by the City of Portland Planning Board on June 22, 2021, and recorded in the Cumberland County Registry of deeds in Plan Book 221, Page 385.

The above-described premises are conveyed together with the appurtenant rights and easements described in the Quitclaim Deed with Covenant from Middle Street Holdings LLC to Cow Plaza 4 LLC acknowledged on January 13, 2021 and recorded in said Registry of Deeds in Book 37715, Page 76, as affected by Corrective Quitclaim Deed with Covenant from Middle Street Holdings LLC dated as of January 19, 2021 and recorded in said Registry of Deeds in Book 37832, Page 235, including the easements benefitting the insured premises as set forth in a deed from Canal National Bank to Marsha L. Higgins dated March 14, 1974 and recorded in said Registry of Deeds in Book 3519, Page 165.

The above-described premises are also conveyed subject to and with the benefit of the Party Wall and Reciprocal Easements Agreement between Fresnel LLC and Cow Plaza 4 LLC dated as of January 19, 2021 and recorded in said Registry of Deeds in Book 37715, Page 80.

MEANING AND INTENDING to describe a portion of the property conveyed to the Grantor herein by Quitclaim Deed With Covenant from Middle Street Holdings LLC acknowledged on January 13, 2021 and recorded in said Registry of Deeds in Book 37715, Page 76, as affected by Corrective Quitclaim Deed With Covenant from Middle Street Holdings LLC dated as of January 19, 2021 and recorded in said Registry of Deeds in Book 37832, Page 235.

DOC :4345 BK:37715 PG:79
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
01/20/2021, 09:57:17A
Register of Deeds Nancy A. Lane E-RECORDED

THENCE: S 39°55'22" E, along said Old Port Arms, 0.67', to a point;

THENCE: N 52°51'33" E, along said Old Port Arms, 42.41', to the southwesterly line of said Exchange Street;

THENCE: N 37°45'44" W, along said Exchange Street, 49.85', to the POINT of BEGINNING.

The above-described parcel contains 4,556 square feet, more or less.

The bearings for the above-described parcel are based on Magnetic North, 1967.

For grantor's source of title, reference is made to deeds to Middle Street Holdings LLC from Buckstar LLC, dated August 13, 2014, recorded in the Cumberland County Registry of Deeds in Book 31707, Page 84, and as further set forth in Confirmatory Deed recorded in Book 31724, Page 277.

The premises herein are subject to a Party Wall and Reciprocal Easements Agreement of even or near date to be recorded herewith.

CORRECTIVE DEED

QUITCLAIM DEED WITH COVENANT

THAT **MIDDLE STREET HOLDINGS LLC**, a Delaware limited liability company, with a principal place of business and mailing address of 475 Greenwich Street, Suite #7N, New York, NY 10013 (the "Grantor"),

For Consideration Paid, GRANTS with QUITCLAIM COVENANT to:

COW PLAZA 4 LLC, a Maine limited liability company, with a principal place of business in the City of Portland, County of Cumberland and State of Maine, with a mailing address of 100 Commercial Street, Portland, ME 04101 (the "Grantee"),

A certain lot or parcel of land with the buildings and improvements thereon, situated in the City of **Portland**, County of **Cumberland** and State of Maine, bounded and described in Exhibit A annexed hereto and made a part hereof.

Grantee by acceptance of this deed is hereby responsible to pay real estate taxes for the period of January 1, 2021, and thereafter.

IN WITNESS WHEREOF, the said **MIDDLE STREET HOLDINGS LLC** has caused this instrument to be signed and sealed by **Fabian Friedland, its Manager,** thereunto duly authorized, this 13th day of January, 2021.

and effective as of

MIDDLE STREET HOLDINGS LLC

By: Fabian Friedland, its Manager

STATE OF NEW YORK

Kings (county) SS. Date: January 13, 2021

Then personally appeared the above-named Fabian Friedland, Manager of MIDDLE STREET HOLDINGS LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company. Before me,

Notary Public
Printed Name: Nicholas Prunty
My Commission Expires: 11/03/22

NICHOLAS PRUNTY
Notary Public, State of New York
Reg. No. 01PR6314309
Qualified in Kings County
Commission Expires 11/03/2022

***The purpose of this corrective deed is to corrective and clarify the effective date of the Deed recorded in Book 37715, Page 76. The deed is deemed to be effective**

EXHIBIT A

A certain lot or parcel of land situated in the City of Portland, County of Cumberland and State of Maine more particularly bounded and described as follows:

Beginning at the intersection of the southerly sideline of Middle Street with the westerly sideline of Exchange Street; thence S 37° 45' 44" E along the westerly sideline of Exchange Street 49.85 feet to the centerline of the party wall and property now or formerly of Old Port Arms as described in Deed recorded in Book 4890, Page 343; thence on the following courses and distances along land of Old Port Arms:

S 52° 51' 33" W 42.35 feet;

N 39° 55' 22" W 0.67 feet;

S 50° 04' 38" W 11.68 feet;

S 29° 24' 59" E 12.52 feet;

S 23° 28' 47" E 55.92 feet;

N 59° 42' 19" E 17.86 feet;

N 51° 27' 19" E 4.00 feet to land now or formerly of Virginia S. Fitzgibbons and Lee F. Street Trustees as described in Deed recorded in Book 26232, Page 250;

Thence S 37° 49' 26" E along land of said Virginia S. Fitzgibbons and Lee F. Street Trustees 35.45 feet to land now or formerly of Cow Plaza 1, LLC as described in the deed recorded in Book 27480, Page 310;

Thence on the following courses and distances along land of Cow Plaza 1, LLC:

S 80° 16' 52" W 27.34 feet;

S 69° 54' 09" W 21.60 feet;

S 59° 38' 09" W 21.04 feet;

N 29° 45' 51" W 0.72 feet to the face of the brick building now or formerly of Buckstar LLC as described in the Deed recorded in Book 15885, Page 284;

Thence on the following courses and distances continuing along land of said Cow Plaza 1, LLC and the face of said brick building:

S 59° 34' 59" W 17.27 feet;

N 30° 16' 58" W 1.63 feet;

S 59° 34' 59" W 27.46 feet;

N 30° 16' 58" W 0.84 feet;

S 59° 34' 59" W 21.66 feet to the face of a concrete wall and land now or formerly of Cow Plaza 3, LLC as described in the Deed recorded in Book 27480, Page 335;

Thence on the following courses and distances along land of said Cow Plaza 3, LLC and the face of a concrete wall:

N 30° 31' 12" W 107.47 feet;

S 64° 35' 45" W 0.94 feet;

N 30° 15' 22" W	10.98 feet;
S 65° 25' 44" W	0.64 feet;
N 30° 04' 16" W	32.05 feet;
S 59° 45' 07" W	0.14 feet;
N 30° 14' 53" W	6.86 feet to the southerly sideline of Middle Street;

Thence northeasterly along the southerly sideline of Middle Street along a non-tangent curve to the right having a radius of 377.00 feet an arc length of 0.87 feet to a point, said point being .87 feet from, on a course of, N 59° 22' 04" E from the last-named point on the southerly sideline of Middle Street;

Thence N 65° 10' 04" E along the southerly sideline of Middle Street 163.77 feet to the westerly sideline of Exchange Street and the point of beginning.

The above-described parcel is shown on a plan made for prior Owner Buckstar LLC dated August 2, 2011 by Owen Haskell, Inc. and recorded in the Cumberland County Registry of Deeds in Plan Book 211, Page 226.

Together with easements benefitting the insured premises as set forth in a deed from Canal National Bank to Marsha L. Higgins dated March 14, 1974 and recorded in said Registry of Deeds in Book 3519, Page 165.

The above-described premises are shown on the ALTA/ACSM Survey entitled "Boyd Block" 176-188 Middle Street and 180-184 Middle Street, Portland, Maine, made for Fabian Friedland dated August 13, 2014, prepared by Livingston-Hughes Surveyors.

EXCEPTING from the above-described property, a certain lot, or parcel of land, located on the southeasterly side of Middle Street and the southwesterly side of Exchange Street, in the City of Portland, County of Cumberland, State of Maine, being conveyed to Fresnel LLC by deed of even or near date to be recorded herewith, said parcel being bound and described as follows:

Beginning at the intersection of the southeasterly side of Middle Street and the southwesterly side of Exchange Street;

THENCE: S 65°10'04" W, along said Middle Street, 75.43', to the northerly corner of "184 Middle Street", as shown on plan entitled "Legal Description Sketch, 178 Middle Street, Portland, Maine", by Northeast Civil Solutions, Inc., dated January 6, 2021, NCS Project No. 42346;

THENCE: S 30°14'53" E, through a party wall, 64.99', to a point;

THENCE: N 61°53'30" E, 23.93', to a point;

THENCE: N 28°06'30" W, 0.80', to a point;

THENCE: N 61°53'30" E, 3.91', to the southwesterly line of land now or formerly (N/F) Old Port Arms, as described in Book 4890, Page 343;

THENCE: N 29°24'59" W, along said Old Port Arms, 2.30', to a point;

THENCE: N 50°04'38" E, along said Old Port Arms, 11.68', to a point;

THENCE: S 39°55'22" E, along said Old Port Arms, 0.67', to a point;

THENCE: N 52°51'33" E, along said Old Port Arms, 42.41', to the southwesterly line of said Exchange Street;

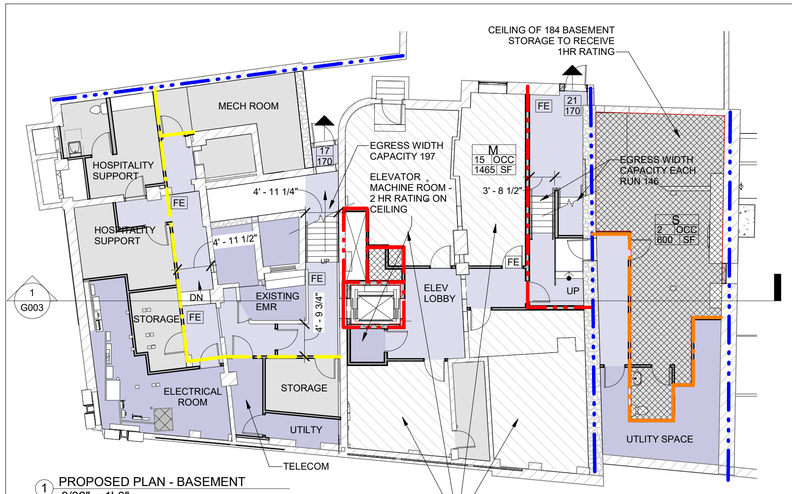
THENCE: N 37°45'44" W, along said Exchange Street, 49.85', to the POINT of BEGINNING.

The above-described parcel contains 4,556 square feet, more or less.

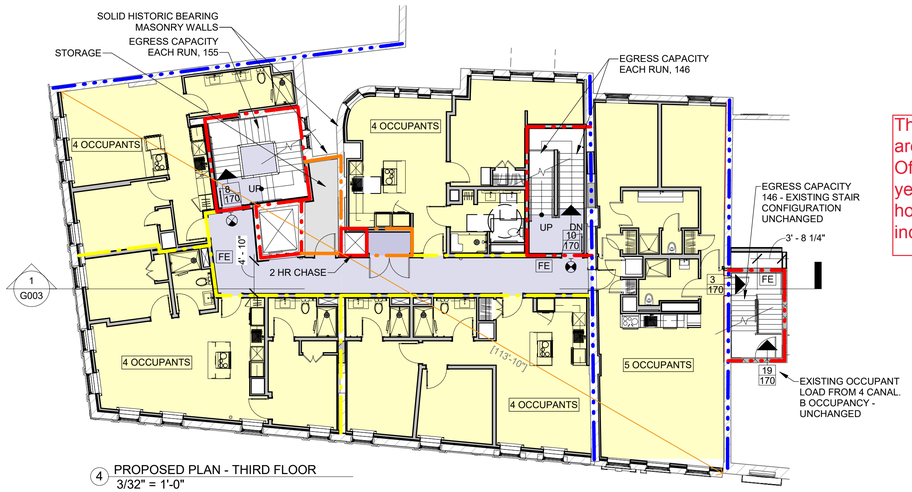
The bearings for the above-described parcel are based on Magnetic North, 1967.

For grantor's source of title, reference is made to deeds to Middle Street Holdings LLC from Buckstar LLC, dated August 13, 2014, recorded in the Cumberland County Registry of Deeds in Book 31707, Page 84, and as further set forth in Confirmatory Deed recorded in Book 31724, Page 277.

The premises herein are subject to a Party Wall and Reciprocal Easements Agreement of even or near date to be recorded herewith.

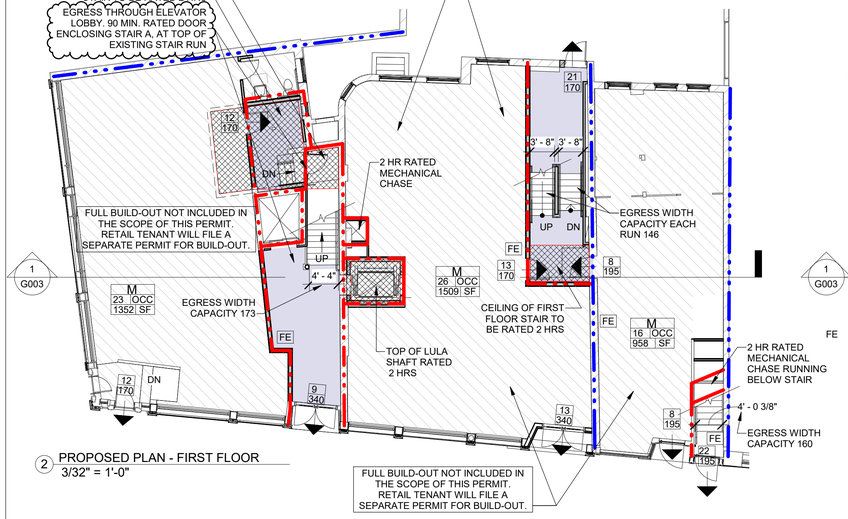


1 PROPOSED PLAN - BASEMENT
3/32" = 1'-0"

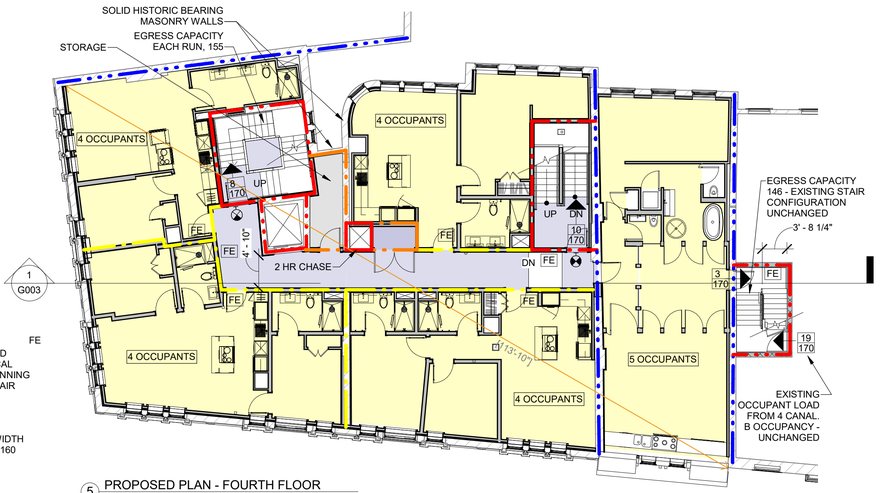


4 PROPOSED PLAN - THIRD FLOOR
3/32" = 1'-0"

FULL BUILD-OUT NOT INCLUDED IN THE SCOPE OF THIS PERMIT. RETAIL TENANT WILL FILE A SEPARATE PERMIT FOR BUILD-OUT.



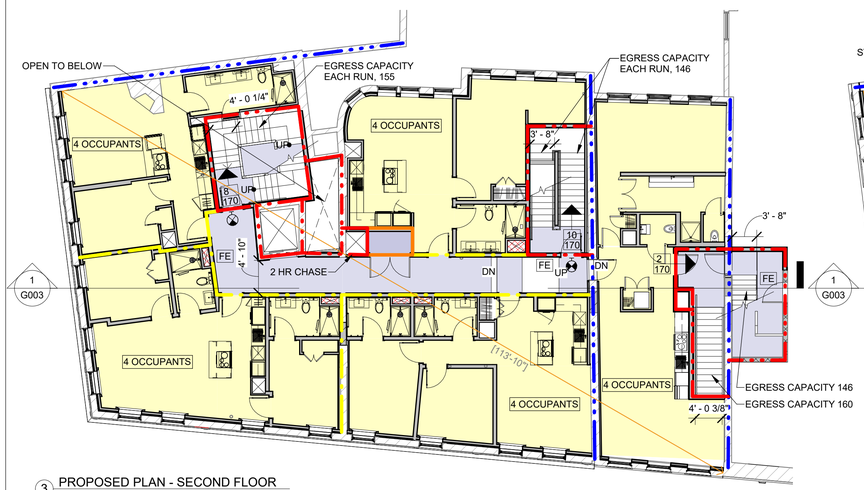
2 PROPOSED PLAN - FIRST FLOOR
3/32" = 1'-0"



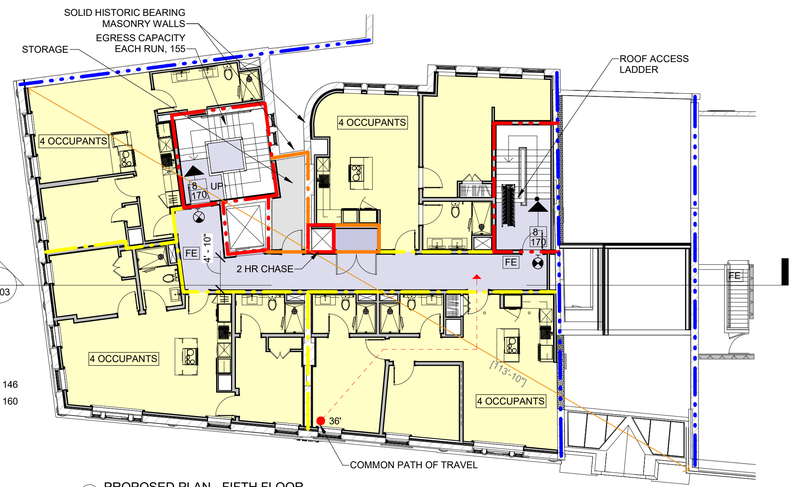
5 PROPOSED PLAN - FOURTH FLOOR
3/32" = 1'-0"

The areas requesting Conditional Use review by this renovation are is indicated on this drawing. The allowed Office use (Class B Office) being converted to the allowed Hotel use are marked in yellow on this page. As noted in attached cover letter the allowed hotel use is subject to conditional use review and applicable inclusionary zoning fee assesments

BUILDING OCCUPANCY			
OCCUPANCY	AREA	OCCUPANT LOAD	OCCUPANTS
CIRCULATION	4599 SF		11
GROUP R-1 (HOTEL)	12910 SF	200	20
MECHANICAL	813 SF	300	0
NOT IN PERMIT (M)	4975 SF	60	79
STORAGE	1608 SF	300	1
	24906 SF		111



3 PROPOSED PLAN - SECOND FLOOR
3/32" = 1'-0"



6 PROPOSED PLAN - FIFTH FLOOR
3/32" = 1'-0"

LIFE SAFETY PLAN LEGEND:

- ### / ### OCC / #### SF — USE TYPE, (###) DENOTES ACCESSORY USE; OCCUPANTS; ROOM AREA
- ## / ## — OCCUPANT EGRESS LOAD AT DOOR/STAIR; DOOR/STAIR OCCUPANT CAPACITY; DIRECTION OF EGRESS
- X — EXIT KEY
- X XXX' — DISTANCE TO EXIT
- [XX'-X"] — DIAGONAL / SEPARATION DISTANCE
- (XX'-X") — PATH OF EGRESS (LEG DISTANCE)
- 1-HOUR FIRE RATED SEPARATION WITH 1 HOUR OPENINGS
- 2-HOUR RATING
- 3-HOUR RATING
- 30 MIN FIRE RATING AND SMOKE SEPARATION WITH 20 MINUTE OPENINGS
- HATCH DENOTES PLUMBING CHASE. TO BE FIRE-SEALED AT EACH FLOOR.
- FE — FIRE EXTINGUISHER
- ILLUMINATED EXIT SIGN (WALL MOUNTED)
- ILLUMINATED EXIT SIGN (CEILING MOUNTED)
- SD — SMOKE/FIRE DETECTOR
- K — KNOX BOX
- P — FIRE ALARM PULL STATION
- FIRE ALARM STROBE ONLY
- FIRE ALARM HORN / STROBE
- FIRE ALARM HORN / STROBE (CEILING MOUNTED)
- EMERGENCY LIGHT
- COMBINATION EMERGENCY LIGHT / EXIT SIGN
- FACP — FIRE ALARM CONTROL PANEL

LIFE SAFETY NOTES:

1. THESE LIFE SAFETY PLANS ARE MEANT TO SHOW CONFORMANCE WITH THE REGULATIONS EXISTING AT THE TIME OF CONSTRUCTION, OR AS INDICATED IN THE CODE SUMMARY NOTES. THESE DOCUMENTS ARE A COMPILATION OF EXISTING CONSTRUCTION DOCUMENTS, EXISTING CONDITIONS AS OBSERVED IN THE FIELD, AND CURRENT PROGRAMMATIC USE STATEMENTS. THOUGH THE INTENT IS TO ACCURATELY REFLECT THE CURRENT CONDITIONS OF THE SCHOOL, AN AS-BUILT SURVEY WAS NOT CONDUCTED FOR THE COMPLETION OF THESE DRAWINGS; SOME CONDITIONS MAY DIFFER FROM THOSE SHOWN.
2. SEE A1.1 FOR PARTITION TYPES
3. SEE FP AND E SERIES DWGS FOR ADD'L FIRE ALARM AND FIRE PROTECTION SYSTEM INFORMATION
4. SEE ENLARGED PLANS AND INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF DEVICES
5. SEE E SERIES DWGS FOR DESIGNATION OF LIGHTS ON EMERGENCY CIRCUITS

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PROJECT NAME:

178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
PORTLAND, ME 04101

SEAL:

LICENSED ARCHITECT SCOTT R. SIMONS NO. 2934 STATE OF MAINE

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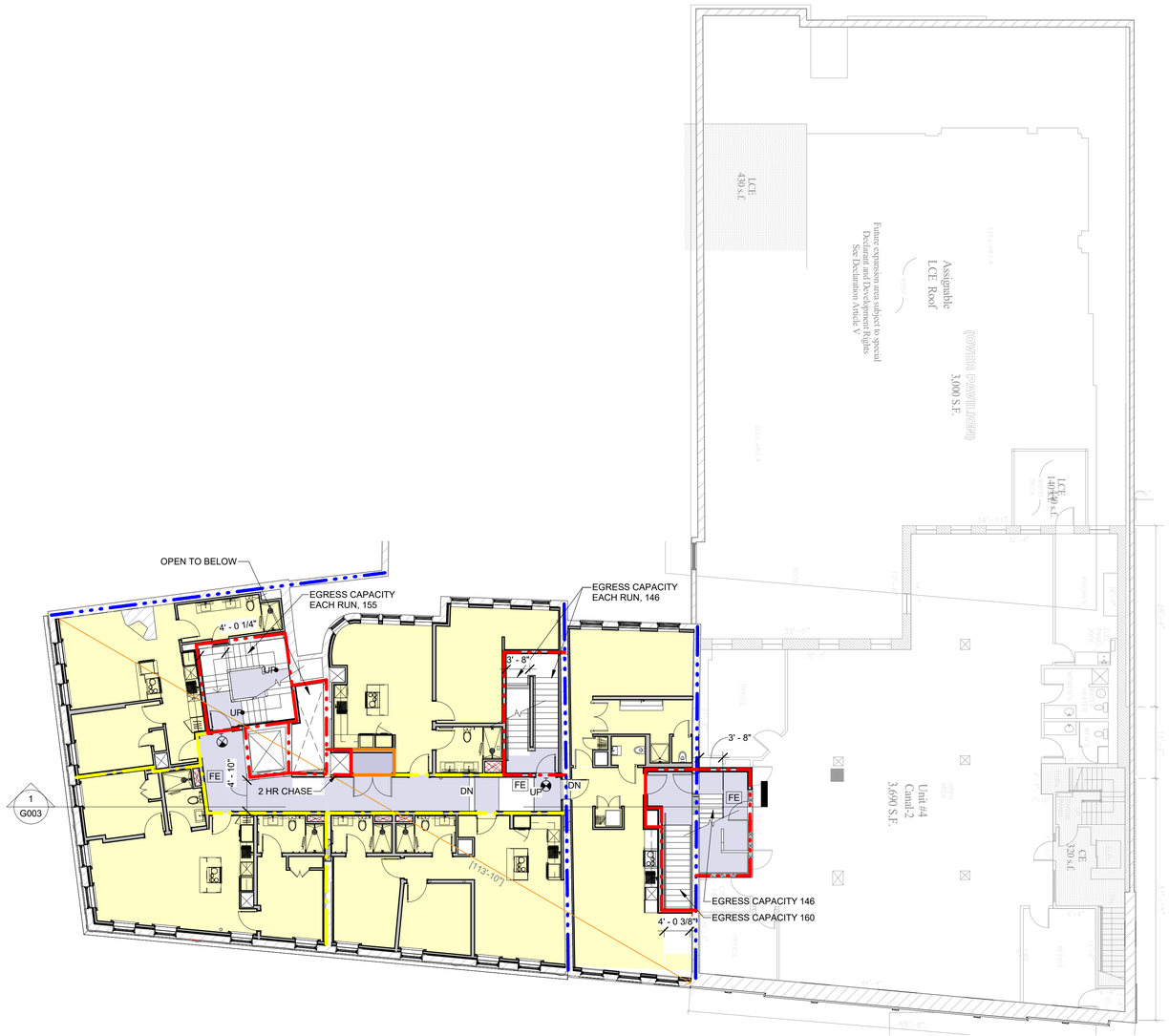
REVISIONS

7	CD Addendum 5	01.13.23
8	CSKs/RFIs	VARIES

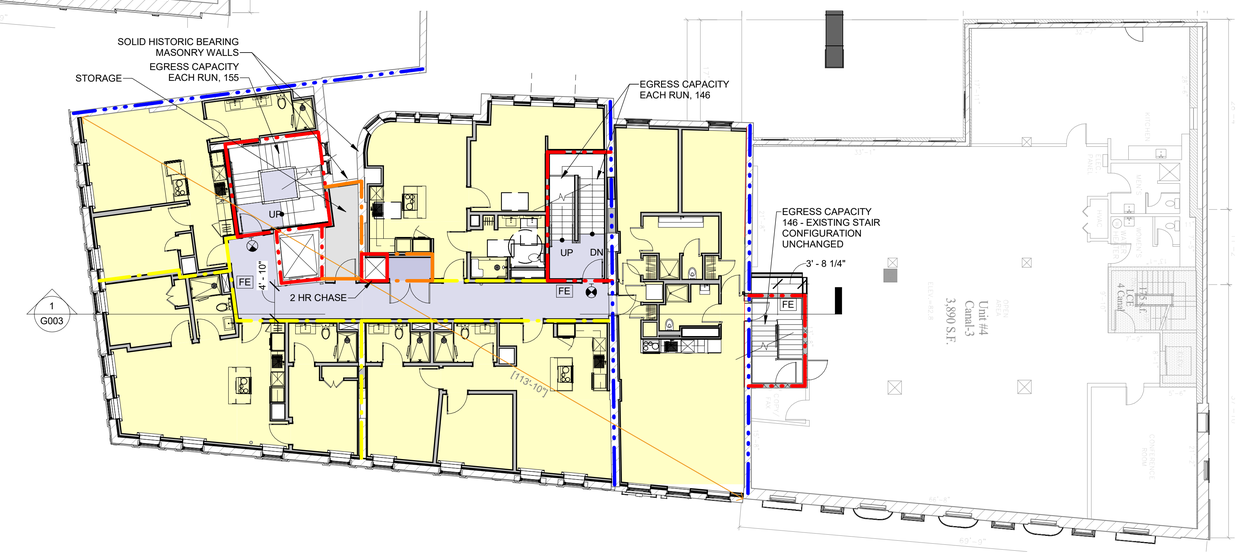
DATE OF ISSUE: 02.22.2023
PROJECT NUMBER: 2022-0030
STATUS: CONSTRUCTION DOCUMENTS

178+184 LIFE SAFETY PLANS

G002



1 PROPOSED PLAN - SECOND FLOOR
3/32" = 1'-0"



2 PROPOSED PLAN - THIRD FLOOR
3/32" = 1'-0"

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PROJECT NAME:
178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
PORTLAND, ME 04101

SEAL:
LICENSED ARCHITECT
SCOTT R. SIMONS
NO. 2034
STATE OF MAINE

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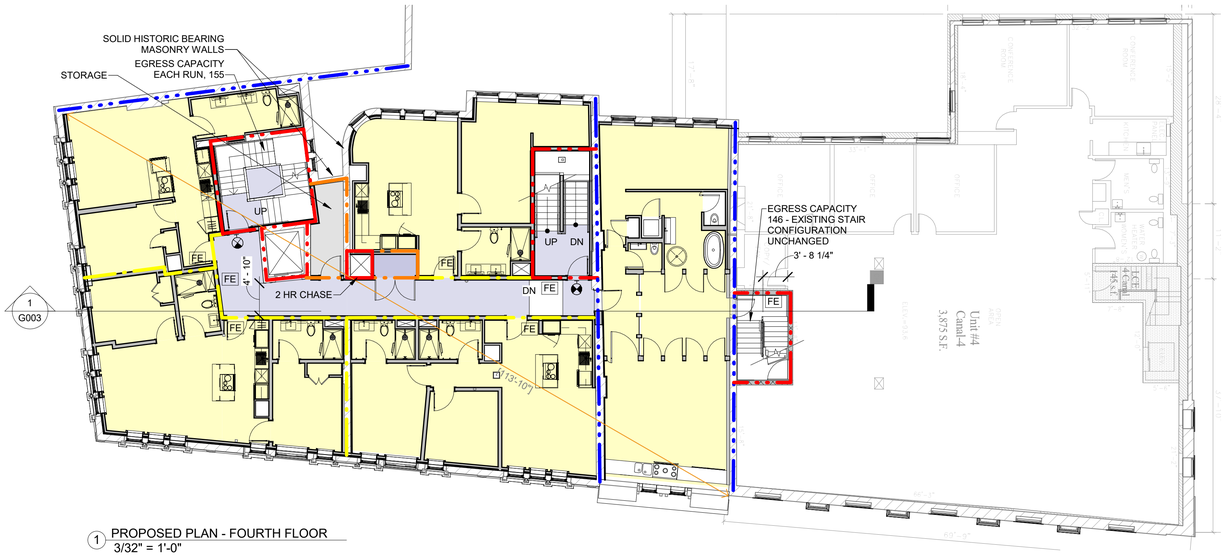
△ REVISIONS

7	CD Addendum 5	01.13.23

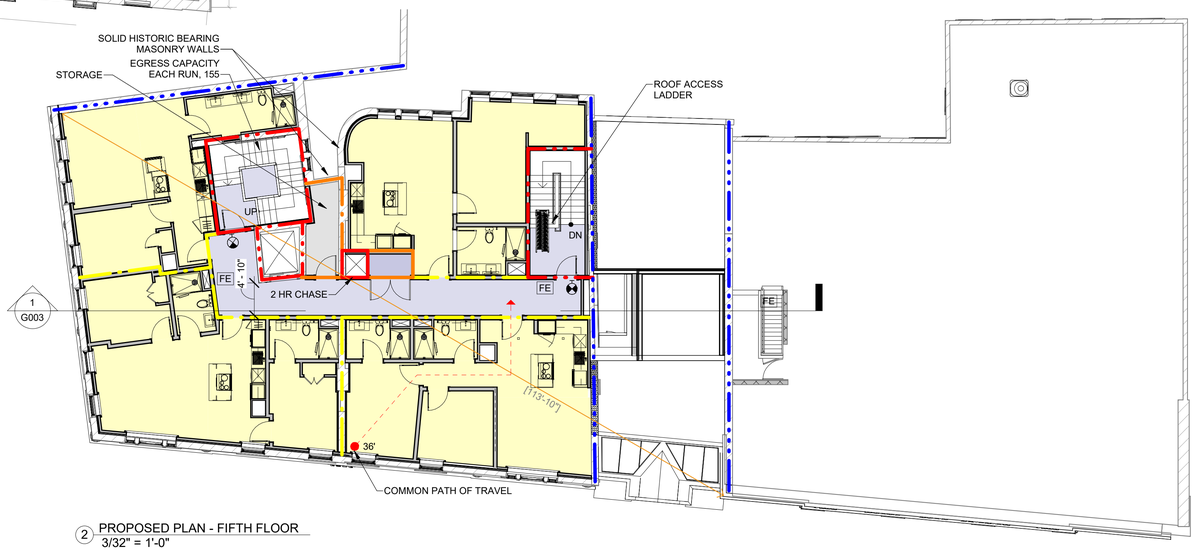
DATE OF ISSUE:	02.03.2023
PROJECT NUMBER:	2022-0030
STATUS:	CONSTRUCTION DOCUMENTS

LIFE SAFETY W/ CANAL 4 - 2ND AND 3RD FLOORS

G002.2



1 PROPOSED PLAN - FOURTH FLOOR
3/32" = 1'-0"



2 PROPOSED PLAN - FIFTH FLOOR
3/32" = 1'-0"

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PROJECT NAME:

178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
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SEAL:

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REVISIONS

7	CD Addendum 5	01.13.23

DATE OF ISSUE:	02.03.2023
PROJECT NUMBER:	2022-0030
STATUS:	CONSTRUCTION DOCUMENTS

LIFE SAFETY W/ CANAL 4 - 4TH AND 5TH FLOORS

G002.3



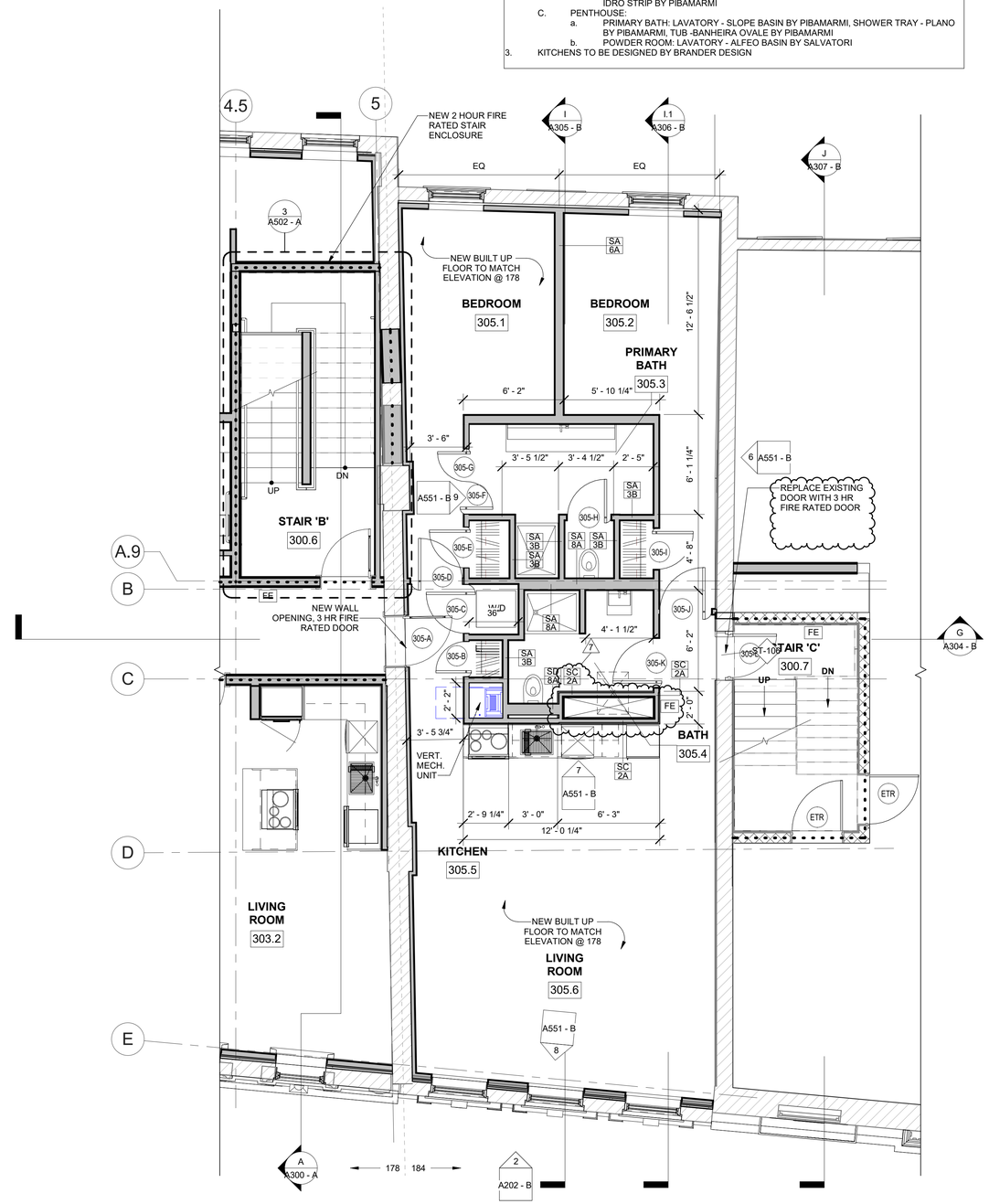
KEY PLAN
1/32" = 1'-0"

GENERAL NOTES:

1. PROPOSED FIRE RATED WALLS ARE DENOTED BY A DOTTED LINE. DOTTED LINE ONLY REPRESENTS THAT THE PROPOSED WALL HAS A FIRE RATING. REFER TO LIFE SAFETY PLAN G002 FOR RATINGS.
2. PLUMBING FIXTURE SELECTION TO MATCH THOSE OF 178 (REF SHEET ID0-04.3), EXCLUDING BATHROOM SINKS, BATHTUB AND SHOWER PANS:
   - A. 205:
     - a. PRIMARY BATH: LAVATORY - SLOPE BASIN BY PIBAMARMI, SHOWER TRAY - IDRO STRIP BY PIBAMARMI
     - b. POWDER ROOM: LAVATORY - ALFEO BASIN BY SALVATORI
   - B. 305:
     - a. PRIMARY BATH: LAVATORY - SLOPE BASIN BY PIBAMARMI, SHOWER TRAY - IDRO STRIP BY PIBAMARMI
     - b. SECONDARY BATH: LAVATORY - ALFEO BASIN BY SALVATORI, SHOWER TRAY - IDRO STRIP BY PIBAMARMI
   - C. PENTHOUSE:
     - a. PRIMARY BATH: LAVATORY - SLOPE BASIN BY PIBAMARMI, SHOWER TRAY - PLANO BY PIBAMARMI, TUB -BANHEIRA OVALE BY PIBAMARMI
     - b. POWDER ROOM: LAVATORY - ALFEO BASIN BY SALVATORI
3. KITCHENS TO BE DESIGNED BY BRANDER DESIGN

WALL TYPE LEGEND

- NEW
- DEMO
- EXISTING
- FIRE RATING



1 PROPOSED PLAN - THIRD FLOOR
1/4" = 1'-0"

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PROJECT NAME:

178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
PORTLAND, ME 04101

SEAL:

LICENSED ARCHITECT
SCOTT R. SIMONS
NO. 2034
STATE OF MAINE

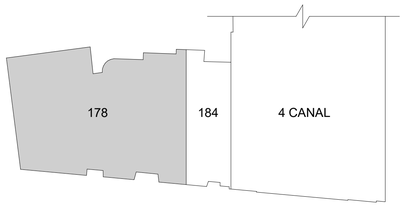
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REVISIONS		
4	CD Addendum 1	08.18.22
5	CD Addendum 2	08.29.22
7	Permit Revisions	12.08.22

DATE OF ISSUE:	12.14.2022
PROJECT NUMBER:	2022-0030
STATUS:	CONSTRUCTION DOCUMENTS

184 - THIRD FLOOR PLAN

A103 - B



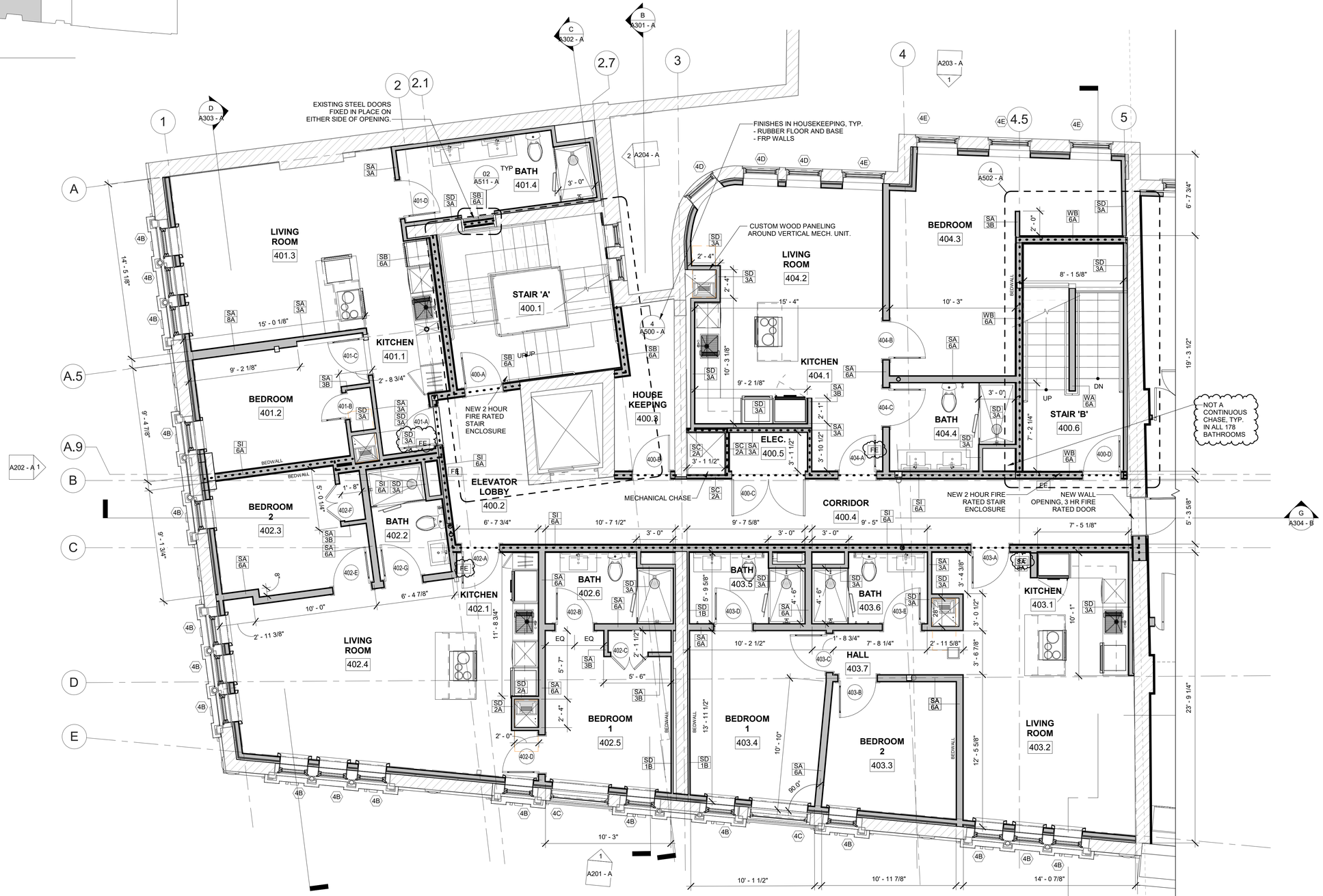
KEY PLAN
1/32" = 1'-0"

GENERAL NOTES:

1. PROPOSED FIRE RATED WALLS ARE DENOTED BY A DOTTED LINE. DOTTED LINE ONLY REPRESENTS THAT THE PROPOSED WALL HAS A FIRE RATING. REFER TO LIFE SAFETY PLAN G002 FOR RATINGS.

WALL TYPE LEGEND

- NEW
- DEMO
- EXISTING
- FIRE RATING



1 PROPOSED PLAN - FOURTH FLOOR
1/4" = 1'-0"

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PROJECT NAME:

178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
PORTLAND, ME 04101

SEAL:

LICENSED ARCHITECT
SCOTT R. SIMONS
NO. 2034
STATE OF MAINE

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△ REVISIONS

4	CD Addendum 1	08.18.22
7	Permit Revisions	12.08.22

DATE OF ISSUE:	12.14.2022
PROJECT NUMBER:	2022-0030
STATUS:	CONSTRUCTION DOCUMENTS

178 - FOURTH FLOOR PLAN

A104 - A



KEY PLAN

1/32" = 1'-0"

GENERAL NOTES
IECC 2021 COMPLIANCE -
OVERALL BUILDING ENVELOPE OF 178 AND 184 MIDDLE STREET - 21,404 SF
OVERALL GLAZED AREA (INCLUDING STOREFRONTS) - 4,220 SF
PERCENTAGE OF GLAZED AREA ON BOTH BUILDINGS - 19.7%

HISTORIC RESTORATION LEGEND:

- BROWN STONE REPAIR
- SANDSTONE REPAIR
- BROWN STONE REPLACEMENT DETAIL
- SANDSTONE REPLACEMENT DETAIL

EARLY RELEASE PACKAGE ADD ALTERNATE 1 - INFILL EXISTING OPENINGS AT 4C WITH MASONRY. BRICK AND MORTAR COLOR TO MATCH EXISTING.

COPPER FLASHING AND CAP TO BE REPLACED ON 178 ROOF EDGE PERIMETER

LIGHT BLUE HATCH INDICATES WINDOW TO BE REPLACED WITH HISTORIC PROFILES

NEW ALL WOOD HISTORIC SINGLE HUNG ARCHED WINDOW, TYP. THIS LEVEL & ELEVATION

NEW ALL WOOD HISTORIC SINGLE HUNG ARCHED WINDOW, TYP. THIS LEVEL & ELEVATION

FACE BRICK AND IRON STRUCTURE WITH SKIM FINISH TO MATCH LOOK AND TEXTURE OF GRANITE

SIGNAGE TO BE REMOVED BY FORMER TENANT. GC TO REMOVE ALL REMAINING LIGHTING AND WIRING

REINSTALL GLAZING AT CURRENTLY BLOCKED LITES. EXT'G SURROUND TO REMAIN, OR BE REPLICATED

NEW FULL LITE SIDE LITES ON EITHER SIDE OF EXISTING ENTRY

NEW TRIM PIECES ADDED BELOW EXISTING WOOD BRACES

GRIND EDGE OF EXPOSED CONCRETE BEAM TO BE FLUSH WITH EXISTING CONCRETE COLUMNS AND CLAD WITH PAINTED WOOD

HATCHES REPRESENT NEW CANOPIES

NEW CUSTOM WOOD STOREFRONT DOOR AND TRANSOM TO MATCH HISTORIC PROFILES

NEW FULL LITE SOLID WOOD DOOR TO REPLACE EXISTING STOREFRONT OPENING

PAINTED WOOD BASE WITH RAISED RAILS

CAST IRON COLUMN RETURNS TO BE RE-EXPOSED AND CLEANED/PATCHED TO MATCH ORIGINAL STOREFRONT, TYP.

WOOD BASE TO MATCH HISTORIC PRECEDENT

ROOF 66' - 8"

184 FIFTH FLOOR PENTHOUSE 54' - 4 1/2"

FIFTH FLOOR 49' - 11"

FOURTH FLOOR 39' - 4 1/2"

THIRD FLOOR 27' - 9 1/2"

SECOND FLOOR 14' - 7"

M1 FLOOR 8' - 1"

FIRST FLOOR 0' - 0"

STARBUCKS FIRST FLOOR -1' - 1"

11 1/4"

178 | 184

1 PROPOSED ELEVATION - NORTH
1/4" = 1'-0"

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PROJECT NAME:

178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
PORTLAND, ME 04101

SEAL:

LICENSED ARCHITECT
SCOTT R. SIMONS
NO. 2034
STATE OF MAINE

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2	Early Release Addendum 1	05.13.22
4	CD Addendum 1	08.18.22
7	CD Addendum 5	01.13.23
8	CSKs/RFIs	VARIES

DATE OF ISSUE:	02.22.2023
PROJECT NUMBER:	2022-0030
STATUS:	CONSTRUCTION DOCUMENTS

178 - ELEVATION - NORTH

A201 - A



KEY PLAN
1/32" = 1'-0"

GENERAL NOTES
IECC 2021 COMPLIANCE -
OVERALL BUILDING ENVELOPE OF 178 AND 184 MIDDLE STREET - 21,404 SF
OVERALL GLAZED AREA (INCLUDING STOREFRONTS) - 4,220 SF
PERCENTAGE OF GLAZED AREA ON BOTH BUILDINGS - 19.7%



2 PROPOSED ELEVATION - SOUTH
1/4" = 1'-0"

1 PROPOSED ELEVATION - NORTH
1/4" = 1'-0"

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PROJECT NAME:
178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
PORTLAND, ME 04101

SEAL:
LICENSED ARCHITECT SCOTT R. SIMONS NO. 2034 STATE OF MAINE

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REVISIONS

4	CD Addendum 1	08.18.22
7	CD Addendum 5	01.13.23
8	CSKs/RFIs	VARIES

DATE OF ISSUE: 02.22.2023
PROJECT NUMBER: 2022-0030
STATUS: CONSTRUCTION DOCUMENTS

184 - ELEV - NORTH AND SOUTH

A201 - B



KEY PLAN

1/32" = 1'-0"

GENERAL NOTES
IECC 2021 COMPLIANCE -
OVERALL BUILDING ENVELOPE OF 178 AND 184 MIDDLE STREET - 21,404 SF
OVERALL GLAZED AREA (INCLUDING STOREFRONTS) - 4,220 SF
PERCENTAGE OF GLAZED AREA ON BOTH BUILDINGS - 19.7%

HISTORIC RESTORATION LEGEND:

- BROWN STONE REPAIR
- SANDSTONE REPAIR
- BROWN STONE REPLACEMENT DETAIL
- SANDSTONE REPLACEMENT DETAIL

COPPER FLASHING AND PARAPET CAP TO BE REPLACED AROUND PERMIETER OF 178 MIDDLE ST

07 A405 - A
04 A405 - A
06 A405 - A
1 A405 - B

NEW ALL WOOD HISTORIC SINGLE HUNG ARCHED WINDOW, TYP. THIS LEVEL & ELEVATION

NEW ALL WOOD HISTORIC SINGLE HUNG ARCHED WINDOW, TYP. THIS LEVEL & ELEVATION

NEW ALL WOOD HISTORIC SINGLE HUNG ARCHED WINDOW, TYP. THIS LEVEL & ELEVATION

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FACE BRICK AND IRON STRUCTURE WITH SKIM FINISH TO MATCH LOOK AND TEXTURE OF GRANITE

SIGNAGE TO BE REMOVED BY FORMER TENANT. GC TO REMOVE ALL REMAINING LIGHTING AND WIRING

NEW CONTINUOUS SIGNAGE BAND LIGHTING. DETAILS TBD

REINSTALL GLAZING AT CURRENTLY BLOCKED LITES. EXT'G SURROUND TO REMAIN, OR BE REPLICATED

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NEW CONTINUOUS SIGNAGE BAND LIGHTING. DETAILS TBD

PAINTED WOOD BASE WITH RAISED RAILS OVER EXISTING BRICK. TYP AROUND BASE OF 178 MIDDLE. SCRIBE WOOD BASE TO COLUMNS. REPLICATE HISTORIC DETAILING

SIAMESE HOSE CONNECTION

PAINTED WOOD BASE WITH RAISED RAILS OVER EXISTING BRICK. TYP AROUND BASE OF 178 MIDDLE. SCRIBE WOOD BASE TO COLUMNS. REPLICATE HISTORIC DETAILING

NEW FULL LITE WOOD DOOR TO REPLACE EXISTING STOREFRONT OPENING

ROOF 66' - 8"
FIFTH FLOOR 49' - 11"
FOURTH FLOOR 39' - 4 1/2"
THIRD FLOOR 27' - 9 1/2"
SECOND FLOOR 14' - 7"
M1 FLOOR 8' - 1"
184 FIRST FLOOR 0' - 7 1/2"
FIRST FLOOR 0' - 0"
STARBUCKS FIRST FLOOR -1' - 1"
REAR GRADE -4' - 0"

PROPOSED ELEVATION - EAST

1/4" = 1'-0"

simons architects
designed for human potential

75 York Street
Portland, Maine 04101
simonsarchitects.com
207.772.4656

PROJECT NAME:

178-184 MIDDLE STREET HOSPITALITY CONVERSION

178 AND 184 MIDDLE STREET
PORTLAND, ME 04101

SEAL:

LICENSED ARCHITECT
SCOTT R. SIMONS
NO. 2934
STATE OF MAINE

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REVISIONS		
4	CD Addendum 1	08.18.22
7	CD Addendum 5	01.13.23
8	CSKs/RFIs	VARIES

DATE OF ISSUE:	02.22.2023
PROJECT NUMBER:	2022-0030
STATUS:	CONSTRUCTION DOCUMENTS

178 - ELEVATION - EAST

A202 - A



KEY PLAN

1/32" = 1'-0"

GENERAL NOTES
IECC 2021 COMPLIANCE -
OVERALL BUILDING ENVELOPE OF 178 AND 184 MIDDLE STREET - 21,404 SF
OVERALL GLAZED AREA (INCLUDING STOREFRONTS) - 4,220 SF
PERCENTAGE OF GLAZED AREA ON BOTH BUILDINGS - 19.7%



3
PR-02

1 PROPOSED ELEVATION - SOUTH

1/4" = 1'-0"

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178-184 MIDDLE STREET HOSPITALITY CONVERSION

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REVISIONS

3	Addendum 2	06.16.22
4	CD Addendum 1	08.18.22
7	CD Addendum 5	01.13.23
8	CSKs/RFIs	VARIES

DATE OF ISSUE: 02.22.2023
PROJECT NUMBER: 2022-0030
STATUS: CONSTRUCTION DOCUMENTS

178 - ELEVATION - SOUTH

A203 - A