1. Legal Ad

   Documents:

   PB LEGAL AD 9-12-17.PDF

2. Agenda (Please Be Advised That The Maine Medical Center Item Is Being Postponed - Refer To Agenda For More Detail)

   Documents:

   PB AGENDA 9-12-17.PDF

3. Corner Of Hancock And Thames Streets

   3.I. Report And Report Attachments

   Documents:

   HANCOCK AND THAMES (REPORT AND REPORT ATTACHMENTS).PDF

   3.II. Applicants Submittal

   Documents:

   HANCOCK AND THAMES (APPLICANTS SUBMITTAL).PDF

   3.III. Plans

   Documents:

   HANCOCK AND THAMES (PLANS).PDF

4. Maine Medical Center - This Item Is Being Tabled To The 9-26-17 Meeting At 6:30 P.m.)

   4.I. Tabling Memo

   Documents:

   PB TABLING MEMO MMC-IOZ FOR 9.12.17.PDF

5. 155 Sheridan Street

   5.I. Report And Report Attachments

   Documents:

   SHERIDAN ST. - 155 (REPORT AND REPORT ATTACHMENTS).PDF

   5.II. Applicants Submittal

   Documents:

   SHERIDAN ST. - 155 (APPLICANTS SUBMITTAL).PDF

5.III. Public Comment

Documents:

SHERIDAN ST. - 155 (PUBLIC COMMENT).PDF

5.IV. Plans

Documents:

SHERIDAN ST. - 155 (PLANS).PDF

6. 510 Cumberland Avenue

6.I. Report And Report Attachments

Documents:

CUMBERLAND AVE. - 510 (REPORT AND ATTACHMENTS).PDF

6.II. Applicants Submittal

Documents:

CUMBERLAND AVE. - 510 (APPLICANTS SUBMITTAL).PDF

6.III. Public Comment

Documents:

CUMBERLAND AVE. - 510 (PUBLIC COMMENT).PDF

6.IV. Plans

Documents:

CUMBERLAND AVE. - 510 (PLANS).PDF

LEGAL ADVERTISEMENT
PORTLAND PLANNING BOARD MEETING
REVISED AGENDA

The Portland Planning Board will hold a meeting on Tuesday, September 12, 2017, Council Chambers, 2nd Floor, City Hall, 389 Congress Street.

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

Workshop – 4:30 p.m.

i. Level III Site Plan for WEX Office Building, O Hancock Street, Jonathan Cohen, Applicant. (4:30 - 6:00 p.m. estimated time) The Planning Board will hold a workshop on a 4 story 102,027 sq. ft. office building with retail use on part of the first floor. The proposal is for WEX corporate offices for 450 employees. Parking for the offices would be located within the existing Ocean Gateway Parking Garage. The proposals include a ground level public plaza at the east end of the building and a roof deck for use by the occupants. The project is located at the corner of Hancock and Thames Streets within the B6 zone. The proposal is also subject to review under the standards for a traffic movement permit, stormwater quality permit, and shoreland zoning.

Public Hearing – 6:30 p.m.

i. Institutional Development Plan and Regulatory Framework; Maine Medical Center, Applicant. (6:30 – 7:30 p.m. estimated time) The Board will hold a public hearing on final proposals by Maine Medical Center for: a) an Institutional Development Plan (IDP); and b) an associated Regulatory Framework that sets out proposed zoning text and map amendments. These are proposed under the Institutional Overlay Zone (IOZ) Ordinance and together would guide the hospital's future development. The Regulatory Framework (which also refers to the IDP) includes, but is not limited to: allowing increased heights and other dimensional requirements such as transition zones; and requirements regarding design, signs, transportation, neighborhood integration, construction management and relocated helipad.

ii. Level III Subdivision and Site Plan, Conditional Use Review for Inclusionary Zoning; 19 Residential Units; 155 Sheridan Street, BD Sheridan, LLC., Applicant. (7:30 - 8:30 p.m. estimated time) The Board will hold a public hearing on a proposal for a four (4) story building with 14 one-bedroom units and 5 two-bedroom units. Parking for 19 vehicles on the first level is proposed. The site is in the R-6 zone and is subject to the Fort Sumner Park Overlay zone. The project will also be reviewed for conformance with the inclusionary zoning requirements, subdivision and site plan ordinances.

Evening Workshop – follows public hearing

i. Level III Site Plan and Conditional Use; 510 Cumberland Avenue; Avesta Housing Development Corporation, Applicant. (8:30 p.m. estimated time) The Board will hold a workshop on a proposal by Avesta Housing for 82 units of affordable housing in two buildings. A four-story addition is proposed to the existing structure at 510 Cumberland Avenue, which would add 42 residential units creating a total of 55 apartments. A second building is proposed along Deering Street with 27 residential units. Parking for 59 vehicles is proposed on the ground floor level of the Cumberland Avenue building and 5 surface parking spaces are proposed accessing Deering Street. The proposal is subject to review under the subdivision, site plan and inclusionary zoning ordinance of the Land Use Code.

ELIZABETH BOEPPLE, CHAIR – PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE

PLANNING BOARD

Elizabeth Boepple, Chair
Sean Dundon, Vice Chair
Carol Morrissette
David Eaton
Brandon Mazer
Maggie Stanley
Lisa Whited

AGENDA
PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will hold a meeting on Tuesday, September 12, 2017, Council Chambers, 2nd Floor, City Hall, 389 Congress Street.

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WORKSHOP - 4:30 p.m.

i. Level III Site Plan for WEX Office Building; Corner of Hancock and Thames Streets, Jonathan Cohen, Applicant. (4:30 – 6:00 p.m. estimated time) The Board will hold a workshop on a 4 story 102,027 sq. ft. office building with retail use on part of the first floor. The proposal is for WEX corporate offices for 450 employees. Parking for the offices would be located within the existing Ocean Gateway Parking Garage. The proposals include a ground level public plaza at the east end of the building and a roof deck for use by the occupants. The project is located at the corner of Hancock and Thames Streets within the B6 zone. The proposal is also subject to review under the standards for a traffic movement permit, stormwater quality permit, and shoreland zoning.

BREAK FOR DINNER

PUBLIC HEARING – 6:30 p.m.

1. ROLL CALL AND DECLARATION OF QUORUM
2. COMMUNICATIONS AND REPORTS
3. REPORT OF ATTENDANCE AT THE MEETINGS HELD ON AUGUST 8, 2017:

Workshop: Boepple, Dundon, Eaton, Morrissette, Stanley and Whited present; Mazer absent.
Public Hearing: Boepple, Dundon, Eaton, Morrissette, Stanley and Whited present; Mazer absent.

4. REPORT OF DECISIONS AT THE MEETINGS HELD ON AUGUST 8, 2017:

i. Zoning Map and Text Amendments to India Street Form Based Code (ISFBC), City of Portland, Applicant. Dundon moved and Morrissette seconded a motion to find the proposed IS-FBC text amendments consistent with the comprehensive plan and to recommend adoption of the amendments to the City Council. Vote: 6-0, Mazer absent. Dundon moved and Morrissette

seconded a motion to find the proposed map amendments consistent with the comprehensive plan and to recommend adoption of the IS-FBC regulating plan amendments to the City Council. Vote: 6-0, Mazer absent. Dundon moved and Morrissette seconded a motion to find the proposed design standards consistent with the comprehensive plan and approves the IS-FBC building design standard amendments to the Design Manual. Vote: 6-0, Mazer absent.

5. NEW BUSINESS

i. **The Planning Authority and the applicant are requesting that the Planning Board table this item to the September 26, 2017 meeting at 6:30 p.m.**

Institutional Development Plan and Regulatory Framework; Maine Medical Center, Applicant. (6:30 p.m. estimated time) The Board will hold a public hearing on final proposals by Maine Medical Center for: a) an Institutional Development Plan (IDP); and b) an associated Regulatory Framework that sets out proposed zoning text and map amendments. These are proposed under the Institutional Overlay Zone (IOZ) Ordinance and together would guide the hospital's future development. The Regulatory Framework (which also refers to the IDP) includes, but is not limited to: allowing increased heights and other dimensional requirements such as transition zones; and requirements regarding design, signs, transportation, neighborhood integration, construction management and relocated helipad.

ii. Level III Subdivision and Site Plan, Conditional Use Review for Inclusionary Zoning; 19 Residential Units; 155 Sheridan Street, BD Sheridan, LLC., Applicant. (6:45 – 7:45 p.m. estimated time) The Board will hold a public hearing on a proposal for a four (4) story building with 14 one-bedroom units and 5 two-bedroom units. Parking for 19 vehicles on the first level is proposed. The site is in the R-6 zone and is subject to the Fort Sumner Park Overlay zone. The project will also be reviewed for conformance with the inclusionary zoning requirements, subdivision and site plan ordinances.

6. EVENING WORKSHOP (immediately follows the public hearing)

i. Level III Site Plan and Conditional Use; 510 Cumberland Avenue; Avesta Housing Development Corporation, Applicant. (7:45 p.m. estimated time) The Board will hold a workshop on a proposal by Avesta Housing for 82 units of affordable housing in two buildings. A four-story addition is proposed to the existing structure at 510 Cumberland Avenue, which would add 42 residential units creating a total of 55 apartments. A second building is proposed along Deering Street with 27 residential units. Parking for 59 vehicles is proposed on the ground floor level of the Cumberland Avenue building and 5 surface parking spaces are proposed accessing Deering Street. The proposal is subject to review under the subdivision, site plan and inclusionary zoning ordinance of the Land Use Code.

Memorandum
Planning and Urban Development Department
Planning Division

To: Elizabeth Boepple, Chair and Members of the Portland Planning Board

From: Caitlin Cameron, Urban Designer

Date: September 7, 2017

Re: Level III Site Plan 0 Hancock Street (Thames Street Property)

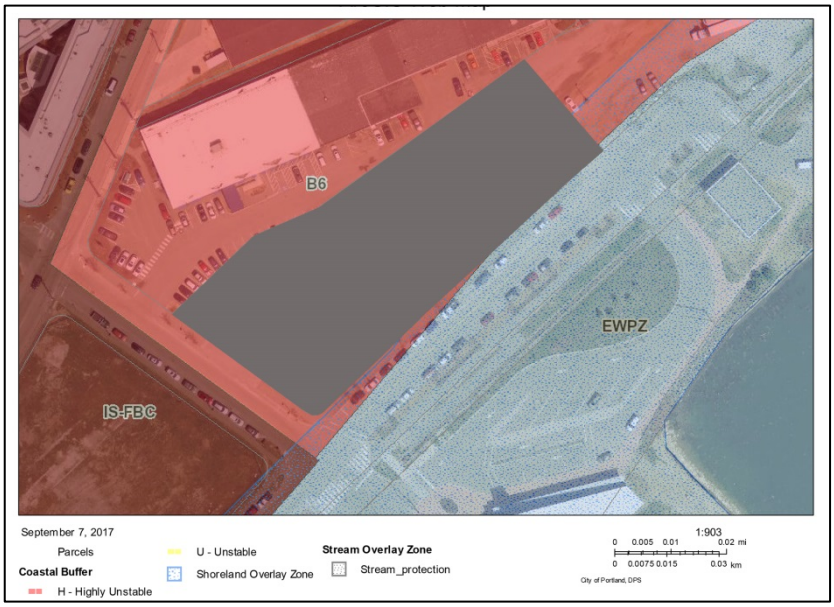
0 Hancock Street, LLC, Applicant
Project #: 2017-180 CBL: 019 A0014

Meeting Date: September 12, 2017

I. INTRODUCTION

This is a first Workshop on the project at Thames and Hancock Street which is for a four-story commercial office building with 102,545 sf of office space and 5,000 sf of retail space. WEX, Inc., an international payment company based locally, is currently in discussions on a long-term lease of 80,000 sf in the building for its corporate suites and other executive functions.

The development site is 48,000 sf currently owned by the City of Portland, bounded by Thames and Hancock streets, and a potential Mountfort Street extension in the B6 zone. Transfer of right, title, and interest as well as an accurate boundary survey are currently in process.



Applicant: 0 Hancock Street, LLC
Engineer: Stantec
Architect: Archetype, PA

This Workshop was noticed to 161 property owners within 500 feet of the site and interested parties, and a legal ad was published in the *Portland Press Herald* on September 4 & 5, 2017. A Neighborhood Meeting is required and was held on September 6th and the attendees and meeting notes are attached (Attachment K). At the time of completing this Memorandum, the Planning Division has received four written public comments (Attachment 3) – in most cases, the comments are concerned with parking and traffic management.

Required Review (waivers may be needed but have not been requested):

Applicant's Proposal	*Applicable Standards*
Mixed use building of 102,545 sf	Level III Site Plan Review and B-6 Design Review

II. PROJECT DATA (See Level I Plan in Plan P17 for further details)

Existing Zoning	B-6, Shoreland Overlay zone			
Existing Use	Vacant, surface parking			
Proposed Use	Mixed use (including commercial office, retail)			
Property Size	48,000 sf (1.1 acres)			
	Existing	*Proposed*	*Net Change*	
Building Footprint	0 sf	30,545 sf	30,545 sf	
Building Floor Area	0 sf	102, 545 sf	102, 545 sf	
Impervious Surface Area	48,000 sf	45,000 sf	-3,000 sf	
Parking Spaces (on-site)	100+	0	-100	
Parking Spaces (off-site)	0	320	320	
Bicycle Parking Spaces	0	14	14	
Estimated Cost of Project	$12 to 15 million			

III. PLANNING BOARD CONSIDERATIONS

Some topics the Planning Board may want to consider in the workshop include:

- General direction of the building design
- Sidewalk design and building relationship to the street
- Impacts on the neighboring property approved vehicle circulation and parking
- Public and staff concern regarding parking strategy and traffic impact – some submittals are outstanding

IV. THE SITE and CONTEXT

The City-owned site is a prominent parcel on Thames Street, east of Hancock Street currently used as surface parking for the public and Police Department. The Eastern Waterfront Master Plan calls for Mountfort Street to be extended to Thames and this future ROW forms the eastern boundary of the site. To the south is the Ocean Gateway terminal, Eastern Promenade Trail, and future Amethyst Lot Park (depicted in the rendering below). To the north and west is the India Street neighborhood with multiple new construction projects underway within a two-block radius.

V. PROGRAM

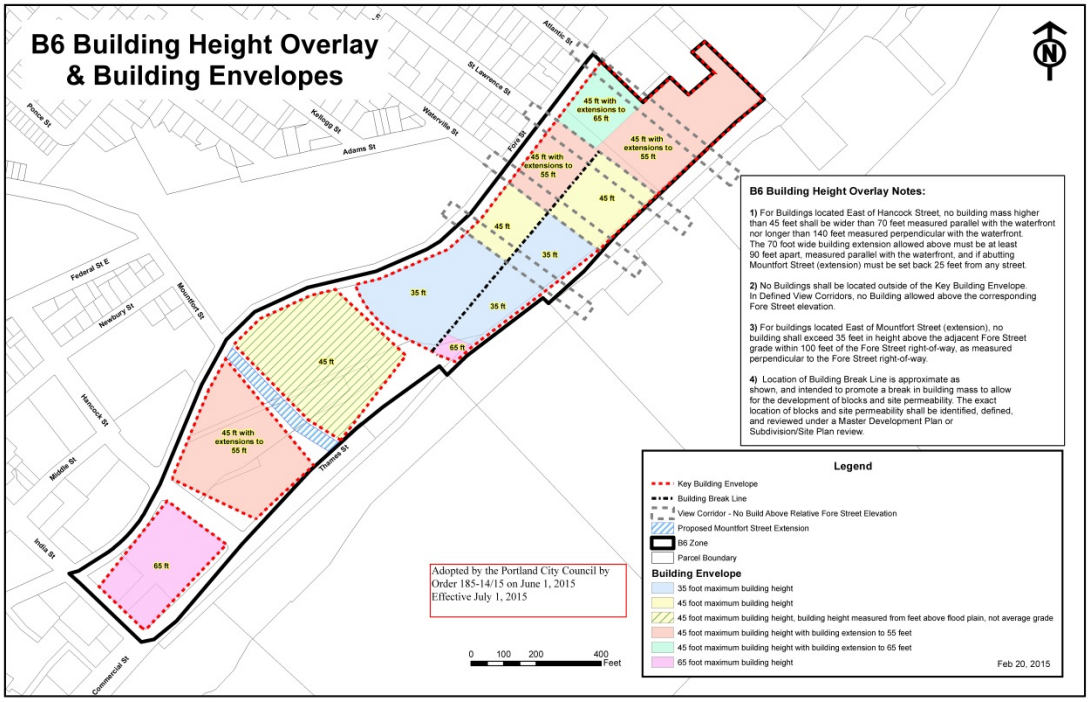
The proposal includes the following key elements:

- Three to four-story building, comprising commercial office and some ground floor retail
- Elevated building in response to the Shoreland Overlay and resiliency considerations for sea-level rise
- Roof terrace and ground floor plaza space
- 320 parking spaces provided off-site; no on-site vehicle parking proposed
- Service corridor on the interior of the site
- Accommodation of a future Mountfort Street extension and the B-6 Height Overlay

VI. ZONING ANALYSIS

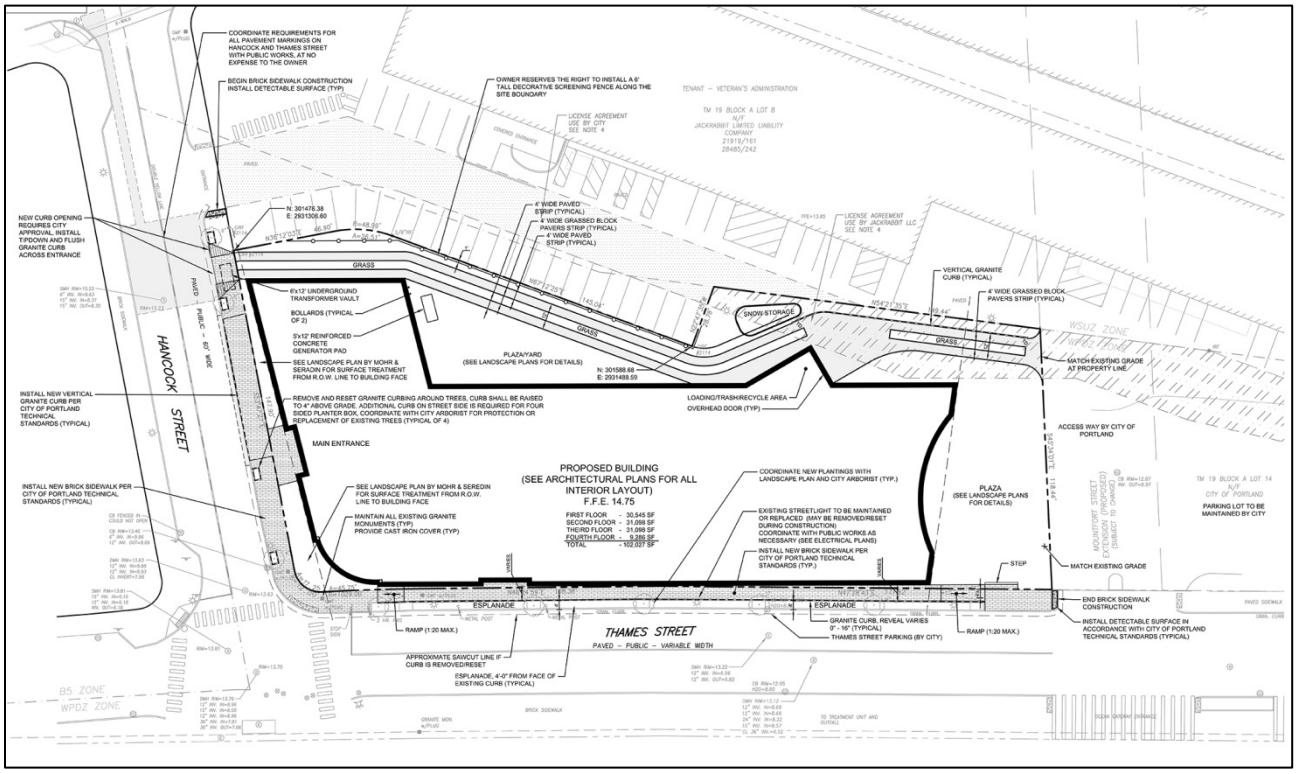
The RFP for the City-owned parcel required proposals to comply with the Eastern Waterfront Master Plan (EWMP) as well as the B6 zoning. Staff finds the proposal complies with the zoning requirements of the B6 zone and the intent of the EWMP. The proposed height of the building is three to four stories and conforms with the 45 maximum height established by the B6 Height Overlay Zone.

Those additional setbacks are indicated on the Site Plan (Attachment P4) as well as the B6 Height Overlay & Building Envelopes diagram.



VIII. STAFF REVIEW – SITE PLAN + DESIGN STANDARDS

A. SITE PLAN STANDARDS - 14-526 Site Plan Standards



Traffic - Access, Circulation, Servicing and Loading – Awaiting submittal of traffic analysis. No on-site parking currently proposed; the nearby Ocean Gateway Garage is proposed to accommodate the traffic and parking for the site.

Sidewalks

The applicant is proposing brick sidewalk on Hancock and Thames streets consistent with the established streetscape. However, Transportation plan reviewer Bruce Hyman had the following additional comments requesting revisions to the sidewalk design:

- *The site plan needs to reflect what will be the existing conditions at the NW corner of Hancock-Thames Streets per the AC Hotel approved site plan. Two curb ramps are to be provided at the Hancock-Thames NE corner for the crossing of both streets. Further discussion is needed regarding the curb design and curb extensions at this corner. The one curb ramp, as shown on their site plan, is inadequate.*
- *The site plan needs to similarly reflect the SW corner of Fore-Hancock in the AC Hotel approved site plan.*
- *Staff has concerns that the 4' continuous esplanade-5' sidewalk is the correct streetscape concept for this section of Thames Street. Alternative approaches could mimic similar (but maybe not exact) treatments to the AC Hotel and such west of Hancock St as urban hardscape. Even eliminating the 4' esplanade for a 10' sidewalk may be inadequate considering the number of new developments on the street and nearby increasing pedestrian traffic. The board could consider strategies that could provide a wider sidewalk on Thames Street. I'd suggest <u>a minimum</u> width of 12' for the sidewalk is what we'd want due to the likely raised granite tree wells within the sidewalk area.*
- *The proposed 10' sidewalk width on Hancock is likely undersized and should be 12' minimum, accounting for adequately sized tree wells, reducing the size of the planters and landscaped areas as necessary to achieve this width. The building is set back from the property line. <u>If sidewalks are less than 12' we should switch to in-sidewalk tree grates.</u>*

Public Transit Access **-** Not applicable to this project. The closest route is the 8 bus with stops on Commercial and India Streets.

Parking **-** The applicant is proposing 320 parking spaces within the Ocean Gateway parking garage off-site and no on-site parking. Only 258 parking spaces are required by the City Code of Ordinances – the applicant is choosing to provide additional parking to replace parking lost on-site as well as the expected demand of the building uses. The applicant plans to submit a Transportation Demand Management Plan with the expectation to reduce the overall parking demand. The applicant suggests that 100 Fore Street could be used as overflow parking for 50 to 100 additional spaces. All off-site parking locations proposed are in very close proximity to the site. Traffic Engineer reviewer Tom Errico requests the following information to complete the review:

- *Updated report of the capacity and parking management for Ocean Gateway Garage and 100 Fore Street*
- *Clarification on the proposed use of 100 Fore Street for parking*
- *Clarification on the impacts to the parking and vehicle circulation for the neighboring property which is built according to an approved Site Plan. The City lot lines appear to cross and impede the parking circulation in several locations.*
- *Indication of where office and retail visitors will park*

Bicycle Parking **-** The application indicates that 14 bike parking spaces will be provided but the location is not identified – perhaps in the Ocean Gateway garage? The locations should address the use by office workers and visitors to the retail uses. Transportation plan reviewer Bruce Hyman had the additional, following comments:

- *The space provided on the site plan for the bike parking is inadequate (too close to the wall, shown 36" I believe scaled to the drawing - the detail on sheet C 6.0 looks correct though) a minimum of 48" is required, with 60" preferred. The spacing shown, 36", does meet minimum spacing between the racks (48" preferred). If they were to be placed parallel to the building (instead of perpendicular as shown), the racks can be placed as close as 30" (36" preferred) to the wall with a minimum of 72" separation on center (96" preferred) between the racks. Adequate maneuvering room is needed for the end racks (48" min, 60" preferred).*
- *Also recent development on the potential for bike share locations should be examined.*

Snow Storage **-** The size allocated for snow storage does not appear to be adequate. Staff requests clarification of the impacts on the vehicle circulation and parking on the adjacent lot.

Transportation Demand Management **–** Awaiting submittal.

Construction Management Plan (CMP) **–** Under review – staff commented that on-street parking spaces on Thames Street would be very difficult to keep during construction.

Landscape Preservation / Site Landscaping and Screening/Street Trees
The applicant's Landscape Plan (in Plans P7) includes planters between the building and the public sidewalk. Staff reviewers agree that this approach causes the building to be disconnected from the public realm and would prefer that the planting buffer be removed in exchange for a wider sidewalk in these locations. This will make for a more urban building/sidewalk interface.

The Thames Street and Hancock Street should include raised granite planters for street trees consistent with the streetscape design already established. An esplanade on Thames Street is not a preferred solution. The City Arborist has yet to review the submission.

The project also includes some landscaping and planting on the roof and the plaza on the east end of the building. These features will be of benefit to the office workers as well as the general public views of the building and may benefit the stormwater/heat island effect of the building.

- *Staff are concerned about the three steps from the public sidewalk to the plaza area and whether this can be made more accessible.*

Water quality, Stormwater Management and Erosion Control - Under review. The project will reduce the amount of impervious surface on the property. Peer reviewer Lauren Swett had the following preliminary comments (Attachment 2):

- *The Applicant has noted that the project does not require any additional Federal or State level environmental site permits. The lot was originally part of the Ocean Gateway Site Location of Development, and there may be additional permits associated with Ocean Gateway that encompass this site. We anticipate that the City or the Applicant will need to work with the original permitting agencies to determine what needs to be done to remove the site from the original permits in association with the sale of the property. We also anticipate that the Notice of Intent to Comply with the Maine Construction General Permit will be required for the project.*
- *The site is completely within the area that was considered for Ocean Gateway, and capacity calculations at the time included this area as a parking lot, so capacity of the outfall installed for Ocean Gateway should not be an issue due to this project.*

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

The proposals do not raise any particular concerns, but further information is required regarding the path from the parking garage to the office entrance and the design and lighting of the public sidewalks.

Fire Prevention – Under review – no anticipated concerns.

Public Utilities - Under review - Existing utilities are underground and project proposes to extend underground utilities from Fore and Hancock streets.

Massing, Ventilation and Wind Impact and Shadows – The proposal does not appear to raise any particular concerns.

Historic Resources – No historic resources or districts within 100' of the site.

Exterior Lighting including Street Lighting – The applicant will be expected to provide street lighting as part of the sidewalk design and reconstruction according to the City of Portland Technical Manual. Additional information regarding building lighting has yet to be submitted.

B. DESIGN STANDARDS

The proposal is subject to the B6 and Eastern Waterfront Design Guidelines and excerpts from the review (Attachment 1) prepared by the City's Urban Designer are as follows:

> *Generally, the staff find the project to meet the design guidelines and support the direction of the project with some revision.*
>
> ***Eastern Waterfront Master Plan – Design Guidelines for the Eastern Waterfront***
> *Standard B (1) New buildings should be designed in response to their context and should be compatible with surrounding neighborhoods.*
> *The site should be considered to have a unique context when it comes to the architectural approach. Staff recognizes that this site has little historic context to relate to. Where there is visual connection on Hancock Street to the India Street neighborhood context, the building employs a height, façade treatment, and massing that are sensitive to and relate to that more traditional context. On Thames Street and facing the water, the Ocean Gateway terminal, waterfront, and future Amethyst Lot park are contemporary designs that create the most immediate context for the 0 Hancock Street project and the contemporary design reflects that – the project proposes a new vision for contemporary development on the waterfront.*

There is one general area of criticism which has to do with how the building relates to its urban setting – some details of the sidewalk and building design cause the building to sit apart from the streetscape similar to a suburban office park design. Staff comments below suggest specific revisions to engage the building with the pedestrian and urban environment.

Standard B (2) e. Articulation: The project uses a combination articulation elements such as material changes, canopies, and plane changes. Interest is also provided by the roof design and massing changes. The long length of Thames Street façade is broken down to a human scale with the fenestration pattern, material placement, and the ground level design. Staff recommend that the curved corner be better integrated into the design through articulation of the building's regulating lines (either horizontal or vertical or both).

IX. NEXT STEPS

The final submissions will need to fully address the Site Plan and design standards and address any further Planning Board comments, including the following:

- Finalize sale of land, boundary survey, right, title, and interest transfer
- Resolve the State and Federal Site Location of Development permits associated with Ocean Gateway
- Clarify DEP review requirements
- Submit details of the parking garage capacity and management
- Submit traffic analysis, resolve Traffic Movement Permit questions
- Submit Transportation Demand Management Plan
- Revise sidewalk designs according to staff and Planning Board comment including ADA ramps, sidewalk elevation, sidewalk widths, remove planters and esplanade
- Clarify waiver requests
- Respond to any additional staff review comments

ATTACHMENTS

STAFF REVIEW COMMENTS

1. Preliminary Design Review
2. Staff Review

PUBLIC COMMENTS

3. Public Comment Received - Combined

APPLICANT'S SUBMITTAL

A. Level III Site Plan Review Application
B. Development Description
C. RTI Letter
D. Technical and Financial Capability
E. Utilities
F. Fire Safety
G. Construction Management Plan
H. Solid Waste Plan
I. Design Narrative
J. HVAC Equipment
K. Neighborhood Meeting Minutes

PLANS

P1 Boundary Survey
P2 Existing Conditions
P3 Construction Management Plan
P4 Site Plan
P5 Grading and Drainage Plan
P6 Utility Plan
P7 Landscape Plans
P8 Architectural Floor Plans (4 sheets)
P9 Elevations (2 sheets) – not updated
P10 Renderings (7 images)

Planning and Urban Development Department
Planning Division

Subject: B6/ Eastern Waterfront Design Review – 0 Hancock Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, September 5, 2017

Design Review Criteria:
The policies and standards listed below are applied to the design review of a B6 Site Plan application.

Eastern Waterfront Master Plan - *Design Guidelines for the Eastern Waterfront*

City of Portland Design Manual – *(g) EWPZ Eastern Waterfront Port Zone and B6 Eastern Waterfront Mixed Use Zone*

Findings of the Design Review:
Preliminary staff review was conducted during the week of September 4, 2017 and included Caitlin Cameron, Urban Designer, Christine Grimando, Senior Planner, and Deb Andrews, Historic Preservation Program Manager. Generally, the staff find the project to meet the design guidelines and support the direction of the project with some revision. Comments in red denote topics of concern or questions for the board to consider.

Eastern Waterfront Master Plan - *Design Guidelines for the Eastern Waterfront*

Introduction: *Development will serve to integrate the working waterfront, commercial business areas, and the Munjoy Hill neighborhood. For integration to be successful, thoughtful, high quality design for all aspects of construction is imperative. With care and attention paid to details and quality, the design of streets, buildings, open space, parking, and changes to the water's edge will contribute to the value of public and private property and the quality of life for Portland residents. . . . that the Eastern Waterfront become a benefit to City residents. The Master Plan, along with these Guidelines, promotes development that will be an asset, not a liability, to the surrounding neighborhoods and community at large.*

A. **Streets**
   1. **Public Streets:** The project maintains the Mountfort Street extension as proposed in the Eastern Waterfront Master Plan.
   2. **Appropriate Street Design:** Not applicable. The design for the new Mountfort Street extension is not part of this application.
   3. **Sidewalks**: Staff continue to work with the applicant on the sidewalk design. Appropriate to the urban context, staff recommend wider sidewalks and not placing landscape planters between the sidewalk and the building. The street tree and street lighting design will be consistent with other developments on Thames Street to provide a consistent streetscape.

4. **View Corridors:** The proposal maintains the protected view corridors through the site according to the B6 Building Height Overlay & Building Envelopes Map.
5. **Railroad Right of Way:** Not applicable
6. **Underground Utilities:** Utilities are being provided underground from Fore/Hancock street.
7. **Marine Passenger Terminal Circulation**: Not applicable
8. **Bicycle Safety:** Staff continue to work with the applicant on the bicycle facilities proposed.

B. **Buildings and Architecture**

Purpose: Met – Project is mixed-use, high quality contemporary design.

Design guidelines for buildings in the Eastern Waterfront Redevelopment Area encourage architecture that enhances the development of a mixed-use . . . New construction should respect the historic character of Portland's waterfront, while representing the best elements of contemporary design.

1. **Contextual Design:** *New buildings should be designed in response to their context and should be compatible with surrounding neighborhoods.*
   The site should be considered to have a unique context when it comes to the architectural approach. Staff recognizes that this site has little historic context to relate to. Where there is visual connection on Hancock Street to the India Street neighborhood context, the building employs a height, façade treatment, and massing that are sensitive to and relate to that more traditional context. On Thames Street and facing the water, the Ocean Gateway terminal, waterfront, and future Amethyst Lot park are contemporary designs that create the most immediate context for the 0 Hancock Street project and the contemporary design reflects that – the project proposes a new vision for contemporary development on the waterfront.

   There is one general area of criticism which has to do with how the building relates to its urban setting – some details of the sidewalk and building design cause the building to sit apart from the streetscape similar to a suburban office park design. Staff comments below suggest specific revisions to engage the building with the pedestrian and urban environment.

   The signs shown in the application do not necessarily reflect an approved sign plan that meets the sign ordinance.

2. **Building Composition:**
   a. **Placement:** The building is placed to comply with the B6 overlay envelope on Hancock Street. The building facing Thames Street is close to the property line to help create a consistent street wall with the surrounding blocks currently under development. The primary office entrance is oriented to the street – retail entrances should be provided on Thames but are currently not indicated in the plan.

   b. **Height:** The project complies with the B6 45' height overlay. On Hancock Street the project is four stories and steps down to three stories on Thames. This is as tall or shorter than most recent development in this area. The important thing of note is that it is a multi-story building consistent with zoning and urban design goals.

c. **Massing:** The building has massing variation with a taller mass at Hancock Street, a curved massing with special roof treatment at the primary corner, and a low and long mass along Thames Street. The massing is appropriate according to each street relationship and provides visually interesting building forms.

d. **Proportion:** Buildings in the Eastern Waterfront vary in their height, length, and proportion but are often low and long – similar to the longitudinal proportions of the historic industrial complex and working waterfront building typologies. Facing the mixed-use India Street neighborhood, the building has a more vertical proportion. The proportion on Thames is horizontal.

e. **Articulation:** The project uses a combination articulation elements such as material changes, canopies, and plane changes. Interest is also provided by the roof design and massing changes. The long length of Thames Street façade is broken down to a human scale with the fenestration pattern, material placement, and the ground level design. Staff recommend that the curved corner be better integrated into the design through articulation of the building's regulating lines (either horizontal or vertical or both).

f. **Materials:** The proposal conveys a contemporary approach similar to other contemporary buildings nearby such as the Ocean Gateway terminal. Where the project faces the India Street neighborhood, the material placement is more traditional. Where the project faces the waterfront, curtainwall is used – staff does have concern about the further detail and specification of the curtain wall in terms of reflectivity and tint as well as sun shading.

3. **Pedestrian Environment:** Staff support providing wider sidewalks to give enough space for pedestrian amenities such as street trees and lighting. Both facades are proposed to provide active entrances with the office entrance on Hancock Street and retail entrances on Thames. Thames Street has a long façade but accommodates the pedestrian environment through the use of storefront and high transparency, retail uses and entrances, canopies, and plane changes.

4. **Primary Entrances and Service Entrances:** The primary entrance is on Hancock Street which is considered by these guidelines to be a primary street. More information is requested on building access points – show where building entrances on Thames Street are likely to be. Service entrances are internal to the site with an access path interior to the block.

5. **Parking Structures:** Not applicable

6. **Infill and Small Scale Development:** Not applicable

7. **Historic Structures:** Not applicable

8. **Civic Structures:** Not applicable

9. **Marine Development:** Not applicable

C. **Open Space and the Public Realm**

1. **Public Open Space and Plazas:** Not applicable

2. **Private Open Space and Plazas**: A plaza space at the east end of the development is proposed to occupy the space of the view corridor. Staff suggest this design might be modified to be at the grade of Thames Street rather than requiring three steps. In addition,

an internal path cuts through the site to provide service access and possible mid-block cut through between Hancock and a future Mountfort extension. The project also proposes rooftop plazas for the office workers.

3. **Historic Sites:** Not applicable
4. **Public Art:** The proposal does not currently include public art or similar focal points.
5. **View Protection**: The proposal maintains the protected view corridors through the site according to the B6 Building Height Overlay & Building Envelopes Map.

D. **Surface Parking and Vehicle Queuing:** Not applicable - the project predominantly uses off-site structured parking meeting the Shared Use and Partnerships guideline and does not include vehicle queuing.

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

Att. 2

MEMORANDUM

TO: Caitlin Cameron, Planner
FROM: Lauren Swett, PE & Craig Sweet, EIT
DATE: September 7, 2017
RE: Level III Site Plan Application, WEX Hancock & Thames Street.

Woodard & Curran has reviewed the Level III Site Plan Application for the proposed development located at 0 Hancock Street in Portland, Maine. The project involves the construction of 102,027 square foot, 4-story building at the intersection of Hancock and Thames Street.

Documents Reviewed by Woodard & Curran

- Level III and attachments, dated August 11, 2017, prepared by Stantec Consulting Services Inc., on behalf of 0 Hancock Street LLC.
- Engineering Plans, Sheets C-1.0, C-1.1, C-2.0, C-2.1, C-2.2, C-3.0, C-4.0, C-5.0, C-6.0, C-6.1, C-6.2, C-6.3, & C-6.4, dated August 8, 2017, prepared by Stantec Consulting Services Inc., on behalf of 0 Hancock Street LLC.
- Architectural Plans, Sheets A1.01, A1.02, A1.03, A1.05, A2.01, A2.02, R1, R2, R3, R4, R5, R6, & R7, dated August 8, 2017, prepared by Archetype Architects, on behalf of 0 Hancock Street LLC
- Electrical Plans, Sheets E-001, ES101, & ES301, dated August 10, 2017, prepared by E.S. Boulos Company, on behalf of 0 Hancock Street LLC

Comments (Note that our review is preliminary at this time, and there may be additional comments provided following the workshop.)

1) The Applicant has noted that the project does not require any additional Federal or State level environmental site permits. The lot was originally part of the Ocean Gateway Site Location of Development, and there may be additional permits associated with Ocean Gateway that encompass this site. We anticipate that the City or the Applicant will need to work with the original permitting agencies to determine what needs to be done to remove the site from the original permits in association with the sale of the property. We also anticipate that the Notice of Intent to Comply with the Maine Construction General Permit will be required for the project.
2) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. Sedimentation barrier should be installed downgradient of proposed construction activities.
   b) General Standard: It appears that the project may result in redevelopment of over 5,000 square feet of non-roof impervious area. In accordance with the City of Portland Technical Manual, the project is required to provide water quality treatment for no less than 50% of the redeveloped non-roof impervious area. Additional information on development areas should be provided, as well as discussion and calculations to show how the project will meet the General Standard.
   c) Flooding Standard: No additional impervious surface is being added as a result of the project. The site discharges to the Fore River, and the area was accounted for as part of the original outfall design. The project is not anticipated to increase flow to the site.
3) Additional clarifications should be provided for the rood drain connection on Thames Street. On the utility plan, the RD connection is shown directly to an existing catch basin within the City ROW. This type of connection is not allowed. The grading and drainage plan shows the connection to a new

manhole, as would be anticipated for a 12-inch pipe connection. The Applicant should clarify the stormdrain piping.

4) A stormwater inspection and maintenance plan developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances should be provided.
5) In Accordance with The City of Portland Technical Manual sanitary sewer laterals shall be connected to main sanitary sewer lines for sanitary building laterals under 8 inches in diameter. The connection is currently proposed directly to the existing manhole in Thames Street. Acceptability of this type of connection should be confirmed with the Department of Public Works.
6) The Applicant has noted a snow storage location behind the proposed building however, the size does not appear to be adequate for the proposed site and may restrict travel ways for the adjacent properties. Please provide additional information regarding snow removal.

Att. 3

Google Groups

WEX Office Building Parking

William Campbell <wfcampbelljr@gmail.com> Sep 1, 2017 2:48 PM
Posted in group: **Planning Board**

Dear Planning Board Members,
It is nice to see so much growth in our city of Portland. On the other hand, I am very concerned about public parking and our infrastructure.

The WEX company seems to have very little concern about public parking. I have read contradictory articles about this site. Is there a new parking garage planned? With 500 employees planning on working there, the parking garage capacity should fit at least 700 spaces.

What about traffic concerns for the future? There has been substantial growth already on the East End with the additional new condo buildings on Fore St, Middle Street, Newbury Street, Hancock Street, India Street, and finally Thames Street. Two additional new hotels are now in the process of being built. Then, coming in the near future, will be the 10 acre site on 58 Fore Street, The Portland Company.

Are you looking carefully at the traffic gridlock and lack of parking that will impact our city? Please consider our neighborhood and look what this is going to do to the livability of our city. You need to be aware of the current traffic congestion and lack of parking that already exists on the East End.

The WEX Company announced a neighborhood meeting on September 6th at 5pm in the parking lot of their proposed site. If it rains it will be held inside the Ocean Gate parking garage! This is so unprofessional with very little concern for our neighbors standing outside listening to their proposal. I am asking our Planning Board to look at the WEX proposed project plan very carefully and protect our neighborhood parking and city infrastructure.

Thank You,
Bill Campbell
22 Hancock Street
Unit 306A

Google Groups

Wex -development plans.

Mike Curran <mwcurran@gmail.com> Sep 2, 2017 9:16 AM
Posted in group: **Planning Board**

Has there been a change in parking plans? Is Ocean Gate garage to be the employee parking facility? If so have you confirmed this plan with the local hotels that now and will use going forward?
This needs open discussion and it's impact on the community especially current users as private citizens at this garage site.

Please advise, thank you.

--
Mike Curran
22 Hancock St. #206
Portland, ME 04101
207 747 9639

-- Forwarded message ----------
From: **Mike Curran** <mwcurran@gmail.com>
Date: Tuesday, September 5, 2017
Subject: Traffic Planning- New Development- Wex Corp
To: hcd@portlandmaine.gov

Ms. Helen Donaldson /Senior Planner / Portlane Maine

Helen, I and some of my neighbors just attended a meeting to review the plan for the new Wed Corp building at Thames/Hancock Sts .
There is growing concern regarding volume of daily in/out traffic flow and impact on "quality" of life as well as safety.
While the plan addresses parking space availability if a new garage is approved we saw no plan that provides a clear path towards traffic management. Is there one?
Please advise how we can learn and understand this going forward.
Are meetings planned?
Thank you for reviewing this email.

Mike Curran
22 Hancock St. #206
Portland, ME 04101
207 747 9639

Google Groups

New WEX building at Hancock and Thames

Deborah Cummins <dbc1103@gmail.com> Sep 6, 2017 11:01 AM

Posted in group: **Planning Board**

I am a resident of this neighborhood and I write with my concerns regarding the information provided in the postcards recently sent out about the upcoming workshop to be held on 9/12. Regrettably, I cannot attend as I will be out of town.

My concern about the information provided is that reference is made to the parking for the proposed WEX corporate offices employing 450 people -- "parking for the offices would be located within the existing Ocean Gateway Parking Garage."

While I have no immediate objections to the building of this corporate structure, I do have concerns about the parking for it. I do not see how it is possible for this existing garage to accommodate this many employees. Currently, the garage provides parking for the existing Marriott hotel as well as the new one under construction and the proposed adjacent condos to be built on Thames. Additionally, employees in the office building under construction at Hancock and Middle will use this garage, as currently do a couple of condo buildings in the immediate vicinity, and people with homes on the Casco Bay islands. Not to mention the visitors, tourists and restaurant and retail patrons in the area.

Parking is and will continue to be an even greater problem in Portland, particularly on the East End where there is considerable development underway and being proposed. I do not see how the planning board can approve a building of this size and scope without mandating they provide their own parking.

In fact, these recently received postcards are in direct opposition to what was written in recent Portland Press Herald articles in which they said that the winning bidder on this property was going to be providing structured and surface parking for 450. Was the developer just saying this in order to secure the winning bid/sale? And is now changing his story? Which is true - the postcard or the newspaper?

As I stated earlier, as a resident, I do not object to this building happening and to welcoming WEX into the neighborhood. But to put further pressure on parking here and to expect that Ocean Gateway can continue to be the solution is a seriously short-sighted problem that I cannot support, nor, I assume, will many others who reside here. City planning has to include present as well as future concerns and parking surely is at the top of the list.

Thank you,
Deborah Cummins

--

Level III – Preliminary and Final Site Plans
Development Review Application
Portland, Maine

Planning and Urban Development Department
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

Level III: Site Plan Development includes:

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14), Design Manual and Technical Manual.

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719
planning@portlandmaine.gov

Office Hours
Monday thru Friday
8:00 a.m. – 4:30 p.m.

I. Project Information (Please enter n/a on those fields that are not applicable)

Project Name:	Thames Street Property
Proposed Development Address:	Corner of Hancock and Thames Street - Address TBD
Project Description:	Commercial Office Building
Chart/Block/Lot:	19/A/14
Preliminary Plan	
Final Plan	Submitted 08.11.17

II. Contact Information (Please enter n/a on those fields that are not applicable)

APPLICANT

Name:	Jonathan Cohen
Business Name:	0 Hancock Street, LLC
Address:	PO Box 910
City/State:	Portland, Maine
Zip Code:	04098-0910
Work #:	207.776.0304
Home #:	
Cell #:	
Fax #:	207.775.4367
E-mail:	jcohen@a-d-w.biz

OWNER

Name:	City of Portland
Address:	389 Congress Street
City/State:	Portland, Maine
Zip Code:	04101
Work #:	207.874.8300
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Stephen R. Bushey/Stantec
Address:	482 Payne Road
City/State:	Scarborough, Maine
Zip Code:	04074
Work #:	207.887.3478
Home #:	
Cell #:	207.756.9359
Fax #:	207.883.3376
E-mail:	stephen.bushey@stantec.com

BILLING (to whom invoices will be forwarded to)

Name:	Same as Applicant
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

ENGINEER

Name:	Same as Agent
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

SURVEYOR

Name:	John Swan - Owen Haskell, Inc.
Address:	390 US Route 1
City/State:	Falmouth, Maine
Zip Code:	04105
Work #:	207.774.0424
Home #:	
Cell #:	
Fax #:	
E-mail:	jswan@owenhaskell.com

ARCHITECT

Name:	Bill Hopkins - Archetype, PA
Address:	48 Union Wharf
City/State:	Portland, Maine
Zip Code:	04101
Work #:	207.772.6022
Home #:	
Cell #:	
Fax #:	
E-mail:	hopkins@archetypepa.com

ATTORNEY

Name:	N/A
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Celina Daniell
E-mail:	celina.daniell@stantec.com
Name:	Steve Bushey
E-mail:	stephen.bushey@stantec.com
Name:	Sandi Keef
E-mail:	sandi.keef@stantec.com

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

☐	Less than 50,000 sq. ft.	$750.00
☐	50,000 – 100,000 sq. ft.	$1,000.00
☑	100,000 – 200,000 sq. ft.	$2,000.00
☐	200,000 – 300,000 sq. ft.	$3,000.00
☐	Over 300,000 sq. ft.	$5,000.00
☐	Parking lots over 100 spaces	$1,000.00
☐	After-the-fact Review	$1,000.00 + applicable application fee above

PLAN AMENDMENTS (check applicable review)

☐	Planning Staff Review	$250.00
☐	Planning Board Review	$500.00

OTHER REVIEWS (check applicable review)

☑	Traffic Movement	$1,500.00
☑	Stormwater Quality	$250.00
☐	Subdivision	$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [ ] x $25.00 each	$
☐	Site Location	$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [ ] x $200.00 each	$
☑	Change of Use	
☐	Flood Plain	
☑	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 3,750.00

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($50.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

V. PROJECT DATA (Please enter n/a on those fields that are not applicable)

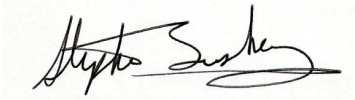
TOTAL AREA OF SITE	48,000	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	48,000	sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	48,000	sq. ft.
Impervious Area (Total Proposed)	<45,000	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	0	sq. ft.
Building Footprint (Total Proposed)	30,545	sq. ft.
Building Floor Area (Total Existing)	0	sq. ft.
Building Floor Area (Total Proposed)	102,545	sq. ft.
ZONING		
Existing	B-6	
Proposed, if applicable	No Change	
LAND USE		
Existing	Parking	
Proposed	Office Building	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	N/A	
# of Residential Units (Total Proposed)		
# of Lots (Total Proposed)		
# of Affordable Housing Units (Total Proposed)		
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	N/A	
# of One-Bedroom Units (Total Proposed)		
# of Two-Bedroom Units (Total Proposed)		
# of Three-Bedroom Units (Total Proposed)		
PARKING SPACES		
# of Parking Spaces (Total Existing)	>100+	
# of Parking Spaces (Total Proposed)	320 - Using Gateway Garage	
# of Handicapped Spaces (Total Proposed)	0	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	14	
ESTIMATED COST OF THE PROJECT	$12 to 15 million	

VI. APPLICANT SIGNATURE

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a ***legal signature*** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:	 , Agent
Date:	August 11, 2017

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Completed Application form
X		1	* Application fees
X		1	* Written description of project
X		1	* Evidence of right, title and interest
X		1	* Evidence of state and/or federal permits
X		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
X		1	* Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site
X		1	* Evidence of financial and technical capacity
X		1	Construction Management Plan
Pending		1	A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.
X		1	Written summary of significant natural features located on the site (Section 14-526 (b) (a))
X		1	Stormwater management plan and stormwater calculations
X		1	Written summary of project's consistency with related city master plans
X		1	Evidence of utility capacity to serve
X		1	Written summary of solid waste generation and proposed management of solid waste
X		1	A code summary referencing NFPA 1 and all Fire Department technical standards
X		1	Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual
X		1	Manufacturer’s verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST** **(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
		1	**Final Site Plans including the following:**
X		Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);	
X		Existing and proposed structures on parcels abutting site;	
X		All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;	
X		Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;	
X		Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;	
X		Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;	
X		Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;	
X		Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;	
X		Location of all snow storage areas and/or a snow removal plan;	
X		A traffic control plan as detailed in Section 1 of the Technical Manual;	
X		Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);	
X		Location and proposed alteration to any watercourse;	
X		A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;	
X		Proposed buffers and preservation measures for wetlands;	
X		Existing soil conditions and location of test pits and test borings;	
X		Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;	
X		A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;	
X		Grading plan;	
X		Ground water protection measures;	
X		Existing and proposed sewer mains and connections;	

- Continued on next page -

X		Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;
X		Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;
X		Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;
X		Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;
X		Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;
X		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
X		A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;
X		Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;
X		An exterior lighting plan in accordance with Section 12 of the Technical Manual;
X		A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;
X		Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

Ø HANCOCK STREET LLC
PO BOX 910
WESTBROOK, ME 04098-0910

(Please Place on Letterhead)

July 25, 2017

City of Portland
Planning Department
389 Congress Street
Portland, ME 04101

Subject: Proposed Thames Street Site Plan Development
Agent Authorization Letter

To Whom It May Concern:

0 Hancock LLC has retained Stantec Consulting Services Inc. (Stantec) to prepare Local, State and Federal Permit Applications for the above referenced project. Stantec and their subconsultants are authorized to act as an agent for matters related to these permits.

Sincerely,

MANAGER

Title

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1. DEVELOPMENT DESCRIPTION

1.1 PROJECT OVERVIEW

0 Hancock LLC has been selected by the City of Portland to acquire approximately 48,000 SF of City property located at the northeast corner of the intersection of Thames Street and Hancock Street. The prospective development site is currently used as a City managed surface parking lot. The proposed project includes a 102,027 SF, 4-story mixed-use building with a portion of the first floor and all upper floors designated as corporate office space for WEX and 5,000 SF of the first floor as retail space. The project is guided by the Eastern Waterfront Master Plan and is designed to allow permeability and accessibility across the site.

WEX has agreed on a long-term commitment to lease a minimum of 80,000 square feet in the building.

1.2 PROJECT PURPOSE AND NEED

The property is a prime location for a mixed-use development that takes advantage of proximity to the heavy foot and car traffic from the Old Port as well as expansive views of the harbor and accessibility to the City's adjacent parks and walking paths.

The advantages of the Property are highlighted in the Eastern Waterfront Master Plan (the "EWMP") for the Thames Street road extension and the site is best suited to be densely developed with office and retail space surrounded by pedestrian pathways and public plazas and amenities. A great benefit to the site is the natural slope of the East End of Portland, north of the Property, which allows for the creation of a denser urban fabric through height along Thames Street without creating a wall in front of the residential housing units.

The proposed project is for a 102,027 SF, 4-story mixed-use building with a 30,545 SF footprint. A portion of the first floor and all upper floors are designated as office space for WEX with a portion of the first floor designed as retail space to encourage pedestrian traffic and enhance and extend the retail segment of the Old Port. Both of these uses will bring hundreds of jobs to the City of Portland and will provide meaningful benefits to the City's economy and tax base.

This project would eliminate parking from the core of the site through the provision of parking at nearby locations owned and operated by the principals of 0 Hancock Street, LLC, including at the Ocean Gateway Garage and 100 Fore Street. The 100 Fore Street site and the Ocean Gateway Garage can accommodate, at a minimum, replacement parking for 53 City parking spaces and 117 public parking spaces lost as a result of the sale of the Property and approximately 320 parking spaces for employees of WEX.

Pedestrian and Public Outdoor Space: By eliminating parking on the property, the project creates the opportunity for higher density and more pedestrian and public outdoor space, including sidewalk extensions as outlined in the EWMP.

Public green spaces are included that create new walkable areas and landscaping which additionally helps buffer users from traffic. The public square will create a strong entrance to the retail portion of the property which would begin along Thames Street and turn and continue along the building's east side plaza to create multiple pedestrian entrances. The plaza would be a prime space to include plantings, street furniture, public art or a monument. The plaza will transition down to match grade on the remaining City property located further east of the site. The development activity will also match into existing grades along the north side and along the street frontage of Hancock and Thames Street.

In addition to ample public outdoor space created at the ground level, the proposal includes a large roof deck that will take advantage of the accessible roof space left behind due to the required height changes included in the B-6 Height Overlay. This large roof deck would create a prominent Casco Bay viewing area for the tenants of the property. This space is graphically depicted on the architectural renderings produced on behalf of the Applicant by Archetype PA.

Transportation: The EWMP conveys a strong interest in development, promoting multiple types of transportation. As the tenant for the property, WEX would bring with it hundreds of employees who would be able to take full advantage of the proximity of systems already in place, including the nearby ferry terminal, the walking and biking trail across the street and the bus stop at the corner of Atlantic and Fore Street. The retail portion of the property would also encourage the already in place pedestrian access joining the Old Port to the East End Path. As part of this application process, the Development Team including the Applicant and WEX representatives are working with Cushman Transportation Consulting, LLC to prepare a Transportation Demand Management Plan that will help WEX make best use of the site and the transportation systems available in the greater Portland area.

In addition to the systems already in place, bicycle storage could be added to the property, with exterior storage and racks in the plaza and entry locations, along with interior storage in the Ocean Gateway Garage or the potential 100 Fore Street parking facility.

The Community benefits provided by the project include the following:

- The Project will contribute to the redevelopment and revitalization of the area;
- The Project will provide a quality office use destination to complement other mixed-use activities in the nearby vicinity; and
- The Project will incorporate exterior site enhancements for outside Plaza space, landscaping, and related site amenities.

Archetype PA has prepared a narrative outlining many of the aforementioned benefits as well as others within the written narrative contained in Attachment A to this section.

1.3 EXISTING CONDITIONS

The total site area is 48,000 SF (1.10 acres) and the property is currently managed as a pay-for-parking surface lot (75-90 spaces) by the City of Portland. The site is bounded to the north by a parking lot associated with a commercial office building including such

tenants as the Veterans Administration and SMRT Architects. Additional City land and surface parking will remain east of the site. Hancock Street (west) and Thames Street (south) border the site. The site's historic use includes the Grand Truck Railroad yard that consisted of multiple tracks and portions of various structures, including a portion of former grain elevator #2, thought to reside on the site's easterly end.

Existing utilities are limited to some underground wiring for site lighting. Generally, public utilities for water, sewer, gas, power, and communications are located in the nearby vicinity.

A limited amount of infrastructure is anticipated to be removed and/or abandoned as part of the development of the site. Aside from abandoning the existing utilities and removal of various surface features, general site preparation is anticipated to be straightforward to include site grading, new utilities, drainage, building construction and site surface improvements for sidewalk restoration and landscaping. Early foundation preparation may involve the installation of stone piers to support traditional concrete foundations. It is anticipated the old abandoned foundations and related pipes may be encountered during the course of construction and appropriate actions will be taken to address these conditions.

Existing topography is relatively flat with elevations ranging from approximately 13.0 to over 15.0 based on NGVD 1929 vertical Datum. The lot is internally draining, meaning the lowest portion of the site is towards the east end of the site and the higher grades are around the perimeter. The site improvements will involve ground disturbance over the entire site. Summit GeoEngineering has been engaged to assist with a geotechnical investigation. Their initial findings include identifying soft marine clay soils underlying the site. The preliminary recommendations include the use stone filled piers to aid with addressing long term settlement potential. The details of the geotechnical/foundation program remain under discussion and are to be clarified over the next few weeks.

The site is within the Shoreland Zone of the Fore River. This portion of the Fore River is tidally influenced and has a mean annual high tide elevation of 7.4 (NGVD 1929) and a 100-year FEMA flood elevation of 10.0 (NGVD1929). Tidal information as determined by Owen Haskell, land surveyor is defined as follows:

- Mean High Water is Elevation 4.95
- Mean Low Water is Elevation is -4.95

The building finish floor elevation will be 14.75' (NGVD29) thus placing it greater than 2' above the 100-year flood level.

Photographs of the existing site conditions are contained in Attachment B.

1.4 ACCESS CONDITIONS

The development includes primarily a building development and there will be only a small service route to the rear of the building. There will be no onsite parking, as all parking will be provided at either the Gateway Garage or 100 Fore Street properties, both of which are owned by the Applicant. A single 12' vehicular access will be provided off Hancock Street to the rear of the site, to allow access to a loading overhead door at the

rear of the building. This route will connect with the remaining City land contained within a so-called Mountfort Street Extension, to be established by the city within their remaining land. Pedestrian access will be from the sidewalks along Hancock and Thames Streets.

1.5 UTILITIES

The development site will require utility service extensions from within Hancock and Thames Street. According to the City and utility provider's records, the following is available:

- Public water supply is available in Thames Street. A 6" fire service and a 4" domestic water service are proposed off an existing 12" water main in Thames Street. Existing fire hydrants are available within 500 feet of the site.
- A sanitary sewer service will tie into the existing 12" gravity sewer within Thames Street. A grease tank will also be installed for possible future use in the event that a restaurant goes into the building's retail space. A wastewater capacity request has been sent to the City's Public Works Division as part of this application.
- Three phase power is available from Fore Street within 300 feet of the site. An underground primary power service extension has been discussed with CMP and that will extend from their existing underground facility at the intersection of Fore Street and Hancock Street, north of the site. Similarly, underground communications and cable facilities are currently contemplated from in front of the Residence Inn along Fore Street to Hancock and to the site. An underground transformer vault will be installed beneath the Hancock Street sidewalk in front of the site and underground secondary power will be extended into the building. An emergency generator is proposed to be located at the rear of the building.

1.6 TOPOGRAPHY AND DRAINAGE

Owen Haskell, Inc. has completed a Boundary and Topographic Survey of the property. The site is relatively flat with the highest points along the Hancock Street frontage. The site grades range from Elevation 13' (NGVD 29) on the east end of the site to elevation 15' along the Hancock Street frontage.

The proposed building will have finish floor elevations established at elevation 14.75' which places it greater than 2 feet above the nearby Fore River 100-year flood elevation.

1.7 SOILS/GEOTECHNICAL REVIEW

A Geotechnical Investigation has been prepared by Summit GeoEngineering. It is anticipated the subsurface soils will consist of urban fill, marine clay, and sand. The current structural design planning is considering ground improvements to help reinforce ground conditions whereby traditional concrete spread wall and column footings can be utilized, and any pile supported foundations can be avoided.

1.8 PROPOSED DEVELOPMENT

The development program includes the following components:

1.8.1 ON-SITE

The proposed development will include improvements to the entire parcel which is approximately 48,000 SF in size. The proposed land cover is anticipated to be comprised of a 30,545± SF multi-story building footprint, a narrow circulation drive at the rear of the building, at-grade loading at an overhead door on the north side, various sidewalks/ pedestrian hardscape and plaza improvements, lawn, planted landscape features, and utilities services. The building's main entrance will be positioned on the west end, facing Hancock Street and the retail space will be accessed from a plaza space on the east end of the building.

The landscape Plaza area will contain both hard and landscaped surfaces. The hard surfaces may consist of patterned concrete or paver blocks while the landscaped areas are likely to contain various themes including plantings, fixed and non-fixed site measures including, but not limited to, benches, fencing, exhibits, etc. The north side of the site will include mostly hard surfaces consisting of pavement, grass pavers, or similar measures along with a less amount of vegetative landscaping. The Applicant realizes the importance of continuity and connectivity to the adjacent uses, parking, and pedestrian designs and they are working to assure the site is well integrated to the long-term vision of the site and nearby properties.

Multiple bicycle racks will be positioned nearby the building entrance. The exact styling and positioning of these site improvements including benches and related measures are being discussed and refined with the Owner and the Tenant. Additional information on these site features will be supplied to the City as the design is refined.

1.8.2 OFF-SITE

The offsite improvements include utility service extensions in both Thames Street and Hancock Street and various sidewalk improvements. Along Hancock Street, the existing sidewalk will be reconstructed as brick and an existing wide curb opening will be closed to create a new brick sidewalk condition in front the building. Along Thames Street, the existing bituminous asphalt sidewalk will be reconstructed and a new grass esplanade will be introduced behind the existing curb line to allow for grade differential along the building front and the street line. The intent is to raise the sidewalk nearly flush with the proposed building finish floor elevation, thus affording potential retail or office access from entry doors that might be installed in the future. The grade differential to the street varies from 6" to over 15", thus the esplanade will aid in overcoming this difference while maintaining the opportunity for continued parallel parking along Thames Street in front of the site. We note that the proposed office tenant is expected to utilize parking to be made available within the Gateway parking garage as the primary parking supply. It is expected that the parking supply within the garage will be available for long term WEX use as some short term (none contracted) parking tenants will be required to seek alternative parking locations. The Gateway Garage currently contains 720 parking spaces. Additional information related to parking is contained in subsequent sections of this narrative.

1.9 LAND ORDINANCE REVIEW

1.9.1 OVERVIEW

The project is located in the B-6 Zone. The proposed uses include:

- Professional business and general offices;
- Retail and retail service establishments; and
- Restaurants and other eating and drinking establishments.

These uses are all allowed by right in this zone.

The space and bulk criteria for the B-6 Zoning District are not overly restrictive. There is no minimum lot size, minimum frontage, minimum front yard, side yard, rear yard, or street setbacks in the B-6 Zone. The current proposal remains within the eastern waterfront Master Plan, the B-6 Building Height Overlay and Building Envelopes approved design parameters and no zoning relief is required. See additional information contained in the narrative within Attachment A for further background.

1.9.2 SHORELAND ZONING

The site is located within the Shoreland Zoning District. However, there are no specific restrictions related to vegetative clearing or resource setbacks given the nature of the site's historic 100% developed conditions.

1.10 TRAFFIC

Traffic Solutions LLC has been retained to assist with the preparation of any traffic analysis related to the development. We await a meeting with City officials to determine the data collection and analysis requirements for the project, given that the development parking will be provided at the Gateway Garage and that the parking is expected to basically displace existing parking demand already frequenting the garage. A more robust traffic analysis and possibly a Traffic Movement Permit Application will be provided to the City once the traffic consultant and peer reviewed discuss trip generation, parking, and related traffic data values.

1.11 PARKING DEMAND

The proposed development will include 450 office employees. The 4th Edition of the Institute of Transportation Engineers Parking Generation publication provide parking rates for a number of land use categories. LUC#701 Office Building suggests that the average peak period parking demand is 0.84 spaces per employee, which requires a total of 374 parking spaces based on a total of 450 employees. The City of Portland Code Section 14-332 outlines parking supply for various land uses as follows:

- *Offices; professional and public buildings: one (1) parking space for each four hundred (400) square feet or major fraction thereof, of floor area exclusive of cellar not used for bulk storage.*

  Based on an office area of approximately 97,027 SF this equates to 243 spaces.

- *Retail Stores: One (1) parking space for each two hundred (200) square feet of first floor area in excess of two thousand (2,000) square feet not use for bulk storage.*

  This equates to 15 parking spaces.

Based on the City Code, the parking supply required is 258 parking spaces. The Applicant is proposing to provide a total of 320 parking spaces for long term lease to WEX. We believe that the implementation of a robust Transportation Demand Management Plan achieves the objective of reducing the overall demand for parking from the facility, therefore the Applicant's stated parking supply at the Gateway Garage will be more than adequate to meet project demand. Further, the Applicant controls, by ownership the surface parking facility at the 100 Fore Street site, whereby an additional 50 to 100 parking spaces may be made available to the proposed development. These spaces are provided within a walking distance of less than 5 minutes to the site.

1.12 NATURAL FEATURES

The site contains no visible natural features or resources. The site's land use goes back greater than a century.

1.13 STATE AND FEDERAL PERMITS

The project as presented does not require any additional Federal or State level environmental site permits. The Development Team is working with Bill Bray of Traffic Solutions to ascertain the applicability of a Traffic Movement Permit and we are requesting further discussion with City Staff and the City's Traffic Peer reviewer, Tom Errico, on the data needs and information required to complete this determination. We look forward to working with Staff/Peer reviewer on this issue.

1.14 NOISE AND VIBRATION

The B-6 Zone has the following standards for noise and vibration:

(b) Noise:

"3. Maximum permissible sound levels: The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

a. Sixty (60) dBA between the hours of 7:00 a.m. and 10:00 p.m.

b. Fifty (50) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones."

(c) Vibration: Vibration inherently and recurrently generated shall be imperceptible without instruments at lot boundaries."

It is the Applicant's intention to comply with the noise and vibration standards above. Night time activity will be minimal. Temporary noise sources during construction will include construction equipment operations, pavement grinding, dump trucks delivering gravel/fill to the site and related noise.

The site is well separated from noise sensitive sites with no direct abutting impacts to abutting residential neighborhoods.

The site is surrounded by commercial uses as previously outlined.

1.15 LIGHTING

The primary purpose for site lighting for the site is for security in the vicinity of the buildings and to provide lighting at key building entry points. Security at the site may be supplemented by infrared cameras mounted on the building. Copies of the catalog cuts for the building mounted lighting is included with this submission as Attachment C. It is the Applicant's intent to work with City staff as to the replacement of various Street fixtures along the Hancock and Thames Street frontage for consistency with nearby development and the City's master plans.

1.16 EASEMENTS OR OTHER BURDENS

According to the Boundary Survey prepared by Owen Haskell Inc., the site is encumbered by a license agreement with Jackrabbit LLC as evidenced in Attachment D to this section. The terms of the agreement involve the creation of "Functionally Equivalent" access to Jackrabbit LLC. We understand this access will be created as part of the City's objective of creating a Mountfort Street Extension right of way, east of the proposed development site. We will continue to work with City staff as to the coordination between the proposed site development and use of adjacent City lands for access and parking.

1.17 STORMWATER MANAGEMENT

The site's stormwater regime consists of sheet flow conditions across the mostly paved and gravel surfaces. There is an existing catch basin located within the gravel lot east of the property and this catch basin appears to collect the majority of site generated runoff. The catch basin outlets through a 24" storm drain that ties into the Thames Street system. The Thames Street system discharges thru a 36" storm drain to a hydrodynamic separator before the outfall into the Fore River just east of the Gateway Terminal. The development will include the use of one or more roof drain filter boxes to treat runoff from the building area. These have been successfully used and approved by the City at other building locations including the nearby 185 Fore Street site and 16 Middle Street site. The Applicant is requesting a waiver of the City's Flooding Standards based on the site's location proximate to the Fore River.

1.18 EROSION AND SEDIMENT CONTROL

Temporary Erosion and Sediment Control measures are included as part of the plan documents. Temporary measures during construction are expected to be modest since there will be limited earthmoving involved. The primary emphasis will be on keeping paved areas clean and swept and existing drainage inlets protected during

construction. Dust control will also be a primary objective during the course of construction.

1.19 FLOODING

The project site has been depicted graphically on a portion of the FEMA Flood Insurance Rate Map and is provided as Figure 2 in Attachment B at the end of this section. The buildings will be constructed with a minimum finish floor elevation of 14.75 feet, which is greater than 4 feet higher than the 100-year flood elevation of 10.0 feet.

1.20 BLASTING

Based on previous soil investigation at the site, blasting is not anticipated for construction of the project. If blasting or rock removal is required, the contractor will be required to prepare a Blasting Plan and preblast survey prior to any rock removal.

1.21 AIR EMISSIONS/ODORS/VAPORS

Air emissions expected to occur as a result of, or within, the project area are as follows:

- Temporary emissions associated with construction vehicles and construction of project.
- Temporary emissions associated with vehicular travel of employees, delivery vehicles, travel lift, etc.
- Emissions associated with the heating systems for the building.

Odors will be generated during the construction phase of the development.

Short term odors or odors generated during construction include the following:

- Organic odors from earth moving during construction.
- Petroleum odors from construction equipment and vehicles used during construction for the project.
- These odors will emanate from the site and may be detectable in the immediate vicinity of the development but will dissipate through the air into the atmosphere in negligible amounts.

Long-term odors or odors generated during day to day operation of the facility are considered negligible considered the proposed office use.

These odors are not likely to be offensive, as they are of low intensity; therefore, no provisions for odor control are planned. However, appropriate ventilation procedures will be utilized on site for health and safety of staff as necessary.

Large scale water vapor emissions are not anticipated as part of this project.

1.22 SUNLIGHT

The proposed buildings at the site will not cast significant shadows onto neighboring residential properties, or block access to direct sunlight for structures utilizing solar energy. The Site Layout Plan and Grading and Drainage Plan show the proposed site improvements and their relationships to property lines. The grading plan shows the relative elevations of the buildings with respect to elevations along the property lines.

1.23 ATTACHMENTS

Attachment A – Architect's Narrative
Attachment B – Figures and Site Photographs
Attachment C – Lighting Catalog Cuts
Attachment D – Jackrabbit LLC License Agreement

ATTACHMENT A

Architect's Narrative

0 Hancock Street

Planning Board Workshop

The following write-up on 0 Thames Street reviews how the proposal responds to the city, the community and the Master Plan for Redevelopment of the Eastern Waterfront including the specific strategies, goals and amenities of the project and design direction. Highlights of the project will be emphasized with acknowledgements on how the project will move forward from this point.

How the project responds to the city, the community and the Master Plan for Redevelopment of the Eastern Waterfront:

The proposal for the development at the corner of Hancock and Thames is one of mixed-use including office space, to be rented to Wex as its global headquarters, as well as over 5,000 S.F. of retail space. The site's proximity to the heavy foot and car traffic of the Old Port makes it an ideal location for both uses – offering an exciting and amenity-filled location for Wex employees and a prime location to continue to extend the commercial hub and help connect it to the, already in place and growing, public park and path system. The use of the building and the design respect and contribute to the urban fabric of the city.

The location is also responsive to and supportive of current and proposed pedestrian and vehicular traffic patterns. The site design includes multiple paved and planted plazas as well as an access road wrapping the back side of the building that also functions as a pedestrian and bike path. It is a direct link between the quickly developing residential and hotel filled blocks behind the site and the Eastern Promenade Trail. The proposal is intentionally sensitive to the vehicular traffic patterns of the city and recognizes both the existing and proposed future grid of the streets that includes possible Thames and Mountfort extensions.

The owner of 0 Hancock is also the owner of the Gateway Garage and 100 Fore Street meaning that there is existing and available multi-level and grade level parking as well as an area for potential development of more multi-level parking. This ties directly into the EWMP goals to reduce grade level parking and keep the parking set back from critical waterfront sites. It enables all of 0 Hancock to be utilized for the mixed-use purposes and sitework that will enhance the area.

Not only is the project sensitive to pedestrian and vehicular traffic, but it also takes advantage of other forms of transportation located nearby and encourages use of them both for the public and its tenants. Aside from being easily accessible by foot or car, the site is located adjacent to bike paths and routes and will offer exterior bike racks for the public and tenants as well as interior bike storage at the Gateway Garage for tenants. To encourage multi-modal transportation, the fit-up will include showers and changing areas. 0 Hancock is only a short walk from the ferry terminal and bus stops. In addition to access to public and private transportation, the site is located across the street from the Ocean Gateway giving it high visibility and accessibility to the many cruise ship visitors which is beneficial to the retail component.

The major and most notable material used in the design is glass. The perimeter with views of the water is clad mostly in curtain wall which transitions to large runs of glass and punched openings as the building turns back towards the East End. In contrast to the many brick buildings of the Old Port and the wood clapboard clad 3 flats of the east end, the addition of a largely glass building adds a timeless design to the fabric of the area. Unlike opaque building materials glass creates a very strong connection between the interior and the exterior and the private and public. The reflectivity of the façade causes the appearance of the building to change with the day and the season and its transparency allows it to showcase the everchanging interior. The skin is much more linked to its current surroundings and interior rather than a specific time period and style.

The height and volume of the proposed building are in direct response to the EWMP and the height overlay zone. The building's peeling back from the corner of Thames and Hancock and stepped massing keep it in scale with its surroundings, and both of these design elements and the high level of glazing make it particularly sensitive to the view corridors and pedestrian experience. Because of the large footprint of the project (30,000 S.F.), it has been broken down into three distinct masses, denoted by step backs, roof and parapet height and glazing/curtain wall treatment. The three masses can be read from the corner of Thames and Hancock, and although they help to scale the building, the materials and relationships create continuity between the three masses to tie them together as a single design.

The specific strategies, goals and amenities of the project:

At the site level of the project there are several important highlights of the design, some of which tie back into the goals of the EWMP. The strategy to eliminate the need for surface parking and consolidate it into efficient structures that are not a public street edge or critical waterfront is key. Because of the amazing location with its proximity to the water and its ensured water views and visibility and accessibility, as much of the site as possible should be given to the tenants and public and not used for the storage of vehicles.

Another positive aspect of the site is its location at the lowest point of the slope that is the east end. The building is able to stand 3 and 4 stories high without blocking the views of neighbors located further from the water but at a higher elevation.

The landscaping of the site shows greening of as many areas as possible creating life at all edges including the roof not unlike the deck of a boat and takes full advantage of the views, sounds and energy of the harbor. The 'vest pocket' park acts as an extension of the Eastern Promenade Trail and the proposed Amethyst Park drawing interest into and around the site. The importance of greening the site is reflected in details such as the access drive including grass pavers and a green screen to act as fencing between it and the neighboring parking.

The building design at the pedestrian level breaks down in massing and scale along the street through setbacks and manipulation of the curtainwall system. The main entrance for the office space is denoted by a step back in the façade that continues all the way through roof level. Along Thames Street there are large glazed areas that read as separate sheets of glass reaching up past the roof towards the sky as they create a transparent wind block for the large roof deck. Although there are three distinct sections of this façade, two of these terminate at the second level allowing the building to step back

underneath itself at angles – the office portion facing towards the islands and the retail towards Commercial Street. Finally, at the plaza on the northeast end of the building the first floor is again pushed back under the upper floors, this time with a curved wall allowing the building to create a strong edge for the plaza. These pushed back portions create a strong relationship between the exterior and interior and draw people to the retail component while creating covered transition spaces.

Not only does the massing increase the exterior/interior relationship but the daytime/nighttime interaction with the city is crucial to the design. During the day, the skin system engages and naturally reflects its surroundings and at night (or the afternoon as our latitude causes in the winter months), the same skin becomes transparent revealing the activity of the interiors and acting as a beacon that is visible from many directions due to siting. This causes the building to be a natural 'landmark' as it is set apart from the more opaque and non-reflective buildings surrounding it -The Ocean Gateway and the new ferry terminal are other newer projects which have used glazing in a similar fashion. The interior and exterior lighting designs will be critical and can be used to create a sensitive and elegant 'landmark'.

The transition in building skin treatment reflects the changing nature of the context. The curtain wall is a transparent face to the sea and responds to the open reflective expanses and modern terminal architecture while the punched openings facing the city are responsive to the historic building context of Portland and the city fabric. Where the wall becomes more solid, the insulated metal panels will still have amounts of reflectivity based on finish so that light will constantly be changing the appearance of the building.

Highlights of the building:

In summary:

The sensitive management of parking reserves the valuable site for the most appropriate uses.

The development of strong exterior spaces and attention to detail in greening the site creates public spaces that seamlessly tie into the existing and proposed surrounding parks and paths and take full advantage of the views and amenities offered.

The roof deck furthers the development of outdoor space at the private level and making the best use of the stepped massing of the building as required by zoning.

The transition from transparent to punched openings is responsive to the varied context – the sea and the city.

There is a strong interaction between the building interior and exterior that is promoted by skin concept, public spaces and access.

The mixed-use proposal and site plan activate the area from early morning through the evening both drawing from its surroundings and enhancing them as well.

Areas still being worked on that will greatly enhance the final design:

Although the massing and skin and site plan of the building have been brought to the table after many revisions, there are still elements being worked through that will be important to the final design of the project.

Finalizing the color and finish of all skin systems will be an important element as well as what connection system is used and where.

Because of the amount of glazing, sun control will also be a large component of the final fit-up.

The plazas and roof deck are great amenities of the building. Mohr & Seredin is the Landscape Architecture team on the project and they will continue to further the planting/paving schemes.

The interior fit-up is being done by SMRT and there is a very open dialogue between the core & shell team and SMRT to make sure that there is integration of the interior, exterior, experience and perception from both sides of the skin. This will hold true for both the office space and the retail space.

ATTACHMENT B

Figures and Site Photographs

N
W E
S

LOCATION MAP
THAMES STREET SITE - PORTLAND, MAINE

SOURCE: U.S.G.S.

Stantec
482 Payne Road Scarborough Court
Scarborough, Maine 04074-8929
Tel. 207.883.3355
www.stantec.com

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The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
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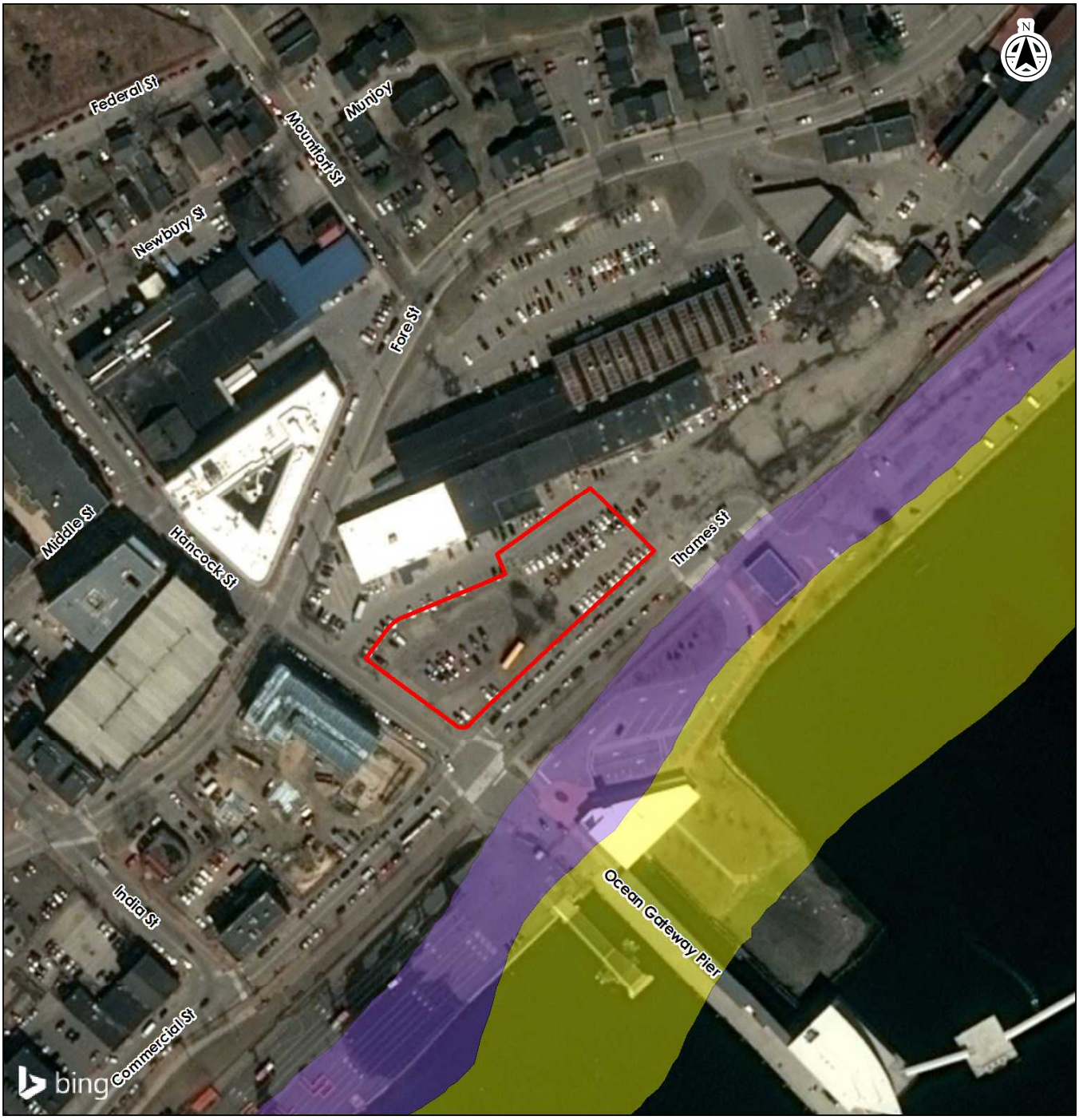
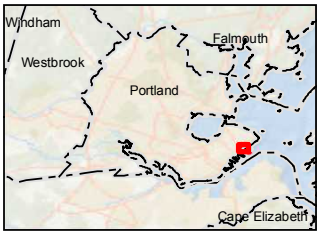
DRAWN:	PBF
CHECKED:	SRB
DATE:	8/9/2017
FILENAME:	50450_loc_figure
SCALE:	N.T.S.

FIGURE

1

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195350450\03_data\gis_cad\gis\MXDs\50450_FEMAMap_8.5x11.mxd Revised: 2017-08-11 By: khoward





Legend

Approximate Project Boundary

FEMA Flood Hazard Layer (Q3)

100 Year Flood Zone (Zone AE)

100 Year Coastal Flood Zone (Zone VE)

0 200 Feet

1 inch = 200 feet (At page size of 8.5"x11")

Stantec

Project Location
Hancock St. and Thames St.
Portland, Maine

195350450
Prepared by KWH on 2017-08-11
Review by CD on 2017-08-11

Client/Project
0 Hancock Street LLC
WEX Development
Site Development

Figure No.
2

Title

FEMA Flood Insurance Rate Map

Notes

1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. FEMA Flood Hazard data provided by Maine Office of Geographic Information (MEGIS).
3. Aerial imagery provided by ArcGIS Online Bing Maps web mapping service. (http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

PHOTO 1 – Thames Street Frontage

PHOTO 2 – Hancock Street Frontage

Stantec

Stantec Consulting Services Inc.
482 Payne Road, Scarborough Court
Scarborough ME 04074-8929
Main: 207.883.3355 Fax: 207.883.3376

Thames Street Property, Portland, Maine
Site Photos Taken by Steve Bushey – 08/10/17
(Stantec JN 195350450)

PHOTO 3 – Aerial view from Gateway Garage

PHOTO 4 – Aerial view from Gateway Garage

Stantec

Stantec Consulting Services Inc.
482 Payne Road, Scarborough Court
Scarborough ME 04074-8929
Main: 207.883.3355 Fax: 207.883.3376

Thames Street Property, Portland, Maine
Site Photos Taken by Steve Bushey – 08/10/17
(Stantec JN 195350450)

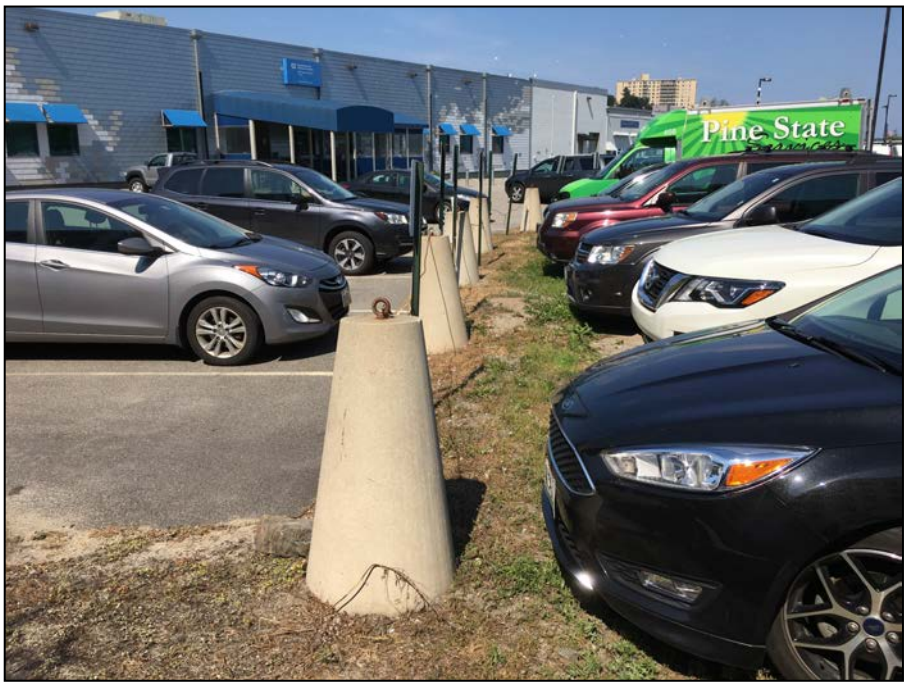


PHOTO 5 – North Side

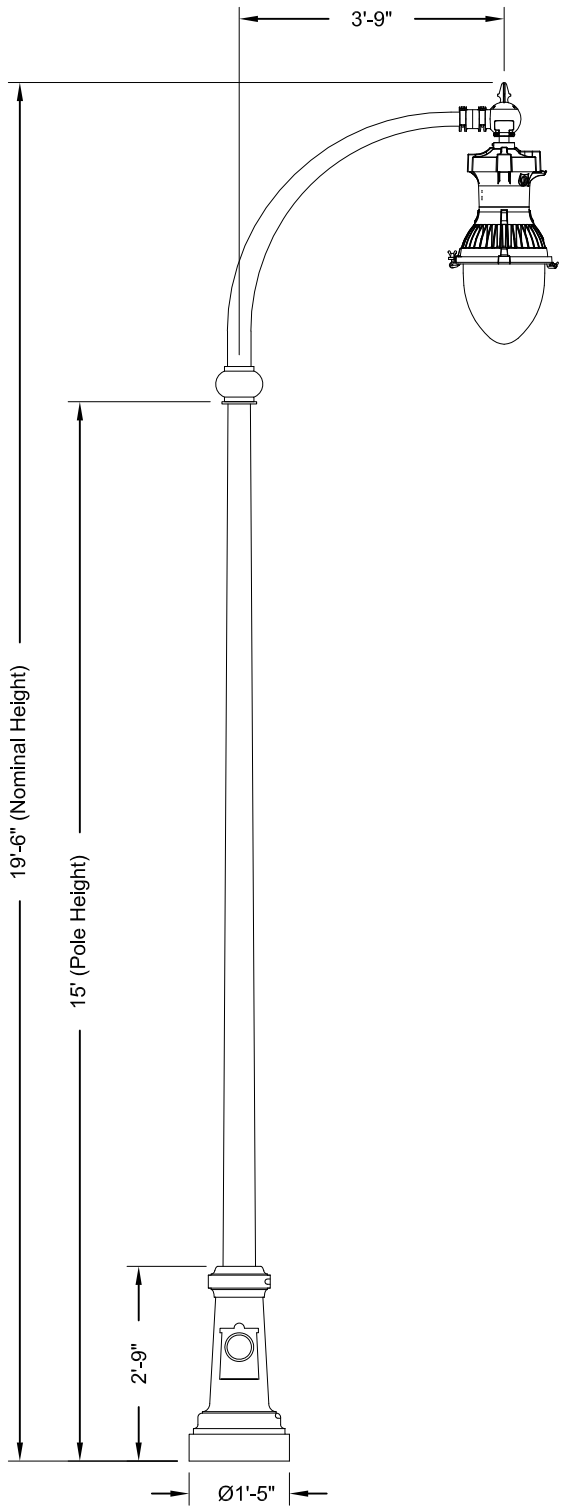
Stantec

Stantec Consulting Services Inc.
482 Payne Road, Scarborough Court
Scarborough ME 04074-8929
Main: 207.883.3355 Fax: 207.883.3376

Thames Street Property, Portland, Maine
Site Photos Taken by Steve Bushey – 08/10/17
(Stantec JN 195350450)

ATTACHMENT C

Lighting Catalog Cuts



Specifications

GENERAL DESCRIPTION
The lighting post shall be all steel, one or two piece construction, consisting of a tapered shaft welded to a steel anchor base. The post shall be provided with (1) OUC roadway arm, 45" from post center to luminaire center, (1) Boston Harbour QSM leveling fitter, and (1) Cambridge style Ø17"clamshell base.

MATERIAL
The shaft shall conform to ASTM A595 Grade-A and is supplied in .1196" thickness. The anchor base is fabricated from structural quality hot rolled carbon steel plate conforming to ASTM A36. The base plate telescopes the pole shaft and is circumferentially welded top and bottom.

DIMENSIONS
The post shall be 15'-0" in height with a 10" square base. An integral Ø3.5"x8" tenon will be provided for arm mounting.

WIRE ACCESS
A reinforcing handhole rim is provided on the post and is made of a rectangular shaped tubing material. It is provided with one or two steel attachment bars, steel cover, and one or two round head machine screw. The handhole is welded in the post shaft and is located above the base.

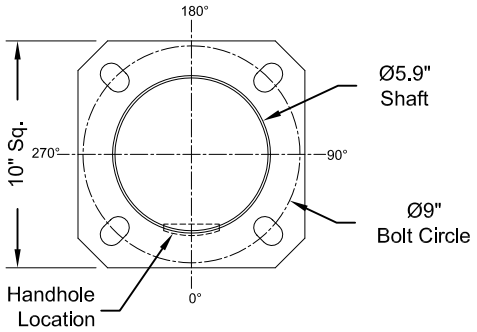
INSTALLATION
The post shall use four L-type anchor bolts (anchor bolts by others) . Anchor bolts shall be installed on a Ø9" bolt circle.

FINISH
The pole assembly shall have a standard Holophane black finish.

LUMINAIRE DESCRIPTION
- Esplanade Utility LED
- 110W System, 4K CCT, Auto-Sensing Voltage (120-277)
- Black finish, Asymmetric Teardrop Type Glass
- Quick Lock Stem Mount, Shorting Cap, Extended Life Driver
- NEMA Twistlock Photocontrol Receptacle

For complete standard specifications, please see LUM_ESL.

Anchorage Detail



DO NOT USE TO SET ANCHOR BOLTS
CONTACT CUSTOMER SERVICE FOR TEMPLATE

Catalog #'s:
RFD108969
Pole: DS210590AU617A
Clamshell Base: CM17CSBU617A
Roadway Arm: OUC45/1CABKH
STANDARD MATERIAL
Fixture: ESL1104KASB4SPSCREL
Fitter: BHDF13200BK

Customer Signature **Date**

HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS
An AcuityBrandsCompany

City Of Portland
Portland, Maine

ORDER #: 2066-14-10519-1	TYPE:	DRAWING #: TSG 009221
REVISION:	REVISION DATE:	
DRAWN: MAB	ORIGIN DATE: 10/27/15	PAGE: 1 of 1

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING, ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED. THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

VIPER S SERIES

SMALL VIPER LUMINAIRE

Cat.#	
Job	Type

BEACON design . performance . technology

Approvals

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- Manufactured with die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

Electrical:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is ≥.90 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher.
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.
- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night (see www.beaconproducts.com/products/energeni).
- In addition, Viper can be specified with **SiteSync™** wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/sitesync for more details.

Installation:

- Mounting options for horizontal armd, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- IFS polyester powder-coat electro-statically applied and thermocured.
- IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermosetsuper TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Certified to UL 1598 and CSA C22.2 No.250.0
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://www.beaconproducts.com/products/vipersmall

Warranty:

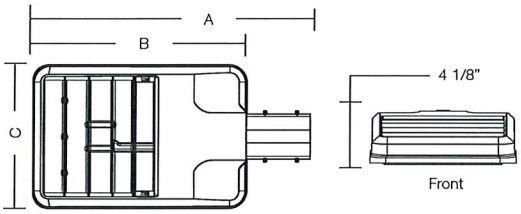
Five year limited warranty for more information visit: www.hubbelllighting.com/resources/warranty

CERTIFICATIONS/LISTINGS

*3000K and warmer CCTs only

PRODUCT IMAGE(S)

DIMENSIONS

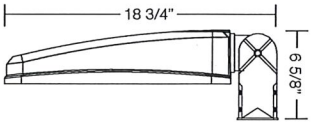


A	B	C	Weight:	EPA
22.75" (578 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

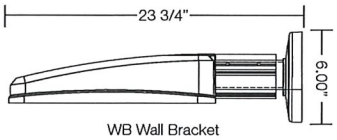
MOUNTING OPTIONS

Side View RA Rectangular Arm *Back View*

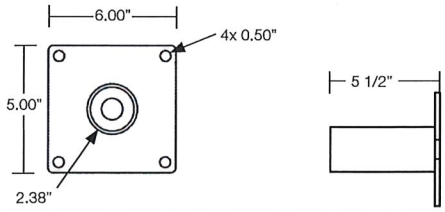
Side View SF2 2-3/8" OD Slip Fitter *Back View*



PK2 2-3/8" Adjustable Knuckle



WB Wall Bracket



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HUBBELL Lighting

ORDERING INFORMATION

ORDERING EXAMPLE: VPS/36NB-80/5K/T4/UNV/PCR-TL/SWP/BLC/RA/BBT

VPS

SERIES

VPS viper-small

ENGINE-WATTS

24NB-55 55W, LED array
30NB-70 70W, LED array
36NB-80 80W, LED array
48NB-110 110W, LED array
60NB-136 136W, LED array

LED COLOR[8]

3K 3000K
4K 4000K
5K 5000K

OPTICS[4]

T1 type I
T2 type II
T3 type III
T4 type IV
T5R type V, rectangular
T5QM type V, square medium
T5W type V, round wide
FR front row auto optic

VOLTAGE

UNV 120-277V
347V 347V
480V 480V

ELECTRICAL OPTIONS

PCR-TL Twist lock receptacle with photo control
PCR-SC Twist lock receptacle with shorting cap
PCRU Twist lock receptacle
2PF[7] dual power feed

CONTROL OPTIONS

GENI-XX[6] Energeni
SWP[1,5] SiteSync Wireless Pre-Commission
SWPM[1,2,5] SiteSync Wireless Pre-Commission w/ Motion Detection
MDD[2,5] Motion Dimming Detector

HOUSE SIDE SHIELD OPTIONS

BLC[3] backlight control

BIRD DETERRENT

BSP bird spike

MOUNTING OPTIONS

RA rectangular arm for round or square pole mount. RPA included.
SF2 2 3/8" OD slip-fitter
PK2 2 3/8" adjustable knuckle
WB wall bracket (use with SF2 or PK2), SF2 standard

FINISH

BBT basic black textured
BMT black matte textured
WHT white textured
MBT metallic bronze textured
BZT bronze textured
DBT dark bronze textured
GYS gray smooth
DPS dark platinum smooth
GNT green textured
MST metallic silver textured
MTT metallic titanium textured
OWI old world iron
RAL _____

[1] Must specify group and zone information at time of order. See www.hubbelllighting.com/controls/sitesync for further details.
[2] Specify time delay; dimming level and mounting height.
[3] T4 optic only.
[4] To rotate optics Left or right 90 degrees, specify L or R after the optical distribution example T4L.
[5] Not available with other wireless control or sensor options.
[6] When ordering Energeni, specifiy the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[7] Not available for 347V or 480V input.
[8] This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://cdn.beaconproducts.com/content/products/specs/specs_files/Viper_Small_LED_turtle_spec_sheet.pdf

PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: VP-S/24NB-55/5K/T3/UNV/SWP/RA/DBT — SiteSync only
VP-S/24NB-55/5K/T3/UNV/SWPM-20F/RA/DBT — SiteSync with Motion Control

MDD ORDERING INFORMATION: When ordering a fixture with the motion detection option (MDD), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

VP-S/24NB-55/5K/T3/UNV/MDD - 1 to 30 min. - 33% or 50% - ?? / RA/DBT

High to Dim Delay — Low Level — Mounting Height (ft.)

Accessories and Services (Ordered Separately)

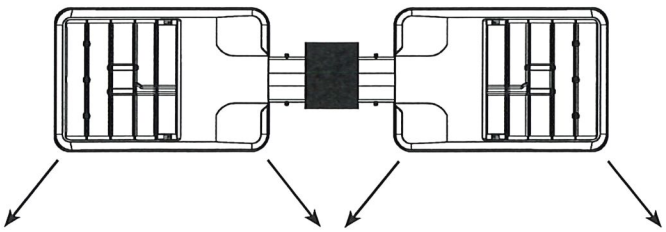
Catalog Number	Description
SWUSB*	SiteSync loaded on USB flash drive (Windows based only)
SWTAB*	SiteSync Windows Tablet
SWBRG+	SiteSync Wireless Bridge Node

*When ordering with SiteSync, one of the following interface options must be chosen and ordered separately. Each option contains the SiteSync License, GUI and Bridge Node.
+ If needed, an additional Bridge Node can be ordered.

DesignLights Consortium qualified.
Consult DLC website for more details:
http://www.designlights.org/QPL

SiteSync Lighting Control is available from our most popular brands in a broad range of award-winning product families.

LEFT ROTATED OPTIC **RIGHT ROTATED OPTIC**



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ATTACHMENT D

Jackrabbit LLC License Agreement

LICENSE AGREEMENT

This LICENSE AGREEMENT is made between the **City of Portland**, a body corporate and politic located at 389 Congress Street, Portland, Maine (hereinafter the "City"), and **JACKRABBIT, LLC**, a Maine limited liability company with a mailing address of 44 Oak Street, Portland, Maine, 04101 (hereinafter "Jackrabbit").

WHEREAS, the City and Jackrabbit each own property adjacent to Jackrabbit's building located at 144 Fore Street in the City of Portland, Maine; and

WHEREAS, the City wishes to have access to a portion the Jackrabbit's above-described property (hereinafter the "Jackrabbit Property"), and Jackrabbit wishes to have access to a portion of the City's above-described property (hereinafter the "City Property") for the purposes of vehicular traffic, travel and parking as described in the Agreement;

NOW THEREFORE, the City does hereby grant to Jackrabbit, its successors and assigns in ownership of the Jackrabbit Property, a revocable license to enter upon and to use the City Property for the purpose of vehicular traffic and travel, and Jackrabbit does hereby grant to the City, its successors and assigns in ownership of the City Property a revocable license to enter upon and use the Jackrabbit Property for the purpose of vehicular traffic, travel and parking, subject to the following terms and conditions:

1. **Location.** The City Property and Jackrabbit Property are described and delineated in Exhibit A, attached hereto and incorporated herein by reference.

2. **Use of City Property by Jackrabbit.** The City Property shall be used by Jackrabbit as shown on Exhibit A attached hereto for vehicular traffic, travel and minimal parking related to Jackrabbit's ownership and Jackrabbit's and his tenants' and invitees' use of Jackrabbit's building located at 144 Fore Street, only. All of Jackrabbit's parking shall be immediately adjacent to the building located at 144 Fore Street and at either end of the building, as shown on Exhibit A attached hereto. Vehicles shall not block the flow of traffic in the shared travel lane. Any vehicles that park on City Property not in accordance with this paragraph and do not display a City hang tag or permit will be subject to ticketing, booting and towing at the City's discretion. All use of the City's Property by Jackrabbit must be in compliance with state and federal law, and local ordinance, including but not limited to local land use ordinances.

3. **Use of Jackrabbit Property by the City.** The Jackrabbit Property shall be used by the City as shown on Exhibit A attached hereto for vehicular traffic, travel and parking related to the City's activities, including but not limited to providing parking for users of the Eastern Promenade Trail after 5:00 p.m. Monday through Friday and all day on weekends and holidays. All use of the Jackrabbit Property by the City must be in compliance with state and federal law, and local ordinance, including but not limited to local land use ordinances.

4. **Signage.** Jackrabbit agrees to post signs on or around its building located at 144 Fore Street, at its own expense, indicating that parking adjacent to the building is reserved for tenants and customers of the building.

5. **Maintenance.** Jackrabbit shall be responsible for maintenance and repair,

including snow plowing and removal, of the Jackrabbit property and the shared travel lane indicated on Exhibit A. City shall be responsible for maintenance and repair, including snow plowing and removal, of the City property.

6. **No Fees.** Jackrabbit shall be liable for no fees for its use of the City Property in accordance with this License Agreement, and the City shall be liable for no fees for its use of the Jackrabbit Property in accordance with this License Agreement.

7. **Event Revenue.** Jackrabbit shall retain any revenue from parking for special events only for parking spaces located on Jackrabbit property. The City shall retain any revenue from parking for special events for parking spaces located on City property.

8. **Insurance: City.** City is self insured and any claims which are the responsibility of the City under this agreement shall be covered by said self insurance fund.

9. **Insurance: Jackrabbit.** Jackrabbit shall procure and maintain throughout the term of this License Agreement, or provide through its contractor(s), comprehensive general liability insurance in the minimum amount of Four Hundred Thousand Dollars ($400,000) covering Jackrabbit's activities hereunder and naming the City as an additional insured thereon. In addition, Jackrabbit shall provide evidence of automobile liability insurance in said minimum amount, and workers compensation insurance in the statutory amount, if applicable. All contractors to Jackrabbit performing work under this License shall provide the City with evidence of the above insurance coverages with the City as an additional insured, and workers compensation and employers liability insurance in the statutory amounts which shall have an endorsement waiving subrogation against the City. Such contractor insurance may be in place of that required of Jackrabbit so long as it remains in effect and names the City as an additional insured.

Certificates evidencing such insurance policies shall be delivered to City and shall provide the City with no less than thirty (30) days prior notice of cancellation or non-renewal.

All insurance policies hereunder shall be primary to any insurance, or self-insurance, maintained by City.

10. **Effective Date.** This License is effective as of the date of execution.

11. **Term.** This license shall have a term of ten (10) years and shall automatically continue for successive ten year periods unless the parties agree upon and establish functionally equivalent access to the Jackrabbit Property or the affected portion of it on terms similar to this Agreement as mutually agreed upon by Jackrabbit and the City. If the parties fail to agree, then on written notice from either party any dispute shall first be submitted to nonbinding mediation by a single mediator. If no mediation occurs or if no agreement is reached within 30 days thereafter, then on written notice from either party the dispute shall be submitted to arbitration, to a single arbitrator to be agreed upon within 20 days of the date on which the notice is served. If the parties cannot agree on a single arbitrator then on written notice from either part the dispute shall be submitted to a panel of three arbitrators and the notice shall specify the name and address of the person designated to act as an arbitrator on its behalf. Within 20 days after the service of such notice, the other party shall specify the name and

address of the person designated to act an arbitrator on its behalf. If the other party fails to notify the initiating party of the appointment of its arbitrator within the time above specified, then the appointment of the second arbitrator shall be made by the first arbitrator. The two arbitrators so chosen shall meet within 15 days after the second arbitrator is appointed and if, by 30 days after the date of the appointment of the second arbitrator, the two arbitrators shall not agree upon a resolution of the dispute, they shall together appoint a third arbitrator. The three arbitrators shall meet and render a decision within 30 days after the date of the appointment of the third arbitrator. The decision of a majority of the arbitrators shall be final. All arbitrators appointed must be employed or active in the real estate industry, including without limitation, as managers, real estate brokers, bankers, attorneys, developers, investors or otherwise.

The party's shall share the costs of providing a functionally equivalent access equally, but if the City's proportionate share based on the original square footage of the portion of the access relocated on its land to all of the original square footage of the access from the City to Jackrabbit access is less, then it shall pay the lesser share.

12. Termination. In the event either party does not comply with the terms of this Agreement, the aggrieved party must first request the other party to cure the problem. In the event the problem is not cured within thirty (30) days, the party can terminate the Agreement upon thirty (30) days written notice.

Any notice of an Event of Default delivered pursuant section 12 of this license agreement must be sent by certified mail, return receipt requested to Jackrabbit at the address for Jackrabbit set forth above, or at such other address as Jackrabbit may provide to the City in writing from time to time. In addition following a notice sent to the City by certified mail, return receipt requested, by a party identifying itself as the holder of a mortgage on Jackrabbit's Property, the City shall concurrently send such mortgagee a copy of any notice of an Event of Default which the City sends to Jackrabbit.

Notwithstanding any other provision herein, in the event that a notice of an Event of Default is delivered to Jackrabbit pursuant to section 12 hereof, any mortgagee of Jackrabbit's Property who has identified itself to the City shall be entitled to cure such default within the time frames set forth above, and the City agrees to accept such performance by any such mortgagee of Jackrabbit's obligations hereunder.

In the event the adjacent Thames Street Lot, owned by the City, is redeveloped and the use of City Property by Jackrabbit pursuant to this Agreement presents an encumbrance to redevelopment of said lot, the City shall provide Jackrabbit and any mortgagee of Jackrabbit's Property who has identified itself to the City one (1) years notice of termination of this Agreement, provided that the City must provide functionally equivalent access to the Jackrabbit Property on terms similar to this Agreement in order for such notice of termination to be effective.

In the event the City takes by eminent domain proceedings a portion of the Jackrabbit Property necessary for a future extension of Mountfort Street, then this License shall terminate with respect to that portion of the License area necessary for such extension of Mountfort Street, and the City shall not be required to pay damages for such partial

termination or for any increased value of the portion of the Jackrabbit Property so taken attributable to this License Agreement.

12.No Interest in Land. The City shall have no authority to modify or make any changes to the Jackrabbit Property subject to this License without the prior consent of Jackrabbit, and Jackrabbit shall have no authority to modify or make any changes to the City Property subject to this License without the prior consent of the City, provided that the parties hereby consent to the changes identified in the City's minor site plan approval issued on August 16, 2010.

13. This Agreement amends and restates in its entirety a prior License Agreement between the parties dated October 14, 2010.

Dated as of January 21st, 2011

JACKRABBIT, LLC

By: _____
name: Pres. Mike Marino
its Pres

CITY OF PORTLAND

By: _____
name: Joseph E. Gray, Jr.
its City Manager

STATE OF MAINE
CUMBERLAND, ss.

January 21, 2011

PERSONALLY APPEARED before me the above named Mike Marino in his said capacity, 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.

Barbara J. Brewer
Notary Public/~~Attorney at Law~~
Print name: Barbara J. Brewer

STATE OF MAINE
CUMBERLAND, ss.

January 21, 2011

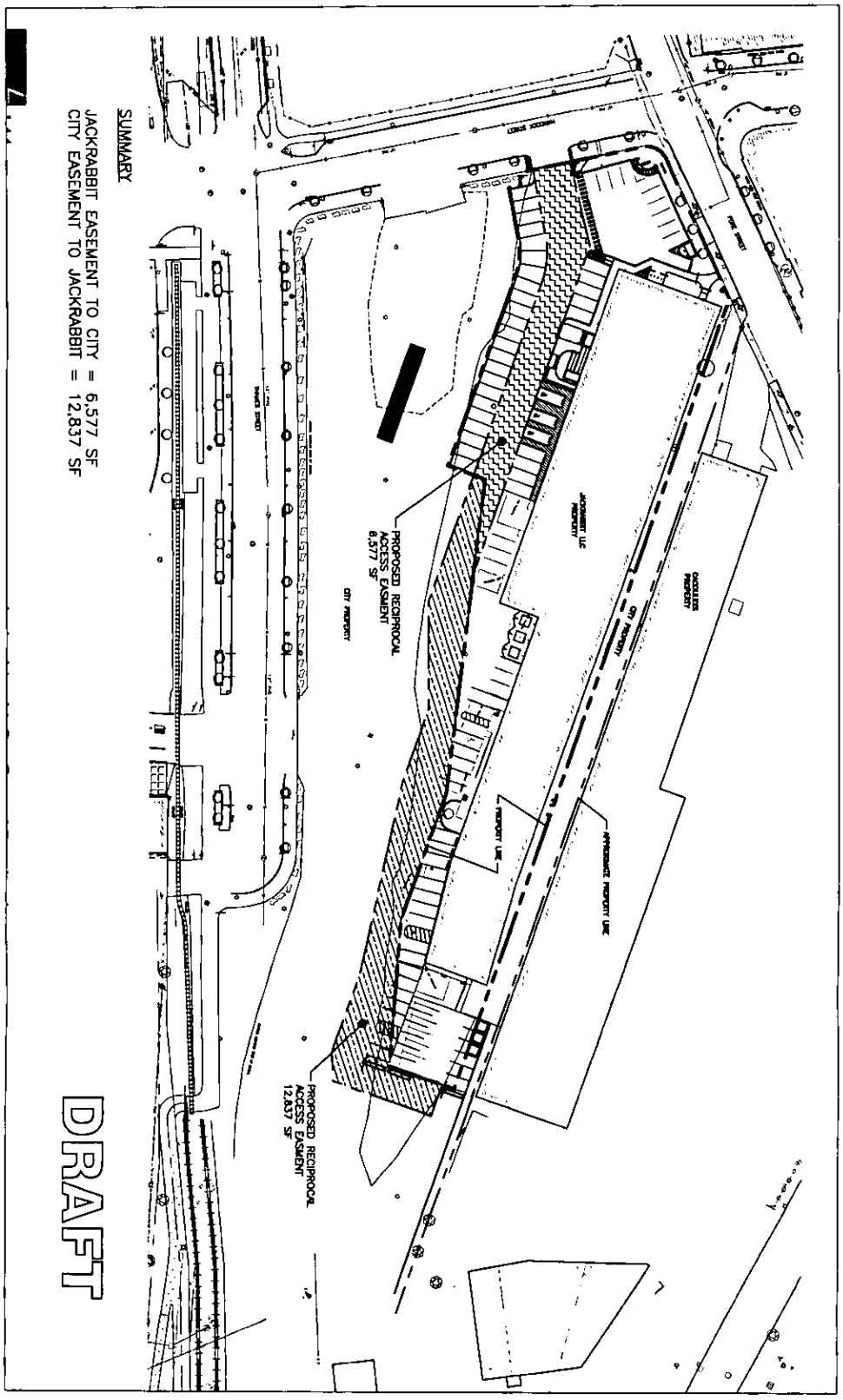
PERSONALLY APPEARED before me the above named Joseph E. Gray, Jr. in his/her said capacity, and acknowledged the foregoing instrument to be his/her free act and deed and the free act and deed of the City of Portland.

Sonia T. Bean
Notary Public/~~Attorney at Law~~
Print name:

License City of Portland Jackrabbit REV LRC 1-11-2011
1/20/2011 12:10 PM

SONIA T. BEAN
Notary Public, Maine
My Commission Expires January 10, 2017

Exhibit A



Received
Recorded Register of Deeds
Jan 27,2011 02:48:05P
Cumberland County
Pamela E. Lovley

2. RIGHT, TITLE AND INTEREST

2.1 OVERVIEW

As evidenced by recent media reports[1], the Applicant is currently working with City officials on the purchase of the proposed development site. We understand that upcoming City Council meeting(s) will solidify that selection process and that because of the time is of the essence circumstances involved with projected building construction and occupancy, the City has agreed to accept these application materials for initial processing with the understanding that formalized land transfers agreements are imminent.

2.2 ATTACHMENTS

Attachment E – City Authorization Letter (will be submitted upon City Council Action)

[1]See http://www.mainebiz.biz/article/20170728/NEWS01/170729950/1100?utm_source=enews&utm_medium=WeeklyReport&utm_campaign=Thursday

ATTACHMENT E

City Authorization Letter
(To Be Submitted Upon City Council Action)

3. TECHNICAL AND FINANCIAL CAPACITY

3.1 TECHNICAL CAPACITY

The Applicant has retained a highly-qualified team of professionals to undertake planning, permitting and design tasks on this project. Services will be provided by the following companies and their respective team leaders

3.2 CONSULTANT TEAM

Civil Engineer	Stephen Bushey, P.E. Stantec 482 Payne Road Scarborough, ME 04074 (207) 887-3478 – Work (207) 883-3355 – Fax stephen.bushey@stantec.com
Surveyor	John Swan Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, ME 04105 (207) 774-0424 – Work (207) 774-0511 – Fax jswan@ownehaskell.com
Architect	Bill Hopkins Archetype, PA 48 Wharf Street Portland, ME 04101 (207) 772-6022 – Work (207) 772-4056 – Fax hopkins@archetypepa.com
Landscape Architect	Stephen Mohr Mohr & Seredin 18 Pleasant Street Portland, ME 04101 (207) 871-0003 – Work (207) 871-1419 – Fax smohr@mohrseredin.com
Geotechnical Consultant	William Peterlein, P.E. Summit Geoengineering Services 145 Lisbon Street, Suite 601 Lewiston, ME 04240 (207) 576-3313 – Work bpeterlein@summitgeoeng.com

3.3 EXPERIENCE OF PROJECT TEAM

All members of the project team have significant expertise and experience on the project site. Resumes for key personnel can be provided upon request. 0 Hancock LLC, is owned by Jonathan Cohen, who is a well-established landowner in the City with an extensive background of land development success.

3.4 FINANCIAL CAPACITY

The Applicant has adequate financial resources to undertake this project as identified in the letter from Androscoggin Bank accompanying this submission in Attachment F.

3.5 CONSTRUCTION COST ESTIMATE

A breakdown of the preliminary project cost estimates includes the following:

- Construction Cost: $12 to 15 million
- Soft Costs: $200,000 to $400,000
- **Total Costs: $12 to 16 million**

3.6 ATTACHMENTS

Attachment F – Financial Capacity Letter from Androscoggin Bank

ATTACHMENT F

Financial Capacity Letter from Androscoggin Bank

EXHIBIT O - ANDROSCOGGIN BANK LETTER

Androscoggin Bank

30 Lisbon Street
PO Box 1407
Lewiston, Maine 04243
1 800 966.9172
androscogginbank.com

April 5, 2017

City of Portland
389 Congress Street
Portland, ME 04101

To Whom It May Concern:

Jonathan Cohen is a client in good standing with Androscoggin Bank. Mr. Cohen demonstrates both the financial capacity and the industry experience necessary to purchase, develop, construct, own and operate a commercial real estate project such as a Corporate Headquarters office building at Hancock and Thames Street in Portland.

If there are any questions on this matter, please do not hesitate to contact me at (207) 518-6314 or jdeering@androscogginbank.com

Sincerely,

Jeremiah C. Deering
Vice President
Lead Commercial Lending Officer

Member FDIC

4. UTILITIES

The following information is made in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7).

4.1 OVERVIEW

Electrical, water, sewer, and gas services to the property will be extended from existing supply mains in the adjacent streets. These services will be updated to serve the new proposed use. The Development Team has contacted all governing utility agencies and companies and will continue to coordinate the provision of new services, as required throughout the design and construction phases of the project. The following sections outline current conditions and anticipated improvements associated with each system.

4.2 WATER SUPPLY

There are existing water supply mains in Hancock Street (8" main) and Thames Street (12" main). A new 6" fire service will be required to support sprinkler systems in the building. A 4" domestic service will provide water supply to the building. We have enclosed Ability to Serve information from the Portland Water District as part of the submission as well as their confirmation that they have adequate capacity to service the development.

4.2.1 Total Project Water Usage

A preliminary estimate of project water use has been undertaken using commonly accepted daily water demand criteria:

Building – Office/Retail Use	Design Flow (GPD)
Office – 450 Employees @ 15 gpd/Employee	6,750
Retail – 15 Employees @ 15 gpd/Employee	225
TOTAL	**6,975**

4.3 WASTEWATER DISPOSAL

The proposed building will be served by a new 6" domestic sanitary service that will exit the east side of the building and tie into an existing 12" gravity main installed within Thames Street. This system ultimately discharges to the existing PWD pump station at India Street. Domestic sanitary flows are expected to be similar to the water use. At this time, a grease trap is likely to be installed to allow for the potential of a restaurant use within the ground floor retail space. A Wastewater Capacity request has been submitted to the City's Public Works Department concurrently with this submission and we await their reply.

4.4 NATURAL GAS SUPPLY

There is an existing 6" gas main located within Thames Street. Details as to service sizing for natural gas into the building remain incomplete, but it is expected that a natural gas service connection will be made for heating the building. A copy of the Unitil capacity availability determination is contained in Attachment G.

4.5 ELECTRICITY SUPPLY/COMMUNICATIONS

The Development Team is coordinating various improvements to the site's overall power supply and communications systems with the utility providers. The Applicant will continue to coordinate provision of power to the site with CMP. Similarly, communications and cable service will be coordinated with Fairpoint and Time Warner Cable. All facilities for power and communications will be underground, including the placement of a below grade transformer vault within the Hancock Street sidewalk off the southwest building corner. Confirmation from the utility providers is contained in Attachment G.

4.6 ATTACHMENTS

Attachment G – Ability to Serve Correspondence

ATTACHMENT G

Ability to Serve Correspondence

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

June 21, 2017

Mr. Jamie Cough
Central Maine Power
162 Canco Road
Portland, Maine 04103

Subject: Proposed Land Development
Corner of Hancock and Thames Streets, Portland, Maine
Request for Ability to Serve Letter

Dear Jamie:

Our office is working as a consultant in the site planning and permitting associated with the proposed development of land at the corner of Hancock and Thames Streets in Portland, Maine into a mixed-use building. The project site is located within a portion of property identified on Tax Map 19/Block A/Lot 14 according to the City of Portland Tax Assessor's Maps. The project will consist of construction of a 100,000 SF four story mixed-use development on a 1.1 acre parcel area. The proposed building use is summarized as follows:

Space	Use (SF)
WEX-General Office Use (Assumed Space)	90,000
Retail	12,285
Total	**102,285**

We trust that the power supply system in the site vicinity has adequate capacity to serve this project. We are in the process of completing the Preliminary Site Plan Application for a submission to the City Planning Staff and we would appreciate your confirmation of site conditions. We anticipate that a new underground service from the existing overhead along Hancock and Thames Street will be installed as well as a new pad mount transformer possibly located at the west side of the site. The electrical design has not yet been started; however, we would like your initial assessment of project conditions and service capacity.

We look forward to your review of this request and a summary of your findings and any updated cost projections for the project you may be able to provide.

Please include in your assessment any costs that could be associated with the following:

- Upgrades to nearby CMP infrastructure;

- All onsite overhead and underground improvements;
- Impact fees or connection fees; and
- CMP engineering costs.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

v:\1953\active\195350450\civil\admin\utility contacts\abs_cmp_cough_20170621.docx

From:	Cough, Jamie
To:	Bushey, Stephen
Cc:	Daniell, Celina
Subject:	CMP Ability to Serve Request
Date:	Wednesday, June 21, 2017 11:25:59 AM
Attachments:	Easement_Information_Worksheet.doc Standard Easement Sample.pdf EDET July 2017.xlsx

---

6/21/17

Stephen Bushey, PE,
Stantec Consulting Services
482 Payne Road Scarborough Court
Scarborough ME 04074-8929
Sent via email to: Stephen.Bushey@stantec.com

RE: CMP Ability to Serve Letter for Corner of Hancock and Thames Streets in Portland, ME.

Project Description:

The project will consist of construction of a 100,000 SF (General Office Space 90,000 sq. ft. and Retail 12,285 sq. ft.) four story mixed-use development on a 1.1 acre parcel area.

Dear Mr. Bushey:

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Standards Handbook. If you have any questions on the process, or need help in completion of the documents, please feel free to contact me.

New Service Milestones

- Call 1-800-565-3181 to establish a new account and an SAP work order.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.
- Submit Load information. Please complete this CMP spreadsheet using load information
- Submit the easement information worksheet. Please complete this CMP form and either email or fax back to us.
- Preliminary meetings with CMP to determine the details of job
- Field planner design appointment to cost out job and develop CMP Invoice.
- Submit invoice for payment.
- Easements signed and payment received.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer delivery, potential substation upgrades, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements:

CMP Handbook of Standard Requirements
(http://www.cmpco.com/MediaLibrary/3/6/Content%20Management/YourAccount/PDFs%20and%20Docs/handbook.pdf)

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to http://www.cmpco.com/YourAccount/puc324.html and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Chapter 313 (Customer Net Energy Billing) can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing .

If you have any questions, please contact me.

Attachments:
Excel Load Sheet
Easement Worksheet and Sample Standard Easement

Regards,

Jamie

Jamie Cough
Energy Services Advisor
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

CENTRAL MAINE POWER

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Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

June 26, 2017

Mr. Kyle Bouchard
FairPoint Communications
5 Davis Farm Road
Portland, Maine 04103

Subject: Proposed Land Development
Corner of Hancock and Thames Streets, Portland, Maine
Request for Ability to Serve Letter

Dear Mr. Bouchard:

Our office is working as a consultant in the site planning and permitting associated with the proposed development of land at the corner of Hancock and Thames Streets in Portland, Maine into a mixed-use building. The project site is located within a portion of property identified on Tax Map 19/Block A/Lot 14 according to the City of Portland Tax Assessor's Maps. The project will consist of the construction of a 100,000 SF four story mixed-use building on an approximately 1.1 acre parcel area.

We would like to verify Fairpoint's ability to provide communication service for the project and from which location will communications service extend underground from.

We are in the process of completing the Preliminary Site Plan Application for a submission to the City Planning Staff and we would appreciate your confirmation of site conditions in a timely manner.

We look forward to your review of this request and a summary of your findings and any updated cost projections for the project you may be able to provide.

Please include in your assessment any costs that could be associated with the following:

- Upgrades to nearby Fairpoint infrastructure;
- All onsite overhead and underground improvements;
- Impact fees or connection fees; and
- Fairpoint engineering costs.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

v:\1953\active\195350450\civil\admin\utility contacts\abs_fairpoint_derrig_20170621.docx

From:	Daniell, Celina
To:	"Bouchard, Brian M."
Subject:	RE: Ability to Serve Hancock & Thames Street - Portland, ME
Date:	Friday, July 21, 2017 2:59:00 PM
Attachments:	abs_fairpoint_bouchard_20170721.pdf image001.png image003.png

---

From: Bouchard, Brian M. [mailto:bbouchard1@fairpoint.com]
Sent: Thursday, June 22, 2017 8:09 AM
To: Daniell, Celina <Celina.Daniell@stantec.com>
Subject: Ability to Serve Hancock & Thames Street - Portland, ME

Good morning Celina,

My name is Brian Bouchard and I am currently the OSP Engineer for the Portland area in place of Scott Derrig.

Looking at the plot of land in question it is difficult for me to fill out an ability to serve letter that outlines any sort of costs or requirements without knowing where the proposed utility room/demarcation point will be. Currently FairPoint does not have a lot of facilities around this area, but we do have the capability to serve this building from a pole that sites on the corner of Fore St and Hancock St if conduit is place to this point or a building entrance is provided. Otherwise likely poles will have to be set or underground construction to extend from our manholes to your building will be required. If you have a site plan that you could send me that would be fantastic, otherwise I will detail this in a more proper format and send it along to you.

Thank you,

Brian Bouchard - *ME OSP Engineer*
FairPoint Communications | 5 Davis Farm Rd Flr 2, Portland, ME 04103 | bbouchard1@fairpoint.com
www.FairPoint.com | 207.712.1063 cell | 207.797.1098 fax

From: Daniell, Celina [mailto:Celina.Daniell@stantec.com]
Sent: Wednesday, June 21, 2017 10:44 AM
To: Derrig, Scott
Cc: Bushey, Stephen
Subject: Ability to Serve Hancock & Thames Street - Portland, ME

Scott,

Attached please find an ability to serve the project for the above referenced site.

If you have any questions, please contact our office.

Thank you,

Celina Daniell

Senior Technical Assistant
Stantec
482 Payne Road Scarborough Court, Scarborough ME 04074-8929
Phone: (207) 887-3469
Fax: (207) 879-0896
Celina.Daniell@stantec.com

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Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

July 31, 2017

MEANS Group
Portland Water District
225 Douglass Street
P.O. Box 3553
Portland, Maine 04104-3553

Subject: Proposed Land Development
Corner of Hancock and Thames Streets, Portland, Maine
Water Supply and Ability to Serve

Dear Coordinator:

Our office is working as a consultant in the site planning and permitting associated with the proposed development of land at the corner of Hancock and Thames Streets in Portland, Maine. The project site is located within a portion of property identified on Tax Map 19/Block A/Lot 14 according to the City of Portland Tax Assessor's Maps. On behalf of the developer, we would like to verify the Portland Water District's ability to provide domestic and fire supply water for the project and determine any impact fees.

The project will consist of construction of a single 100,000 SF four story mixed-use development with ancillary site improvements including utilities on a 1.1-acre lot.

Space	Use (SF)
Office Use (650 Employees)-Assumed Space	90,000
Retail	10,000
Total	**100,000**

The projected water use using the Maine State Plumbing Code and typical City of Portland flows information is as follows:

Building – Office/Retail Use	Design Flow (GPD)
Office – 650 Employees @ 15 gpd/Employee	9,750
Retail – 20 Employees @ 15 gpd/Employee	300
Total Retail	**10,050**

At this time, a fixture count for the building is not available, so an estimate of peak demand has not been prepared. This will be provided to PWD as the design is advanced.

Based on this amount of flow, we trust that the existing water supply system in the site vicinity has adequate capacity to serve this project. We are in the process of completing the Level III Site Plan Application for a submission to the City Planning Staff and we are seeking to provide documentation indicating the District's ability to provide water supply service for fire and domestic needs to this project.

The proposed building will have fire protection sprinkler systems; however, at this time, the size and flow requirements of the sprinkler system have not yet been determined. As the building and site design effort progresses, our office will meet with you to provide detailed information for the new water services and connections proposed for this project.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Stephen Bushey, PE
Associate, Senior Project Manager
Phone: 207.887.3478
Stephen.bushey@stantec.com

Attachment – Preliminary Site Plan

v:\1953\active\195350450\civil\admin\utility contacts\abs_pwd_means_20170731_update.docx

From:	Robert Bartels on behalf of AMaP MEANS
To:	Bushey, Stephen
Subject:	RE: WEX site Thames Street
Date:	Wednesday, August 09, 2017 3:48:56 PM
Attachments:	0 Hancock Street, PO - Ability to Serve Determination.pdf

Stephen,

Please see attached. Let me know if you have any questions.

As design progress please send any updated plans you may have regarding the water services to this site.

An RPZ will be required for backflow prevention at the service entrance on the domestic water service line.

Thanks,

Robert Bartels
Senior Project Engineer
Portland Water District
Phone:
E-mail: rbartels@pwd.org
http://www.pwd.org

From: Bushey, Stephen [mailto:Stephen.Bushey@stantec.com]
Sent: Wednesday, August 09, 2017 2:49 PM
To: Robert Bartels <rbartels@pwd.org>
Subject: RE: WEX site Thames Street

Robert,

Please see the attached plan for your consideration. If acceptable we'd kindly accept a "Capacity availability letter from you to include in a submission package to the city that we are hoping to submit on Thursday.

thanks

Stephen Bushey
Associate, Senior Project Manager
Stantec
482 Payne Road Scarborough Court, Scarborough ME 04074-8929
Phone: (207) 887-3478
Stephen.Bushey@stantec.com

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From: Robert Bartels [mailto:rbartels@pwd.org]
Sent: Monday, August 07, 2017 2:44 PM
To: Bushey, Stephen <Stephen.Bushey@stantec.com>
Subject: RE: WEX site Thames Street

Yes, we are waiting on an updated utility plan.

Robert Bartels
Senior Project Engineer
Portland Water District
Phone:
E-mail: rbartels@pwd.org
http://www.pwd.org

From: Bushey, Stephen [mailto:Stephen.Bushey@stantec.com]
Sent: Monday, August 07, 2017 2:43 PM
To: Robert Bartels <rbartels@pwd.org>
Subject: WEX site Thames Street

Robert,
Are you waiting on us to provide an updated utility plan before you issue an capacity availability letter?

I hope to get the update utility plan to you tomorrow most likely.

thanks

Stephen Bushey
Associate, Senior Project Manager
Stantec
482 Payne Road Scarborough Court, Scarborough ME 04074-8929
Phone: (207) 887-3478
Stephen.Bushey@stantec.com

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Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

August 9, 2017

Stephen Bushey, P.E.
Stantec
482 Payne Road Scarborough Court
Scarborough, ME 04074

Re: 0 Hancock Street, PO
Ability to Serve with PWD Water

Dear Mr. Bushey:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on July 31, 2017. Based on the information provided per plans dated 8/8/17 for final site plan review, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 4-inch DI domestic service and 6-inch DI fire service may be installed from the 12" DI water main in Thames Street. The services should enter through the properties frontage on Thames Street at least 10-feet from any side property lines.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site does not currently have existing water service.

Water System Characteristics

According to District records, there is an 12-inch diameter DI water main in Thames Street and a public fire hydrant located approximately 50 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 107 psi.

225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104-3553
PHONE: 207.774.5961 FAX: 207.761.8307 WEB: WWW.PWD.ORG

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

From: Brian Johnson on behalf of AMaP MEANS
To: Bushey, Stephen
Subject: RE: 398180-Hancock St, PO - PWD Hydrant Flow Data
Date: Thursday, July 27, 2017 10:49:36 AM
Attachments: PO - Thames Street - Hydrant Flow Data Map - 2017.pdf

---

Hi Steve,

Attached is a map containing Hydrant Flow and Static Pressure Data from the area near Thames Street and Hancock Street - Portland

The red text beside each hydrant is the hydrant ID and the latest observed static pressure, including the date that pressure was observed.

The callout boxes in maroon are showing hydrants that have test data with residual PSI from a two hydrant flow test.

If the data is out of date or insufficient for your needs, please contact the MEANS Group to request a hydrant flow test and we will work with you to get more complete data.

Should you require further information, please don't hesitate to contact us.

Have a great day,

Brian Johnson

MEANS Group
Main Extensions and New Services
Portland Water District
225 Douglass Street
Portland, ME 04104-3553
P:(207)774-5961 Ext. 3199
F:(207)761-8307
MEANS@pwd.org

Brian Johnson
Asset Management Technician
Portland Water District
Phone: 207-774-5961 x
E-mail: brianjohnson@pwd.org
http://www.pwd.org

From: Bushey, Stephen [mailto:Stephen.Bushey@stantec.com]
Sent: Tuesday, July 25, 2017 1:44 PM
To: AMaP MEANS <means@pwd.org>
Subject: RE: 398180-Hancock St, PO

Hi Robert,

I've been asked to find out if you have any flow information for hydrants in the vicinity of the Thames/Hancock Street site. Do you have anything you can share before we meet next week?

thanks

Stephen Bushey
Associate, Senior Project Manager
Stantec
482 Payne Road Scarborough Court, Scarborough ME 04074-8929
Phone: (207) 887-3478
Stephen.Bushey@stantec.com

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Please consider the environment before printing this email.

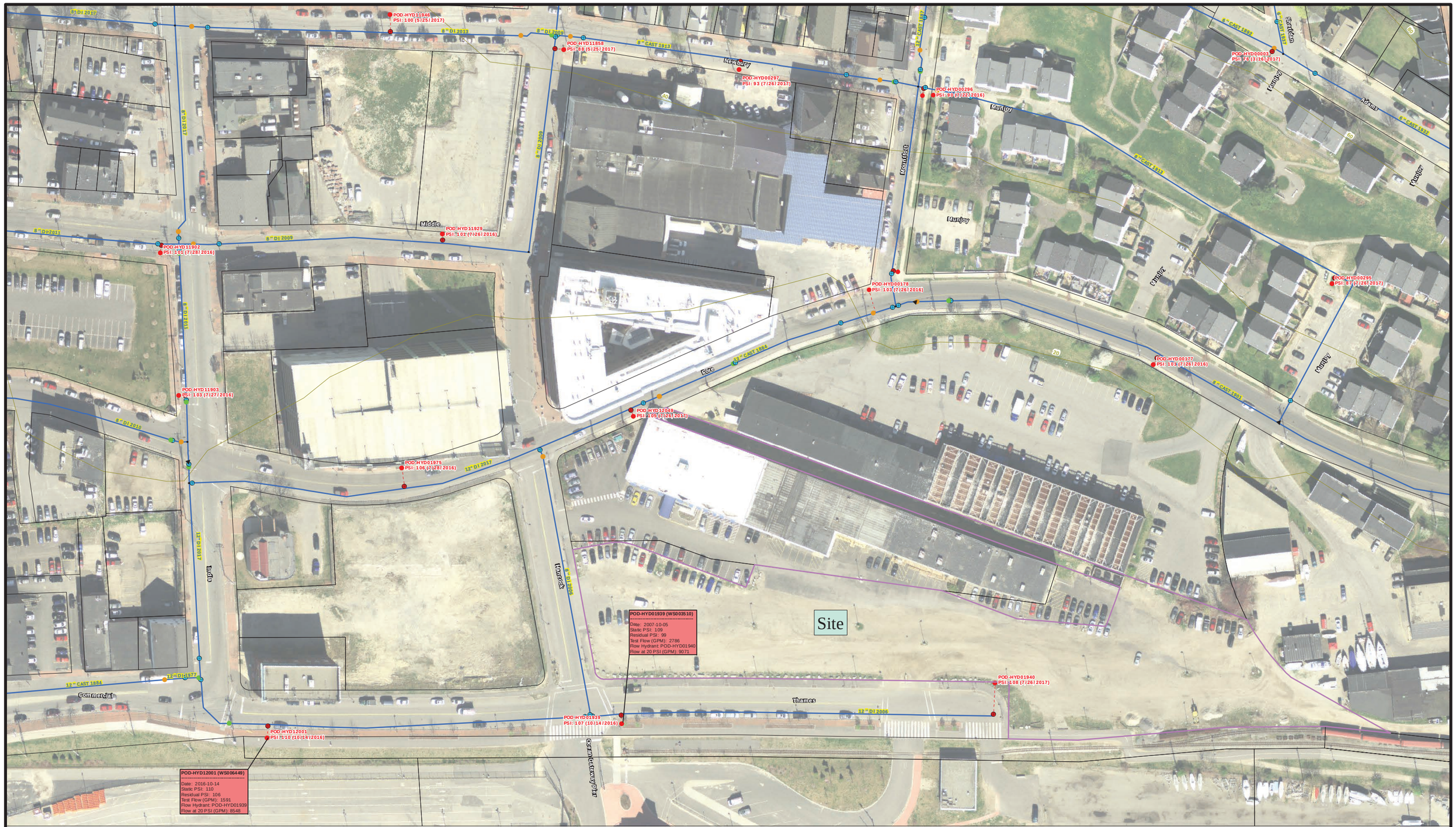
From: Robert Bartels [mailto:rbartels@pwd.org] **On Behalf Of** AMaP MEANS
Sent: Thursday, July 20, 2017 8:54 AM
To: Bushey, Stephen <Stephen.Bushey@stantec.com>
Cc: Gordon Johnson <gjohnson@pwd.org>; Jay Arnold <jarnold@pwd.org>; Daniel Scala <dscala@pwd.org>
Subject: 398180-Hancock St, PO

Steve,

We received a request from your office for a capacity to serve the proposed project at the corner of Hancock and Thames. With all the current activity in the area, the expansion and renewal that is planned in the coming years, and the services to this large commercial building, I think it would be best to meet and discuss the project so that we are all on the same page with regards to scope and schedule, and timing of approvals from the City and the District. 10am August 2nd works best for us, does that work for you?

Robert Bartels, PE

Robert Bartels
Senior Project Engineer
Portland Water District
Phone:
E-mail: rbartels@pwd.org
http://www.pwd.org



SR #: 398180

0 50 100 200 300 400 Feet

1 inch = 50 feet

Pressure Zone: 267

PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104
Asset Management and Planning Dept.

Legend

Air Valve	Connection	Combined Service	Manhole
Blow Off	Attribute Change	Domestic Service	CSO
By Pass	Reducer	Fire Service	Gravity
Distribution	Hydrant	Private Hydrants	Force
Transmission	Hydrant Control	Meter Pits	Contours

Hydrant Flow Testing Data

Thames Street / Hancock Street
Portland

This map depicts flow testing and static pressure data for the selected hydrants from PWD's asset management system. If the data is out of date or insufficient for your needs, please contact the MEANS group to request a hydrant flow test and we will work with you to get more complete data.

Drawn By: BSJ	Prepared For: Stephen Bushey Stantec
Scale: As Noted	Date: July 27, 2017

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

June 21, 2017

Mr. Mark Pelletier
Charter/Spectrum
118 Johnson Road
Portland, Maine 04102

Subject: Proposed Land Development
Corner of Hancock and Thames Streets, Portland, Maine
Request for Ability to Serve Letter

Dear Mr. Pelletier:

Our office is working as a consultant in the site planning and permitting associated with the proposed development of land at the corner of Hancock and Thames Streets in Portland, Maine into a mixed-use building. The project site is located within a portion of property identified on Tax Map 19/Block A/Lot 14 according to the City of Portland Tax Assessor's Maps. The project will consist of the construction of a 100,000 SF four story mixed-use building on an approximately 1.1 acre parcel area.

We are in the process of completing the Preliminary Site Plan Application for a submission to the City Planning Staff and we would appreciate your confirmation of site conditions in a timely manner.

We look forward to your review of this request and a summary of your findings and any updated cost projections for the project you may be able to provide.

Please include in your assessment any costs that could be associated with the following:

- Upgrades to nearby Charter/Spectrum cable infrastructure;
- All onsite overhead and underground improvements;
- Impact fees or connection fees; and
- Charter/Spectrum engineering costs.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

v:\1953\active\195350450\civil\admin\utility contacts\abs_spectrum_pelletier_20170621.docx

From: Pelletier, Mark
To: Daniell, Celina
Subject: RE: Ability to Serve Request Thames and Hancock Street - Portland, ME
Date: Tuesday, July 25, 2017 11:20:49 AM

Celina, Sorry I thought I already replied to this one….

Spectrum Cable at this time has no cable plant on the area of Hancock and Thames St's. My cable current cable plant stops at Newbury and Hancock intersection and I have no cable plant on Thames St at all.

My cable plant in that area closest is on corner of India and Commercial St's and at intersection of Fore and Hancock St right in front of the Residence Inn.

Any construction costs (if any) would be discussed with the bldg or property owner when they call for services. Those construction costs would include our overhead and underground improvements, upgrades etc that we would need to do to provide them services and the level of services they are looking for. Construction lead times right now are at 7-8 weeks at a minimum. New and old pole applications would be needed if we are to attach to existing or new poles. Old pole applications/attachments can take 4-6 months with Fairpoint at their end. CMP takes 4-6 weeks.

If services are to be underground, then we require a 4 inch conduit from the riser pole to the demark, both ends swept up above the final grade. Pull rope required also.

Mark

From: Daniell, Celina [mailto:Celina.Daniell@stantec.com]
Sent: Wednesday, June 21, 2017 10:59 AM
To: Pelletier, Mark <Mark.Pelletier@charter.com>
Cc: Bushey, Stephen <Stephen.Bushey@stantec.com>
Subject: Ability to Serve Request Thames and Hancock Street - Portland, ME

Mark,

Attached please find an ability to serve the project for the above referenced site.

If you have any questions, please contact our office.

Thank you,

Celina Daniell
Senior Technical Assistant
Stantec
482 Payne Road Scarborough Court, Scarborough ME 04074-8929
Phone: (207) 887-3469
Fax: (207) 879-0896
Celina.Daniell@stantec.com

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Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

June 21, 2017

Mr. Scott Carpenter
Unitil
1075 Forest Avenue
Portland, Maine 04103

Subject: Proposed Land Development
Corner of Hancock and Thames Streets, Portland, Maine
Request for Ability to Serve Letter

Dear Mr. Carpenter:

Our office is working as a consultant in the site planning and permitting associated with the proposed development of land at the corner of Hancock and Thames Streets in Portland, Maine into a mixed-use building. The project site is located within a portion of property identified on Tax Map 19/Block A/Lot 14 according to the City of Portland Tax Assessor's Maps.

The project will consist of construction of a 100,000 SF four story mixed-use development on the 1.1-acre parcel area.

We are in the process of completing the Site Plan Application for a submission to the City Planning Staff and we are seeking to provide documentation indicating your confirmation of natural gas service availability to the project. We would like information on the existing systems in the site vicinity as well as an opinion as to the best service route for the building.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

v:\1953\active\195350450\civil\admin\utility contacts\abs_unitil_carpenter_20170621.docx

June 23, 2017

Celina Daniell
Stephen Bushey
Stantec
482 Payne Road
Scarborough, ME 04074

Re: Hancock and Thames St. Project, Portland, Maine

Dear Celina/Stephen:

Thank you for your interest in using natural gas for the above referenced project.

Unitil has natural gas in the street in the vicinity of the proposed building. Once you can provide us the load we can further verify the ability to service with more accuracy however I did have our engineering evaluate with a load of 6,000 CFH and they approved the building based on that amount.

If you have any further questions or require additional information, please contact me directly at (207) 541-2543 or at carpenters@unitil.com.

Sincerely,

Scott Carpenter

Scott Carpenter
Senior Business Development Representative
Unitil Corporation
(o) 207-541-2543 (f) 207-541-2593

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

July 31, 2017

Mr. Brad Roland, PE
City of Portland Public Works
55 Portland Street
Portland, Maine 04104-3553

Subject: Proposed Land Development
Corner of Hancock and Thames Streets, Portland, Maine
Request for Ability to Serve Letter

Dear Brad:

Our office is working as a consultant in the site planning and permitting associated with the proposed development of land at the corner of Hancock and Thames Streets in Portland, Maine into a mixed-use building. The project site is located within a portion of property identified on Tax Map 19/Block A/Lot 14 according to the City of Portland Tax Assessor's Maps. On behalf of the owner/developer, we would like to verify the City's wastewater division has ability to provide wastewater capacity for the project and to determine any impact fees.

The project will consist of building demolition, renovation, and expansion with size and use summarized as follows:

Space	Use (SF)
Office Space	Assumed Space – 90,000
Retail	Retail – 10,000
Total	**100,000**

The projected water use using the Maine Subsurface Wastewater Disposal Rules and typical City of Portland flows information is as follows:

Building – Office/Retail Use	Design Flow (GPD)
Office – 650 Employees @ 15 gpd/Employee	9,750
Retail – 20 Employees @ 15 gpd/Employee	300
Total Retail	**10,050**

Based on this amount of flow, we trust that the existing sanitary sewer system has adequate capacity to serve this project. We understand there is an existing sewer service(s) exiting the existing building; however, the exact conditions, flows, and service conditions are unknown. We would like the review the City's records for the existing services so we may determine any necessary improvements. We are in the process of completing final submission materials and responses to City staff comments and we are seeking to provide documentation indicating the city's continued ability to provide sanitary sewer service to this project.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Stephen Bushey, PE
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

Attachment: Wastewater Application

v:\1953\active\195350450\civil\admin\utility contacts\abs_portland_roland_20170731.docx

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division

Date: July 31, 2017

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

Site Address: Corner of Hancock and Thames Street

Chart Block Lot Number: Map 19/Block A/Lot 14

Proposed Use: Office Retail
Previous Use: Vacant
Existing Sanitary Flows: _____GPD
Existing Process Flows: _____GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

_____

_____

Site Category		
	Commercial *(see part 4 below)*	x
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	
	Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: _____ Phone: _____
Owner/Developer Name: Jonathan Cohen - 0 Hancock Street LLC
Owner/Developer Address: P.O. Box 910, Portland, ME 04098-0910
Phone: 207.776.0304 Fax: _____ E-mail: jcohen@a-d-w.biz
Engineering Consultant Name: Stephen R. Bushey, PE - Stantec
Engineering Consultant Address: 482 Payne Road - Scarborough, ME 04074
Phone: 207.887.3478 Fax: _____ E-mail: _____

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: 9,750 GPD
Peaking Factor/ Peak Times: x6
Specify the source of design guidelines: *(i.e.* x *"Handbook of Subsurface Wastewater Disposal in Maine,"* __ *"Plumbers and Pipe Fitters Calculation Manual,"* __ *Portland Water District Records, Other (specify)* _____

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

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.

From:	Daniell, Celina
To:	Keef, Sandi
Subject:	FW: Hancock and Thames Street - Ability to Serve Request
Date:	Friday, August 11, 2017 11:03:57 AM

Celina Daniell

Stantec
Phone: 207-887-3469

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From: Bradley Roland [mailto:brad@portlandmaine.gov]
Sent: Friday, August 11, 2017 10:19 AM
To: Bushey, Stephen <Stephen.Bushey@stantec.com>
Cc: Daniell, Celina <Celina.Daniell@stantec.com>
Subject: Re: Hancock and Thames Street - Ability to Serve Request

Thanks Steve
I will wait to look at it after vacation (return Aug 28).
And as usual dry weather capacity is rarely an issue.
But I will look at the numbers then.
Brad

Bradley A. Roland, P.E.
Senior Project Engineer
Portland Public Works
55 Portland Street
Portland, ME 04101
Tel: 207-874-8840
Fax: 207-874-8852
brad@portlandmaine.gov

On Fri, Aug 11, 2017 at 9:56 AM, Bushey, Stephen <Stephen.Bushey@stantec.com> wrote:

> Brad,
>
> It is likely to be 0 Hancock Street, however we are in the process of submitting a level III site plan application today so technically you will not find it yet in the system most likely. We are simply trying to affirm wastewater capacity at this point as part of the planning process. Once submitted the review process is likely to move quickly given the high project visability and public interest.
>
> **Stephen Bushey**

Associate, Senior Project Manager
Stantec
482 Payne Road Scarborough Court, Scarborough ME 04074-8929
Phone: (207) 887-3478
Stephen.Bushey@stantec.com

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From: Bradley Roland [mailto:brad@portlandmaine.gov]
Sent: Friday, August 11, 2017 9:51 AM
To: Daniell, Celina <Celina.Daniell@stantec.com>
Cc: Bushey, Stephen <Stephen.Bushey@stantec.com>
Subject: Re: Hancock and Thames Street - Ability to Serve Request

Good Morning Celina and Steve
What is the street address of the project so I can find it in the city system
If it is not in the system yet I won't issue a wastewater capacity authorization.
Brad

Bradley A. Roland, P.E.
Senior Project Engineer
Portland Public Works
55 Portland Street
Portland, ME 04101
Tel: 207-874-8840
Fax: 207-874-8852
brad@portlandmaine.gov

On Mon, Jul 31, 2017 at 10:40 AM, Daniell, Celina <Celina.Daniell@stantec.com> wrote:

> Brad,
>
> Attached please find a request for Ability to Serve a proposed development at Hancock and Thames Street. If you have any questions, please contact our office.
>
> Thank you,
>
> **Celina Daniell**
> Senior Technical Assistant
> Stantec
> 482 Payne Road Scarborough Court, Scarborough ME 04074-8929
> Phone: (207) 887-3469
> Celina.Daniell@stantec.com
>
> The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

5. FIRE SAFETY

5.1 OVERVIEW

Stantec has completed the Fire Department checklist and will continue to perform ongoing coordination with Fire Department representatives and City Planning officials. The accompanying memorandum outlines our findings with respect to compliance with the City's Public Safety Standards as set forth in the City's Technical Manual, Section 3 – Public Safety Standards.

The building will be fully sprinkled and code compliant to current applicable standards.

Additional fire safety review and evidence of building related fire code compliance will be provided as part of the Building Permit process.

5.2 ATTACHMENTS

Attachment H – Portland Fire Department Site Review Checklist & NFPA 1 Review

ATTACHMENT H

Portland Fire Department Site Review Checklist & NFPA 1 Review

Stantec Consulting Services Inc.
482 Payne Road, Scarborough Court, Scarborough, ME 04074

August 3, 2017

Mr. Keith Gautreau, Assistant Chief
City of Portland Fire Department
380 Congress Street
Portland, Maine 04101

Subject: Corner of Thames and Hancock Street
Fire Safety Checklist

Dear Assistant Chief Gautreau:

In accordance with instructions in the City's Level III Site Plan Review packet, please find enclosed the drawings necessary for your review of the proposed commercial office building site at the corner of Thames and Hancock Street. As part of the building design, the architect will retain a third-party Fire Protection Engineer to review NFPA 101. We have listed each item in your checklist below, followed by our response.

1. *Name, address, telephone number of applicant.*

   0 Hancock Street LLC
   Attn: Jonathan Cohen
   PO Box 910
   Portland, ME 04098-0910
   207.776.0304

2. *Name, address, telephone number of architect.*

   Archetype PA
   Attn: Bill Hopkins
   48 Union Wharf
   Portland, ME 04101
   207.772.6022

3. *Proposed uses of any structures (NFPA and IBC classification).*

Building	IBC Code	NFPA Code	Sprinkler
Office Building/Assembly Construction Type II-A (protected, noncombustible)	A-3, B	NFPA 101	Yes NFPA13

* Systems designed to meet NFPA

4. *Square footage of all structures (total and per story).*

Building	Footprint Area (SF)
First Floor	31,545
Second Floor	31,098
Third Floor	31,098
Fourth Floor	9,286
Total	**103,027**

5. *Elevation of all structures.*

   The maximum building height is 55'-0" with finish floor elevation of 14.75. Architectural building elevations accompany this letter and they show the various locations of door openings, etc. around the building perimeter.

6. *Proposed fire protection of all structures.*

   The proposed building will have a sprinkler system with additional protection per code. Fire flows and requirements for system storage or booster pumping are subject to the fire system design which will be performed prior to the request for a building permit.

7. *Hydrant locations.*

   Multiple fire hydrants are currently located on Hancock Street, Fore Street, and Thames Street opposite the project site less than 100 feet from the building.

8. *Water main(s) size and location.*

   The site will be served by a 6" sprinkler service to be extended into the building off an existing 12" water main along Thames Street. A 4" domestic service will also be extended to the building. The building is expected to have internal sprinkler risers and a Siamese fire pump connection on the Thames Street side of the building.

9. *Access to all structures (min. 2 sides).*

   The accompanying site plan depicts the site access conditions along Hancock Street and Thames Street.

10. *A code summary shall be included referencing NFPA 1 and all fire department technical standards.*

<u>NFPA 1 – Chapter 18 Fire Department Access and Water Supply</u>

18.2 Fire Department Access:

The project site is located in a densely-developed area and is fronted by public streets. The following street widths are currently available:

Street	Width
Thames Street	38 feet
Hancock Street	30 feet

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 ft. from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety

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

Supporting Evidence: Not applicable.

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

Supporting Evidence: As depicted on the Site Plan, the proposed building layout provides for a minimum two-sided access to the structure.

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

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

Supporting Evidence: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along the public streets for emergency vehicles.

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

Supporting Evidence: The building will be provided with exterior doors that will be within 50' of a Fire Department access route, namely Thames and Hancock Street.

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

Supporting Evidence: A minimum of 9 feet vertical clearance will be provided below any overhead signage or utilities entering the site.

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

Supporting Evidence: The elevators will be supplied to meet this requirement.

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

Supporting Evidence: The applicant will work with the city's Public Services Division to assign street addresses and numbering to meet City Standards.

If you need any further information regarding this review, please contact our office.

Regards,

STANTEC CONSULTING SERVICES INC.

Stephen R. Bushey, P.E.
Associate
Tel: 207-887-3478
Stephen.bushey@stantec.com

Attachments

c: Captain David Petruccelli, Fire Department (via email)

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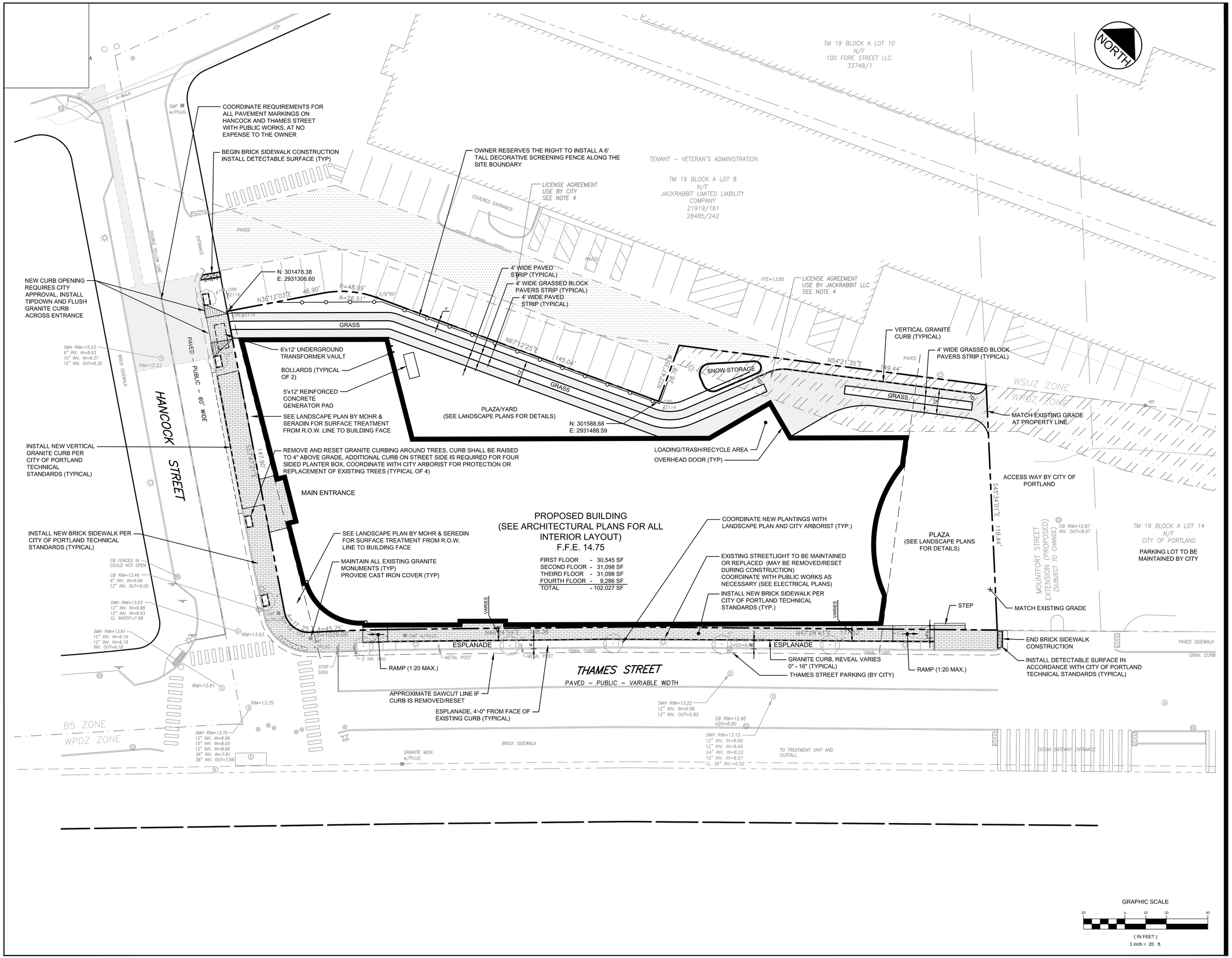

Stantec

Stantec
482 Payne Road Scarborough Court
Scarborough, Maine 04074-8929
Tel. 207.883.3355
www.stantec.com

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Consultants

Notes

Revision	By	Appd.	YY.MM.DD
3 FINAL SITE PLAN REVIEW	SRS	JBS	17.08.08
2 PRELIMINARY SITE PLAN REVIEW	SRS	JBS	17.08.02
1 PRELIMINARY SUBMISSION SUBMITTED TO CITY	SRS	JBS	17.07.11

File Name: 195350450_site	LA	DBS	SRB	17.07.10
P.E. STEPHEN R. BUSHEY	DWN.	CHK'D.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7429
LICENSED
PROFESSIONAL ENGINEER
8/8/17

Client/Project
0 HANCOCK LLC

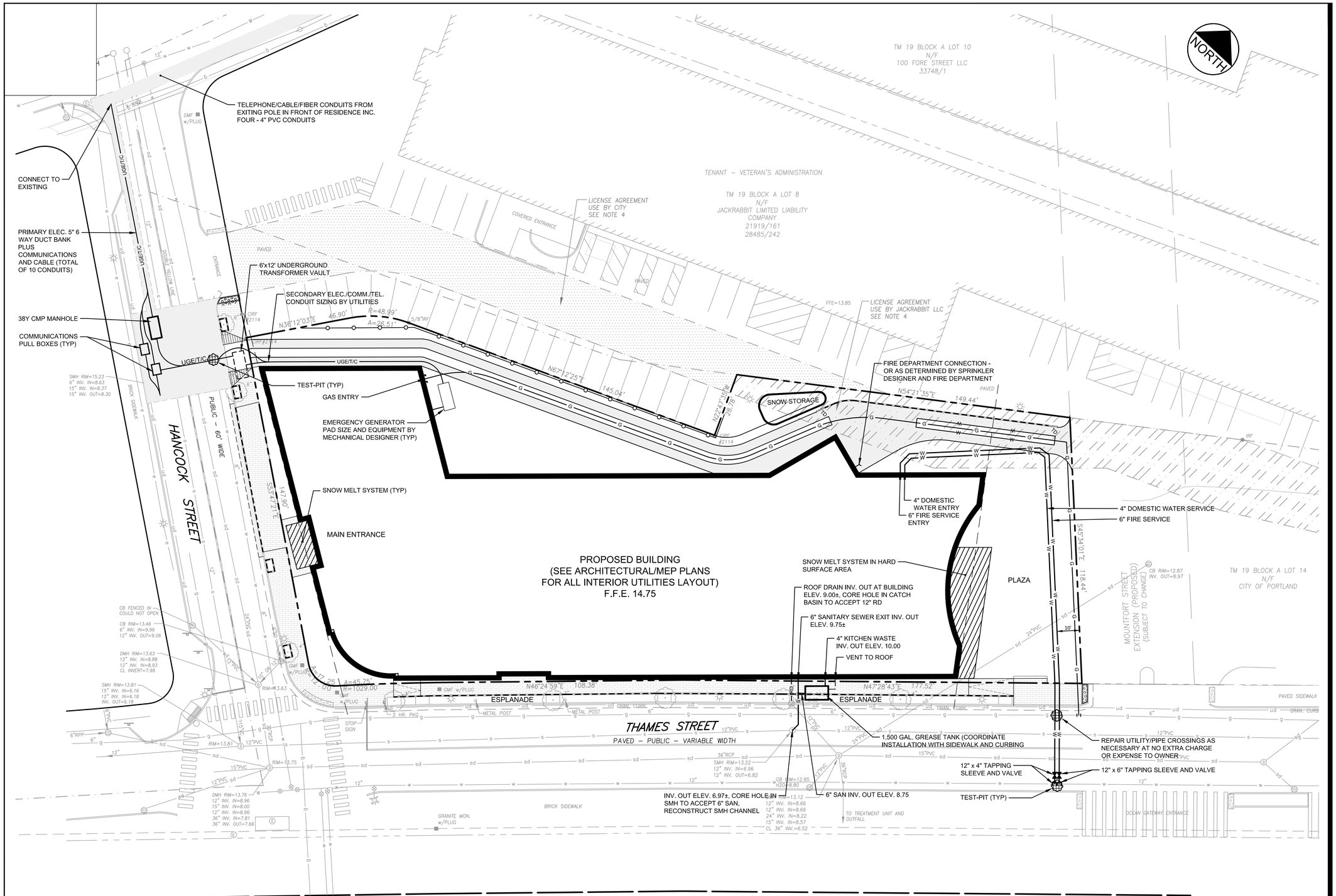
THAMES STREET SITE
PORTLAND, MAINE

Title
SITE LAYOUT PLAN

Project No. 195350450
Scale 1" = 20'

Sheet
C-3.0

V:\195350\active\195350450\civil\cadd\permit\dwg\195350450_site.dwg pfilletaz 8/8/2017 5:13 PM



PLAN REFERENCE

CITY OF PORTLAND OCEAN GATEWAY PHASE 1 - MDOT PROJECT NO. 009215.00 BY WOODARD & CURRAN, RECORD PLAN DATED JANUARY 14, 2005, SHEETS 215-217, PROVIDED BY CITY OF PORTLAND ARCHITECT.

NOTES

1. OWEN HASKELL, INC. TO CONFIRM ALL INVERT INFORMATION PRIOR TO THE PRODUCTION OF CONTRACT DOCUMENTS.
2. CONTRACTOR SHALL PROVIDE RECORD TIE LOCATIONS FOR ALL UTILITIES TO THE OWNER PRIOR TO THE REQUEST FOR A CERTIFICATE OF OCCUPANCY.

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

Stantec

Stantec
482 Payne Road Scarborough Court
Scarborough, Maine 04074-8929
Tel. 207.883.3355
www.stantec.com

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Consultants

Notes

Revision	By	Appd.	YY.MM.DD
1 FINAL SITE PLAN REVIEW	SRB	JBS	17.03.08

File Name: 195350450_util	LA	DBS	SRB	17.07.12
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7420
LICENSED
PROFESSIONAL ENGINEER
8/8/17

Client/Project
0 HANCOCK LLC

THAMES STREET SITE
PORTLAND, MAINE

Title
UTILITY PLAN

Project No. 195350450

Scale 1" = 20'

Sheet
C-5.0

V:\195350\active\195350450\civil\cadd\permit\dwg\195350450_util.dwg pfilletaz 8/8/2017 6:22 PM

6. CONSTRUCTION MANAGEMENT PLAN

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(1).

6.1 CONSTRUCTION MANAGEMENT PLAN

The Applicant is seeking to commence construction during the Fall 2017 into 2018 and complete work by Summer 2019. The construction will involve mobilization, site work, and building construction. A Construction Management Plan accompanies this submission.

6.2 ATTACHMENTS

Attachment I – Construction Management Plan

ATTACHMENT I

Construction Management Plan

Construction Management Plan
WEX Corporate Headquarters Project
Cianbro Corporation

This document and its subsequent attachments comprise The Construction Management Plan being submitted to the City of Portland for the WEX Corporate Headquarters Project, located at 0 Hancock Street. This plan is being submitted by Cianbro Corporation on behalf of the Owner of the property, 0 Hancock Street LLC. The Construction Management plan contains information pertaining to the overall planning and coordination of the project.
The WEX Corporate Headquarters Project involves a new three and four level 100,000 square foot mixed use building located on the corner of Thames Street and Hancock Street. The majority of the building will be office spaced occupied by WEX Corporation, with two 5,000 square foot retail spaces located on the ground floor. The portion of the building which is three levels will have a roof top patio for usage by WEX.

A. Construction Management Principles

The impact of this project on the public will be minimized via the following construction management principles:

- The construction zone will be fully secured with hard barriers/fencing preventing any access into the site by the public.
- All construction activities will occur within the construction barriers/fencing to ensure the public is never exposed to any risks caused by the activities.
- There will be an onsite staging and unloading area for all deliveries which will prevent any impacts caused by offsite staging of trucks.
- All deliveries will be coordinated and scheduled to ensure that there is no off site queuing required. Cianbro plans to schedule as many deliveries as possible in the early morning to limit impact on the surrounding area.
- All construction activities will occur within normal working hours to minimize sound impacts to the surrounding area.

B. Development Review of Construction Management Plan

Cianbro has developed a comprehensive logistics plan specific to this project. Please see **Exhibit A** of this document for the logistics plan.

Cianbro will also utilize a site specific safety program for all team members who work on the construction site. Each team member will complete a job specific orientation before starting work on the project site. The public will not be put at risk at any point throughout this project, as all work will be completed within the fenced off jobsite. At no point of the project will the public have access to this job site.

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

All fees, permits, and guarantees will be paid/issued prior to construction commencing.

This project will require public street openings for utility tie-ins. All required permits will be requested and granted by the Department of Public Works prior to any street openings occurring. Street openings will need to occur on both Thames and Hancock street. MUTCD plans will be submitted to and approved by the City of Portland for any traffic disruptions caused by street openings.

D. Construction Administration and Communication

The contact person for all construction activities for the project will be:

Clay Maker: Assistant Project Manager
(207) 416-2959
Cmaker@cianbro.com

Temporary signage will be posted onsite with additional contact information for the contractor.

E. Construction Schedule

The preliminary construction schedule for the project starts in September of 2017 and runs through September of 2018.

- **Exhibit B** of this document is the current preliminary construction schedule.

All construction activities will be completed during daytime hours, there will be no need for night work. All deliveries for this project will also occur during normal daytime hours.

F. Security & Public Safety

See **Exhibit A** for fencing and barriers to be used to isolate the construction site from the public. All gates into the project will have knox locking devices to allow for emergency access.

The fire safety program onsite will consist of the following:

- Fire extinguishers placed throughout the construction site for the duration of the project.
- The new fire alarm system installation will be ongoing throughout the project duration.
- The existing fire alarm system in the parking garage attached to the new building will remain active throughout the project duration.
- All team members will be briefed on the emergency evacuation plan for the project site prior to starting work.

G. Construction Permitting and Traffic Control Plans

Construction Activity in Public Streets: This project will require street openings on both Hancock Street and Thames Street. These openings are required to tie the building into the electrical, water, sewer, and storm water systems. Prior to any of this work starting, permits will be submitted for and approved by the Street Opening Clerk at the Department of Public Works.

Sewer and Storm Water: This building will need to connect to the sewer and storm water systems on Thames Street. All required permits will be submitted for and approved by the Street Opening Clerk at the Department of Public Works.

Traffic Control Plans: There will be periods of time throughout the project where construction activity impacts the existing public street system. Prior to any interruptions and MUTCD plan will be created and submitted to the city for approval. The MUTCD will ensure that traffic and safe passage for the public is maintained in a satisfactory manner.

H. Site Management and Controls

The following actions will be taken by Cianbro as regular site management and control activities:

- Construction site signage will be provided, installed, and maintained by Cianbro throughout the duration of the project.
- Access to the site will be controlled to ensure that the
- Trash and debris will be removed from site via a construction dumpster which will be changed out as needed on a regular basis.
- Street cleaning will not be required on a regular basis, but if it is deemed necessary Cianbro will coordinate the cleaning of any excess dirt that has resulted from construction activities.
- Onsite snow removal will be Cianbro's responsibility.

I. Erosion Control and Preservation of Trees

Erosion control measures will be installed onsite prior to any work commencing. A complete erosion control plan will be put together and reviewed with the city at the preconstruction meeting. Some of the measures that will be taken are utilization of silt sacks and fences to protect the surrounding area from any silt run off form the site. The control measures will be maintained daily and inspected weekly or after any major rain event. The inspections will be documented for review by the City of Portland, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency.

Please review **Exhibit C** of this document for the landscaping plan which will be maintained throughout the duration of the project.

All stored materials onsite will be located away from any trees of vegetation.

J. Construction Staging Area

Exhibit A of this document is the site logistics plan for the project. This plan shows the location of the onsite staging area for materials. The logistics plan also depicts the onsite truck unloading/staging area. All trucks will be unloaded within the construction site's foot print to avoid and impacts on public traffic. An offsite marshalling area will not be required for this project.

K. Parking During Construction

Construction parking will be provided in the private parking lot of 104 Fore Street as well as at the Ocean Gateway Parking Garage.

Exhibit D is the truck route that will be followed by deliveries for the project.

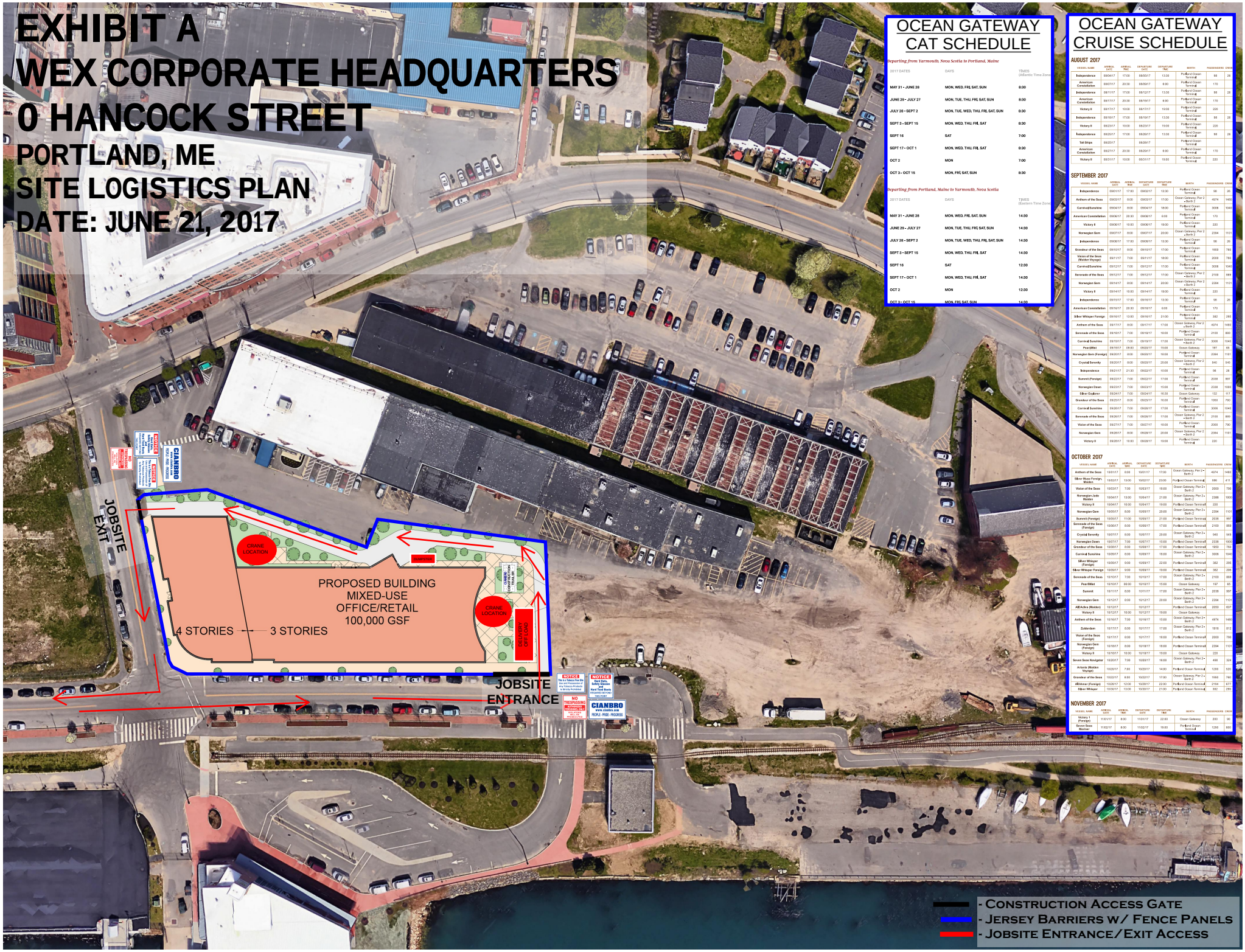
L. Special Measures as Necessary
There will be no special measures necessary for this project.

Please do not hesitate to contact me with any comments, questions, or concerns regarding the WEX Corporate Headquarters Project and subsequent construction management plan.

Sincerely,

Clay Maker
Project Engineer
Building
CIANBRO
Direct (207) 992-9374
Mobile (207) 416-2959

EXHIBIT A
WEX CORPORATE HEADQUARTERS
0 HANCOCK STREET
PORTLAND, ME
SITE LOGISTICS PLAN
DATE: JUNE 21, 2017



OCEAN GATEWAY CAT SCHEDULE

Departing from Yarmouth, Nova Scotia to Portland, Maine

2017 DATES	DAYS	TIMES (Atlantic Time Zone)
MAY 31 - JUNE 28	MON, WED, FRI, SAT, SUN	8:30
JUNE 29 - JULY 27	MON, TUE, THU, FRI, SAT, SUN	8:30
JULY 28 - SEPT 2	MON, TUE, WED, THU, FRI, SAT, SUN	8:30
SEPT 3 - SEPT 15	MON, WED, THU, FRI, SAT	8:30
SEPT 16	SAT	7:00
SEPT 17 - OCT 1	MON, WED, THU, FRI, SAT	8:30
OCT 2	MON	7:00
OCT 3 - OCT 15	MON, FRI, SAT, SUN	8:30

Departing from Portland, Maine to Yarmouth, Nova Scotia

2017 DATES	DAYS	TIMES (Eastern Time Zone)
MAY 31 - JUNE 28	MON, WED, FRI, SAT, SUN	14:30
JUNE 29 - JULY 27	MON, TUE, THU, FRI, SAT, SUN	14:30
JULY 28 - SEPT 2	MON, TUE, WED, THU, FRI, SAT, SUN	14:30
SEPT 3 - SEPT 15	MON, WED, THU, FRI, SAT	14:30
SEPT 16	SAT	12:30
SEPT 17 - OCT 1	MON, WED, THU, FRI, SAT	14:30
OCT 2	MON	12:30
OCT 3 - OCT 15	MON, FRI, SAT, SUN	14:30

OCEAN GATEWAY CRUISE SCHEDULE

AUGUST 2017

VESSEL NAME	ARRIVAL DATE	ARRIVAL TIME	DEPARTURE DATE	DEPARTURE TIME	BERTH	PASSENGERS	CREW
Independence	08/04/17	17:00	08/05/17	13:30	Portland Ocean Terminal	88	26
American Constellation	08/07/17	20:30	08/09/17	6:00	Portland Ocean Terminal	170	
Independence	08/11/17	17:00	08/12/17	13:30	Portland Ocean Terminal	88	28
American Constellation	08/17/17	20:30	08/19/17	6:00	Portland Ocean Terminal	170	
Victory II	08/17/17	10:00	08/17/17	19:00	Portland Ocean Terminal	220	
Independence	08/18/17	17:00	08/19/17	13:30	Portland Ocean Terminal	88	26
Victory II	08/23/17	10:00	08/23/17	19:00	Portland Ocean Terminal	220	
Independence	08/25/17	17:00	08/26/17	13:30	Portland Ocean Terminal	88	26
Tall Ships	08/25/17		08/28/17		Portland Ocean Terminal		
American Constellation	08/27/17	20:30	08/29/17	6:00	Portland Ocean Terminal	170	
Victory II	08/31/17	10:00	08/31/17	19:00	Portland Ocean Terminal	220	

SEPTEMBER 2017

VESSEL NAME	ARRIVAL DATE	ARRIVAL TIME	DEPARTURE DATE	DEPARTURE TIME	BERTH	PASSENGERS	CREW
Independence	09/01/17	17:30	09/02/17	13:30	Portland Ocean Terminal	96	26
Anthem of the Seas	09/03/17	8:00	09/05/17	17:00	Ocean Gateway, Pier 2 - Berth 2	4074	1460
Carnival Sunshine	09/04/17	8:00	09/04/17	18:00	Portland Ocean Terminal	3006	1040
American Constellation	09/06/17	20:30	09/08/17	6:00	Portland Ocean Terminal	170	
Victory II	09/06/17	10:00	09/06/17	19:00	Portland Ocean Terminal	220	
Norwegian Gem	09/07/17	8:00	09/07/17	20:00	Ocean Gateway, Pier 2 - Berth 2	2394	1101
Independence	09/08/17	17:30	09/09/17	13:30	Portland Ocean Terminal	96	26
Grandeur of the Seas	09/10/17	8:00	09/10/17	17:00	Portland Ocean Terminal	1950	780
Vision of the Seas (Maiden Voyage)	09/11/17	7:00	09/11/17	18:00	Portland Ocean Terminal	2000	780
Carnival Sunshine	09/12/17	7:00	09/12/17	17:00	Portland Ocean Terminal	3006	1040
Serenade of the Seas	09/12/17	7:00	09/12/17	17:00	Ocean Gateway, Pier 2 - Berth 2	2100	889
Norwegian Gem	09/14/17	8:00	09/14/17	20:00	Ocean Gateway, Pier 2 - Berth 2	2394	1101
Victory II	09/14/17	10:00	09/14/17	19:00	Portland Ocean Terminal	220	
Independence	09/15/17	17:30	09/16/17	13:30	Portland Ocean Terminal	96	26
American Constellation	09/16/17	20:30	09/18/17	6:00	Portland Ocean Terminal	170	
Silver Whisper Foreign	09/16/17	13:00	09/16/17	21:00	Portland Ocean Terminal	382	295
Anthem of the Seas	09/17/17	8:00	09/17/17	17:00	Ocean Gateway, Pier 2 - Berth 2	4074	1460
Serenade of the Seas	09/18/17	7:00	09/18/17	18:00	Portland Ocean Terminal	2100	889
Carnival Sunshine	09/19/17	7:00	09/19/17	17:00	Ocean Gateway, Pier 2 - Berth 2	3006	1040
Pearl Mist	09/19/17	08:30	09/20/17	15:00	Ocean Gateway	197	68
Norwegian Gem (Foreign)	09/20/17	8:00	09/20/17	18:00	Portland Ocean Terminal	2394	1101
Crystal Serenity	09/20/17	8:00	09/20/17	20:00	Ocean Gateway, Pier 2 - Berth 2	940	545
Independence	09/21/17	21:30	09/22/17	10:00	Portland Ocean Terminal	96	26
Summit (Foreign)	09/22/17	7:00	09/22/17	17:00	Portland Ocean Terminal	2058	897
Norwegian Dawn	09/23/17	7:00	09/23/17	15:00	Portland Ocean Terminal	2328	1000
Silver Explorer	09/24/17	7:00	09/24/17	16:30	Ocean Gateway	132	117
Grandeur of the Seas	09/25/17	8:00	09/25/17	16:00	Portland Ocean Terminal	1950	780
Carnival Sunshine	09/26/17	7:00	09/26/17	17:00	Portland Ocean Terminal	3006	1040
Serenade of the Seas	09/26/17	7:00	09/26/17	17:00	Ocean Gateway, Pier 2 - Berth 2	2100	889
Vision of the Seas	09/27/17	7:00	09/27/17	16:00	Portland Ocean Terminal	2000	790
Norwegian Gem	09/28/17	8:00	09/28/17	20:00	Ocean Gateway, Pier 2 - Berth 2	2394	1101
Victory II	09/28/17	10:00	09/28/17	19:00	Portland Ocean Terminal	220	

OCTOBER 2017

VESSEL NAME	ARRIVAL DATE	ARRIVAL TIME	DEPARTURE DATE	DEPARTURE TIME	BERTH	PASSENGERS	CREW
Anthem of the Seas	10/01/17	8:00	10/01/17	17:00	Ocean Gateway, Pier 2 - Berth 2	4074	1460
Silver Muse Foreign, Maiden	10/02/17	13:00	10/02/17	23:00	Portland Ocean Terminal	596	411
Vision of the Seas	10/03/17	7:00	10/03/17	18:00	Ocean Gateway, Pier 2 - Berth 2	2000	790
Norwegian Jade Maiden	10/04/17	13:00	10/04/17	21:00	Ocean Gateway, Pier 2 - Berth 2	2398	1000
Victory II	10/04/17	10:00	10/04/17	19:00	Portland Ocean Terminal	220	
Norwegian Gem	10/05/17	8:00	10/05/17	20:00	Ocean Gateway, Pier 2 - Berth 2	2394	1101
Summit (Foreign)	10/06/17	11:00	10/06/17	21:00	Portland Ocean Terminal	2038	997
Serenade of the Seas (Foreign)	10/06/17	8:00	10/06/17	17:00	Portland Ocean Terminal	2100	868
Crystal Serenity	10/07/17	8:00	10/07/17	20:00	Ocean Gateway, Pier 2 - Berth 2	940	545
Norwegian Dawn	10/07/17	7:00	10/07/17	15:00	Portland Ocean Terminal	2328	1000
Grandeur of the Seas	10/08/17	8:00	10/08/17	17:00	Portland Ocean Terminal	1950	780
Carnival Sunshine	10/09/17	8:00	10/09/17	18:00	Ocean Gateway, Pier 2 - Berth 2	3006	1040
Silver Whisper (Foreign)	10/09/17	9:00	10/09/17	22:00	Portland Ocean Terminal	382	295
Silver Whisper Foreign	10/09/17	9:00	10/09/17	19:00	Portland Ocean Terminal	382	295
Serenade of the Seas	10/10/17	7:00	10/10/17	17:00	Ocean Gateway, Pier 2 - Berth 2	2100	868
Pearl Mist	10/10/17	08:00	10/10/17	15:00	Ocean Gateway	197	65
Summit	10/11/17	8:00	10/11/17	17:00	Ocean Gateway, Pier 2 - Berth 2	2038	997
Norwegian Gem	10/12/17	8:00	10/12/17	20:00	Ocean Gateway, Pier 2 - Berth 2	2394	1101
AIDAdiva (Maiden)	10/12/17		10/12/17		Portland Ocean Terminal	2050	607
Victory II	10/12/17	10:00	10/12/17	19:00	Ocean Gateway		
Anthem of the Seas	10/16/17	7:00	10/16/17	15:00	Ocean Gateway, Pier 2 - Berth 2	4074	1460
Zuiderdam	10/17/17	8:00	10/17/17	17:00	Ocean Gateway, Pier 2 - Berth 2	1916	612
Vision of the Seas (Foreign)	10/17/17	8:00	10/17/17	18:00	Portland Ocean Terminal	2000	790
Norwegian Gem (Foreign)	10/18/17	8:00	10/18/17	18:00	Portland Ocean Terminal	2394	1101
Victory II	10/18/17	10:00	10/18/17	19:00	Ocean Gateway	220	
Seven Seas Navigator	10/20/17	7:00	10/20/17	16:00	Ocean Gateway, Pier 2 - Berth 2	490	324
Artania (Maiden Voyage)	10/20/17	7:00	10/20/17	14:00	Portland Ocean Terminal	1200	520
Grandeur of the Seas	10/22/17	8:00	10/22/17	17:00	Ocean Gateway, Pier 2 - Berth 2	1950	780
AIDAvivar (Foreign)	10/26/17	12:00	10/26/17	22:00	Portland Ocean Terminal	2194	677
Silver Whisper	10/30/17	13:00	10/30/17	21:00	Portland Ocean Terminal	382	295

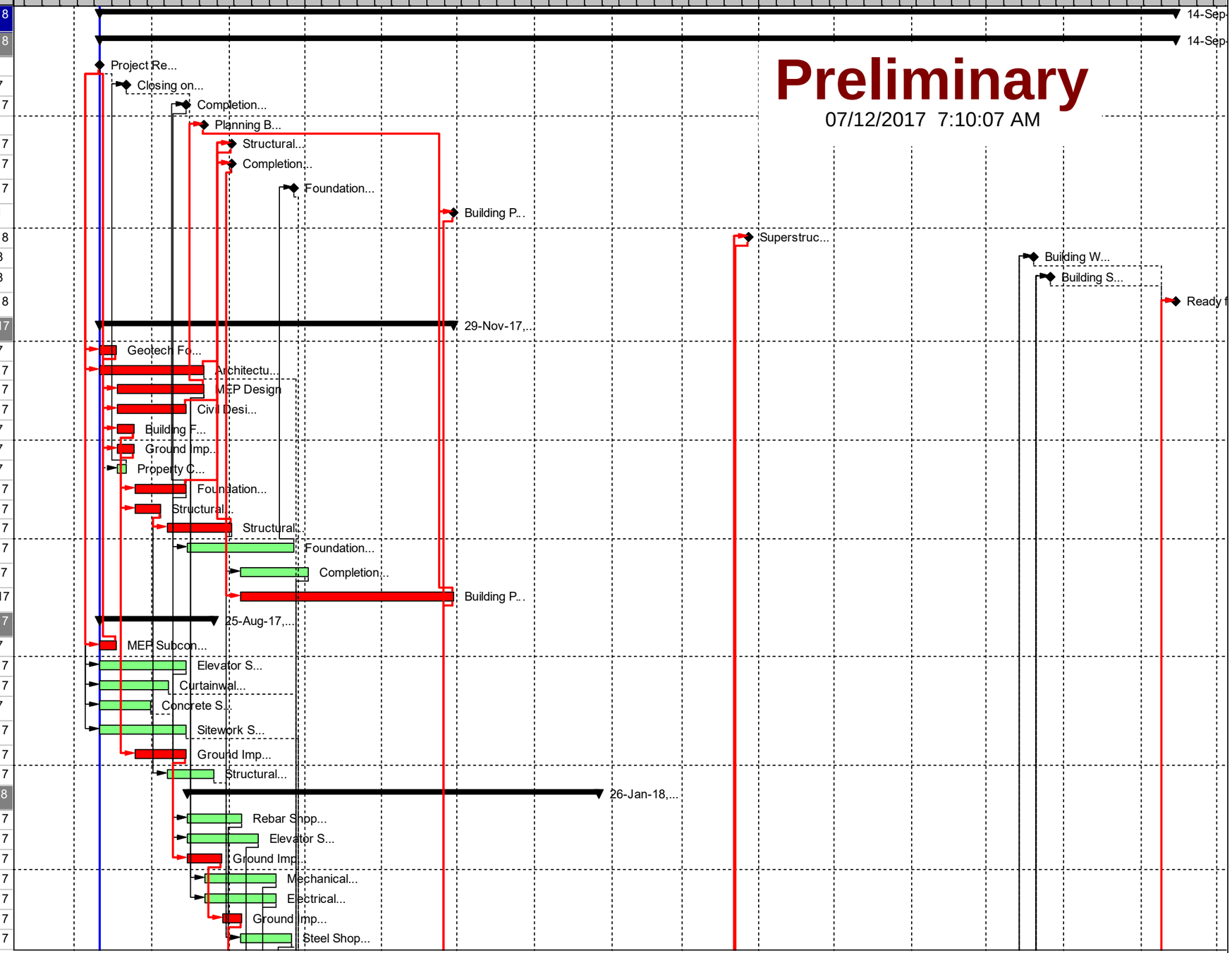
NOVEMBER 2017

VESSEL NAME	ARRIVAL DATE	ARRIVAL TIME	DEPARTURE DATE	DEPARTURE TIME	BERTH	PASSENGERS	CREW
Victory I (Foreign)	11/01/17	8:00	11/01/17	22:00	Ocean Gateway	200	90
Seven Seas Mariner	11/02/17	8:00	11/02/17	18:00	Portland Ocean Terminal	1250	850

EXHIBIT B

WEX Corporate Headquarters | CIANBRO Corporation | Data Date: 11-Jul-17 | Run Date: 11-Jul-17

Activity Name	Original Duration	Start	Finish
WEX Corporate Headquarters	300	11-Jul-17	14-Sep-18
Project Milestones	300	11-Jul-17	14-Sep-18
Project Release	0	11-Jul-17	
Closing on Property	0		21-Jul-17
Completion of Foundation Permit Drawing Set	0		14-Aug-17
Planning Board Approval	0		21-Aug-1
Structural Design Complete	0		01-Sep-17
Completion of Building Permit Drawing Set	0		01-Sep-17
Foundation Permit Issued by City	0		26-Sep-17
Building Permit Issued by City	0		29-Nov-1
Superstructure Complete	0		27-Mar-18
Building Weather Tight	0		19-Jul-18
Building System Complete	0		26-Jul-18
Ready for Tennant Move in	0		14-Sep-18
Design/Permitting	99	11-Jul-17	29-Nov-17
Geotech Foundation Review	5	11-Jul-17*	17-Jul-17
Architectural Core and Shell Design	30	11-Jul-17	21-Aug-17
MEP Design	25	18-Jul-17	21-Aug-17
Civil Design	20	18-Jul-17	14-Aug-17
Building Footprint and Column Grid Set	5	18-Jul-17*	24-Jul-17
Ground Improvement Design	5	18-Jul-17	24-Jul-17
Property Closing	4	18-Jul-17*	21-Jul-17
Foundation Design	15	25-Jul-17	14-Aug-17
Structural Steel Bid Set	9	25-Jul-17	04-Aug-17
Structural Steel Permit Set	20	07-Aug-17	01-Sep-17
Foundation Permit Review and Approval	30	15-Aug-17	26-Sep-17
Completion of Construction Drawing Set	20	05-Sep-17	02-Oct-17
Building Permit Review and Approval	60	05-Sep-17	29-Nov-17
Subcontractor Procurement	34	11-Jul-17	25-Aug-17
MEP Subcontractor Procurement	5	11-Jul-17*	17-Jul-17
Elevator Subcontractor Procurement	25	11-Jul-17	14-Aug-17
Curtainwall Subcontractor Procurement	20	11-Jul-17	07-Aug-17
Concrete Subcontract Procurement	15	11-Jul-17	31-Jul-17
Sitework Subcontractor Procurment	25	11-Jul-17	14-Aug-17
Ground Improvement Subcontractor Procuren	15	25-Jul-17	14-Aug-17
Structural Steel Subcontractor Procurement	15	07-Aug-17	25-Aug-17
Submittals/Material Procurment	114	15-Aug-17	26-Jan-18
Rebar Shop Drawings	15	15-Aug-17	05-Sep-17
Elevator Submittal	20	15-Aug-17	12-Sep-17
Ground Improvement Submittal	10	15-Aug-17	28-Aug-17
Mechanical Submittals	20	22-Aug-17	19-Sep-17
Electrical Equipment Submittal	20	22-Aug-17	19-Sep-17
Ground Improvement Submittal Review and Ap	5	29-Aug-17	05-Sep-17
Steel Shop Drawings	15	05-Sep-17	25-Sep-17



Remaining Level of Effort | Actual Work | Critical Re...
Actual Level of Effort | Remaining Work | ◆ Milestone

CIANBRO Corporation
Preliminary Milestone Schedule

TASK filter: All Activities

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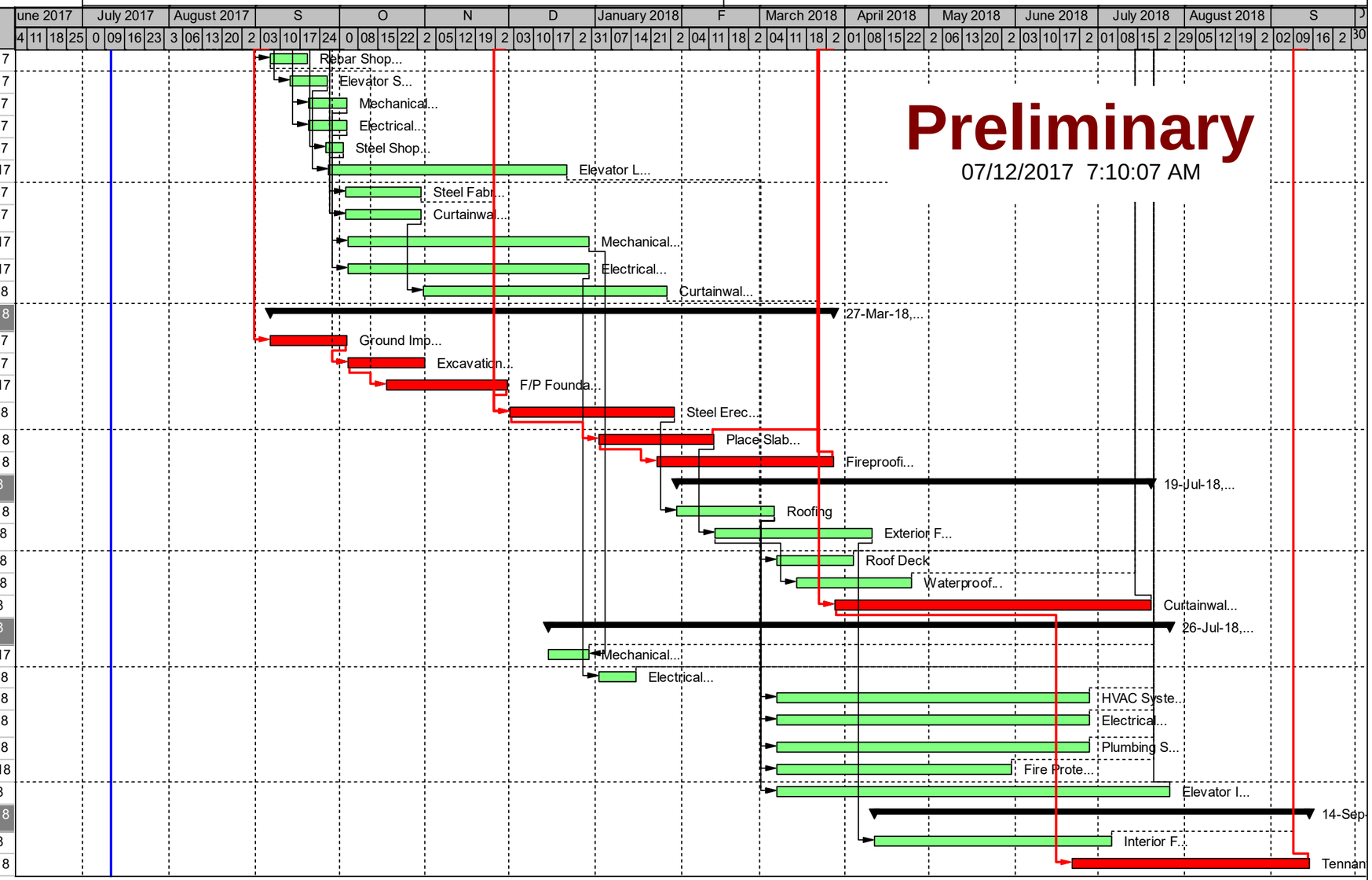
WEX Corporate Headquarters

CIANBRO Corporation

Data Date: 11-Jul-17
Run Date: 11-Jul-17

Activity Name	Original Duration	Start	Finish
Rebar Shop Review and Approval	10	06-Sep-17	19-Sep-17
Elevator Submittal Review and Approval	10	13-Sep-17	26-Sep-17
Mechanical Submittal Review and Approval	10	20-Sep-17	03-Oct-17
Electrical Equipment Submittal Review and App	10	20-Sep-17	03-Oct-17
Steel Shop Drawing Review and Approval	5	26-Sep-17	02-Oct-17
Elevator Lead Time	60	27-Sep-17	21-Dec-17
Steel Fabrication	20	03-Oct-17	30-Oct-17
Curtainwall Shop Drawings	20	03-Oct-17	30-Oct-17
Mechanical Unit Lead Time	60	04-Oct-17	29-Dec-17
Electrical Equipment Lead Time	60	04-Oct-17	29-Dec-17
Curtainwall Fabrication	60	31-Oct-17	26-Jan-18
Superstructure	140	06-Sep-17	27-Mar-18
Ground Improvement	20	06-Sep-17	03-Oct-17
Excavation for Foundations	20	04-Oct-17	31-Oct-17
F/P Foundations	30	18-Oct-17	30-Nov-17
Steel Erection	40	01-Dec-17	29-Jan-18
Place Slabs	30	02-Jan-18	12-Feb-18
Fireproofing	45	23-Jan-18	27-Mar-18
Envelope	120	30-Jan-18	19-Jul-18
Roofing	25	30-Jan-18	06-Mar-18
Exterior Framing and Sheathing	40	13-Feb-18	10-Apr-18
Roof Deck	20	07-Mar-18	03-Apr-18
Waterproofing	30	14-Mar-18	24-Apr-18
Curtainwall Install	80	28-Mar-18	19-Jul-18
Building System Installation	155	15-Dec-17	26-Jul-18
Mechanical Unit Install	10	15-Dec-17	29-Dec-17
Electrical Unit Install	10	02-Jan-18	15-Jan-18
HVAC System Install	80	07-Mar-18	27-Jun-18
Electrical System Install	80	07-Mar-18	27-Jun-18
Plumbing System Install	80	07-Mar-18	27-Jun-18
Fire Protection System Install	60	07-Mar-18	30-May-18
Elevator Installation	100	07-Mar-18	26-Jul-18
Interior Fit Up	110	11-Apr-18	14-Sep-18
Interior Framing and Drywall	60	11-Apr-18	05-Jul-18
Tennant Fit Out	60	21-Jun-18	14-Sep-18



Remaining Level of Effort | Actual Work | Critical Re...
Actual Level of Effort | Remaining Work | ◆ Milestone

CIANBRO Corporation
Preliminary Milestone Schedule

TASK filter: All Activities

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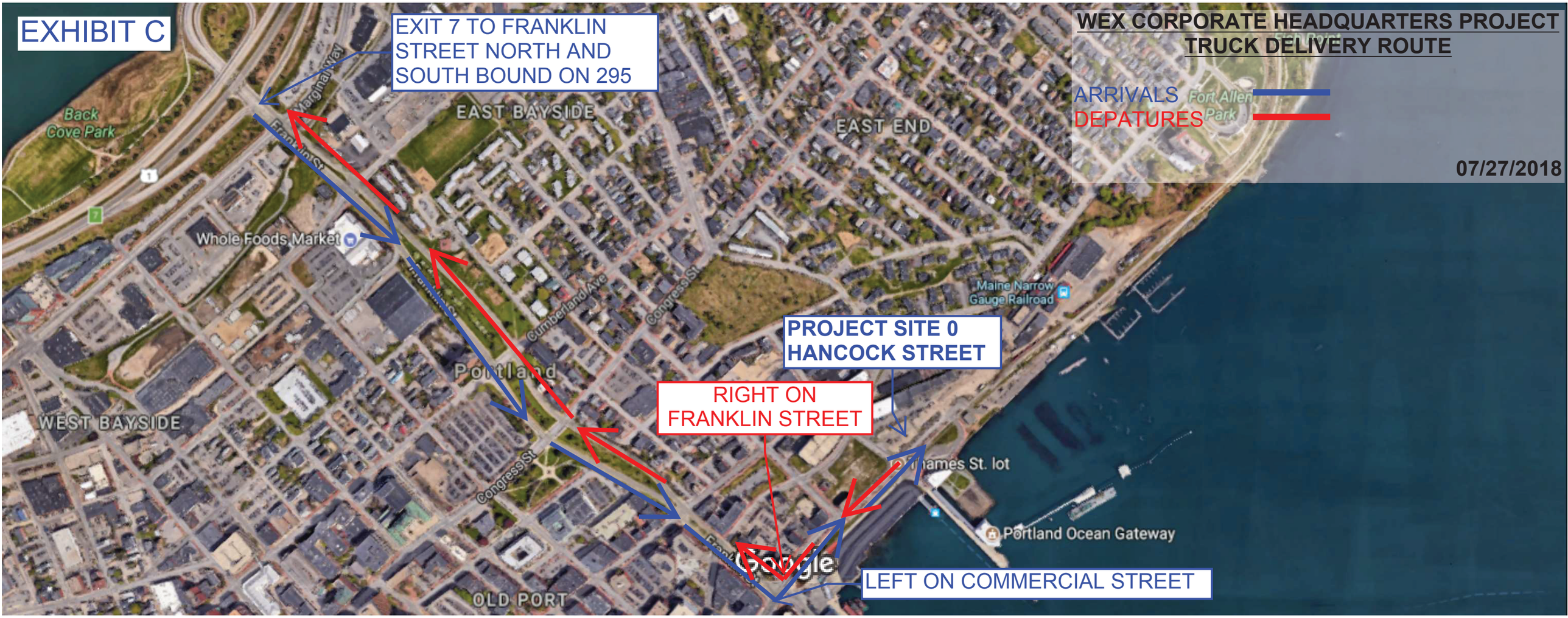


EXHIBIT C
EXIT 7 TO FRANKLIN STREET NORTH AND SOUTH BOUND ON 295
WEX CORPORATE HEADQUARTERS PROJECT
TRUCK DELIVERY ROUTE
ARRIVALS
DEPATURES
07/27/2018
PROJECT SITE 0 HANCOCK STREET
RIGHT ON FRANKLIN STREET
LEFT ON COMMERCIAL STREET
Back Cove Park
Marginal Way
Franklin St
EAST BAYSIDE
EAST END
Fort Allen Park
Whole Foods Market
Cumberland Ave
Congress St
Maine Narrow Gauge Railroad
Portland
WEST BAYSIDE
Thames St. lot
Portland Ocean Gateway
OLD PORT

7. SOLID WASTE

The following information is made in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(8).

7.1 OVERVIEW

This section provides estimates of solid waste generation during construction and operation of the finished project. Procedures for the transport and disposal of generated wastes are described, as are measures to reduce waste loads through re-use and recycling.

The project will generate the following estimated volumes of solid waste during construction and operation:

- <300 cubic yards of waste asphalt material associated with existing pavement areas.
- <10 cubic yards of grubbings from existing vegetated areas.
- <200 cubic yards of construction and demolition debris (CDD) associated with building demolition and new construction work (excluding recycled materials).
- <20 cubic yards per week of municipal solid waste (MSW) per week during operation and an additional 10 cubic yards of recyclable materials.

7.2 SOLID WASTE GENERATED DURING THE CONSTRUCTION OF THE SITE

It is anticipated that approximately 200 cubic yards of demolition debris will be generated during the initial phase of the project. Waste generated during ongoing construction activities is estimated to be in the range of 10 cubic yards of mixed debris per week. The project is expected to take approximately 12-18 months to complete.

7.3 SOLID WASTE GENERATED FROM THE OPERATION OF THE SITE

Waste generated after occupancy is projected to consist of paper and regular waste to be handled within a loading area at the rear of the building. Weekly collection and removal will be performed under contract to a local waste hauler.

7.4 HAZARDOUS AND SPECIAL WASTES

The proposed use is not expected to generate hazardous, or special wastes after construction. Construction activities will be performed in accordance with Local and State requirements for the handling of hazardous or special wastes.

7.5 GRIT/SEDIMENT REMOVAL

The Applicant will be responsible for the maintenance of the minor storm drain systems including the roof drain filters on the site. They will be responsible for the long-term maintenance of the stormwater collection system and the associated structures, including removal of sediment from the roof drain filters. Given the limited nature of the on-site storm drainage system the quantities associated with this task are considered insignificant.

8. CONFORMITY WITH APPLICABLE DESIGN STANDARDS

The following statements are made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526 Site Plan Standards.

8.1 OVERVIEW

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

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The surrounding street system consists of Thames Street, Hancock Street, and Fore Street. The proposed building will involve limited vehicular access other than for support services such as solid waste pickup, etc. There will be no onsite parking. Parking for the development will be provided at the Gateway Garage located on Fore Street. The Garage has been in operation for at least 8 years therefore traffic patterns and access to that site have been well established and found to be acceptable. The proposed use is considered consistent with the zoning and objectives identified in various City reports; therefore, we believe it results in no significant impact to the surrounding street system.

2. Access and Circulation:

   a. Site Access and Circulation.

      (i) The development provides access via a narrow service drive off Hancock Street that will connect to the remaining City land on the east side within the proposed Mountfort Street extension. Pedestrian access will be from fully developed sidewalk facilities off Thames and Hancock Streets.

      (ii) There are no new vehicular access and egress points to the site being constructed as part of this project.

      (iii) The site does not feature drive up services as mentioned in this requirement.

      (iv) Site access has been designed so as not to impede potential future connection to adjacent streets.

   b. Loading and Servicing.

      (i) Adequate provisions are made at the site for periodic loading from panel trucks to service the proposed use. The site provides clear area in front of an at grade overhead door at the rear of the building for servicing and loading vehicles.

c. Sidewalks.

(i) The project will provide new brick sidewalks along Hancock and Thames Streets.

3. Public Transit Access:

a. The development site will continue to have superior access to public transit facilities including various Metro stops, and the East End Trail system among other pedestrian facilities. The nearest METRO stop is located at Casco Bay lines which is less than 1,000 feet distance from the site. The Applicant is requesting a waiver of the provision requiring a transit facility on the site.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

(i) Off-street parking is provided within the Gateway Garage, which the Applicant also owns. The Applicant is proposing to provide 320 parking spaces within the garage and this amount exceeds the amount required under City code. The Applicant's tenant has indicated this parking supply will satisfy their need for parking based on their employee census and anticipated needs. In addition, the Applicant outlined prospective plans to construct additional parking in the nearby site vicinity on other properties under common ownership to aid with addressing any parking supply needs for this project and the area in general.

(ii) The Applicant and WEX are currently working with Cushman Transportation Consulting on the preparation of a Transportation Demand Management (TDM) plan that will look to implement various strategies for reducing the project's overall parking needs and traffic impacts in general. An outline of the TDM objectives and strategies under consideration by WEX is contained in Attachment J.

(iii) Not applicable see above.

(iv) No onsite parking is proposed. All parking space dimensional requirements are satisfied in the Gateway Garage.

(v) Not applicable.

b. Location and Required Number of Bicycle Parking Spaces:

(i) The project provides seven racks, each with a capacity for two bicycles, providing a total of 14 bicycle parking spaces. The location of these racks will be off the Hancock Street entrance and at the rear of the building. Per Code Section 14-526 a.4.b (i) (b), the required number of bike spaces is 31 spaces, thus the Applicant is seeking a waiver of this required number of spaces, until the findings and full TDM plan are more fully developed with WEX.

c. Motorcycles and Scooter Parking:

(i) N/A as there is no onsite parking. There are accommodations in the Gateway Garage for motorcycle parking.

d. Snow Storage:

(i) Snow storage management will employ two strategies:

a. Limited snow storage along the northerly perimeter of the site (this will suffice for small storm events and temporary storage only).

b. Snow removal and off-site disposal.

5. Transportation Demand Management (TDM):

a. A Transportation Demand Management (TDM) Plan will be prepared and submitted for Planning review within the upcoming application review period.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

a. The site is currently developed as a parking lot, nearly 100% impervious, and contains no significant natural features.

2. Landscaping and Landscaping Preservation:

a. Landscape Preservation.

(i) There are no existing landscape features or elements at the site. A substantial amount of new landscaping will be provided to the site.

b. Site Landscaping.

(i) Landscaped Buffers:

(a) The solid waste storage, HVAC, and loading area will be inside the building at the rear of the site.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable.

(ii) Parking Lot Landscaping:

a) Not applicable.

(iii) Street Trees:

(a) The landscape plan includes 11± street trees along Hancock and Thames Streets.

3. Water Quality, Stormwater Management and Erosion Control:

a. The project proposes the development of a new building covering nearly 64% of the site with additional plaza area covering another 20% of the site. The property is currently nearly 100% impervious. Redevelopment of the site will reduce the impervious cover and provide pervious landscaped surfaces that will reduce both the peak rate of runoff and the volume of runoff from the site under all storm conditions. The provision of landscaped green space will also enhance the quality of surface runoff from the site under all conditions. The site improvements will also include measures for meeting the MaineDEP Stormwater Chapter 500 Rules and the City of Portland Stormwater Management Standards. This will include the installation of roof drain water quality treatment devices within the building.

(i) The site is part of a larger area draining to the east and to an existing catch basin that will remain on the City property. A new onsite collection system including several new structures and conveyance pipe will be installed on the north side of the property to help capture any runoff draining from the adjacent property to the north and this system will be tied in to the existing City system.

(ii) See above. There will be no increase in the rate or volume of runoff from the site.

(iii) See above.

(iv) See above.

b. The project will ultimately meet the General Standards under Chapter 500, Stormwater Law (City of Portland Technical Manual, Section 5 – Portland Stormwater Management and Maine DEP Ch. 500, 3 (e)). The Basic Standards will apply to this project and a detailed Soil Erosion and Sediment Control Pan has been developed to address this. One or more roof drain water quality units will be installed to treat runoff from the building roof and there will be an overall increase of pervious area including landscaping to aid with improving water quality, since the site is now nearly 100% covered with pavement or gravel parking lot.

c. Not applicable.

d. Not applicable.

e. Construction at the site will be required to follow local, state and federal regulations and will be undertaken under the supervision of a suitably qualified

environmental professional. Post-construction activities at the site do not pose a risk of groundwater contamination.

f. The project will be connected to the public sanitary sewer system which is adequately sized for the anticipated project flows.

(c) Public Infrastructure and Community Safety Standards.

1. Consistency with City Master Plans:

   a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure plans.

   b. Not applicable.

2. Public Safety and Fire Prevention:

   a. The site has been designed to promote a safe and welcoming mixed use development environment.

   b. The site provides access from Hancock Street and Thames Street for emergency vehicles.

   c. Fire hydrants are located adjacent to the property along the existing streets. The building will be fully sprinklered.

3. Availability and Adequate Capacity of Public Utilities:

   a. The Applicant has secured letters from the applicable utilities stating their ability to serve the site (we await the City of Portland Wastewater capacity response). The project will require new or updated electrical, gas, sewer, and water services to the site.

   b. All new electrical services to the site will be underground.

   c. All new utility infrastructures will meet the provisions of the Technical Manual.

   d. The project will utilize a new service connection to the public sewer system within Thames Street.

   e. All new sewer and stormwater infrastructure will meet City standards.

   f. A solid waste collection and storage area will be provided with adequate capacity for the needs of the development. The owner will contract with a waste removal vendor as part of the onsite management of waste collection and recycling.

(d) Site Design Standards.

1. Massing, Ventilation and Wind Impact:

   a. The project proposes construction of a new multi-story building. The project will not result in any significant changes to the wind environment proximate to the site.

   b. The project will not result in any significant impacts to abutting properties and is consistent with the Eastern Waterfront Master Plan and other zoning considerations.

   c. HVAC venting, if necessary, will be directed through building roof top mounted units and will not impact any adjacent public spaces.

2. Shadows:

   a. The project is in the B-6 Zone. The building will not cast shadows onto publicly accessible open space such as a garden area, sports field or similar. It will cast shadows onto nearby parking areas.

3. Snow and Ice Loading:

   a. The building will be designed in such a way that accumulated snow does not impact adjacent properties or public ways as evidenced by the graphical representations of the building by Archetype PA.

4. View Corridors:

   a. The project entails construction of a multistory building at the site in manner that is compliant with the Downtown Vision View Corridor protection plan and B6 Building Height Overlay and Building Envelopes plans and objectives.

5. Historic Resources:

   a. The project is not located in a historic district, historic landscape district, or City designated landmark.

   b. The project is not located adjacent to, or within 100 feet of, a historic district, historic landscape district, or City designated landmark.

   c. There are no historical or archaeological resources on the project site.

6. Exterior Lighting:

   a. Site Lighting

      (i) All new exterior lighting at the site will be full cutoff with no light emitted above the horizontal plane, and in accordance with Section 12 of the Technical Manual. A photometric lighting plan will be developed demonstrating illumination levels throughout the site consistent with previously submitted plans.

7. Noise and Vibration:

    a. Project noise levels will be designed to meet the permitted standards within the zone. HVAC units will be located on the ground adjacent the building or on the roof top. Equipment cut sheets can be provided upon request.

8. Signage and Wayfinding:

    a. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

        (i) The project is not located in a historic district or subject to Article IX.

        (ii) Proposed commercial signage has not yet been designed for the site and will be submitted in a separate application.

        (iii) All street and wayfinding signage is designed to meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

9. Zoning Related Design Standards:

    a. The project satisfies the goals and objectives of the B6 zone.

8.2 ATTACHMENTS

Attachment J – Exploration of TDM Objectives and Strategies

ATTACHMENT J

Exploration of TDM Objectives and Strategies

Cushman Transportation Consulting, LLC
94 Beckett Street, 2nd Floor, Portland, ME 04101
(207) 200-1910 • sarah@sarahcushman.com • www.sarahcushman.com

8/13/2017 TDM Plan Update: *as part of the Transportation Demand Management (TDM) plan requirement for City of Portland Level III site review, WEX is currently exploring the following TDM strategies.*	
Infrastructure - *beyond required sidewalk & crossing improvements, bicycle parking and TDM kiosk*	
Bicycle and Pedestrian Facilities	
	street lighting, wayfinding and general safety and attractiveness
	shower and locker facilities on-site
	covered and/or secured bicycle parking beyond city-required bicycle parking
	internal bikeshare at new site and/or work with Portland Bikeshare for dock near site (launch in 2018)
Incentives & Fringe Benefits	
Parking	
	Parking "Cash Out": for those employees who have parking paid for by the company, offer choice of receiving monetary payments in lieu of employer-provided parking
	Preferential parking for carpools, vanpools and bicycles
	Craft customized Transportation Network Company (TNC - e.g., Lyft & Uber) solutions for employees to access transit and/or underutilized or lower-cost parking located at some distance from the company headquarters
Transit	
	Free or reduced-cost METRO, South Portland, Lakes Region Explorer, Shuttlebus-ZOOM and Casco Bay Ferry passes
	Continue to offer and promote federal transportation fringe benefits for transit, vanpool and bicycle commuters: e.g., offer employees the option to purchase a pre-tax monthly transit pass
Rideshare and Carshare	
	Vanpool coordination via vRide/Enterprise
	Vanpool vouchers and/or federal vanpool fringe benefit
	Ridesharing matches via GO MAINE
	Sign up multi-modal employees with GO MAINE for rewards program and Emergency Ride Home
	Use of UhaulCarShare near Ferry Terminal for short trips or possible internal 1-2 vehicle carshare for site - for either commercial or personal trips through the work day

Bicycle Commuting	
	Federal bicycle commuting fringe benefit
	Reimbursement for Cycling Savvy and/or Bicycle Coalition of Maine Traffic Skills 101 courses
Telecommuting/Alternate Work Arrangements	
	Offer telecommute options - e.g. an employee may work from home 1 day per week
	Offer flexible working hours outside morning or evening peak travel times
	Offer four-day work weeks or other working hour arrangements that avoid morning or evening peak travel
Other Incentives	
	Provide stipend for TDM Coordinator to support work on behalf of the company to lead the ongoing development and implementation of TDM efforts.
	Offer thank-yous for company TDM champions – e.g., vacation hours or gift cards
	Run short-term incentive campaign(s): transit users, vanpoolers, carpoolers, walkers and bicyclists are entered into a monthly raffle for vacation hours, gift cards, movie passes, and other benefits.
Internal & External Promotion *- building company culture and leadership in community*	
	Vibrant TDM company website, social media and physical kiosk presence with transportation information and description of incentives/benefits.
	Employee commute surveys to identify barriers to using alternate transportation to work and to foster additional carpooling
	New-hire transportation orientation programs
	Lunch & Learn sessions regarding different transportation options
	Use of written commitment cards to try alternate modes
	Telework program set-up and support
	On-site Cycling Savvy and Bicycle Coalition of Maine Traffic Skills 101 courses
	WEX participation in GO MAINE B2B Commute Challenge, National Bike to Work Day, Park(ing) Day and World Car-Free Day
	Recognition of employees who reduce the traffic impact of the development through newsletter, email, bulletin board, or other announcements
	Form a company committee or sub-group of an existing company committee to advise the site's TDM work and develop peer-led campaigns that encourage active transportation and reduce the appeal of driving to work
	Support the development of - and WEX membership in - area non-profit Transportation Management Association (TMA) to benefit private sector employers. TMAs assist with TDM implementation and monitoring, advocate for transportation solutions for local business, and act as brokers for services such as: vanpools, TNC trips, etc.
	Support transit expansion: (A) between Portland Transportation Center and Waterfront (METRO and/or automated OLLI test-site bus) and (B) downtown circulator route specifically meant to transport riders between the Waterfront and Cumberland Ave./Congress St. to access transit and additional parking

9. VERIFICATION OF PROPOSED HVAC EQUIPMENT

9.1 OVERVIEW

See the attached statement from the Mechanical Designer, Johnson & Jordan, regarding compliance with applicable State and Federal Emissions requirements.

9.2 ATTACHMENTS

Attachment K – Letter from Johnson & Jordan

ATTACHMENT K

Correspondence from Johnson & Jordan

JOHNSON & JORDAN

MECHANICAL CONTRACTORS

DATE: August 4, 2017

SUBJECT: Equipment Emissions Compliance
PROJECT: **0 Hancock St, Portland, ME**

City Application checklist requirement:
Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements

Response:
The proposed mechanical HVAC systems including the plumbing systems, are only expected to have one type of combustion equipment, the central boilers. The proposed high-efficiency, natural-gas fired condensing boilers are a commercially produced product that will comply with all state and federal emission requirements. Boiler manufacturer states that equipment meets the requirements of ANSI Z21.13 and CSA 4.9, as well as the latest efficiency requirements of ASHRAE 90.1 standard.

Jacob Martin, PE
Mechanical Engineer
207-883-8345

STATE OF MAINE
JACOB R. MARTIN
No. 12013
LICENSED
PROFESSIONAL ENGINEER

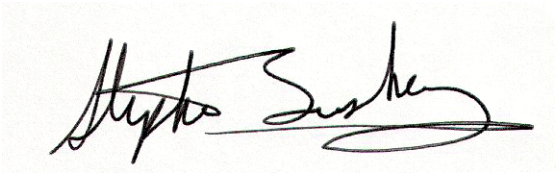
Neighborhood Meeting Certification

I, Stephen Bushey, of Stantec, hereby certify that a neighborhood meeting was held on September 5, 2017 at the development site at the corner of Hancock and Thames Streets at 5:00 pm EST. I also certify that on August 25, 2017, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to the Planning Division (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,  (09.06.2017)

Attached to this certification are:

1. Copy of the invitation sent

2. Sign-in sheet

3. Meeting minutes

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

August 25, 2017

Dear Neighbor:

Please join us for a Neighborhood Meeting to discuss our plans for the proposed construction of a commercial office and retail building at the corner of Thames and Hancock Streets in Portland, Maine. The project includes a 102,027 SF, 4-story mixed-use building with a portion of the first floor and all upper floors designated as corporate office space for WEX and 5,000 SF to 10,000 SF of the first floor as retail space.

Meeting Location:	**Project Site – Existing Parking Lot* 0 Hancock Street (corner of Thames and Hancock Streets) Portland, Maine**
Meeting Date:	**Tuesday, September 5, 2017**
Meeting Time:	**5:00 PM**

*** *In the event of inclement weather the meeting will be held at the same time across the street at the Gateway Garage***

The City Code requires that property owners within 500 feet (except notices must be sent to property owners within 1,000 feet for industrial zoning map amendments and industrial subdivisions) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions, please feel free to contact Steve Bushey, P.E. at 207-883-3355.

Sincerely,

STANTEC CONSULTING SERVICES, INC.

Stephen R. Bushey, P.E.
Associate

V:\1953\active\195350450\civil\admin\permitting\local\Neighborhood Meeting\195350450_notice_neighborhood-meeting.docx

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Note: Under Section 14-32(C) and 14-525 of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within three weeks of submitting a preliminary application or two weeks of submitting a final site plan application, if a preliminary plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street, Portland, ME 04101 or by email to: bab@portlandmaine.gov

0 Hancock LLC Public Information meeting

Name	Address	Tel/Email
Steve Bushey	STANTEC	
Bill CAMPBELL	22 HANCOCK ST UNIT 306	WFCJR@TWC.COM
MIKE CURRAN	22 HANCOCK ST 206	MWCURRAN@GMAIL.COM
ANN SHELDON	HANCOCK + NEWBURY	
Christopher Sheldon	113 Newbury.	
Rick Hulcatt	15 Middle St. #402	rhulcatt@gmail.com
Tony Donovan	84 Middle ST 04101	MELIKESRAIL@gmail.com

WFCJR@TWC.Com

Stantec

Meeting Notes

Public Information meeting – 0 Hancock LLC - WEX

195350450 / 2017.09.05 Meeting minutes

Date/Time:	September 5, 2017 / 5:00 pm
Place:	Corner of Thames and Hancock Street Parking lot
Next Meeting:	N/A
Attendees:	See attendees list
Absentees:	Absentees
Distribution:	See attached list

A public information meeting was held on September 5, 2017 at the development site for a 100,000 SF office building proposed by 0 Hancock Street LLC. The expected office tenant will be the WEX Corporation. There were 6 attendees from the general public and the development team was represented by Katherine Detmer and Mike Coyne of Archetype, Jonathan Cohen of 0 Hancock Street LLC,, Brian Larson of Cianbro and Steve Bushey of Stantec.

The initial few minutes of the meeting commenced with some general discussion amongst several attendees and Mr. Cohen. Mr. Bushey then formally introduced the project and provided an explanation of the meeting purpose as well as an overview of the development proposal. The basic project description includes:

- 48,000 SF land transfer from the City of Portland to the Developer
- Construction of a multi-story office building with nearly 90,000 SF of office and 10,000 SF of retail/restaurant space on the ground floor
- Pedestrian plaza space will be provided at the rear and east end of the building.
- No parking will be provided on site. All parking for the development will be provided in the Gateway Garage or within spaces to be provided at the 100 Fore Street property.

The majority of the discussion from attendees involved parking and how the existing garage and Fore street sites would work for meeting the expected parking demand. Mr. Cohen spoke at length about existing parking utilization and capacity at the garage and the prospect for a new parking structure at the 100 Fore Street Site. In general, attendees expressed skepticism about the project's parking approach. Discussion and questions also focused on traffic and the overall amount of development occurring in the area. Several of the attendees appeared to be residents of the Bay House development.

There were no specific comments about building architecture or height that the writer heard, although there were overlapping discussions occurring during the course of the 30 minute meeting.

Mr. Donovan attended the meeting to express his ideas on the site's pivotal role in future rail operations that may occur in the site vicinity, including passenger rail service to points north such as Lewiston-Auburn and beyond.

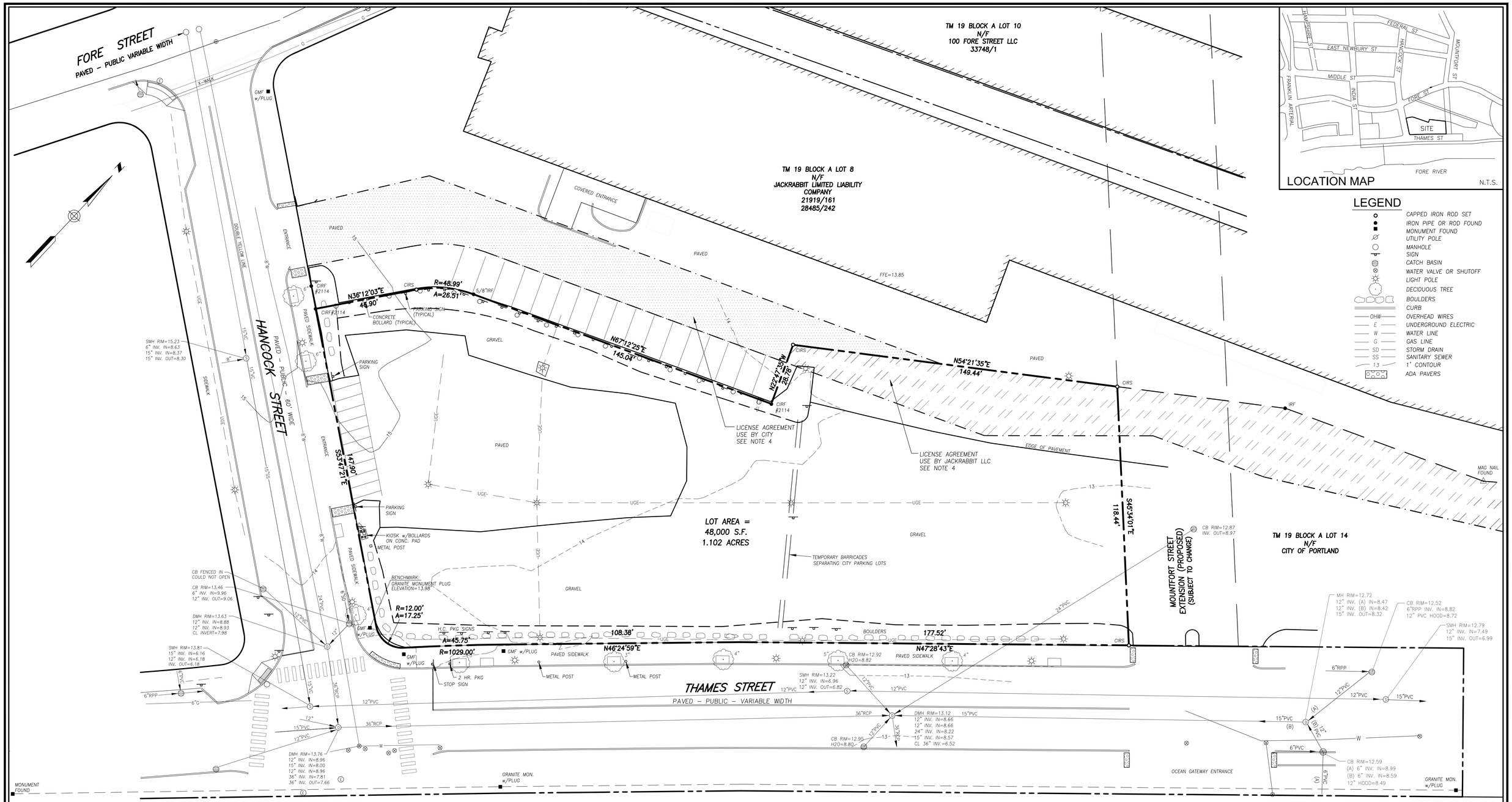
The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

Stantec Consulting Services Inc.

Stephen Bushey
Associate, Senior Project Manager
Phone: (207) 887-3478
Fax: 207-883-3376
Stephen.Bushey@stantec.com

Attachment: Attachment

c. Cc List



UTILITY NOTE

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

GRAPHIC SCALE

0 10' 20' 40' 80'

PLAN REFERENCES

1. "RECORDING PLAT (SHEETS 1 THRU 3) OCEAN GATEWAY COMMERCIAL STREET & FORE STREET, PORTLAND, MAINE MADE FOR RECORD OWNERS CITY OF PORTLAND AND STATE OF MAINE," BY OWEN HASKELL, INC.D DATED AUGUST 4, 2004. OHI JOB# 2003-165P. RECORDED IN PLAN BOOK 204 PAGES 622-624.

2. "ALTA/ACSM LAND TITLE SURVEY, 144 FORE STREET AND HANCOCK STREET, PORTLAND, CUMBERLAND COUNTY, STATE OF MAINE FOR RECORD OWNER: JACKRABBIT LIMITED LIABILITY CO.," BY LEWIS & WASINA, INC.D DATED 1/23/2011 AND REVISED THROUGH 1/26/2011. RECORDED IN PLAN BOOK 211 PAGE 15.

3. "BOUNDARY SURVEY AND PROPOSED CONVEYANCE 144 FORE STREET AND HANCOCK STREET, PORTLAND, CUMBERLAND COUNTY, STATE OF MAINE FOR RECORD OWNER: JACKRABBIT LIMITED LIABILITY CO.," BY LEWIS & WASINA, INC., DATED 5/18/2010 AND REVISED THROUGH 10/4/2010. ON FILE WITH THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS.

4. "ALTA/NSPS LAND TITLE SURVEY, 100 FORE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR JONATHAN COHEN," BY OWEN HASKELL, INC., DATED OCTOBER 20, 2016. OHI JOB# 2016-325P.

GENERAL NOTES

1. OWNER OF RECORD: CITY OF PORTLAND
TAX MAP 19 BLOCK A LOT 14
C.C.R.D. BOOK 10924 PAGE 84
BOOK 12907 PAGE 105

2. BEARINGS ARE BASED ON STATE PLANE COORDINATE SYSTEM, MAINE WEST ZONE, NAD 83 PER CITY CONTROL MONUMENTS.

3. ELEVATIONS ARE BASED ON CITY DATUM.

4. PROPERTY IS SUBJECT TO LICENSE AGREEMENT BETWEEN THE CITY OF PORTLAND AND JACKRABBIT LLC AS RECORDED IN BOOK 28481 PAGE 166.

5. MOUNTFORT STREET EXTENSION IS IN THE PROPOSAL AND PLANNING STAGE AND MAY BE SUBJECT TO CHANGE. LINES SHOWN HEREON ARE BASED ON A 50 WIDTH WHERE THE NORTHEAST INTERSECTION WITH FORE STREET HINGES ON AN ANGLE POINT ON THE EASTERLY SIDE OF FORE STREET NEAREST TO MOUNTFORT (AS SHOWN ON PLAN REFERENCE 4) AND EXTENDS SOUTHEASTERLY AS TO CREATE A 48,000 SQUARE FOOT LOT – BEING THE SURVEYED PREMISES. THE TERMINATION OF MOUNTFORT STREET EXTENSION AS SHOWN HEREON ALSO IS CENTERED APPROXIMATELY WITH THE ACCESS DRIVE OF THE OCEAN GATEWAY.

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.

8/8/2017
DATE

JOHN W. SWAN, PLS NO. 1038

STATE OF MAINE
JOHN W. SWAN
1038
PROFESSIONAL LAND SURVEYOR

BOUNDARY & TOPOGRAPHIC SURVEY

ON

HANCOCK & THAMES STREETS, PORTLAND, MAINE

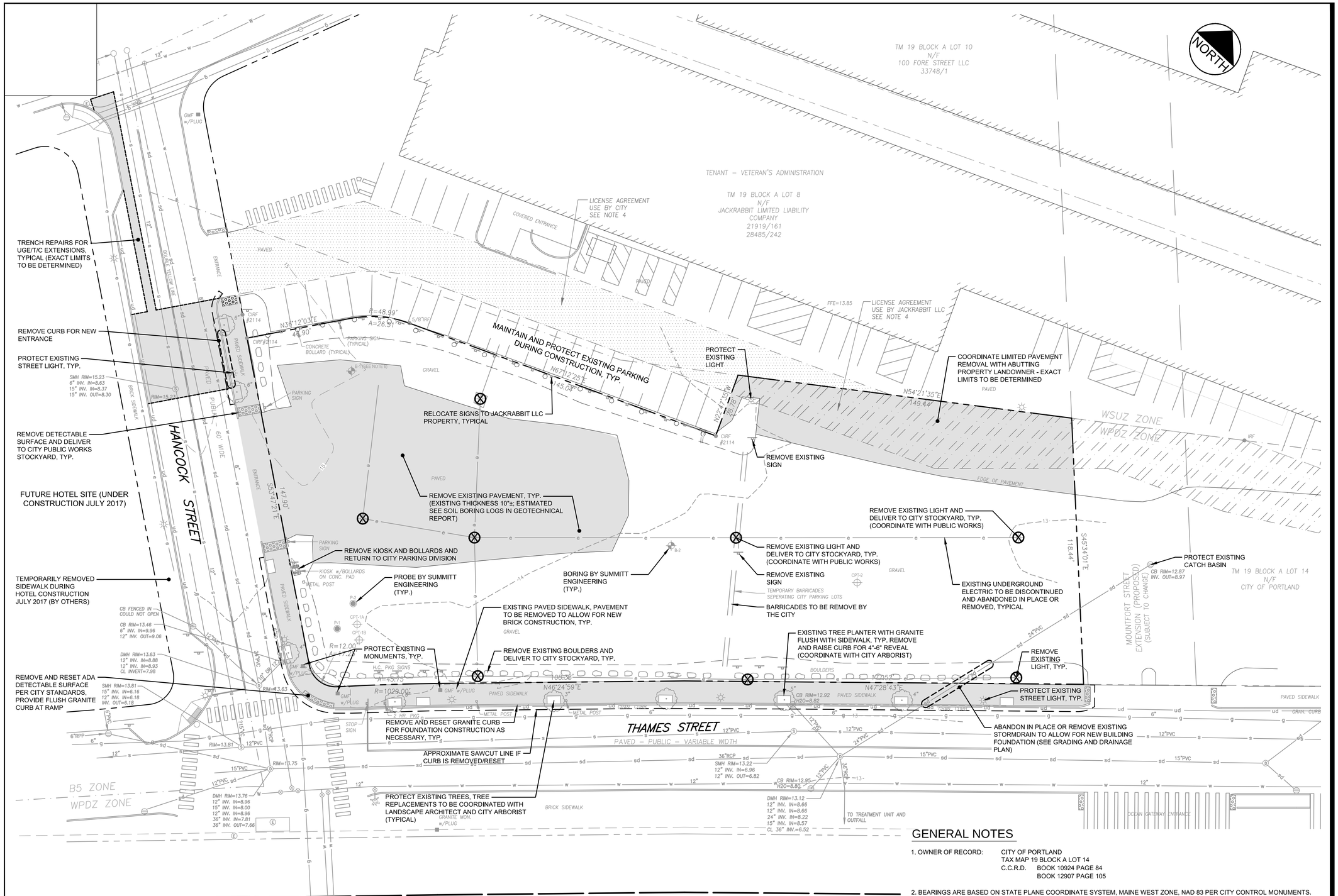
MADE FOR

ARCHETYPE

48 UNION WHARF, PORTLAND, MAINE

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

Drawn By SDG	Date	Job No.	
Trace By JLW	JUNE 15, 2017	2017-145P	
Check By JWS	Scale	Drwg. No.	
Book No. FILE	1" = 20'	1	



GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

PLAN REFERENCE

1. CITY OF PORTLAND OCEAN GATEWAY PHASE 1 - MDOT PROJECT NO. 009215.00 BY WOODARD & CURRAN AS RECEIVED FROM CITY ARCHIVES, JANUARY 1, 2005.
2. BOUNDARY & TOPOGRAPHIC SURVEY ON HANCOCK & THAMES STREETS, PORTLAND, MAINE MADE FOR ARCHETYPE BY OWEN HASKELL, INC. JUNE 15, 2017 FILE 2017-145P

UTILITY NOTE

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GENERAL NOTES

1. OWNER OF RECORD: CITY OF PORTLAND
   TAX MAP 19 BLOCK A LOT 14
   C.C.R.D. BOOK 10924 PAGE 84
   BOOK 12907 PAGE 105
2. BEARINGS ARE BASED ON STATE PLANE COORDINATE SYSTEM, MAINE WEST ZONE, NAD 83 PER CITY CONTROL MONUMENTS.
3. ELEVATIONS ARE BASED ON CITY DATUM.
4. PROPERTY IS SUBJECT TO LICENSE AGREEMENT BETWEEN THE CITY OF PORTLAND AND JACKRABBIT LLC AS RECORDED IN BOOK 28481 PAGE 166.
5. MOUNTFORT STREET EXTENSION IS IN THE PROPOSAL AND PLANNING STAGE AND MAY BE SUBJECT TO CHANGE. LINES SHOWN HEREON ARE BASED ON A 50 WIDTH WHERE THE NORTHEAST INTERSECTION WITH FORE STREET HINGES ON AN ANGLE POINT ON THE EASTERLY SIDE OF FORE STREET NEAREST TO MOUNTFORT (AS SHOWN ON PLAN REFERENCE 4) AND EXTENDS SOUTHEASTERLY AS TO CREATE A 48,000 SQUARE FOOT LOT - BEING THE SURVEYED PREMISES. THE TERMINATION OF MOUNTFORT STREET EXTENSION AS SHOWN HEREON ALSO IS CENTERED APPROXIMATELY WITH THE ACCESS DRIVE OF THE OCEAN GATEWAY.
6. SEE GEOTECHNICAL REPORT BY SUMMIT GEOENGINEERING SERVICES DATED 07/20/2017, PROJECT #17101
7. THE CONTRACTOR SHALL BE PREPARED TO ENCOUNTER BURIED FOUNDATIONS AND OTHER REMNANTS OF PAST USE OF THE SITE. ANY REMOVALS SHALL BE COMPLETED AT NO ADDITIONAL EXPENSE TO THE OWNER.

V:\195350\active\195350450\civil\consultants\owen Haskell Files\from 2017.06.15\sdn-2017-145 P.dwg pfillettaz 8/8/2017 3:21 PM

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Consultants

Notes

Revision	By	Appd.	YY.MM.DD
1 FINAL SITE PLAN REVIEW	SRB	SRB	17.08.08

File Name: sfn-2017-145 P	LA	DBS	SRB	17.07.12
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7426
LICENSED
PROFESSIONAL ENGINEER
8/8/17

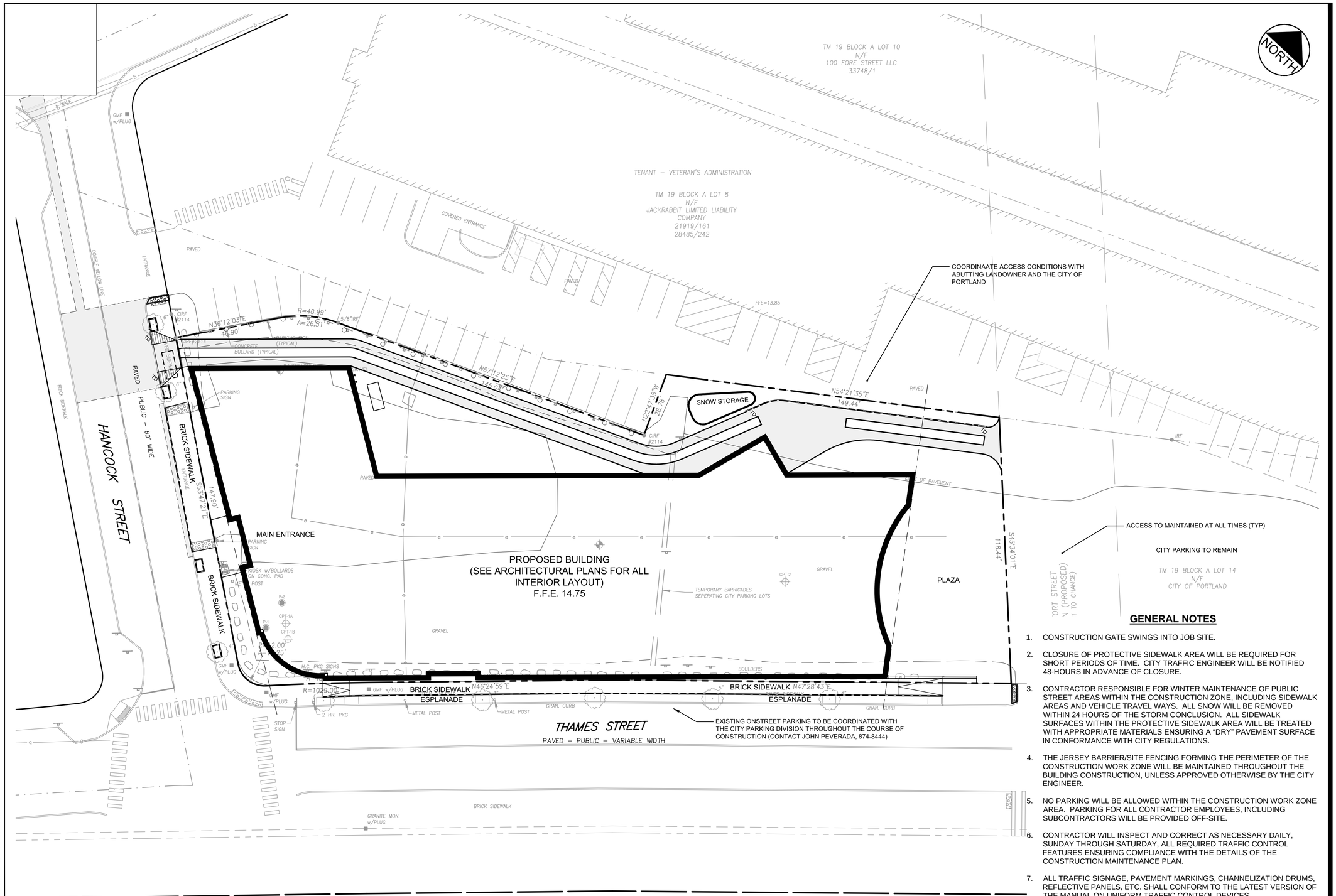
Client/Project
0 HANCOCK LLC

THAMES STREET SITE
PORTLAND, MAINE

Title
EXISTING CONDITIONS AND DEMOLITION PLAN

Project No. 195350450
Scale 1" = 20'

Sheet
C-2.1



GENERAL NOTES

1. CONSTRUCTION GATE SWINGS INTO JOB SITE.
2. CLOSURE OF PROTECTIVE SIDEWALK AREA WILL BE REQUIRED FOR SHORT PERIODS OF TIME. CITY TRAFFIC ENGINEER WILL BE NOTIFIED 48-HOURS IN ADVANCE OF CLOSURE.
3. CONTRACTOR RESPONSIBLE FOR WINTER MAINTENANCE OF PUBLIC STREET AREAS WITHIN THE CONSTRUCTION ZONE, INCLUDING SIDEWALK AREAS AND VEHICLE TRAVEL WAYS. ALL SNOW WILL BE REMOVED WITHIN 24 HOURS OF THE STORM CONCLUSION. ALL SIDEWALK SURFACES WITHIN THE PROTECTIVE SIDEWALK AREA WILL BE TREATED WITH APPROPRIATE MATERIALS ENSURING A "DRY" PAVEMENT SURFACE IN CONFORMANCE WITH CITY REGULATIONS.
4. THE JERSEY BARRIER/SITE FENCING FORMING THE PERIMETER OF THE CONSTRUCTION WORK ZONE WILL BE MAINTAINED THROUGHOUT THE BUILDING CONSTRUCTION, UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.
5. NO PARKING WILL BE ALLOWED WITHIN THE CONSTRUCTION WORK ZONE AREA. PARKING FOR ALL CONTRACTOR EMPLOYEES, INCLUDING SUBCONTRACTORS WILL BE PROVIDED OFF-SITE.
6. CONTRACTOR WILL INSPECT AND CORRECT AS NECESSARY DAILY, SUNDAY THROUGH SATURDAY, ALL REQUIRED TRAFFIC CONTROL FEATURES ENSURING COMPLIANCE WITH THE DETAILS OF THE CONSTRUCTION MAINTENANCE PLAN.
7. ALL TRAFFIC SIGNAGE, PAVEMENT MARKINGS, CHANNELIZATION DRUMS, REFLECTIVE PANELS, ETC. SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
8. CONTRACTOR WILL PAINT ALL CROSSWALKS AND STOP BAR MARKINGS WITHIN THE THAMES STREET / HANCOCK STREET INTERSECTION AS DIRECTED BY THE CITY'S TRAFFIC ENGINEER.
9. CONTRACTOR WILL APPROPRIATELY REPAIR OR REPLACE ALL SIDEWALK AREAS, GRANITE CURBING, ETC. DAMAGED BY THE BUILDING CONSTRUCTION PROJECT, AS DIRECTED BY THE CITY ENGINEER.
10. CONSTRUCTION MANAGEMENT PLAN MAY BE ADJUSTED BY CONTRACTOR IN CONSULTATION WITH CITY OF PORTLAND.
11. SEE THE WRITTEN CONSTRUCTION MANAGEMENT PLAN BY CIANBRO CORPORATION FOR SPECIFICS.

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

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Notes

Revision	By	Appd.	YY.MM.DD
1 FINAL SITE PLAN REVIEW	SRB	LBS	17.08.08

File Name: 195350450_construction_mgt	LA	DBS	SRB	17.07.12
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7420
LICENSED
PROFESSIONAL ENGINEER
8/8/17

Client/Project
0 HANCOCK LLC

THAMES STREET SITE
PORTLAND, MAINE

Title
CONSTRUCTION MANAGEMENT PLAN

Project No. 195350450

Scale 1" = 20'

Sheet C-2.2

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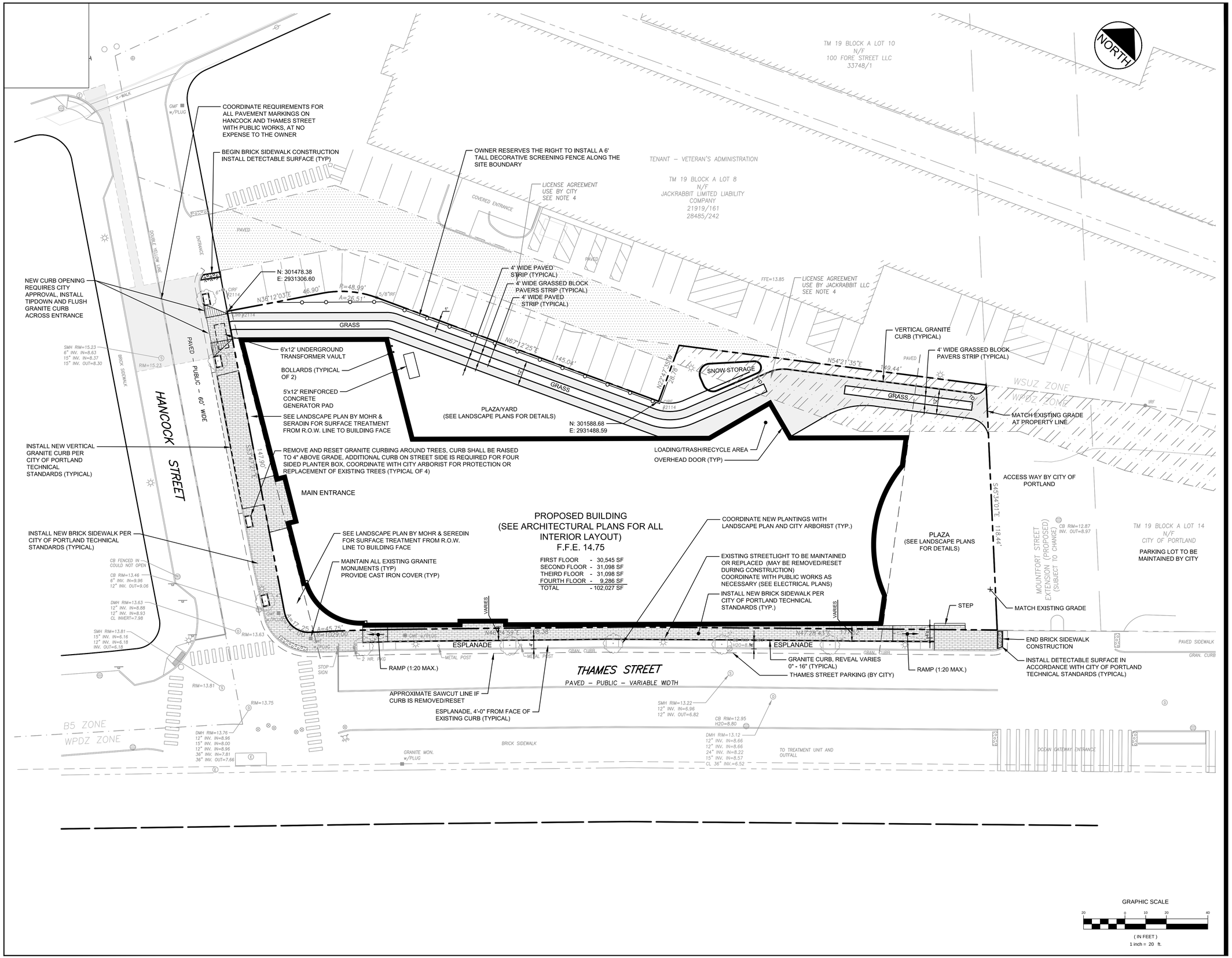

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Notes

Revision	By	Appd.	YY.MM.DD
3 FINAL SITE PLAN REVIEW	SRS	JBS	17.08.08
2 PRELIMINARY SITE PLAN REVIEW	SRS	JBS	17.08.02
1 PRELIMINARY SUBMISSION SUBMITTED TO CITY	SRS	JBS	17.07.11

File Name: 195350450_site	LA	DBS	SRB	17.07.10
P.E. STEPHEN R. BUSHEY	DWN.	CHK'D.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7429
LICENSED
PROFESSIONAL ENGINEER
8/8/17

Client/Project
0 HANCOCK LLC

THAMES STREET SITE
PORTLAND, MAINE

Title
SITE LAYOUT PLAN

Project No. 195350450
Scale 1" = 20'

Sheet
C-3.0

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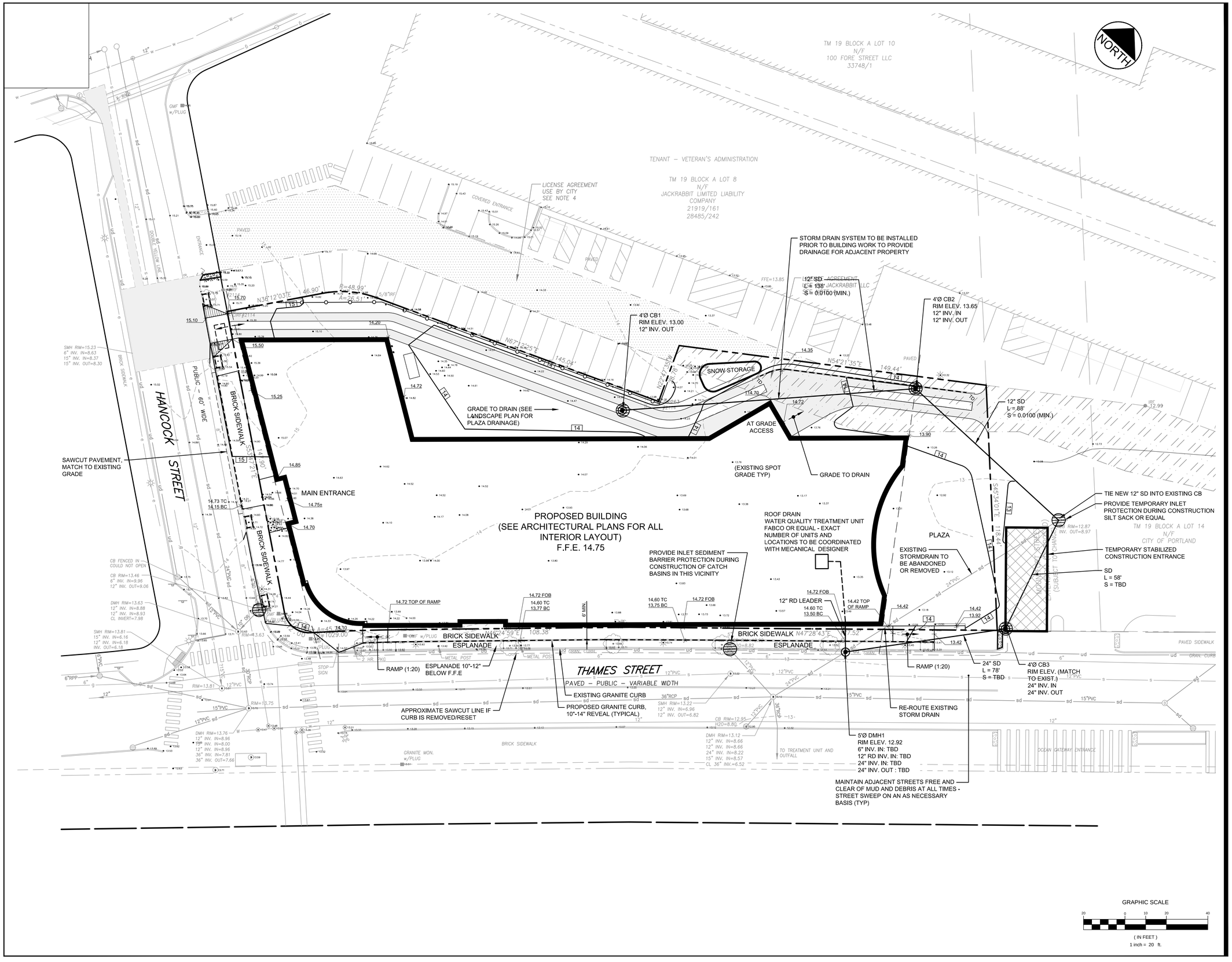

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Notes

Revision	By	Appd.	YY.MM.DD
1 FINAL SITE PLAN REVIEW	SRB	SRB	17.05.08

File Name: 195350450_grading	DWN.	DBS	SRB	17.07.12
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7429
LICENSED
PROFESSIONAL ENGINEER
8/8/17

Client/Project

0 HANCOCK LLC

THAMES STREET SITE
PORTLAND, MAINE

Title

GRADING, DRAINAGE AND EROSION CONTROL PLAN

Project No. 195350450

Scale 1" = 20'

Sheet

C-4.0

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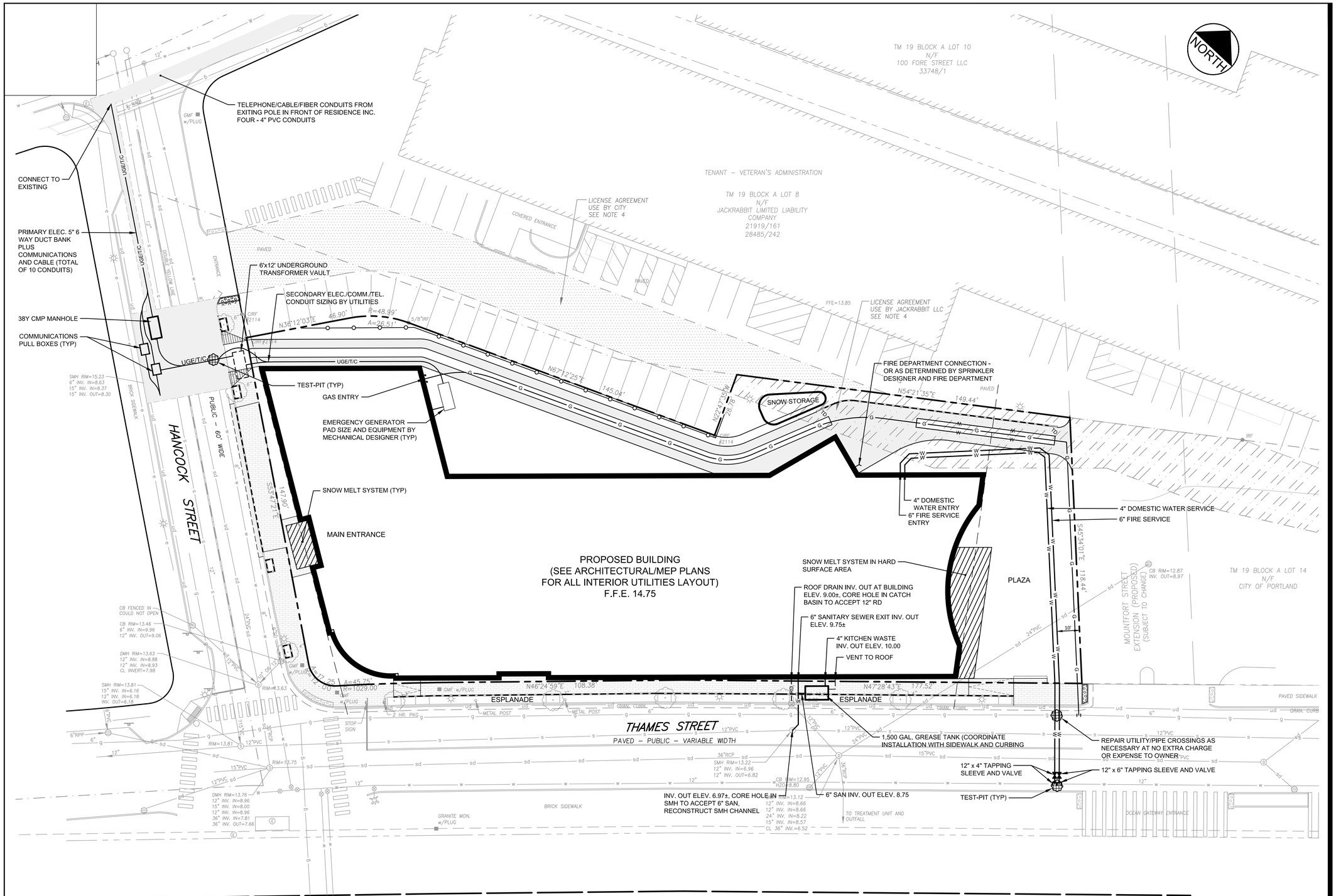

PLAN REFERENCE

CITY OF PORTLAND OCEAN GATEWAY PHASE 1 - MDOT PROJECT NO. 009215.00 BY WOODARD & CURRAN, RECORD PLAN DATED JANUARY 14, 2005, SHEETS 215-217, PROVIDED BY CITY OF PORTLAND ARCHITECT.

NOTES

1. OWEN HASKELL, INC. TO CONFIRM ALL INVERT INFORMATION PRIOR TO THE PRODUCTION OF CONTRACT DOCUMENTS.
2. CONTRACTOR SHALL PROVIDE RECORD TIE LOCATIONS FOR ALL UTILITIES TO THE OWNER PRIOR TO THE REQUEST FOR A CERTIFICATE OF OCCUPANCY.

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

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Notes

Revision	By	Appd.	YY.MM.DD
1 FINAL SITE PLAN REVIEW	SRB	JBS	17.03.08

File Name: 195350450_util	LA	DBS	SRB	17.07.12
P.E. STEPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7420
LICENSED
PROFESSIONAL ENGINEER
8/8/17

Client/Project
0 HANCOCK LLC

THAMES STREET SITE
PORTLAND, MAINE

Title
UTILITY PLAN

Project No. 195350450

Scale 1" = 20'

Sheet
C-5.0

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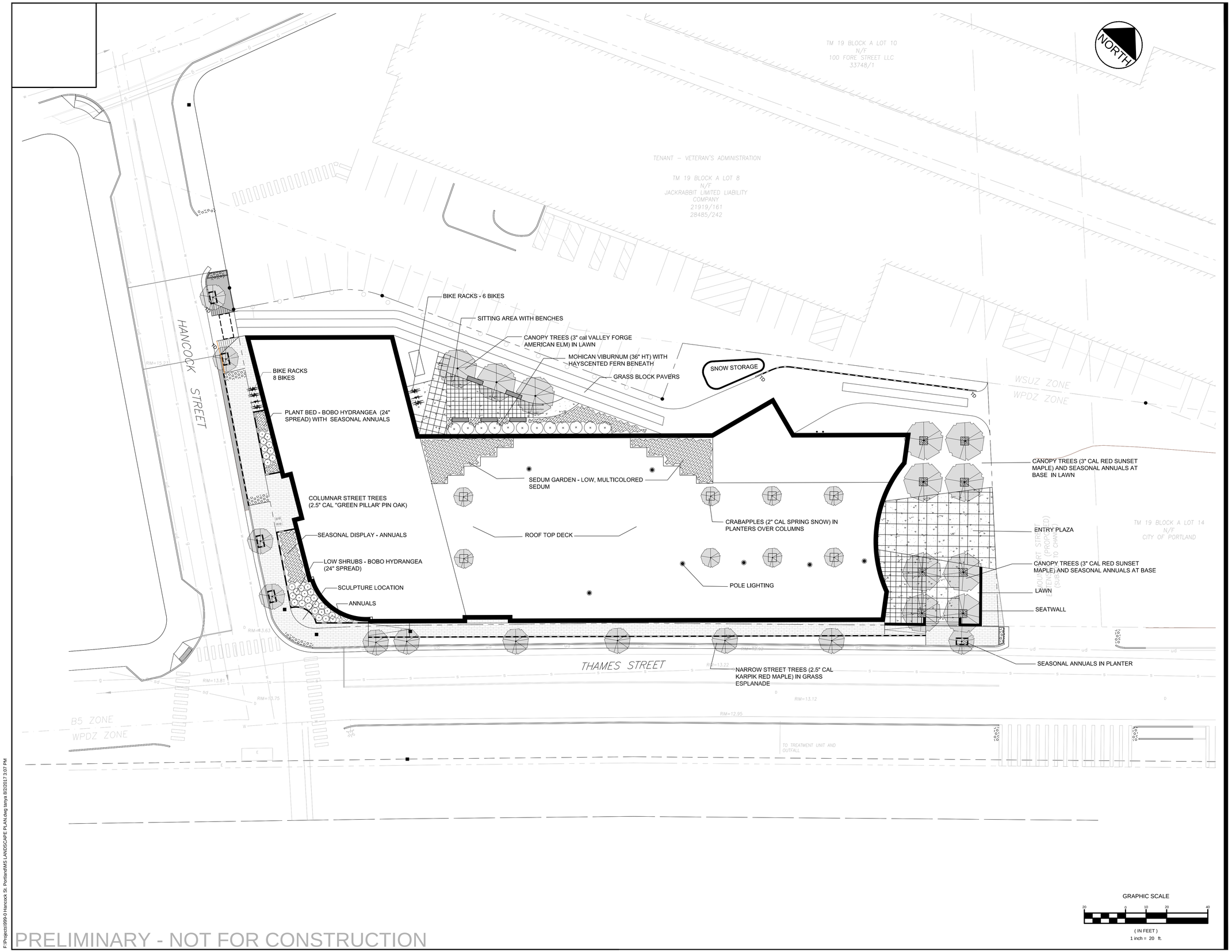

PRELIMINARY - NOT FOR CONSTRUCTION

F:\Projects\999-0 Hancock St, Portland\MS LANDSCAPE PLAN.dwg tanya 8/2/2017 3:07 PM

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Consultants

MOHR & SEREDIN
Landscape Architects, Inc.
18 Pleasant Street
Portland, Maine 04101
207-871-0003

Notes

Revision	By	Appd.	YY.MM.DD
2 PRELIMINARY SITE PLAN REVIEW	SRB	SRB	17.07.18
1 PRELIMINARY SUBMISSION SUBMITTED TO CITY	SRB	SRB	17.07.11

File Name: 195350450_site	MAP	DBS	SRB	17.07.10
P.E. SREPHEN R. BUSHEY	DWN.	CHKD.	DSGN.	DATE

Permit-Seal

Client/Project
0 HANCOCK LLC

THAMES STREET SITE
PORTLAND, MAINE

Title
LANDSCAPE PLAN

Project No. 195350450

Scale 1" = 20'

Sheet
L-1.0

1 | 1ST FLOOR
1/16" = 1'-0"

Prepared For:
0 Hancock Street LLC

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022ARCHETYPE@ARCHETYPEPA.COM

Project:
0 Hancock Street
0 Hancock Street
Portland, Maine

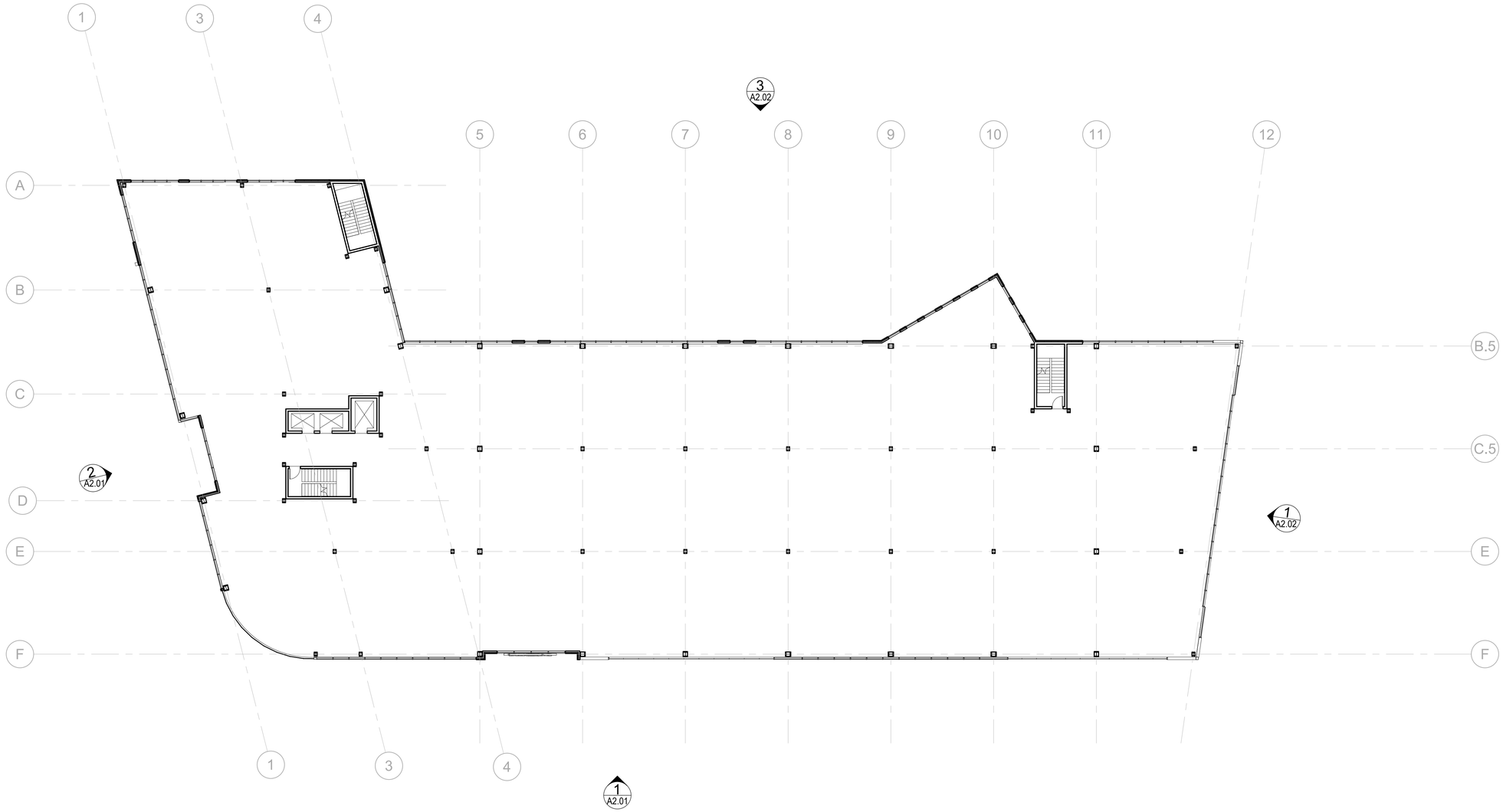
Revisions:

Scale:
1/16" = 1'-0"

Date:
August 8, 2017

First Floor Plan

A1.01



1 | 2ND AND 3RD FLOOR
1/16" = 1'-0"

Prepared For:
0 Hancock Street LLC
Address
City, State

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022ARCHETYPE@ARCHETYPEPA.COM

Project:
0 Hancock Street
0 Hancock Street
Portland, Maine

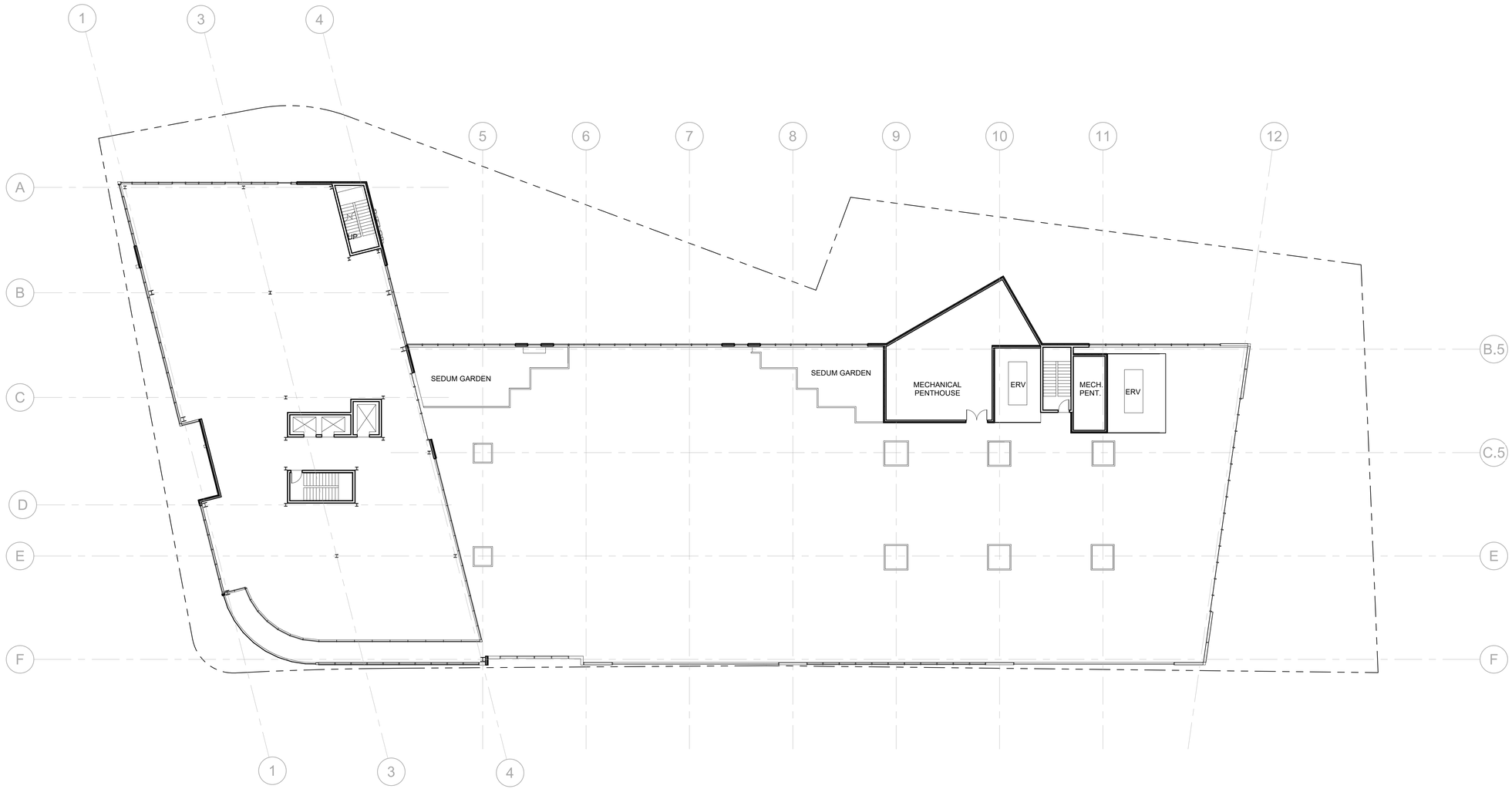
Revisions:

Scale:
1/16" = 1'-0"

Date:
August 8, 2017

Second and Third Floor

A1.02



1 | 4TH FLOOR
1/16" = 1'-0"

Prepared For:
0 Hancock Street LLC
Address
City, State

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022ARCHETYPE@ARCHETYPEPA.COM

Project:
0 Hancock Street
0 Hancock Street
Portland, Maine

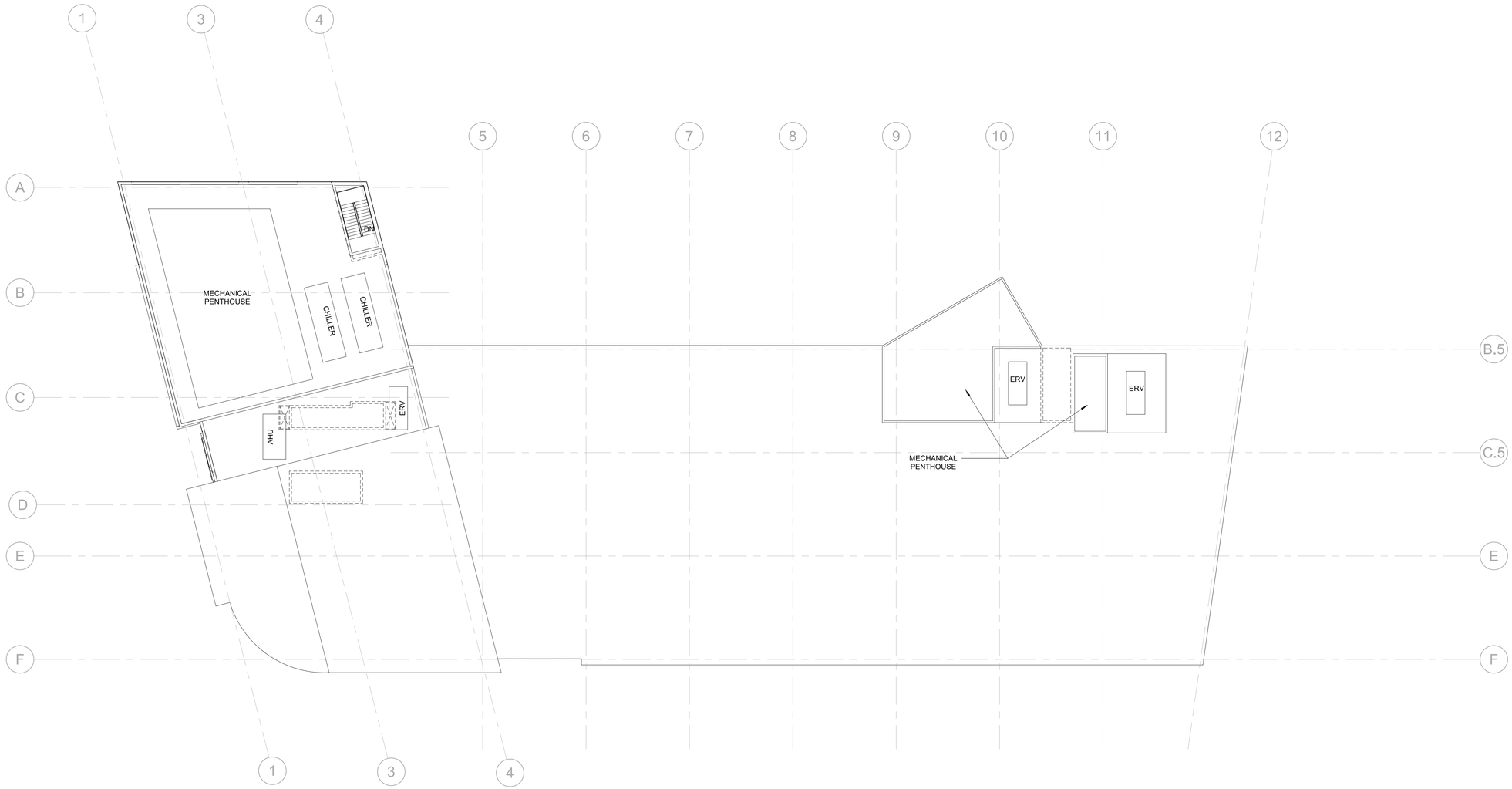
Revisions:

Scale:
1/16" = 1'-0"

Date:
August 8, 2017

Fourth Floor Plan

A1.03



1 ROOF
1/16" = 1'-0"

Prepared For:
0 Hancock Street LLC
Address
City, State

Consultant:

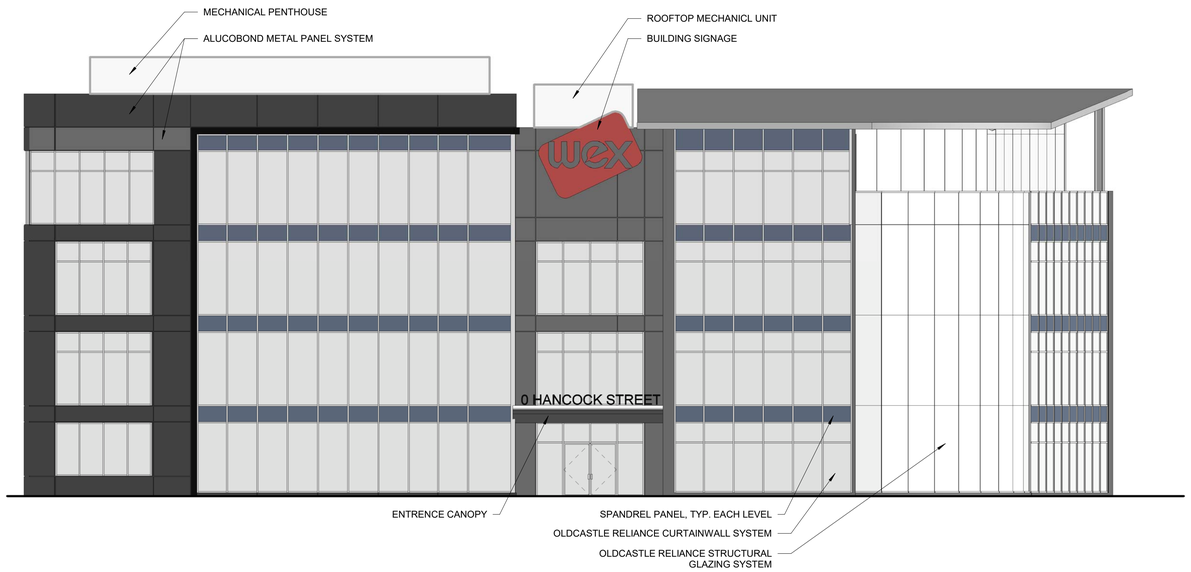
Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022ARCHETYPE@ARCHETYPEPA.COM

Project:
0 Hancock Street
0 Hancock Street
Portland, Maine

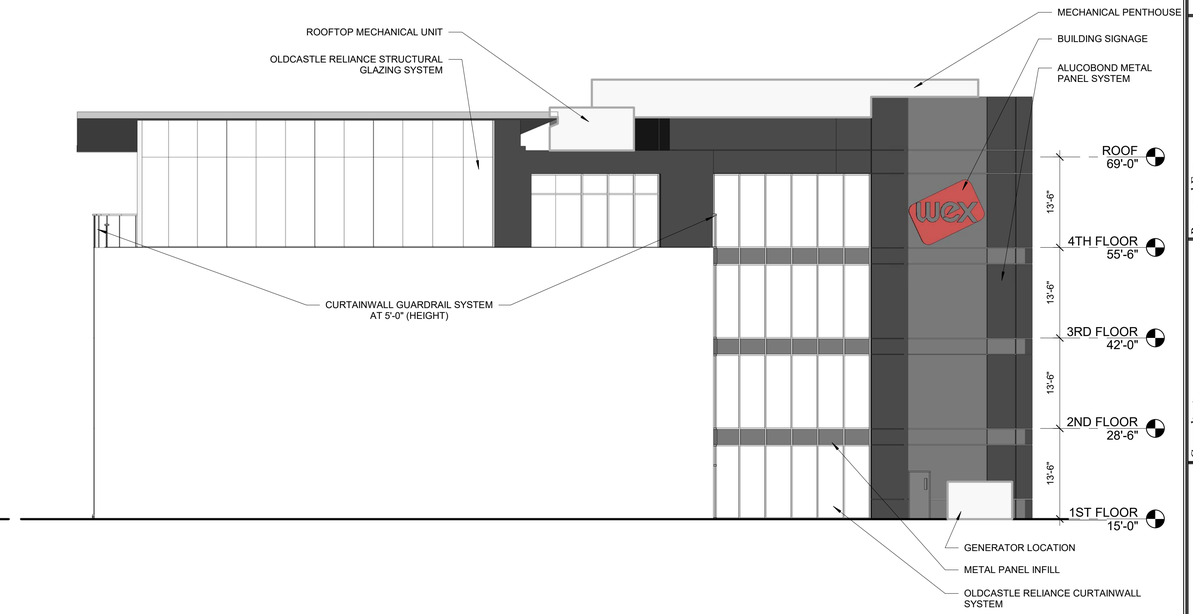
Revisions:

Date: August 8, 2017
Scale: 1/16" = 1'-0"
Roof Plan

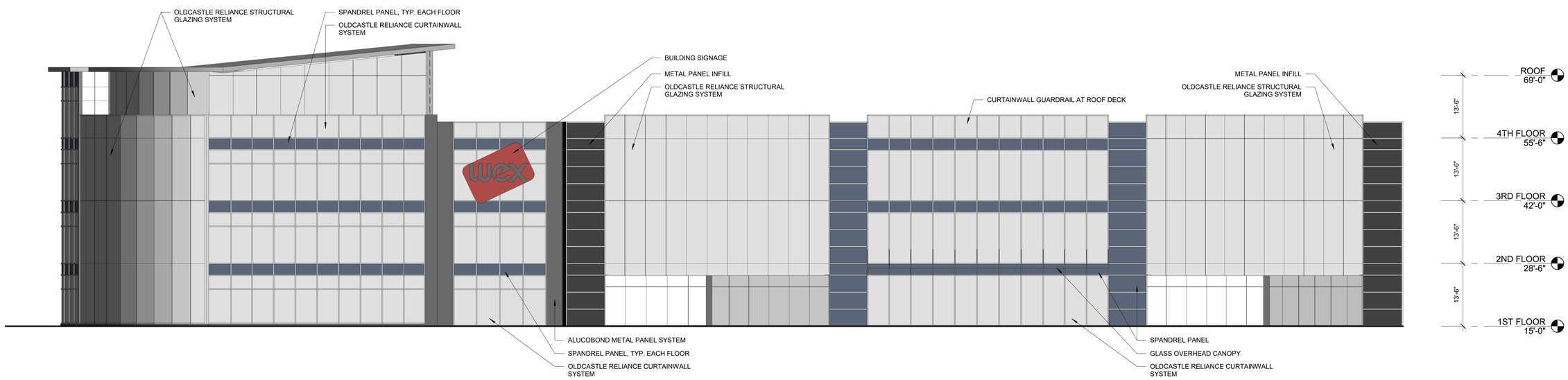
A1.05



2 | West Elevation - Hancock Street
3/32" = 1'-0"



3 | Courtyard/Patio Elevation
3/32" = 1'-0"



1 | South Elevation - Thames Street
3/32" = 1'-0"

Prepared For:
0 Hancock Street LLC
Address
City, State

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
0 Hancock Street
0 Hancock Street
Portland, Maine

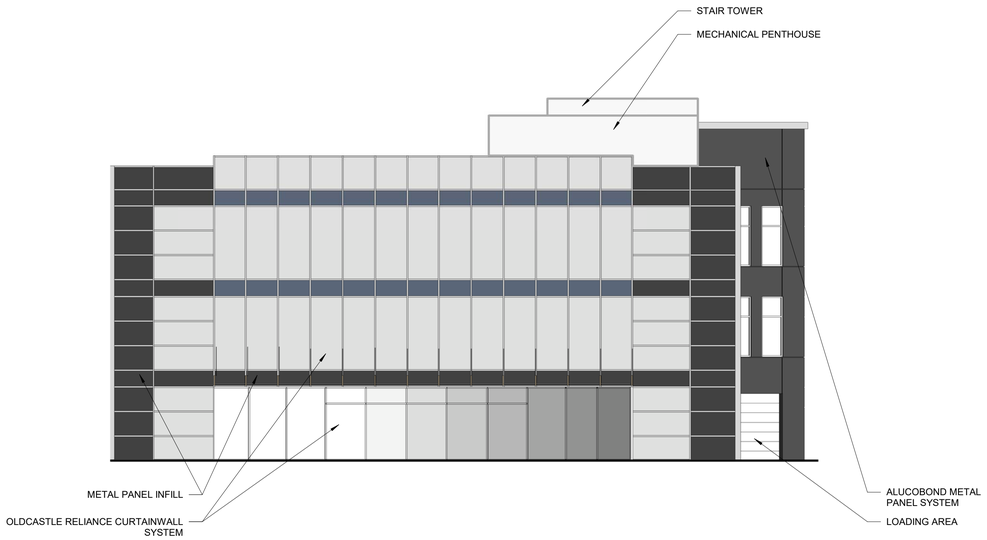
Revisions:

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

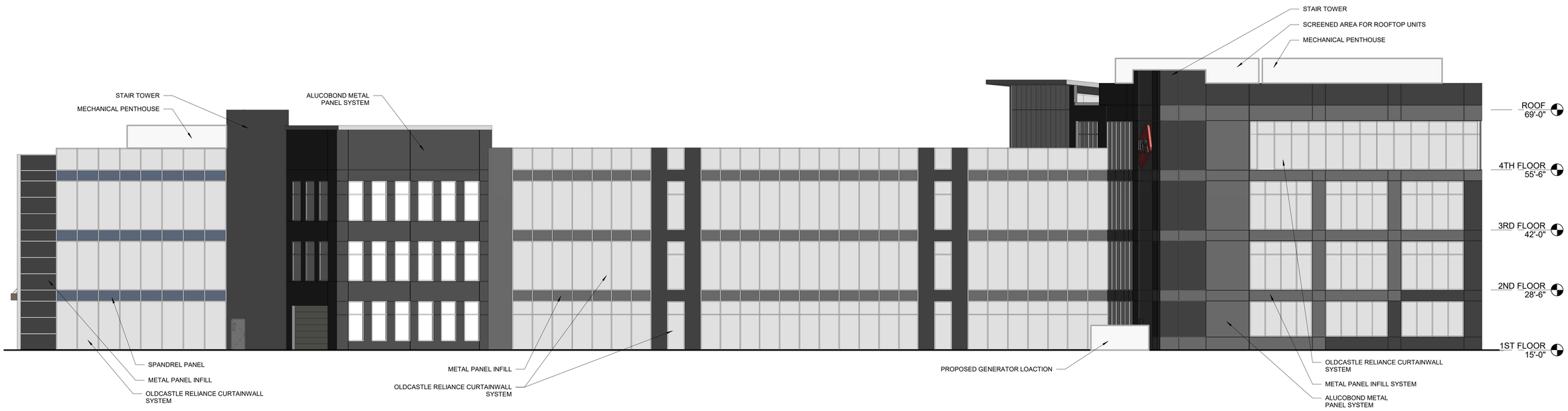
Date: August 8, 2017

Building Elevations

A2.01



1 | Plaza Elevation
3/32" = 1'-0"



3 | North Elevation
3/32" = 1'-0"

Prepared For:
0 Hancock Street LLC

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022ARCHETYPE@ARCHETYPEPA.COM

Project:
0 Hancock Street
0 Hancock Street
Portland, Maine

Revisions:

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

Date: August 8, 2017

Building Elevations

A2.02

wex
wex
ARCHETYPE
architects

wex

STOP

ROOF WEIGHT 100 LBS.

STOP

Memorandum
Planning and Urban Development Department
Planning Division

To: Elizabeth Boepple, Chair and Members of the Portland Planning Board

From: Nell Donaldson, Planner

Date: September 8, 2017

Re: **Recommendation to Table – Maine Medical Center Institutional Overlay Zone**
Maine Medical Center, Applicant

The Planning Authority and the applicant are requesting that the Planning Board table the agenda item regarding the final review of Maine Medical Center's proposed Institutional Overlay Zone to 6:30 p.m. on Tuesday, September 26. This will allow additional time for MMC to submit final revisions to their Institutional Development Plan (IDP) and Regulatory Framework and additional time for City staff review.

PROPOSED MOTION
On the basis of the recommendation of the Planning Authority, the Planning Board moves to table the public hearing on Maine Medical Center's proposed Institutional Overlay Zone to 6:30 p.m. on Tuesday, September 26, 2017.

PLANNING BOARD REPORT
PORTLAND, MAINE

19-Unit Condominium Development
155 Sheridan Street
Level III Site Plan and Subdivision Plan and Conditional Use Application for Inclusionary Zoning

Submitted to: Portland Planning Board Date: September 8, 2017 Public Hearing Date: September 12, 2017	Prepared by: Matthew Grooms, Planner CBL: 012-Q-010, 012-Q-012 Project #: 2017-073, 2017-115

I. INTRODUCTION

BD Sheridan, LLC requests a Level III site plan, subdivision and conditional use review for a four-story, 34,555 SF housing development on Sheridan Street in the East End. The proposed development consists of nineteen residential units including one on-site workforce housing unit with ground-floor structured parking for nineteen vehicles on a property located immediately north of Fort Sumner Park. The site is currently occupied by a one and a half story single-family home.

Figure 1: Project Site (Note: Existing Single-Family House to be Demolished)

This development is being referred to the Planning Board for compliance with the site plan and subdivision standards of the land use code. The applicant has submitted a final site plan for review by the Planning Board. As this project is located within the Fort Sumner Park Overlay Zone, this project was required to go before the Parks Commission for an advisory review to the Planning Board. The Parks Commission met on September 7, 2017, and unanimously recommended approval of the proposed project.

A total of 374 notices were sent to property owners within 500 feet of the site and a legal ad ran on September 4, and 5 2017.

Applicant: BD Sheridan, LLC
Consultants: Will Savage, Acorn Engineering, INC; Rex Croteau, Titcomb Associates; Ryan Senatore, Ryan Senatore Architecture; Tom Jewell; Olivia Dawson; Patrick Venne

II. REQUIRED REVIEWS

Waiver Requests	***Applicable Standards***
Overhead utilities – To retrofit existing overhead utility lines to serve this site and meet fire department access requirements and the standards of the Fort Sumner Park Overlay Zone <u>Staff Comments</u>: The review staff recommends waiving this standard if the formal cost estimate for underground utilities is greater than $150,000 based upon CMP's non-binding initial estimate.	Site Plan Ordinance, Section 14-526(c)(3)(b) - Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities. Subdivision Ordinance, Section 14-499(h) - All utility lines shall be placed underground unless otherwise approved by the Planning Board.

Review	***Applicable Standards***
Subdivision	*Section 14-497*
Site Plan	*Section 14-526*

III. PROJECT DATA

Existing Zoning	R-6, Fort Sumner Park Overlay
Existing Use	Single-Family Home
Proposed Use	Residential
Proposed Development Program	19 units, 19 parking spaces
Parcel Size	18,140 SF

	Existing	*Proposed*	*Net Change*
Building Footprint	640 SF	9,708 SF	9,068 SF
Building Floor Area	1,280 SF	34,555 SF	33,275 SF
Impervious Surface Area	1,287 SF	*11,070 SF*	*9,783 SF*
Parking Spaces (on site)	1	19	18
Bicycle Parking Spaces	0	8	8
Estimated Cost of Project	$5,000,000		

IV. EXISTING CONDITIONS

The applicant proposes to develop on a 18,140 SF site on the east side of Sheridan Street immediately north of Fort Sumner Park. The site is steeply sloped, with a maximum grade differential of 43 feet from west to east along the southerly property line. Surrounding uses include both single-family homes and multi-family developments, with several nearby projects having been completed in recent years; 152-156 Sheridan Street (2014) located immediately across the street and 135 Sheridan Street (2006) located just to the south. Fort Sumner Park, located immediately to the south, is accessible via footpath from Sheridan Street. The city has recently completed work to stabilize the toe of this slope.

The site lies in the R-6 zone within the Fort Sumner Park Overlay Zone, intended to protect the panorama from Fort Sumner Park. The properties across Sheridan Street are zoned B-2b.

V. PROPOSED DEVELOPMENT

The applicant proposes to develop nineteen residential condominiums on this site, including five two-bedroom units and fourteen one-bedroom units on the second through fourth floor. One, one-bedroom unit of comparable size and appointment is set aside for workforce housing. As currently depicted, the units would range in size from 836 SF to 1,438 SF, and all would have either a balcony or patio with small yard. Extensive site grading is planned. In order to maintain the cut slope, a permanent soldier pile and lagging wall is proposed along the south, east and north portions of the site with a maximum exposed height of 24 feet.

Figure 2: Proposed Site with Zoning Information with Topography

The proposed building is set back five feet from Sheridan Street and is four stories tall with its northern most extent being reduced to three stories in order to satisfy the requirements of the Fort Sumner Park Overlay Zone. The exterior façade consists of a mixture of composite lap siding with a cedar shingle appearance and composite siding panel. Building articulation and massing is further managed by means of projecting bays, street-facing balconies, an entrance canopy and a ranged color palette. Three pedestrian entrances are proposed along the west (street-facing) façade with a further 18' foot wide vehicular entrance and associated new curb cut also being provided off Sheridan Street. The

first and primary entrance is located in the center of the west façade and provides access to the mail room, parking area and one of two building stairwells. The two secondary entrances are located at either end of the building's west façade, with one entrance adjacent to the proposed garage entrance, and the other at the southwest corner of the building which provides direct pedestrian access to the building's elevator and second stairwell.

Given the extensive grade differential, the applicant is proposing to regrade large portions of the site and has submitted a geotechnical report in support of the necessary site work. In accordance with the Fort Sumner Park Overlay Zone, the applicant has provided a fifteen-foot setback along the southerly property line adjacent with the park property and building elevations demonstrating that all portions of the proposed roof structure including appurtenances fall within the limits set by the overlay zone. In order to further mitigate the impacts of a building in this location as it relates to the panorama from Fort Sumner Park, the applicant is proposing to construct a green (vegetated) roof in order to soften the appearance of the building from the park. The green roof would not be accessible to residents of the development, and during the workshop on July 11th, the Planning Board suggested that the roof be maintained by an independent contractor hired by the condominium association. According to the applicant, maintenance of this feature is covered under both the stormwater maintenance agreement and condominium documents for this project.

The first floor of the proposed building will consist of structured parking for nineteen vehicles including one compact parking space as well as a resident lobby, mail room, solid waste storage, mechanical closets and elevator. The upper floors will consist of nineteen one and two-bedroom residential units, ranging from 836 SF to 1,438 SF. Each unit is provided with either a patio or a balcony. There is an additional common roof deck available to residents located on the fourth floor and similarly residents have private access to Fort Sumner Park via a proposed pathway accessible by an entrance located on the fourth floor.

Additional site improvements include the reconstruction of the sidewalk along Sheridan Street and dedication of one foot of the applicant's frontage along a portion of their property as a public access easement in order to widen the sidewalk. According to the applicant's engineer, this would provide sufficient space for the proposed street trees and adequate pedestrian passing access. The developer intends to install landscaping along both the property's street frontage and along the rear property line. A total of four Armstrong Red Maples are proposed as street trees with eight additional Dwarf Alberta Spruce and perennial beds proposed along the front façade of the building. At the northern extent of the building, a CMP compliant 6-foot cedar stockade fence is proposed to screen the proposed transformer pad and at the southern extent of the building, one Downy Service Berry is proposed to soften the appearance of the retaining walls per suggestions raised by the Planning Board at the July 11th workshop. At the rear of the property, 55 Virginia Rose, which is a thorny bush, are proposed to run along the top perimeter of the pile and slag retaining wall as both a visual buffer and natural deterrent to site access from North Street. A five-foot chain link fence will also be installed along the top of the retaining wall for additional safety. No street lights are proposed.

VI. DISCUSSION OF WAIVER REQUEST FOR OVERHEAD UTILITIES

Both the site plan ordinance and subdivision ordinance contain language which require developers to install electrical service lines underground for new development. The site plan ordinance under Section 14-526(c)(2)(3)(b) states:

> *Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities.*

The subdivision ordinance, under Section 14-499(h) states:

> *All utility lines shall be placed underground unless otherwise approved by the Planning Board.*

In response to preliminary plan review comments from Planning, the Department of Public Works and Fire Department requesting that utility lines be placed underground, the applicant met with and discussed cost estimates with Central Maine Power for the placement of electrical service lines underground. It was initially determined to be cost prohibitive, which prompted the developer to pursue an alternative option in which the lines would be located on elevated poles and moved away from the building by means of alley arms. Given that this alternative does not

meet city standards as stated above and is not a preferred alternative for the fire department, city staff have solicited additional information to inform the recommendation to the Planning Board.

On August 17, 2017, staff met with the applicant's engineer, architect and attorney to discuss the cost of this improvement and standards under the site plan and subdivision ordinance as listed above. Staff asked that the applicant meet with CMP and determine a formal cost estimate for both options so as to weigh a waiver request. This meeting was followed up by a site visit on August 24th attended by members of staff, the applicant's engineer and architect, and Paul Duperre from Central Maine Power. At this meeting, Mr. Duperre provided a rough approximation of the cost and layout of the two alternatives, stating that a formal cost estimate would take six weeks to prepare.

According to Mr. Duperre, the cost of an overhead configuration with raised poles and alley arms would likely be around $70,000, based upon a similar configuration installed on India Street. This proposal would involve relocating poles 20 and 21 away from the proposed building's frontage and raising the poles approximately seven feet in elevation. The non-binding estimate for the underground configuration would be between $120,000 and $140,000. This proposal would involve relocation of pole 21 from the east side of Sheridan Street to the west side, and removal of existing poles 20 and 22, currently along the building's frontage and to the north of the project site, with the installation of two underground vaults along the property's frontage. This proposal would involve work to be completed within Sheridan Street (*Plans 31 and 32*).

The overhead configuration is considered acceptable though not preferable from a life/safety perspective and would meet fire department standards for building access. Keith Gautreau, Assistant Fire Chief, has indicated his preference to see the lines installed underground. This consideration is being addressed as a waiver request, and is further being reviewed as a condition for approval, subject to the final cost estimate provided by CMP.

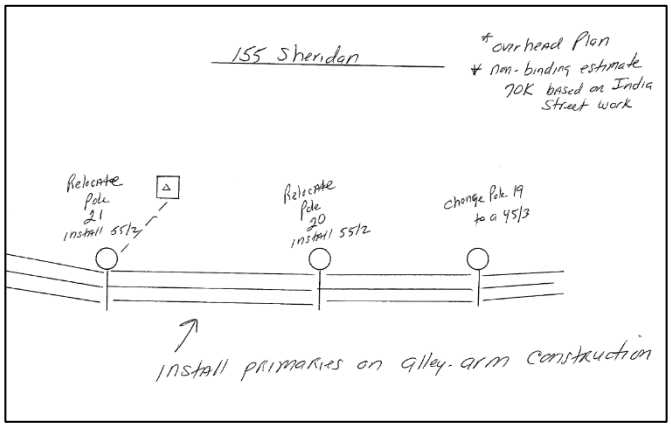


Figure 3: Proposed Overhead Configuration

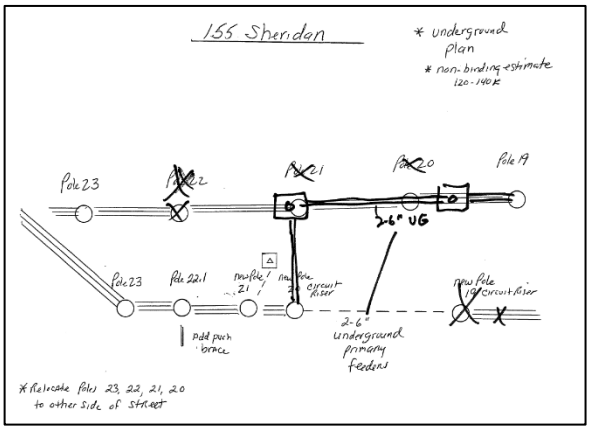


Figure 4: Proposed Underground Configuration

Figure 3: West Elevation Demonstrating Compliance with Fort Sumner Park Overlay

Figure 6: Building Rendering Looking South

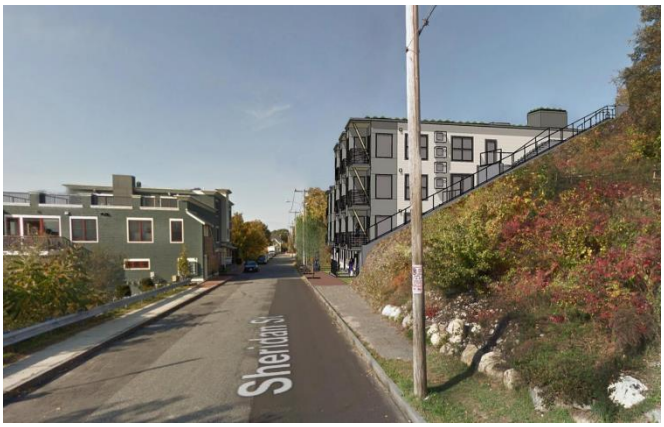


Figure 7: Building Rendering Looking North

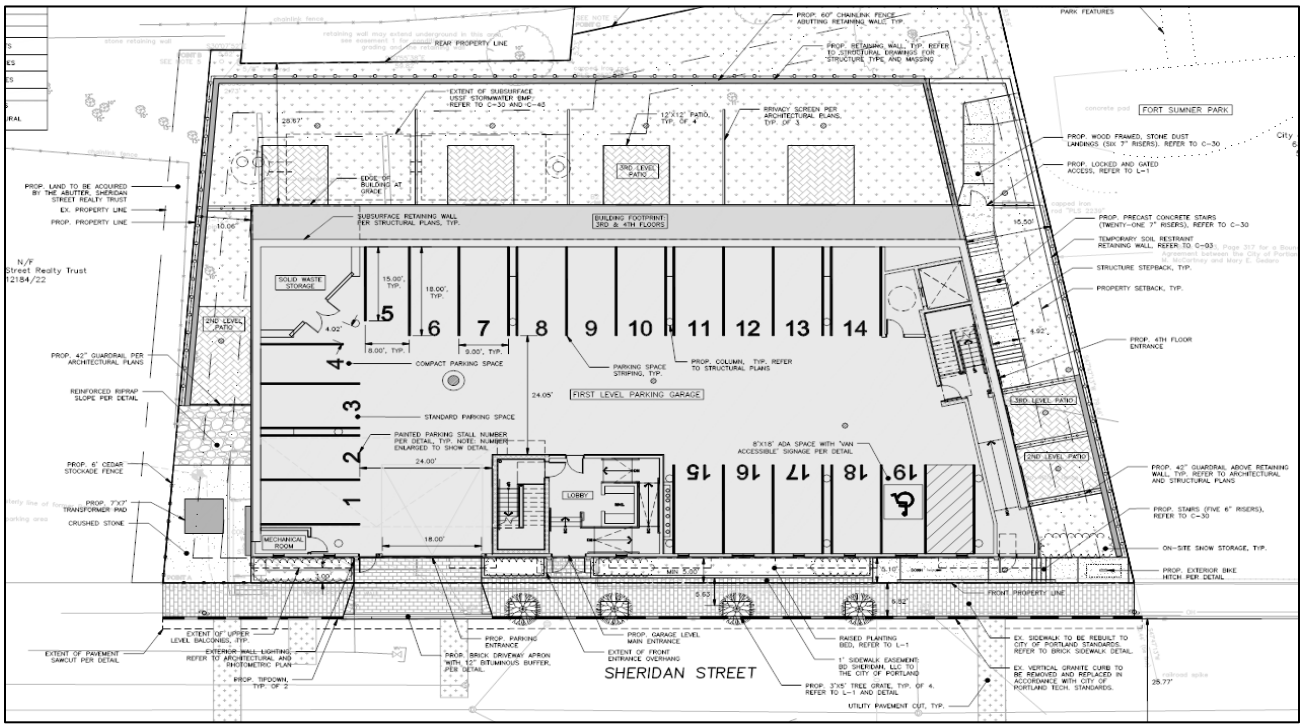


Figure 4: Proposed Site Plan

VI. PUBLIC COMMENT

The Planning Division has received one written comment in regards to this project (*Attachment 8*). This individual requested that the applicant in coordination with the city, make additional off-site improvements as follows: install landscaping to the slope beneath Fort Sumner Park, expand the width of the sidewalk along the east side of Sheridan Street, and install a crosswalk across Sheridan Street at the Marion Street intersection. Two additional members of the public have raised concerns regarding the parking of construction vehicles and both noise and safety concerns related to the construction process.

While off-site improvements are not required of this project, staff has suggested that in lieu of proposed street trees, an alternative could consist of landscaping improvements to the slope beneath Fort Sumner Park. The applicant has stated that they intend to pursue the planting of street trees in front of their property and that they do not wish to

provide off-site improvements. In regards to the other raised concerns, these issues are addressed in the applicant's construction management plan which has been reviewed by the city's consulting traffic engineer, Tom Errico and Senior Engineer with DPW, Keith Gray.

The applicant did hold a neighborhood meeting on June 21st at the East End School, attended by 12 individuals. Questions asked at this meeting were in regards to the parking, the proposed work-force housing unit, the construction management process, site stabilization, view impacts from Fort Sumner Park, the proposed green roof and project timeline (*Attachment Y*). Comments are discussed below where relevant.

VII. PARKS COMMISSION ADVISORY REVIEW

On September 7, 2017, the Parks Commission voted unanimously to recommend approval of the project at 155 Sheridan Street to the Planning Board. The applicant provided a comprehensive overview including compliance with the standards of the Fort Sumner Park Overlay Zone, and revisions based upon both staff and Planning Board feedback. The Commission's recommendation to the Planning Board included a suggestion that the applicant work with other proposed developments occurring in the vicinity, notably the project at 88 Walnut Street, to provide monetary contributions for off-site improvements, specifically extension of the sidewalk along the east side of Sheridan Street by 200 feet to south across the Fort Sumner Park property, and installation of a cross-walk at the Marion Street intersection. No public testimony was received during this meeting.

Staff has not formally requested contributions from the applicant for off-site improvements, though the Parks Commission recommendation may be pursued by the Planning Board as a possible condition for approval.

VIII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed demonstrating ownership of the subject property, which, as described above, consists of two separate parcels. *(Attachment C)*.

VIII. FINANCIAL & TECHNICAL CAPACITY

The estimated cost of the development is $5 million. The applicant has submitted a letter from Northern Bank & Trust Company indicating that BD Sheridan, LLC has the financial capacity to fund the project *(Attachment G).*

IX. ZONING ANALYSIS

BD Sheridan, LLC is proposing a nineteen-unit multi-family development located entirely within the R-6 Residential zoning district and within the Fort Sumner Park Overlay District. This structure meets the maximum and minimum setback requirements, including the required fifteen-foot setback from Fort Sumner Park. Building height within the R-6 is limited to 45' feet above average grade with further limitations imposed by the Fort Sumner Park Overlay Zone, which limits the absolute height of the building, including roof forms and rooftop mechanical equipment, to 160.27' feet above mean sea level, with a further reduction of one vertical foot for each 25' feet radially away from the identified apex point within Fort Sumner Park. The average building height is approximately 43.75' feet above grade, with the proposed elevator override being located just under the maximum allowable height under the Fort Sumner Park Overlay Zone. Proposed landscaped open space exceeds 20% of the property as is required, and the lot contains a total of 954 square feet per unit, whereas the requirements is for a minimum of 750 square feet.

At this time, overhead utilities are proposed along the property's frontage. In order to provide for adequate Fire Department access, the installation of taller utility poles utilizing alley arms would be necessary. Per both the site plan and subdivision ordinance, new projects are required to install underground utilities, though this requirement may be waived by the Planning Board if the installation of underground utilities proves cost prohibitive. In the event that overhead utilities are permitted, the applicant has stated that overhead lines will fully comply with the standards of the Fort Sumner Park Overlay. This has been drafted as condition for approval.

The standards of the Fort Sumner Park Overlay Zone require that projects located within the zone go before the Parks Commission for an advisory review to the Planning Board. A preliminary presentation was made to the Parks Commission on July 6, 2017, with a follow-up advisory meeting held on September 7, 2017. The Parks Commission voted unanimously to recommend this project for approval by the Planning Board.

The project as proposed meets the standards of both the R-6 Residential district and the Fort Sumner Park Overlay Zone.

X. SUBDIVISION REVIEW (14-497(a). Review Criteria; 14-198. Technical and Design Standards; & 14-499. Required Improvements)

The final plans have been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff comments are below.

1. Water, Air Pollution

The site is currently occupied by a single-family structure and is largely vegetated, and steeply sloped to the east. An impervious area of 11,070 square feet is proposed. The applicant has submitted stormwater management plans which have been reviewed and approved by the city's consulting storm water engineer, Lauren Swett, P.E. of Woodard and Curran. No detrimental air quality impacts are anticipated.

2 & 3. Adequacy of Water Supply

The applicant has supplied a letter from the Portland Water District dated August 2, 2017 which states that there is adequate capacity to serve this project. (*Attachment M*)

4. Soil Erosion

As noted above, the site is sloped such that the grade changes by approximately 43 feet from west to east. There will be a retaining wall around the exterior of the property, where the site abuts residential buildings on the west side of North Street. Vegetation currently covers most of the slope. The submittal includes a geotechnical report which found that no blasting would be required as part of this development. Piles will be driven into the ground for support of the pile and lag retaining wall. The applicant states that the building will be constructed as a slab-on-grade with development with a soldier pile and lagging wall retaining the cut slope along the easterly property line *(Attachment Q).*

5. Impacts on Existing or Proposed Highways and Public Roads

The applicant has supplied a Traffic Impact Study which projects that this development would result in fewer than 10 new peak hour trips, and further states that Sheridan Street currently has the capacity to handle this traffic. The project has been reviewed by Mr. Thomas Errico, consulting traffic engineer, who has indicated that he generally finds it acceptable *(Attachment 3).*If approved, proposed underground utilities would require work within the public Right-of-Way to install an underground primary feeder across Sheridan Street.

6. Sanitary Sewer/Stormwater

The applicant has submitted a wastewater capacity application to the Department of Public Works which was approved by the Department of Public Works on July 19, 2017 *(Attachment M).*

An underdrained subsurface sand filter (USSF) is proposed as a stormwater mitigation measure. Catch basins are to be installed around the exterior of the property with stormdrains directing discharge to the northwest corner of the site where it will connect with a storm sewer in Sheridan Street.

7. Solid Waste

The applicant states that a private contractor would be used for waste management purposes. Temporary storage of trash and recyclables in an interior trash room is proposed.

8. Scenic Beauty

The applicant proposes to remove existing vegetation on the site and replace it with a three-story structure. As with many projects in this area, the proposal takes advantage of existing views from Sheridan Street looking westward over Back Cove and the city skyline. It should be noted that the view from Fort Sumner Park, which sits uphill from the site with a grade change of approximately 40 feet, should remain relatively unchanged. A rendering of the development as seen from Fort Sumner Park has been provided. (*Attachment Plan 28*)

9. Comprehensive Plan

The project is highly compatible with Comprehensive Plan goals and policies, specifically the city's identified local goals as stated:

1. Increase, preserve and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households;
2. 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;
3. Pursue policies to enable people who work in Portland to have the option to live in Portland;
4. Encourage quality, sustainable design in new housing development.

This project provides significant additional housing in a location that is readily accessible and nearby to a variety of services, amenities and public transit. Additionally, this project is contextually sensitive in its construction, specifically as it related to nearby Fort Sumner Park, and meets the city's standards for workforce housing.

10. Financial and Technical Capacity

As noted above, the applicant has submitted a letter from Northern Bank & Trust Company indicating that BD Sheridan, LLC has the financial capacity to fund the project *(Attachment G).*

11. Wetland Impacts

There are no anticipated impacts to wetlands.

12. Groundwater Impacts

There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area

The project is not located in a flood-prone area.

Technical and Design Standards and Required Improvements

Generally, many of the technical and design standards of *Section 14-498* do not apply in this case. The application incorporates most of the required improvements outlined in *Section 14-499.* A subdivision plan and recording plat will be required demonstrating compliance with these standards. Street trees are required per both the subdivision ordinance *(Section 14-499(f))* and the site plan ordinance *(Section 14-526.2.b(iii)*), both of which refer to the city's Technical Manual, which sets a standard of one street tree/unit for multi-family developments. Based on this standard, nineteen street trees are required and four street trees are proposed. In speaking with the applicant, it is understood that street tree contribution will be made a condition for approval.

XII. SITE PLAN REVIEW

The preliminary plans for the Sheridan Street Apartments have been reviewed by staff for conformance with the relevant review standards of the City of Portland's site plan ordinance. Staff comments are below.

1. Transportation Standards

a. Impact on Surrounding Street Systems

The applicant has stated that less than 10 peak hour trips will be generated by the proposed development. Mr. Errico has reviewed the submittal and reports that he finds it generally acceptable *(Attachment 3).*

b. Access and Circulation

The preliminary plans include a new curb cut on Sheridan Street, with a garage door providing access to an interior parking area. Pedestrian access is proposed via two doors on the Sheridan Street frontage, one at each end of the building. The applicant proposes to reconstruct the existing sidewalk and replace concrete with brick pavers. Tom Errico, the city's consulting traffic engineer, has reviewed the plans and offers the following comments (*Attachment 3*):

1. *In an attempt to maintain on-street parking and avoid the use of barriers in the street, the City requests that the applicant provide a draft construction management plan (for review and approval) that*

incorporates a sidewalk detour to the west side of Sheridan Street. Two temporary crosswalks will be required and shall be ADA accessible. The southerly temporary crosswalk shall be located at the location of the Fort Sumner path.

c. *Public Transit Access*
The proposed development is not located along a public transit route and is not of sufficient size to require transit access.

d. *Parking*
Division 20 of the land use ordinance requires one parking space/unit for residential development located on the peninsula (*Section 14-332(a)3*) with the requirement for the first three spaces within the R-6 zone being waived. At this ratio, the project requires a minimum of sixteen parking spaces. As noted above, these are proposed in an interior parking area, with door-controlled access from Sheridan Street.

Per the preliminary submittal, bike parking is proposed for eight bicycles. While this meets the city's standard of two spaces for every five dwelling units per *Section 14-526(a)4.b*). Bicycle racks shall be located in an interior storage room on the second floor of the development and as well outside of the southerly most pedestrian entrance to the building.

e. *Transportation Demand Management*
A transportation demand management plan is not required.

2. Environmental Quality Standards

a. *Preservation of Significant Natural Features*
There are no known significant natural features on the site.

b. *Landscaping and Landscape Preservation*
The preliminary plans show eight Dwarf Alberta Spruce along the property's frontage, set amongst ornamental grasses and perennial planting beds. Along Sheridan Street, the applicant is proposing four Armstrong Red Maple street trees. Virginia Roses are proposed towards the rear of the property atop the proposed retaining wall, intended to visually buffer the site from adjacent residential properties and act as a deterrent to site access from North Street.

Jeff Tarling, the City Arborist, has stated that plantings along the property frontage should be placed in raised granite boxes, and has indicated that the narrow width of the sidewalk with proposed street trees does not provide sufficient maneuvering for pedestrian access and wintertime sidewalk plows. He notes that few if any street trees are present elsewhere along Sheridan Street due to narrow sidewalks. He recommends contribution to the Tree Fund in lieu of providing street trees on-site. Mr. Tarling further suggests that additional plantings be provided along the rear and sides of the property in order to further buffer the project from North Street and Fort Sumner Park.

Given the unique context of the project in close proximity to Fort Sumner Park, Mr. Tarling has stated a desire to see additional contributions made towards the improvement of the park property:

1. *The 155 Sheridan Street project has many site related challenges given the lay of the land and the desired building density. Trees and landscape, greenery do not appear to be primary in the overall design intent, unfortunately. Unlike the condo project next door that contributed to the lower Fort Sumner Park lower Sheridan Street trail access and public landscape we do not see similar attempts here, although it could benefit the overall streetscape.*

   Requesting a small contingent landscape budget to address post development needs once the project is complete. This is an unusual request but perhaps the best approach given the uncertainty of how the project will appear

In line with Section 14-526(b)(2)(b)(iii) Street Trees, Planning staff recommends that the applicant either provide a contribution in lieu of providing on-site street trees, or propose landscaping improvement to the lower slope of Fort Sumner Park.

c. Water Quality/Storm Water Management/Erosion Control

The project's water quality, storm water management and erosion control plans were peer reviewed by the city's consulting project engineer, Lauren Swett, P.E. of Woodard and Curran. She has reviewed the revised plans submitted following the initial workshop and finds that the applicant has addressed all but one comment.

1. *The applicant is proposing a direct connection to the stormdrain in Sheridan Street. Based on the referenced note, it appears that the proposed stormdrain pipe will be 8" connecting to an existing 12" pipe. The applicant should confirm with Public Works that an Inserta Tee connection will be allowed for these pipe sizes, and that a new manhole will not be required.*

Bradley Roland, Senior Project Engineer with the Department of Public Works reviewed the proposed connection and offered the following comment:

1. *An 8" insert-a-tee on a 12" pipe in my opinion will not work. Historically we have not allowed insert-a-tee's on any pipe less than 15". And an insert-a-tee that is more than half the diameter of the receiving pipe is just wrong.*

   By technical manual (2.6.7) building sewers and drains over 8" require a manhole. Also by technical manual (2.3.4) service laterals shall not connect to either stormwater or sewer manholes. I would suggest to the applicant that they cut out a portion of the existing 12" storm drain and install a 12"x8" Wye with two Fernco couplings. They can then tie their storm drain into the 8" side of the Wye.

Resolution of this comment has been drafted as a condition for approval.

3. Public Infrastructure and Community Safety Standards

a. Consistency with Related Master Plans

As noted above, the project is generally consistent with related master plans.

b. Public Safety and Fire Prevention

Keith Gautreau, Deputy Fire Chief, has reviewed the final plans submitted for this project and has indicated that his initial comments were addressed with the applicant's resubmittal and that he has no further comments. As noted above, Mr. Gautreau did state that his preference was to see all utilities placed underground, though he finds the proposed raised utility poles with alley arms acceptable from a public safety and fire prevention perspective.

c. Availability and Capacity of Public Utilities

The applicant proposes to extend an existing 6" water line across Sheridan Street that would divert into a 4" domestic line and 6" fire line and connect at the southwest corner of the proposed building. A connection to an existing 12" sanitary sewer line, which flows north towards Walnut Street, is proposed from the northwest corner of the building. The applicant proposes underground electric from a new pole to be located at the northwest corner of the building.

The applicant has supplied all requisite 'ability to serve' letters for electrical service, water and wastewater that there are sufficient utilities, in particular, sewer and water capacity, to service the residential units on the site.

At this time, the Board shall consider a waiver request to allow for the reconfiguration of overhead utilities to serve this development. The waiver should be considered on the basis of extreme financial burden based around the formal cost-estimate as provided by CMP.

4. Site Design Standards

a. Massing, Ventilation, and Wind Impact

The maximum building height in the R-6 zone is 45 feet. The preliminary elevations show a building height of 43.75' feet from the Sheridan Street grade. The proposed building is similar in massing to other recently approved multi-family developments along Sheridan Street, including the property immediately across the street.

b. Shadows

No shadow impacts on publicly accessible open spaces are anticipated.

c. Snow and Ice Loading

There are no anticipated detrimental snow or ice loading impacts.

d. View Corridors

The site is located within the Fort Sumner Park Overlay Zone, and as such must conform with standards intended to protect the vista from Fort Sumner Park. This proposal meets those standards and shall not obstruct the existing panorama. Proposed overhead utilities, if approved as a waiver, would be required to comply with the standards of the Fort Sumner Park Overlay.

e. Historic Resources

Fort Sumner Park is adjacent to this site; however this site as well as the park are not a designated historic district or landmark. Similarly, the project site is not a known archaeological site.

f. Exterior Lighting

Details regarding exterior lighting including photometric plan have been provided and found to meet applicable city standards for light trespass and design.

g. Noise and Vibration

Information on the HVAC and mechanical equipment has been provided.

h. Signage and Wayfinding

No signage or wayfinding is proposed at this time.

i. Zoning-Related Design Standards

The city's site plan ordinance states that "residential developments…shall integrate with and respect the character of surrounding residential development in terms of architectural form, landscaping and open space, façade materials, roof pitch, massing and height as demonstrated by compliance with all applicable design standards as listed in the Design Manual" (*Section 14-526(d)9.a(v)*). The Design Manual includes standards and guidelines for the R-6 zone, however, in this case, the standards for multiple family developments as the standards of the R-6 zone specifically apply to small developments on lots of less than 10,000 square feet. The multi-family design standards section of the Design Manual provides standards related to site context, interface with the public realm, building orientation, building articulation, garages and building materials.

The applicant has provided final building elevations and renderings, which were reviewed by city staff during a design review attended by Caitlin Cameron, Urban Designer; Christine Grimando, Senior Planner; Matthew Grooms, Planner. These renderings show a façade constructed with a mixture of composite siding panel and composite lap siding with cedar shingle appearance. In order to provide building articulation, the applicant has proposed regularly spaced projecting bays, material and color changes, and other elements to break up the façade such as balconies and projecting canopies. The building possesses extensive fenestration, including at the ground level. Given that this building will be highly proximate to Fort Sumner Park, the

applicant has proposed the installation of a green roof to soften the visual impact. The city's urban designer stated that comments were addressed with the applicant's resubmittal with the exception of material placement configurations chosen by the architect which accentuate the building's façade over the principal entrance. This, according to the city's Urban Designer is an unnecessary addition as the entrance is already framed by projecting bay windows and accentuated by a canopy. Ms. Cameron states that the rhythm and consistency of the design is a more important consideration than accentuation of the principal entrance (*Attachment 7*)

XIII. INCLUSIONARY ZONING CONDITIONAL USE

The city's Housing Program Manager, Victoria Volent, reviewed the Conditional Use for Affordable Housing application at 155 Sheridan Street. Conditional Use is authorized by Division 30, Section 14-487, Ensuring Workforce Housing, to secure the creation of Workforce Housing Units as part of new residential projects that propose 10 or more units. The ordinance requires a minimum of 10% of the project to be restricted for Workforce Households and that the number of bedrooms required under Section 14-487(e)3 be at least 10% of the total number of bedrooms made available as part of the project. The project located at 155 Sheridan Street proposes the creation of 19 condominium units with one unit being set aside as workforce housing in order to satisfy the standards of Division 30. According to the attached memo, provided by Ms. Volent, the proposed unit shall be restricted to households earning up to 120% of the Area Median Income (AMI). It is requested that the applicant enter into an Affordable Housing Agreement (AHA) with the City prior to issuance of a building permit (*Attachment 6*).

XIV. PROPOSED MOTIONS

A. CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on September 12, 2017 for application 2017-115 relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the Planning Board Hearing, the Planning Board finds the proposed conditional use for workforce housing [**does** or **does not**] meet the standards of Section 14-484 with the following conditions:

1. That the Applicant shall provide one unit of on-site workforce housing restricted to households earning up to 120% of the Area Median Income (AMI) per the submitted application prior.
2. The applicant shall enter into an Affordable Housing Agreement (AHA) with the City. This agreement shall outline the details of the affordability restrictions placed on Workforce Units and will be filed as covenant to the property's deed with the Cumberland Country Registry of Deeds before a Certificate of Occupancy shall be issued.

B. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on September 12, 2017 for application 2017-073 relevant to Portland's site plan ordinance and subdivision ordinance and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board [**finds/does not find]**, based upon the Department of Public Works and Planning Department's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Site Plan standard *(Section 14-526(c)(3)(b))* which requires that electrical service be placed underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost. The Planning Board **[waives/does not waive]** the Site Plan standard *(Section 14-526(c)(3)(b))* to allow overhead utilities subject to the following conditions:

    a. The cost of installing underground utilities exceeds $150,000 based upon CMP's initial non-binding cost-estimate; and
    b. If greater than $150,000 to install underground utilities, the cost delta between providing underground and overhead utilities exceeds $50,000; and

c. The proposed overhead utility lines conform to the standards of the Fort Sumner Park Overlay zone; and
d. The final proposed overhead configuration shall be reviewed and approved by the Fire Department, Department of Public Works and Planning Authority.

2. The Planning Board [**finds/does not find]**, based upon the Department of Public Works and Planning Department's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Subdivision standard *(Section 14-499(h))* which requires that all utility lines be placed underground unless otherwise approved by the Planning Board. The Planning Board [**waives/does not waive]** the Subdivision standard *(Section 14-499(h))* to allow overhead utilities subject to the following conditions:

   a. The cost of installing underground utilities exceeds $150,000 based upon CMP's initial non-binding cost-estimate; and
   b. If greater than $150,000 to install underground utilities, the cost delta between providing underground and overhead utilities exceeds $50,000; and
   c. The proposed overhead utility lines conform to the standards of the Fort Sumner Park Overlay zone; and
   d. The final proposed overhead configuration shall be reviewed and approved by the Fire Department, Department of Public Works and Planning Authority.

B. SUBDIVSION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on September 12, 2017 for application 2017-073 relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the Planning Board finds that the plan **[is/is not]** in conformance with the subdivision standards of the land use code, subject to the following conditions of approval, which must be met prior to the signing of the plat:

1. Requiring that draft Condominium Association documents addressing Planning Board feedback regarding maintenance of the green roof and be finalized to the satisfaction of Corporation Counsel; and

2. A final subdivision plan and recording plat shall be reviewed and approved by the Department of Public Works and the Planning Authority.

C. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on September 12, 2017 for application 2017-073 relevant to the site plan regulations; and the testimony presented at the planning board hearing, the Planning Board finds that the plan **[is/is not]** in conformance with the site plan standards of the land use code, subject to the following conditions of approval that must be met prior to the issuance of a building permit, unless otherwise stated:

1. The applicant shall provide a revised construction management plan that incorporates a sidewalk detour to the west side of Sheridan Street. Two temporary crosswalks will be required which shall both be ADA accessible. The southerly temporary crosswalk shall be located at the location of the Fort Sumner path as requested by the city's consulting traffic engineer; and

2. That the applicant shall provide a stormwater maintenance agreement for the stormwater drainage system, shall be submitted, signed, and recorded prior to the issuance of a building permit with a copy to the Department of Public Works; and

3. The applicant shall provide an updated landscaping plan which addresses the comments raised in the City Arborist's email dated September 1, 2017 or otherwise approved by the City Arborist; and

4. A contribution of nineteen street trees or an equivalent alternative shall be provided prior to the issuance of a Certificate of Occupancy. This contribution shall be reviewed and approved by the City Arborist; and

5. The applicant shall work with the Department of Public Works to revise their proposed stormdrain connection per comment 2 of Woodard and Curran's memo dated August 29, 2017.

XIV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Staff Review Memo (6.30.17)
2. Woodard and Curran Memo (8.29.17)
3. T.Y. Lin Email (8.30.17)
4. City Arborist Comments (9.1.17)
5. DPW Comments (9.1.17)
6. Housing Program Manager Memo (9.5.17)
7. Final Design Review Memo (9.6.17)
8. Public Comment
    a. Jaimie Parker (8.21.17)

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Level III Site Plan Application
C. Right Title and Interest
D. Conformity with Applicable Zoning Standards
E. Summary of Easements
F. Written Request for Waivers
G. Evidence of Financial Capacity
H. Stormwater Report
I. Stormwater Maintenance Agreement
J. Erosion Control Report
K. Fire Department Letter
L. Solid Waste
M. Utility Cover
N. Construction Management Plan
O. Tree Report
P. Traffic Impact Study
Q. Geotechnical Report
R. Architectural Design Narrative
S. Lighting Cut Sheets
T. Architectural Design Comment Responses
U. Structural Design Concept
V. Inclusionary Zoning Cover Letter
W. Inclusionary Zoning Application
X. Conformity with Applicable Conditional Use Standards
Y. Neighborhood Meeting
Z. Comment Response Letter

C. PLANS

Plan 1 Cover Sheet & Legend

Plan 2 General Notes
Plan 3 Existing Conditions Plan
Plan 4 Demolition, Construction Management Plan & Erosion Control Plan
Plan 5 Site Plan
Plan 6 Landscape Plan
Plan 7 Utility Plan
Plan 8 Grading & Drainage Plan
Plan 9 Site Details I
Plan 10 Site Details II
Plan 11 Utility Details
Plan 12 Drainage Details
Plan 13 Stormwater Details
Plan 14 Erosion Control Notes
Plan 15 Erosion Control Details
Plan 16 First Floor Plan
Plan 17 Second Floor Plan
Plan 18 Third Floor Plan
Plan 19 Fourth Floor Plan
Plan 20 Section View
Plan 21 West Elevation
Plan 22 South Elevation
Plan 23 East Elevation
Plan 24 North Elevation
Plan 25 Rendering – View Looking South
Plan 26 Rendering – View Looking North
Plan 27 Rendeirng – View from Washington Ave
Plan 28 Rendering – View from Fort Sumner Park Apex
Plan 29 Photometric Plan
Plan 30 Subdivision Plan
Plan 31 Overhead Proposal CMP
Plan 32 Underground Proposal CMP

Planning and Urban Development Department
Planning Division

June 30, 2017

Bernie Saulnier
BD Sheridan, LLC
1266 Furnace Brook Parkway
Quincy, MA 02169

Will Savage, P.E.
Acorn Engineering, INC
158 Danforth Street
Portland, ME 04102

RE: Staff Review Comments for 155 Sheridan Street (2017-073) – Planning Board Review

Project Name:	155 Sheridan Street	Project ID:	(2017-073)
Project Address:	155 Sheridan Street	CBL:	012-Q-012
Applicant:	Will Savage		
Planner:	Matthew Grooms		

Dear Mr. Saulnier and Mr. Savage,

Thank you for submitting a preliminary Level III Site Plan, Subdivision, Stormwater Quality and Conditional Use application for Ensuring Workforce Housing for a four-story, 19-unit residential development at 155 Sheridan Street in the R-6 District, subject further to the Fort Sumner Park Overlay Zone. This property is being reviewed as a preliminary plan subject to the following applicable Land Use Code provisions:

- Subdivision Ordinance, Article IV
- Site Plan Ordinance, Arcticle V
- Division 7, R-6 and R-6A Residentials Zones
- Division 20, Off-Street Parking Standards
- Neighborhood Meeting Regulations, Section 14-32

Final Plan for Planning Board Review: Staff Review Comments

I. Stormwater and Civil Engineering Review

Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments, dated May 11, 2017, prepared by Acorn Engineering, INC, on behalf of BD Sheridan LLC.
- Engineering Plans, Sheets C-01, C-02, C-03, C-10, C-20, C-30, C-40, C-41, C-42, C-43, C-44, C-45, C-46, & L-1, , dated March 28, 2017 prepared by Acorn Engineering, INC, on behalf of BD Sheridan LLC.

- Architectural Plans, 13 sheets dated March 9, 2017, prepared by Ryan Senator Architecture, on behalf of BD Sheridan LLC.
- Existing Conditions Survey, dated March 4, 2016, prepared by Titcomb Associates, on behalf of BD Sheridan, LLC

Comments

1. Per Section 12 of the City's Technical Manual, the Applicant is required to submit a photometric plan demonstrating minimal light trespass from the site.
2. In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
    a. Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.
    b. General Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include stormwater management features for stormwater quality control. We have the following comments on the proposed treatment system.
        i. The Applicant has indicated in the Stormwater Management Report that the subsurface sand filter was sized only to treat runoff generated from the roof of the proposed building and that landscaped areas will not be directed into the system. Table 2: Developed Area Treatment and Table 4: Water Quality Volume Table, both depict landscaped areas being treated by the subsurface sand filter. Please clarify if the proposed subsurface sand filter will treat the proposed landscaped areas. Additionally, if landscaped area is to be directed towards the subsurface sand filter, the filter surface area provided in Table 3 should be revised accordingly.
    c. Flooding Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include any specific stormwater management features to control the rate or quantity of stormwater runoff from the site. We have the following comments on the associated stormwater model.
        i. Table 4 in the Stormwater Management Report specifies a provided storage volume for the subsurface sand filter of 1,086 cubic feet, however, the modeled storage for pond 1P is approximately 2,222 cubic feet. Please clarify the intended subsurface filter size.
        ii. The Time of Concentration flow path for Pre-Development does not appear to represent the most hydrologically remote point.
        iii. It appears that a portion of subcatchment 3 shown on the Post-Development watershed, is directed towards the subsurface sand filters and a portion flows directly onto Sheridan Street. Please clarify how flow from the rear of the lot is directed way from the proposed subsurface sand filters.
3. The provided bituminous pavement detail references both 9.5 and 12.5 mm HMA as the surface course. City of Portland Technical Standards require the use of 12.5 mm HMA.

II. Traffic and Construction Management Review

1. The applicant has prepared a traffic impact study and I find the methods and conclusions to be reasonable. The project is not be expected to create any mobility or safety deficiencies. Trip generation levels do not require a Traffic Movement Permit. The Washington Avenue/Walnut Street/Fox Street intersection is a High Crash Location, but the proposed project is not expected to add a significant amount of traffic to the intersection.
2. I have reviewed the parking layout and I find it to be acceptable.
3. The proposed driveway opening at the garage is 18-feet wide. Technically this width does not require a waiver from City standards given that the width increases at the property line (the minimum width permitted by the City is 20 feet). I find the driveway configuration to be acceptable. I would note that the driveway apron shall provide for a maximum 2% cross slope along the sidewalk or pedestrian route.
4. I have reviewed the construction management plan and greater detail is required as it relates to temporary sidewalk provisions. This should include resultant width of roadway and ADA compliant temporary ramps. Additionally, the applicant should specifically note if on-street parking is to be eliminated (with detailed limits) during construction and how contactor parking be managed.

5. Public Infrastructure and Community Safety Standards

A. Fire Department Comments (Keith Gautreau)

1. Premises Identification
    a. The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
    b. Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.
    c. If the building entry faces a different street, both the street name and number should be large enough to read from the street.
    d. Address numbers must be a minimum of 6 inches high.
    e. The number should be in Arabic numerals rather than spelled out (for example, “130” instead of “One Hundred and Thirty’).
    f. Color: Addresses should be in a color that contrasts with the background.
    g. Whenever possible, should be illuminated.
    h. Provide additional address signs at entrances to the property when the building address is not legible from the public street.
    i. Buildings set back in groups that share common entrances can make quickly locating a specific building and the shortest route difficult. On such sites, additional signs with directional arrows and/or diagrams of the buildings and access layout should be posted.
2. There appears to be hydrants located at Walnut and Sheridan and at 135 Sheridan Street. According to GIS they are on dead end mains. Please confirm with PWD that this is the case and that they will provide a capacity to serve letter for domestic and fire protection for this proposed project.
3. Essentially there is only access to one side of the building for Emergency Vehicles on Sheridan Street. Because of this Fire Dept. would like to see underground power rather than the proposed overhead lines. This will make access to the roof and roof top decks difficult or impossible.

I. Site Design Standards

A. Site Plan, Subdivision Review Comments (Matthew Grooms)

6. Will the elevator be ADA accessible from the proposed southerly most pedestrian entrance? If not, would the applicant consider making this a fully ADA accessible pedestrian entrance.
7. Indicate on the proposed site plan where the required bicycle parking shall be located.
8. Façade mounted mechanical equipment is clearly visible from the public right-of-way. This equipment shall be screened in conformance with the City's site plan ordinance, Section 14-526(b)(2)(b).
9. A copy of the finalized Geotechnical report will be required prior to the issuance of any building permit.
10. In line with the Fort Sumner Park Overlay Zone, this item is required to go before the Parks Commission for an advisory review and Planning Board recommendation.
11. Site lighting details and associated photometric plan shall be provided with the final submittal package.
12. A subdivision plan and recording plat shall be required as part of the final submittal package.
13. It is recommended that plantings along Sheridan Street be located within vertical granite planters, so as to protect vegetation from road salts and define private space.
14. Given the narrow sidewalk width along Sheridan Street, street tree placement is still under consideration. Further direction regarding street tree placement shall be provided.

B. Design Review (Caitlin Cameron)

The project at 155 Sheridan Street was reviewed according to the *Multiple-family Standards of Review* in the *City of Portland Design Manual* by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Christine Grimando, Senior Planner.

Design Review Comments*:*

(i) Multiple-family:
Standard (1) Design Compatibility – Sheridan Street has a mix of building scales and types. Immediately adjacent to this proposal are several multi-family residential projects of similar scale and character. The project provides visual interest and scale through the bays, materials, and articulation elements such as balconies, cornice overhangs, and brackets. The façade material selection is appropriate to the building scale, type, and context. Staff requests that the material placement be revised slightly – in order to establish a building rhythm and rationale, and emphasize the third floor delineation/scale, the shingles should consistently be placed to end at the third story with panel on the fourth across the street facade (see attached). In addition, the ground floor windows at the structured parking should be more consistent and without spandrel glass – revise the two large windows at the ground floor to be transparent and of the same height as the smaller square windows, the width could remain as is (see attached).

Standard (2) Relationship of building to the street – The project is setback five feet from the sidewalk according to zoning dimensional requirements and also consistent with the building placement of nearby buildings. However, the landscaping between the sidewalk and the building face should be better defined with a raised edge such as a curb or a seating wall –this better establishes the line between public and private as well as holding the sidewalk edge. Plant viability will also be improved. The main entry is directly oriented to the street and is emphasized with a canopy, lighting, and building address. The mechanicals are very visible from the public right-of-way – more integrated design or screening is needed.

Standard (3) Open Space – Project includes balcony and roof spaces for tenants.

Standard (4) Light and Air – Project includes ample windows for light and air.

Standard (5) Surface Parking – Not applicable

Standard (6) Lodging Conversion – Not applicable

Additional Submittals Required:

Please upload the digital plans and documents to address staff comments. Upon receipt of the revised material, the City of Portland will review the additional plans and information for conformance with applicable ordinances. Please be aware that an application expires within 120 days of the date upon which this written request for additional information was made and only *one set of revised plans* may be submitted for review. This item is scheduled to go before the Planning Board as a workshop item on July 11, 2017. Following the workshop process, this item will be scheduled for a public hearing at the Planning Board's next available meeting and the staff will provide the Planning Board with a recommendation to approve, approve with conditions, or deny the final site plan.

If you have any questions, feel free to contact me at (207) 874-8725 or by email at mgrooms@portlandmaine.gov.

Sincerely,

Matthew Grooms
Planner

Electronic Distribution:
Tuck O'Brien, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Victoria Morales, Associate Corporation Counsel
Anne Machado, Zoning Administrator
Captain Keith Gautreau, Fire
Jeff Tarling, City Arborist
Tom Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard & Curran

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: Matt Grooms, Planner
FROM: Lauren Swett, PE & Craig Sweet, EIT
DATE: August 29, 2017
RE: 155 Sheridan Street, Level III Site Plan Application Response to Comments

---

Woodard & Curran has reviewed the Level III Site Plan Application response to comments the proposed development located at 155 Sheridan Street in Portland, Maine. The project involves the construction of four-story apartment building with a parking garage on the first floor and 19 apartment units on the second, third and fourth floors.

Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments and Response to Comments, dated August 4, 2017, prepared by Acorn Engineering, INC, on behalf of BD Sheridan LLC.
- Engineering Plans, Sheets C-01, C-02, C-03, C-10, C-20, C-30, C-40, C-41, C-42, C-43, C-44, C-45, C-46, & L-1, , REV. dated August 4 2017 prepared by Acorn Engineering, INC, on behalf of BD Sheridan LLC.

Comments

1) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.
   b) General Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. The project includes an underdrained subsurface sand filter system that will provide adequate treatment of the site.
   c) Flooding Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. The project will provide adequate flow control from the site, reducing the peak flow in all modeled storm events.
2) The Applicant is proposing a direct connection to the stormdrain in Sheridan Street. Based on the referenced note, it appears that the proposed stormdrain pipe will be 8" connecting to an existing 12" pipe. The Applicant should confirm with Public Works that an Inserta Tee connection will be allowed for these pipe sizes, and that a new manhole will not be required.
3) All other comments have been addressed.

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

155 Sheridan Street - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Wed, Aug 30, 2017 at 1:39 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>, Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>, "Swett, Lauren" <lswett@woodardcurran.com>

Hi Matt – I have reviewed the updated application materials and offer the following final traffic comments as a status update of my June 30th comments.

- The applicant has prepared a traffic impact study and I find the methods and conclusions to be reasonable. The project is not be expected to create any mobility or safety deficiencies. Trip generation levels do not require a Traffic Movement Permit. The Washington Avenue/Walnut Street/Fox Street intersection is a High Crash Location, but the proposed project is not expected to add a significant amount of traffic to the intersection.

Status: I have no further comment.

- I have reviewed the parking layout and I find it to be acceptable.

Status: I have no further comment.

- The proposed driveway opening at the garage is 18-feet wide. Technically this width does not require a waiver from City standards given that the width increases at the property line (the minimum width permitted by the City is 20 feet). I find the driveway configuration to be acceptable. I would note that the driveway apron shall provide for a maximum 2% cross slope along the sidewalk or pedestrian route.

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

- I have reviewed the construction management plan and greater detail is required as it relates to temporary sidewalk provisions. This should include resultant width of roadway and ADA compliant temporary ramps. Additionally, the applicant should specifically note if on-street parking is to be eliminated (with detailed limits) during construction and how contactor parking be managed.

Status: In an attempt to maintain on-street parking and avoid the use of barriers in the street, the City requests that the applicant provide a draft construction management plan (for review and approval) that incorporates a sidewalk detour to the west side of Sheridan Street. Two temporary crosswalks will be required and shall be ADA accessible. The southerly temporary crosswalk shall be located at the location of the Fort Sumner path.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Review Comments Reminder

Jeff Tarling <jst@portlandmaine.gov> Fri, Sep 1, 2017 at 2:08 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt -

I have reviewed the 155 Sheridan Street project and offer the following review comments:

a) Street and shade tree planting - The proposed building setback and narrow street right of way width is a challenge for street tree installation and have the required ADA sidewalk width. Sidewalk snow clearing equipment access with trees in tree pits or planters on a narrow walk also adds to this challenge. Looking at the rest of Sheridan Street we see very few if any street trees due to the same reasons. Thus we would not see the typical planting space as we would like to see for a development of this scale. Landscape planting behind the sidewalk is about the only green offering for this project, steep slopes nearby are also a challenge.

Contribution to the Tree Fund to be planted nearby looks like the best option.

b) Other landscape features - the project does not appear to have any landscape treatment on the upper sections near the North Street, Fort Sumner Park area. Additional landscape treatment would be recommended for the North Street, Fort Sumner park view. This could be in the form of low shrub plantings that soften the building view while not obstructing the vista, view shed.

Tree & Landscape summary - The 155 Sheridan Street project has many site related challenges given the lay of the land and the desired building density. Trees and landscape, greenery do not appear to be primary in the overall design intent, unfortunately. Unlike the condo project next door that contributed to the lower Fort Sumner Park lower Sheridan Street trail access and public landscape we do not see similar attempts here, although it could benefit the overall streetscape.

Requesting a small contingent landscape budget to address post development needs once the project is complete. This is an unusual request but perhaps the best approach given the uncertainty of how the project will appear.

Thanks

Jeff

Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

On Tue, Aug 29, 2017 at 7:51 AM, Matthew Grooms <mgrooms@portlandmaine.gov> wrote:
[Quoted text hidden]

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

155 Sheridan Street

Bradley Roland <brad@portlandmaine.gov> Fri, Sep 1, 2017 at 2:33 PM
To: Lauren Swett <lswett@woodardcurran.com>
Cc: Matthew Grooms <mgrooms@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>

Afternoon All,
An 8" insert-a-tee on a 12" pipe in my opinion will not work.
Historically we have not allowed insert-a-tee's on any pipe less than 15".
And an insert-a-tee that is more than half the diameter of the receiving pipe is just wrong.

By technical manual (2.6.7) building sewers and drains over 8" require a manhole.
Also by technical manual (2.3.4) service laterals shall not connect to either stormwater or sewer manholes.
Hmm - now keep in mind I have only been doing this development review for a short time but seems to be a conflict to me.
We should really fix that.

That being said (and looking at the street) the storm drain manholes are 80 feet apart.
I do not want another one.

So I would suggest to the applicant that they cut out a portion of the existing 12" storm drain and install a 12"x8" Wye with two Fernco couplings. They can then tie their storm drain into the 8" side of the Wye.
Enjoy the weekend.
Brad
--
Bradley A. Roland, P.E.
Senior Project Engineer
Portland Public Works
55 Portland Street
Portland, ME 04101
Tel: 207-874-8840
Fax: 207-874-8852
brad@portlandmaine.gov
[Quoted text hidden]

Portland, Maine | Yes. Life's good here.

Planning & Urban Development Department

To: Matthew Grooms Planner, Planning & Urban Development Department

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: September 5, 2017

Subject: 155 Sheridan Street – Inclusionary Zoning Conditional Use

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All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. The ordinance under Section 14-487 e 3 also requires the number of bedrooms in the units shall be 10% of the total number of bedrooms in the development.

The development located at 155 Sheridan Street proposes the creation of 19 dwelling units of owner occupied housing consisting of fourteen (14) one-bedroom units, and five (5) two-bedroom units. As dwelling units for sale, the designated Workforce Unit will be restricted to households earning up to 120% of Area Median Income (AMI). Based on the requirements outlined in Section 14-487, the development is required to provide a minimum of one (1) workforce units with one (1) bedroom. The Applicant has elected to provide one (1) Workforce Unit on-site consisting of one (1) one-bedroom unit to satisfy the ordinance's minimum requirements. As such, the project has met the minimum requirements set forth in Section 14-487.

Staff recommends the Board Approve this Conditional Use provided the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) before a Building Permit may be issued. The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Units and will be filed as covenant to the property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

Sincerely,

Victoria Volent
Housing Program Manager

Planning and Urban Development Department
Planning Division

Subject: Multi-family Design Review – 155 Sheridan Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, September 6, 2017

The project at 155 Sheridan Street was reviewed according to the *Multiple-family Standards of Review* in the *City of Portland Design Manual* by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Christine Grimando, Senior Planner.

Design Review Comments*:*

(i) Multiple-family:

Standard (1) Design Compatibility – Sheridan Street has a mix of building scales and types. Immediately adjacent to this proposal are several multi-family residential projects of similar scale and character. The project provides visual interest and scale through the bays, materials, and articulation elements such as balconies, cornice overhangs, and brackets. The façade material selection is appropriate to the building scale, type, and context. Staff requests that the material placement be revised slightly – in order to establish a building rhythm and rationale, and emphasize the third floor delineation/scale, the shingles should consistently be placed to end at the third story with panel on the fourth across the street façade. Carrying the shingle to the fourth floor above the entrance is not needed given the entrance is already emphasized by the canopy and will have little impact on making the entrance more legible given the bay projections will obscure its visibility. Staff feel the rhythm and consistency in design is more important. **In addition, the ground floor windows at the structured parking were revised to be more consistent and without spandrel glass.**

Standard (2) Relationship of building to the street – The project is setback five feet from the sidewalk according to zoning dimensional requirements and also consistent with the building placement of nearby buildings. **The landscaping between the sidewalk and the building face should is better defined with a raised curb –this better establishes the line between public and private as well as holding the sidewalk edge. Plant viability will also be improved.** The main entry is directly oriented to the street and is emphasized with a canopy, lighting, and building address. **The mechanicals are very visible from the public right-of-way –screening was added.**

Standard (3) Open Space – Project includes balcony and roof spaces for tenants.

Standard (4) Light and Air – Project includes ample windows for light and air.

Standard (5) Surface Parking – Not applicable

Standard (6) Lodging Conversion – Not applicable

ACORN ENGINEERING, INC.

Planning Division
Attn: Matthew Grooms, City Planner
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

August 4, 2017

Subject: Level III Site Plan & Subdivision Application
155 Sheridan Street – Portland, ME

Matthew,

BD Sheridan LLC is pleased to submit the accompanying package of submission materials related to the proposed nineteen-unit urban infill project at 155 Sheridan Street, subject to and in compliance with the Fort Sumner Park Height Overlay (14-139(d)). This submission package is intended to address and expand upon the previously submitted Level III Application based on Planning Staff review and comments and feedback from the Planning Board during the July 11th workshop meeting.

The following new and updated documents and drawings are to be uploaded onto the City's electronic submission site per the procedure outlined in the application:

Documents:

A. *Updated* Cover Letter
B. *Updated* Level III Site Plan Application
D. *Updated* Conformity with Applicable Zoning Standards
E. *Updated* Summary of Easements
H. *Updated* Stormwater Report
I. *Updated* Stormwater Maintenance Agreement
M. *Updated* Utility Cover
N. *Updated* Construction Management Plan
Q. *Updated* Geotechnical Report
S. *Updated* Lighting Cut Sheet
U. *New* Comment-Response Letter
T. *New* Architectural Design Comment-Response Letter

Drawings:

- Final Civil Site Plan Set, Dated 8/4/17
  - *New* Photometric Plan by Swaney Lighting Associates, Inc., Dated 7/11/17
- Final Architectural Plan Set, Dated 8/4/2017

BD Sheridan LLC and the design team look forward to your review of this project and are requesting to be placed on the next available final hearing meeting with the Planning Board. If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,

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

ATTACHMENT B

Level III – Preliminary and Final Site Plans Development Review Application Portland, Maine

Planning and Urban Development Department
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

Level III: Site Plan Development includes:

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division
Fourth Floor, City Hall
389 Congress Street
p.m. (207) 874-8719
planning@portlandmaine.gov

Office Hours
Monday thru Friday
8:00 a.m. – 4:30

PROJECT NAME:

155 Sheridan Street

PROPOSED DEVELOPMENT ADDRESS:

155 Sheridan Street Portland, Maine 04101

PROJECT DESCRIPTION:

Redevelopment of an existing lot with a 1.5 story home into a 19 units 4-story building with green roof and first floor parking garage.

CHART/BLOCK/LOT: 012-Q-010 & 012-Q-012

PRELIMINARY PLAN 3/28/17(date)
FINAL PLAN 7/18/17(date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Bernie Saulnier BD Sheridan, LLC Business Name, if applicable: Address: 1266 Furnace Brook Parkway City/State : Qunicy, MA Zip Code: 02169	**Applicant Contact Information** Work #: (207)571-4166 Home #: Cell #: Fax#: e-mail: saulnier04@yahoo.com
Owner – (if different from Applicant) Name: Address: City/State : Zip Code:	**Owner Contact Information** Work #: Home #: Cell #: Fax#: e-mail:
Agent/ Representative Name: Acorn Engineering, Inc. Will Savage, P.E. Address: 158 Danforth Street City/State : Portland, ME Zip Code: 04102	**Agent/Representative Contact information** Work #: (207)775-2655 Home #: (207)317-1884 Cell #: Fax#: e-mail: wsavage@acorn-engineering.com
Billing Information Name: (See Applicant Information) Address: City/State : Zip Code:	**Billing Contact Information** Work #: Home #: Cell #: Fax#: e-mail:

Engineer	Engineer Contact Information
Name: Acorn Engineering, Inc. Address: Will Savage, P.E. 158 Danforth Street City/State: Portland, ME Zip Code: 04012	Work #: (207)775-2655 Home #: Cell #: Fax#: e-mail: wsavage@acorn-engineering.com
Surveyor	**Surveyor Contact Information**
Name: Titcomb Associates Address: Rex Croteau, PLS 133 Gray Road City/State: Falmouth, ME Zip Code: 04105	Home #: (207)797-9199 Work #: Cell #: Fax#: e-mail: RCroteau@titcombsurvey.com
Architect	**Architect Contact Information**
Name: Ryan Senatore Architecture Address: Ryan Senatore, AIA 565 Congress St, Suite 304 City/State: Portland, ME Zip Code: 04101	Work #: (207)747-5159 Home #: Cell #: Fax#: e-mail: ryan@senatorearchitecture.com
Attorney	**Attorney Contact Information**
Name: Tom Jewell Address: 477 Congress St Suite 1104 City/State: Portland, ME Zip Code: 04101	Work #: (207) 774-6665 Home #: Cell #: Fax#: e-mail: tjewell@jewellandbulger.com

Designated person/person(s) for uploading to e-Plan:

Name: Olivia Dawson
e-mail: odawson@acorn-engineering.com

Name: William Savage
e-mail: wsavage@acorn-engineering.com

Name: Patrick Venne & Bernie Saulnier
e-mail: patrickjvenne@gmail.com saulnier04@yahoo.com

APPLICATION FEES:

Level III Development (check applicable reviews)	**Other Reviews (check applicable reviews)**
_x_ Less than 50,000 sq. ft. ($750.00) ___50,000 - 100,000 sq. ft. ($1,000) ___100,000 – 200,000 sq. ft. ($2,000) ___200,000 – 300,000 sq. ft. ($3,000) ___over 300,00 sq. ft. ($5,000) ___Parking lots over 11 spaces ($1,000) ___After-the-fact Review ($1,000.00 plus applicable application fee) **Plan Amendments (check applicable reviews)** ___Planning Staff Review ($250) ___Planning Board Review ($500) _____ The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.	___Traffic Movement ($1,500) _x_ Stormwater Quality ($250) _x_ Subdivisions ($500 + $25/lot) # of Lots 19 x $25/lot = 475 ($925 TOTAL) ___Site Location ($3,500, except for residential projects which shall be $200/lot) # of Lots___x $200/lot = _____ ___Other _____ ___Change of Use ___Flood Plain ___Shoreland ___Design Review ___Housing Replacement ___Historic Preservation

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

Please refer to the application checklist (attached) for a detailed list of submission requirements.

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov
(Please be sure to designate a person who will be responsible for uploading documents and drawings.)
This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:
Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.
Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions
Tab 3 - Preparing and uploading revised drawings and documents

   Applying Online Instructions

5. When ready, upload your files and documents into the following folders:
"Application Submittal – Drawings"
"Application Submittal – Documents"

VI. APPLICANT SIGNATURE

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a ***legal signature*** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:	
Date: 7-17-17	

PROJECT DATA

The following information is required where applicable, in order to complete the application.

Total Area of Site	18,140 sq. ft.
Proposed Total Disturbed Area of the Site	18,140 sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.	
Impervious Surface Area	
Impervious Area (Total Existing)	1,287 sq. ft.
Impervious Area (Total Proposed)	11,070 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	640 sq. ft.
Building Footprint (Total Proposed)	9,708 sq. ft.
Building Floor Area (Total Existing)	1,280 sq. ft.
Building Floor Area (Total Proposed)	34,555 sq. ft.
Zoning	
Existing	R-6
Proposed, if applicable	R-6
Land Use	
Existing	RESIDENTIAL
Proposed	RESIDENTIAL
Residential, If applicable	
# of Residential Units (Total Existing)	1
# of Residential Units (Total Proposed)	19
# of Lots (Total Proposed)	19
# of Affordable Housing Units (Total Proposed)	1
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	0
# of One-Bedroom Units (Total Proposed)	14
# of Two-Bedroom Units (Total Proposed)	5
# of Three-Bedroom Units (Total Proposed)	0
Parking Spaces	
# of Parking Spaces (Total Existing)	1
# of Parking Spaces (Total Proposed)	19
# of Handicapped Spaces (Total Proposed)	1
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	8
Estimated Cost of Project	$ 5,000,000

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
X		1	Completed Application form
X		1	Application fees
X		1	Written description of project
X		1	Evidence of right, title and interest
N/A		1	Evidence of state and/or federal approvals, if applicable
X		1	Written assessment of proposed project's compliance with applicable zoning requirements
X		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
X		1	Written requests for waivers from site plan or technical standards, if applicable.
X		1	Evidence of financial and technical capacity
X		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
X		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
X		Proposed grading and contours;	
X		Existing structures with distances from property line;	
X		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
X		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
X		Preliminary infrastructure improvements;	
X		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
N/A		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
N/A		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
X		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
X		Exterior building elevations.	

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Completed Application form
X		1	* Application fees
X		1	* Written description of project
X		1	* Evidence of right, title and interest
N/A		1	* Evidence of state and/or federal permits
X		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
X		1	* Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site
X		1	* Evidence of financial and technical capacity
X		1	Construction Management Plan
X		1	A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.
N/A		1	Written summary of significant natural features located on the site (Section 14-526 (b) (a))
X		1	Stormwater management plan and stormwater calculations
X		1	Written summary of project's consistency with related city master plans
X		1	Evidence of utility capacity to serve
X		1	Written summary of solid waste generation and proposed management of solid waste
X		1	A code summary referencing NFPA 1 and all Fire Department technical standards
X		1	Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual
X		1	Manufacturer’s verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST** **(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Final Site Plans including the following:**
X		Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);	
X		Existing and proposed structures on parcels abutting site;	
X		All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;	
X		Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;	
X		Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;	
N/A		Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;	
N/A		Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;	
X		Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;	
X		Location of all snow storage areas and/or a snow removal plan;	
X		A traffic control plan as detailed in Section 1 of the Technical Manual;	
N/A		Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);	
N/A		Location and proposed alteration to any watercourse;	
N/A		A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;	
N/A		Proposed buffers and preservation measures for wetlands;	
X		Existing soil conditions and location of test pits and test borings;	
X		Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;	
X		A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;	
X		Grading plan;	
X		Ground water protection measures;	
X		Existing and proposed sewer mains and connections;	

- Continued on next page -

X		Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;
X		Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;
X		Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;
X		Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;
X		Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;
N/A		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
N/A		A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;
X		Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;
X		An exterior lighting plan in accordance with Section 12 of the Technical Manual;
X		A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;
X		Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

ATTACHMENT C

Cumberland County Register of Deeds Current datetime: 6/23/2016 8:39:53 AM

DETAILS REPORT

**Note: Report is Sorted in Ascending Order by Office, Recorded Date, Document Number

Doc#	File Date	Rec Time	Type Desc.
37775	07/30/2015	1:40PM	DEED

# of Pgs.	Book/Page	Doc. Status
2	32471/220	Verified/Certified

Town
PORTLAND

Grantor	Grantee	Street	Property Description
MCCARTNEY JAMES J	MCCARTNEY FAMILY LLC		

References

Book/Vlm/Page	Description	Recorded year

QUITCLAIM DEED WITH COVENANT

(Maine Statutory Short Form)

KNOW ALL BY THESE PRESENTS, that I, **James J. McCartney,** of Windham, County of Cumberland, and State of Maine, for no consideration and as a distribution of trust property, GRANT to **McCartney Family, LLC**, an LLC organized and existing under the laws of the State of Maine, the mailing address of which is 72 Stroudwater Place, Westbrook, Maine, with QUITCLAIM COVENANT, all of James J. McCartney's right, title and interest in, the real property located in Portland, County of Cumberland and State of Maine, more particularly described in Exhibit A attached hereto and made a part hereof.

This conveyance is made SUBJECT, HOWEVER, to real estate taxes which are not yet due and payable, which, by acceptance hereof, Grantee assumes and agrees to pay.

WITNESS my hand and seal this 30 day of JUNE, 2015.

Witness
Paul M Cobb

By: James J McCartney
James J McCartney

STATE OF MAINE
County of Cumberland, SS.

June 30, 2015

Then personally appeared the above-named James J. McCartney and acknowledged the foregoing instrument to be his free act and deed

SEAL

Before me,

Notary Public/Maine ~~Attorney-at-Law~~
Printed Name:

KARL E. HARTWELL
Notary Public, Maine
My Commission Expires 1212/2019

EXHIBIT A

A certain lot or parcel of land with the buildings thereon situated on the easterly side of Sheridan Street in said Portland, being numbered 161, 163, and 165 on said Sheridan Street and containing 9,146 square feet of land, as shown on Revaluation Plan of the City of Portland, recorded in Cumberland County Registry of Deeds, Plan Book 5, Page 12.

Being the same premises conveyed to James J. McCartney by Annie P. Siteman by deed dated August 28, 1919 recorded in Cumberland County Registry of Deeds Book 1031, Page 111 and being a part of the premises conveyed by James J. McCartney to the Maine Savings Bank by mortgage deed dated October 2, 1924, recorded in said Registry of Deeds in Book 1166, page 230, which mortgage was foreclosed by said Maine Savings Bank by Notice, certificate of which is recorded in said Registry of Deeds Book 1525, page 474, and same to grantor from said Bank in Book 1554, Page 98.

Also another certain lot or parcel of land in said Portland on the Northeasterly side of Sheridan Street, formerly Poplar Street, being lot numbered eighteen (18) as delineated on the plan of lots of Simonton, Hatch, Washburn, Cook and Chase recorded in Cumberland County Registry of Deeds, Book 551, page 297, said lot being about eighty-five feet front of said Sheridan Street and running back to lot numbered twenty-five (25) as marked on said plan about one hundred and forty feet, being the same lot that Horatio N. Jose conveyed to Thomas Shanahan by deed dated seventh day of January 1867.

Lot 18 Reference: See Portland, Maine Plan Book 551, Page 297.

Lots 161, 163 and 165 Reference: Deed to Mary F. McCartney dated August 15, 1938, recorded in the Cumberland County Registry of Deeds in Book 1554, Page 198.

Being the same property conveyed to James M. McCartney and Mary E. Gedaro by Deed from Mary F. McCartney dated January 24, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3355, Page 239.

Being the same property conveyed to the Mary E. Gedaro Trust from Mary E. Gedaro by Deed dated April 13, 2012 and recorded in the Cumberland County Registry of Deeds in Book 29,552, Page 95.

Being the same property conveyed to Susanne E. Gedaro from Susanne E. Gedaro as Trustee of the Mary E. Gedaro by Deed dated June 19, 2015 and recorded in the Cumberland County Registry of Deeds in Book 32416, Page 53.

Further reference is also made to the Boundary Line Agreement between the City of Portland and James M. McCartney and Mary E. Gedaro, dated January 19, 1996 and recorded in the Cumberland County Registry of Deeds in Book 12,323, Page 317.

Received
Recorded Register of Deeds
Jul 30,2015 01:40:52P
Cumberland County
Nancy A. Lane

BOUNDARY LINE AGREEMENT

WHEREAS, McCartney Family, LLC, a Maine limited liability company, is the owner of the land and buildings situated at 165 Sheridan Street, Portland, Maine, as more particularly described in a deeds recorded in Cumberland County Registry of Deeds in Book 32471, Pages 220, 222, 224, 226 and 228; and

WHEREAS, Anthony Mancini, as Trustee of Sheridan Street Realty Trust under a Declaration of Trust, dated October 26, 1995, is the owner of the land and buildings situated at 179 Sheridan Street, Portland, Maine, as more particularly described in a deed recorded in said Registry of Deeds at Book 12184, Page 22; and

WHEREAS, the boundary line between the said two properties is uncertain and the owners wish to acknowledge the location of the boundary line, and to provide for these matters to run with the land;

NOW, THEREFORE, in consideration of the foregoing and of the mutual agreements set forth in this Agreement, the parties do hereby agree to a common boundary line as follows:

A certain line being located adjacent to the northeasterly side of Sheridan Street, in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows.

Beginning at a point on the northeasterly sideline of Sheridan Street said point being located S 30°18'44" W by said Sheridan Street a distance of Two Hundred Seventy-Three and 50/100 (273.50) feet from the intersection of the northeasterly sideline of said Sheridan Street with the southeasterly sideline of Walnut Street. Thence:

N 64°17'41" E a distance of One Hundred Eight and 33/100 (108.33) feet to a point on the southwesterly line of land now or formerly of Anthony Mancini as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7754, Page 185.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

Reference is herein made to a plan entitled "Plan of Existing Conditions Survey "made for Vazza Real Estate Group BD Sheridan, LLC by Titcomb Associates dated March 4, 2016.

1. The McCartney Family, LLC hereby remises, releases, bargains, sells and conveys and forever quit-claims unto Sheridan Street Realty Trust, its successors and assigns forever, any right, title or interest it may have in any land which adjoins and is northwesterly of the boundary line described above.

2. The Sheridan Street Realty Trust hereby remises, releases, bargains, sells and conveys and forever quit-claims unto McCartney Family, LLC, its successors and assigns

forever, any right, title or interest it may have in any land which adjoins and is southeasterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

Witness

Sheridan Street Realty Trust

By: Anthony Mancini
Its: Trustee

Witness

McCartney Family, LLC

By:
Its:

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

~~February~~ May 1, 2017

Personally appeared the above-named Anthony Mancini, Trustee of Sheridan Street Realty Trust, and acknowledged the foregoing to be his free act and deed in his said capacity and the free act and deed of the Trust.

Before me,

Notary Public/Attorney at Law

Janine M. Galli, Notary Public
State of Maine
My Commission Expires 7/19/2019

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

February ____, 2017

Personally appeared the above-named _____, Member/Manager of McCartney Family, LLC, and acknowledged the foregoing to be his/her free act and deed in his /her capacity and the free act and deed of the limited liability company.

Before me,

Notary Public/Attorney at Law

forever, any right, title or interest it may have in any land which adjoins and is southeasterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

Sheridan Street Realty Trust

_____
Witness

_____
By: Anthony Mancini
Its: Trustee

McCartney Family, LLC

_____
Witness

_____
By: John C. McCartney
Its: Manager

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

March ____, 2017

Personally appeared the above-named Anthony Mancini, Trustee of Sheridan Street Realty Trust, and acknowledged the foregoing to be his free act and deed in his said capacity and the free act and deed of the Trust.

Before me,

_____
Notary Public/Attorney at Law

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

March 22, 2017

Personally appeared the above-named John C. McCartney, ~~Member~~/Manager of McCartney Family, LLC, and acknowledged the foregoing to be his/~~her~~ free act and deed in his ~~her~~ capacity and the free act and deed of the limited liability company.

Before me,

_____
Notary Public/Attorney at Law

The undersigned mortgagee of Sheridan Street Realty Trust (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

Camden National Bank^, Mortgagee

5/1/17
Date

By: _____
Name: Elliott Berry
Title: SVP

The undersigned mortgagee of McCartney Family, LLC, (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

^, Mortgagee

_____
Date

By: _____
Name:
Title:

BOUNDARY LINE AGREEMENT

WHEREAS, McCartney Family, LLC, a Maine limited liability company, is the owner of the land and buildings situated at 165 Sheridan Street, Portland, Maine, as more particularly described in a deeds recorded in Cumberland County Registry of Deeds in Book 32471, Pages 220, 222, 224, 226 and 228; and

WHEREAS, Anthony Mancini, as Trustee of Alpine Realty Trust, is owner of land and buildings, as more particularly described in a deed recorded in said Registry of Deeds at Book 7691, Page 331 and Book 7856, Page 32, by virtue of the deed from Anthony Mancini and Phyliss Mancini, dated June 26, 1991 and recorded in said Registry, Book 9611, Page 304; and

WHEREAS, the boundary line between the said two properties is uncertain and the owners wish to acknowledge the location of the boundary line, and to provide for these matters to run with the land;

NOW, THEREFORE, in consideration of the foregoing and of the mutual agreements set forth in this Agreement, the parties do hereby agree to a common boundary line as follows:

A certain line being located northeasterly of, but not adjacent to, the northeasterly side of Sheridan Street, in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows.

Beginning at a point on the southerly line of land now or formerly of Anthony Mancini as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7691, Page 331, said point being located N 64°17'43" E by said land of Mancini a distance of Five and 23/100 (5.23) feet from a capped iron rod ("PLS 1252") at the southwesterly corner of said land of Mancini. Thence:

S 43°38'21" E a distance of Seventy-Six and 93/100 (76.93) feet to a point on the northwesterly line now or formerly of the City of Portland as described in a boundary line agreement deed recorded in said Registry in Book 12323, Page 317, said point being located S 47°47'13" W by said land of the City of Portland a distance of Thirty-One and 35/100 (31.35) feet from a capped iron rod ("PLS 2239").

Meaning and intending to describe an agreement line between land now or formerly of Anthony Mancini as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7856, Page 32 and land now or formerly of McCartney Family, LLC as described in deeds recorded in said Registry in Book 32471, Pages 220, 222, 224, 226, and 228.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

Reference is herein made to a plan entitled "Plan of Existing Conditions Survey "made

for Vazza Real Estate Group BD Sheridan, LLC by Titcomb Associates dated March 4, 2016. The above description runs from "POINT D" to "POINT C" on said Plan.

1. The McCartney Family, LLC hereby remises, releases, bargains, sells and conveys and forever quit-claims unto Anthony Mancini, his heirs and assigns forever, any right, title or interest it may have in any land which adjoins and is northeasterly of the boundary line described above.

2. Anthony Mancini, as Trustee of Alpine Realty Trust, hereby remises, releases, bargains, sells and conveys and forever quit-claims unto McCartney Family, LLC, its successors and assigns forever, any right, title or interest he may have in any land which adjoins and is southwesterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

Witness

Anthony Mancini, as Trustee of Alpine Realty Trust

McCartney Family, LLC

Witness

By:
Its:

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

~~February~~ May 1, 2017

Personally appeared the above-named Anthony Mancini, as Trustee of Alpine Realty Trsut and acknowledged the foregoing to be his free act and deed.

Before me,

Janine M. Galli, Notary Public
State of Maine
My Commission Expires 7/19/2019

Notary Public/Attorney at Law

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

February ____, 2017

Personally appeared the above-named _____, Member/Manager of McCartney Family, LLC, and acknowledged the foregoing to be his/her free act and deed in his /her capacity and the free act and deed of the limited liability company.

Before me,

Notary Public/Attorney at Law

for Vazza Real Estate Group BD Sheridan, LLC by Titcomb Associates dated March 4, 2016. The above description runs from "POINT D" to "POINT C" on said Plan.

1. The McCartney Family, LLC hereby remises, releases, bargains, sells and conveys and forever quit-claims unto Anthony Mancini, his heirs and assigns forever, any right, title or interest it may have in any land which adjoins and is northeasterly of the boundary line described above.

2. Anthony Mancini, as Trustee of Alpine Realty Trust, hereby remises, releases, bargains, sells and conveys and forever quit-claims unto McCartney Family, LLC, its successors and assigns forever, any right, title or interest he may have in any land which adjoins and is southwesterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

_____
Witness

_____
Anthony Mancini, as Trustee of Alpine Realty Trust

Witness

McCartney Family, LLC

By: John C. McCartney
Its: Manager

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

March 22, 2017

Personally appeared the above-named Anthony Mancini, as Trustee of Alpine Realty Trsut and acknowledged the foregoing to be his free act and deed.

Before me,

_____
Notary Public/Attorney at Law

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

March 22, 2017

Personally appeared the above-named John C. McCartney, ~~Member~~/Manager of McCartney Family, LLC, and acknowledged the foregoing to be his/~~her~~ free act and deed in his/~~her~~ capacity and the free act and deed of the limited liability company.

Before me,

Notary Public/Attorney at Law

The undersigned mortgagee of Anthony Mancini (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

Camden National Bank, Mortgagee

5/1/17
Date

By: _____
Name: Elliott Barry
Title: SVP

The undersigned mortgagee of McCartney Family, LLC, (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

Mortgagee

_____
Date

By: _____
Name:
Title:

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PURCHASE AND SALE AGREEMENT

("days" means business days unless otherwise noted, see paragraph 23)

December 22, 2015
Offer Date

_____, _____ Effective Date
Effective Date is defined in Paragraph 23 of this Agreement.

1. PARTIES: This Agreement is made between Saulnier Development ("Buyer") and Mccartney Family LLC ("Seller").

2. DESCRIPTION: Subject to the terms and conditions hereinafter set forth, Seller agrees to sell and Buyer agrees to buy ([X] all [ ] part of ; If "part of" see para. 26 for explanation) the property situated in municipality of Portland, County of Cumberland, State of Maine, located at 153 & 165 Sheridan St and described in deed(s) recorded at said County's Registry of Deeds Book(s) 32471, Page(s) 220-229.

3. FIXTURES: The Buyer and Seller agree that all fixtures, including but not limited to existing storm and screen windows, shades and/or blinds, shutters, curtain rods, built-in appliances, heating sources/systems including gas and/or kerosene-fired heaters and wood/pellet stoves, sump pump, electrical fixtures, and N/A are included with the sale except for the following: N/A.
Seller represents that all mechanical components of fixtures will be operational at the time of closing except: N/A.

4. PERSONAL PROPERTY: The following items of personal property as viewed on N/A are included with the sale at no additional cost, in "as is" condition with no warranties: N/A.

5. PURCHASE PRICE/EARNEST MONEY: For such Deed and conveyance Buyer agrees to pay the total purchase price of [redacted] Buyer [ ] has delivered; or [X] will deliver to the Agency within 10 days of the Effective Date, a deposit of earnest money in the amount [redacted] Buyer agrees that an additional deposit of earnest money in the amount of [redacted] ill be delivered upon permitting approval. If Buyer fails to deliver the initial or additional deposit in compliance with the above terms Seller may terminate this Agreement. This right to terminate ends once Buyer has delivered said deposit(s). The remainder of the purchase price shall be paid by wire, certified, cashier's or trust account check upon delivery of the Deed.

This Purchase and Sale Agreement is subject to the following conditions:

6. ESCROW AGENT/ACCEPTANCE: The Maine Real Estate Network ("Agency") shall hold said earnest money and act as escrow agent until closing; this offer shall be valid until December 22, 2015 (date) 5 [ ] AM [X] PM; and, in the event of non-acceptance, this earnest money shall be returned promptly to Buyer.

7. TITLE AND CLOSING: A deed, conveying good and merchantable title in accordance with the Standards of Title adopted by the Maine Bar Association shall be delivered to Buyer and this transaction shall be closed and Buyer shall pay the balance due and execute all necessary papers on See #26 (closing date) or before, if agreed in writing by both parties. If Seller is unable to convey in accordance with the provisions of this paragraph, then Seller shall have a reasonable time period, not to exceed 30 calendar days, from the time Seller is notified of the defect, unless otherwise agreed to in writing by both Buyer and Seller, to remedy the title. Seller hereby agrees to make a good-faith effort to cure any title defect during such period. If, at the later of the closing date set forth above or the expiration of such reasonable time period, Seller is unable to remedy the title, Buyer may close and accept the deed with the title defect or this Agreement shall become null and void in which case the parties shall be relieved of any further obligations hereunder and any earnest money shall be returned to the Buyer.

8. DEED: The property shall be conveyed by a Warranty deed, and shall be free and clear of all encumbrances except covenants, conditions, easements and restrictions of record which do not materially and adversely affect the continued current use of the property.

9. POSSESSION, OCCUPANCY, AND CONDITION: Unless otherwise agreed in writing, possession and occupancy of premises, free of tenants and occupants, shall be given to Buyer immediately at closing. Said premises shall then be broom clean, free of all possessions and debris, and in substantially the same condition as at present, excepting reasonable use and wear. Buyer shall have the right to view the property within 24 hours prior to closing.

10. RISK OF LOSS, DAMAGE, DESTRUCTION AND INSURANCE: Prior to closing, risk of loss, damage, or destruction of premises shall be assumed solely by the Seller. Seller shall keep the premises insured against fire and other extended casualty risks prior to closing. If the premises are damaged or destroyed prior to closing, Buyer may either terminate this Agreement and be refunded the earnest money, or close this transaction and accept the premises "as-is" together with an assignment of the insurance proceeds relating thereto.

The Maine Real Estate Network, 970 Baxter Blvd Portland, ME 04103 Phone: (207)595-0260 Fax:
Jeffrey Clark

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11. FUEL/UTILITIES/PRORATIONS: Buyer shall pay Seller at closing for all fuel in any tanks remaining on the property calculated as of the closing date or such earlier date as required to comply with lender requirements, if any. The amount owed shall be determined using the most recently available cash price of the company that last delivered the fuel. Metered utilities such as electricity, water and sewer will be paid through the date of closing by Seller. The following items, where applicable, shall be prorated as of the date of closing: collected rent, association fees, (other) N/A. The day of closing is counted as a Seller day. Real estate taxes shall be prorated as of the date of closing (based on municipality's fiscal year). Seller is responsible for any unpaid taxes for prior years. If the amount of said taxes is not known at the time of closing, they shall be apportioned on the basis of the taxes assessed for the preceding year with a reapportionment as soon as the new tax rate and valuation can be ascertained, which latter provision shall survive closing. Buyer and Seller will each pay their transfer tax as required by State of Maine.

12. DUE DILIGENCE: Neither Seller nor Licensee makes any warranties regarding the condition, permitted use or value of Sellers' real or personal property, or any representations as to compliance with any federal, state or municipal codes, including, but not limited to, fire, life safety, electrical and plumbing. Buyer is encouraged to seek information from professionals regarding any specific issue or concern. This Agreement is subject to the following investigations, with results being satisfactory to Buyer:

TYPE OF INVESTIGATION	YES	NO	FULL RESOLUTION	TYPE OF INVESTIGATION	YES	NO	FULL RESOLUTION
a. General Building (may include any a-z)		X	Within ____ days	n. Arsenic Treated Wood		X	Within ____ days
b. Sewage Disposal	X		Within 14 days	o. Pests		X	Within ____ days
c. Coastal shoreland septic		X	Within ____ days	p. Code Conformance		X	Within ____ days
d. Water Quality	X		Within 14 days	q. Insurance		X	Within ____ days
e. Water Quantity		X	Within ____ days	r. Environmental Scan		X	Within ____ days
f. Air Quality		X	Within ____ days	s. Lot size/acreage		X	Within ____ days
g. Square Footage		X	Within ____ days	t. Survey/MLI		X	Within ____ days
h. Pool		X	Within ____ days	u. Zoning		X	Within ____ days
i. Energy Audit		X	Within ____ days	v. Registered Farmland		X	Within ____ days
j. Chimney		X	Within ____ days	w. Habitat Review/Waterfowl		X	Within ____ days
k. Smoke/CO detectors		X	Within ____ days	x. Flood Plain		X	Within ____ days
l. Mold		X	Within ____ days	y. Tax Status		X	Within ____ days
m. Lead Paint		X	Within ____ days	z. Other Permits	X		Within SeeAddl days

All investigations will be done by persons chosen and paid for by Buyer in Buyer's sole discretion. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer, Buyer will declare the Agreement null and void by notifying Seller in writing within the specified number of days, and any earnest money shall be returned to Buyer. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer in Buyer's sole discretion, and Buyer wishes to pursue remedies other than voiding the Agreement, Buyer must do so to full resolution within the time period set forth above; otherwise this contingency is waived. If Buyer does not notify Seller that an investigation is unsatisfactory within the time period set forth above, this contingency is waived by Buyer. In the absence of investigation(s) mentioned above, Buyer is relying completely upon Buyer's own opinion as to the condition of the property.

13. PROPERTY DISCLOSURE FORM: Buyer acknowledges receipt of Seller's Property Disclosure Form and the information developed by the Maine Center for Disease Control and Prevention regarding arsenic in private water supplies and arsenic in treated wood.

14. FINANCING: This Agreement [X] is [ ] is not subject to Financing. If subject to Financing:

a. This Agreement is subject to Buyer obtaining a Private Capital loan of N/A % of the purchase price, at an interest rate not to exceed N/A % and amortized over a period of N/A years. Buyer is under a good faith obligation to seek and obtain financing on these terms.

b. Buyer to provide Seller with letter from lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested within N/A days from the Effective Date of the Agreement. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.

c. Buyer hereby authorizes, instructs and directs its lender to communicate the status of the Buyer's loan application to Seller, Seller's licensee and Buyer's licensee.

d. After (b) is met, if the lender notifies Buyer that it is unable or unwilling to provide said financing, Buyer is obligated to provide Seller with written documentation of the loan denial. Any failure by Buyer to provide Seller with the loan denial within two days of receipt by Buyer of such notice from lender shall be a default under this Agreement. After notifying Seller, Buyer shall have N/A days to provide Seller with a letter from another lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.

e. Buyer agrees to pay no more than N/A points. Seller agrees to pay up to $ N/A toward Buyer's actual pre-paids, points and/or closing costs, but no more than allowable by Buyer's lender.

f. Buyer's ability to obtain financing [ ] is [X] is not subject to the sale of another property. See addendum [ ] Yes [X] No.

g. Buyer may choose to pay cash instead of obtaining financing. If so, Buyer shall notify Seller in writing including providing proof of funds and the Agreement shall no longer be subject to financing, and Seller's right to terminate pursuant to the provisions of this paragraph shall be void.

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15. BROKERAGE DISCLOSURE: Buyer and Seller acknowledge they have been advised of the following relationships:

Jeffrey Clark/Mindy Sanderson (016705) of The Maine Real Estate Network (2874)
Licensee MLS ID Agency MLS ID
is a ☐ Seller Agent ☒ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

Jeffrey Clark/Mindy Sanderson (016705) of The Maine Real Estate Network (2874)
Licensee MLS ID Agency MLS ID
is a ☐ Seller Agent ☐ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

If this transaction involves Disclosed Dual Agency, the Buyer and Seller acknowledge the limited fiduciary duties of the agents and hereby consent to this arrangement. In addition, the Buyer and Seller acknowledge prior receipt and signing of a Disclosed Dual Agency Consent Agreement.

16. DEFAULT/RETURN OF EARNEST MONEY: In the event of default by the Buyer, Seller may employ all legal and equitable remedies, including without limitation, termination of this Agreement and forfeiture by Buyer of the earnest money. In the event of a default by Seller, Buyer may employ all legal and equitable remedies, including without limitation, termination of this Agreement and return to Buyer of the earnest money. Agency acting as escrow agent has the option to require written releases from both parties prior to disbursing the earnest money to either Buyer or Seller. In the event that the Agency is made a party to any lawsuit by virtue of acting as escrow agent, Agency shall be entitled to recover reasonable attorney's fees and costs which shall be assessed as court costs in favor of the prevailing party.

17. MEDIATION: Earnest money disputes within the jurisdictional limit of small claims court will be handled in that forum. All other disputes or claims arising out of or relating to this Agreement or the property addressed in this Agreement (other than requests for injunctive relief) shall be submitted to mediation in accordance with generally accepted mediation practices. Buyer and Seller are bound to mediate in good faith and to each pay half of the mediation fees. If a party fails to submit a dispute or claim to mediation prior to initiating litigation (other than requests for injunctive relief), then that party will be liable for the other party's legal fees in any subsequent litigation regarding that same matter in which the party who failed to first submit the dispute or claim to mediation loses in that subsequent litigation. This clause shall survive the closing of the transaction.

18. PRIOR STATEMENTS: Any representations, statements and agreements are not valid unless contained herein. This Agreement completely expresses the obligations of the parties.

19. HEIRS/ASSIGNS: This Agreement shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns of the Seller and the assigns of the Buyer.

20. COUNTERPARTS: This Agreement may be signed on any number of identical counterparts with the same binding effect as if the signatures were on one instrument. Original or faxed or other electronically transmitted signatures are binding.

21. SHORELAND ZONE SEPTIC SYSTEM: Seller represents that the property ☐ does ☒ does not contain a septic system within the Shoreland Zone. If the property does contain a septic system located in the Shoreland Zone, Seller agrees to provide certification at closing indicating whether the system has/has not malfunctioned within 180 calendar days prior to closing.

22. NOTICE: Any notice, communication or document delivery requirements hereunder may be satisfied by providing the required notice, communication or documentation to or from the parties or their licensee. Only withdrawals of offers and counteroffers will be effective upon communication, verbally or in writing.

23. EFFECTIVE DATE/BUSINESS DAYS: This Agreement is a binding contract when the last party signing has caused a paper or electronic copy of the fully executed agreement to be delivered to the other party which shall be the Effective Date. Licensee is authorized to fill in the Effective Date on Page 1 hereof. Except as expressly set forth to the contrary, the use of the term "days" in this Agreement, including all addenda made a part hereof, shall mean business days defined as excluding Saturdays, Sundays and any observed Maine State/Federal holidays. Deadlines in this Agreement, including all addenda, expressed as "within x days" shall be counted from the Effective Date, unless another starting date is expressly set forth, beginning with the first day after the Effective Date, or such other established starting date, and ending at 5:00 p.m. Eastern Time on the last day counted. Unless expressly stated to the contrary, deadlines in this Agreement, including all addenda, expressed as a specific date shall end at 5:00 p.m. Eastern Time on such date.

24. CONFIDENTIALITY: Buyer and Seller authorize the disclosure of the information herein to the real estate licensees, attorneys, lenders, appraisers, inspectors, investigators and others involved in the transaction necessary for the purpose of closing this transaction. Buyer and Seller authorize the lender and/or closing agent preparing the closing disclosure and/or settlement statement to release a copy of the closing disclosure and/or settlement statement to the parties and their licensees prior to, at and after the closing.

25. ADDENDA: Lead Paint - ☐ Yes ☒ No ; Other - ☒ Yes ☐ No Explain: Addendum 1

The Property Disclosure Form is not an addendum and not part of this Agreement.

26. OTHER CONDITIONS: Closing date shall take place with 30 days of buyer obtaining approvals for permitting as set forth in Addendum 1.

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27. GENERAL PROVISIONS:

a. A copy of this Agreement is to be received by all parties and, by signature, receipt of a copy is hereby acknowledged. If not fully understood, contact an attorney. This is a Maine contract and shall be construed according to the laws of Maine.

b. Seller acknowledges that State of Maine law requires buyers of property owned by non-resident sellers to withhold a prepayment of capital gains tax unless a waiver has been obtained by Seller from the State of Maine Revenue Services.

c. Buyer and Seller acknowledge that under Maine law payment of property taxes is the legal responsibility of the person who owns the property on April 1, even if the property is sold before payment is due. If any part of the taxes is not paid when due, the lien will be filed in the name of the owner as of April 1 which could have a negative impact on their credit rating. Buyer and Seller shall agree at closing on their respective obligations regarding actual payment of taxes after closing. Buyer and Seller should make sure they understand their obligations agreed to at closing and what may happen if taxes are not paid as agreed.

d. Buyer acknowledges that Maine law requires continuing interest in the property and any back up offers to be communicated by the listing agent to the Seller.

e. Whenever this Agreement provides for earnest money to be returned or released, agency acting as escrow agent must comply with the Maine Real Estate Commission rules which may require written notices or obtaining written releases from both parties.

Buyer's Mailing address is 22 West Ave, Saco, ME 04072 .

DocuSigned by:
2957DDD0CD734F3...
12/22/2015

DATE BUYER DATE

Saulnier Development

Seller accepts the offer and agrees to deliver the above-described property at the price and upon the terms and conditions set forth and agrees to pay agency a commission for services as specified in the listing agreement.

Seller's Mailing address is _____ .

12/22/15

SELLER Mccartney Family LLC DATE SELLER DATE

COUNTER-OFFER

Seller agrees to sell on the terms and conditions as detailed herein with the following changes and/or conditions:

The parties acknowledge that until signed by Buyer, Seller's signature constitutes only an offer to sell on the above terms and the offer will expire unless accepted by Buyer's signature with communication of such signature to Seller by (date) _____ (time) _____ ____ AM ____ PM.

SELLER DATE SELLER DATE

The Buyer hereby accepts the counter offer set forth above.

BUYER DATE BUYER DATE

EXTENSION

The closing date of this Agreement is extended until _____ .
DATE

SELLER DATE SELLER DATE

BUYER DATE BUYER DATE

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EQUAL HOUSING OPPORTUNITY

Saulnier,Bernier

D. Conformity with Applicable Design Standards

The following statement is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526.

9.1 OVERVIEW

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

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The site is located on Sheridan Street, a low volume, residential public road that is used primarily by local traffic; there is limited cut-through traffic in the area from either Cumberland Ave or Walnut Street. It is predicted that the incremental increase in traffic volume will not create or aggravate any hazards and thus not impact overall safety. Please refer to the Traffic Impact Study included in this application for more information.

2. Access and Circulation:

   a. Site Access and Circulation.

      (i) The development will provide safe access and internal circulation for both pedestrians and vehicles.

      (ii) The proposed two points of site access and egress are located on the lot as such as to not conflict with existing traffic movements from the residential property across the street at 156 Sheridan Street.

      (iii) The site does not feature drive up services as mentioned in this requirement.

   b. Loading and Servicing.

      (i) Not required. There will be adequate area along adjacent streets and within the proposed drive aisle for infrequent periods of tenants moving in/out of the building.

   c. Sidewalks.

      (i) The existing sidewalk along both street frontages are bituminous or made of concrete will be reconstructed to City Standards as part of the project.

      (ii) Due to the substandard condition of the existing sidewalks and likelihood that the proposed construction will impact the sidewalk integrity, it is proposed that the sidewalks be rebuilt to the City standard brick sidewalk. Curb is to be replaced as noted on the Site Plan, C-10.

      (iii) Internal sidewalks will be provided to facilitate the movement of pedestrians to the City ROW and to and from internal garage parking spaces.

3. Public Transit Access:

   a. Non-Applicable.

   b. A new transit stop is not proposed as part of the project.

   c. A new transit stop is not proposed as part of the project.

4. Parking:

   a. Location and Required Number of Vehicle Parking Spaces:

      (i) The proposed parking lot meets the one space per unit after three units parking requirement. With the proposed nineteen units, nineteen parking spaces meets this minimum.

      (ii) A parking study is not required.

      (iii) The amount of parking exceeds 10% by one parking space. However, allocating space for nineteen spaces, one per unit, is more appropriate than proposing eighteen spaces by allowing for equal parking access for both the non-workforce and workforce units and reducing the demand for on-street parking along Sheridan Street.

      (iv) The proposed parking garage layout incorporates the design standards as set in the Technical Manual including two compact sized parking space (8' X 15') to increase accessibility to the solid waste storage room. Incorporating two compact spaces stays below the maximum 20% compact to standard sized space requirement.

      (v) The parking lot will be constructed of a permanent and durable concrete surface that is not subject to ponding or erosion.

   b. Location and Required Number of Bicycle Parking Spaces:

      (i) Per Technical Manual requirement, a minimum of eight (8) bike storage spaces will be provided within the second-floor storage area meeting the required two (2) spaces per five (5) units. There will also be space for two (2) exterior bicycle parking spaces provided along the Sheridan Street frontage.

   c. Motorcycles and Scooter Parking:

      (i) The project does not provide designated motorcycle/scooter parking but on-street opportunities exist within Sheridan Street.

   d. Snow Storage:

      (i) Snow storage space will be provided in the landscaped areas surrounding the driveway aprons and front walkway entrances.

      (ii) Snow storage shall not be located where it will adversely impact the functionality of the stormwater management system nor the structural integrity of the proposed landscaping of the storage area.

5. Transportation Demand Management (TDM):

a. A TDM plan is not required for this project.
b. A TDM plan is not required for this project.
c. A TDM plan is not required for this project.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

   a. The existing site contains no prominent significant natural features therefore no issue related to the preservation of these features applies.

   b. Not applicable.

2. Landscaping and Landscaping Preservation:

   a. Landscape Preservation.

      (i) The existing site is made up primarily of untamed and unmaintained overgrowth with a high density of invasive Norway Maple trees; refer to the Tree Report by Rene Noel, Jr. for a tree count and approximate location and size of identified trees. It is proposed that the contractor make efforts to preserve the existing Apple (non-native) and Linden trees to the rear of the property outside of the retaining wall to the greatest degree feasible without impacting construction activities.

      (ii) There are three (3) existing trees with a DBH of 10" or greater that are within the property setbacks, of which one (1) is proposed to be preserved during construction. Refer to the Landscape Plan for existing tree locations.

      (iii) Existing trees are to be preserved and protected during construction per standards detailed in the Technical Manual. Refer to the Site Details plan for additional information.

      (iv) Not applicable.

      (v) Not applicable.

   b. Site Landscaping.

      (i) Landscaped Buffers:

         (a) The proposed exterior transformer pad location is to be bordered by a six-foot cedar fence and will not visible from the public sidewalks, street, and adjacent properties.

         (b) The project has 176 linear feet of frontage along Sheridan Street; per requirement, it is proposed that a minimum of twenty-four (24) shrubs or shrub alternatives are planted within this setback as noted in greater detail in the Landscape Plan.

         (c) Not applicable.

         (d) Not applicable.

      (ii) Parking Lot Landscaping:

a) Not applicable.

b) Not applicable.

c) Not applicable.

d) Not applicable.

e) Not applicable.

(iii) Street Trees:

(a) Four (4) new street trees are proposed to be planted within the City ROW along Sheridan Street. Trees are to be a maple variety as to minimize potential impacts with overhead services while maintaining a bright red tree presence in the fall.

(b) An additional eight (8) evergreen trees are proposed to front the property within twenty (20) feet of the building surrounded by native grass features and perennial planting beds. This additional landscaping is proposed to meet the requirement for the nineteen (19) total street trees per Technical Manual requirement.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) Stormwater runoff produced by the roof area is to be conveyed into an underdrained subsurface sand filter (USSF) designed to the MDEP Stormwater Best Practices design standards; all remaining site stormwater is to be directed offsite and into the existing municipal stormwater system within Sheridan Street. There is no anticipated ponding or flooding using this design nor runoff redirected onto the abutting properties.

(ii) The roof runoff from the site is proposed to be treated using filtration via the USSF system. All remaining runoff will be redirected into the stormdrain line within Sheridan Street. The redirected runoff is less than what is currently produced within the site. Therefore, the project will not increase the net rate of runoff nor adversely impact adjacent lots.

(iii) The project will not increase the stormwater flows directly within the Sheridan Street separated sewer system nor create adverse impacts to the Munjoy Hill neighborhood or wastewater treatment plant when compared to existing conditions.

(iv) The City's separated storm sewer system is anticipated to accommodate the increase in stormwater flow; any increase will not exceed the capacity of the existing system within Sheridan Street.

b. A site specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic, general, and flooding standards of MeDEP Chapter 500. Please refer to the Stormwater Management plan for more information.

c. The project is not located in a watershed of an urban impaired stream as listed by the MaineDEP.

d. Not applicable.

e. The development is not anticipated to pose a risk to groundwater contamination either during or post-construction. The project is serviced by a public wastewater system.

f. The development will provide for adequate and sanitary disposal or sewage in accordance with Section 2 of the Technical Manual.

(c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans:

   a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.

   b. Not applicable.

2. Public Safety and Fire Prevention:

   a. The site has been designed to promote safe and inviting public and residential access.

   b. The proposed emergency vehicle access to the site is designed to City Technical Standards.

   c. Fire hydrants are located within the Sheridan Street system as noted on the Utility Plan. The new building will have fire suppression.

3. Availability and Adequate Capacity of Public Utilities:

   a. Public utilities near the site have been contacted to confirm the capacity to serve the proposed project. More information on utilities is included within the ability to serve letters to the respective utility companies.

   b. All electrical service lines will be underground.

   c. All new utility infrastructures will meet the provisions of the Technical Manual.

   d. The project will be served by connection to the public sewer system within Sheridan Street

   e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the standards of Chapter 500.

   f. The proposed building includes provisions for on-site storage of trash and recyclables temporarily until waste is removed from the site via a private hauler.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:

   a. The bulk, location and height of the existing building does not result in adverse impacts

to abutting properties. This design and application has been developed in compliance with the Fort Sumner Park Height Overlay (14-139(d)).

b. The proposed building is designed to minimize bulk and height and is positioned as such to affect abutting properties as little as possible.

c. Proposed HVAC venting will be designed to direct all exhaust away from the abutting public park and residential properties.

2. Shadows:

a. Not applicable.

3. Snow and Ice Loading:

a. The proposed building will have a flat roof thus eliminating the risk of accumulated snow and ice unloading onto adjacent properties or City right-of-way.

4. View Corridors:

a. The project site is located outside the Downtown Vision View Corridor Protection Plan.

b. The project has also been designed to be compliant with the. Fort Sumner Park Height Overlay (14-139(d)). The building will not interfere with the view from the Park as outlined in the ordinance.

5. Historic Resources:

a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to designated landmark, historic district, or historic landscape district.

c. There are no known archaeological resources on the site.

6. Exterior Lighting:

a. Site Lighting

(i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual. Cut sheets and a photometric plan have been provided for onsite lighting.

(ii) All proposed exterior lighting will employ house-side shielding per requirement.

b. Architectural and Specialty Lighting

(i) No architectural or specialty lighting is proposed.

(ii) No up-lighting is proposed.

c. Street Lighting

(i) No new street lights are proposed.

7. Noise and Vibration:

   a. All HVAC and Mechanical equipment shall be accordance with the applicable zoning requirements.

8. Signage and Wayfinding:

   a. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

      (i) The project is not located in a historic district or subject to Article IX.

      (ii) Not applicable.

      (iii) All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

9. Zoning Related Design Standards:

   a. The project will be designed to meet the design standards within the R6 Zone.

E. Summary of Written Easements

- **Existing Easements** – The Existing Conditions Plan developed by Titcomb Associates identified an existing easement regarding the site; details outlining the rights are recorded within Book 314, Page 544. Refer to the Existing Conditions Plan.

- **Proposed Easements** – Public Access Easement to be granted to the City of Portland by BD Sheridan, LLC for pedestrian use of the brick sidewalk located within the site property lines. Final easement language and associated exhibits to be reviewed and approved by the City and recorded within the Cumberland County Registry of Deeds. Easement book and page information to be also recorded on the final project Recording Plat.

F. Written Request for Waivers

There are no waives requested at this time.

NORTHERN BANK
Neighbors you can bank on.

April 13, 2017

Mr. Bernie Saulnier
BD Sheridan, LLC
1266 Furnace Brook Parkway
Quincy, MA 02169

Dear Mr. Saulnier,

This letter is to inform you that Northern Bank & Trust Company has reviewed your initial credit request associated with the redevelopment of 155 Sheridan Street located in Portland, ME. Based on our previous experience with you and your partners, Northern Bank & Trust Company believes that the project applicant has the financial capacity and development expertise to successfully execute the project.

Northern Bank and Trust Company looks forward to providing terms and conditions of said approval upon completion of your permitting process.

Please note that this is not a legally binding commitment to lend as any extension of credit is subject to satisfactory completion of underwriting due diligence, credit committee approval and satisfactory review of documentation and such other terms and conditions as determined by the Bank and its counsel in their sole discretion.

Should you have any questions, please call me at 617 835 1419.

Very truly yours,

Justin Thomas

Commercial Loan Officer

ATTACHMENT H

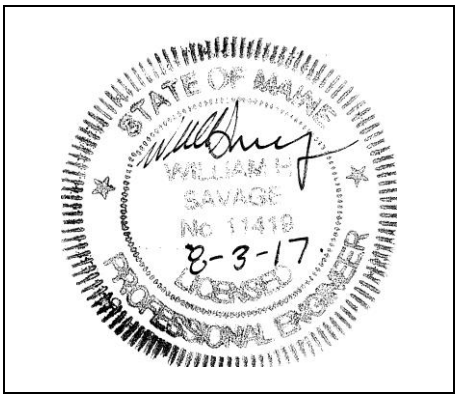
FINAL STORMWATER MANAGEMENT REPORT

Prepared For:

BD Sheridan LLC
Vazza Real Estate Group
1266 Furnace Brook Parkway Suite 300
Quincy, Massachusetts 02169

Prepared By:

Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102



March 2017
Revised July 2017

INTRODUCTION

Acorn Engineering, Inc. has been retained by BD Sheridan LLC to provide civil engineering services for the proposed urban infill project at 155 Sheridan Street. The proposed project is to develop an existing single family, 1.5-story residence into a high-density, 19-unit apartment building.

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

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

The proposed project will include the redevelopment of existing, impervious area including a rooftop, and concrete steps and walkways. The project will result in a net increase of impervious area above 1,000 sf, and, as such, is required to include stormwater management features for stormwater quality & quantity control. The stormwater analysis is documented with supporting calculations and reports attached to this narrative.

The current course of action is to provide primary water quality treatment to the stormwater via filtration utilizing a subsurface chamber sand filter, or underdrain subsurface sand filter (USSF) designed per Chapter 7.3 of Volume III of the Maine Stormwater Management BMP manual. The implemented BMP system is to provide water quality treatment for no less than 95% of the new impervious area and 80% of the developed area. For this stormwater analysis, water quality and quantity benefits as a result from the proposed green roof have not been taken into consideration during the modeling of rain events. The green roof will cover approximately 36% of the building.

EXISTING CONDITIONS

The proposed project site is located on Sheridan Street between Cumberland Ave and Walnut Street within the East End neighborhood on Munjoy Hill. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine dated March 4, 2016 and revised January 30, 2017.

Abutting Uses:

➢ North	R-6 Zone	Multi-Family Residential
➢ West	R-6 Zone	Multi-Family Residential
➢ South	B-2b Zone	Community Business
➢ East	R-6 Zone	Multi-Family Residential

Fort Sumner Park directly abuts the property to the east.

Most of the site is pervious with dense overgrowth and limited mature tree growth. The average grade is relatively steep. The existing dwelling is sided by a concrete walk and stairway with the steps continuing into the property. There are also two retaining walls further into the site, potentially continuing into the northernmost abutting property.

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

PROPOSED DEVELOPMENT

The proposed project is a 19-unit redevelopment of an existing single-family lot. Covered, garage parking will be provided on-site on the first floor of the building, below the residential units. Select residential units on the second and third floors will have access to outdoor patios which will drain to the filter BMP. Due to the existing steep conditions, portions of the site will have greater slopes that will require structural retaining walls and riprap support. The reminder of the property will be landscaped.

Most of the added impervious surface will be generated by the new roof surface from the building footprint. The new runoff will be collected and piped from the rooftop to a subsurface, detention system below the patios outside the third-floor apartments. The runoff generated from the patios and third level lawns is to be redirected into the system as well via field inlet drains. The roof is to be composed of a series of green roof trays.

The development will be served by the Portland Water District, underground power/cable/communications, natural gas, and the municipal sewer system. The project anticipates incorporating Maine DEP approved stormwater Best Management Practices to meet the General and Flooding Standards.

GENERAL STANDARDS - WATER QUALITY

The Underdrained Subsurface Sand Filtration system (USSF) is sized to meet or exceed to the requirements set forth within the MDEP Volume III BMPs Technical Design Manual, Chapter 7.3. Filter BMP systems have shown to be effective at filtering out and removing a wide range of pollutants from stormwater runoff.

Treatment Area

Runoff generated from the new building roof and the third level patio and lawn areas is to be redirected and conveyed into the USSF system set below the third-floor patios. The runoff is to be treated in a series of two StormTech Isolator Rows. These structures are to be outfitted with at least one access point provided by either the outlet control structure or the drainage manhole and additional access via an inspection port per Isolator Row for the removal of any accumulated sediment or debris. The runoff will enter the sand filter structure and be detained for a minimum of 24 hours and a maximum of 48 hours. The underdrains below the sand filter will then outlet into a control structure. This structure will serve to attenuate

flows into the existing municipal separated stormwater system within Sheridan Street and prevent flooding.

The treatment of the impervious surface by the BMPs are as follows:

Table 1 - Impervious Treatment Area Table					
	Existing Impervious Area (SF)	Proposed Total Impervious Area (SF)	Net change in Impervious Area (SF)	Proposed Impervious Area with Treatment (SF)	% Overall New Imp. Area Treated
Subsurface Sand Filter	1,287	12,287	11,000	10,466	95%

As shown above, the project anticipates meeting the required treatment for new impervious surfaces assuming the entire roof is impervious and accounting for the green roof. Note that the existing impervious area as recorded does not include the area of existing riprap slope.

Furthermore, the MDEP defines developed area as "Disturbed area" excluding area that within one calendar year of being disturbed is returned to a condition with the same drainage pattern that existed prior to the disturbance and is revegetated, provided the area is not mowed more than once per year. The proposed developed areas as generated by the project will span from the rear retaining walls to the front property line. The disturbed soils behind the retaining walls, to the rear property line are to be regraded to reflect the existing drainage pattern.

Based upon this definition, Table 2 summarizes the proposed disturbance and treatment areas.

Table 2: Developed Area Treatment			
	Proposed Total Developed Area (SF)	Proposed Developed Area with Treatment (SF)	% Overall Developed Area Treated
Subsurface Sand Filter	15,670	12,960	83%

As shown in Table 2, the project anticipates exceeding the required treatment for the total developed area through the utilization of the USSF BMP. Note that this developed area includes the building footprint.

Filter Area Size

Per the requirements for an underdrained subsurface sand filter as defined in Volume III BMPs Technical Design Manual, Chapter 7.3, the surface area of the filter shall be no less than the sum of 5% of the tributary impervious area and 2% of the tributary landscaped area.

The filter area is calculated by the following formula:

$$Filter\ Area\ (sf) = (Imperivous\ Area \times 0.05) + (Landscaped\ Area \times 0.02)$$

Table 3 – Total Filter Surface Area, displays the proposed sand filter sizing requirements, actual size, and the percentage of required area.

Table 3 –Total Filter Surface Area				
	Tributary Landscaped Area (SF)	Tributary Impervious Area (SF)	Filter Area Required (SF)	Filter Area Provided (SF)
Subsurface Sand Filter	2,559	10,466	575	601

The outflow from the sand filter structure is then tributary to the outlet control structure before entering the municipal stormwater system. As shown, the size of the soil filter area will meet and exceed the surface area requirements.

Isolator Row Sizing

The isolator row was sized by referencing a letter from Mark Bergeron, Director of the MDEP Bureau of Land Resources, to StormTech dated July 29, 2016. Mr. Bergeron recommends determining the minimum number of stormwater chambers per isolator row by dividing the one-year peak flow rate by the specific flow rate of the chamber. However, no flow rate was designated for StormTech's MC-4500 chamber system. Assuming that the MC-4500 model has at least a flow rate of 0.3 cfs per isolator chamber as defined for the MC-3500 model, the proposed three-chamber system would have a treatment flow rate of at least 0.9 cfs to accommodate for a one-year peak flow rate of 0.47 cfs as defined by the HydroCAD model.

Water Quality Volume

In accordance with the Volume III: BMPs Technical Design Manual, a water quality volume of 1.0-inch times the tributary impervious area plus 0.4-inch times the tributary landscaped developed area is required to be treated by the Underdrained Subsurface Sand Filter. The water quality volume is calculated by the following formula:

$$Treatment\ Volume\ (cf) = \frac{\left((Impervious\ Area \times 1.0") + (\text{Disturbed Area} \times 0.4")\right)}{(12"/1')}$$

Within the USSF system, the water quality volume is defined by the depth and surface area of the sand layer. For this project, the total water quality volume is the sum of the two Isolator Row sand filter layers. The system treatment volume was calculated using StormTech's storage volume for the MC-4500 chamber and end cap as provided in the MC-4500 Design Manual and the available stone storage surrounding the system assuming a 40% porosity.

The StormTech values are as follows:

MC-4500 Chamber 109.9 cf/unit

MC-4500 End Cap 35.7 cf/unit

The Water Quality Volume (WQV) is then calculated using the following:

$$WQV = [Total\ USSF\ System\ Vol] + [(Stone\ Vol - Total\ USSF\ System\ Vol) * 0.4]$$

A summary of the proposed water quality volume is as follows:

Table 4 – Water Quality Volume Table, displays the tributary landscaped area, tributary impervious area, treatment volume required, and treatment volume provided.

Table 4 - Water Quality Volume Table				
	Tributary Landscaped Area (SF)	Tributary Impervious Area (SF)	Treatment Volume Required (CF)	Treatment Volume Provided
Subsurface Sand Filter	2,559	10,466	**957**	**2,091**

As shown, the size of the combined water quality volume will meet and exceed the treatment volume requirements. Values from the HydroCAD calculations are attached to this report.

HydroCAD Adjustments

Given that the water quality volumetric infiltration rates through the soil filter vary, a water quality outlet is modeled to provide the required minimum 24-hour release time. This is completed by adjusting the rainfall amount in HydroCAD until the inflow volume is equal to or greater than the calculated treatment volume. The storm events are modeled as type III, 24-hour storm events in HydroCAD.

A vertical orifice is modeled in HydroCAD at the outlet structures of the USSF BMP. The orifice diameter is sized to detain the stormwater for an approximate period of 24 hours. The orifice is intended to be a PVC cap placed on the outfall pipe (no glue) with the orifice drilled into the cap eccentrically and is to be fitted at the end of the outfall pipe on the outlet control structure baffle to be inspected or replaced if necessary. The PVC cap can be inspected, removed or replaced if necessary. The orifice for the water quantity volume is then set above the peak elevation determined for the water quality volume.

Also, once the water quality volume is known, an artificial rainfall is created within HydroCAD, to mimic a storm event which equals the water quality volume (2.35”). Based on the artificial rainfall event, the depth of the water quality volume within the chamber system at peak elevation will not exceed 18 inches, as defined by Chapter 7.3.

Additional Quality Provided by the Green Roof

The above calculations do not consider the additional water quality treatment provided by the modular green roof trays covering 36% of the building rooftop. Per the Stormwater BMP Manual, Chapter 7.6 on Vegetated Roofs, rooftop vegetation can contribute to the General Standards requirement for Water Quality via filtration and water quality volume within the filter layer of the trays.

FLOODING STANDARD – WATER QUANTITY

The proposed project was modeled using HydroCAD to verify that the post-development conditions do not exceed the pre-development conditions. The model applied a 24-hour SCS Type III storm distribution for the 2, 10, and 25-year storm events with the corresponding rainfall amounts 3.1", 4.6", and 5.8" respectively. Rainfall amounts are from Appendix H of the Chapter 500 for Cumberland SE.

Both the pre- and post-development conditions were developed to model all runoff to enter the Sheridan Street municipal stormwater system. This assumption is based on the existing grades sloping downward from the property.

Due to the numerous variables and inherent inaccuracies with the modeling program used to calculate stormwater runoff, it is custom at Acorn Engineering, Inc. to round to the nearest whole number or to the nearest tenth for urban infill projects. Due to the relatively small size of the project footprint, the stormwater runoff shall be rounded to the nearest tenth of a cubic foot per second (cfs).

Time of Concentration (T_c)

For the pre-development condition, the Tc was represented using a fifty-foot sheet flow component, assuming light, wooded underbrush followed by shallow concentrated flow through forest with heavy litter. The modelled flow path assumed the greatest time was associated with the longest physical distance travelled from the most remote point of the subcatchment.

Given the urban environment and the short flow paths in the post condition, a Tc of 5 minutes was used for the post-development subcatchments.

Curve Number

It was assumed that the existing, steep sloping condition of the site would be best represented by the following CN condition:

- Woods/Grass Combo – Good

Furthermore, Cumberland County describes the existing soil condition as a hydrologic soil group A, but the site no longer contains primarily native soils (Hinckley Gravelly Sandy Loam). This is based upon the urban fill and silts/clays that were discovered on site. Therefore, the soil is closer to a B or C soil. It was modeled as group B in this report. Refer to

Appendix A, page 103 from the USDA Urban Hydrology for Small Watersheds TR-55 from HydroCAD.net as well as Summit Geoengineering's Geotechnical Report for more information.

The existing stairways, building, and concrete structures were assumed to be classified as impervious. A more conservative CN value was designated to the existing riprap wall to more accurately represent the limited permeability of the compacted surface.

The post-development conditions for the proposed building roof was modelled assuming both a completely impervious section represented by the wooden decks and hardtop surface and a semi-pervious section formed by the modular green roof system; the green roof covers about 36% of the total rooftop area. Based on past research as published in the December 2015 edition of the Journal of Hydrologic Engineering, "Curve Number and Runoff Coefficients for Extensive Living Roofs", extensive green roof systems can be modeled using a CN of 84.

It was also assumed that all newly proposed landscaped areas would be in good condition. The following curve numbers implemented in the post-development condition are as follows:

- > 75% Grass cover – Good

The remaining retaining walls, patios, and internal walkways were all classified as completely impervious.

Pre-development Calculations

The pre-development condition was modeled as one subcatchment to determine the net impact of the development.

- Subcatchment 1 –Rear property line to Sheridan Street

A Pre-Development Watershed Map developed for this project can be viewed in Attachment A, and a copy of the HydroCAD calculations is included within Attachment D of this report.

Peak flow rates for the storm events are as follows:

Table 5 – Pre-Development Peak Stormwater Flows

Drainage Area	2 – Year Storm Event (cfs)	10 – Year Storm Event (cfs)	25 – Year Storm Event (cfs)
Sheridan Street	0.3	0.8	1.2

Post-development Calculations:

The one pre-development subcatchment was broken into three separate subcatchments for the post-development condition.

- Subcatchment 1 – Rooftop of the proposed building
- Subcatchment 2 – Third floor patio area
- Subcatchment 3 – Front, side, and rear runoff into Sheridan Street

The post development calculations include changes to the land use and compensation provided by the subsurface BMP system. The following table represents comparison of predevelopment and post-development condition peak runoff rates for the proposed development and tributary area.

Table 6 – Comparison of Peak Flows						
Drainage Area	**2 – Year Storm Event (cfs)**		**10 – Year Storm Event (cfs)**		**25 – Year Storm Event (cfs)**	
Sheridan Street	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
	0.3	0.2	0.8	0.7	1.2	1.0

As shown in Table 6, the net impact of the post development peak flows shall remain below the predevelopment levels for the two, ten, and twenty-five-year storms.

A Post-Development Watershed Map created for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment D of this report.

Additional Quantity Provided by the Green Roof

It should be noted that the developed model and resulting peak flows do not take into consideration the additional storage and ponding as provided within the modular green roof system. The vegetation support course and drainage course within each tray will detain rainfall directly entering the system and further attenuate the site peak flows; this attenuation has not been considered within the abovementioned peak flow comparison.

STORMWATER BMP MAINTENANCE

A stormwater maintenance agreement in accordance with Chapter 7.3 has been established and submitted under separate cover to the City of Portland. The agreement outlines the maintenance and inspection requirements for the site BMPs including providing inspection logs and information on qualified inspectors as well as required maintenance activities and related inspection and maintenance frequencies. The site USSF system, storm drains, drainage manholes, vegetated areas around the retaining walls, and the modular green roof system have all been addressed within the document to be recorded with the Cumberland County Registry of Deeds.

SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

The existing soils are exclusively Hinckley throughout the site. The Hinckley soil series consists of very deep, excessively drained soils formed in glaciofluvial materials. The permeability of the Hinckley soil is rapid in the surface layer and subsoil and very rapid in the substratum, typically with a low groundwater table. Soils also consist of silty clays and urban fill as outlined in the above sections. Refer to the Geotechnical Report for more information. Given the soils information as listed above, no onsite wastewater is proposed and the applicant does not intend to perform a more intense hydric soil boundary delineation or permeability test due to the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 have been met.

The area within and surrounding the project includes soils types listed in Table 7 below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 7 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley	0.17	0.17

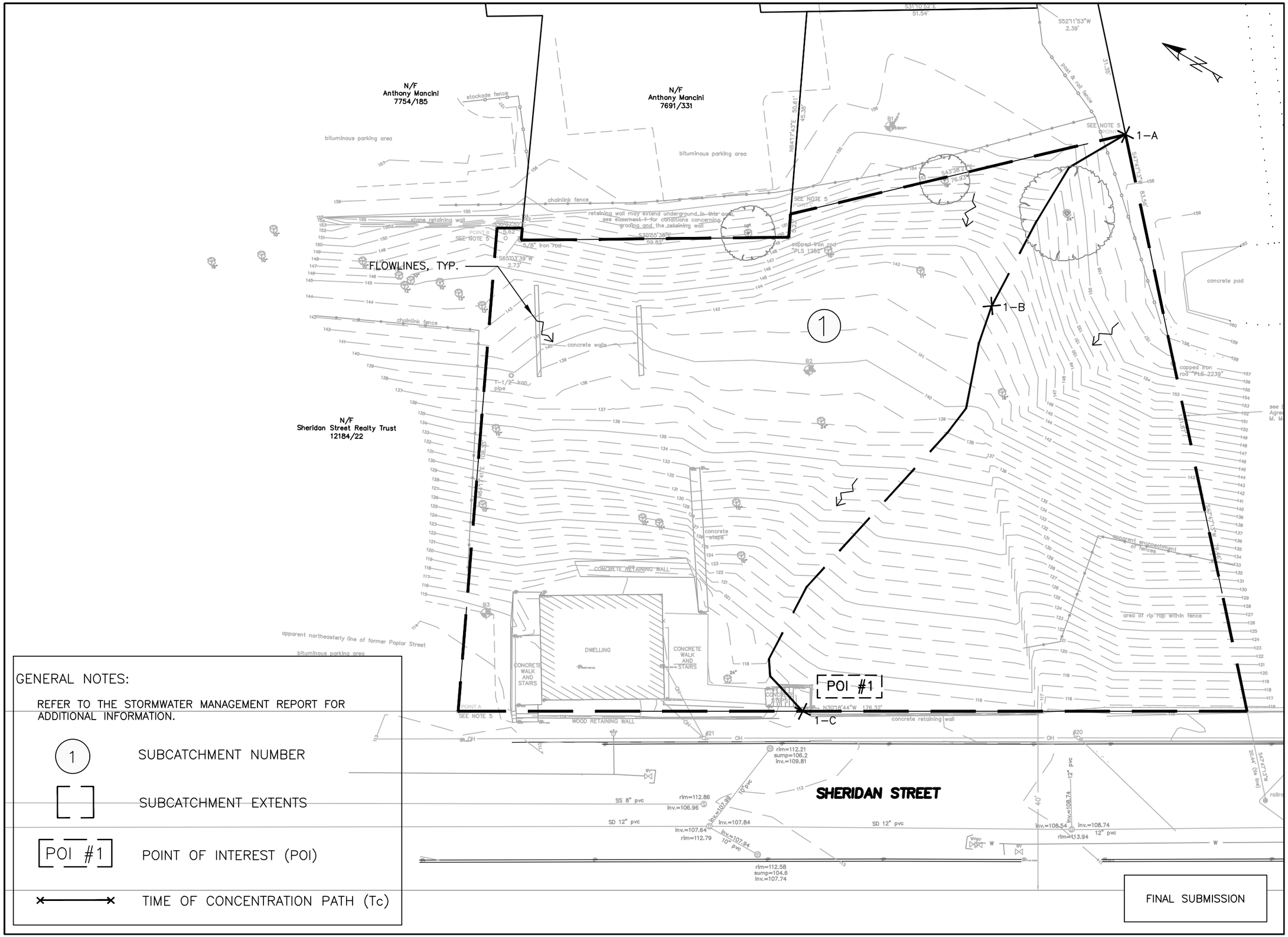
The soil "K" values for the soils, listed above, show a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although soil "K" values for the soils show a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will still be of considerable importance.

Conclusion

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. Thus, the design of the proposed development and stormwater system does not anticipate creating erosion, drainage or runoff problems either in the development or with respect to adjoining properties.

Attachments

Attachment A: Pre-Development Watershed Map
Attachment B: Post-Development Watershed Map
Attachment C: Soils Map
Attachment D: Green Roof Cut Sheets
Attachment E: HydroCAD Calculations



GENERAL NOTES:

REFER TO THE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION.

(1) SUBCATCHMENT NUMBER

[ ] SUBCATCHMENT EXTENTS

POI #1 POINT OF INTEREST (POI)

TIME OF CONCENTRATION PATH (Tc)

FINAL SUBMISSION

ISSUED FOR	BY / DATE
PRELIM. APP.	WHS 3/28/17
FINAL APP.	WHS 8/4/17

REVISION	REV. DATE

DRAWING NAME: PRE-DEVELOPMENT WATERSHED MAP

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: BD SHERIDAN, LLC
VAZZA REAL ESTATE GROUP BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169

ACORN ENGINEERING, INC
158 DANFORTH ST
PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1069_CIVIL
JN:	1069
SCALE:	NTS
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

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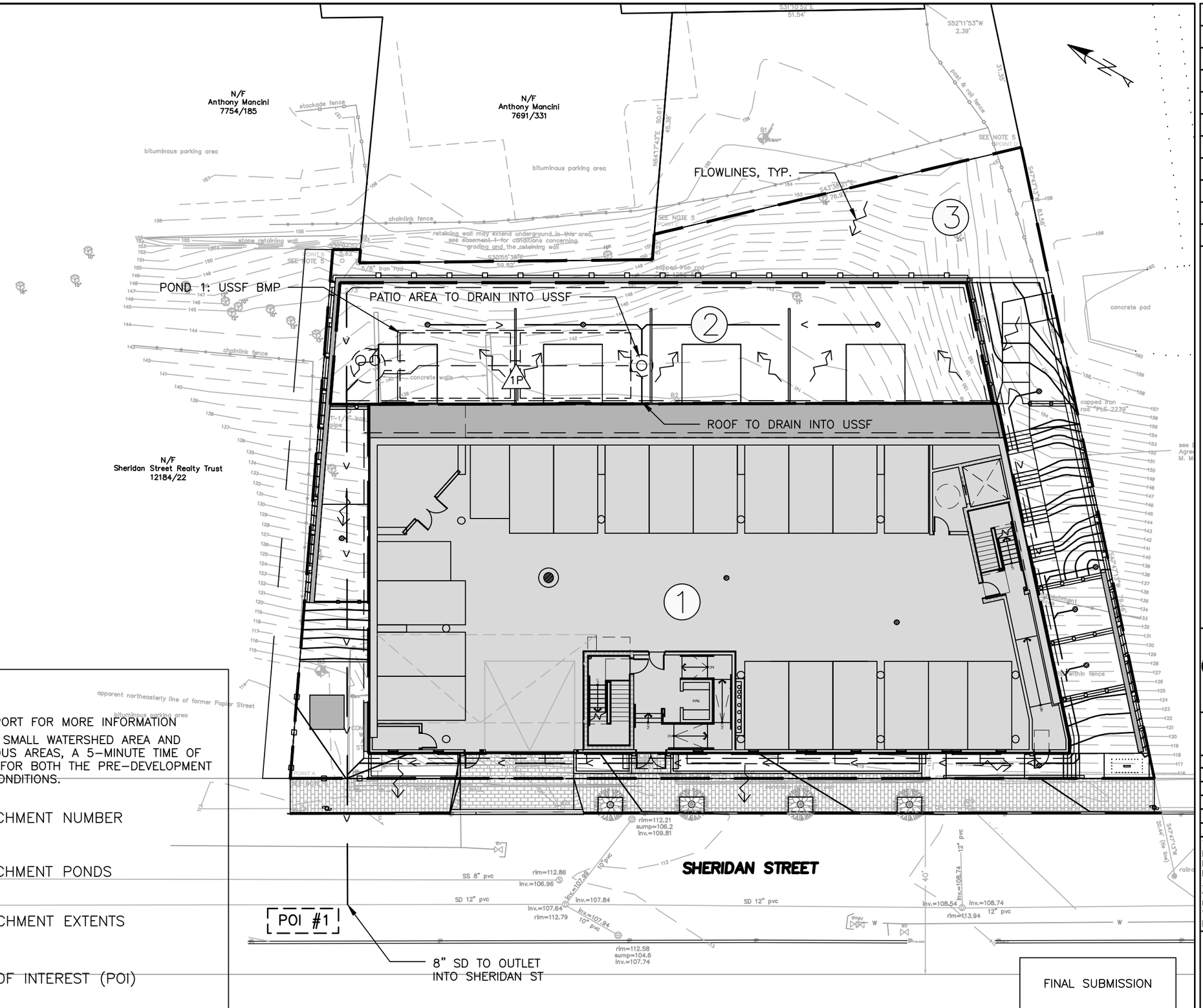
DRAWING NO.

PRE



GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION
2. GIVEN THE URBAN SETTING, SMALL WATERSHED AREA AND PREDOMINANCE OF IMPERVIOUS AREAS, A 5-MINUTE TIME OF CONCENTRATION WAS USED FOR BOTH THE PRE-DEVELOPMENT AND POST-DEVELOPMENT CONDITIONS.

(1) SUBCATCHMENT NUMBER

(1P) SUBCATCHMENT PONDS

[ ] SUBCATCHMENT EXTENTS

[POI #1] POINT OF INTEREST (POI)

FINAL SUBMISSION

ISSUED FOR	BY / DATE
PRELIM. APP.	WHS 3/28/17
FINAL APP.	WHS 8/4/17

REVISION	REV. / DATE

DRAWING NAME: POST-DEVELOPMENT WATERSHED MAP

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: BD SHERIDAN, LLC
VAZZA REAL ESTATE GROUP BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169

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FILE:	1069_CIVIL
JN:	1069
SCALE:	1:20
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

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DRAWING NO.
POST

ISSUED FOR	BY DATE
PRELIM APP	WHS 3/28/17
	REV. DATE:

DRAWING NAME: SOILS MAP

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: BD SHERIDAN, LLC
VAZZA REAL ESTATE GROUP

ACORN ENGINEERING, INC
ACORN ENGINEERING, INC. P.O. BOX 3372
PORTLAND, MAINE 04104 (207) 775-2655

FILE:	CIVIL 1069
JN:	1069
SCALE:	1":30'
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

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DRAWING NO.

SOILS

PRODUCT DATA SHEET

Protection Mat SSM 45

ZinCo USA, Inc.

Water and nutrient storage mat of synthetic fibres, for the application as a protection layer under green roofs, gravel fills, slab pavings, etc.

Features

- resistant to mechanical stress
- high quality protection layer
- water and nutrient storage
- non-rotting
- biologically neutral
- bitumen and polystyrene compatible
- made of recycled fibres
- quick and easy installation

Technical Data

Protection Mat SSM 45 / EDP No. 2045 / 2046
High-quality fibre mat made of polypropylene, with fleece backing.

Colour:	brown (varies)	
Thickness:	ca. 0.2 in	(ca. 5 mm)
Weight:	ca. 0.1 lb/sq ft	(ca. 470 g/m²)
Water storage capacity:	ca. 0.1 gal/sq ft	(ca. 5 l/m²)
Strength class:	3	
Tensile strength lengthwise:	> 570 lb/ft	> 8.5 kN/m)
Extension lengthwise:	> 90 %	
Dimensions:		
EDP No. 2045: rolls, ca. 1076 sqft (100 m²)	6.6 ft x 164.0 ft	(2.0 m x 50.0 m)
EDP No. 2046: ca. 215 sqft (ca. 20 m²), folded	ca. 6.6 ft x ca. 32.8 ft	(ca. 2.0 m x 10.0 m)

Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

Installation Instructions

Install the Protection Mat SSM 45 above a waterproofing or root barrier with an overlap of 4 inch. The Protection Mat has to be taken above the growing medium along edges and at roof penetrations. Cut the Protection Mat in situ at roof penetrations. Consider an allowance for overlap and wastage of ca. 10 – 15 %.

ZinCo USA, Inc. • Paragon Towers • 233 Needham Street • Newton MA 02464-1502
T 866 766 3155 • F 866 766 3955 • www.zinco-usa.com • info@zinco-usa.com

Subject to technical alterations and printing errors; First edition: 01/07, revised: 01/09
Authorized by ZinCo GmbH

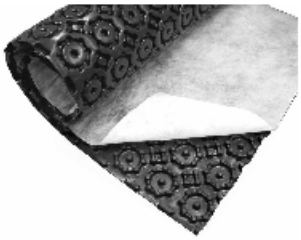
1.2

Fixodrain XD-20 drainage layer by Zinco. The composite shall satisfy the following specifications:
Material: HD-PE (REC) (Polyethylene (REC))
Color: black / grey
Height: ca. 0.80 in (ca. 20 mm)
Weight: ca. 0.20 lb/sq ft (ca. 1.00 kg/m²)
Water storage capacity: ca. 0.07 gal/sq ft (ca. 3 l/m²)
Max. compressive strength: 7.25 psi (50 kN/m²)
Waterflow rate in element level: with 1 % slope: ca. 1.75 gpm/ft (ca. 0.36 l/(s•m))
with 2 % slope: ca. 2.50 gpm/ft (ca. 0.52 l/(s•m))
with 3 % slope ca. 3.15 gpm/ft (ca. 0.65 l/(s•m²))
Dimensions: rolls ca. 3.30 ft x 65.60 ft (1.00 m x 20.00 m)

PRODUCT DATA SHEET

Fixodrain ®XD 20

ZinCo USA, Inc.



Economic, multi-functional Drainage Mat for use as alternative to single layered extensive green roof build-ups.

Features

- **no need for additional protection layer due to connectible interlocking studs**
- **tested and proven drainage capacity**
- **water retention within the element**
- **quick and easy installation**
- **100 % Polypropylene**

Technical Data

Fixodrain® XD 20 / EDP No. 3020
Drainage Mat with attached Filter Sheet, connecting lengthwise on interlocking studs.

Material:		Polypropylene	
Color:		grey / white	
Height:		ca. 0.8 in	(ca. 20 mm)
Weight:		ca. 0.2 lb/sq ft	(ca. 1.0 kg/m²)
Water storage capacity:		ca. 0.07 gal/sq ft	(ca. 3 l/m²)
Max. compressive strength:		> 7.25 psi	(> 50 kN/m²)
Waterflow rate in element level:	with 1 % slope:	ca. 1.75 gpm/ft	(ca. 0.36 l/(s·m))
	with 2 % slope:	ca. 2.50 gpm/ft	(ca. 0.52 l/(s·m))
	with 3 % slope	ca. 3.15 gpm/ft	(ca. 0.65 l/(s·m²))
Dimensions:	rolls	ca. 3.3 ft x 65.6 ft	(1.0 m x 20.0 m)

Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

Installation Instructions

Install the Drainage Mat Fixodrain®XD 20 on the root resistant and waterproof roof construction. The Fixodrain®XD 20 mats are to be connected by interlocking studs lengthwise. Cut the Fixodrain®XD 20 mat in situ at roof penetrations. Ensure that pre-attached filter sheet overlaps completely at joints. Consider ca. 3 % allowance for wastage.
Note: At roof edge and upstands the waterproofing has to be protected by a protection layer which has to be taken up above the finished surface in accordance with guidelines.

ZinCo USA, Inc. • Paragon Towers • 233 Needham Street • Newton MA 02464-1502
T 866 766 3155 • F 866 766 3955 • www.zinco-usa.com • info@zinco-usa.com

Subject to technical alterations and printing errors; First edition: 02/10
Authorized by ZinCo GmbH

2.0

Aluminum GeoEdge: Long Base aluminum restraint for media and vegetated assembly
Height: 3” x 3.25”
Weight: 4lbs (per 8’ length)
Thickness: 0.210 inch thick exposed top lip
Connection Method: Spliced together with horizontal 0.060 inch thick x 1 inch wide x 2-3/4” aluminum sliding connector
Anchors: Anchor as specified
Finish: Natural Mill Aluminum

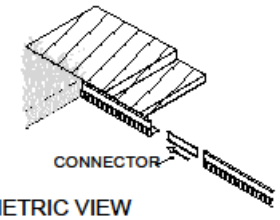
geoedge™

PERMALOC CORPORATION, 13505 BARRY STREET HOLLAND, MI 49424
(800) 356-9660 PHONE: (616) 399-9600 FAX: (616) 399-9770 WWW.PERMALOC.COM

ARCHITECT NOTE: CHECK OFF APPLICABLE SIZE & FINISH DESIRED

SIZE: ALL 8' (2.44M) LENGTHS w/ 0.250" (6.35MM) THICK EXPOSED TOP LIP

☐ 3"	x 3.25"	(76MM x 83MM)	☐MF	☐BL
☐ 3.5"	x 4.5"	(89MM x 114MM)	☐MF	☐BL
☐ 4"	x 3.25"	(102MM x 83MM)	☐MF	☐BL
☐ 4.25"	x 3.25"	(108MM x 83MM)	☐MF	☐BL
☐ 4.5"	x 3.25"	(114MM x 83MM)	☐MF	☐BL
☐ 4.5"	x 4.5"	(114MM x 114MM)	☐MF	☐BL
☐ 5.5"	x 6.5"	(140MM x 165MM)	☐MF	☐BL
☐ 6.5"	x 5.5"	(165MM x 140MM)	☐MF	☐BL
☐ 7.5"	x 8.5"	(191MM x 216MM)	☐MF	☐BL
☐ 8.5"	x 7.5"	(216MM x 191MM)	☐MF	☐BL

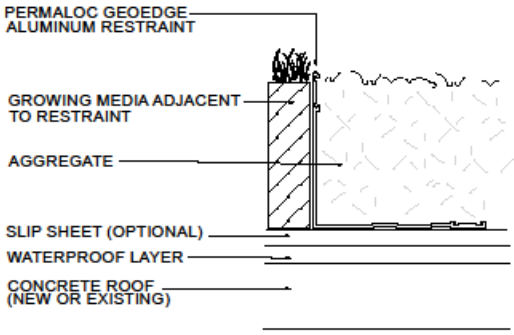


ISOMETRIC VIEW
NTS

FINISH LEGEND:
(MF) MILL FINISH-NATURAL ALUMINUM
(BL) BLACK DURAFLEX-ELECTROSTATICALLY APPLIED BAKED ON PAINT, MEETS AAMA 2603

NOTES:
1. INSTALLATION PER MANUFACTURER'S RECOMMENDED "INSTALLATION GUIDELINES" IN ACCORDANCE WITH DESIGNER'S INSTRUCTIONS.*
2. 8'-0" (2.44M) SECTIONS CONNECTED WITH 2 - 2.75" (70MM) SLIDING CONNECTORS.
3. CORNERS: REMOVE BASE TABS AND FORM A CONTINUOUS CORNER.
4. PERMALOC GEOEDGE AS MANUFACTURED BY PERMALOC CORPORATION, HOLLAND MI. (800) 356-9660 (616) 399-9600
5. CONTRACTOR'S NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT: WWW.PERMALOC.COM

*DESIGNER MAINTAINS ULTIMATE RESPONSIBILITY FOR VALIDITY AND SAFETY OF THE INSTALLATION.



ALTERNATE INSTALLATION: GEOEDGE BASE MAY BE INSTALLED UNDER THE GROWING MEDIA

EDGING FOR GREENROOF WITH AGGREGATE
SCALE: 3"=1'-0"

GE2.dwg

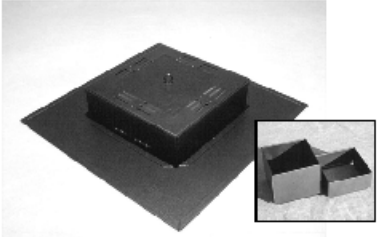
3.0

Stancils light-weight growth media.
Parameters Guiding Values * Guiding Values (metric) *
Proportion of silting components: □ 15 mass %
Volume weight apparent density
max. water capacity: 68.74 lb/cu ft
Total pore volume: approx. 60 Vol. %
Max. water capacity: approx. 50 Vol. %
Water permeability, mod Kf: 0.024–2.40 in/min 0.001–0.10 cm/s
pH-Value: 6.50–8.00

PRODUCT DATA SHEET

Inspection Chamber KS 8

ZinCo USA, Inc.



Inspection chambers for protection and inspection of roof outlets for extensive green roofs and gravel roofs.

Features

- fits all outlets, d < 10 in
- frost proof due to insulated cover
- walkable
- corrosion-resistant
- overflow function via the cover, in case of flooding
- elevation with additional extension pieces KSA

Technical Data

Inspection Chamber KS 8 / EDP No. 4286
Made of galvanized, plastic-coated steel with lateral slots for water passage. Detachable and walkable cover, with thermally insulating expanded polystyrene inlay and drainage slots according to German FLL-Guidelines.

Height:	ca. 3.1 in	(ca. 80 mm)
Aperture:	ca. 9.8 x 9.8 in	(ca. 250 x 250 mm)
Flange:	ca. 19.7 x 19.7 in	(ca. 500 x 500 mm)
Slot width:	ca. 0.1 in	(ca. 3 mm)
Weight:	ca. 7.05 lb	(ca. 3.20 kg)
Colour:	"oldsilver-antique"	
Accesories:		
Extension Piece KSA 10 / EDP No. 4249	ca. 3.9 in	ca. 100 mm
Extension Piece KSA 20 / EDP No. 4250	ca. 7.9 in	ca. 200 mm

Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

Installation Instructions

Install the Inspection Chamber KS 8 on the drainage element above the drain. Install the Filter Sheet on top of the flange of the Inspection Chamber.

ZinCo USA, Inc. • Paragon Towers • 233 Needham Street • Newton MA 02464-1502
T 866 766 3155 • F 866 766 3955 • www.zinco-usa.com • info@zinco-usa.com

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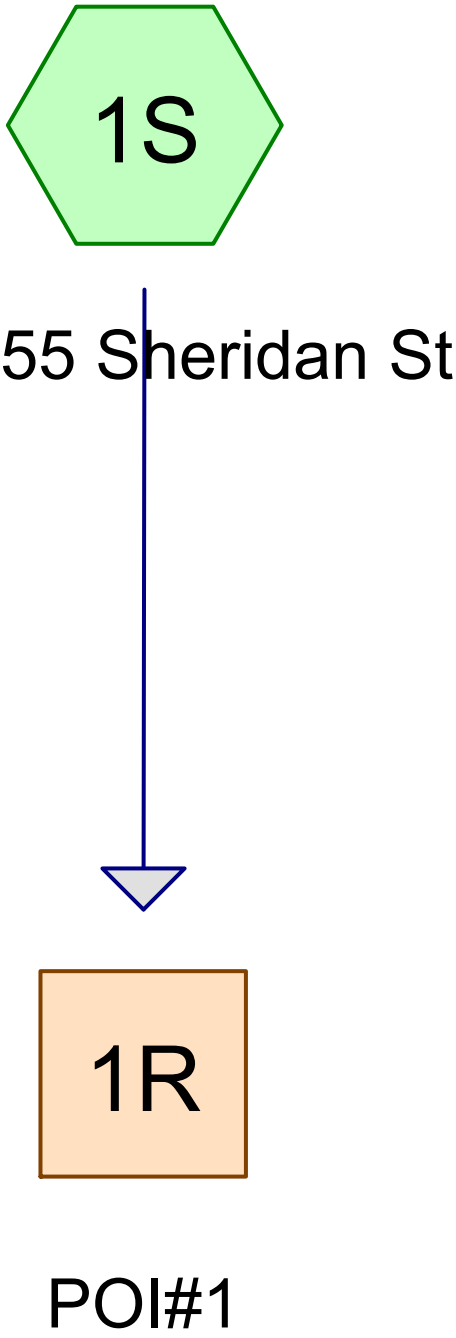
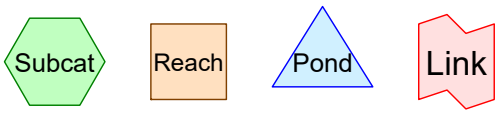
Authorized by ZinCo GmbH





Routing Diagram for 1069_Pre_7-18-17
Prepared by Acorn Engineering, Inc., Printed 7/18/2017
HydroCAD® 10.00-19 s/n 00620 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.015	98	Building (1S)
0.015	98	Concrete Stairs, Walkways, and walls (1S)
0.020	96	Riprap wall (1S)
0.367	65	Woods/grass comb., Fair, HSG B (1S)
0.416	**69**	**TOTAL AREA**

Time span=1.00-36.00 hrs, dt=0.02 hrs, 1751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre 155 Sheridan St Runoff Area=18,140 sf 7.09% Impervious Runoff Depth=0.72"
Flow Length=160' Tc=5.8 min CN=69 Runoff=0.31 cfs 0.025 af

Reach 1R: POI#1 Inflow=0.31 cfs 0.025 af
Outflow=0.31 cfs 0.025 af

Total Runoff Area = 0.416 ac Runoff Volume = 0.025 af Average Runoff Depth = 0.72"
92.91% Pervious = 0.387 ac 7.09% Impervious = 0.030 ac

Time span=1.00-36.00 hrs, dt=0.02 hrs, 1751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre 155 Sheridan St Runoff Area=18,140 sf 7.09% Impervious Runoff Depth=1.67"
Flow Length=160' Tc=5.8 min CN=69 Runoff=0.79 cfs 0.058 af

Reach 1R: POI#1 Inflow=0.79 cfs 0.058 af
Outflow=0.79 cfs 0.058 af

Total Runoff Area = 0.416 ac Runoff Volume = 0.058 af Average Runoff Depth = 1.67"
92.91% Pervious = 0.387 ac 7.09% Impervious = 0.030 ac

Time span=1.00-36.00 hrs, dt=0.02 hrs, 1751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre 155 Sheridan St Runoff Area=18,140 sf 7.09% Impervious Runoff Depth=2.56"
Flow Length=160' Tc=5.8 min CN=69 Runoff=1.24 cfs 0.089 af

Reach 1R: POI#1 Inflow=1.24 cfs 0.089 af
Outflow=1.24 cfs 0.089 af

Total Runoff Area = 0.416 ac Runoff Volume = 0.089 af Average Runoff Depth = 2.56"
92.91% Pervious = 0.387 ac 7.09% Impervious = 0.030 ac

Summary for Subcatchment 1S: Pre 155 Sheridan St

Manual Tc of 5 minutes applied once actual calculated dropped below 5 minutes.

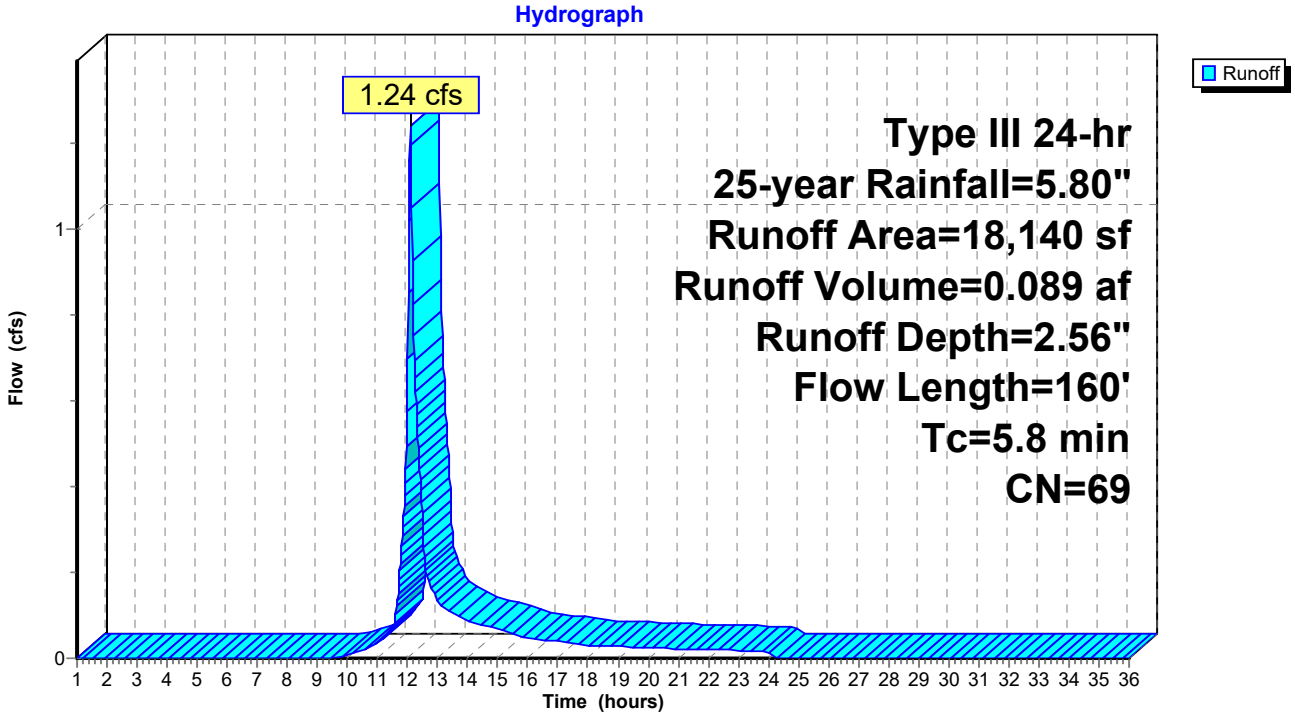
Runoff = 1.24 cfs @ 12.09 hrs, Volume= 0.089 af, Depth= 2.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	640	98	Building
*	647	98	Concrete Stairs, Walkways, and walls
	15,992	65	Woods/grass comb., Fair, HSG B
*	861	96	Riprap wall
	18,140	69	Weighted Average
	16,853		92.91% Pervious Area
	1,287		7.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.2700	0.19		**Sheet Flow, A to B** Woods: Light underbrush n= 0.400 P2= 3.10"
1.4	110	0.2800	1.32		**Shallow Concentrated Flow, B to C** Forest w/Heavy Litter Kv= 2.5 fps
5.8	160	Total			

Subcatchment 1S: Pre 155 Sheridan St

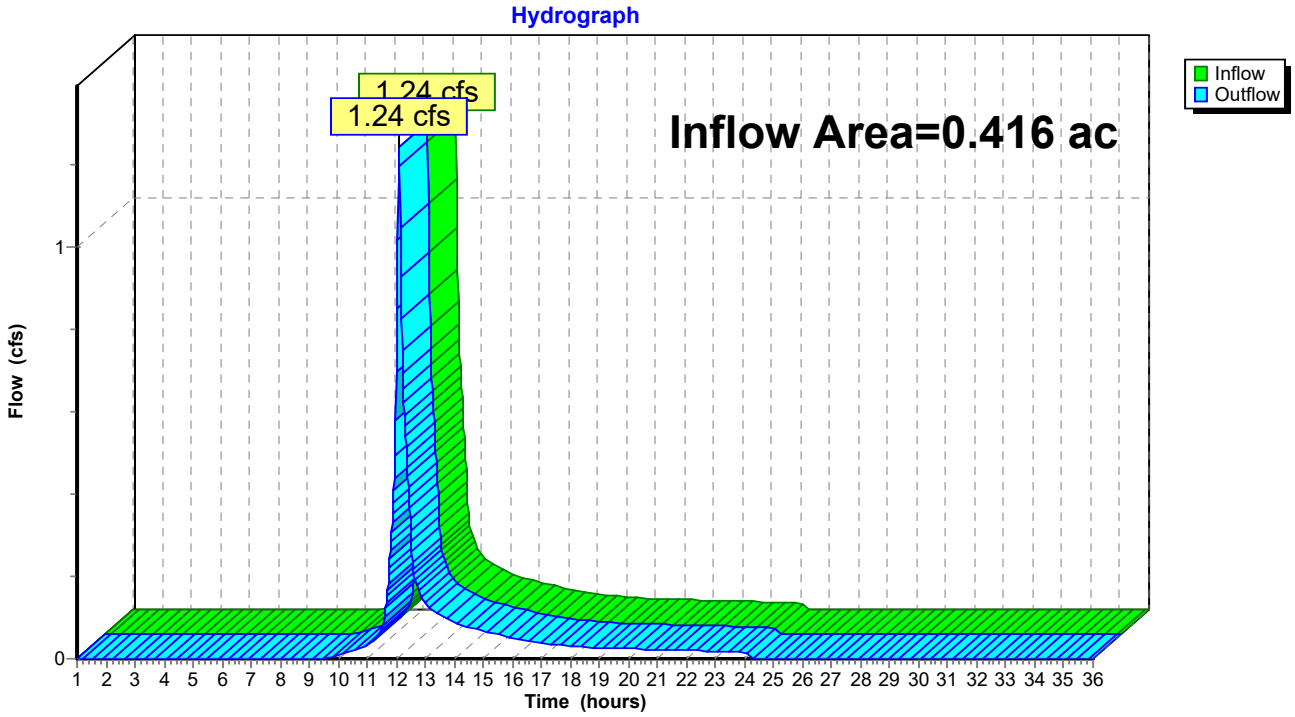


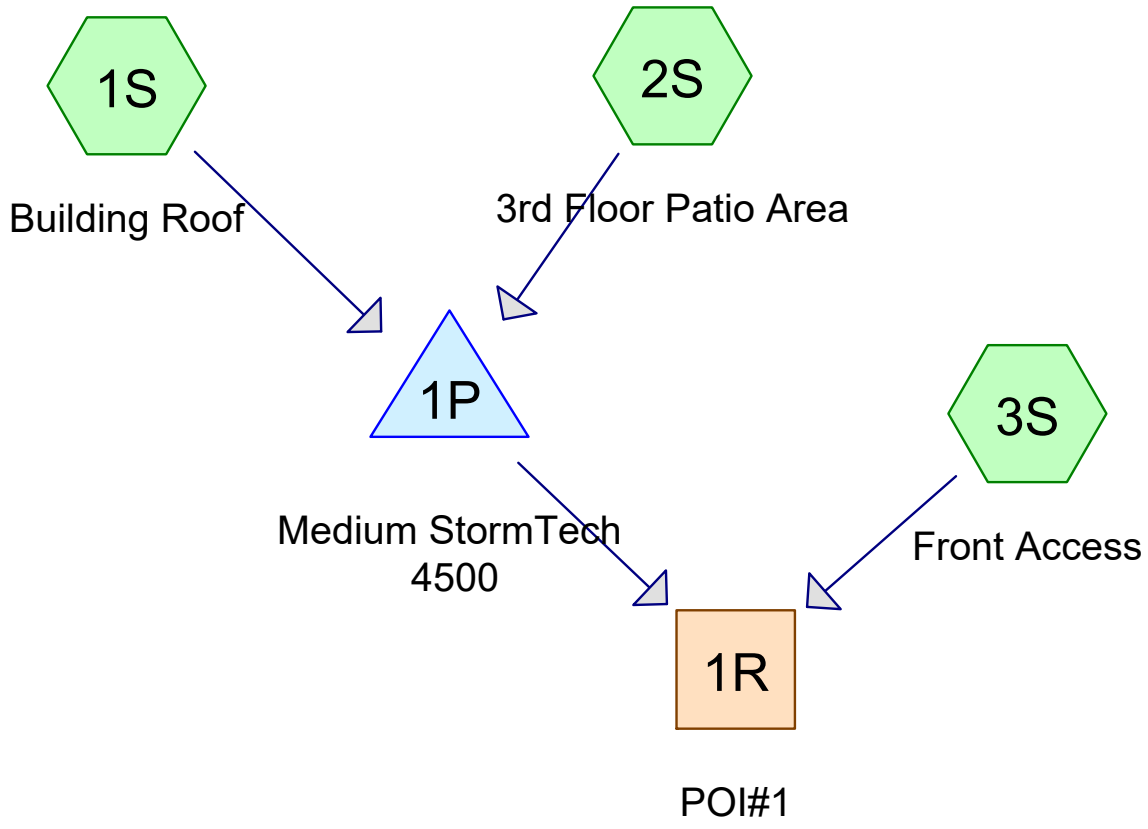
Summary for Reach 1R: POI#1

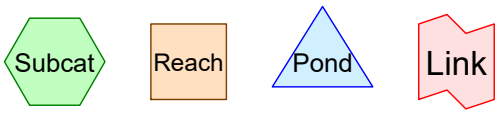
Inflow Area = 0.416 ac, 7.09% Impervious, Inflow Depth = 2.56" for 25-year event
Inflow = 1.24 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.24 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-36.00 hrs, dt= 0.02 hrs

Reach 1R: POI#1







Routing Diagram for 1069_Post_7-19-17
Prepared by Acorn Engineering, Inc., Printed 7/19/2017
HydroCAD® 10.00-19 s/n 00620 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.134	61	>75% Grass cover, Good, HSG B (2S, 3S)
0.080	84	Green Roof, HSG B (1S)
0.017	98	Patio/Wall (2S)
0.042	98	Patio/Walls, Walkways (3S)
0.143	98	Roofs, HSG B (1S)
0.416	**83**	**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.001 hrs, 48001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Roof Runoff Area=9,708 sf 64.28% Impervious Runoff Depth=2.35"
Tc=5.0 min CN=93 Runoff=0.62 cfs 0.044 af

Subcatchment 2S: 3rd Floor Patio Area Runoff Area=3,317 sf 22.85% Impervious Runoff Depth=0.72"
Tc=5.0 min CN=69 Runoff=0.06 cfs 0.005 af

Subcatchment 3S: Front Access Runoff Area=5,115 sf 35.60% Impervious Runoff Depth=0.97"
Tc=5.0 min CN=74 Runoff=0.13 cfs 0.010 af

Reach 1R: POI#1 Inflow=0.20 cfs 0.055 af
Outflow=0.20 cfs 0.055 af

Pond 1P: Medium StormTech 4500 Peak Elev=124.88' Storage=0.025 af Inflow=0.68 cfs 0.048 af
Outflow=0.16 cfs 0.046 af

Total Runoff Area = 0.416 ac Runoff Volume = 0.058 af Average Runoff Depth = 1.66"
51.38% Pervious = 0.214 ac 48.62% Impervious = 0.202 ac

Time span=0.00-48.00 hrs, dt=0.001 hrs, 48001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Roof Runoff Area=9,708 sf 64.28% Impervious Runoff Depth=3.81"
Tc=5.0 min CN=93 Runoff=0.98 cfs 0.071 af

Subcatchment 2S: 3rd Floor Patio Area Runoff Area=3,317 sf 22.85% Impervious Runoff Depth=1.67"
Tc=5.0 min CN=69 Runoff=0.15 cfs 0.011 af

Subcatchment 3S: Front Access Runoff Area=5,115 sf 35.60% Impervious Runoff Depth=2.05"
Tc=5.0 min CN=74 Runoff=0.29 cfs 0.020 af

Reach 1R: POI#1 Inflow=0.65 cfs 0.098 af
Outflow=0.65 cfs 0.098 af

Pond 1P: Medium StormTech 4500 Peak Elev=125.88' Storage=0.033 af Inflow=1.12 cfs 0.081 af
Outflow=0.46 cfs 0.078 af

Total Runoff Area = 0.416 ac Runoff Volume = 0.101 af Average Runoff Depth = 2.92"
51.38% Pervious = 0.214 ac 48.62% Impervious = 0.202 ac

Time span=0.00-48.00 hrs, dt=0.001 hrs, 48001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Roof Runoff Area=9,708 sf 64.28% Impervious Runoff Depth=4.99"
Tc=5.0 min CN=93 Runoff=1.26 cfs 0.093 af

Subcatchment 2S: 3rd Floor Patio Area Runoff Area=3,317 sf 22.85% Impervious Runoff Depth=2.56"
Tc=5.0 min CN=69 Runoff=0.23 cfs 0.016 af

Subcatchment 3S: Front Access Runoff Area=5,115 sf 35.60% Impervious Runoff Depth=3.02"
Tc=5.0 min CN=74 Runoff=0.43 cfs 0.030 af

Reach 1R: POI#1 Inflow=0.96 cfs 0.135 af
Outflow=0.96 cfs 0.135 af

Pond 1P: Medium StormTech 4500 Peak Elev=126.86' Storage=0.040 af Inflow=1.49 cfs 0.109 af
Outflow=0.63 cfs 0.106 af

Total Runoff Area = 0.416 ac Runoff Volume = 0.138 af Average Runoff Depth = 3.99"
51.38% Pervious = 0.214 ac 48.62% Impervious = 0.202 ac

Summary for Subcatchment 1S: Building Roof

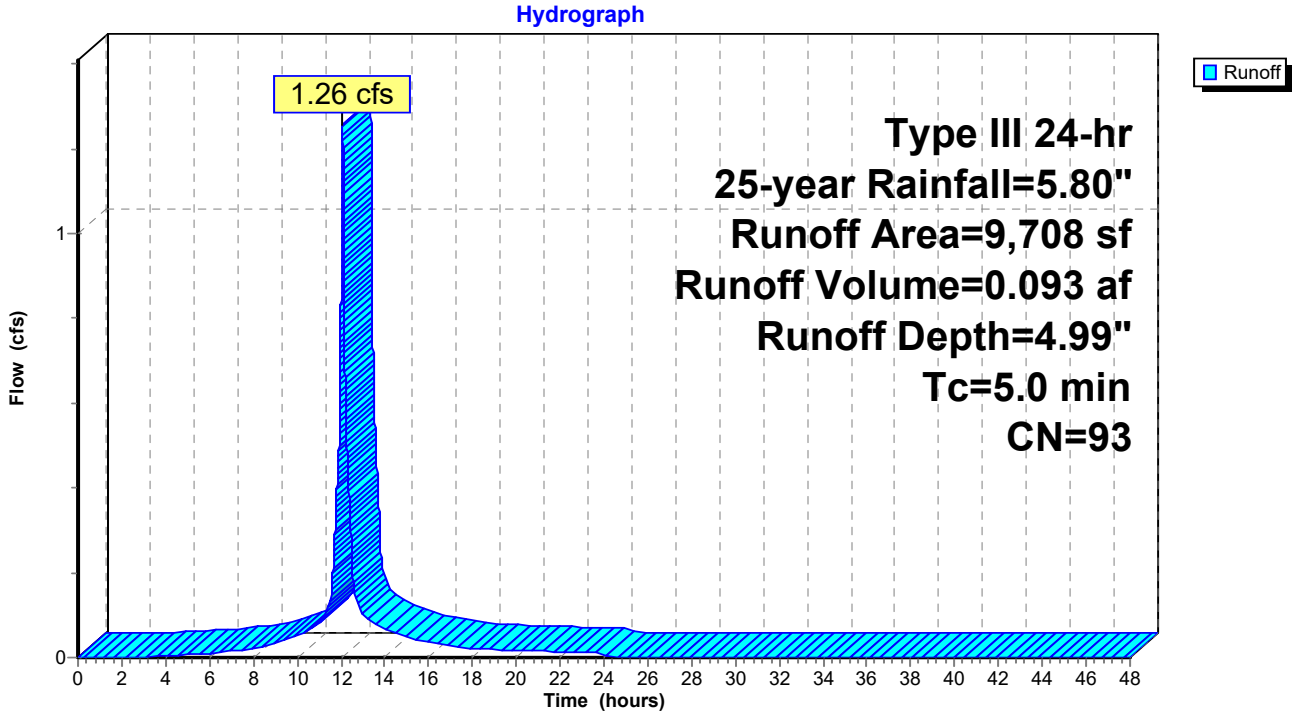
Runoff = 1.26 cfs @ 12.07 hrs, Volume= 0.093 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	6,240	98	Roofs, HSG B
*	3,468	84	Green Roof, HSG B
	9,708	93	Weighted Average
	3,468		35.72% Pervious Area
	6,240		64.28% Impervious Area

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

Subcatchment 1S: Building Roof



Summary for Subcatchment 2S: 3rd Floor Patio Area

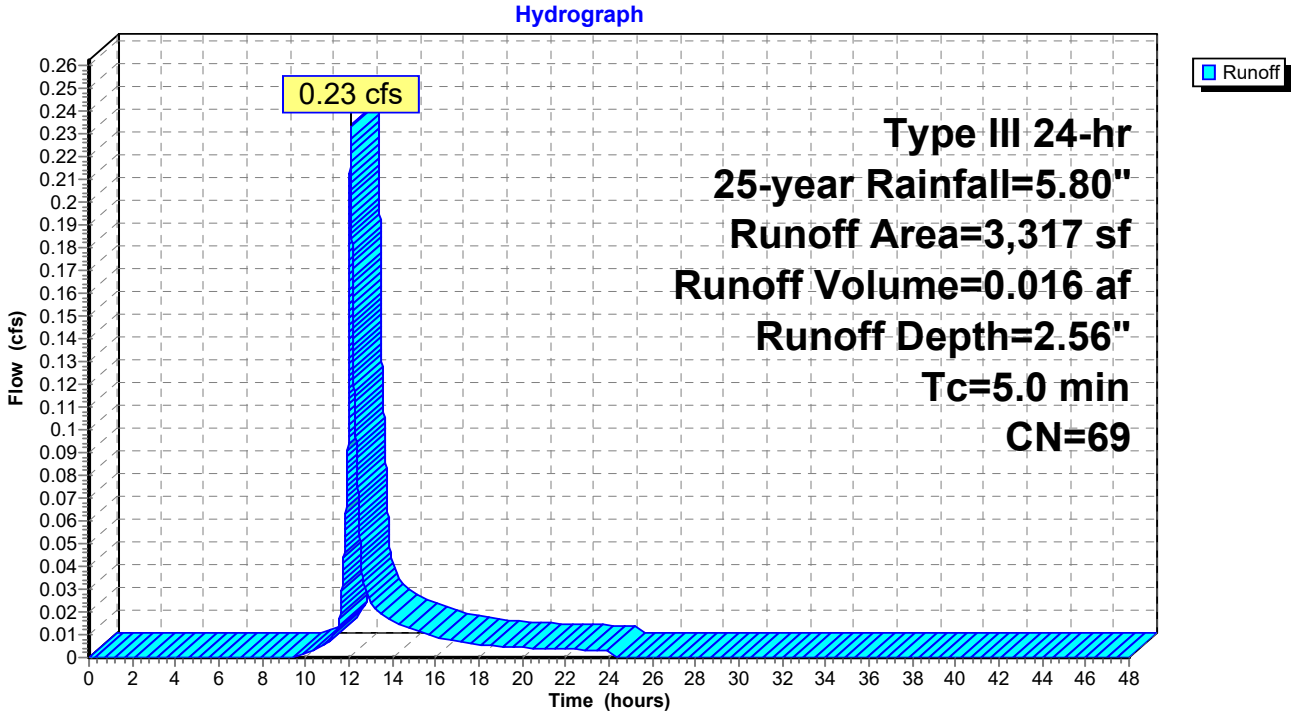
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 2.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	758	98	Patio/Wall
	2,559	61	>75% Grass cover, Good, HSG B
	3,317	69	Weighted Average
	2,559		77.15% Pervious Area
	758		22.85% Impervious Area

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

Subcatchment 2S: 3rd Floor Patio Area



Summary for Subcatchment 3S: Front Access

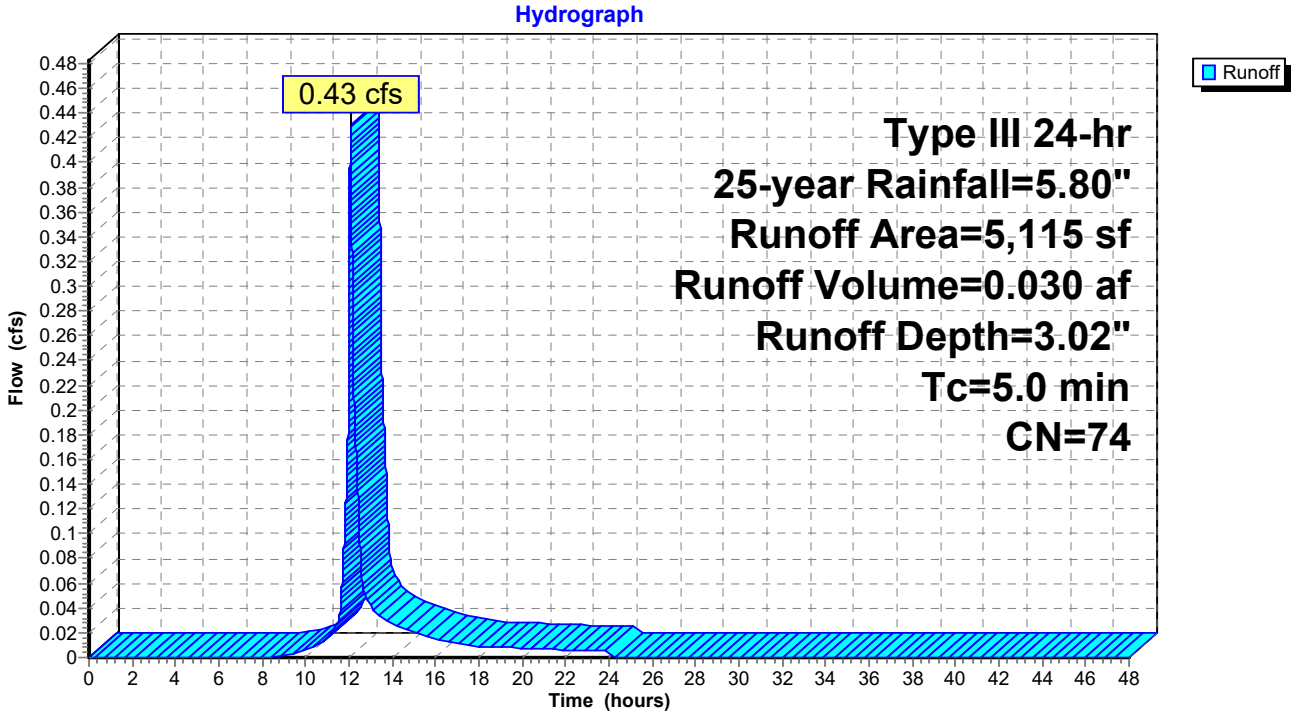
Runoff = 0.43 cfs @ 12.07 hrs, Volume= 0.030 af, Depth= 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	1,821	98	Patio/Walls, Walkways
	3,294	61	>75% Grass cover, Good, HSG B
	5,115	74	Weighted Average
	3,294		64.40% Pervious Area
	1,821		35.60% Impervious Area

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

Subcatchment 3S: Front Access

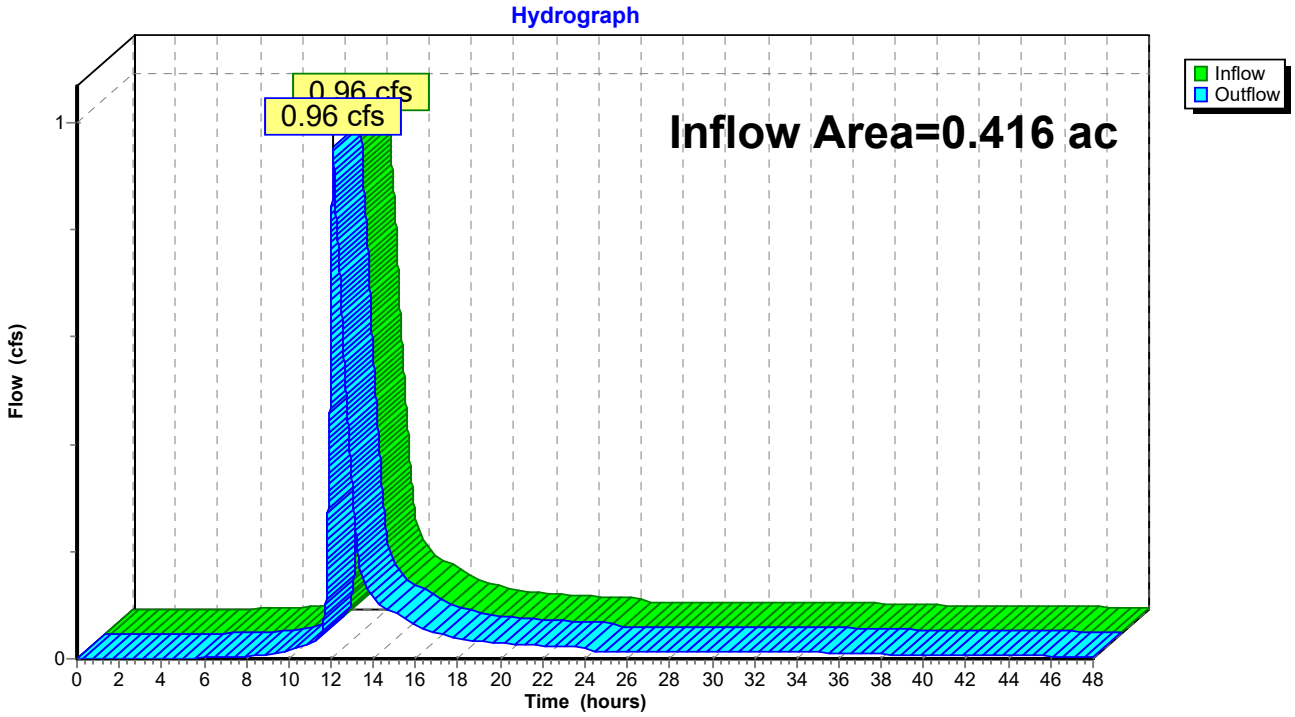


Summary for Reach 1R: POI#1

Inflow Area = 0.416 ac, 48.62% Impervious, Inflow Depth > 3.90" for 25-year event
Inflow = 0.96 cfs @ 12.10 hrs, Volume= 0.135 af
Outflow = 0.96 cfs @ 12.10 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs

Reach 1R: POI#1



Summary for Pond 1P: Medium StormTech 4500

Inflow Area = 0.299 ac, 53.73% Impervious, Inflow Depth = 4.37" for 25-year event
Inflow = 1.49 cfs @ 12.07 hrs, Volume= 0.109 af
Outflow = 0.63 cfs @ 12.26 hrs, Volume= 0.106 af, Atten= 58%, Lag= 11.1 min
Primary = 0.63 cfs @ 12.26 hrs, Volume= 0.106 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs
Peak Elev= 126.86' @ 12.26 hrs Surf.Area= 0.041 ac Storage= 0.040 af

Plug-Flow detention time= 291.6 min calculated for 0.106 af (97% of inflow)
Center-of-Mass det. time= 274.5 min (1,057.8 - 783.2)

Volume	Invert	Avail.Storage	Storage Description
#1	122.72'	0.030 af	**13.33'W x 45.08'L x 6.75'H Stone** 0.093 af Overall - 0.018 af Embedded = 0.075 af x 40.0% Voids
#2	123.47'	0.018 af	**ADS_StormTech MC-4500 +Cap @ 4.03' L** x 6 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.6 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 2 Rows of 3 Chambers Cap Storage= +35.7 cf x 2 x 2 rows = 142.8 cf
#3	121.22'	0.001 af	**13.33'W x 45.08'L x 1.50'H Sand** 0.021 af Overall x 5.0% Voids
#4	119.88'	0.007 af	**13.33'W x 45.08'L x 1.33'H Crushed Stone** 0.018 af Overall - 0.000 af Embedded = 0.018 af x 40.0% Voids
#5	120.21'	0.000 af	**4.0" Round Underdrain Storage** Inside #4 L= 42.0'
		0.056 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	119.90'	**8.0" Round Culvert** L= 107.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 119.90' / 107.00' S= 0.1206 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	120.00'	**0.5" Vert. Vert Water Quality** C= 0.600
#3	Device 1	124.60'	**4.0" Vert. Vert Quantity** C= 0.600
#4	Primary	128.00'	**6.0' long x 0.7' 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 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32

Primary OutFlow Max=0.63 cfs @ 12.26 hrs HW=126.86' (Free Discharge)
- **1=Culvert** (Passes 0.63 cfs of 3.42 cfs potential flow)
  - **2=Vert Water Quality** (Orifice Controls 0.02 cfs @ 12.59 fps)
  - **3=Vert Quantity** (Orifice Controls 0.61 cfs @ 6.97 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

ATTACHMENT I

DRAFT OF STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

IN CONSIDERATION OF the site plan approval granted by the Planning Board of the City of Portland to the proposed 155 Sheridan Street Redevelopment Project shown on the Site Plan recorded in the Cumberland County Registry of Deeds in Plan Book ___, Page ___ (the "Plan") and associated Grading & Drainage Plan (Sheet C-30), dated _____ prepared by Acorn Engineering, Inc. of P.O. Box 3372, Portland, ME 04104 dated and pursuant to a condition thereof, BD Sheridan, LLC, a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of 1266 Furnace Brook Parkway Suite 300, Quincy, Massachusetts 02169, 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 underdrained subsurface sand filter, green roof system, drainage manholes, storm drain pipes, and underdrain pipes (hereinafter collectively referred to as the "stormwater system") as shown on the Grading & Drainage Plan, C-30 attached hereto as **Exhibit B** and in strict compliance with the approved Stormwater Inspection & Maintenance Plan and Stormwater Maintenance and Inspection Log, dated 7/18/2017, copies attached as **Exhibit A and C** respectively and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance and Inspection Log in the forms attached as **Exhibit C**. 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 the property and abutters thereto; further, that the said City of Portland or 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, including but not limited to the underdrained subsurface

sand filter, green roof system, drainage manholes, storm drain pipes, underdrain pipes, and other drainage structures thereon 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 not confer upon the City of Portland or any other person the right to utilize said stormwater system for public use or for the development of any other property, and the Owner shall bear no financial responsibility by virtue of this Agreement for enlarging the capacity of said system for any reason whatsoever.

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

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

The Owner agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Works 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 or

residential units 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 _____, 2017.

BD Sheridan, LLC
A Maine limited liability company

_____
Bernie Saulnier, Manager

STATE OF MAINE
CUMBERLAND, ss. Date: _____

Personally appeared the above-named Bernie Saulnier, Manager of BD Sheridan, LLC, 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: Stormwater Inspection & Maintenance Plan

Exhibit B: Grading & Drainage Plan

Exhibit C: Stormwater Maintenance and Inspection Log

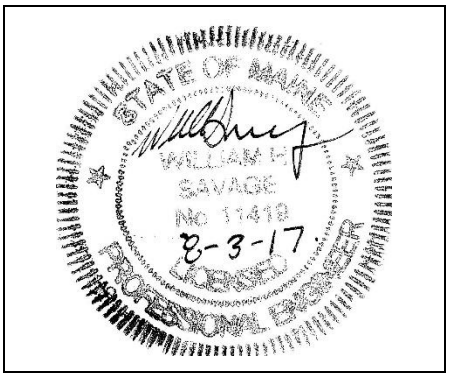
POST CONSTRUCTION - STORMWATER INSPECTION & MAINTENANCE PLAN

Prepared For:

BD Sheridan, LLC
1266 Furnace Brook Parkway Suite 300
Quincy, Massachusetts 02169

Prepared By:

Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102



March 2017
Revised July 2017

RESPONSIBLE PARTY

The owner, BD Sheridan, LLC, and/or their successor shall be responsible for contracting with a qualified stormwater professional to implement the Inspection and Maintenance Plan. The qualified stormwater professional shall maintain a stormwater log (report) summarizing inspections, maintenance, and corrective action taken. The Qualified Stormwater Professional shall annually submit the Stormwater Log to the Department of Public Works prior to June 30th.

The following is an example of a qualified stormwater professional that the association may contract through.

Organization: Will Savage, PE
Acorn Engineering, Inc
Portland, Maine

Phone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert. #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert. #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The inspection and maintenance criteria is based upon the Maine DEP - Stormwater Management for Maine, Volume III: BMPs Technical Design Manual. Refer to the Grading and Drainage Plan for the location of the BMPs

PURPOSE

This Inspection and Maintenance Plan has been individually tailored to this parcel's stormwater infrastructure, site characteristics, and their respective opportunities and limitations related to reducing the pollutant load on the receiving watershed. The maintenance of a parcel's impervious surfaces and stormwater infrastructure is critical to extending the long-term performance and effectiveness of Best Management Practices (BMPs). The Inspection and Maintenance Plan represents the parcel's minimum activities to meet the permit requirements. The parcel shall still be subject to any applicable Civil Site Plans, Permit Applications, Erosion and Sedimentation Control Plans Reports, Stormwater Management Plans, Inspection and Maintenance Manuals, and all Municipal, State, and Federal rules.

OPERATION AND MAINTENANCE ACTIVITY

Underdrained Subsurface Sand Filter (USSF):

The maintenance of the underdrained subsurface sand filter shall be in accordance with the following activities identified below and the most recent version of the Maine DEP Volume III BMPs Technical Design Manual Chapter 7.3 Underdrained Subsurface Sand Filter. Refer the manufacturer's maintenance manual in Exhibit C for more information on maintenance activities.

- The system should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 24 hours to 36 hours.
- Inspect Outlet Control Structures (OCS) to ensure they are in good working order and that the orifice and trash racks are unobstructed from trash and debris.
- Inspect and maintain the StormTech Isolator Row in accordance with the attached proprietary Operation and Maintenance Plan.

Modular Green Roof System:

The maintenance of the modular green roof shall be in accordance with the following activities identified below and the most recent version of the Maine DEP Volume III BMPs Technical Design Manual Chapter 7.6 Vegetated Roofs.

- At minimum for the first two years of installation, the green roof is to be inspected and maintained as necessary at least four times per year. Following this period, the roof can be inspected biannually.
- The roof system is to be inspected after any major rainstorm event in the first three months to ensure proper drainage and waterproofing. Thereafter, the system should be inspected biannually to ensure that it is draining properly.
- Inspect and remove any unwanted or weed growth and replace any desirable plantings in substandard condition. Excess and waste materials are to be properly disposed of following maintenance activities.

Sweeping:

Annual sweeping of the driveway and parking areas following the snow melt for accumulated winter sand, if necessary. Appropriately dispose of all collected material.

Storm Drains:

The storm drain shall be annually inspected for the presence of accumulated sediment or debris. Any sediment shall be removed as required.

- The equipment shall meet the following minimum specifications; power jet and water source for washing down the storm drain, vacuum attachment for catch basin cleaning, and a liquid handling method to dewater the material.
- Inspect and legally dispose of accumulated sediment and debris within the storm drains between basins. Liquids must be decanted on-site and returned to the catch basin.

Drainage Manholes:

Drainage manholes shall be inspected to confirm the structure is operating properly.

- Inspect the presence of accumulated sediment or debris any sediment shall be removed. The equipment shall meet the following minimum specifications; power jet and water source for washing down the storm drain, vacuum attachment for catch basin cleaning, and a liquid handling method to dewater the material.
- Sediment shall be removed when accumulation is within 6 inches of the outfall pipe invert. Legally dispose of accumulated sediment and debris from the bottom of the basin, inlet grates, and inflow channels to the basin.
- If the basin outlet is designed with a hood to trap floatable materials (e.g. Snout), check to ensure watertight seal is working.

Landscaped, Vegetated and Areas Adjacent to Retaining Walls:

Inspect all landscaped and or vegetated slopes and embankments on an annual basis. Vegetated areas with bare areas or sparse growth (<90% coverage) shall be revegetated. Mulch shall be applied to landscaped areas, as necessary. Dead or decaying landscaping (ground cover, shrubs, trees etc.) shall be replanted in accordance with the approved Landscape Plan.

If signs of rill erosion or scour are present within areas tributary to the retaining walls, or stormwater flow is observed flowing over the wall, Acorn Engineering should be immediately contacted to perform an inspection and/or to contact the appropriate professional. Should concerns arise from the downhill abutters related to groundwater flow from the retaining wall weep hole outlets, Acorn Engineering should be contacted to perform a site inspection and to meet with the concerned abutter. Periodic inspections of the retaining walls shall be performed, under separate contract, by a Professional Geotechnical Engineer.

INSPECTION AND MAINTENANCE TABLE

Inspection and Maintenance Frequency	Spring or Yearly	Summer	Fall	As Necessary
Underdrained Subsurface Sand Filter	X		X	X
Green Roof*	X		X	X
Sweeping	X			X
Storm Drains		X		X
Drainage Manholes		X		X
Landscaped/Vegetated/Wall Areas	X			X
*Green Roof system to be inspected at least four times per year for the first two years				

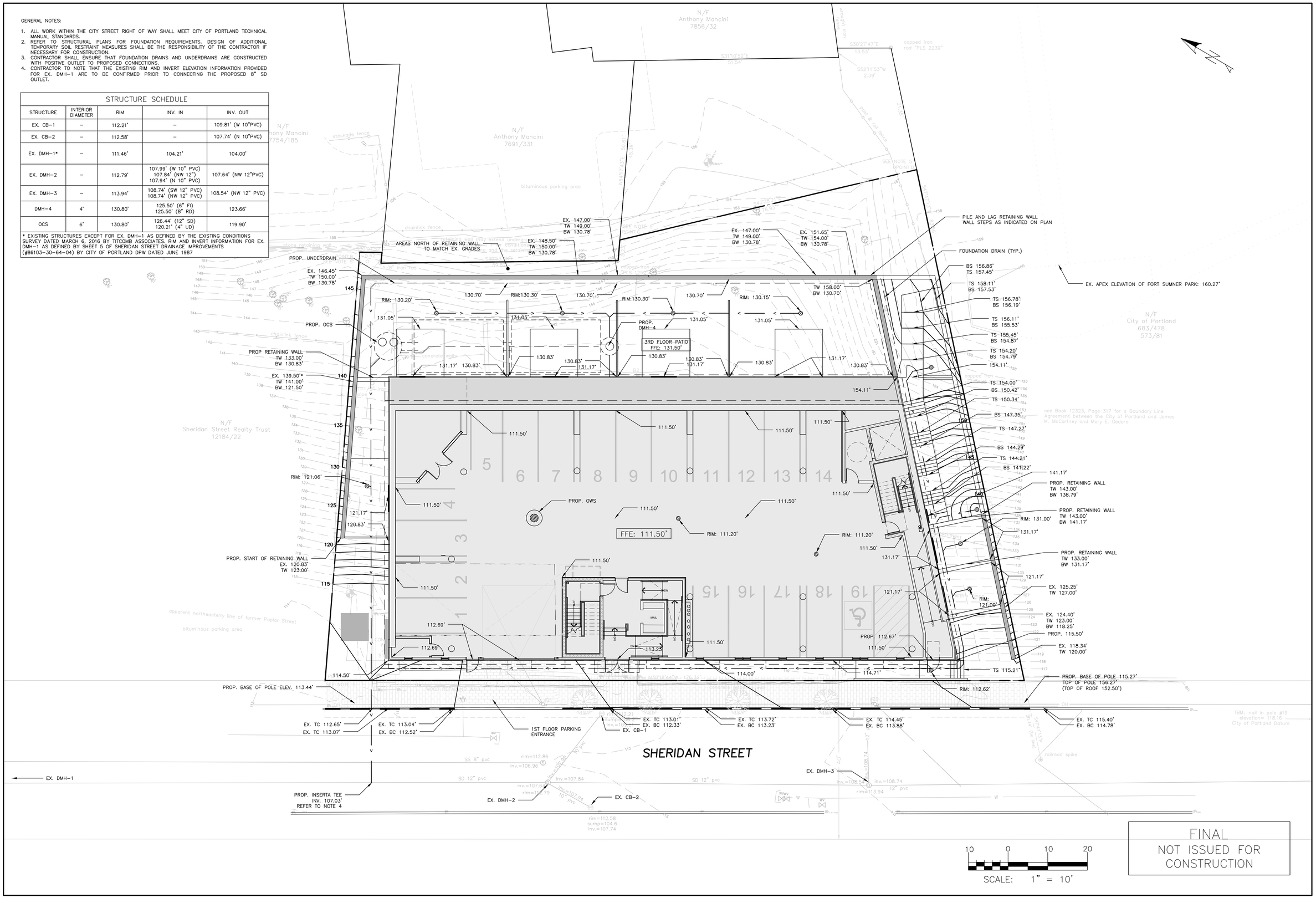
GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. REFER TO STRUCTURAL PLANS FOR FOUNDATION REQUIREMENTS. DESIGN OF ADDITIONAL TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CONTRACTOR TO NOTE THAT THE EXISTING RIM AND INVERT ELEVATION INFORMATION PROVIDED FOR EX. DMH-1 ARE TO BE CONFIRMED PRIOR TO CONNECTING THE PROPOSED 8" SD OUTLET.

STRUCTURE SCHEDULE

STRUCTURE	INTERIOR DIAMETER	RIM	INV. IN	INV. OUT
EX. CB-1	–	112.21'	–	109.81' (W 10"PVC)
EX. CB-2	–	112.58'	–	107.74' (N 10"PVC)
EX. DMH-1*	–	111.46'	104.21'	104.00'
EX. DMH-2	–	112.79'	107.99' (W 10" PVC) 107.84' (NW 12") 107.94' (N 10" PVC)	107.64' (NW 12"PVC)
EX. DMH-3	–	113.94'	108.74' (SW 12" PVC) 108.74' (NW 12" PVC)	108.54' (NW 12" PVC)
DMH-4	4'	130.80'	125.50' (6" FI) 125.50' (8" RD)	123.66'
OCS	6'	130.80'	126.44' (12" SD) 120.21' (4" UD)	119.90'

* EXISTING STRUCTURES EXCEPT FOR EX. DMH-1 AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED MARCH 6, 2016 BY TITCOMB ASSOCIATES. RIM AND INVERT INFORMATION FOR EX. DMH-1 AS DEFINED BY SHEET 5 OF SHERIDAN STREET DRAINAGE IMPROVEMENTS (#86103-30-64-04) BY CITY OF PORTLAND DPW DATED JUNE 1987



FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS, WHETHER WRITTEN OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1069_CIVIL
JN:	1069
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11452 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-30

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

FILTRATION BMP:		
Location: 155 Sheridan Street, Portland, ME 04101	**Latitude:**	43.667553° N
	Longitude:	-70.251461° W
Description of Located Point: Northeast to the rear of the property	**Inspector:**	
	Date of Inspection:	
	Weather Conditions:	
Days since last precipitation:	**MEDEP Permit #:**	N/A
Quantity of last precipitation (in):	**Design Drawings:**	YES

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
Underdrained Subsurface Sand Filter (USSF)							
Sand filter retains the design volume for a drain down time greater than 24-hours and less than 36-hours	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
The outlet control structure is in good working condition.	☑	☐	☐	☐ Yes ☐ No ☐ N/A			
Inlet and pre-treatment measures are free of sediment and floatables accumulation.	☑	☐	☐	☐ Yes ☐ No ☐ N/A			
Maintain in accordance with manufacturer's recommendations	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Treatment device is working properly and is free of debris and sediment	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Sediment is less than 3 inches within the isolator row	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Manhole is working properly and is free of debris and sediment	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Basin outlet hood (if any) is working properly.	☑	☑	☐	☐ Yes ☐ No ☐ N/A			

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
The outlet control structure is in good working condition	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
Inter-basin storm drain is functioning properly and free of sediment and debris.	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
General							
Access to facility is adequate	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
Photographs of most recent site inspection are included	☐	☑	☐				Photographs are attached.
Additional Comments:							

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

VEGETATED ROOF BMP:	
Location: 155 Sheridan Street, Portland, ME 04101	**Latitude:** 43.667656° N **Longitude:** -70.251515° W
Description of Located Point: On the third level and topmost roofs	**Inspector:** **Date of Inspection:** **Weather Conditions:**
Days since last precipitation:	**MEDEP Permit #:** N/A
Quantity of last precipitation (in):	**Design Drawings:** YES

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
Green Roof System							
Drainage course within system is unclogged and draining properly	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Site is free of locations with less than 90% vegetative cover	☑	☐	☐	☐ Yes ☐ No ☐ N/A			
The outlet stormdrain from the rooftop are free of debris and is working properly	☑	☐	☐	☐ Yes ☐ No ☐ N/A			
Maintain in accordance with manufacturer's recommendations	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
General							
Access to facility and each vegetated roof area is adequate	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
Photographs of most recent site inspection are included	☐	☑	☐				Photographs are attached.
Additional Comments:							

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

DRAINAGE MANHOLE:	
Location: 155 Sheridan Street, Portland, ME 04101	**Latitude:** 43.667553° N **Longitude:** -70.251461° W
Description of Located Point: Northeast to the rear of the property	**Inspector:** **Date of Inspection:** **Weather Conditions:**
Days since last precipitation:	**MEDEP Permit #** N/A
Quantity of last precipitation (in):	**Design Drawings:** YES

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
Drainage Manhole							
Manhole is working properly and is free of debris and sediment	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Inter-basin storm drain is functioning properly and free of sediment and debris.	☑	☑	☐ ☐	☐ Yes ☐ No ☐ N/A			
Sediment sacks and hydrocarbon absorptive pads are working properly.	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
General							
Access to facility is adequate	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Photographs of most recent site inspection are included	☑	☑	☐				Photographs are attached.
Additional Comments:							

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

STORMWATER PIPE:							
Location: 155 Sheridan Street, Portland, ME 04101					**Latitude:**		43.667647°N
					Longitude:		-70.251671° W
Description of Located Point: In between the OCS and Sheridan Street					**Inspector:**		
					Date of Inspection:		
					Weather Conditions:		
Days since last precipitation:					**MEDEP Permit #**		N/A
Quantity of last precipitation (in):					**Design Drawings:**		YES

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
Inlets, Outlets, Culverts & Storm Drains							
Pipe/culvert is free of obstruction, accumulated sediment and debris	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Pipe inlet and outlet is free of obstruction, accumulated sediment and debris	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Pipe/culvert, inlet and outlet is free of collapses and structural damage	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Outlet and inlet are properly conveying stormwater and no erosion is visible	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
General							
Access to facility is adequate	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Photographs of most recent site inspection are included	☑	☑	☐				Photographs are attached.
Additional Comments:							

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

VEGETATED AREAS:	
Location: 155 Sheridan Street, Portland, ME 04101	**Latitude:** 43.667440°N **Longitude:** -70.251540° W
Description of Located Point: Landscape Areas within the property	**Inspector:** **Date of Inspection:** **Weather Conditions:**
Days since last precipitation:	**MEDEP Permit #** N/A
Quantity of last precipitation (in):	**Design Drawings:** YES

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
Embankments							
Slopes and embankments are in good condition.	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
Site is free of rill erosion	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
General							
Site is free of locations with less than 90% vegetative cover	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Plantings are capable of withstanding concentrated flows	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Access to facility is adequate	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
Photographs of most recent site inspection are included	☐	☑	☐				Photographs are attached.
Additional Comments:							

StormTech®

Detention • Retention • Water Quality

A division of ADS®

Save Valuable Land and Protect Water Resources

Isolator® Row O&M Manual

StormTech® Chamber System for Stormwater Management

1.0 The Isolator® Row

1.1 INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a patented technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.

Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.

1.2 THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

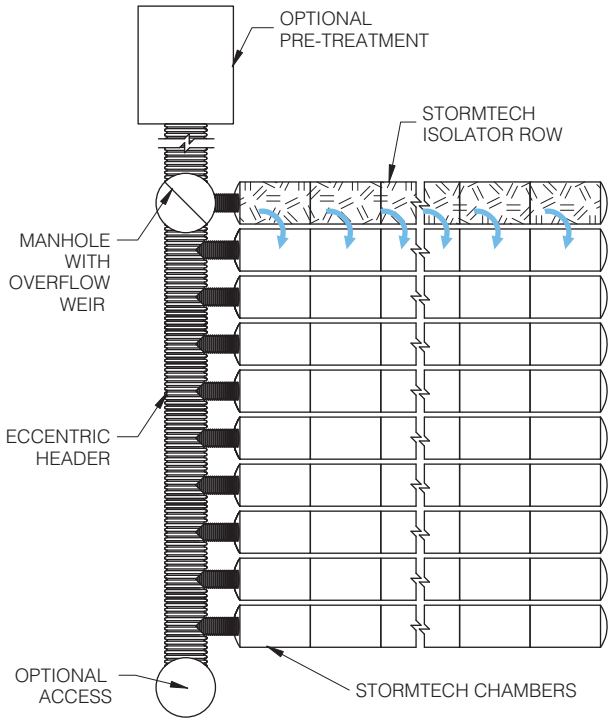
Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.

StormTech Isolator Row with Overflow Spillway
(not to scale)



2.0 Isolator Row Inspection/Maintenance

StormTech

2.1 INSPECTION

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

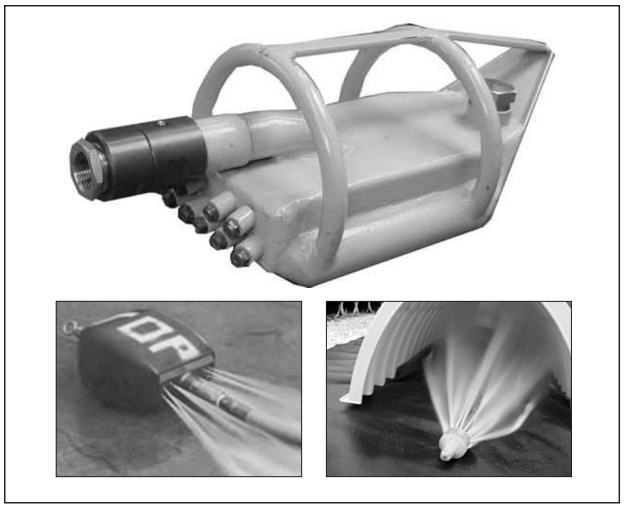
At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

2.2 MAINTENANCE

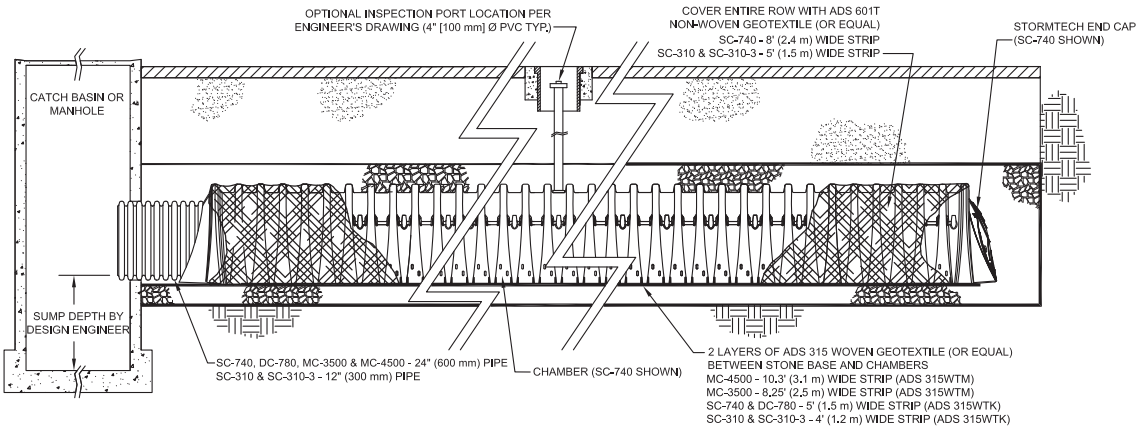
The Isolator Row was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.



Examples of culvert cleaning nozzles appropriate for Isolator Row maintenance. (These are not StormTech products.)

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

StormTech Isolator Row (not to scale)



NOTE: NON-WOVEN FABRIC IS ONLY REQUIRED OVER THE INLET PIPE CONNECTION INTO THE END CAP FOR DC-780, MC-3500 AND MC-4500 CHAMBER MODELS AND IS NOT REQUIRED OVER THE ENTIRE ISOLATOR ROW.

3.0 Isolator Row Step By Step Maintenance Procedures

Step 1) Inspect Isolator Row for sediment

A) Inspection ports (if present)

i. Remove lid from floor box frame

ii. Remove cap from inspection riser

iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.

iv. If sediment is at, or above, 3 inch depth proceed to Step 2. If not proceed to step 3.

B) All Isolator Rows

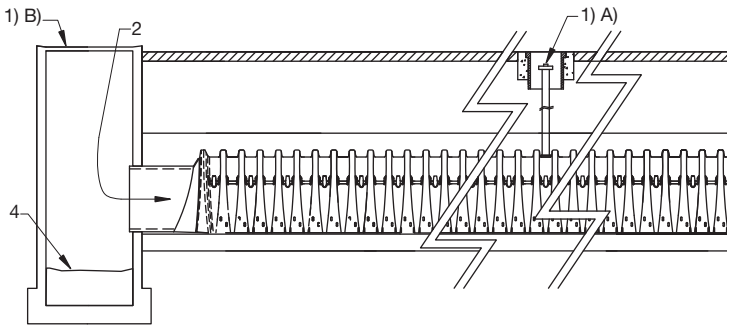
i. Remove cover from manhole at upstream end of Isolator Row

ii. Using a flashlight, inspect down Isolator Row through outlet pipe

1. Mirrors on poles or cameras may be used to avoid a confined space entry
2. Follow OSHA regulations for confined space entry if entering manhole

iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches) proceed to Step 2. If not proceed to Step 3.

StormTech Isolator Row (not to scale)



Step 2) Clean out Isolator Row using the JetVac process

A) A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable

B) Apply multiple passes of JetVac until backflush water is clean

C) Vacuum manhole sump as required

Step 3) Replace all caps, lids and covers, record observations and actions

Step 4) Inspect & clean catch basins and manholes upstream of the StormTech system

Sample Maintenance Log

Date	Stadia Rod Readings		Sediment Depth (1) - (2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/01	6.3 ft.	none		New installation. Fixed point is CI frame at grade	djm
9/24/01		6.2	0.1 ft.	Some grit felt	sm
6/20/03		5.8	0.5 ft.	Mucky feel, debris visible in manhole and in Isolator row, maintenance due	rv
7/7/03	6.3 ft.		0	System jetted and vacuumed	djm

StormTech®

Detention • Retention • Water Quality

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70 Inwood Road, Suite 3 | Rocky Hill | Connecticut | 06067

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ATTACHMENT J

EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

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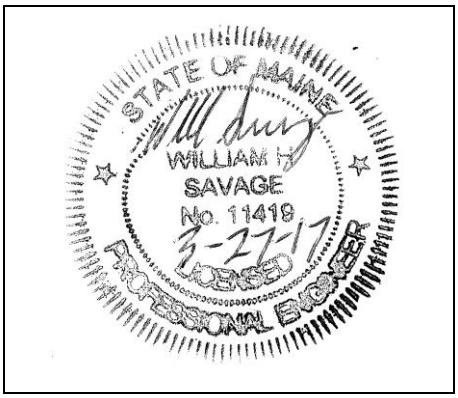
1266 Furnace Brook Parkway Suite 300
Quincy, Massachusetts 02169

Prepared By:

Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102



March 2017

INTRODUCTION

Acorn Engineering, Inc. has been retained by BD Sheridan LLC to provide civil engineering services for the proposed urban infill project at 155 Sheridan Street. The proposed project is to develop an existing single family, 1.5-story residence into a high-density, 19-unit apartment building.

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended January 11, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2014.

1.0 EXISTING CONDITIONS

The proposed project site is located on Sheridan Street between Cumberland Ave and Walnut Street within the East End neighborhood on Munjoy Hill. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine dated March 4, 2016 and revised January 30, 2017.

Abutting Uses:

- North R-6 Zone Multi-Family Residential
- West R-6 Zone Multi-Family Residential
- South B-2b Zone Community Business
- East R-6 Zone Multi-Family Residential

Fort Sumner Park directly abuts the property to the east.

The majority of the site is pervious with dense overgrowth and limited mature tree growth. The average grade is relatively steep. The existing dwelling is sided by a concrete walk and stairway with the steps continuing into the property. There are also two retaining walls further into the site, potentially continuing into the northernmost abutting property.

1.1 Existing Soils

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

Given the soils information, listed above, no onsite wastewater is proposed, the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met. Additionally, soil borings have been taken on site which are outlined in the Geotechnical Report (Section Q).

The area within and surrounding the project includes soils types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 3 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley	0.17	0.17

The soil "K" values for the soils, listed above, show a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although soil "K" values for the soils show a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance, given the long-sustained slopes.

1.2 Existing Erosion Problems

There are no existing erosion control issues.

1.3 Critical Areas

Critical areas that would require special attention during construction are the areas adjacent to the municipal stormwater system. This includes, but is not limited to, the two catch basins located directly in front of the property within Sheridan Street.

1.4 Protected Natural Resource

The client is not aware of the presence of any existing significant natural features located on the site as listed in Section 14-526 (b) 1. of the Land Use Code. The project is not located within a watershed classified as an Urban Impaired Stream by the Maine DEP.

1.5 Previous Construction Activity (5 years)

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

1.6 Timber Harvesting

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

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

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

2.1 Temporary Erosion Control Measures

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

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.
- The thickness of the entrance stone layer shall be no less than 6 inches.
- The entrance shall not be less than 20 feet wide, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
- Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
- The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public road ways.

2.1.2 Siltation fence or erosion control berm shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.

2.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.

2.1.4 Sedimentation basin with a permanent outlet into Sheridan Street. Basin shall be installed before the ground is frozen and should be cleared of stumps, roots, brush, boulders, etc. Scarify the native soil and confirm that the soil has sufficient moisture for the first layer of fill. Contractor to construct overflow outlet or spillway (center minimum 6 inches lower than outer edges) within the embankment that is protected with geotextile fabric and riprap. Basin shall have a minimum depth of 2 feet. Stabilization of the embankments is critical and should be carried out though erosion control mix, riprap, or sand bags. The basin has been sized using the MDEP Erosion and Sediment Control BMP

Manual's procedures. A 10-year storm in the pre-development condition was modeled. As a result, the required volume for the basin is approximately 450 cubic feet. Refer to the MDEP's Erosion and Sediment Control BMP Field Guide for a complete list of construction specifications.

2.1.5 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

2.1.6 Sheridan Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

2.1.7 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

2.1.8 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.9 Stormdrain inlet protection shall be provided to stormdrains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached ½ the design height.

2.1.10 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.

2.1.11 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.

2.1.12 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.

2.1.13 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

2.1.14 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.

2.2 Permanent Erosion Control Measures

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

2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 4.1 of this report.

2.2.2 All stormwater devices shall be installed and tributary areas stabilized prior receiving stormwater.

2.2.3 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

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

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and April 15. If a construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on a road shall be considered open.

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

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

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

5.2 Mulching

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

5.3 Soil Stockpiling

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

5.4 Seeding

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

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

5.5 Over winter stabilization of disturbed soils

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

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.

- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

5.6 Over winter stabilization of disturbed slopes

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

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% f the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.

- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a "storm event". A "storm event" shall consist 0.5 inches of rain within a 24-hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Sedimentation Basin

The sedimentation basin and outlet culvert shall be inspected and maintained during construction. If embankments show signs of erosion or settlement, it will be necessary to repair or replace the erosion control device. Culvert should be checked for debris and other clogs. Inspect riprapped outlet for signs of erosion and increase the length of the outlet apron if signs of erosion are present. In the spring, basin should be monitored for high flows of runoff.

6.3 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable

manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

6.3 Mulched Areas

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets must be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

6.4 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control.

6.5 Stormwater Appurtenances

All underdrains, storm drains, and catch basins need to be operating effectively and free of debris.

6.6 Erosion and Sedimentation Control Inspections:

Acorn Engineering has personnel qualified to conduct Erosion and Sedimentation Control Inspections. For further information, contact:

Contact: Will Savage, PE
Telephone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The Contractor has sole responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards.

7.0 IMPLEMENTATION SCHEDULE

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

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter silt fence or erosion control berm.
3. Commence installation of drainage infrastructure within Sheridan Street into the site.
4. Install sedimentation basin.
5. Install all other erosion control devices as necessary throughout the remainder of this schedule.
6. Prioritize the downhill foundation walls to contain runoff within the site while providing an engineered outlet with siltation barrier to the municipal stormwater system within Sheridan Street.
7. Commence earthwork operations, wall and foundation installation.
8. Commence installation of utilities.
9. Continue earthwork and grading to subgrade as necessary for construction.
10. Complete installation of drainage infrastructure, as well as other utility work.
11. Complete remaining earthwork operations.
12. Install sub-base and base gravels in paved areas.
13. Install paving, curbing and brickwork.
14. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
15. Once the site is stabilized, 90% catch of grass has been obtained, or mulching of landscape areas is complete remove all temporary erosion control measures.
16. Touch up areas without a vigorous catch of grass with loam and seed.
17. Complete site signage and striping.
18. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

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

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

8.0 CONCLUSION

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

9.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

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

Seedbed Preparation

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

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

Seeding

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

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

Mulching

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

Conclusion

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

PERMANENT SEEDING PLAN

Site Preparation

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

Seedbed Preparation

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

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

Seeding

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

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

Mulching

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

Recommendations

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

Conclusion

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

ATTACHMENT K

ACORN ENGINEERING, INC.

Assistant Chief Keith Gautreau
380 Congress St.
Portland, ME 04101

May 11, 2017

Subject: 153-165 Sheridan St. Site Review – Fire Department Checklist
Section 8 of Application

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

1. Name, address, telephone number of applicant

   BD Sheridan, LLC
   Vassa Real Estate Development
   Quincy, Massachusetts
   (207) 571-4166

2. Name address, telephone number of architect

   Ryan Senatore Architects
   565 Congress St., Suite 304
   Portland, Maine 04101

   Proposed uses of any structures [NFPA and IBC classification]

   The Code Analysis by Ryan Senatore Architecture is attached.

3. Square footage of all structures [total and per story]

1st Floor	8,800	sf
2nd Floor	8,912	sf
3rd Floor	9,701	sf
4th Floor	7,142	sf
Total	**34,555**	**sf**

4. Elevation of all structures

   The total building height from base of the first-floor parking garage to top of truss, four total floors, is 41-0". The average building height as calculated from the average grade is below the maximum allowable 42'-9 ¼ " height limit per the latest Fort Sumner Park Overlay Zone standards and existing apex elevation of the park. See the attached elevations and section view provided by the Architect for additional information.

5. Proposed fire protection of all structures

   The building will have a sprinkler system with additional protection per code. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior the request for a building permit.

6. Hydrant locations

   There is an existing fire hydrant approximately 250' from the proposed building edge along the Sheridan Street frontage. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

7. Water main size and location

   The development will be serviced a 6" parent line that will split into a 2" domestic and 6" fire service. The fire service line will extend from the split to the building fire suppression system. The building is expected to have an internal sprinkler risers and a Fire Department pump connection on the building.

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

   Front access to the structure is provided on Sheridan Street and rear access is provided from a private paved parking lot off of North Street.

9. The Architect will provide a code summary referencing NFPA 1 and all fire department technical standards.

<u>NFPA 1 – Chapter 18 Fire Department Access and Water Supply</u>

18.2 Fire Department Access:

The project site is located in a densely developed area and is fronted by a public street. The following street widths are currently available:

- Sheridan Street: 26 ft.

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

City of Portland Technical Manual – Section 3 Public Safety

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

Response: Not applicable

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

Response: As depicted on the site plan, the proposed building layout provides a minimum of two paved access points to the structure: one from Sheridan Street and one from North Street.

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

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

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

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

Response: The building will be provided with exterior doors that will be within 50' of a Fire Department access route, namely Sheridan Street.

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

Response: Emergency access is provided on Sheridan Street with access to stairs and the elevator.

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

Response: The architect has sized the elevator to accommodate a stretcher of such size.

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

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

Please let me know if you have any additional questions or comments.

Sincerely,

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

Code Review

Mar 10, 2017

155 Sheridan Residences

	IBC 2009		NFPA 101 2009	
4 floors above grade	502.1			
Sprinklers		NFPA 13		NFPA 13
Fire Alarm		Monitored Fire Alarm Required		Monitored Fire Alarm Required
Smoke and CO Detectors		Smoke and CO detectors required		Smoke and CO detectors required
Occupant Load	T 1004.1.1	Floor 1 = 1500 sf Residential accessory (200 gsf/oc) = 8	7.3.1.2	Floor 1 = 1500 sf Residential accessory (200 gsf/oc) = 8
		Floor 1 = 7,120 sf Parking (200 gsf/oc) = 36		Floor 1 = 7,120 sf Parking (200 gsf/oc) = 36
		Floor 2 = 8,812 sf Residential (200 gsf/oc) = 45		Floor 2 = 8,812 sf Residential (200 gsf/oc) = 45
		Floor 3 = 9,569 sf Residential (200 gsf/oc) = 48		Floor 3 = 9,569 sf Residential (200 gsf/oc) = 48
		Floor 4 = 7,045 sf Residential (200 gsf/oc) = 36		Floor 4 = 7,045 sf Residential (200 gsf/oc) = 36
		Floor 4 = Common Roof Deck 550 sf / 15 = 37		Floor 4 = Common Roof Deck 550 sf / 15 = 37
		Total Building Occupant Load = 210		**Total Building Occupant Load = 210**
Use Group(s)	311.3	Floor 1 and 2 - Parking (S2)	6.1.13.1	Storage (Vehicles)
	310.1	Floors 2, 3, 4 - Apartments (R2)	6.1.8.1.5	Apartment Building
Horizontal Separation	509.4	Parking Below R - maximum 1 story above grade plane S-2		
		parking garage of type 1 construction, the number of stories		
		shall be measured from the floor above such parking area		
	509.2	3 hr fire separation between 1A and 5B		
		Building below the 3hr is of 1A construction		
		Height measured from Grade Plane for 5B maximum		
Floor 1 - Const. Type	T 503	1A - non-combustible protected		I (332) non-combustible protected
Building Area	T 503	Unlimited Area per floor		

Building Elements	T 601	3 hr Structural Frame	30.1.6	No Minimum Construction requirements
	T 602	3 hr Bearing Walls Exterior		
	T 601	3 hr Bearing Walls Interior		
	T 601	0 hr Non-Bearing Walls Interior		
	T 602	1 hr Non-Bearing Walls Exterior (sep. dist 10'<= 30')		
	T602	2hr Non-Bearing Walls Exterior (sep. dist 0'<10')		
	T 602	0 hr Non-Bearing Walls Exterior (sep. dist >30')		
Floor 2,3,4 Const. Type	T 503	5B - combustible unprotected		V (000) combustible unprotected
Building Height	T 503 and 504.2	Sprinkler increase = 3 stories and 60' max.		
		The proposed building is 3 stories (on top of the 1 story podium)		
Building Area	T 503	14,000 sf max with 503 sprinkler increase of 100%		
		The proposed largest story is 9,569 sf		
Building Elements	T 601	0 hr Structural Frame	30.1.6	No Minimum Construction requirements
	T 602	0 hr Bearing Walls Exterior (sep. dist >= 10')		
	T 601	0 hr Bearing Walls Interior		
	T 601	0 hr Non-Bearing Walls Interior		
	T 601	0 hr Floor Construction (1hr between units)		
	T 601	0 hr Roof Construction		
Separations				
	508.4	S2 and R2 = 1 hr	6.1.14.4.1	Storage (ord.) and Apartment = 1hr with sprink.
	708.4	2 hr Elevator Shaft >= 4 stories	8.6.5	2 hr >= 4 stories
	708.4	1 hr Elevator Shaft < 4 stories	8.6.5	1 hr < 4 stories
	708	2 hr Mechanical Shaft >= 4 stories		
	708	1 hr Mechanical Shaft < 4 stories		
	1022.1	2 hr Stair Shaft >= 4 stories		
	1022.1	1 hr Stair Shaft < 4 stories		
	709.1	1 hr Between Dwelling Units		
	1018.1	1/2 hr Corridor	30.3.6.1.2	1/2 hr corridor
	508.2.5	1 hr Boiler Room	30.3.2.1.1	1 hr Boiler Room
	508.2.5	1 hr Trash Room	30.3.2.1.1	1 hr Trash Room
	508.2.5	1 hr Storage Room	30.3.2.1.1	1 hr Storage Room

	508.2.5	1 hr Laundry Room	30.3.2.1.1	1 hr Laundry Room
	3006.4	2 hr Elevator Machine Room		
	715.4	90 minute Stairwell Doors (2hr shaft)		
	715.4	20 minute Apartment Entry Doors (1/2 hr corridor wall)	30.3.6.2.1	20 minute Apartment Entry Doors
Distances and Exits	1021.1	2 Exits required	7.4.1.1	2 Means of Egress required
	1016.1	250’ Travel Distance to exits with Sprinklers	30.2.6.3.2	200’ Travel distance from apt. door to exit
	1014.3	125’ Common Path of Travel	30.2.5.3.2	50’ Common Path of Travel
	1018.4	50‘ Dead End	30.2.5.4.2	50‘ Dead End
			30.2.6.2	125’ Travel Distance within Dwelling to Corridor
Unprotected Openings	T 705.8	15% when exterior wall sep. dist. is 3’>5’		
	T 705.8	25% when exterior wall sep. dist is 5’>10’		
	T 705.8	45% when exterior wall sep. dist. is 10’>15’		
	T 705.8	75% when exterior wall sep. dist. is 15’>20’		
	T 705.8	Unlimited when exterior wall sep. dist. is 25’>30’		
Elevator Lobby	708.14.1.4	Not required as Sprinkled with 13		
Elevator as MoE	1007.2.1.1	Not req. as bldg. is not 4 stories above the level of exit discharge		
Egress Windows	1029.1.1	Not Required as Sprinkled with NFPA13		
Egress Stairs	1009.1	Occ. Load >50 = 44” min width	24.2.5.4	36” min. stair width
	1009.1	Occ. Load <=50 = 36” min width	7.2.2.2.1.2(B)	44” min. over 50 occ.
	1003.3	Handrails can protrude into stair 4.5” max	7.2.2.2.1.2	Handrails can protrude into stair 4.5” max
	1005.2	Door Swings may not reduce egress width by > 1/2		
	1009.2	80” min headroom	7.2.2.2.1.1(a)	6’-8” min. headroom
	1009.3	7” max. riser	7.2.2.2.1.1(a)	7” max. riser
	1009.3	11” min Tread depth	7.2.2.2.1.1(a)	11” min. tread
	1009.6	12’ max. total rise between floors or landings	7.2.2.2.1.1(a)	12’ max. height between landings
Ramps	1010.2	1:12 (8%) Max slope	7.2.5.2(a)	1:12 max. slope

	1010.6	60” long landings at top and bottom		
	1010.6	2% max slope of landings	7.2.5.2(a)	1:48 max. cross slope
	1010.8	>6” rise must have handrails on both sides of ramp		
Egress Corridors	1018.2	44” min. when Occ. > 50		
	1018.2	36” min. when Occ. <= 50		
	1018.2	24” min. at service corridors to mechanical equipment		
Sound	1207.2	STC > 50 at walls and floors/ceilings		
	1207.3	IIC > 50 at walls and floors/ceilings		
Energy IECC 2006	T 402.1.1	0.35 Fenestration U-Factor		
Zone 6		R-49 Ceiling		
Residential		R-20 or 13+5c Framed wall		
		R-30 Floor		
		R-19 or 15c Basement wall		
		R-10 to 4ft Slab		
Accessibility	Fair Housing Act Applies			
	All units are designed to meet the Fair Housing Act			
	Ch 11 of IBC 2009 does not apply as State of ME did not adopt it as part of MUBEC			
	Maine Human RIghts Act Applies			
	All units are designed to meet the Maine Human Rights Act			
	Retail Spaces must meet ADA 2010			
	All common spaces and retail areas are designed to meet ADA 2010			
	The residential units do not need to meet ADA as the project has no Public Funding			

L. Solid Waste Disposal

The owner, BD Sheridan, LLC or their property management company shall be responsible for relocating the solid waste and recyclable material to the solid waste room as located on the Site Plan (C-10). The waste can then be removed via curbside pickup or a private hauler.

The solid waste containers will be fully enclosed within the first-floor garage and screened from the public view.

M. Utilities

As identified in the Existing Conditions Plan, the site has existing overhead services (2) that connect to the existing building in front of the property; overhead utility is proposed to be rerouted underground to an on-site transformer; the cable/telephone service is to bypass the transformer. The existing overhead services along Sheridan Street and their corresponding utility poles directly abutting the property are to remain and be protected during construction. It is proposed, with coordination with Central Maine Power, that one utility pole along the front of the property be relocated to a point of non-conflict with the new driveway entrance.

There are no existing gas services or sewer service extending from the existing building as confirmed by Unitil Gas and the City of Portland Public Works; new services are proposed with connections into the existing systems in Sheridan Street.

Ability to serve letters, originally sent on June 7th, 2016 for a 34-unit project and since revised for a 19-unit project, have been sent out to the respectivel utility companies in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Please refer to the attached letters and responses received to date.

Ability to serve from the Department of Public Works was also received July 19th, 2017 in response to the Wastewater Application and has been attached as well.

ACORN ENGINEERING, INC.

Central Maine Power Company
Attn: Paul DuPerre
162 Canco Road
Portland, Maine 04103

May 11, 2017

Subject: 155 Sheridan Street Redevelopment
Re: Updated Ability to Serve

Paul DuPerre:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for CMP's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to CMP on June 7th, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing overhead services are to be demolished.

It is still proposed that the main overhead lines servicing Sheridan Street remain as is and that the new, three-phase service be rerouted underground from a relocated utility pole to an on-site transformer. One of the existing utility poles needs to be relocated due to the proposed driveway entrance to the parking garage. The attached utility plan shows the preferred location for the relocated utility pole and transformer. The transformer pad has a five-foot side clearance from the building, a front clearance of approximately twelve feet as provided on the north side of the pad, and a rear clearance of five feet as provided on the south side of the pad. Due to site constraints, only three feet of clearance can be provided from the property line.

On behalf of the client, we are requesting the following information:

1. Any easements for overhead services currently crossing the proposed development.
2. Alternative connection and transformer pad locations from the development to the existing system.
3. Confirmation of the proposed location or recommendation or the final location for the relocated utility pole.
4. Confirm that the proposed transformer pad setbacks is acceptable or recommendations on a revised pad layout.
5. CMP's proposed infrastructure improvements within the project vicinity.
6. CMP's ability to serve the project.
7. Access requirements to the CMP meters.

I have attached an existing conditions plan created by Titcomb Associates as well as a revised preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.

CENTRAL MAINE POWER

May 17, 2017

Ms. Olivia Dawson, PI
Engineer
Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104

RE: 155 Sheridan Street, Portland, Maine

Dear Ms. Dawson,

This letter is to advise you Central Maine Power has sufficient three phase electrical capacity in the area to serve the subject project.

Once the project is accepted by the City of Portland, the owner will need to call our Customer Service Center at 1-800-565-3181 to sign up for a New Account and a SAP Work Request Order so we may provide an actual cost.

If you have any questions please feel free to call me at 828-2882.

Sincerely,

Paul DuPerre

Paul DuPerre
Energy Service Specialist

162 Canco Road, Portland, ME 04103
Telephone 800.750.4000, Fax 207.791.1026
cmpco.com

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ACORN ENGINEERING, INC.

Fairpoint Communications
Attn: Brian Bouchard
5 Davis Farm Road
Portland, Maine 04103

May 11, 2017

Subject: 155 Sheridan Street Redevelopment
Re: Updated Ability to Serve

Brian Bouchard:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for the Fairpoint's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to Fairpoint on June 7th, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing overhead services are to be demolished.

It is still proposed that the main overhead lines servicing Sheridan Street remain as is and the new service be rerouted underground from a relocated utility pole as noted on the utility plan. The service is also to bypass the proposed transformer.

On behalf of the client, we are requesting an update, if any, for the following information:

1. Any additional information, such as utility mapping within Sheridan Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the development to the existing communication system.
4. Fairpoint's proposed infrastructure improvements within the project vicinity.
5. Confirmation that Fairpoint still has the ability to serve the project

I have attached an existing conditions plan created by Titcomb Associates as well as a revised preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.

5 Davis Farm Rd
Portland, ME 04103
207- 712-1063 Cell
207- 797-1098 Fax

May 12, 2017

To Whom It May Concern:

This letter is to inform that FairPoint Communications has the capacity and willingness to serve the proposed 19-Unit to be located at 155 Sheridan St in Portland. FairPoint currently has aerial facilities along Sheridan St and on the proposed service pole in which we can provide service from. Please do not hesitate to contact me with any questions.

Sincerely,

Brian M. Bouchard

FairPoint Outside Plant Engineer

Email: bbouchard1@fairpoint.com

Phone: 207-712-1063

ACORN ENGINEERING, INC.

Portland Water District
Attn: MEANS Department
225 Douglas Street
Portland, Maine 04104

May 11, 2017

Subject: 155 Sheridan Street Redevelopment
Re: Updated Ability to Serve

To Whom It May Concern:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for PWD's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to PWD on June 7th, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing domestic water service are to be demolished.

Previous conversations with PWD included proposing a main line extension of the existing 8" DI water main within Sheridan Street. Due to the redesign of the building and relocation of the mechanical room, the water service can tap the existing water main and run perpendicular to the street. It is also proposed, to limit the amount of utility pavement cuts, that the building be service via a parent/child connection; an 8" parent is proposed to split into a 6" domestic and 2" fire service within the furnishing zone of the ROW.

Based upon the Section 4 of the Maine Subsurface Water Disposal Rules, the project anticipates the following design flows:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Single Family Residential Units	1 Bedroom	0	180	0
	2 Bedroom	1	180	180
				180
Proposed flow				
Attached Single Family Residential Units	1 Bedroom	14	180	2,520
	2 Bedroom	5	180	900
				3,420
			Net Change	**+ 3,240**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

The proposed project is anticipated to add a net water usage from the development of approximately 3,240 gallons per day (GPD). It should be noted that these values were developed using conservative estimates from the State of Maine Subsurface Wastewater Disposal Rules and, considering the compact nature of the units, ranging from 834 to 1,438 square feet, the actual flows are anticipated to be lower.

On behalf of the client, we are requesting an update, if any, for the following information:

1. Any additional information, such as utility mapping within Sheridan Street; more specifically the location of the service to the existing building.
2. Alternative connection locations from the development to the existing system.
3. PWD's proposed infrastructure improvements within the project vicinity.
4. New flow data for adjacent hydrants.
5. PWD's ability to serve the project.

I have attached an existing conditions plan completed by Titcomb Associates, a revised preliminary utility plan, and an updated PWD fixture count spreadsheet from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

August 2, 2017

Olivia Dawson
Acorn Engineering, Inc.
PO Box 3372
Portland, ME 04104

Re: 155 Sheridan Street, PO
Ability to Serve with PWD Water

Dear Ms. Dawson :

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on May 11, 2017. Based on the information provided per plans dated 7/18/17, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch parent service line may be installed from the renewed 8" DI water main in Sheridan Street to serve a 6" fire service and 4" domestic service for the site. The service should enter through the properties frontage on Sheridan Street at least 10-feet from any side property lines.
- Tees, valves, and services from the main to the shutoff valve will be installed by the contractor performing the main renewal scope of work. The developer of 155 Sheridan Street will reimburse the district for the cost of the work.
- Our records show that the property is currently served with a ¾-inch domestic water service; please note that the size of this service is below our minimum service size of 1-inch. PWD will retire the existing ¾" service as part of the water main renewal project in Sheridan Street.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper domestic water line provides water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of these services.

Water System Characteristics

According to District records, there is an 2.25-inch diameter CI water main in Sheridan Street. PWD will renew the existing main with a new 8" DI water main as part of the City of Porltand Sheridan Street reconstruction project. There are two public fire hydrants near the site, one located 350 feet from the site at the intersection of Sheridan and Walnut Street, and the other located 350 feet from the site to the southeast on Sheridan Street. The most recent static pressure reading for the hydrants was 60 psi and 62 psi, respectively.

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.

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

A C O R N
ENGINEERING, INC.

Spectrum Cable
Attn: Mark Pelletier
118 Johnson Road
Portland, Maine 04102

May 11, 2017

Subject: 155 Sheridan Street Redevelopment
Re: Updated Ability to Serve

Mark Pelletier:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for the Spectrum's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to Spectrum (formally Charter) on June 7th, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing overhead services are to be demolished.

It is still proposed that the main overhead lines servicing Sheridan Street remain as is and the new service be rerouted underground from a relocated utility pole as noted on the utility plan. The service is also to bypass the proposed transformer.

On behalf of the client, we are requesting an update, if any, for the following information:

1. Any additional information, such as utility mapping within Sheridan Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the development to the existing communication system.
4. Spectrum's proposed infrastructure improvements within the project vicinity.
5. Spectrum's ability to serve the project.

I have attached an existing conditions plan created by Titcomb Associates as well as an updated preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.

A C O R N
ENGINEERING, INC.

Unitil Service Corp.
Attn: Bridget Harmon
376 Riverside Industrial Parkway
Portland, Maine 04103

May 11, 2017

Subject: 155 Sheridan Street Redevelopment
Re: Updated Ability to Serve

Bridget Harmon:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for Unitil's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to Unitil on June 7th, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building is to be demolished.

It has since been confirmed that a gas service will be required for the building. From our previous conversations, an existing gas main was identified within Sheridan Street. It is proposed that the new service connect to the main located within the City sidewalk.

On behalf of the client, we are requesting any updates, if any, for the following information:

1. Any additional utility mapping such as gas lines on Sheridan or North Street.
2. Unitil's proposed infrastructure improvements within the project vicinity.
3. Unitil's ability to serve the project.

I have attached an existing conditions plan created by Titcomb Associates as well as an updated preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact myself or the office for questions or clarifications.

Sincerely,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.

July 21, 2017

Olivia Dawson, E.I.
Acorn Engineering Inc.
Po Box 3372
Portland Maine 04104

Re: 155 Sheridan Street, Portland Maine

Dear Miss. Dawson:

Thank you for your interest in using natural gas for the above referenced project.

This is to confirm that natural gas can be made available from our distribution system to serve your proposed residential redevelopment project.

Any improvements to the existing distribution system necessary to provide this service, as well as the design of the gas system in the project itself will be established as the overall design and scope of your project progresses and natural gas loads and intended location of service becomes available.

All work necessary to provide service will be performed in accordance with the Maine Public Utilities Commission requirements.

If you have any further questions or require additional information, please contact me directly at (207) 541-2536 or at Harmon@unitil.com.

Sincerely,

Bridget L. Harmon

Business Development Representative
Unitil Corporation
(o) 207-541-2536 (f) 207-541-2586

Date: July 19, 2017

Re: Wastewater Capacity Authorization

Address: 155 Sheridan Street, Portland, Maine
Applicant: Bernie Sheridan, LLV

Planner: Matthew Grooms

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Single Family Dwelling	2 Rooms or Less		180	(180)
Proposed flow				
Multiple Family Dwelling Units	1-Bedroom	14	120	1680
Multiple Family Dwelling Units	2-Bedroom	5	180	900
			Net Change	**+ 2,400**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

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

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

Sincerely,
CITY OF PORTLAND

Bradley A Roland

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

CC:
Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland
Stuart O'Brien, Planning Director, Department of Planning and Urban Development, City of Portland
Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland

Kathi Earley, City Engineer/Engineering Manager, Portland Department of Public Works
Keith Gray, Senior Project Engineer, Portland Department of Public Works

Nancy Gallinaro, Water Resources Manager, Portland Department of Public Works
Rachel Smith, Industrial Pretreatment Coordinator, Portland Department of Public Works
John Emerson, Wastewater Coordinator, Portland Department of Public Works

Lauren Swett, Woodard & Curran, DPW Development Review
Scott Firmin, Director of Wastewater, Portland Water District

N. Construction Management Plan

Project Address: 155 Sheridan Street, Portland, Maine

Project Description:

The proposed project is the redevelopment of an existing 1.5-story dwelling into a four-story, 19-unit apartment building with a parking garage on the first floor. Access will be provided from Sheridan Street. The project also implements extensive use of retaining walls to accomendate the steep existing slopes.

Project Team Summary:

Owner:	BD Sheridan, LLC
General Contractor:	To Be Determined
Civil Engineer:	Acorn Engineering, Inc.
Structural Engineer:	Structural Integrity Consulting Engineers, Inc.
Architect:	Ryan Senatore Architecture

Timeline and Schedule:

Projected Start Date:	Fall 2017
Project Duration:	Approximately one (1) year
Projected Completion:	Fall 2018
Street Interruption:	During the installation of utilities within Sheridan Street. It is the sole responsibility of the contractor to manage traffic during the street interruption.
Sidewalk Interruption:	During the installation of utilities and foundation wall construction. The contractor shall maintain pedestrian access along Sheridan Street either through the existing sidewalk or through a temporary path. All temporary sidewalks are to be ADA compliant.

Emergency Contact:

Bernie Saulnier
BD Sheridan, LLC
(207) 571–4166

Estimated Work Hours:	7:00 am to 5:00 pm
Delivery Truck Access:	Contact Owner
Worker Parking:	The construction management company and sub-contractors are to be responsible for providing off-site parking to employees; on-site parking will not be provided or guaranteed. The construction management company to be responsible for obtaining the appropriate permits from the City for closing any on-street parking spaces during the construction period.

BD Sheridan, LLC and their contractor will work with the City of Portland, and adjacent landowners to minimize any project impacts.

The General Contractor will remain solely and completely responsible for enforcement of and compliance with 1) all contract plans and specifications and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case both by the contractor and its subcontractors. These include all OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. The General Contractor will remain responsible for safeguarding the general public.

The General Contractor shall review all permits and reports associated with the project. The General Contractor is advised to visit the site prior to the start of work to confirm the site conditions. Refer to the Civil/Site Plan Set, Sheet C-03 Demolition & Construction Management Plan for visual representation of the measures be taken during demolition and construction.

ATTACHMENT O

To: BD Sheridan, LLC
Attn: Bernie Saulnier
1266 Furnace Brook Parkway
Suite 300
Quincy, Mass 02169

From: Rene D. Noel, Jr. ACF Maine Licensed Forester # 325

Date: October 3, 2016

RE: Sheridan Street Forest

I have examined and inventoried the trees on the Sheridan Street property.

The site is a hillside with fairly steep slopes. A large part of the area has soil which has been disturbed in past or is fill dumped from above. From my observations there is little of the property where soils are not fill or have not been disturbed in the past. In other words there is little to no natural soil types on the property.

The overstory forest is composed primarily of Norway maple and apple. The understory plant community is composed almost entirely of invasive species. During my field work I saw and identified; Barberry, Bittersweet, Multiflora rose, and Honeysuckle. These undesirable plants occupy most or all or most of the growing space in the understory.

Shade from the overstory and dense plant community of invasive shrubs allows little light to reach the soil surface for the growth of low vegetation, such as grasses and forbs. Nor has a natural litter layer and humus developed under these conditions. This has left areas of the surface of the soil exposed. This combined with steep slope and unstable fill soils allows for a constant low level of soil erosion.

The community of overstory trees is largely composed of stems of an undesirable specie, Norway Maple. Norway Maple is an imported invasive tree species. By simple count it comprises 62% of the stems. However, foresters use basal area, the cross sectional area of trees as a better measure how trees occupy a forest. By this measure, basal area, Norway Maple is 77% of this forest. Apple trees which most would not consider undesirable but are not native account for 28% of the stems and 21% of the basal area.

A total of 81 tree stems were tallied on the property. Of these 16 were 10 inches or larger at Diameter Breast Height, 4.5 feet, from the ground. Of these 16, 6 are Norway Maple and 5 are apple. There may be a few desirable stems around the periphery of property that can be preserved. However, I advise caution. On this steep land any root disturbance or stem damage during construction will destabilize these stems making for high risk trees in a dense residential area.

This property is slated for dense residential development. From a forest and ecological perspective there is not a lot to be lost in this development. The forest and understory is composed primarily of invasive undesirable or non native species. Soils are also unstable and eroding.

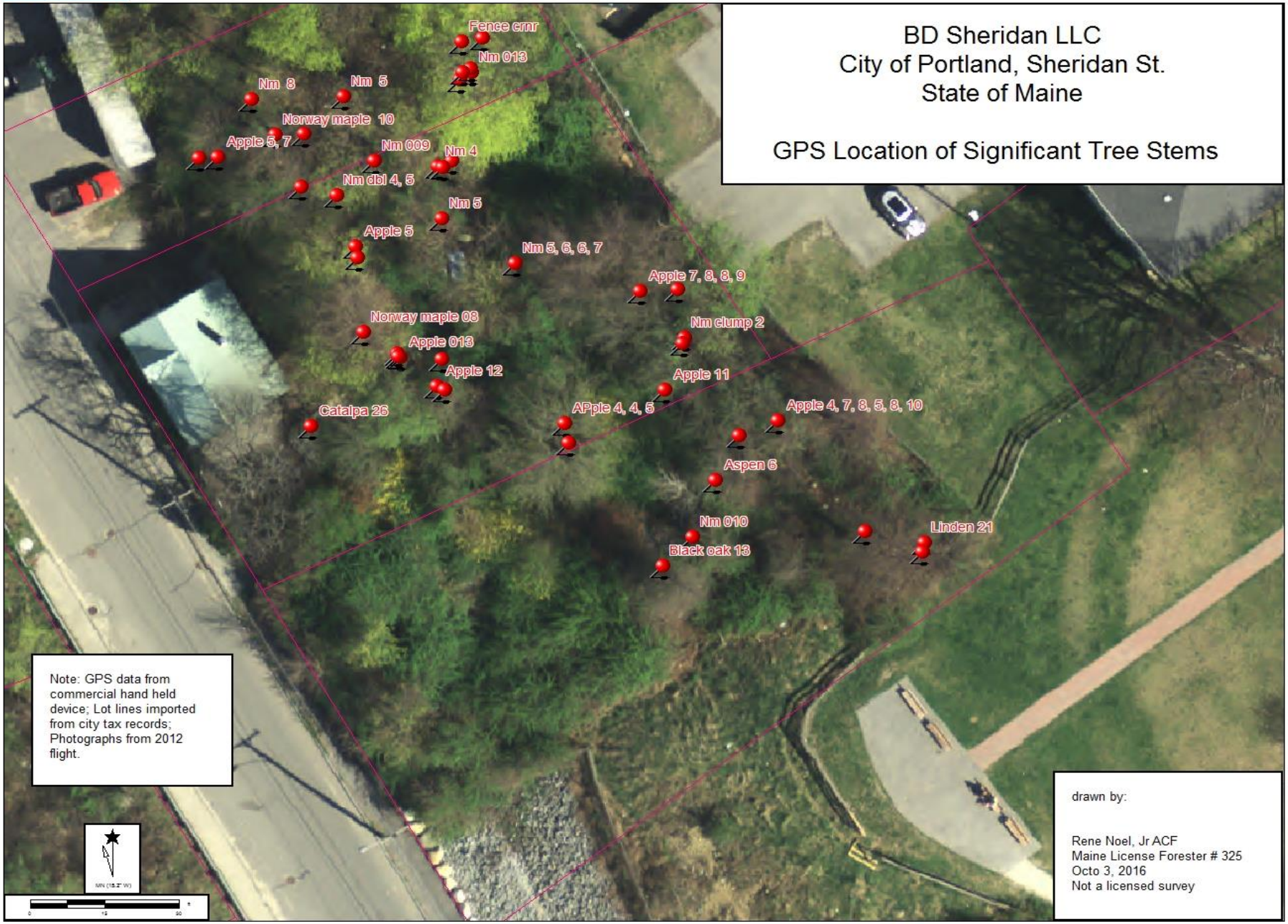
Removal of this forest and replacement with more suitable species in the landscaping and buffer areas could improve urban forest and plant community of this area.

Below is a table showing trees by species and diameter that are found on the property as well as map prepared from GPS data showing location of all stems and another showing location of trees over 10” in DBH.

Rene D. Noel, Jr. ACF
Maine Licensed Forester #325

DELORME

XMap® 7



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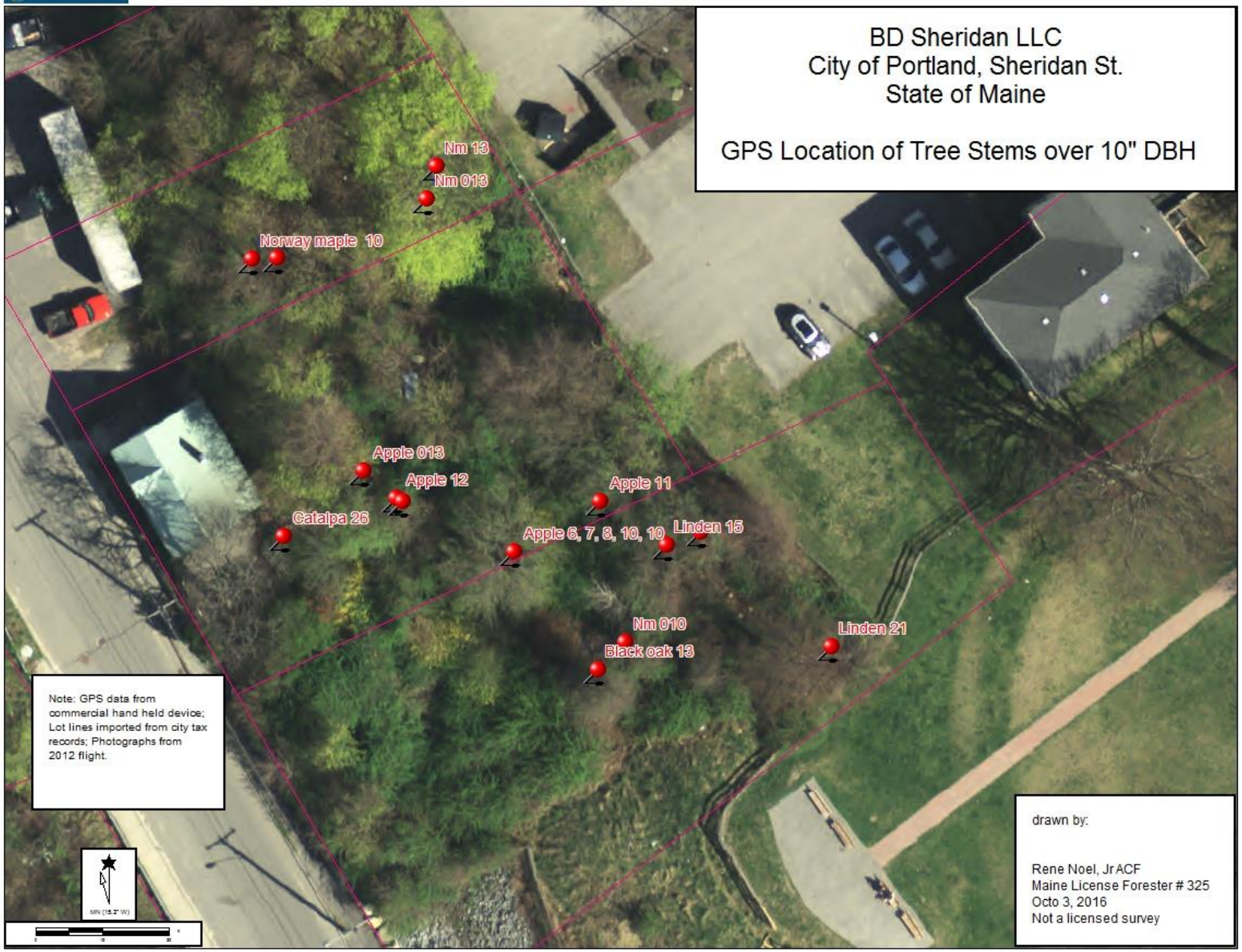

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www.delorme.com

Table 1. Tree Count by Species and Diameter Breast Height (4.5 feet)

	Species						
DBH	N Maple	Catalpa	Apple Spc.	Black Cherry	Lindon	Black oak	Aspen
1	2						
2	8						
3	5						
4	4		3				
5	8		3		1		
6	5		2				1
7	4		3				
8	6		5				
9	4		2		1		
10	3		3	1			
11	1		2				
12	1						
13	1					1	
14							
15					1		
16							
17							
18							
19							
20							
21					1		
22							
23							
24							
25							
26		1					
27							
Total < 10	44	0	18	0	2	0	1
Total >10	6	1	5	1	2	1	0
Total	50	1	23	1	4	1	1

TRAFFIC IMPACT STUDY

FOR

PROPOSED

155 Sheridan Street

Residential Condominium Project

Prepared For: Saulnier Development, LLC
Prepared By: William J. Bray, P.E.

March 14, 2017

INTRODUCTION

Saulnier Development, LLC is proposing to construct 19 residential condominiums on a parcel of property located at 155 Sheridan Street in the City of Portland. The proposed project provides a total of 19 covered parking spaces on-site.

Access to the proposed condominium units is provided through a single site driveway that exits directly onto Sheridan Street.

The purpose of this study is to examine existing traffic conditions in the general vicinity of the proposed project, estimate the total number of site trips generated by the project, and make a determination as to whether the existing transportation system can safely accommodate the added traffic demand generated by the project.

EXISTING CONDITIONS

Existing Traffic: Manual turning movement counts were conducted at the following intersections on the dates noted during the summer of 2016:

1. Washington Avenue, Fox Street and Walnut Street - July 13, 2016
2. Sheridan Street @ Cumberland Avenue - July 20, 2016
3. Sheridan Street, Walnut Street and Munjoy Heights Condo Drive - July 21, 2016

All vehicular traffic entering each intersection was recorded in 15-minute intervals between the hours of 7:00 to 9:00 AM and between 3:00 and 6:00 PM (Copies of the field data summary sheets are attached).

MaineDOT utilizes highway classifications of I, II, or III for all State and Local roadways. Group I roadways are defined as urban roadways or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Group II roadways or arterial roads are those that see a combination of commuter and recreational traffic and; therefore, experience moderate fluctuations during the year. Group III roads or recreational roadways are typically used for recreational purposes and experience significant seasonal fluctuations. MaineDOT has classified each approach roadway as a Group I road. Based upon MaineDOT's seasonal adjustment factors; the traffic data was considered representative of "*peak*" summer travel conditions, with no further adjustment.

Figure 1 illustratively presents the estimated 2016 AM and PM design hour traffic conditions at each of the three study intersections.

TRAFFIC ACCIDENTS

Existing Safety Trends: The Maine Department of Transportation's (MaineDOT) Accident Records Section provided three-year (2013 through 2015) safety records for the Washington Avenue, Walnut Street and Fox Street intersection; the section of Walnut Street between Washington Avenue and North Street and the section of Sheridan Street between Walnut Street and Cumberland Avenue. MaineDOT's report for the noted road sections is presented as follows:

2013 - 2015 Accident Summary
Sections of Washington Avenue, Sheridan Street and Walnut Street

Location	Number of Accidents	Critical Rate Factor
1. Washington Avenue, Fox Street and Walnut Street	11	2.20
2. Sheridan Street, Walnut Street and Munjoy Heights	3	4.80
3. Walnut Street @ Poplar Street	1	2.50
4. Sheridan Street @ Cumberland Avenue	1	0.49
5. Walnut Street btw. Sheridan Street and Washington Avenue	4	4.14
6. Sheridan Street btw. Cumberland Avenue and Walnut Street	1	0.81

The MaineDOT considers any roadway segment or intersection a high crash location if both of the following criteria are met:

- *8 or more accidents*
- *A Critical Rate Factor greater than 1.00*

As the data presented in the table shows (location highlighted in yellow), the Washington Avenue/Walnut Street/Fox Street intersection meets MaineDOT's criteria for a high crash location. A total of 11 crashes and a Critical Rate Factor (CRF) of 2.20 were reported for the intersection. A more in-depth review (preparation of detailed vehicle collision diagrams) was prepared for the intersection to determine if a clear pattern of accident is occurring (Copies of the Collision Diagrams are attached as an appendix to the report). The remaining street segments and intersections within the study area experience very low numbers of traffic crashes during the three-year time period.

The detailed review of the vehicle crash reports for the intersection would suggest two clear patterns of concern: 1) A total of four collisions involved vehicles approaching Washington Avenue from the Walnut Street approach sliding through the intersection and striking a thru vehicle on Washington Avenue or other fixed object. 2) The second pattern, with two reported crashes, involved vehicles on the Fox Street approach turning left onto Washington Avenue being struck by thru vehicles traveling southbound on Washington Avenue.

Implementation of one or both of the following suggested remediation measures should help reduce the frequency of traffic crashes occurring at this "*off-set*" intersection:

- Utilization of an anti-icing agent during periods of inclement weather on the full length of Walnut Street would potentially reduce vehicle skidding problems on Walnut Street.
- Alternatively, or in conjunction with utilization of the anti-icing agent, the City may want to consider closure of Walnut Street at North Street during periods of severe winter road conditions using a remotely operated flashing "*Street Closed*" beacon placed at the top of the Walnut Street "*hill*".

In October of 2014 a detailed Traffic Signal Warrant Study was completed for the intersection to determine if prevailing traffic conditions warrant signalization of the intersection. That study concluded 2014 travel conditions do not meet the minimum requirements for traffic control signals.

SITE TRAFFIC

Site Trip Generation: The ninth edition of the Institute of Transportation Engineers (ITE) "**TRIP GENERATION**" manual was used to determine the volume of site traffic generated by the proposed 19-unit residential condominium project. The ITE publication provides numerous land-use categories and the average volume of trips that are generated by each category. The following trip rates were used to calculate the trip generation of the proposed project:

Land Use #230 – Residential Condominium/Townhouse
AM Peak Hour = 0.44 trips per occupied unit
PM Peak Hour = 0.52 trips per occupied unit.

Accordingly, the proposed 19 condominium units can be expected to generate a total of 8 trips in the morning peak hour and 10 trips during the afternoon peak hour.

Site Trip Composition: Trips generated by the proposed project are assumed to be "*new*" or "*primary*" trips.

Site Trip Distribution: The Institute of Transportation Engineers handbook provides the following directional distribution rates for a condominium unit during the AM and PM peak hours:

AM Peak Hour = 17% enter site and 83% exit site
PM Peak Hour = 67% enter site and 33% exit site

Based upon the noted directional distribution patterns; three (1) trip during the morning peak hour and 7 trips in the evening peak hour will enter the proposed site and the remaining trips (7 AM trips and 3 PM trips) during both peak time periods will exit the site.

Site Trip Assignment: Vehicle trips generated by the proposed project were assigned through the three study intersections based on existing travel patterns and the Consultants knowledge of travel patterns in the City of Portland. Figure 2 graphically depicts the assignment of the site traffic during both peak commuter time periods.

FUTURE TRAFFIC

Annual Growth: The Traffic Impact Study has been prepared based upon a projected build-out year of 2018. MaineDOT's historical traffic data for the study area would suggest the appropriateness of zero growth in annual traffic for the corridor. However, to ensure a conservative assessment of traffic impact; the 2016 design hour traffic values, as highlighted on Figure 1, were increased by an annual growth rate of 1.5% per year to approximate future 2018 design hour traffic values for each study intersection. The estimated 2018 design hour traffic volumes for the study intersections are illustratively presented on Figure 3.

Other Development Traffic: Traffic generated by projects that have been approved by the local Planning Board and/or the Maine Department of Transportation, yet are not opened, must be included in the estimate of pre-development traffic. Peak hour trips generated by the following projects were appropriately assigned through the three study intersections:

- *180 Washington Avenue Condominiums*
- *169 Newbury Street Apartments*
- *121 Newbury Street – Mixed-Use Development*
- *65 Munjoy Street Condominiums*
- *Midtown – Mixed-Use Development*
- *Merrill Street Condominiums*
- *89 Anderson Apartments*
- *Chestnut Street Apartments*
- *Portland Gateway Hotel*
- *Ocean Gateway Retail*
- *62 India Street*

Figure 4 illustratively presents the Other Development traffic assignment for the study intersections.

2018 Pre-Development Traffic: 2018 Pre-Development traffic forecasts were prepared for the study intersections by combining the 2018 Design Hour traffic volumes shown on Figure 3 with the Other Development traffic values displayed on Figure 4. Figure 5 presents the 2018 Pre-Development traffic forecasts at each of the three study intersections.

2018 Post-Development Traffic: 2018 Post-Development traffic forecasts were prepared for each study intersection by combining the 2018 Pre-Development travel forecasts illustrated on Figure 5 with the estimated site generated trips highlighted on Figure 2. Figure 6 presents the estimated 2018 Post-Development Traffic forecasts for the study intersections.

MOBILITY ANALYSIS

Capacity analyses of both 2018 Pre-and Post-Development traffic conditions were performed for each study intersection utilizing the Synchro and SimTraffic computer traffic models.

Levels of Service rankings are similar to the academic grading system, where an "A" is very good with little delay and "F" represents very poor conditions. The following table summarizes the relationship between delay and Level of Service for an unsignalized intersection:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Total Control Delay (sec/veh)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

The results of the unsignalized intersection capacity analyses are presented in the following table:

Unsignalized Intersection
Level of Service Summary
2018 Pre and Post-Development Conditions

	2018 Pre-Development				2018 Post-Development			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection/Approach	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS
1. Sheridan Street @ Cumberland Avenue								
Sheridan Street NB	5 sec.	A	6 sec.	A	5 sec.	A	6 sec.	A
Sheridan Street SB	4 sec.	A	5 sec.	A	4 sec.	A	5 sec.	A
Cumberland Avenue EB	1 sec.	A	1 sec.	A	1 sec.	A	1 sec.	A
Cumberland Avenue WB	1 sec.	A	1 sec.	A	1 sec.	A	1 sec.	A
Overall Intersection	**1 sec.**	**A**	**1 sec.**	**A**	**1 sec.**	**A**	**1 sec.**	**A**
2. Sheridan Street/Walnut Street/Munjoy Heights Condominiums								
Sheridan Street NB	4 sec.	A	5 sec.	A	4 sec.	A	5 sec.	A

Munjoy Heights Condos SB	3 sec.	A	4 sec.	A	3 sec.	A	4 sec.	A
Walnut Street EB	1 sec.	A	1 sec.	A	1 sec.	A	1 sec.	A
Walnut Street WB	1 sec.	A	1 sec.	A	1 sec.	A	1 sec.	A
Overall Intersection	**1 sec.**	**A**	**1 sec.**	**A**	**1 sec.**	**A**	**1 sec.**	**A**
3. Washington Avenue & Walnut Street								
Washington Avenue NB	1 sec.	A	1 sec.	A	1 sec.	A	1 sec.	A
Washington Avenue SB	2 sec.	A	3 sec.	A	3 sec.	A	3 sec.	A
Walnut Street WB	37 sec.	E	25 sec.	C	37 sec.	E	28 sec.	D
Overall Intersection	**6 sec.**	**A**	**3 sec.**	**A**	**6 sec.**	**A**	**3 sec.**	**A**
4. Washington Avenue @ Fox Street								
Fox Street EB	27 sec.	D	51 sec.	F	29 sec.	D	69 sec.	F
Washington Avenue NB	6 sec.	A	5 sec.	A	7 sec.	A	6 sec.	A
Washington Avenue SB	1 sec.	A	1 sec.	A	1 sec.	A	1 sec.	A
Overall Intersection	**4 sec.**	**A**	**9 sec.**	**A**	**5 sec.**	**A**	**11 sec.**	**B**

As presented in the preceding chart, each of the three unsignalized study intersections were determined to operate overall at acceptable levels of service (A or B) under both 2018 Pre- and Post-development travel conditions. Motorists approaching Washington Avenue on either the Walnut or Fox Street approaches experience considerable delay during the evening peak hour entering Washington Avenue under both the 2018 Pre- and Post-development travel conditions.

SUMMARY

1. The proposed 19 residential condominiums will generate approximately 8 trips in the AM peak hour and an additional 10 trips during the PM peak hour. A single trip in the morning peak hour and 7 trips in the evening peak hour will enter the proposed site and the remaining trips (7 AM trips and 3 PM trips) during both peak time periods will exit the site.

2. The three-year roadway safety audit completed for the study area identified one intersection; the Washington Avenue/Fox Street/Walnut Street as a high crash location. MaineDOT's roadway safety report for the years 2013 through 2015 shows a total of 11 vehicle crashes occurred at the intersection with a Critical Rate Factor of 2.20. Both values meet and exceed MaineDOT's criteria for identification of a high crash location. The remaining roadway segments and intersections in the study area experienced a very low number of traffic crashes over the same time period.

   A detailed review of the vehicle crash reports for the Washington Avenue/Walnut Street/Fox Street intersection identified two clear crash patterns: 1) four collisions involved vehicles approaching Washington Avenue from the Walnut Street approach sliding through the intersection and striking a thru vehicle on Washington Avenue and/or fixed object. 2) The second pattern, with two reported crashes, involved vehicles on the Fox Street approach turning left onto Washington Avenue being struck by thru vehicles traveling southbound on Washington Avenue.

Implementation of one or both following winter operational changes should effectively reduce the number of inclement weather related traffic crashes on the Walnut Street approach to Washington Avenue. Both suggested safety improvements are "*low cost - high benefit*" options.

- *Utilization of an anti-icing agent during periods of inclement weather on the full length of Walnut Street would potentially reduce vehicle skidding problems on Walnut Street.*
- *Alternatively, or in conjunction with utilization of the anti-icing agent, the City may want to consider closure of Walnut Street at North Street during periods of severe winter road conditions using a remotely operated flashing "Street Closed" beacon placed at the top of the Walnut Street "hill".*

3. The Mobility Analysis completed for the 2018 Pre- and Post-Development travel conditions at the three study intersections demonstrates the proposed project has no measurable impact on traffic operations at each of the three intersections. Both Sheridan Street intersections with Cumberland Avenue and at Walnut Street were found to operate at Level of Service A, the highest level of operation, under both 2018 travel conditions. The results of the analysis completed for the Washington Avenue/Walnut Street/Fox Street intersection, again, shows very little change in overall vehicle delay between 2018 Pre- and 2018 Post-development conditions. Both side street approaches at Washington Avenue were found to experience high levels of vehicle delay under both forecast future travel conditions. The high levels of vehicle delay are typically experienced on all minor street approaches to busy urban arterial roadways.

4. A 2014 Traffic Signal Warrant Study was completed for the Washington Avenue/Walnut Street/Fox Street intersection to determine if sequenced traffic control signals were warranted at the intersection. That study concluded average 2014 traffic loadings measured at the intersection were less than the minimum requirements established in the 2009 Manual on Uniform Traffic Control Devices for signalization of an intersection.

Summary of All Intervals

Run Number	1	4	5	6	7	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1879	1898	1878	1900	1933	1897
Vehs Exited	1878	1884	1856	1886	1925	1886
Starting Vehs	39	30	30	29	33	31
Ending Vehs	40	44	52	43	41	42
Travel Distance (mi)	884	889	878	898	907	891
Travel Time (hr)	37.4	38.1	37.7	39.1	39.9	38.4
Total Delay (hr)	4.0	4.6	4.6	5.2	5.6	4.8
Total Stops	449	447	445	466	478	457
Fuel Used (gal)	29.4	29.6	29.2	30.3	30.5	29.8

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	4	5	6	7	Avg
Vehs Entered	1879	1898	1878	1900	1933	1897
Vehs Exited	1878	1884	1856	1886	1925	1886
Starting Vehs	39	30	30	29	33	31
Ending Vehs	40	44	52	43	41	42
Travel Distance (mi)	884	889	878	898	907	891
Travel Time (hr)	37.4	38.1	37.7	39.1	39.9	38.4
Total Delay (hr)	4.0	4.6	4.6	5.2	5.6	4.8
Total Stops	449	447	445	466	478	457
Fuel Used (gal)	29.4	29.6	29.2	30.3	30.5	29.8

3: Sheridan Street & Cumberland Ave Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.2
Total Del/Veh (s)	0.3	0.2	4.7	4.3	1.1

8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.1
Total Del/Veh (s)	0.3	0.2	4.3	3.2	0.7

13: Washington Avenue & Walnut Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.7	0.5
Total Del/Veh (s)	37.2	0.6	2.4	6.0

15: Washington Avenue & Fox Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.3	0.0	0.1
Total Del/Veh (s)	26.7	5.6	0.7	4.1

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	8.6

Intersection: 3: Sheridan Street & Cumberland Ave

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	19	40	36
Average Queue (ft)	1	21	18
95th Queue (ft)	11	46	44
Link Distance (ft)	912	492	462
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	17	36	31
Average Queue (ft)	1	14	8
95th Queue (ft)	10	39	31
Link Distance (ft)	671	510	446
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Washington Avenue & Walnut Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	198	25	113
Average Queue (ft)	83	1	13
95th Queue (ft)	164	11	67
Link Distance (ft)	1019	32	1062
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Washington Avenue & Fox Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	146	180	36
Average Queue (ft)	62	58	5
95th Queue (ft)	117	128	23
Link Distance (ft)	1048	1764	32
Upstream Blk Time (%)			0
Queuing Penalty (veh)			2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 2

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1868	1921	1908	1903	1892	1901
Vehs Exited	1874	1922	1917	1891	1870	1895
Starting Vehs	39	44	43	30	30	37
Ending Vehs	33	43	34	42	52	40
Travel Distance (mi)	876	906	909	892	878	892
Travel Time (hr)	37.5	39.4	40.8	38.6	37.7	38.8
Total Delay (hr)	4.4	5.2	6.6	4.9	4.5	5.1
Total Stops	470	475	515	456	476	478
Fuel Used (gal)	29.3	30.9	30.8	29.8	29.2	30.0

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1868	1921	1908	1903	1892	1901
Vehs Exited	1874	1922	1917	1891	1870	1895
Starting Vehs	39	44	43	30	30	37
Ending Vehs	33	43	34	42	52	40
Travel Distance (mi)	876	906	909	892	878	892
Travel Time (hr)	37.5	39.4	40.8	38.6	37.7	38.8
Total Delay (hr)	4.4	5.2	6.6	4.9	4.5	5.1
Total Stops	470	475	515	456	476	478
Fuel Used (gal)	29.3	30.9	30.8	29.8	29.2	30.0

3: Sheridan Street & Cumberland Ave Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	0.4	0.2	4.7	4.3	1.2

8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.1
Total Del/Veh (s)	0.3	0.3	4.1	3.0	0.8

13: Washington Avenue & Walnut Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.8	0.5
Total Del/Veh (s)	36.3	0.6	2.7	6.2

15: Washington Avenue & Fox Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.3	0.0	0.1
Total Del/Veh (s)	29.0	7.0	0.8	4.7

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	9.1

Intersection: 3: Sheridan Street & Cumberland Ave

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	17	41	45
Average Queue (ft)	1	22	22
95th Queue (ft)	11	46	47
Link Distance (ft)	912	492	462
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	6	6	31	31
Average Queue (ft)	0	1	18	6
95th Queue (ft)	4	7	43	27
Link Distance (ft)	671	784	510	446
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Washington Avenue & Walnut Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	190	15	87
Average Queue (ft)	83	0	15
95th Queue (ft)	162	8	59
Link Distance (ft)	1019	32	1062
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Washington Avenue & Fox Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	169	206	43
Average Queue (ft)	67	62	6
95th Queue (ft)	128	146	27
Link Distance (ft)	1048	1764	32
Upstream Blk Time (%)			0
Queuing Penalty (veh)			2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 2

Summary of All Intervals

Run Number	3	4	5	6	7	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2151	2105	2150	2208	2135	2151
Vehs Exited	2163	2121	2144	2210	2137	2156
Starting Vehs	53	52	38	47	41	43
Ending Vehs	41	36	44	45	39	40
Travel Distance (mi)	994	973	1007	1028	983	997
Travel Time (hr)	43.0	42.3	44.7	46.3	42.5	43.7
Total Delay (hr)	5.2	5.3	6.3	7.3	5.0	5.8
Total Stops	429	463	502	483	417	459
Fuel Used (gal)	33.2	32.6	33.9	34.9	33.0	33.5

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	3	4	5	6	7	Avg
Vehs Entered	2151	2105	2150	2208	2135	2151
Vehs Exited	2163	2121	2144	2210	2137	2156
Starting Vehs	53	52	38	47	41	43
Ending Vehs	41	36	44	45	39	40
Travel Distance (mi)	994	973	1007	1028	983	997
Travel Time (hr)	43.0	42.3	44.7	46.3	42.5	43.7
Total Delay (hr)	5.2	5.3	6.3	7.3	5.0	5.8
Total Stops	429	463	502	483	417	459
Fuel Used (gal)	33.2	32.6	33.9	34.9	33.0	33.5

3: Sheridan Street & Cumberland Ave Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.2
Total Del/Veh (s)	0.6	0.3	6.2	4.9	1.1

8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.1
Total Del/Veh (s)	0.4	0.1	4.9	4.1	0.9

13: Washington Avenue & Walnut Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.4	0.1
Total Del/Veh (s)	25.2	0.7	3.2	3.0

15: Washington Avenue & Fox Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.8	0.0	0.5
Total Del/Veh (s)	50.6	5.4	0.6	8.6

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	9.1

Intersection: 3: Sheridan Street & Cumberland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	40	19	40	54
Average Queue (ft)	2	1	18	20
95th Queue (ft)	17	9	44	48
Link Distance (ft)	912	914	492	462
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	6	40	35
Average Queue (ft)	0	18	14
95th Queue (ft)	6	44	40
Link Distance (ft)	671	510	446
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Washington Avenue & Walnut Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	107	32	178
Average Queue (ft)	51	3	41
95th Queue (ft)	93	17	124
Link Distance (ft)	1019	32	1062
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		1	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Washington Avenue & Fox Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	232	246	26
Average Queue (ft)	99	50	1
95th Queue (ft)	195	153	11
Link Distance (ft)	1048	1764	32
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1

Summary of All Intervals

Run Number	3	4	5	6	7	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2184	2151	2168	2235	2160	2182
Vehs Exited	2197	2167	2167	2237	2170	2186
Starting Vehs	57	52	44	47	51	47
Ending Vehs	44	36	45	45	41	41
Travel Distance (mi)	1007	996	1014	1043	995	1011
Travel Time (hr)	45.8	44.3	45.8	47.0	43.7	45.3
Total Delay (hr)	7.5	6.4	7.1	7.4	5.7	6.8
Total Stops	471	467	514	507	435	481
Fuel Used (gal)	34.3	33.7	34.4	35.5	33.5	34.3

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	3	4	5	6	7	Avg
Vehs Entered	2184	2151	2168	2235	2160	2182
Vehs Exited	2197	2167	2167	2237	2170	2186
Starting Vehs	57	52	44	47	51	47
Ending Vehs	44	36	45	45	41	41
Travel Distance (mi)	1007	996	1014	1043	995	1011
Travel Time (hr)	45.8	44.3	45.8	47.0	43.7	45.3
Total Delay (hr)	7.5	6.4	7.1	7.4	5.7	6.8
Total Stops	471	467	514	507	435	481
Fuel Used (gal)	34.3	33.7	34.4	35.5	33.5	34.3

3: Sheridan Street & Cumberland Ave Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.2	0.1	0.1	0.2
Total Del/Veh (s)	0.7	0.3	6.3	4.9	1.2

8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.2
Total Del/Veh (s)	0.4	0.1	4.6	4.2	0.9

13: Washington Avenue & Walnut Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.4	0.1
Total Del/Veh (s)	28.2	0.8	3.4	3.4

15: Washington Avenue & Fox Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.8	0.0	0.5
Total Del/Veh (s)	68.7	5.5	0.6	10.5

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	10.6

Intersection: 3: Sheridan Street & Cumberland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	45	19	40	62
Average Queue (ft)	3	1	17	22
95th Queue (ft)	20	10	43	50
Link Distance (ft)	912	914	492	462
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	12	36	35
Average Queue (ft)	1	18	13
95th Queue (ft)	8	44	39
Link Distance (ft)	671	510	446
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Washington Avenue & Walnut Street

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	112	42	178
Average Queue (ft)	55	2	43
95th Queue (ft)	95	18	129
Link Distance (ft)	1019	32	1062
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		1	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Washington Avenue & Fox Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	316	188	30
Average Queue (ft)	120	53	2
95th Queue (ft)	258	142	15
Link Distance (ft)	1048	1764	32
Upstream Blk Time (%)			0
Queuing Penalty (veh)			1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1

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Geotechnical Report

Proposed Apartment Building
155 Sheridan Street, Portland, Maine

Client
BD Sheridan LLC
1266 Furnace Brook Parkway
Suite 300
Quincy, MA 02169

SUMMIT
GEOENGINEERING SERVICES

Project #: 16030
Date: 5/15/17

145 Lisbon Street (PO Box 7216) Lewiston, Maine 04243 | (207) 576-3313
173 Pleasant Street Rockland, Maine 04841 | (207) 318-7761
www.summitgeoeng.com

May 15, 2017
Summit #16030

BD Sheridan LLC
1266 Furnace Brook Parkway
Suite 300
Quincy, MA 02169
Attn: Rich and Bernie

Reference: Geotechnical Engineering Report – Proposed Apartment Building
155 Sheridan Street, Portland, Maine

Dear Rich and Bernie;

Summit Geoengineering Services, Inc. (SGS) has completed a geotechnical investigation for the proposed apartment building at the site referenced above. Our scope of services included the drilling of 3 borings within the proposed development area, performing laboratory testing on collected samples, and preparing this geotechnical report summarizing our findings and providing geotechnical recommendations.

Our scope of services for this project did not include an environmental site assessment or further investigation for the presence or absence of hazardous or toxic material on, below, or around the site. Any statements in this report, or on the soil boring logs, regarding odors or unusual and suspicious conditions observed are for informational purposes and are not intended to constitute an environmental assessment.

1.0 Project and Site Description

We understand that the project consists of the construction of a new 4 story apartment building on the east side of Sheridan Street with a footprint of approximately 8,500 square feet. We further understand that the first floor will consist of at-grade parking and will have a finish floor elevation (FFE) of 111.50'. The three floors above the parking floor will consist of apartments units. The building will be accessed via Sheridan Street.

Based on the Site Grading Plan prepared by Acorn Engineering, existing grades at the site slope steeply upwards in a northeasterly direction starting at an elevation of 114 feet at Sheridan Street up to an elevation of approximately 156 feet at the top of the slope. A permanent soldier pile and lagging wall will be constructed along the south, east, and north portions of the site to

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retain the existing slope with a maximum exposed height of 24 feet. There will be a flat benched lawn area between the pile/lagging wall and the east wall of the new building with a length of approximately 25 feet. A combination of surface grading and retaining walls will be used to slope down along the north and south sides of the building. There will be an elevated stairwell at the eastern corner of the lot connecting Sumner Park to the third floor of the new building. We understand that a cast in place wall will be constructed to create this stairwell area.

2.0 Subsurface Explorations and Laboratory Testing

2.1 Subsurface Explorations

SGS observed the subsurface conditions at the site with the drilling of 3 borings on March 10, 2016. All explorations were performed by Northern Test Boring, under direct supervision of SGS, using a Diedrich D-50 tracked drill rig. Borings B-1, B-2, and B-3 were terminated in the native glacial till at depths of 50 feet, 32 feet, and 12 feet, respectively. All borings were advanced using rotary wash 4” inside diameter steel casing. During the borings, split spoon sampling (*ASTM D1586*) was performed at 5 foot intervals. An observation well was installed in Boring B-1 to a depth of 41.5 feet below ground surface. The well consists of 2” PVC screen for the bottom 10 feet and 2” PVC riser from the top of the screen to the ground surface.

The borings were located by SGS prior to drilling by taping/pacing from existing features. The borings were survey located by Titcomb Associates after completion. These locations can be seen in the SGS Exploration Plan in Appendix A. The boring logs can be found in Appendix B.

2.2 Laboratory Testing

Laboratory testing was performed on fill/reworked native soil specimens collected from split spoon samples obtained during Boring B-2 at depth of 5’ to 7’ and 10’ to 12’. One Grain Size Analysis (*ASTM D422*), one Atterberg Limit Test (*ASTM D4318)*, and one Direct Shear Test (*ASTM D3080*) was performed on samples of the fill/reworked native soil. Due to the similarity of the soil composition between samples S-2 (5’ – 7’ depth) and S-3 (10’ – 12’ depth), these samples were combined in order to create a representative sample of the entire fill/reworked native soil layer. A summary of the results are presented below. Detailed results can be found in Appendix C.

Table 1: Laboratory Test Results

GRAIN SIZE ANALYSIS RESULTS – FILL/REWORKED NATIVE						
Boring	**Sample**	**Depth (ft.)**	**Composition**			**USCS**
			Gravel	Sand	Silt/Clay	
B-2	S-2 & S-3	5 to 12	9.8%	51.4%	38.8%	SM-SC

USCS = Unified Soil Classification System, SM-SC = Silty Sand/Clayey Sand

Fill/Reworked Native (B-2, S-2 and S-3, 5' to 12'):

Liquid Limit: 17
Plastic Limit: 13
Plasticity Index: 4
Drained Friction Angle (ϕ'): 43.3^o
Cohesion Intercept (c): 0 psf

3.0 Subsurface Conditions

3.1 Soil

The following subsurface layers and thicknesses were encountered in our geotechnical investigation, starting from the ground surface:

- ***Topsoil***, 24 inches (absent in Boring B-3)
- ***Fill or Fill/Reworked Native*** 6.0 feet to 12.0 feet
- ***Glacial Till***, greater than 4 feet to greater than 42 feet

Topsoil. The topsoil at the site was encountered in Borings B-1 and B-2 and is described as dark brown to black silt with little fine sand, trace clay, and frequent rootlets and organics. The topsoil is very loose to soft, moist, and classifies as ML in accordance with the Unified Soil Classification System (USCS).

Fill or Fill/Reworked Native. The fill and fill/reworked native soil was encountered in all of the borings directly below the topsoil, where present. In general, the fill encountered in Borings B-1 and B-3 (top and bottom of the slope, respectively) consists of granular/man-made fill and the fill encountered in Boring B-2 (middle of slope) consists primarily of reworked native soil.

The fill encountered in Borings B-1 and B-3 ranges in thickness from 6 feet to 8 feet and is described as dark tan to black silty sand with no to trace clay. Wood pieces were encountered

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at the bottom of the fill layer in Boring B-1 and few glass pieces were intermixed in the fill layer in Boring B-3. Standard Penetration Number (SPT-N) of the fill ranges from 4 to 25 with an average of 11 blows per foot (bpf). The fill is very loose to compact, humid to moist, and classifies as SM in general accordance with USCS.

The fill/reworked native soil encountered in Boring B-2 is 12 feet thick and is described as olive gray clayey sand with little to some silt and little gravel. The two SPT-N values in the fill/reworked native are 9 and 23. Laboratory grain size testing indicated the composition of the fill/reworked native to be 9.8% gravel, 51.4% sand, and 38.8% fines. Atterberg limit testing on the fines content of the soil resulted in a Liquid Limit of 17, a Plastic Limit of 13, and a Plasticity Index of 4. Direct shear results indicate an internal effective friction angle of 43.3 degrees with an assumed cohesion intercept of 0 psf. The soil is humid, stiff, and classifies as SM-SC in general accordance with USCS.

Glacial Till. The glacial till layer was encountered in all of the borings, ranging from 8 feet to 14 feet below ground surface and extends to the bottom of all of the explorations where the borings were terminated. The glacial till is described as gray to gray-brown silt with little to some clay, sand, and gravel. The layer is compact to very dense, humid to wet, and contains cobbles throughout. SPT-N in the glacial till ranges from 22 to greater than 100 with an approximate average of 54 blows per foot.

We have prepared a cross section showing the interpreted subsurface conditions for soil layering and groundwater elevations in Appendix A.

3.2 Groundwater

On the day of the explorations, groundwater was encountered in Borings B-1 and B-2 (observed on the collected samples) at depths of 11.0 feet and 20.0 feet, respectively (elevation 119.5 feet to 144.0 feet). Groundwater appears to start in the upper portion of the glacial till layer, approximately following the slope of the ground surface.

An observation well was installed in Boring B-1 to a depth of 41.5 feet below ground surface. The well consists of 2” PVC screen for the bottom 10 feet and 2” PVC riser from the top of the screen extending up to the ground surface. See the table below for groundwater measurements collected at various dates after the well was installed.

Table 2: Observation Well Readings

OBSERVATION WELL MEASUREMENTS – BORING B-1		
Date	**Depth to Groundwater (ft)**	**Approximate Groundwater Elevation (ft.)**
3/12/16	11.2 ft.	143.8 ft
4/19/2016	10.7 ft.	144.3 ft
6/16/2016	11.6 ft.	143.4 ft
4/3/2017	10.0 ft.	145.0 ft

3.3 Bedrock

Bedrock was not encountered in the explorations at the site (which were terminated at elevation 102.5 feet to 107.5 feet). Mapping by the Maine Geological Survey indicates the bedrock at the site is of the Precambrian Z Spring Point Formation consisting of green schist and amphibolites facies ranging from mafic to felsic volcanic rock.

4.0 Geotechnical Evaluation

Based on our understanding of the proposed project, we believe that the new building and the associated development is feasible from a geotechnical standpoint. The building can be constructed using conventional spread footings on frost wall with a slab-on-grade. The proposed retaining walls should be designed using the recommendation provided in this report. There geotechnical challenges associated with the proposed development include:

- A deep excavation for the construction of the new building foundation. These walls will also act as permanent retaining walls along the existing slopes surrounding the site. Maximum exposed retaining wall heights for various walls throughout the site will include the following:
    - Pile and lagging wall: 27 feet
    - Cast-in-place concrete walls in northeast corner: 24 feet
    - Cast-in-place concrete walls for building foundation: 20 feet
    - Segmental block retaining walls: 12 feet
- Presence of groundwater within the building foundation excavation
- Presence of groundwater at and above the finish floor elevation (FFE).
- Potential for subgrade softening of the exposed silty/clayey glacial till in the building foundation excavations

Due to the sloping existing topography, multiple retaining walls will be required to create the flat building area for construction of the foundation. Based on preliminary concepts proposed by Structural Integrity, Inc. and the grading plan prepared by Acorn Engineering, we understand that this will be accomplished using a combination of pile and lagging walls, cast-in-place concrete walls, and segmental block retaining walls.

We understand that soil anchors are being avoided if possible for the new project. We anticipate that to complete the building foundation construction, a relatively complex staged construction scheme will need to be developed, utilizing internally braced systems with concrete or sheet pile deadmen. We have attempted to cover all geotechnical design recommendations for potential bracing/shoring schemes within this report. If additional recommendations are needed based on updated or refined concepts, we should be notified in order to provide these. Also, final design computations for the shoring and retaining walls should be provided to us so we can verify that the assumed soil and water conditions match the recommendations provided in this report. Geotechnical design parameters have been provided in Section 6.0

Groundwater was encountered at or near the surface of the glacial till layer, which is approximately 6 to 12 feet below the existing ground surface. We anticipate that groundwater will be encountered within the building excavation and will require de-watering for construction. Groundwater will also have to be considered in the design of the floor slab and retaining walls.

The native glacial till soil encountered in the explorations was dense, gravelly silt with little clay and sand. We believe that this soil will provide adequate support for the proposed building, but may be susceptible to softening if exposed to rainwater or groundwater seepage through the exposed surface. Proper subgrade improvement recommendations have been provided in Section 5.1.

5.0 Geotechnical Recommendations – Proposed Building Foundation

5.1 Foundation Bearing Pressure

Based on the proposed grades, we anticipate that the native glacial till soil will be exposed beneath footings for the building. Assuming that the recommendations below are followed, we recommend an allowable bearing pressure of 3,000 psf be used to proportion the footings for the new building. If the recommendations provided below are followed, we anticipate that post construction total settlement will be less than 1 inch and differential settlement within the building will be less than a deflection of 1/300 (δ/L deflection divided by span length) between

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column footings. The following recommendations apply to the footings construction at both sites:

- All topsoil, pavement, and existing building elements are removed from within the proposed building footprint prior to excavation of the footing trenches.
- All footings exposed to freezing temperatures are constructed at the recommended frost protection depth of 4.0 feet below exterior finish grade. Interior footings should be constructed at a minimum depth of 2.0 feet below FFE.
- If the exposed soil at the bottom of footing trenches is granular (no clay), it is proofrolled with a minimum of 4 passes with a large plate compactor or vibratory roller. Proofrolling should be performed on dry, unfrozen soils. The groundwater surface should be dewatered a minimum of 12" below the bottom of the new footings during proofrolling and construction of the footings. If the exposed soil is cohesive, proofrolling of the subgrade is not necessary.
- If soft/unsuitable soils or man-made materials are encountered at the bottom of the excavation, they should be removed and replaced with ¾" crushed stone prior to proofrolling. If a significant amount of soft/unsuitable soils are encountered, SGS should be notified.

5.2 Frost Protection

The design air freezing index for the Portland area is approximately 1,200 degree F days (10 year, 90% probability). Based on this, a total of 4.0 feet of frost protection should be provided for the exterior footings and interior footings exposed to freezing temperatures. Interior footings constructed in continuously heated areas can be constructed a depth of 2.0 feet below interior grade.

We recommend that the exterior of all foundation elements exposed to freezing temperatures be backfilled with Foundation Backfill (FB). The portion of FB passing the 3" sieve size should meet the following gradation requirements:

Table 3: Foundation Backfill - Soil Gradation

FOUNDATION BACKFILL	
Sieve Size	**Percent Finer**
3 inch	100
¼ inch	25 to 100
No. 40	0 to 50
No. 200	0 to 6*

Reference: MDOT Specification 703.06, Type E (2014)
*Reduced from 7% to 6% from Type E Standard

Maximum particle size should be limited to 6 inches. Foundation backfill should be placed in 6 to 12 inch lifts and compacted to 95% of its optimum dry density determined in accordance with ASTM D1557. The compaction requirement can be reduced to 90% beneath landscaped areas.

5.3 Seismic Design

Based on the summary of field results we recommend Site Class D be used in accordance with the 2012 or 2015 International Building Code. The following seismic site coefficients should be used:

Table 4: Seismic Design Coefficients

SUBGRADE SITE SEISMIC DESIGN COEFFICIENTS - IBC	
Seismic Coefficient	**Site Class D**
Short period spectral response (S_S)	0.240
1 second spectral response (S_1)	0.078
Maximum short period spectral response (S_{MS})	0.385
Maximum 1 second spectral response (S_{M1})	0.187
Design short period spectral response (S_{DS})	0.256
Design 1 second spectral response (S_{D1})	0.125

Subgrade conditions are not considered susceptible to liquefaction during seismic events.

5.4 Groundwater Control

Based on observed groundwater levels, groundwater is anticipated to be above the finish floor elevation (FFE) for the proposed building. Based on this we recommend perimeter underdrains

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be installed along the entire exterior foundation walls for the buildings. Perimeter underdrains should consist of 6 inch rigid perforated PVC placed adjacent to the exterior footings and surrounded by a minimum of 12 inches of crushed stone wrapped in filter fabric to prevent clogging from the migration of the fine soil particles in the foundation backfill soils. The underdrain pipe should outlet to a location where it will be free flowing. Where exposed at the ground surface, the ends of pipes should be screened or otherwise protected from entry and nesting of wildlife, which could cause clogging.

5.5 Ground Floor Slab-on-Grade and/or Pavement

This section provides recommendations for a concrete slab-on-grade or pavement surface in the event that both types of surface are used for the ground floor area. Additionally, this section will provide recommendations for both heated and unheated conditions. Assuming that the FFE is at or near 111.5 feet, we anticipate that native glacial till will be exposed in the slab excavation.

5.5.1 Concrete Slab-on-Grade

We recommend that the slab for the new building be constructed on a minimum of 12” of Structural Fill (SF, see table below) or ¾” crushed stone. We anticipate that the exposed native till will be stiff, cohesive soil and will not require proofrolling. However, if the exposed soil becomes softened from exposure to water (i.e., rain water, surface runoff, seeping groundwater, etc.), all softened areas should be overexcavated and replaced with ¾” crushed stone. If the slab area is unheated, the slab subgrade thickness should be increased to 24” and the slab should be constructed on 2” of rigid insulation. Alternatively, the subgrade soil thickness could be increased to 48” (including the slab) if rigid insulation is not used.

The portion of SF passing the 3” sieve shall meet the following gradation requirements:

Table 5: Structural Fill - Soil Gradation

STRUCTURAL FILL (SF)	
Sieve Size	**Percent finer**
3 inch	100
½ inch	35 to 80
¼ inch	25 to 65
No. 40	0 to 30
No. 200	0 to 7

Reference: MDOT Specification 703.06, Type D

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The maximum SF particle size should be limited to 6 inches. Structural Fill should be placed in 6 to 12 inch lifts and should be compacted to a minimum of 95 percent of its maximum dry density, determined in accordance with ASTM D1557. If ¾" crushed stone is used, it should be placed in 12" lifts and be compacted with a minimum of 4 passes in each of two perpendicular directions with a vibratory roller. For the conditions described above, the slab can be designed using a subgrade modulus value of 175 pci.

The mean annual freezing index for the Portland area is estimated at 1,200 degree days. Based on the subgrade and mean annual freezing index, the anticipated mean annual frost penetration depth is 36 inches.

5.5.2 Pavement

The mean annual freezing index for the Portland area is estimated at 1,200 degree days. Based on the subgrade and mean annual freezing index, the anticipated mean annual frost penetration depth is 36 inches.

We recommend a minimum total section thickness of 18 inches for pavement in unheated areas. The Subbase soil thickness can be reduced to 6" if the area is continuously heated. We further recommend that the pavement section consist of the following materials:

Table 6: Pavement Section Thicknesses

MATERIAL	THICKNESS (in)	SPECIFICATION
Asphalt Surface Course	1	MDOT 703.09 Type 9.5 mm or Type 12.5 mm
Asphalt Binder Course	2	MDOT 703.09 Type 19 mm
Base Soil	3	MDOT 703.06 Type A
Subbase Soil	12	MDOT 703.06 Type D

For portions of the pavement subjected to light traffic loads of cars and light trucks we recommend MDOT Type 9.5mm surface course. The following specifications are for MDOT base and subbase gravel:

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Table 7: Pavement Base and Subbase Gradations

SIEVE SIZE	Percent Passing a 3-inch Sieve	
	MDOT Type A (Base)	MDOT Type D (Subbase)
3 Inch	100	100
2 Inch	100	--
½ Inch	45 – 70	35 – 80
¼ Inch	30 – 55	25 – 65
No. 40	0 – 20	0 – 30
No. 200	0 – 6	0 – 7

Reference: MDOT Specification 703.06, Aggregate for Base and Subbase (2014)

The recommendations above can be used for exterior pavement areas.

6.0 Retaining Wall Design Recommendations

There are various retaining walls proposed throughout the new development area. Based on preliminary concepts proposed by Structural Integrity, Inc. and the grading plan prepared by Acorn Engineering, we understand that retaining walls at the new site may consist of pile and lagging walls, cast-in-place concrete walls, and segmental block retaining walls. The following table presents soil parameters to be used in the structural design of the retaining walls:

Table 8: Retaining Wall Design Parameters

GEOTECHNICAL PARAMETERS – RETAINING WALL DESIGN				
PARAMETER	**EXISTING FILL/REWORKED NATIVE**	**GLACIAL TILL**	**[1]STRUCTURAL FILL**	**[1]GRAVEL BORROW and FOUNDATION BACKFILL**
Total Unit Weight (γ_t)	125 pcf	130 pcf	135 pcf	130 pcf
Submerged Unit Weight (γ_B)	63 pcf	68 pcf	73 pcf	68 pcf
Effective Friction Angle (ϕ')	[2]33°	36°	34°	32°
Cohesion (c)	0 psf	1,000 psf	0 psf	0 psf
Interface Friction Angle (δ), Precast Conc.	17°	22°	24°	22°
Interface Friction Angle (δ), C.I.P. Conc.	19°	26°	28°	26°
Interface Friction Angle (δ), Wood	19°	24°	25°	24°
Adhesion (c_a)	0 psf	0 psf	0 psf	0 psf

[1]**Note:** Soil Parameters for Structural Fill and Gravel Borrow assume that the fill is placed in 12" maximum lifts and compacted to 95% of the dry density in accordance with ASTM D1557
[2]**Note:** Friction angle of existing fill/reworked native soil was determined using a Factor of Safety of 1.30 on the laboratory test result. The purpose of the FOS is to account for soil variability and for scaling factor from small-scale (laboratory) results to large scale (field) results.

Active and passive earth pressures can be calculated based on the above soil properties and the corresponding backslope/toeslope angles behind and in front of the walls. Earth pressures can be calculated using the Rankine or the Coulomb theories, whichever the designer feels is more appropriate. The Rankine theory will provide a more conservative coefficient that the Coulomb theory (wall batter and soil-wall interface friction are ignored using Rankine). Equivalent fluid pressure on the foundation walls can be calculated by multiplying the applicable earth pressure coefficient by the soil unit weight.

Active earth pressure can be used for calculating soil load on walls which are designed to anticipate a horizontal deflection of the following magnitude:

Table 9: Required Deflections for Active Earth Pressure Design

RETAINED SOIL	REQUIRED DEFLECTION (% of Total Height)
Native Glacial Till	1.0% of total wall height
Structural Fill	0.05% of total wall height
Gravel Borrow	0.20% of total wall height
Foundation Backfill	0.20% of total wall height

If the proposed retaining wall is restricted against horizontal deflection or is not designed to accommodate the deflections in the table above, at-rest earth pressure should be used in the wall design.

6.1 Segmental Block Retaining Walls

Multiple segmental block retaining walls are proposed along both sides of the new building with a maximum exposed height of approximately 12 feet. We recommend that the segmental block walls be designed by a qualified Maine Licensed Professional Engineer. An underdrain system should be provided continuously behind the retaining wall near its base to prevent the buildup of hydrostatic pressures. All underdrains should consist of 4” or 6” rigid perforated PVC surrounded by a minimum of 6 inches of ¾” crushed stone and filter fabric to prevent clogging from the migration of the fine soil particles in the foundation backfill soils. There should be a minimum of 12” of crushed stone behind the entire wall between the back of the concrete and the wall backfill to allow for any infiltrated water behind the wall to drain down to the underdrain pipe. Underdrains should outlet through the end of the walls to a location where the outlet will be free flowing.

All topsoil, loose soil, or organic soil should be removed entirely from within the proposed retaining wall footprint prior to construction of the footing or leveling pad. We anticipate that the retaining walls will be constructed in imported fill after the building foundation is constructed. We recommend that the leveling pad consist of a minimum 12” thick layer of ¾” crushed stone. A geotextile fabric (such as Mirafi 180N) should be used if native soil is located beneath the wall. We recommend that the exposed soil beneath the leveling pad be proofrolled prior to placing the crushed stone. We recommend that the walls be designed using a minimum live load surcharge of 100 psf for temporary construction behind the wall. If applicable, surcharge loading should be increased if higher loads are anticipated behind the wall. Passive resistance of embedded portions of the wall should be ignored.

Segmental block retaining walls should be designed in accordance with the National Concrete Masonry Association (NCMA), 3rd Edition design manual. Soil properties presented in Table 8 can be used in the retaining wall design. Retaining wall backfill for gravity retaining walls and reinforced soil for geogrid reinforced retaining walls should consist of Structural Fill (SF, Table 5) and be compacted to 95% of its maximum dry density in accordance with ASTM D1557. The maximum particle size should be limited to 4 inches.

The retaining wall can be designed using an allowable net bearing pressure of 3,000 psf assuming the recommendations above are followed. Since segmental blocks are tolerable of some differential settlement, the blocks do not need to be constructed to full frost depth. Based on our explorations, we do not believe that a global stability analysis is necessary for the proposed retaining wall. We recommend that the final wall design be made available for SGS to review prior to construction.

6.2 Cast-in-Place Concrete Walls (Building Foundation Walls)

Soil properties presented in Table 8 can be used in the cast-in-place concrete wall designs.

We recommend that retaining walls be backfilled with FB meeting the gradation requirements presented in Section 5.3. FB should be compacted to 95% of its maximum dry density in accordance with ASTM D1557. Geotextile (Mirafi 180N or equivalent) should be placed between the native soil and the FB.

We recommend that underdrains be installed at the base of retaining walls to prevent the build-up of hydrostatic pressures. The underdrain should consist of 6” rigid perforated PVC surrounded by a minimum of 6 inches of crushed stone and filter fabric to prevent clogging from the migration of the fine soil particles in the foundation backfill soils. The underdrain pipes should outlet to a location where they will be free flowing.

6.3 Pile and Lagging Wall

We understand that a pile and lagging wall will be constructed along the south, east, and north sides of the site. We further understand that the pile and lagging wall will be used for the temporary excavation for construction of the building foundation, but will also remain in place permanently as a retaining wall for the lawn area at the east end of the site. Permanent exposed wall heights are a maximum of approximately 27 feet.

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We understand that soil anchors are being avoided if possible for the new project. We anticipate that to complete the building foundation construction, a relatively complex staged construction scheme will need to be developed, utilizing internally braced systems with concrete or sheet pile deadmen used in conjuction with the pile and lagging wall. The soil properties provided in Table 8 can be used for the design of the pile and lagging wall.

We recommend that the pile and lagging walls be designed to account for differential hydrostatic load behind the wall at an elevation of 140.0 feet.

7.0 Stormwater Considerations

Based on the "Stormwater Details" sheet contained in the plan set prepared by Acorn Engineering, we understand that two underdrained subsurface sand filter (USSF) with StormTech MC-4500 storage units are proposed on the east end of the new building. We further understand that the bottom of the USSF units is 120.2 feet, approximately 9 feet above the slab FFE.

If installed correctly, the perimeter drains around the building foundation walls will control groundwater below the FFE of 111.5 feet. Therefore groundwater is not anticipated to impact the USSF units.

8.0 Earthwork Considerations

The table below summarizes the OSHA general excavation guidelines for occupied excavations for the soils encountered in our geotechnical explorations. All permissible slopes below apply to soil above groundwater table:

Table 10: OSHA Permissible Slopes

OSHA Excavation Slopes		
Soil	**OSHA Classification**	**Permissible Slope**
Existing Fill/Reworked Native	Type B	1H:1V
Glacial Till	Type A	0.75H:1V
Granular Fill	Type C	1.5H:1V

The above permissible slopes are for soil above the groundwater table. If any excavated soil is found to be below the groundwater table and is not de-watered, the permissible slope for the submerged soil is 1.5H to 1V. Any excavations greater than 20 feet should be designed by a qualified Maine Licensed Professional Engineer.

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After construction of the building foundation, backfilling will be required on the west, north, and east sides of the building. The exterior of the foundation walls should be backfilled with Foundation Backfill (see Table 3), and areas beneath proposed segmental block retaining walls should be backfilled with Structural Fill (see Table 5). All other areas can be backfill with Gravel Borrow (GB). The portion of SF passing the 3" sieve shall meet the following gradation requirements:

Table 11: Gravel Borrow - Soil Gradation

GRAVEL BORROW (GB)	
Sieve Size	**Percent finer**
¼ inch	0 to 70
No. 200	0 to 10.0

Reference: MDOT Specification 703.19, Gravel Borrow

The maximum GB particle size should be limited to 6 inches. GB should be placed in 6 to 12 inch lifts and should be compacted to a minimum of 95 percent of its maximum dry density, determined in accordance with ASTM D1557.

Surface water should be redirected from excavation areas. Where softened, we recommend the subgrade at the base of the excavation be over-excavated and replaced with a minimum of 12 inches of Crushed Stone. Crushed Stone should be should be tamped to lock the stone structure together. Crushed Stone should meet the following gradation specification:

Table 12: 3/4" Crushed Stone Gradation

CRUSHED STONE ¾ INCH	
Sieve Size	**Percent finer**
1 inch	100
¾ inch	90 to 100
½ inch	20 to 55
⅜ inch	0 to 15
No. 4	0 to 5

Reference: MDOT Specification 703.13, Crushed Stone ¾-Inch (2014)

In general, we anticipate that groundwater will enter the excavations. Dewatering may consist of shallow sumps at the base of the excavation. Diversion and control of surface water should be performed to prevent water flow from rain or snowmelt from entering the excavations.

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We recommend that a qualified geotechnical consultant be retained to monitor and test soil materials used during construction and confirm that soil conditions and construction methods are consistent with this report.

9.0 Closure

Our recommendations are based on professional judgment and generally accepted principles of geotechnical engineering and project information provided by others. Some changes in subsurface conditions from those presented in this report may occur. Should these conditions or the proposed development differ from those described in this report, SGS should be notified so that we can re-evaluate our recommendations.

We highly recommend that all retaining wall designs be made available to SGS for review in order to verify that the design conditions are consist with the recommendations provided in this report.

It is recommended that this report be made available in its entirety to contractors for informational purposes and be incorporated in the construction Contract Documents. We recommend that SGS be retained to review final construction documents relevant to the recommendations in this report.

We appreciate the opportunity to serve you during this phase of your project. If there are any questions or additional information is required, please do not hesitate to call.

Sincerely yours,

Mathew Hardison, EI
Geotechnical Engineer

STATE OF MAINE
WILLIAM M. PETERLEIN
5787
LICENSED
PROFESSIONAL ENGINEER

William M. Peterlein, PE
President & Principal Engineer

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APPENDIX A

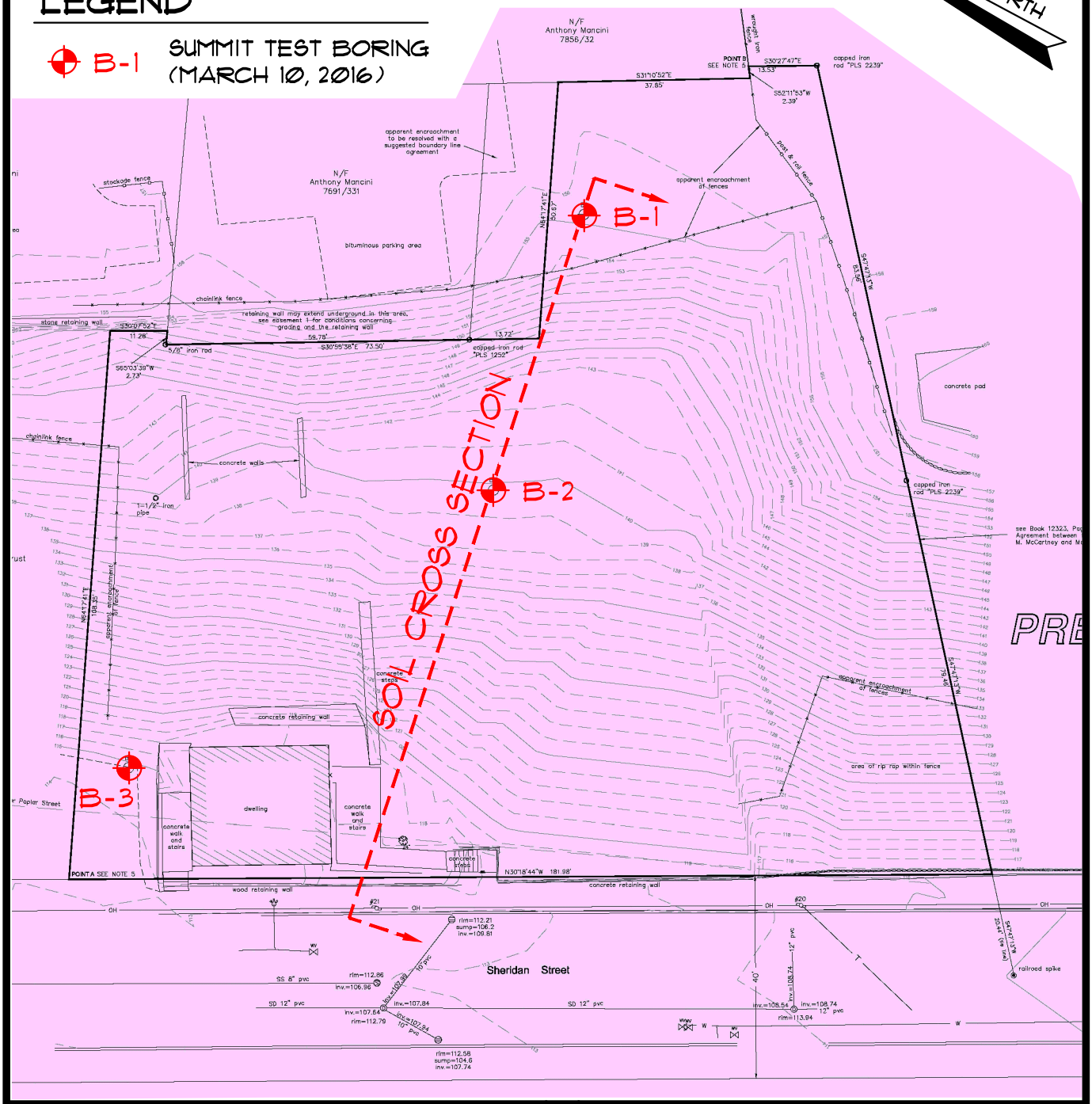
FIGURES

PLAN REFERENCE

"PLAN OF EXISTING CONDITIONS SURVEY", DATED MARCH 4, 2016, PRAPRED BY TITCOMB ASSOCIATES.

LEGEND

B-1 SUMMIT TEST BORING (MARCH 10, 2016)



TEST BORING LOCATION PLAN
PROPOSED RESIDENTIAL BUILDING

153 - 165 SHERIDAN STREET - PORTLAND, MAINE

PREPARED FOR

BD SHERIDAN LLC

DATE: 3-18-2016	DRAWN BY: KRF	CHECKED BY: WMP
JOB: 16030	SCALE: 1" = 30'	FILE: 16030 BOR

145 LISBON ST. - SUITE 601
LEWISTON, ME 04240
Tel.: (207) 576-3313

173 PLEASANT STREET
ROCKLAND, ME 04841
Tel.: (207) 318-7761

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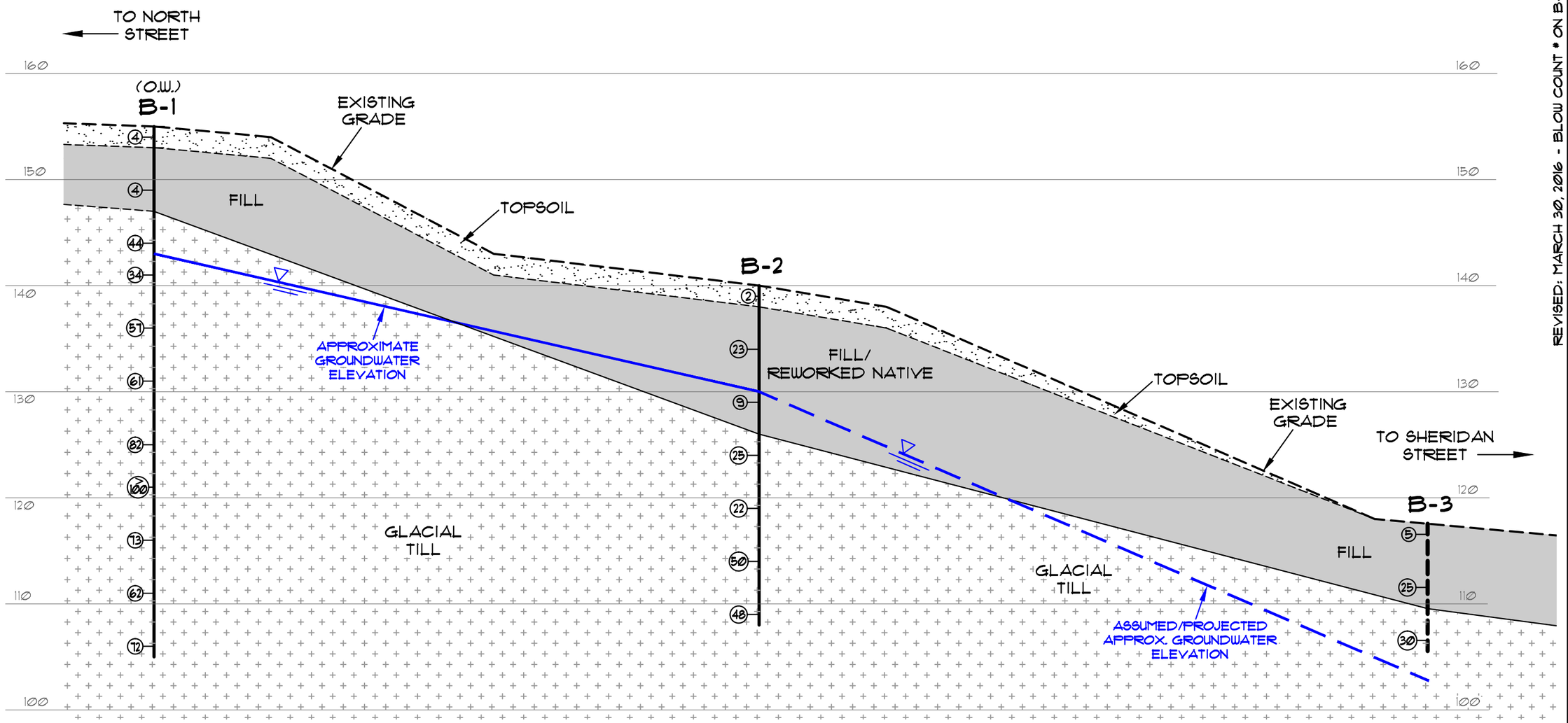


SOIL DESCRIPTION & OSHA SLOPE CLASSIFICATION

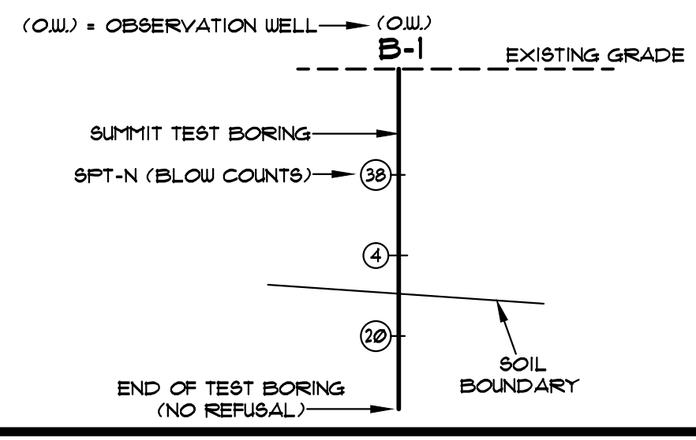
"FILL" - DARK BROWN TO TAN, SILTY SAND OR SANDY SILT, LOOSE TO COMPACT, OCCASIONAL WOOD OR GLASS PIECES. (OSHA TYPE C, 1.5H : 1V)

"FILL/REWORDED NATIVE" - OLIVE GRAY CLAYEY SILT, LITTLE SAND & GRAVEL, STIFF. (OSHA TYPE B, 1H : 1V)

"GLACIAL TILL" - GRAY GRAVELLY SILT, LITTLE SAND & CLAY, COMPACT TO DENSE. (OSHA TYPE A, 0.75H : 1V)

NOTE: ALLOWABLE OSHA SLOPES SHOWN APPLY TO SOIL ABOVE THE GROUNDWATER TABLE AND ARE FOR SHORT-TERM CONSTRUCTION CONDITIONS. OSHA SLOPES BELOW GROUNDWATER ARE 1.5H : 1V. PERMANENT SLOPES MAY BE STEEPER.

LEGEND



THE ACTUAL LOCATION OF THE B-3 TEST BORING IS 40'± TO THE NORTH. DATA WAS EXTRAPOLATED TO THIS LOCATION BASED ON SIMILAR GEOLOGY

SCALE: 1" = 10'

0 5 10 20 30

REVISED: MARCH 30, 2016 - BLOW COUNT * ON B-2

PROJECT: PROPOSED RESIDENTIAL BUILDING
153 - 165 SHERIDAN STREET - PORTLAND, MAINE

CLIENT: BD SHERIDAN LLC

TITLE: SOIL CROSS SECTION

SCALE: 1" = 10'

DRAWN BY: KRF

APPR. BY: WAP

DATE: MARCH 21, 2016

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ROCKLAND, ME 04841
Tel.: (207) 318-7161

PROJ.#: 16030

FIGURE: 1

APPENDIX B

BORING LOGS

EXPLORATION COVER SHEET

The exploration logs are prepared by the geotechnical engineer from both field and laboratory data. Soil descriptions are based upon the Unified Soil Classification System (USCS) per ASTM D2487 and/or ASTM D2488 as applicable. Supplemental descriptive terms for estimated particle percentage, color, density, moisture condition, and bedrock may also be included to further describe conditions.

Drilling and Sampling Symbols:

SS = Split Spoon Sample
UT = Thin Wall Shelby Tube
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RW = Rotary Wash
SV = Shear Vane
PP = Pocket Penetrometer
RC = Rock Core Sample
FV = Field Vane Shear Test
PS = Concrete Punch Sample
Hyd = Hydraulic Advancement of Drilling Rods
Push = Direct Push of Drilling Rods
WOH = Weight of Hammer
WOR = Weight of Rod
PI = Plasticity Index
LL = Liquid Limit
W = Natural Water Content
USCS = Unified Soil Classification System
Su = Undrained Shear Strength
Su(r) = Remolded Shear Strength

Water Level Measurements:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable groundwater levels. In impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations. Groundwater monitoring wells may be required to record accurate depths and fluctuation.

Gradation Description and Terminology:

Boulders:	Over 12 inches
Cobbles:	12 inches to 3 inches
Gravel:	3 inches to No.4 sieve
Sand:	No.4 to No. 200 sieve
Silt:	No. 200 sieve to 0.005 mm
Clay:	less than 0.005 mm

Trace:	Less than 5%
Little:	5% to 15%
Some:	15% to 30%
Silty, Sandy, etc.:	Greater than 30%

Density of Granular Soils and Consistency of Cohesive Soils:

CONSISTENCY OF COHESIVE SOILS		DENSITY OF GRANULAR SOILS	
SPT N-value blows/ft	**Consistency**	**SPT N-value blows/ft**	**Relative Density**
0 to 2	Very Soft	0 to 4	Very Loose
2 to 4	Soft	5 to 10	Loose
5 to 8	Firm	11 to 30	Compact
9 to 15	Stiff	31 to 50	Dense
16 to 30	Very Stiff	>50	Very Dense
>30	Hard		

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	New Apartment Building	Boring #:	B-1 (OW)
Location:	153 - 165 Sheridan Street	Project #:	16030
City, State:	Portland, Maine	Sheet:	1 of 3
		Chkd by:	

Drilling Co:	Northern Test Boring	Boring Elevation:	155.0 ft. +/-
Driller:	Mike Nadeau	Reference:	"Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
Summit Staff:	M. Hardison, E.I.	Date started: 3/10/2016	Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	Diedrich D-50	Diameter:	2"OD/1.5"ID
Method:	3" Case Wash	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/12/2016	11.2 ft.	143.8 ft. +/-	2 days after completion of boring
4/19/2016	10.7 ft.	144.3 ft. +/-	40 days after completion of boring
6/16/2016	11.6 ft.	143.4 ft. +/-	86 days after completion of boring

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/6	0 to 2	3		Dark brown to black SILT, little fine Sand, trace Clay,		
1				2		rootlets and organics, very loose, damp, ML		TOPSOIL
				2				
2				2	153.0'			
3								FILL
4								
5								
	S-2	24/16	5 to 7	1		Dark tan to brown Silty SAND, wood pieces in spoon		
6				2		tip, very loose, humid, SM		
				2				
7				1				
8					147.0'			
						Dense drilling encountered at 8.0' depth		
9								GLACIAL TILL
10								
	S-3	24/24	10 to 12	11		Gray-brown fine Gravelly SILT, little Sand and Clay,	PP >> 9,000 psf	
11				17		hard, humid, ML		
				27			Groundwater	
12				21				
13								
	S-4	24/20	13 to 15	13		same as above, some Cobble pieces	PP >> 9,000 psf	
14				13				
				21				
15				20				
16								
17								
18								
	S-5	24/24	18 to 20	25		Gray-brown Silty GRAVEL, trace Sand and Clay, very		
19				30		dense, humid, GM		
				27				
20				27				
21								
22								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	New Apartment Building	Boring #:	**B-1 (OW)**
Location:	153 - 165 Sheridan Street	Project #:	16030
City, State:	Portland, Maine	Sheet:	2 of 3
		Chkd by:	

Drilling Co:	Northern Test Boring	Boring Elevation:	155.0 ft. +/-
Driller:	Mike Nadeau	Reference:	"Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
Summit Staff:	M. Hardison, E.I.	Date started: 3/10/2016	Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	Diedrich D-50	Diameter:	2"OD/1.5"ID
Method:	3" Case Wash	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/12/2016	11.2 ft.	143.8 ft. +/-	2 days after completion of boring

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
23								
	S-6	24/28	23 to 25	13		Gray Gravelly SAND, little Silt, trace Clay, very dense, humid to moist, SP-SM		GLACIAL TILL
24				22				
				39				
25				29				
26								
27								
28								
29								
	S-7	24/20	29 to 31	40		same as above, little Clay, some Silt		
30				34				
				48				
31				47				
32								
33								
	S-8	24/20	33 to 35	33		Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML		
34				37				
				50/4"				
35								
36								
37								
38								
	S-9	24/18	38 to 40	27		same as above		
39				31				
				42				
40				43				
41								
42								
43								
	S-10	24/24	43 to 45	15		same as above		
44				30				
				32				
				40				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	New Apartment Building	Boring #:	**B-1 (OW)**
Location:	153 - 165 Sheridan Street	Project #:	16030
City, State:	Portland, Maine	Sheet:	3 of 3
		Chkd by:	

Drilling Co:	Northern Test Boring	Boring Elevation:	155.0 ft. +/-
Driller:	Mike Nadeau	Reference:	"Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
Summit Staff:	M. Hardison, E.I.	Date started: 3/10/2016	Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	Diedrich D-50	Diameter:	2"OD/1.5"ID
Method:	3" Case Wash	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/12/2016	11.2 ft.	143.8 ft. +/-	2 days after completion of boring

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
46								GLACIAL TILL
47								
48								
	S-11	24/24	48 to 50	56		Gray SILT, little Sand and Clay, trace Gravel, very		
49				38		dense, humid to moist, ML		
				34				
50				44	105.0'			
51						End of Boring at 50.0', no refusal		
52						Monitoring Well Installed:		
53						2" PVC Well Screen from 41.5' to 31.5'		
54						2" PVC Riser Pipe from 31.5' to ground surface		
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	New Apartment Building	Boring #:	**B-2**
Location:	153 - 165 Sheridan Street	Project #:	16030
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	

Drilling Co:	Northern Test Boring	Boring Elevation:	139.5 ft. +/-
Driller:	Mike Nadeau	Reference:	"Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
Summit Staff:	M. Hardison, E.I.	Date started: 3/10/2016	Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	Diedrich D-50	Diameter:	2"OD/1.5"ID
Method:	2.25" ID H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/10/2016	20.0 ft.	119.5 ft. +/-	observed on samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/20	0 to 2	2		Black SILT, frequent roots, rootlets, and organics, soft, damp, ML		TOPSOIL
1				1				
				1				
2				1	137.5'			
3								FILL/REWORKED NATIVE
4								
5								
	S-2	24/10	5 to 7	9		Olive gray Clayey SAND, little to some Silt, little Gravel, humid, stiff, SM-SC	PP = 4,000 psf to 6,000 psf	
6				12				
				11				
7				10			Gravel % = 9.8%	
							Sand % = 51.4%	
8							Fines % = 38.8%	
9							LL = 17	
							PI = 4	
10								
	S-3	26/16	10 to 12	3		same as above	PP = 3,000 psf	
11				5				
				4				
12				5				
13								
14					125.5'			
15								GLACIAL TILL
	S-4	24/12	15 to 17	8		Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML		
16				13				
				12				
17				9				
18								
19								
20							▽ Groundwater	
	S-5	24/24	20 to 22	8		same as above, wet		
21				11				
				11			PP = 5,000 psf to 9,000 psf	
22				13				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	New Apartment Building	Boring #:	**B-2**
Location:	153 - 165 Sheridan Street	Project #:	16030
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	

Drilling Co:	Northern Test Boring	Boring Elevation:	139.5 ft. +/-
Driller:	Mike Nadeau	Reference:	"Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
Summit Staff:	M. Hardison, E.I.	Date started: 3/10/2016	Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	Diedrich D-50	Diameter:	2"OD/1.5"ID
Method:	2.25" ID H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/10/2016	20.0 ft.	119.5 ft. +/-	observed on samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
23						Dense drilling starting at 23'		GLACIAL TILL
24								
25								
	S-6	24/24	25 to 27	23		Gray SILT, little Sand and Clay, trace Gravel, very		
26				23		dense, humid to moist, ML		
				27				
27				28				
28								
29								
30								
	S-7	24/24	30 to 32	20		same as above		
31				23				
				25				
32				27	107.5'			
						End of Boring at 32.0', no refusal		
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	New Apartment Building	Boring #:	B-3
Location:	153 - 165 Sheridan Street	Project #:	16030
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Northern Test Boring	Boring Elevation:	114.5 ft. +/-
Driller:	Mike Nadeau	Reference:	"Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
Summit Staff:	M. Hardison, E.I.	Date started: 3/10/2016	Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER	
Vehicle:	ATV	Length:	24" SS
Model:	Diedrich D-50	Diameter:	2"OD/1.5"ID
Method:	2.25" ID H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/10/2016	-	-	none encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/10	0 to 2	3		Dark brown - black Silty SAND, few glass pieces, little to trace Clay, rootlets, moist, loose, SM		FILL
1				2				
				3				
2				3				
3								
4								
5								
	S-2	24/1	5 to 7	7		no recovery, Sandy SILT in tip		
6				15				
				10				
7				10				
8					106.5'			
9								GLACIAL TILL
10								
	S-3	24/24	10 to 12	10		Gray Clayey SILT, little Gravel and Sand, humid, very stiff, ML	PP > 9,000 psf	
11				15				
				15				
12				18	102.5'			
13						End of Exploration at 12.0, no refusal		
14								
15								
16								
17								
18								
19								
20								
21								
22								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test
Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

APPENDIX C

LABORATORY TEST RESULTS

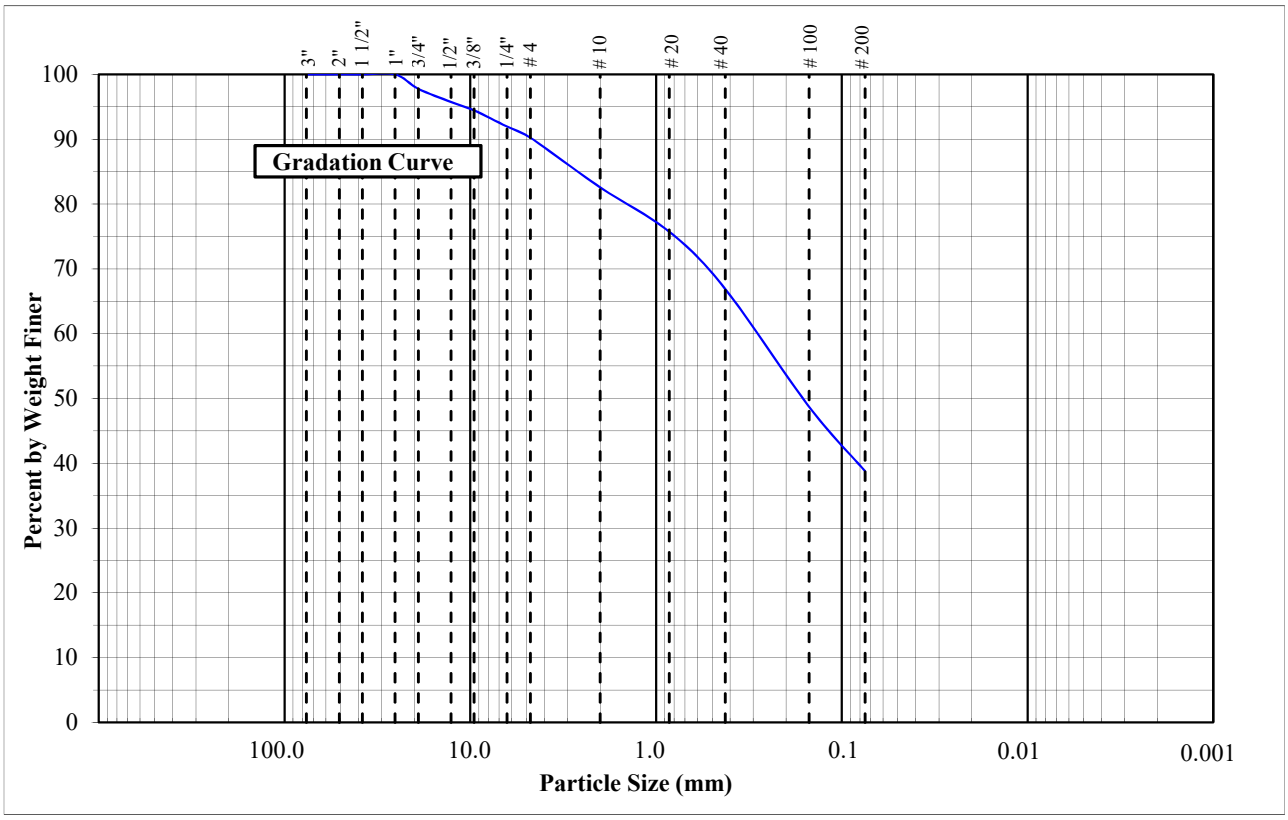
SUMMIT
GEOENGINEERING SERVICES

GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME:	New Apartment Building	PROJECT NUMBER:	16030
CLIENT:	BD Sheridan, LLC	SAMPLE NUMBER:	B-2, S-2 & S-3
SOURCE:	Boring B-2, 5'-12'	DESCRIPTION:	SAND, some Silt & Clay, little Gravel, SM-SC
DATE:	3/25/2016	TECHNICIAN:	Erika Stewart, E.I.

DATA

PARTICLE SIZE mm		% BY WT FINER
76.20	(3 in)	100.0
50.80	(2 in)	100.0
38.10	(1-1/2 in)	100.0
25.40	(1 in)	100.0
19.05	(3/4 in)	97.8
12.70	(1/2 in)	95.7
9.53	(3/8 in)	94.4
6.35	(1/4 in)	92.0
4.75	(No. 4)	90.2
2.00	(No. 10)	82.6
0.85	(No. 20)	75.7
0.43	(No. 40)	66.9
0.15	(No. 100)	48.7
0.075	(No. 200)	38.8



REMARKS: Moisture Content = 11.4%

145 Lisbon Street (PO Box 7216) Lewiston, Maine (207) 576-3313
173 Pleasant Street, Rockland, Maine 04841, (207) 318-7761

SUMMIT
GEOENGINEERING SERVICES

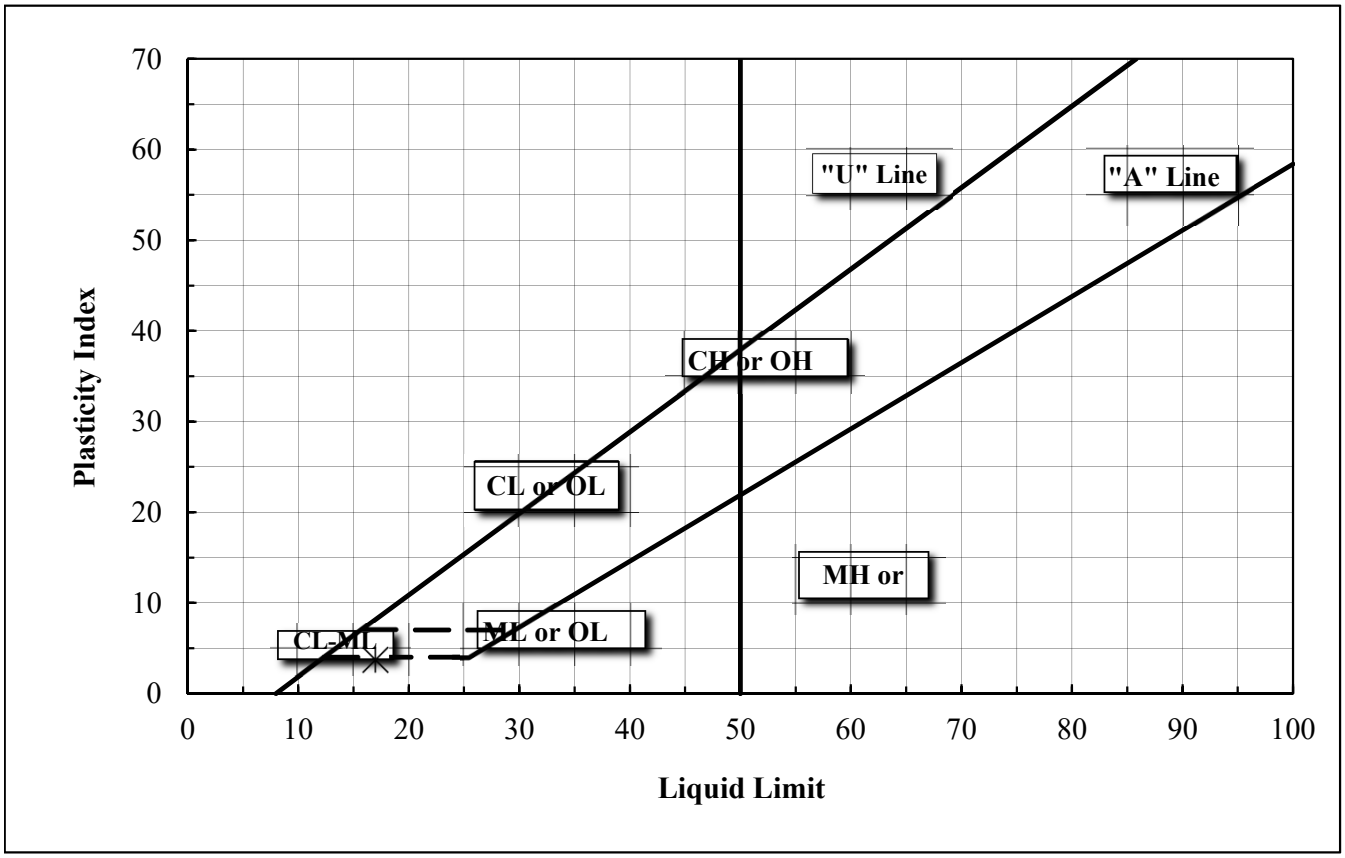
ATTERBERG LIMIT TEST - ASTM D4318

Method "A" (Multi-point)

PROJECT NAME:	New Apartment Building	PROJECT NUMBER:	16030
CLIENT:	BD Sheridan, LLC	SAMPLE NUMBER:	B-2, S-2 & S-3
SOURCE:	Fill / Reworked Native	DEPTH:	5'-12'
DATE:	3/28/2016	TECHNICIAN:	Erika Stewart, E.I.

DATA

Source	Depth	LL	PL	PI	Classification
B-2	5'-12'	17	13	4	Gray SAND, some Silt & Clay, little Gravel, SM-SC



Notes: Sample was screened on the #40 sieve to remove gravel and med-coarse sand before performing Atterberg Limit test.

Summit Geoengineering Services

Direct Shear Test (ASTM D3080)

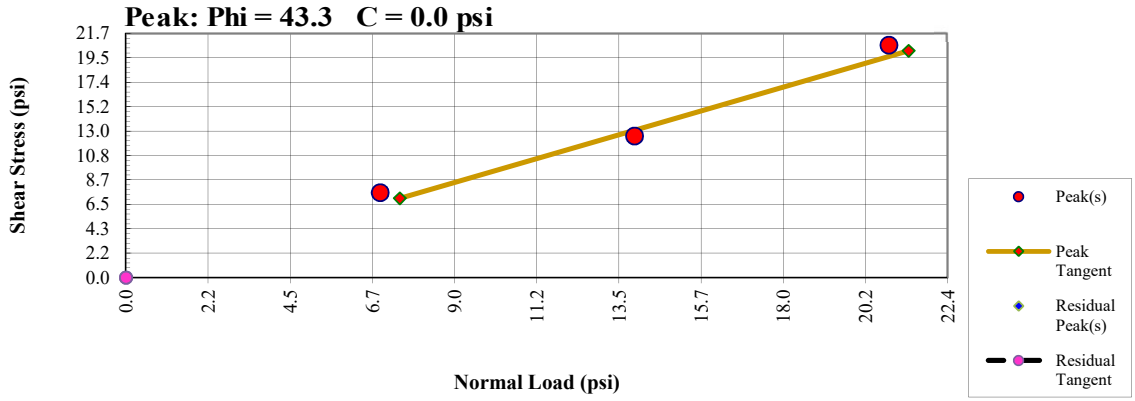
SUMMIT GEOENGINEERING SERVICES

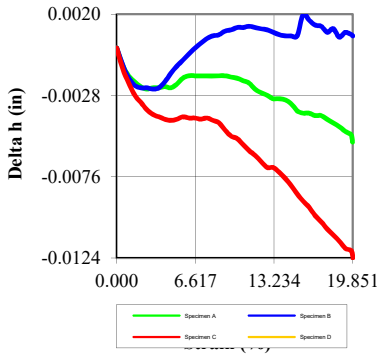
Date: 4/4/2016

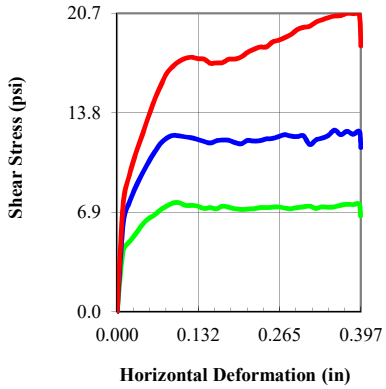
Checked By: Craig Coolidge, P.E.

Date: 4/4/2016

Tested By: Erika Stewart, E.I.







Initial	Specimen A	B	C	D
Moisture (%)	16.51	15.95	15.13	
Density (pcf)	118.01	121.21	121.10	
Void Ratio	0.428	0.391	0.392	
Saturation (%)	100.00	100.00	100.00	
Diameter (in)	2.000	2.000	2.000	
Height (in)	0.750	0.750	0.750	

Final	A	B	C	D
Moisture (%)	12.58	12.92	11.74	
Density (pcf)	118.01	122.23	121.10	
Void Ratio	0.428	0.379	0.392	
Saturation (%)	96.52	100.00	100.00	
Diameter (in)	2.000	2.000	2.000	
Height (in)	0.710	0.693	0.687	
Normal Stress (psi)	6.9	13.9	20.8	
Peak Stress (psi)	7.6	12.6	20.7	
Residual Stress (psi)				
Strain (%)	19.823	17.702	19.851	
Rate (in/min)	0.005	0.005	0.005	

Project Date	
Date	3/29/16

Project:	New Apartment Building	N/A	N/A	N/A	N/A
Location:	Sheridan Street, Portland, ME				
Project Number:	16030				
Boring Number	B-2				
Sample Number:	S-2 & S-3				
Depth:	5'-12'				
Sample Type:	Remolded	Failure Photographs			
Description:	Gray SAND, some Silt & Clay, little Gravel, SM-SC				
Test Type:	Direct Shear				
Remarks:					

RYAN SENATORE **ARCHITECTURE**

March 10, 2017

Planning Department
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: 155 Sheridan Design Narrative

The proposed building to be located at 155 Sheridan Street on Munjoy Hill comprises a 19 unit urban condominium development. The project, consists of 1 building designed to be nestled into the steep hillside that exists presently at the property. The building has an elevation on Sheridan Street of four levels.

The massing of the facade on Sheridan Street is broken up by a rhythm of projecting porch bays. These porches break down the scale of the facade through the use of shadow lines, color changes and texture. The porches are designed to read as a finer more open texture than the adjacent bays and main body of the building, through the use of columns, brackets and open railing systems. The window fenestration not on the bays is based on a traditional vernacular double hung window unit used in pairs to help further define the facade rhythm and scale the facades.

The Southwest facing elevation of the building has a large amount glazing to maximize the views toward Back Cove and Mt. Washington as well as to capture passive solar energy.

The exterior materials of the building consist durable / low maintenance products, these include fibercement clapboard siding with a cedar shingle texture and exposed fastener fibercement panels, a colored parge coating at the above grade foundation walls, and an EPDM roof membrane. The two siding materials (clapboard and panel) interplay to further break down the scale of the elevations and add visual interest to reinforce the design concept. These two siding materials are of a similar base color but differing brightness and saturation.

155 Sheridan is designed to incorporate many energy efficiency measures including a building envelope with increased

207-747-5159

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insulation, low flow plumbing fixtures, and high efficiency mechanical systems.

Zoning Assessment

The project is designed to meet the R-6 zoning ordinance as well as the height overlay recently imposed on the property.

Consistency with City of Portland Design Standards

The project will be designed to meet the City of Portland design standards, please see the design narrative above as to how the project meets the R-6 Zone design standards in particular

HVAC equipment Specifications

The HVAC equipment for the project will meet applicable state and federal emission requirements, the detailed specifications for the HVAC equipment will be submitted to the City at a future date when those systems are final designed.

Code Review

Please see the attached Code review for the project referencing NFPA 101 2009 and IBC 2009.

Signage

Exterior signage is shown on the building facade adjacent to the main entry to the building, a separate signage permit application will be filed with the city at the time of building permit.

Exterior Lighting

The exterior lighting for the project will be down lighting, see the attached cut sheet for the front facade lighting as shown on the street elevation. Each exterior deck will also have a cut off down light, see the attached cut sheet.

We look forward to discussing the vision for 155 Sheridan at the upcoming meeting.

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Sincerely,

Ryan Senatore, AIA LEED-AP

Principal

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Cypher™ – CY1 Accent Scale

TYPE

FEATURES

- Integral Battery Backup Option
- 360° Light Distribution
- RGBW or Static White Luminous Front Option
- IES Type I, II, III & IV Distributions
- Wall Graze, Spot and Pencil Distributions
- Multiple Fascia Options and Finishes
- 0-10V dimming
- IP-66 Housing & Optical System
- 120-277V
- IDA approved, downlight only, 3000K and warmer CCTs
- 3000K, 4000K & 5000K CCT
- 10kA Surge Protection
- Fascia Forms F, E and T are ADA compliant for use in low mounting height applications (80 inches or less)

c UL us LISTED

3000K and warmer CCTs only

ORDERING CODE

1	2	3	4	5	6	7	8	9	10	11	12
Series-Output	CCT/CRI	Model	Main Distribution	Secondary Distribution	Voltage	Housing Finish	Fascia Form	Luminous Front	Fascia Panel	Control Options	Options

SERIES-OUTPUT (Base)

CY1-15	15w, 1500 nominal lumens
CY1-25	25w, 2500 nominal lumens

CCT-CRI

3K7	3000K, 70CRI
3K8	3000K, 80CRI
4K7	4000K, 70CRI
4K8	4000K, 80CRI
5K7	5000K, 70CRI

MODEL (Light Engine)

1	DownLight Only
2	50/50 Down/Up
3	90/10 Down/Up
4	25/25/25/25 Split
5	70/10/10/10 Split

MAIN DISTRIBUTION (Down)

1	IES Type I
2	IES Type II
3	IES Type III
4	IES Type IV
SP	15° Spot/Column
WG	60° Wall Graze
1D	Type 1 Diffused
2D	Type 2 Diffused
3D	Type 3 Diffused
4D	Type 4 Diffused

SECONDARY DISTRIBUTION (Up, Sides)

1	IES Type I
2	IES Type II
3	IES Type III
4	IES Type IV
SP	15° Spot/Column
WG	60° Wall Graze
PB*	Pencil Beam
1D	Type 1 Diffused
2D	Type 2 Diffused
3D	Type 3 Diffused
4D	Type 4 Diffused

PB distribution is available for 90/10 and 70/10/10/10 models only. Not all combinations are recommended. See Distribution Matrix on page 2 for restrictions.

VOLTAGE

UNV	120-277V

BASE HOUSING FINISH

Standard Colors

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

Premium Colors

SFM	Seafoam
SHK	Shamrock
SPP	Salt and Pepper
WCP	Weathered Copper
RAL	Provide a RAL 4 digit color number
CUSTOM COLOR	Please provide color chip for matching

FASCIA FORM

F	Flat
R	Radius/Curved
T	Triangle/Wedge
E	Rounded Edge
C	Circle/Curved
CB	Cylinder Balanced
CT	Cylinder Tall
CBM	Custom Building Material Mount Ghost Fascia

LUMINOUS FRONT

BLANK	Standard None
RGBW	RGBW Luminous Front
LFSW	Luminous Front Static White

RGBW and LFSW luminous fronts are only available with open, four square and perforated fascia panels

FASCIA PANEL

FPP	Full Panel Painted
FPS	Full Panel Stainless Steel
FPC	Full Panel Copper
OPP	Open Panel Painted
OPS	Open Panel Stainless Steel
OPC	Open Panel Copper
4PP	4-Square Panel Painted
4PS	4-Square Panel Stainless Steel
4PC	4-Square Panel Copper
PPP	Perforated Panel Painted
PPS	Perforated Panel Stainless Steel
PPC	Perforated Panel Copper

Flat and Radius Fascia forms only. Painted panels by default match base housing finish/color. Consult factory for custom panel finishes.

CONTROL OPTIONS

PCU	Universal Button Photocell (120-277V)

OPTIONS

EM	Battery Backup Unit -20°C
SF	Single Fuse (120, 277)
DF	Double Fuse (208, 240)

architectural area lighting

ARCHITECTURAL AREA LIGHTING
17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.aal.net
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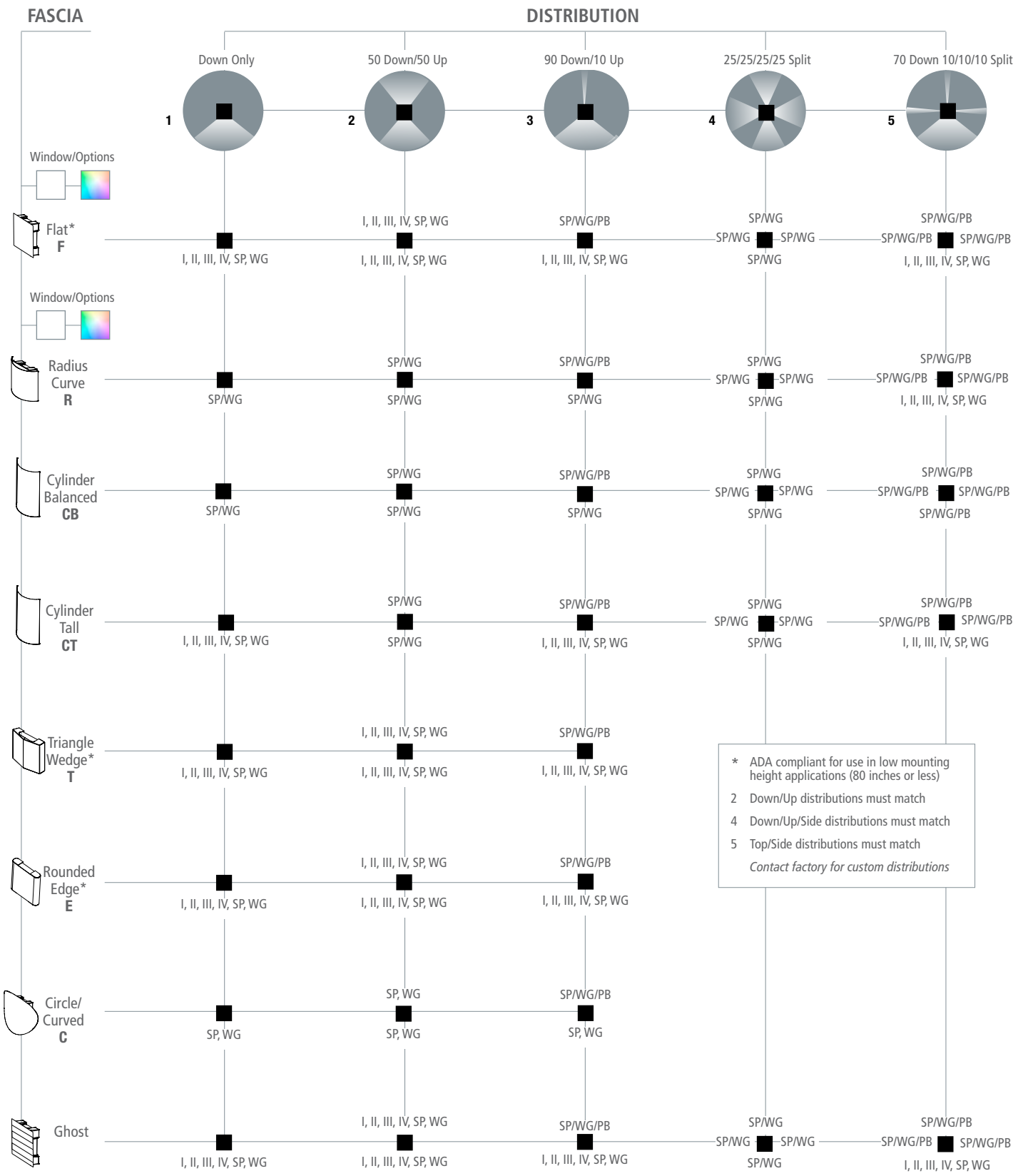
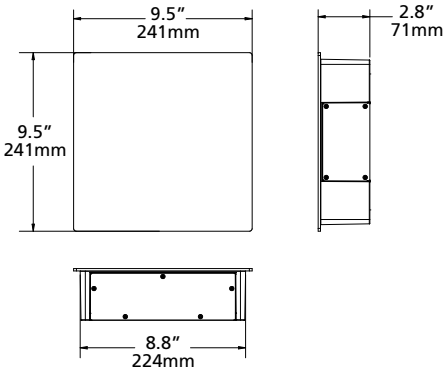
JOB
TYPE
NOTES

Distribution Matrix

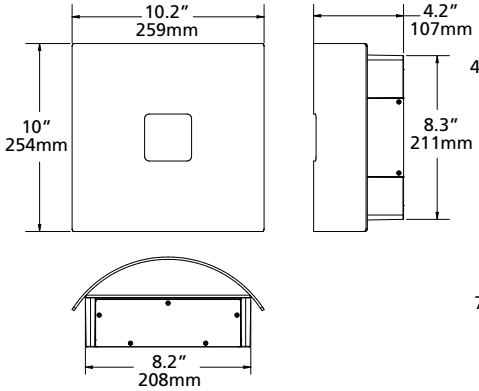


Drawings

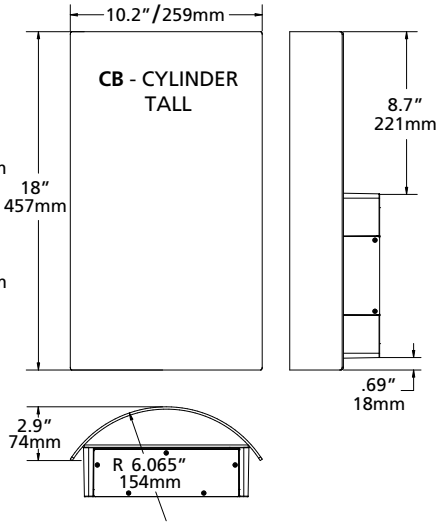
F - FLAT
ADA approved.



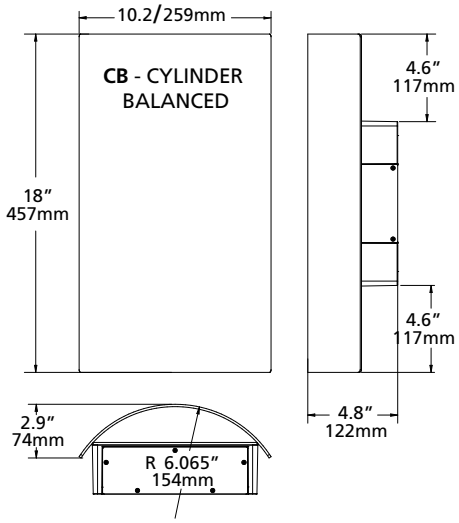
R - RADIUS/CURVED



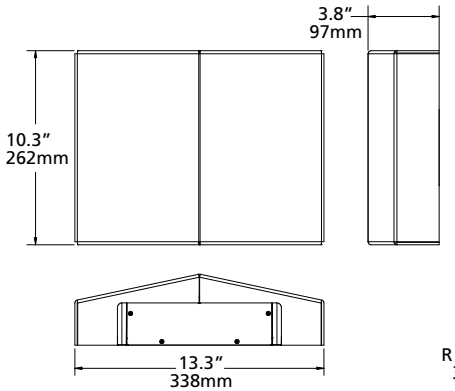
CB - CYLINDER TALL



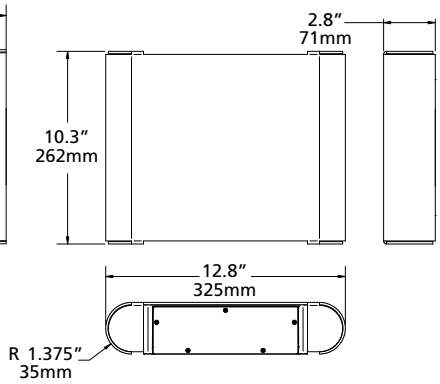
CB - CYLINDER BALANCED



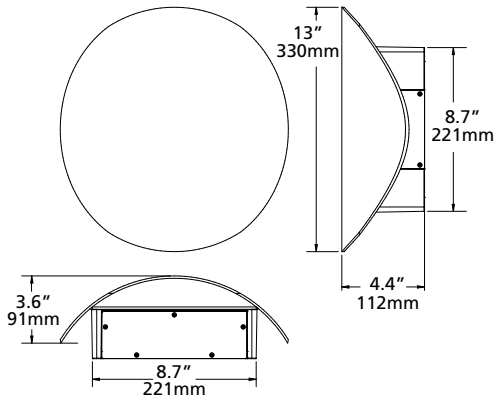
T - TRIANGLE/WEDGE
ADA approved.



E - ROUNDED EDGE
ADA approved.



C - CIRCLE/CURVED



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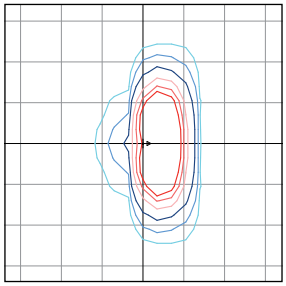
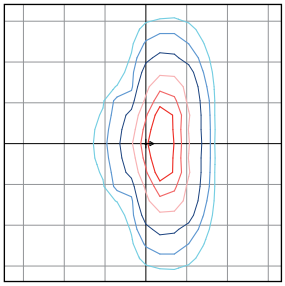
LUMINAIRE PERFORMANCE

Downlight only			Configuration														
			Bright White (5000K)					Neutral White (4000K)					Warm White (3000K)				
Nominal Output (Lm)	Average System Wattage	Distribution	Delivered Lumens	Efficacy (Lm/W)	BUG Rating			Delivered Lumens	Efficacy (Lm/W)	BUG Rating			Delivered Lumens	Efficacy (Lm/W)	BUG Rating		
					B	U	G			B	U	G			B	U	G
			5000K 70 CRI					4000K 70 CRI					3000K 70 CRI				
1,500	17	Type 1	1610	95	0	0	0	1615	95	0	0	0	1529	90	0	0	0
		Type 2	1265	74	0	0	0	1268	75	0	0	0	1201	71	0	0	0
		Type 3	1426	84	0	0	1	1430	84	0	0	1	1354	80	0	0	1
		Type 4	1313	77	0	0	0	1317	77	0	0	0	1247	73	0	0	0
		Wall Graze	1971	114	1	0	0	1976	116	1	0	0	1871	110	1	0	0
		Spot/Column	1792	103	2	0	0	1797	106	2	0	0	1701	100	2	0	0
		Type 1 Diffused	1327	78	1	0	0	1331	78	1	0	0	1260	74	1	0	0
		Type 2 Diffused	1168	69	1	0	0	1171	69	1	0	0	1109	65	1	0	0
		Type 3 Diffused	1161	68	1	0	0	1164	68	1	0	0	1102	65	1	0	0
		Type 4 Diffused	1202	71	1	0	0	1206	71	1	0	0	1142	67	1	0	0
			5000K 70 CRI					4000K 70 CRI					3000K 70 CRI				
2,500	26	Type 1	2517	96	0	0	0	2524	97	0	0	0	2390	92	0	0	0
		Type 2	2233	85	1	0	1	2239	86	1	0	1	2120	82	1	0	1
		Type 3	2229	85	1	0	1	2236	85	1	0	1	2117	80	1	0	1
		Type 4	2319	88	1	0	1	2325	89	1	0	1	2201	85	1	0	1
		Wall Graze	2744	104	2	0	0	2752	106	2	0	0	2605	100	2	0	0
		Spot/Column	2471	94	2	0	0	2478	95	2	0	0	2346	90	2	0	0
		Type 1 Diffused	2344	89	1	0	1	2350	90	1	0	1	2225	86	1	0	1
		Type 2 Diffused	2062	79	1	0	1	2068	80	1	0	1	1958	75	1	0	1
		Type 3 Diffused	2050	78	1	0	1	2056	79	1	0	1	1946	75	1	0	1
		Type 4 Diffused	2123	80	1	0	1	2129	82	1	0	1	2016	78	1	0	1

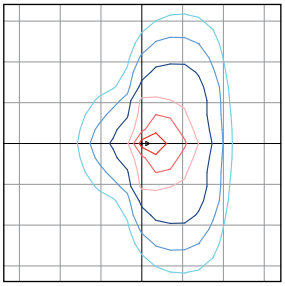
ISOLINE TEMPLATES 10' Mounting Height, 10' Grid Spacing



CY1-25-1-1



CY1-25-1-2



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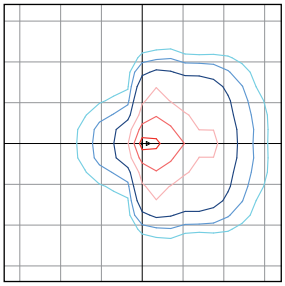

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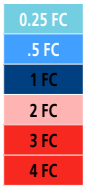
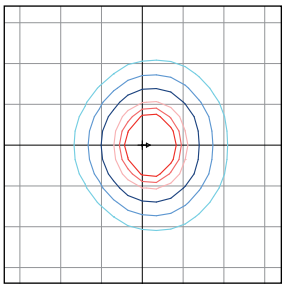
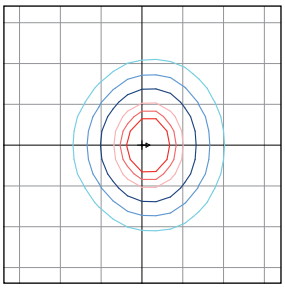
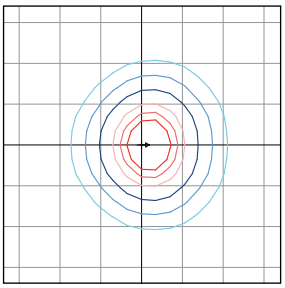




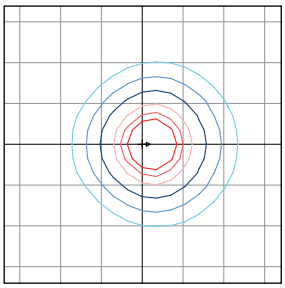
CY1-25-1-1D



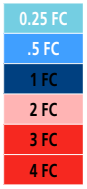
CY1-25-1-2D



CY1-25-1-3D



CY1-25-1-4D



ELECTRICAL CHARACTERISTICS

Lumen Package	System Wattage (W)	Line Voltage		Input				Min. Power Factor	Max THD (%)	Dimming Range	Source/Sink Current (mA)		Abosolute voltage range on 0-10v (+) Purple	
		VAC	Hz	120	277	347	480				Min.	Max.	Min.	Max.
1,500	17	120	50/60	0.1	0.1	0.0	0.0	>0.9	20	10% to 100%	0 mA	1 mA	0V	10V
2,500	26			0.2	0.1	0.1	0.1							

TM-21 LIFETIME CALCULATION (500mA)

Lumen Package	Ambient Environment °C	Projected Lumen Maintenance (Khrs)					Reported L70
		15	25	50	60 (TM-21)	100	
2,500	**25**	98%	97%	94%	92%	87%	>60Khrs.
	40	95%	93%	89%	87%	80%	

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SPECIFICATIONS

HOUSING

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

OPTICAL ARRAY

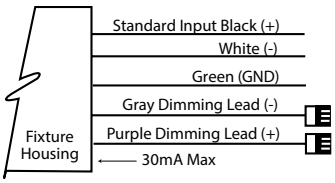
- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features.
- Optical lenses shall be clear injection molded PMMA acrylic.
- Optical array shall be recessed in order to shield each LED optic across the length of the aperture.
- Optical array shall be sealed for IP66 rating.
- Secondary lens is impact resistant 5/32" tempered glass.

ELECTRICAL

- Drivers shall be in direct contact with the die-cast aluminum housing across the entire surface area of the widest face for maximum thermal transfer.
- "Thermal Shield", primary side, thermister provides protection for the sustainable life of LED module and electronic components.
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device shall be wired in series.
- Drivers shall be U.L recognized.
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV.
- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for -20°C ambient environments.

SPECIFICATIONS

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



CONTROLS

- Button photocontrol for dusk to dawn energy savings
- PC12 for 120V, PC20 for 208V, PC24 for 240V, PC27 for 277V
- Photocell is factory installed inside the housing with a fully gasketed sensor on the side wall. For multiple fixture mountings, one fixture is supplied with a photocell to operate the others.

BLUETOOTH®

- RGBW option includes integral Bluetooth module, built into driver, that permits the adjustment of luminous front color when paired with Hubbell Remote App via cellular/ tablet device.
- Bluetooth Low Energy (BLE) or Bluetooth Smart compatible for both iOS (iOS8 and forward) and Andriod (Gingerbread and forward) handheld software applications. Compatible with phones and tablets.
- Free Bluetooth Apps are available for Apple iOS and Google Android mobile devices and are downloadable via the internet at Apple App Store or Google Play.

MOUNTING AND INSTALLATION

- JUNCTION BOX: Standard with zinc-plated, quick-mount junction box plate that mounts directly to 4" J-Box
- Mounting plate features a one-piece EPDM gasket on back side of plate to firmly seal fixture to wall surface, forbidding entry of moisture and particulates.
- Fixture attaches by two Allen-head hidden fasteners for tamper resistance.
- Optional mounting arrangements utilize a die-cast mounting adaptor to allow for surface conduit and through branch wiring.

SERVICING

- Housing shall be able to hang freely in an open service position for inspection of internal wire connections. Once in service position, the housing shall be able to be removed for service by lifting the assembly up off the rear mounting plate and disconnecting the wiring plugs.
- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal.

FINISH

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

CERTIFICATION

- Luminaire shall be listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250.
- IP66 rated assembly
- IDA approved, 3000K and warmer CCTs only.
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.
- Complies with "Americans with Disabilities Act" or "ADA" on select versions for low mounting height applications (fixtures extend maximum of 4 inches from wall for mounting heights of 80 inches or less).

WARRANTY / TERMS AND CONDITIONS OF SALE

Download:
Five year limited warranty (for more information visit: http:// www.hubbelllighting.com/resources/warranty/

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JOB
TYPE
NOTES

July 5, 2017

Planning Department
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: 155 Sheridan Design Narrative

Please see the attached revised exterior elevations for the 155 Sheridan Street Project based on comments from City Staff.

B. (i.) Multiple-family:

Standard 1

Comment 1.) We Would like to keep the lighter color siding at the entry bay as designed, the reasoning is that it helps differentiate that bay and make is special to highlight that this is the main entry to the building. I think it also adds a level of variety to help break up the length of the facade. I don't believe this one bay being higher poses a scale issue as at the first level we have a projecting canopy to there is a massing break here.

Standard 1

Comment 2.) We have revised the first floor windows to be a consistent window pattern across the facade, we have removed the spandrel glass so all windows are transparent.

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Standard 2

Comment 2.) We have added screening around the wall mounted mechanical elements, the proposed screens are metal screens with a 50% open ratio. These are 2”x2” painted metal tubes to color match the adjacent siding. The tubes are spaced with a 2” gap, this allows airflow to the units per their requirements but also screens them from the public right-of -way.

Sincerely,

Ryan Senatore, AIA LEED-AP

Principal

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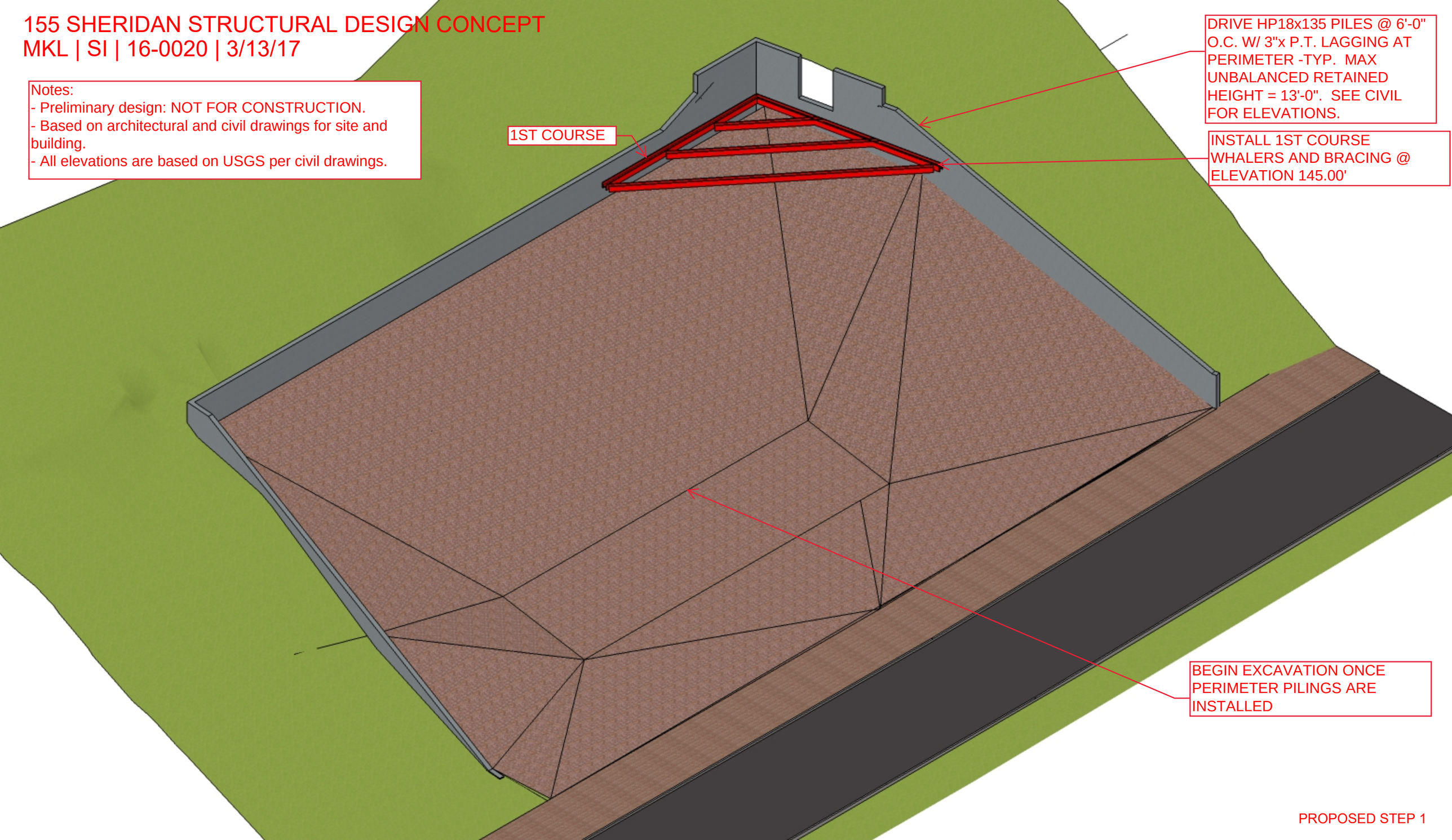
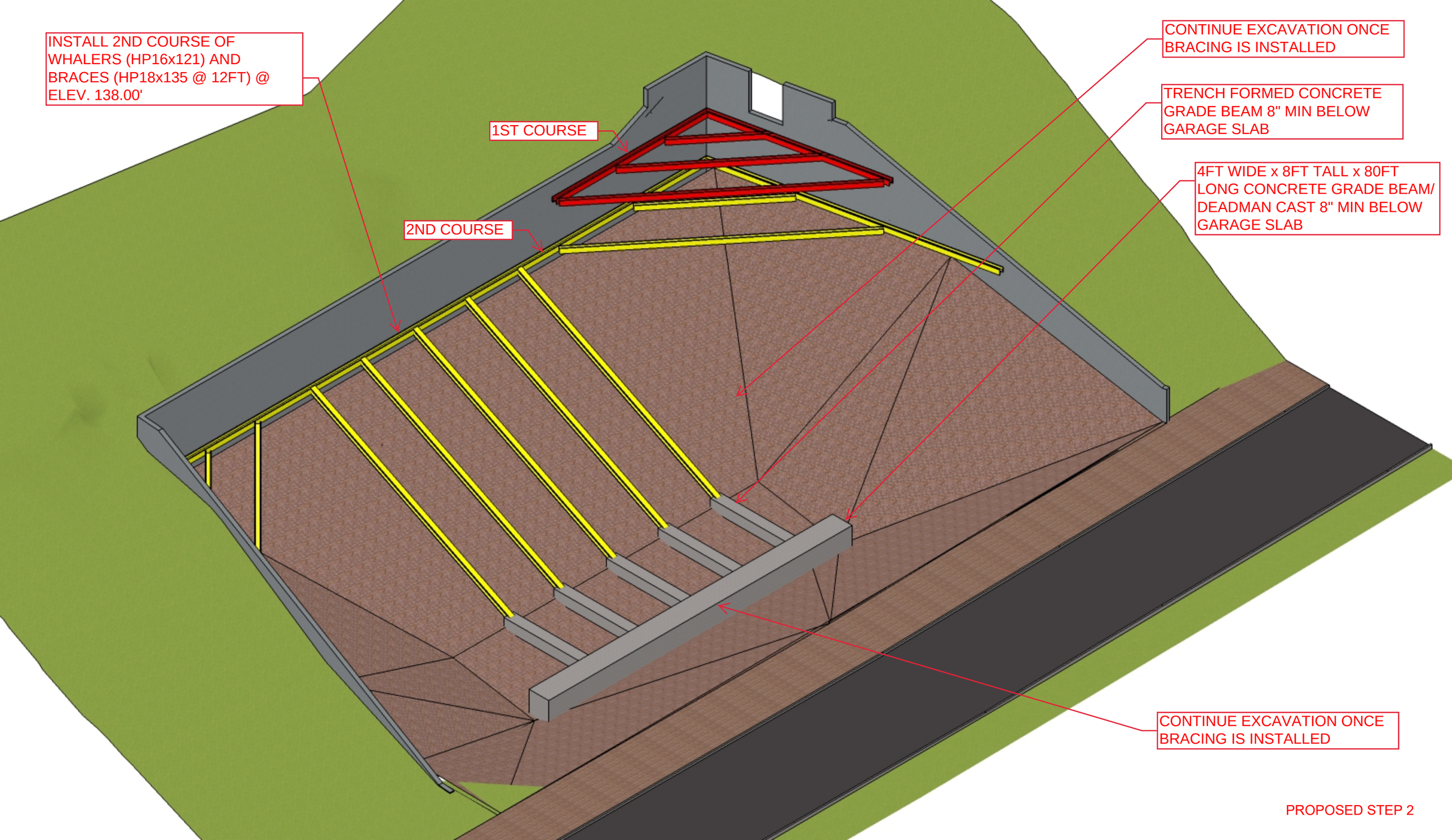
ryan@senatorearchitecture.com

155 SHERIDAN STRUCTURAL DESIGN CONCEPT
MKL | SI | 16-0020 | 3/13/17

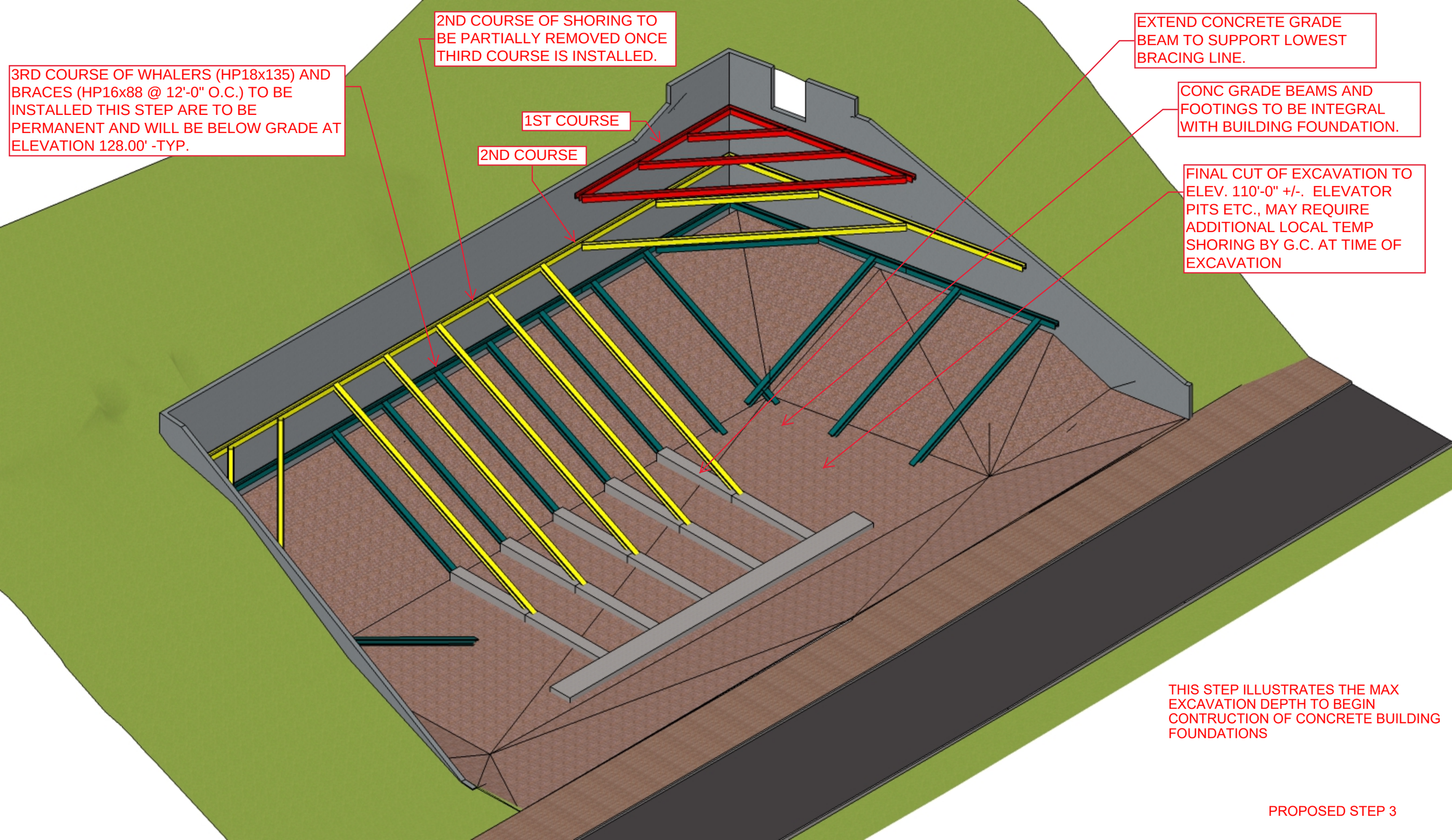
Notes:
- Preliminary design: NOT FOR CONSTRUCTION.
- Based on architectural and civil drawings for site and building.
- All elevations are based on USGS per civil drawings.



PROPOSED STEP 1

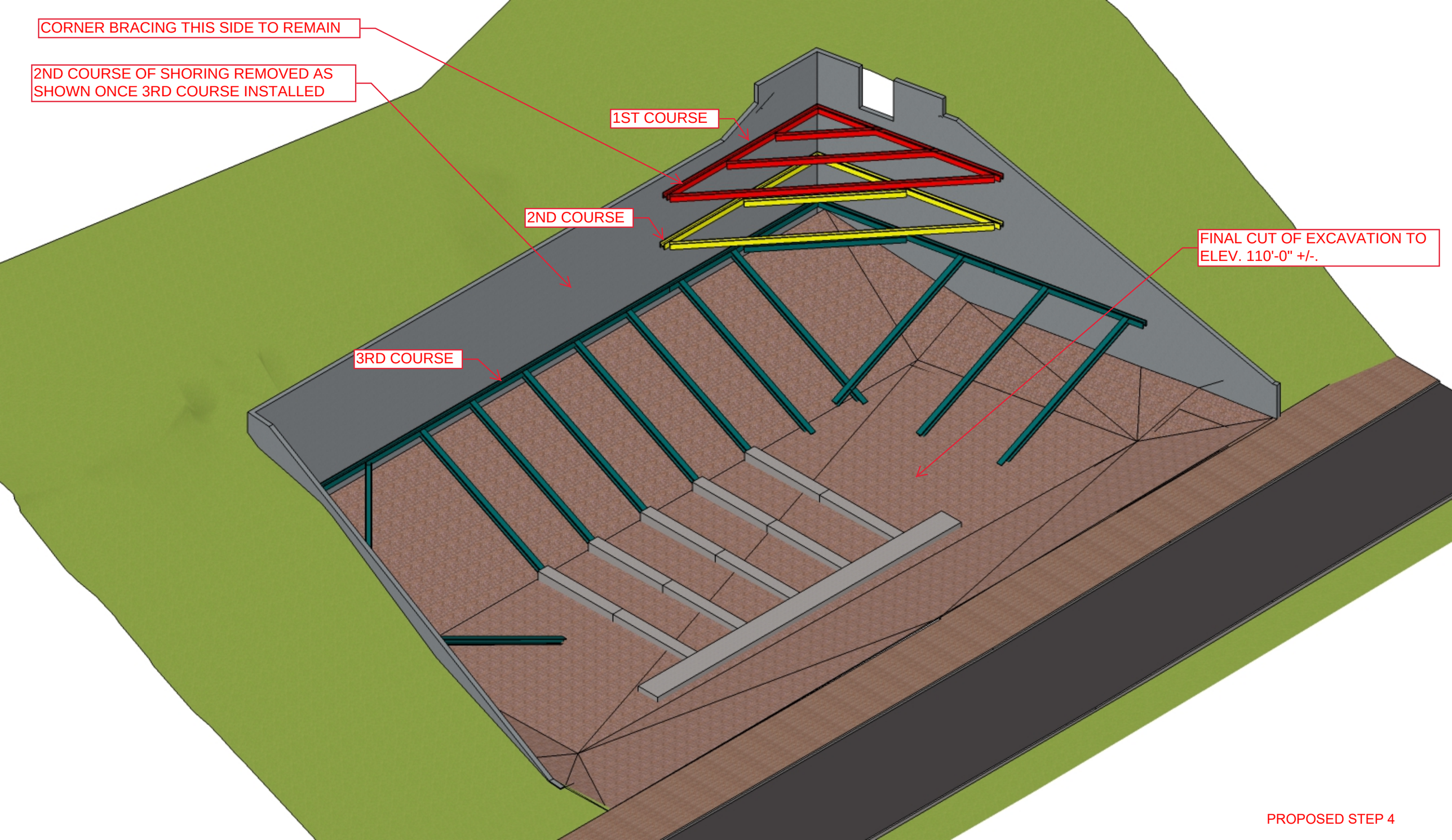


PROPOSED STEP 2

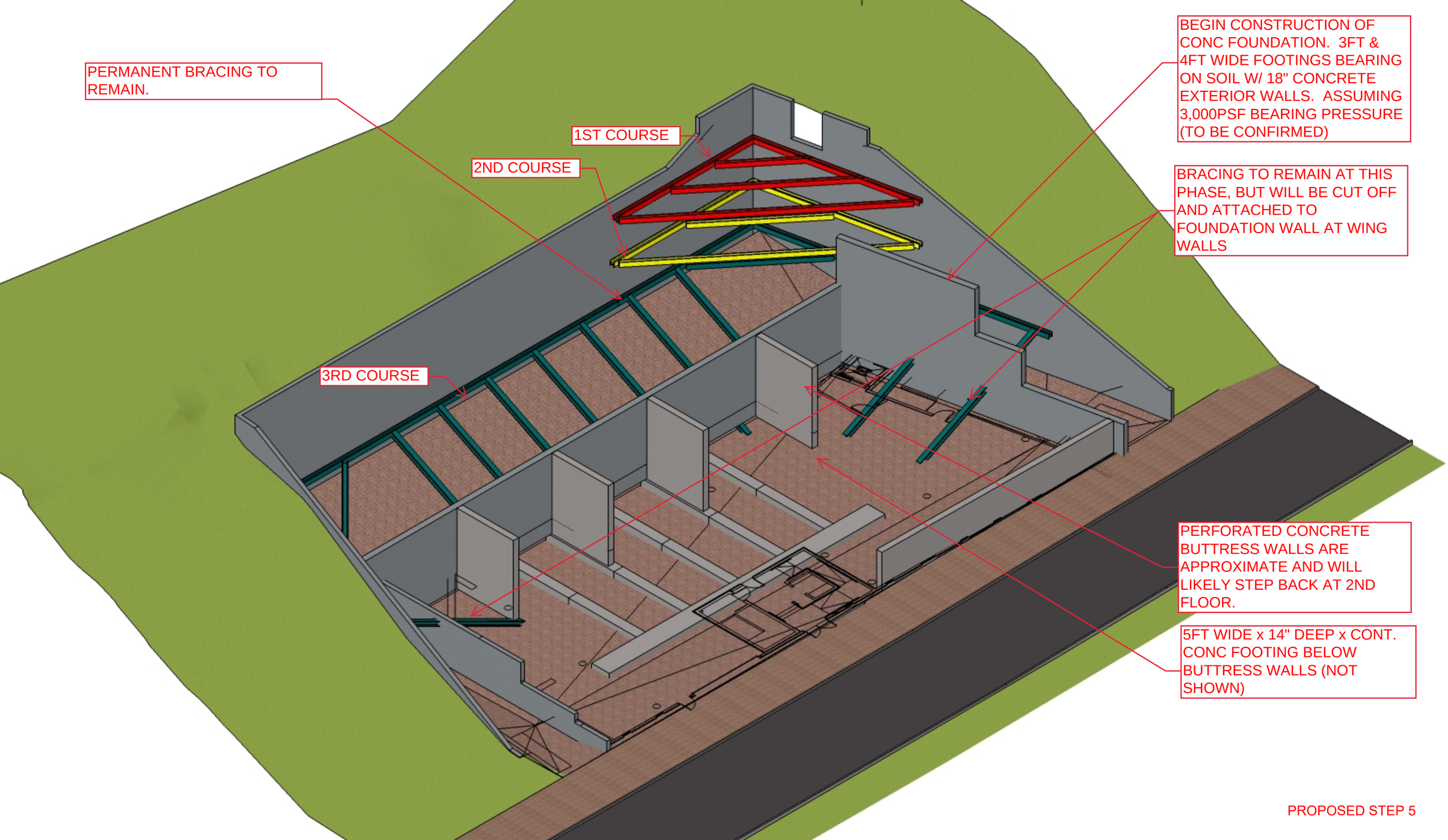


THIS STEP ILLUSTRATES THE MAX EXCAVATION DEPTH TO BEGIN CONTRUCTION OF CONCRETE BUILDING FOUNDATIONS

PROPOSED STEP 3



PROPOSED STEP 4



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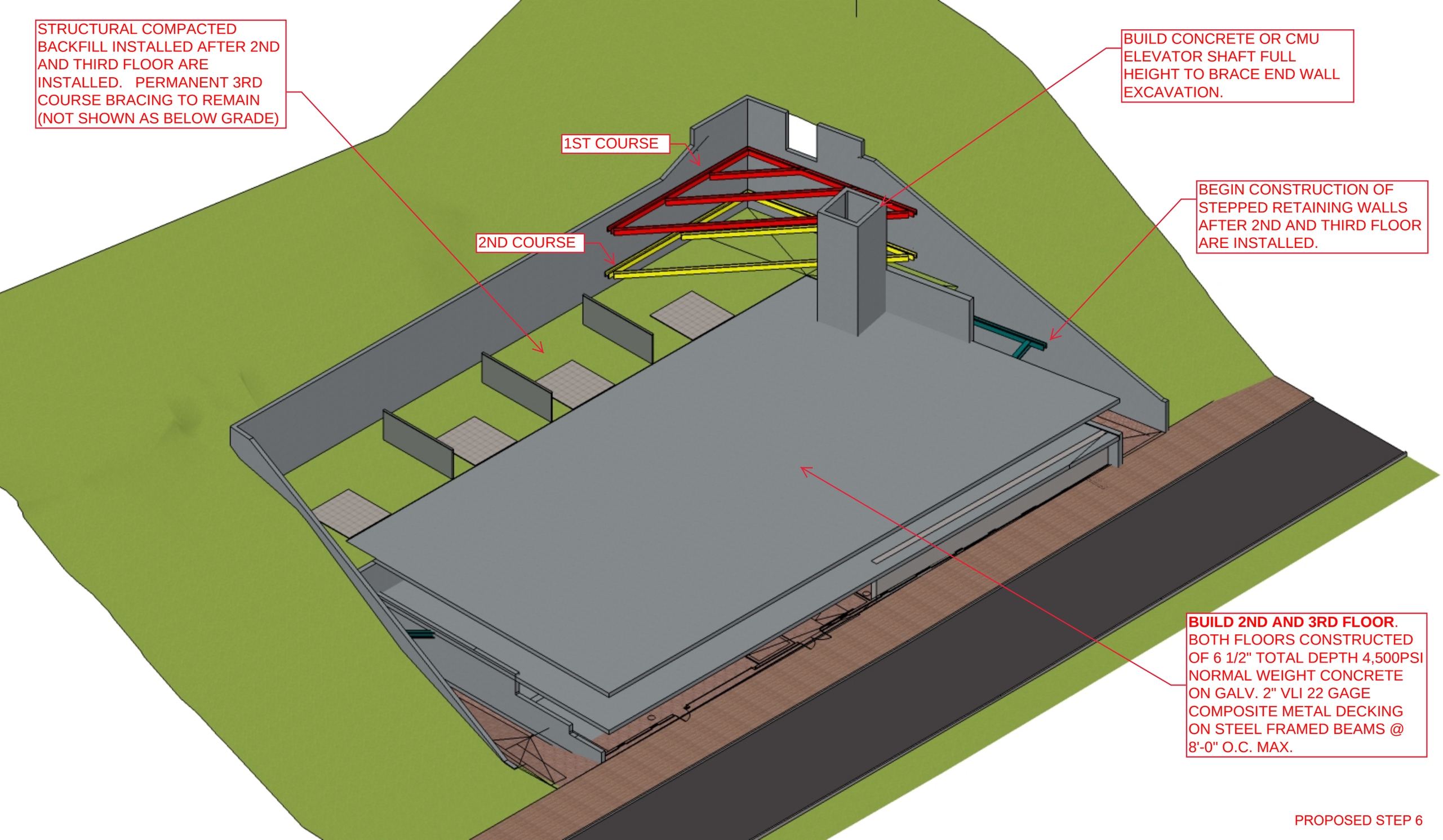

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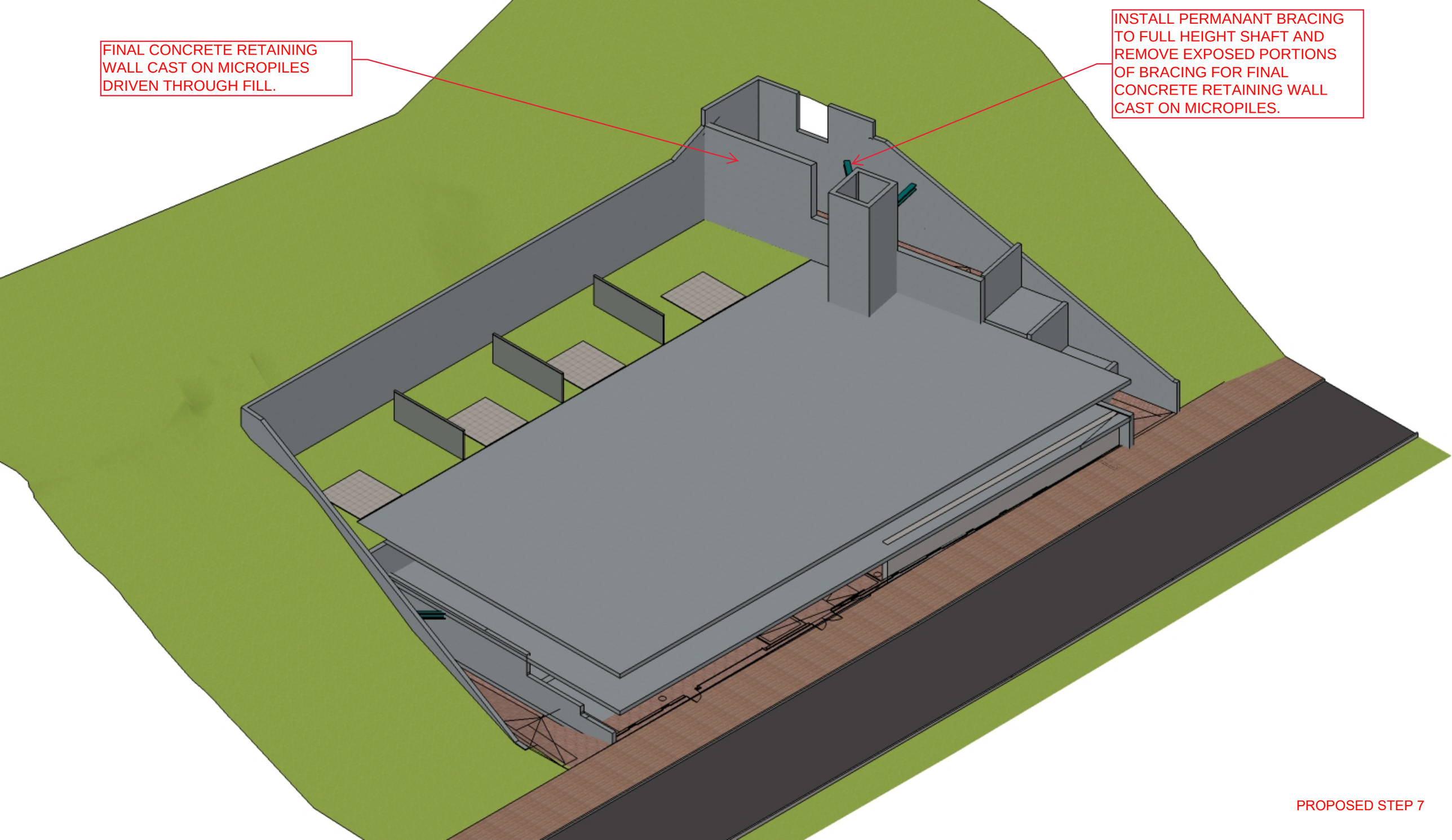
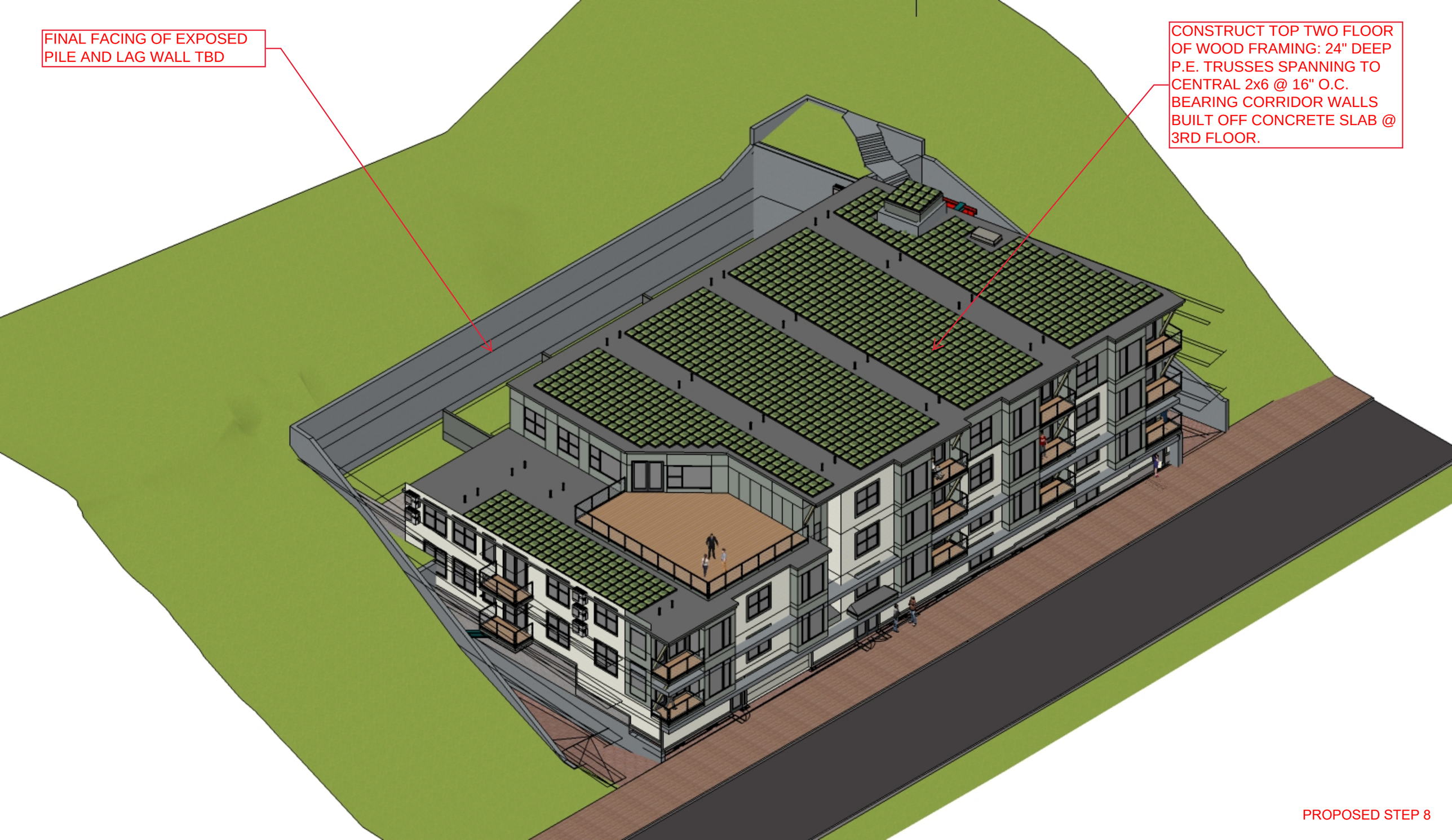


PROPOSED STEP 7



PROPOSED STEP 8

ACORN ENGINEERING, INC.

Division of Housing and Community Development
City of Portland, Maine
389 Congress Street, Room 312
Portland, ME 04101

May 11, 2017

Subject: Conditional Use for Ensuring Workforce Housing Inclusionary Zoning
Planning Board Review Application
Redevelopment of 161 York Street - Portland, Maine

To Whom This May Concern,

BD Sheridan LLC is pleased to submit the accompanying package of submission materials related to the proposed nineteen-unit urban infill project at 155 Sheridan Street and its compliance with the standards set by the Workforce Housing Inclusionary Zoning. This letter and attachments are a follow-up to the preliminary application package submitted on May 11, 2017. The development will include one, one-bedroom workforce housing unit for sale within the proposed building.

This submission package is intended to meet the City's Inclusionary Zoning Submission Requirements as outlined in the Planning Board Review Application. The proposed project site is located within the East End neighborhood and is currently occupied by a single-family, 1.5-story home. It is proposed that the site be redeveloped into a high-density, multi-unit building with nineteen internal parking spaces on the first level and three upper floors of residential units. The development site is located within the City's R-6 Zoning District, and complies with the permitted uses within the zone.

All residential units will have identical interior standards; the proposed workforce unit does not differ in size or standard from the other single bedroom market-rate units. The market strategy for the workforce unit will also mimic the strategy of the market-rate units and is proposed to be approached in the same fashion.

A summary of the materials included as part of the application submission set, supplementary to the Site Plan Application set, are as follows:

<u>Documents:</u>

U. Inclusionary Zoning Cover Letter
V. Inclusionary Zoning Application
W. Conformity with Applicable Conditional Use Standards

Drawings:

- Civil Site Plan Set, Dated 3/28/17
  - *As submitted as part of the Site Plan Application*
- Architectural Submission Set, Dated 3/9/17
  - *As submitted as part of the Site Plan Application*
- Architectural Workforce Unit Floor Plan, Dated 4/27/17

BD Sheridan, LLC and the design team look forward to your review of this project. If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,

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

Conditional Use for Ensuring Workforce Housing
Inclusionary Zoning
Planning Board Review
Application
Portland, Maine

Planning and Urban Development Department
Planning Division and Housing and Community Development

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Conditional Use review of applications to ensure workforce housing in development projects that create ten or more new dwelling units. The units may be for rent or for sale and created through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or rent. All developments of ten units or more a conditional uses subject to Planning Board review on the condition that they comply with the requirements of section 14-487.

A. Ensuring Workforce Housing: Standards -Section 14-484

(d) Workforce Housing Minimum At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The number of units required is rounded down to a whole number if providing units on- or off-site, or shall include a fractional value in cases where a project prefers to pay a fee-in-lieu as per (e)3. below.

(e) Standards

1. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.

2. Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.

3. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.

4. As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.

5. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.

6. If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.

7. The term of affordability for the required 10 percent workforce units provided shall be defined as follows:

Percentage of Workforce Units Provided	Minimum Term of Affordability for Required Workforce Units
10%	Longest term permitted under federal, state and local laws and ordinances
25%	30 years
50%	20 years
100%	10 years

(f) Implementing Regulations. Regulations to further specify the details of this section shall be developed, including, but not limited to:

1. Specific methodology for income verification;
2. Situations where less than permanent affordability might be considered; and
3. Guidelines for meeting the requirement that off-site units be "in the same neighborhood".

B. Site Plan Application: Please submit the Conditional Use Application in addition to the applicable Site Plan Application.

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207)874-8719

Housing and Community Development
Room 313, Third Floor, City Hall
389 Congress Street
(207)482-5028

Office Hours
Monday thru Friday
8:00 a.m. – 4:30 p.m.

PROJECT NAME: 155 Sheridan Street

PROPOSED DEVELOPMENT ADDRESS: 155 Sheridan Street Portland, Maine 04101

CHART/BLOCK/LOT (s): 012-Q-010 & 012-Q-012 **Applicable Zone:** R-6

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Bernie Saulnier BD Sheridan, LLC Business Name, if applicable: Address: 1266 Furnace Brook Parkway Qunicy, MA 02169 City/State : Zip Code:	**Applicant Contact Information** Work # (207)571-4166 Home# Cell # Fax# e-mail: saulnier04@yahoo.com
Owner – (if different from Applicant) Name: Acorn Engineering, Inc. Address: Will Savage, P.E. 158 Danforth Street City/State : Portland, Zip Code: ME 04102	**Owner Contact Information** Work # (207)775-2655 Home# (207)317-1884 Cell # Fax# e-mail: wsavage@acorn-engineering.com
Billing Information Name: (See Applicant Information) Address: City/State : Zip Code:	**Billing Information** Work # Cell # Fax# e-mail:

Designated person/person(s) for uploading to e-Plan:

Name: Olivia Dawson
e-mail: odawson@acorn-engineering.com

Name: William Savage
e-mail: wsavage@acorn-engineering.com

Name: Patrick Venne
e-mail: patrickjvenne@gmail.com

&

Bernie Saulnier
saulnier04@yahoo.com

RIGHT, TITLE OR INTEREST:

Deed, see attached

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

EXISTING USE: Describe the existing use of the subject property.

The locus site is currently occupied by a 1.5-story, single family house

PROJECT DESCRIPTION:

The project proposes to redevelop the site into a 4-story, 19 unit building outfitted with a green roof and first floor parking garage.

INCLUSIONARY ZONING:	
# IZ Units	1
On-Site IZ Units	1
Off-Site IZ Units	
# IZ Homeownership Units	1
# IZ Rental Units	
# IZ Efficiencies	
# IZ 1-Beds	1
# IZ 2-Beds	
# IZ 3-Beds	
IZ Fee In-Lieu	

APPLICATION FEES:

X Conditional Use Review to Ensure Workforce Housing ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

Please refer to the application checklist (attached) for a detailed list of submission requirements.

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:
   Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.
   Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions
   Tab 3 - Preparing and uploading revised drawings and documents

   Applying Online Instructions

5. When ready, upload your files and documents into the following folders:
   "Application Submittal – Drawings"
   "Application Submittal – Documents"

6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST
X		1	Completed Application Form
X		1	Cover letter stating the nature of the project.
X		1	Evidence of right, title and interest.
X		1	Written Submittals that address the conditional use standards of Sec. 14-484, including unit size and bedroom count
X		1	Proposed Marketing Strategy
n/a		1	Written Proposal for providing workforce units on-site, off-site, or payment of fee-in-lieu.
n/a		1	If the project is to be phased, provide written description of project phasing and accommodation of workforce units.
			Plans and Construction Details Submission Checklist
X		1	An accompanying site plan application, as applicable.
X		1	Floor Plans of all units and identifying proposed designated workforce housing units
X		1	Interior Standards for Units for market rate and workforce housing units, including kitchen, bathroom, flooring and closet amenities
n/a		1	If workforce units are proposed off-site, provide vicinity map with project location and workforce unit locations within the applicable census block group map or within 1500 feet of the project.

APPLICANT SIGNATURE:

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Conditional Use IZ Review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:	Date:
	5-2-2017

W. Conformity with Conditional Use Standards

The following statement is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-487.

OVERVIEW

This project conforms with all the applicable design standards of Section 14-487 (e) as demonstrated in the following narrative.

(e) Standards

1. Not applicable; the project will not be constructed in phases.

2. The project proposes that the workforce unit be integrated directly within the multi-unit building and include access to the site's amenities including a shared front lobby entrance.

3. The workforce unit will be a one-bedroom unit, similar to that of the majority of the building.

4. The workforce unit is to be offered on-site.

5. If the workforce unit for sale is converted to a rental unit at a later date will be subject to income limits and other workforce unit requirements.

6. Not applicable

7. Because 10% of the available units will be defined a workforce, the minimum term of affordability required is to be the longest term permitted under federal, state, and local laws and ordinances.

155 Sheridan Street – Level III Development Review Application

Neighborhood Meeting Certification

I, (Applicant/Consultant) hereby certify that a neighborhood meeting was held on **June 21st, 2017** at the **East End Community School** at **6:00pm.**

I also certify that on **June 9th**, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to the Planning Division (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,

_____ 6/22/17 (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Neighborhood Meeting Sign-In Sheet
3. Neighborhood Meeting Minutes

Dear Neighbor: June 8, 2017

On behalf of BD Sheridan, LLC we are pleased to invite you to a neighborhood meeting to discuss our plans for the proposed project at 155 Sheridan Street within the Residential, R-6, Zone in Portland. The project includes the development of a nineteen unit, four-story residential building with resident parking provided on the first level. Parking will be accessed via Sheridan Street and residents will have access from both Sheridan Street and Fort Sumner Park.

The proposed project meets the development requirements as set by the Fort Sumner Park Height Overlay Ordinance: the building is set at least fifteen feet from the park property and remains below the vertical height requirement as it decreases from the park's apex elevation.

Meeting Location: East End Community School – Cafeteria
195 North Street, Portland, ME 04101

Meeting Date: Wednesday, June 21, 2017

Meeting Time: 6:00 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions regarding the neighborhood meeting, please don't hesitate to call me at 274 - 1298. We look forward to seeing you at the meeting.

Sincerely,

Patrick Venne
Owner's Representative
Redwood Development Consulting, LLC

155 Sheridan Street Redevelopment Project
Level III Site Plan and Subdivision Application

Neighborhood Meeting Minutes
June 21, 2017 6:00pm
East End Community School Cafeteria

Design Team Attendees:

Patrick Venne	Developer's Representative - Presenter
Ryan Senatore	Architect - Presenter
Will Savage	Civil Engineer - Presenter
Olivia Dawson	Civil Engineer/Landscape Designer - Minutes Recorder

Presentation:

Patrick Venne:

- Introduced the design team in attendance and elaborated on the progression of the Sheridan project:
    - Discussed how the project to be presented today during the meeting was an accumulation of year-long coordination efforts with the City and neighbors
    - Elaborated on how the project was subject to a City enacted moratorium that stalled design work and delayed the project from site plan review last fall
    - Spoke to the project transforming from a six story, 34-unit building that obscured a portion of the views from Fort Sumner Park to a four-story, 19-unit building that preserves the existing sight lines
- Emphasized that the project application as it is stands and was submitted to the city fully complies with the new Fort Sumner Park Overlay zoning ordinance
    - Pointed out that at the proposed building height, the existing views from Fort Sumner Park would not be obstructed
    - Further emphasized that the developer has gone above and beyond the standard of care for coordinating with the City and committing to public outreach

Ryan Senatore:

- First discussed the proposed floor plans:
    - The first floor is to be occupied by 19 parking spaces with a common entrance/exit driveway, a primary entranceway with a lobby, and a secondary egress. Noted that the majority of this floor would be underground as highlighted in dark grey on each of the floor plans. No residential units are proposed on this level.
    - The second floor is to be a mix of single and two-bedroom units with a large tenant storage room. Units will have either a patio space or balcony.
    - The third floor is to be a 'double-loaded corridor' with one and two-bedroom units on either side of the hallway. Units to also have either a patio or balcony space. The units facing the rear of the property will have larger, private patio and yard space between the building and the retaining wall.
    - The fourth floor is to have units each with a balcony and a shared roof deck area (a portion of the deck space is to be screened off for private use). The fourth-floor plan does not span the full width of the building in order to comply with the height restrictions as set by the Fort Sumner Park Overlay. The remaining roof space not occupied by the roof deck is to be partially covered by green roof trays. There will also be pedestrian access from the fourth floor to Fort Sumner Park.
- Reviewed the sectional view of the building that highlighted how the first and second floors would be below the third-floor surface elevation towards the rear of the property.
- Spoke to the proposed building characteristics and the exterior façade:
    - The west elevation facing Sheridan Street is designed to have variation in massing in order to break up the relatively large scale of the building. The face is to alternate between indented balconies, room overhangs, and large windows flush with the exterior wall in order to create contrast. The exterior wall materials are to alternate in similar fashion between cedar-stamped composite siding and smooth siding in three cream and green based colors. It was noted that green roof trays are also proposed on the rooftop. The drawing also illustrates a red line that represents the decreasing maximum allowable building elevation as set by the Overlay ordinance and how the building complies with the height cap.
    - The south elevation illustrates the elevation change between the floors and the path and stairway leading to Fort Sumner Park. It was emphasized that although the structure appears to be above the existing surface grades, the section at which the elevation view was taken is not in line with the apex of the park and the apex is taller than the top of building.
    - The east elevation highlights the third and fourth level patios and balconies as well as the shared fourth level roof deck and green roof trays on both the top of building and top of third floor rooftops.
    - The north elevation further illustrates the use of retaining walls in the project and how the building complies with the maximum building height requirement.
- Reviewed the proposed massing of the building in a series of renders with views looking to the south and north down Sheridan Street, the view looking uphill from Washington Ave, and the view from Fort Sumner Park. As illustrated in the view from Fort Sumner, the proposed building will not impede on the existing park views.

Will Savage:

- First reviewed the location of the site and what the existing condition is:
    - The site is bordered mostly by the residential R-6 zone to the north towards North Street, to the west towards Walnut Street and Mancini Electric, and to the east towards Marion Street and Cumberland Ave. To the south, along Washington Ave and Fox Street there is the B-2b Business Zone. And directly abutting the property to the east is the newly designated ROS Recreational Open Space zone for Fort Sumner Park.
    - There is also the Portland Trails path that crosses Sheridan Street into Fort Sumner Park towards the south of the property.
    - Noted that there are existing steep slopes towards Sheridan Street.
    - Touched on conclusions of the Tree Survey performed by a licensed arborist of the existing vegetation within the property: per the survey, the majority of the site is occupied by the invasive Norway Maples trees and other invasive understory vegetation

- Discussed the proposed site characteristics:
    - Solid waste generated by the residents is to be stored internally within the first-floor parking garage.
    - Internal bicycle parking for the residents is to be provided within the tenant storage space on the second floor.
    - The workforce housing unit is to be provided on the third floor and have access to a private patio space.
    - There are seven street trees proposed along Sheridan Street and approximately 30% of the site is to be landscaped

- Emphasized that there will be new utilities and services for the building but all services will be routed underground.

- Discussed the proposed stormwater treatment systems:
    - The project proposes a system of green roof trays that help treat and store rain water that then drains into an Underdrained Subsurface Sand Filter (USSF)
    - The USSF system provides both treatment and storage for the stormwater generated on-site and is to outlet into the existing stormwater infrastructure within Sheridan Street

Questions & Answers:

Please note that the following questions and answers were not recorded verbatim and aim to represent and summarize the actual questions, answers, and discussion that took place at the meeting.

Q: Will there be an impact from the building onto the solar panels at 156 Sheridan Street (directly across the street from the proposed project)?

A (Ryan): We have not yet looked into the possibility that the proposed building would block those panels. However, looking at the location and elevations of the two buildings it is unlikely that new building at 155 Sheridan will impact the panels. That being said, we can study this impact in greater depth.

Q: Will the elevator shaft (override) be taller than the maximum allowable building height and impact the park (Fort Sumner Park)?

A (Ryan): No, the elevator override will remain below the height limit.

Q: You mentioned providing Workforce Housing on-site for one of the units. What is Workforce housing?

A (Will): Per the City's affordable housing initiative started last year, there is an Inclusionary Zoning Application that must be filed in tangent with the Site Plan Application to the City that requires new developments to provide affordable housing in three different ways: contribute a sum to the Portland Housing Authority, purchase a unit off-site and designate it as affordable, or provide a workforce unit within the proposed building that has deed restrictions on sale price and future selling prices. It is often more desirable from the developer's standpoint to buy out of the requirement or provide the unit off-site, essentially, for lack of a better word, segregating the unit from the market-rate units within the property. In contrast, this project will have a workforce unit on the third floor with a patio space that is comparable to the surrounding market rate units.

Q: What is the City's parking requirement for this project? Where will residents park their second car?

A (Will): The City does not require parking for the first three residential units and then requires one parking space per unit thereafter; we are proposing 19 parking spaces, one space per unit, including a handicapped accessible space. As for the second car, we are seeing that many first time condo-buyers or retirees looking to downsize, the projected buyers of these units, are often using only one car.

Q: Are you required to purchase parking spots from the City for contractors and the construction crew? *(Additional concern was voiced for this question that was answered in similar fashion)*

A (Will): When and where the construction crews will be parking is to be included in the project's Construction Management Plan submitted as part of the site plan application. The City is working on a new submission requirements for the construction management plan with the goal of reducing conflicts between contractors and neighbors during construction and maintaining a safe environment within and outside the jobsite.

Q: Can you expand upon the pedestrian walkway that accessed by Fort Sumner Park. Is it private? Who is the intended use for?

A (Will): The walkway is intended to provide gated, private access from the park for the residents. The walkway will extend from the fourth level to the Fort Sumner property line at grade. The gate will be a flight of stairs below Fort Sumner and remain out of sight from the park.

Q: Who will be maintaining the green roof?

A (Will): It will be the condo association's responsibility for the upkeep of the green roof trays which are included in the stormwater maintenance agreement. This agreement, as filed with the City of Portland as part of the site plan application, requires the condo association to hire a qualified stormwater inspector to inspect the property's stormwater BMPs annually (the subsurface stormwater system and green roof) and provide the City and condo association with an inspection report and recommended maintenance actions if any.

Q: Has there been a date scheduled for the first Workshop Meeting?

A (Patrick): No date has been confirmed by the Planning Staff as of yet but we are tentatively scheduled for July 11th.

Q: What is the estimated construction period?

A (Ryan): We estimate the project will take about 12-months to complete.

Q: What is the projected cost of the units?

A (Patrick): There is no estimated price point at this time but the unit prices will be influenced by the asking prices of the new condos within the neighborhood including the new development across the street at 156 Sheridan Street.

Q: Who is the construction company for the project?

A (Ryan): We are conducting interviews with different companies at this time but have not selected anyone yet.

Q: Who is the developer?

A (Patrick): The project is being developed by BD Sheridan, LLC and Vazza Real Estate Group which are represented by Bernie Saulnier.

Q: What are you proposing to replace the trees that were removed during construction? I see that Gingko trees are proposed along the street and those are not native to Maine.

A (Will & Olivia): We currently are proposing seven street trees as well as evergreen trees along the front building face and small arborvitaes along the rear retaining wall fence line. Although we are proposing Gingko trees at this point in the design process, the final species is to be reviewed by

and accepted by the City Arborist, Jeff Tarling.

Q: What sort of excavating or earthmoving techniques will be used during construction? Will there be any blasting? I directly abut the project site to the north along North Street and I am concerned about construction activities impacting my foundation.

A (Will): Based upon the results of the Geotechnical Report there is no blasting proposed during project construction but there will be piles driven into the ground for the pile and lag retaining wall. With your permission, the contractor can conduct a survey of your foundation prior to any earthmoving activities. This inspection, including pictures of the existing foundation condition, will be used as a baseline for any damage claims filed during or following project construction.

Q: What is preventing someone from falling from atop the retaining wall?

A (Ryan): There will be a minimum 42" tall black chain link fence atop the retaining wall, closer to the park's apex point the fence will be lower in elevation so that the existing views are not impacted.

Q: Will there be screening proposed during the construction process to prevent trash and debris from blowing into the worksite?

A (Will): Any proposed screening will be defined by the construction management plan and later by the contractor during construction. We will look into implementing temporary structures for blowing debris within the construction management plan. General housekeeping will be the responsibility of the Contractor to minimize trash.

Q: What is the height of the retaining wall to the north?

A (Will): The retaining wall height varies and is approximately 20-24 ft.

Q: What does the fence along the retaining wall look like and will it impose on the park views?

A (Ryan): We are proposing a black chain link fence that is virtually invisible and undetectable from a distance. This fence will taper off prior to the park so that the views are not impeded on.

Q: Will lights from the units be visible from the park?

A (Ryan): If we look at the south elevation again (from the presentation) you can see that the units on the second through fourth floors will remain below the park elevation and the lights will shine towards the lower slopes of the park and not be in direct sight.

Q: Can you expand upon what a green roof is?

A (Will): A green roof consists of covering a building roof or a portion of the roof with plantings that can include anything from small, dense shrub-like species to upwards of tall grasses and trees. We are proposing a smaller, modular green roof system made up of 2-foot by 2-foot trays. Green roofs not only provide a more visually interactive roof scape but also reduce the urban heat index in cities and provide additional stormwater treatment for rainfall events.

Q: What type of plants will be planted on the green roof?

A (Ryan): Green roofs can be planted with a variety of species from grasses to small compact vegetation. These species are also often drought resistant.

Q: Are there any waivers being asked as part of this project? Do you expect to ask for additional waivers further along in the application process? How will we know if a waiver is requested?

A (Will): We are not asking for any waivers at this time nor do we expect to ask for waivers in the future. I would like to emphasize that the City does not simply take our word on the waivers and conducts a third party, professional review of the project application to verify that no waivers from the land code ordinance are required. If they do identify a need for a waiver they will contact the developer and that contact request will be public information. Concerned citizens should contact the Planner – Matt Grooms to receive updates on the project.

Q: Is there any possibility of providing additional plantings along the retaining wall fence along the park property line?

A (Ryan & Will): If we were to plant anything along this fence line the sightline through the chain link fence will be obscured by the plant growth and potentially decrease views from the park.

Q: Is any remedial work proposed for the park property directly abutting the retaining wall?

A (Patrick): During construction, the contractor might need to request a temporary construction easement and use a limited portion of the city land. However, that land will be required to be graded and built to its existing condition following the end of construction. Also, it should be noted that the park surface directly abutting the site is a riprap stabilized slope and as limited plant growth and landscaping.

At this time the project does not require temporary construction rights from adjacent parcels.

Q: What are you proposing for landscaping on the south facing wall towards Fort Sumner?

A (Olivia): The landscaped space along the walkway is proposed to be planted with evergreen groundcover.

Q: When will you anticipate breaking ground on construction?

A (Patrick): Hopefully this October.

Q: How does the flattop roof handle snow accumulation?

A (Ryan): The roof is designed to account for an assumed amount of 'dead weight' loading from snow accumulation and will require additional truss supports for the snow loading. The roof will be designed to withstand the additional weight from the green roof.

Q: Would you consider a different fence style such as wrought iron for the retaining wall fencing?

A (Will & Ryan): We hadn't considered a wrought iron fence but we can look into the implications of proposing it.

Q: Can you elaborate on the design moratorium that was placed on this project.

A (Patrick): Last year the city enacted a development moratorium that prevented the project moving forward in the site plan application process and gave the City time to outline and pass an amendment to the land code ordinance for properties abutting the Fort Sumner Park in the R-6 residential zone. The amendment was passed earlier this year.

Q: Will there be on-site or off-site marketing for the units?

A (Patrick): We have no finalized the marketing plan for these units but it is assumed that the marketing will take place off-site.

Additional Comments from the Public:

1. There was some concern from the neighbors during the discussion of the green roof maintenance that the roof's vegetation would not be properly maintained by the residents and could suffer from neglect because it is not in their direct line of sight. It was also expressed that they would prefer shorter plantings on the rooftop, the shorter the better.

2. During the latter portion of the question and answering period, a member and representative of the Friends of Fort Sumner Park spoke in favor of the project and in appreciation of the developer's and design team's efforts to adjust the scope of the project to comply with the new park overlay ordinance. This support statement was later seconded by another neighbor.

Meeting concluded at approximately 7:15pm.

The abovementioned material was as interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the recorded minutes to the below email address so that they can be reviewed, revised, and resubmitted as necessary.

Recorded by,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.

odawson@acorn-engineering.com

155 Sheridan Street Redevelopment

Neighborhood Meeting Sign-In Sheet – June 21st, 2017

Please Print your Name and Address

1. Debra Byers 156 Sheridan St. Pld
2. CAROL McCRACKEN 645 Congress ST
3. CAROLYN YOUNG 135 SHERIDAN ST #201
4. RANDY YOUNG 135 SHERIDAN ST #201
5. Dave Cowie 32 North Street, Portland 04101
6. Douglas Cowie " " " "
7. GARY MARCISSO 69 Vaspurest Munjoy Hill
8. Lisa Arsenault 135 Sheridan St.
9. Karen Snyder 22 Waterville
10. Anne S Mangarello 84 Dartmouth St.
11. Dave [illegible] 125 Sheridan St
12. Jason York-Wilbur 135 Sheridan St
13.
14.
15.
16.
17.
18.
19.
20.
21.
22.

ACORN ENGINEERING, INC.

Matthew Grooms – City Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

August 4, 2017

Subject: Comment Response Letter
155 Sheridan Street – Portland, Maine

On behalf of BD Sheridan, LLC we are pleased to respond to the civil-related comments provided by multiple reviewers.

To facilitate the review, comments are provided below in italics followed by Acorn Engineering, Inc.'s response.

<u>Woodard & Curran, Stormwater and Civil Engineering</u>

Comment – *Per Section 12 of the City's Technical Manual, the Applicant is required to submit a photometric plan demonstrating minimal light trespass from the site.*

Response – The Comment-Response submittal package includes a Photometric Plan.

Comment – *In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:*

<u>Basic Standard:</u> Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.

Response – Thank you for your review.

Comment – *<u>General Standard:</u> The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include stormwater management features for stormwater quality control. We have the following comments on the proposed treatment system.*

The Applicant has indicated in the Stormwater Management Report that the subsurface sand filter was sized only to treat runoff generated from the roof of the proposed building and that landscaped areas will not be directed into the system. Table 2: Developed Area Treatment and Table 4: Water Quality Volume Table, both depict landscaped areas being treated by the subsurface sand filter. Please clarify if the proposed subsurface sand filter will treat the proposed landscaped areas.

Additionally, if landscaped area is to be directed towards the subsurface sand filter, the filter surface area provided in Table 3 should be revised accordingly.

Response – The report has been revised to state that the landscaped area within the rear private patio spaces is to be redirected and treated by the USSF system as well.

The total developed area and developed area with treatment as recorded in Table 2 include the area of the building that will be disturbed during the construction process. As such, the tributary area as recorded in Table 4 is less than the developed areas and represents the rear patio space entering the USSF system to be treated and included in the water quality volume calculations. Therefore, the USSF filter area is sized to treat at least 95% of all new impervious area and 80% of all disturbed area. The report has been revised to more clearly differentiate the two areas. The USSF filter area has also been updated and sized to the tributary areas.

Comment – *Flooding Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include any specific stormwater management features to control the rate or quantity of stormwater runoff from the site. We have the following comments on the associated stormwater model.*

i. *Table 4 in the Stormwater Management Report specifies a provided storage volume for the subsurface sand filter of 1,086 cubic feet, however, the modeled storage for pond 1P is approximately 2,222 cubic feet. Please clarify the intended subsurface filter size.*
ii. *The Time of Concentration flow path for Pre-Development does not appear to represent the most hydrologically remote point.*
iii. *It appears that a portion of subcatchment 3 shown on the Post-Development watershed, is directed towards the subsurface sand filters and a portion flows directly onto Sheridan Street. Please clarify how flow from the rear of the lot is directed way from the proposed subsurface sand filters.*

Response –

i. Table 4 has been updated to reflect the storage as recorded in the HydroCAD report. Note that the water quality storage is provided in the MC-4500 chambers and end caps, and the surrounding stone only and the number recorded in Table 4 reflects storage from those components only.
ii. The Pre-Development Watershed Map has been revised to reflect a longer flow path as starting from a more hydrologically remote point. The HydroCAD model was updated as well.
iii. The runoff from the rear part of subcatchment 3 is proposed to enter the underdrain installed alongside the retaining wall and connect to the outfall stormdrain of the USSF, thus bypassing the system before entering Sheridan Street.

Comment – *The provided bituminous pavement detail references both 9.5 and 12.5 mm HMA as the surface course. City of Portland Technical Standards require the use of 12.5 mm HMA.*

Response – The detail has been revised to reference 12.5 mm HMA pavement only.

<u>Tom Errico, Traffic and Construction Management Review</u>

Comment – *The applicant has prepared a traffic impact study and I find the methods and conclusions to be reasonable. The project is not be expected to create any mobility or safety deficiencies. Trip generation levels do not require a Traffic Movement Permit. The Washington Avenue/Walnut Street/Fox Street intersection is a High Crash Location, but the proposed project is not expected to add a significant amount of traffic to the intersection.*

Response – Thank you for your review.

Comment – *I have reviewed the parking layout and I find it to be acceptable.*

Response – Thank you for your review.

Comment – *The proposed driveway opening at the garage is 18-feet wide. Technically this width does not require a waiver from City standards given that the width increases at the property line (the minimum width permitted by the City is 20 feet). I find the driveway configuration to be acceptable. I would note that the driveway apron shall provide for a maximum 2% cross slope along the sidewalk or pedestrian route.*

Response – Thank you for your review; the brick driveway apron detail has been updated to reflect the maximum 2% cross slope along the pedestrian walkway route (minimum five feet).

Comment – *I have reviewed the construction management plan and greater detail is required as it relates to temporary sidewalk provisions. This should include resultant width of roadway and ADA compliant temporary ramps. Additionally, the applicant should specifically note if on-street parking is to be eliminated (with detailed limits) during construction and how contactor parking be managed.*

Response – Additional information has been added to C-03, Demolition, Construction Management, & Erosion Control Plan including the resultant width of Sheridan Street with the temporary, 4-foot sidewalk in place (20 feet) and temporary, paved ADA compliant ramps that will be removed following construction. As a result, it is anticipated that on-street parking will be eliminated for one side of the road for the length of the front property, approximately 8 spaces. The construction management company will be responsible for obtaining the appropriate permits from the City for closing the on-street parking spaces.

The construction management company and sub-contractors are made aware that parking will not be guaranteed onsite and they will be responsible for coordinating overflow parking for equipment and their employees during construction as stated in Note 15 of C-03. For example, the contractor would be responsible for entering a lease agreement with nearby rental lots to accommodate their parking needs. The Construction Management Document and Demolition, Construction Management, & Erosion Control Plan as submitted as part of the application has been revised to reflect this process.

Keith Gautreau, Fire Department Comments

Comment – *Premises Identification:*

a) *The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.*
b) *Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.*
c) *If the building entry faces a different street, both the street name and number should be large enough to read from the street.*
d) *Address numbers must be a minimum of 6 inches high.*
e) *The number should be in Arabic numerals rather than spelled out (for example, "130" instead of "One Hundred and Thirty').*
f) *Color: Addresses should be in a color that contrasts with the background.*
g) *Whenever possible, should be illuminated.*
h) *Provide additional address signs at entrances to the property when the building address is not legible from the public street.*
i) *Buildings set back in groups that share common entrances can make quickly locating a specific building and the shortest route difficult. On such sites, additional signs with directional arrows and/or diagrams of the buildings and access layout should be posted.*

Response – The final premises identification design will comply with the abovementioned items. Refer to the architectural elevation drawings for additional information regarding the color and location of the street signage and lighting.

Comment – *There appears to be hydrants located at Walnut and Sheridan and at 135 Sheridan Street. According to GIS they are on dead end mains. Please confirm with PWD that this is the case and that they will provide a capacity to serve letter for domestic and fire protection for this proposed project.*

Response – An ability to serve response letter from PWD has been provided as part of the final Site Application submission package. The letter confirms the location and function of the existing hydrants in the project vicinity and the anticipation that the new, 8" water main replacement to be constructed in Fall 2017 by PWD's Contractor has the capacity to serve the project.

Comment – *Essentially there is only access to one side of the building for Emergency Vehicles on Sheridan Street. Because of this Fire Dept. would like to see underground power rather than the proposed overhead lines. This will make access to the roof and roof top decks difficult or impossible.*

Response – The project team has met onsite with both a representative of CMP and the Captain Gautreau - Portland Fire Department to discuss the possibility of rerouting the existing overhead lines to taller poles. The lines would be raised an additional ten (10) feet into the air and redirected on alley arms to stretch into Sheridan Street and away from the building. This gives the Portland Fire Department at least ten (10) feet of clearance between the top corner of the building face and the overhead primaries. Both CMP and Captain Gautreau have expressed their acceptance of the new alternative routing. Refer to the final Utility Plan, C-20 as included in the final submission package as reference for the proposed changes.

The increased height will remain in compliance with the Sumner Park Overlay. Placing the overhead wires underground was explored in depth with CMP, however the complexity to do so, impact to existing users and resulting significant construction cost proved this method to be unfeasible.

Matthew Grooms, Site Plan and Subdivision Review Comments

Comment – *Will the elevator be ADA accessible from the proposed southerly most pedestrian entrance? If not, would the applicant consider making this a fully ADA accessible pedestrian entrance.*

Response – The elevator will be ADA accessible from either entrance (2) along Sheridan Street via a system of ramped surfaces. Unfortunately, the entrance as accessed by the Fort Sumner Park will not be ADA accessible due to the existing steep grade change and compliance with the view overlay ordinance.

Comment – *Indicate on the proposed site plan where the required bicycle parking shall be located.*

Response – Covered tenant bicycle parking will be provided on the second floor of the building. The Space and Bulk Standards table on C-10, Site Plan references the Architectural Plans for the location of the internal bike storage spaces. As requested during the Planning Board workshop meeting, additional exterior bicycle parking spaces (2) are proposed along the southeast corner of the Sheridan Street frontage.

Comment – *Façade mounted mechanical equipment is clearly visible from the public right-of-way. This equipment shall be screened in conformance with the City's site plan ordinance, Section 14-526(b)(2)(b).*

Response – Screening has been added to the exterior mechanical units. Refer to the architectural design response narrative for additional information.

Comment – *A copy of the finalized Geotechnical report will be required prior to the issuance of any building permit.*

Response – The final Geotechnical Report is included as part of the final application submission package.

Comment – *In line with the Fort Sumner Park Overlay Zone, this item is required to go before the Parks Commission for an advisory review and Planning Board recommendation., the Applicant should show how solid waste trucks will be able to access the site for removal.*

Response – The development was initially presented to the Parks Commission during their monthly meeting on July 6th. A second meeting is scheduled for the commission's September meeting in which the members will hold an advisory vote for the Planning Board. The final recommendation will be provided to the Planning Board in September when the project is formally reviewed as an agenda item.

Comment – *Site lighting details and associated photometric plan shall be provided with the final submittal package.*

Response – Updated Lighting Cut Sheets and a Photometric Plan have been added to the application submittal.

Comment – *A subdivision plan and recording plat shall be required as part of the final submittal package.*

Response – A preliminary Subdivision Plan & Recording Plat has been submitted with the comment-response documents for review. A Final Plat stamped by a Professional Licensed Surveyor will be provided to the Planning Authority, pending Planning Board approval and any associated conditions of approval.

Comment – *It is recommended that plantings along Sheridan Street be located within vertical granite planters, so as to protect vegetation from road salts and define private space.*

Response – There is vertical granite curbing proposed along the front planting bedding areas to create a raised planting area.

Comment – *Given the narrow sidewalk width along Sheridan Street, street tree placement is still under consideration. Further direction regarding street tree placement shall be provided.*

Response – In response to the concerns of the narrowing sidewalk width, we are now proposing to grant a public access easement to the City for an additional foot of brick sidewalk built to City standards that extends into the property lines. The easement, to be reviewed and accepted by the City and recorded with the Cumberland County Registry of Deeds, will provide additional space to navigate around the trees and maintain at least a 5-foot walkway.

Caitlin Cameron, Design Review Comments

Design Review Comments to be addressed under separate cover by the project architect.

Jeff Tarling, Landscape Review Comments
(per 7/26/17 email forwarded to the project team)

Comment – *After looking at the proposed Sheridan Street project and reviewing the existing sidewalk conditions, wanted to propose landscape / streetscape improvement next door along the Sheridan Street frontage of Fort Sumner Park. Although the current conditions are challenging it might present an opportunity to conduct improvements that will complement the project where it lacks space to do so on its site. Thus would like to open dialog to review that aspect of landscape and tree planting standards that could be met on or near site.*

Response – To expand upon the previous response, providing the sidewalk easement and a 5-foot wide walkway allows the project to propose four (4) street trees that add to the greenery and street scape that the future building residents will see directly from their units. Keeping the street trees within the scope of the development in addition to the landscaping improvements directly along the building face are proposed as such to satisfy the City's landscape design intent for developments to contribute to and improve the street environment as stated in Chapter 4.6.4 of the Technical Standard; the street trees and landscaping proposed within the site are intended to meet the street tree alternative standards for the required nineteen (19) trees.

Please let me know if you have any additional questions or comments.

Sincerely,

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

Olivia Dawson, E.I.
Project Engineer
Acorn Engineering, Inc.

PC1

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Sheridan Street projects

Jaime Parker <jaime@trails.org> Mon, Aug 21, 2017 at 4:05 PM
To: mgrooms@portlandmaine.gov, Jeremiah Bartlett <JBartlett@portlandmaine.gov>
Cc: Kara Wooldrik <kara@trails.org>

Hi Matt,

I'm wondering if you would be able to provide any info on what public improvements we might expect from the 2 developments on Sheridan Street. Are there plans yo could forward?

Portland Trails worked with the City years ago to get some of the sidewalk on the north side of the street built, but it was never completed, so there is a missing link (and therefor a lack of ADA compliance) on that side, all along the frontage of the City land "Lower Fort Sumner Park". With two new developments occurring that will put more feet on the street, we would like to request this sidewalk be completed.

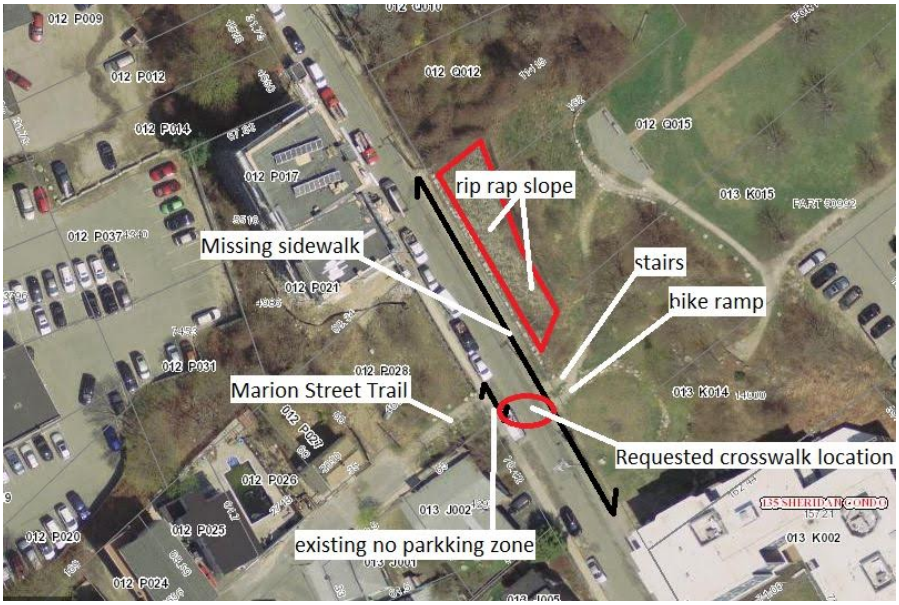
Additionally, we would request a crosswalk from the Marion Street steps and trail, across Sheridan to Lower Fort Sumner. Several neighbors have asked for a crosswalk here, as this is a heavily used trail connection from Washington Ave to North Street. We believe it may also help to set the context for a safer street, as there are ongoing issues with speeding. This is a recent "SeeClickFix" report:

We need some traffic enforcement on Sheridan St as we are subjected daily to cars, trucks and motorcycles that speed down the length of the street. We've seen vehicles routinely hitting 50+ mph.

Finally, we might request funding for more native plantings among the rip rap. Portland Trails planted this area before, and many of the plants are thriving, but the area could use more plants to fill in the gaps, and supplant invasive species.

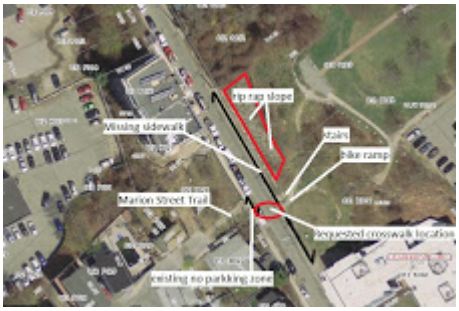
I've attached a sketch, and am happy to chat at your convenience. Thanks Matt,

Jaime
329.6180



Jaime Parker
Trails and Transportation Manager
Portland Trails
jaime@trails.org
329.6180

Non Sibi, Sed Omnibus



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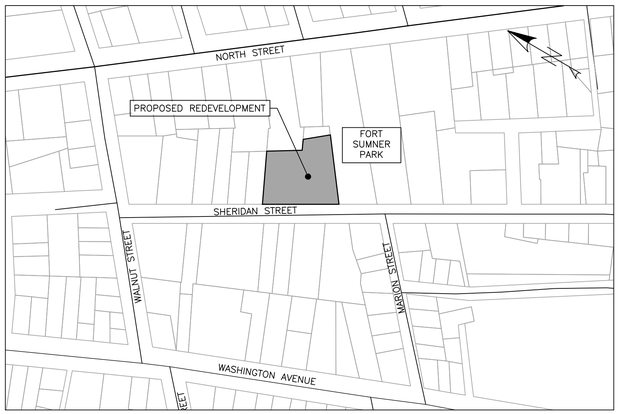
155 SHERIDAN STREET

BD SHERIDAN, LLC
PORTLAND, MAINE



VICINITY MAP
1"=150'

LEGEND

EXISTING		PROPOSED
REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION	UNDERDRAIN	
	BRICK SIDEWALK	
	GREEN SPACE	
	RECONSTRUCTED ROAD	
	UTILITY PAVEMENT CUTS	
	STRIPING	
	SEDIMENTATION BARRIER	
	EDGE OF EX. PAVEMENT	
	CURB	
	SIGN	
	LAMP OR LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	WATER VALVE	
	FIRE HYDRANT	
	SEWER MANHOLE	
	CATCH BASIN	
	DRAIN MANHOLE	
	INTERIOR DRAIN INLET	
	UNDERGROUND ELECTRIC LINE	UGE
	UNDERGROUND WATER LINE	FW FW
64	MINOR CONTOURS (1FT)	
63	MAJOR CONTOURS (5FT)	65
	GAS LINE	GAS
	STORM DRAIN LINE	
	SEWER LINE	S S
	EXISTING/PROPOSED BUILDING	
	FOUNDATION DRAIN	
X	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	OHE/T/C
	PROPERTY LINE	
	SETBACKS	

CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

UTILITIES

SEWER:

DEPARTMENT OF PUBLIC WORKS (DPW)
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: BRADLEY ROLAND, P.E.
(207) 874-8846

WATER:

PORTLAND WATER DISTRICT (PWD)
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774-5961

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: PAUL DUPERRE
(207) 828-2882

TELEPHONE:

FAIRPOINT COMMUNICATIONS
45 FOREST AVENUE
PORTLAND, MAINE 04101
CONTACT: BRIAN BOUCHARD
(207) 712-1063

CABLE:

CHARTER COMMUNICATIONS
(FORMERLY TIME WARNER CABLE)
118 JOHNSON ROAD
PORTLAND, MAINE 04102
CONTACT: MARK PELLETIER
(877) 546-0962

NATURAL GAS:

UNITIL SERVICE CORP.
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: BRIDGET HARMON
(207) 541-2536

PROJECT TEAM

DEVELOPER:

VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
QUINCY, MASSACHUSETTS
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ARCHITECT:

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PORTLAND, MAINE
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(207) 650-6414

SURVEYOR:

TITCOMB ASSOCIATES
PORTLAND, MAINE
CONTACT: REX CROTEAU, P.L.S.
(207) 797-9199

GEOTECHNICAL ENGINEER:

SUMMIT GEOENGINEERING SERVICES, INC.
LEWISTON, MAINE
CONTACT: BILL PETERLEIN, P.E.
(207) 576-3313

STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
PORTLAND, MAINE
CONTACT: AARON JONES, P.E.
(207) 774-4614

TRAFFIC ENGINEER:

TRAFFIC SOLUTIONS
PORTLAND, MAINE
CONTACT: BILL BRAY, P.E.
(207) 774-3603

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ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FI	FIELD INLET
FT.	FEET
GAL.	GALVANIZED
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TWC	TIME WARNER CABLE
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC

FINAL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM APP	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: COVER SHEET & LEGEND

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169

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THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE WITHOUT WRITTEN PERMISSION OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2855

FILE:	CIVIL_1069
JN:	1069
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
8-3-17
PROFESSIONAL ENGINEER

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.

4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.

5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN AUTOCAD FORMAT AND PAPER, STAMPED "AS-BUILT". IF AUTOCAD NOT AVAILABLE EXCLUDE FROM BID IN WRITING.

6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.

7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED EXISTING CONDITIONS SURVEY BY TITCOMB ASSOCIATES FOR VAZZA REAL ESTATE GROUP AND BD SHERIDAN, LLC DATED MARCH 6, 2016.

8. SUBSURFACE DATA HAVE BEEN OBTAINED BY SUMMIT GEOENGINEERING SERVICES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO SUBMITTING A BID.

9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.

10. THE CONTRACTOR SHALL REVIEW ACORN'S CONSTRUCTION MANAGEMENT PLAN. CONTRACTOR SHALL REMAIN RESPONSIBLE FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. CONSTRUCTION MANAGEMENT, MEANS AND METHODS, TRAFFIC CONTROL, ETC. SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

12. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACORN.

13. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF ADJACENT PROPERTIES INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.

2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.

3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.

4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.

5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.

6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.

8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.

9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.

10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED.

11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.

12. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.

2. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT.

3. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.

4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.

5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

6. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.

7. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.

8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.

9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY BD SHERIDAN LLC AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, OR ELEVATION AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO THEIR ORIGINAL LOCATION BY A REGISTERED LAND SURVEYOR.

2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

3. SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED FOUNDATION CORNERS.

6. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.

2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY LOAM WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.

2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. SEE BORING LOGS FOR ADDITIONAL INFORMATION.

3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.

4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.

5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.

6. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.

7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

9. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.

2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.

3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.

4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

5. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

2. CONTRACTOR TO DEMOLISH AND PLUG EXISTING SEWER SERVICE AT NO ADDITIONAL CHARGE TO THE OWNER IF ONE IS LOCATED DURING EARTHWORKING ACTIVITIES.

3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.

4. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.

5. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C-42.

6. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURES", MOST RECENT REVISION.

7. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.

8. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.

9. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.

10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

11. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.

12. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.

13. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK IF ONE IS REQUIRED BY THE CITY.

14. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

FINAL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM APP	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: GENERAL NOTES

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169

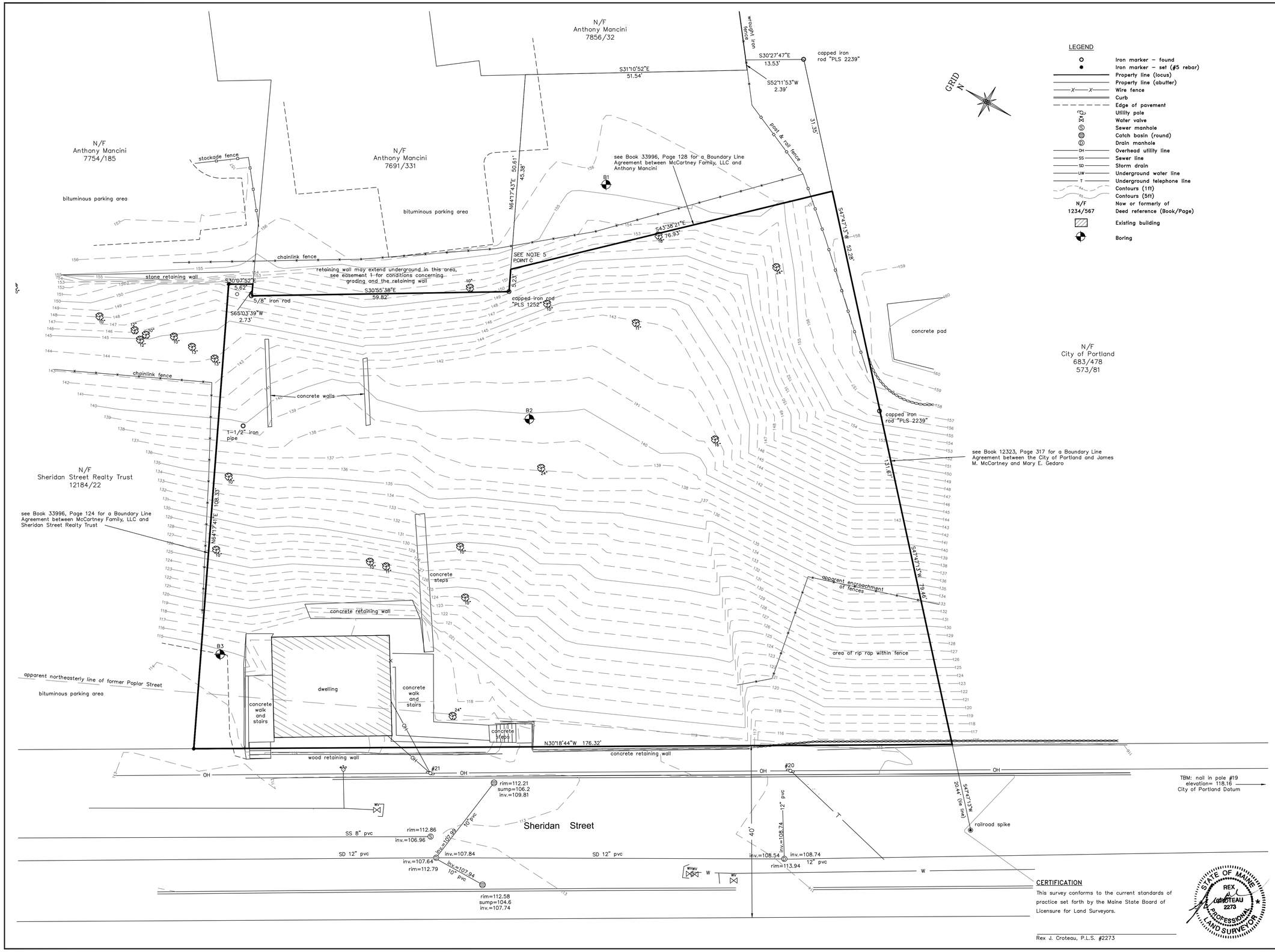
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE WITHOUT OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND MAINE 04102
(207) 775-2855

FILE:	CIVIL_1069
JN:	1069
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 13458 3-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-02



LEGEND

○	Iron marker – found
●	Iron marker – set (#5 rebar)
	Property line (locus)
	Property line (abutter)
—X—X—	Wire fence
	Curb
	Edge of pavement
	Utility pole
	Water valve
	Sewer manhole
	Catch basin (round)
	Drain manhole
—OH—	Overhead utility line
—SS—	Sewer line
—SD—	Storm drain
—UW—	Underground water line
—T—	Underground telephone line
	Contours (1ft)
	Contours (5ft)
N/F	Now or formerly of
1234/567	Deed reference (Book/Page)
	Existing building
	Boring

NOTES

1) Book and Page references are to the Cumberland County Registry of Deeds.

2) Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

3) Elevations are based on City of Portland datum.

4) Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.

REFERENCES

1) City o Portland, Maine Standard Boundary Survey of Proposed Property Line Between Land of James M. McCartney, et al. and Land of City of Portland at Fort Sumner Park dated September, 1995.

2) Plan showing old and new lines of Poplar Street by Charles R. Goodell, C.E., undated (1864?), on file in the City of Portland Archives Plan 370/42.

3) Plan Showing Division Between the Fort Sumner Lot and Lot owned by Messrs. Jose, Gould, and Clark by C. R. Goodell, dated January 12, 1865, recorded in Plan Book 2, Page 45.

4) Untitled working plan by E. C. Jordan showing boundary between Fort Sumner Park and Lands formerly of Shanahan and Pierce, as Surveyed 1886–1927, on file at Owen Haskell, Inc., Portland, Maine.

5) Plan Showing Division Line Between Lands of Hiram Pierce and City of Portland (surveyor unknown) dated May 31, 1892, on file in the City Engineer's Archives, Plan 371/1.

6) City of Portland Tax Assessor's Map of 1882, recorded in Plan Book 5, Page 12.

7) Plan Showing Little, Weeks, and Moody Lot, Munjoy Hill (surveyor and date unknown) on file in the City Engineer's Archives, Plan 86/1.

8) Untitled plan showing subdivision of land of Elijah Kellogg, dated April 10, 1802, recorded in Book 51, Page 297.

9) Untitled plan showing division of land on Mount Joy Neck by the proprietors, dated November 14, 1793 recorded in Book 39, Page 552.

10) Plan of Land (Standard Boundary Survey) on North Street, Portland, Maine for Anthony Mancini by Owen Haskell, Inc., dated April 5, 1988, on file at Owen Haskell, Inc., Portland, Maine.

11) Plan No. 6 in Book 169 page 478, dated November 1839.

12) City Street records, and working plans on file in the city engineer's archives.

13) Boundary Survey made for Anthony Mancini by Owen Haskell, Inc. dated December 6, 2012.

EASEMENTS

1) Grading restrictions set forth in the conveyance of George F. Hitchings to Charles Bailey in Book 314, Page 544.

AREA

18,140 square feet

OWNERSHIP

McCartney Family, LLC: Book 32471, Page 220
Book 32471, Page 222
Book 32471, Page 224
Book 32471, Page 226
Book 32471, Page 228

SCALE IN FEET

10 0 10 20

1" = 10'

Rev. 1	7/14/17	correct intermediate distance	RJC

PLAN OF

Ex[illegible] C[illegible]d[illegible] S[illegible]r[illegible]

153–165 Sheridan Street — Portland, Maine

MADE FOR

V[illegible] R[illegible] E[illegible] Gr[illegible]

BD S[illegible]rd[illegible], LLC

1266 Furnace Brook Parkway, Suite 300 — Quincy, Massachusetts

JOB #216013	DATE: March 4, 2016	SCALE: 1" = 10'
BOOK #891		
216013C_R1.dwg		
FILE #9819		

Titcomb Associates
133 Gr[illegible] R[illegible]d, F[illegible], M[illegible] 04105
(207)797-9199 [illegible]

CERTIFICATION

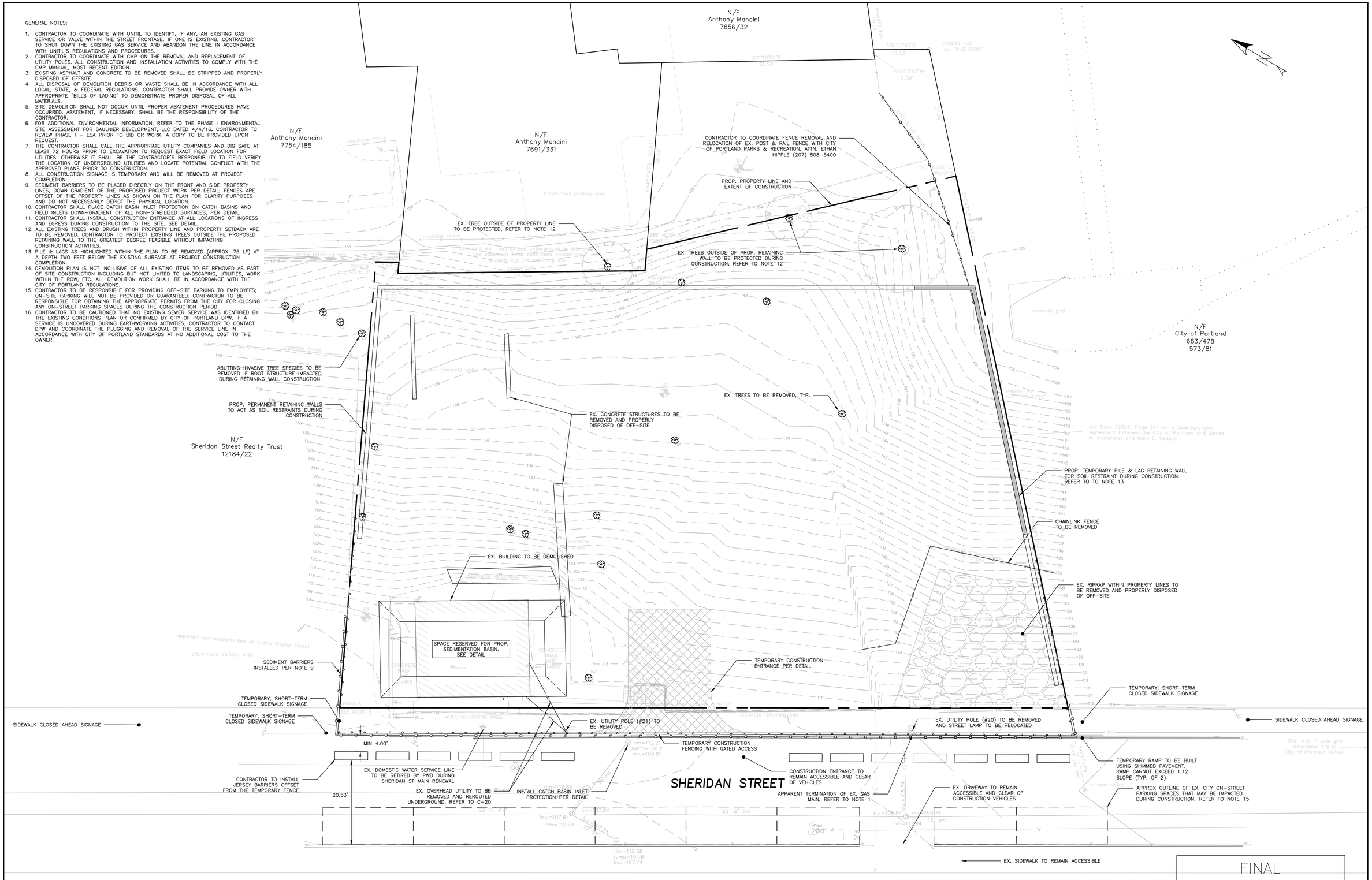
This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

Rex J. Croteau, P.L.S. #2273

STATE OF MAINE — REX J. CROTEAU 2273 — PROFESSIONAL LAND SURVEYOR

GENERAL NOTES:

1. CONTRACTOR TO COORDINATE WITH UNITIL TO IDENTIFY, IF ANY, AN EXISTING GAS SERVICE OR VALVE WITHIN THE STREET FRONTAGE. IF ONE IS EXISTING, CONTRACTOR TO SHUT DOWN THE EXISTING GAS SERVICE AND ABANDON THE LINE IN ACCORDANCE WITH UNITIL'S REGULATIONS AND PROCEDURES.
2. CONTRACTOR TO COORDINATE WITH CMP ON THE REMOVAL AND REPLACEMENT OF UTILITY POLES. ALL CONSTRUCTION AND INSTALLATION ACTIVITIES TO COMPLY WITH THE CMP MANUAL, MOST RECENT EDITION.
3. EXISTING ASPHALT AND CONCRETE TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
5. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. FOR ADDITIONAL ENVIRONMENTAL INFORMATION, REFER TO THE PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR SAULNIER DEVELOPMENT, LLC DATED 4/4/16. CONTRACTOR TO REVIEW PHASE I – ESA PRIOR TO BID OR WORK. A COPY TO BE PROVIDED UPON REQUEST.
7. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
8. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION.
9. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
10. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
11. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
12. ALL EXISTING TREES AND BRUSH WITHIN PROPERTY LINE AND PROPERTY SETBACK ARE TO BE REMOVED. CONTRACTOR TO PROTECT EXISTING TREES OUTSIDE THE PROPOSED RETAINING WALL TO THE GREATEST DEGREE FEASIBLE WITHOUT IMPACTING CONSTRUCTION ACTIVITIES.
13. PILE & LAGS AS HIGHLIGHTED WITHIN THE PLAN TO BE REMOVED (APPROX. 75 LF) AT A DEPTH TWO FEET BELOW THE EXISTING SURFACE AT PROJECT CONSTRUCTION COMPLETION.
14. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
15. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON-STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
16. CONTRACTOR TO BE CAUTIONED THAT NO EXISTING SEWER SERVICE WAS IDENTIFIED BY THE EXISTING CONDITIONS PLAN OR CONFIRMED BY CITY OF PORTLAND DPW. IF A SERVICE IS UNCOVERED DURING EARTHWORKING ACTIVITIES, CONTRACTOR TO CONTACT DPW AND COORDINATE THE PLUGGING AND REMOVAL OF THE SERVICE LINE IN ACCORDANCE WITH CITY OF PORTLAND STANDARDS AT NO ADDITIONAL COST TO THE OWNER.



FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: **DEMO, CONSTRUCTION MANAGEMENT, & EROSION CONTROL PLAN**

PROJECT NAME: **155 SHERIDAN STREET**

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE WITHOUT PERMISSION OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH ST, PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1069_CIVIL
JN:	1069
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11415 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-03

GENERAL NOTES:

1. ZONING ANALYSIS COMPLETED BY RYAN SENATORE ARCHITECTURE.
2. CONTRACTOR TO REPLACE ALL EXISTING CURBING WITH VERTICAL GRANITE CURB PER DETAIL.
3. INTERIOR STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING SHALL BE WHITE UNLESS OTHERWISE NOTED.
4. TREE GRATES AND STREET TREES SHALL BE PLACED A MINIMUM OF 20' APART MEASURED FROM CENTERLINE OF GRATE. TREE GRATES TO REMAIN A MINIMUM 8' FROM UTILITY POLES.

SPACE AND BULK STANDARDS

ZONE: R6	REQUIRED	PROVIDED
MINIMUM LOT SIZE	2,000 SF	18,140 SF
MINIMUM STREET FRONTAGE	20'	176'
FRONT YARD (AVG)	5'	5.1'
SIDE YARD	5'	10.06'
REAR YARD	10'	28.67'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	28.67'
STRUCTURE STEPBACKS (SIDE YARD ABOVE 35')	10'	10.06'
MIN BUILDING SETBACK FROM FORT SUMNER PARK	15'	15.50'
MAXIMUM LOT COVERAGE	60%	55%
MINIMUM LOT WIDTH	20'	176'
MAXIMUM BUILDING HEIGHT*	45'	39.81'
LANDSCAPED OPEN AREA	20%	30%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 25 UNITS	19 UNITS
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 16 SPACES	19 SPACES
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES**	2 SPACES/5 D.U. = 8 SPACES	8 SPACES
MAX. GARAGE OPENING	20'	18'

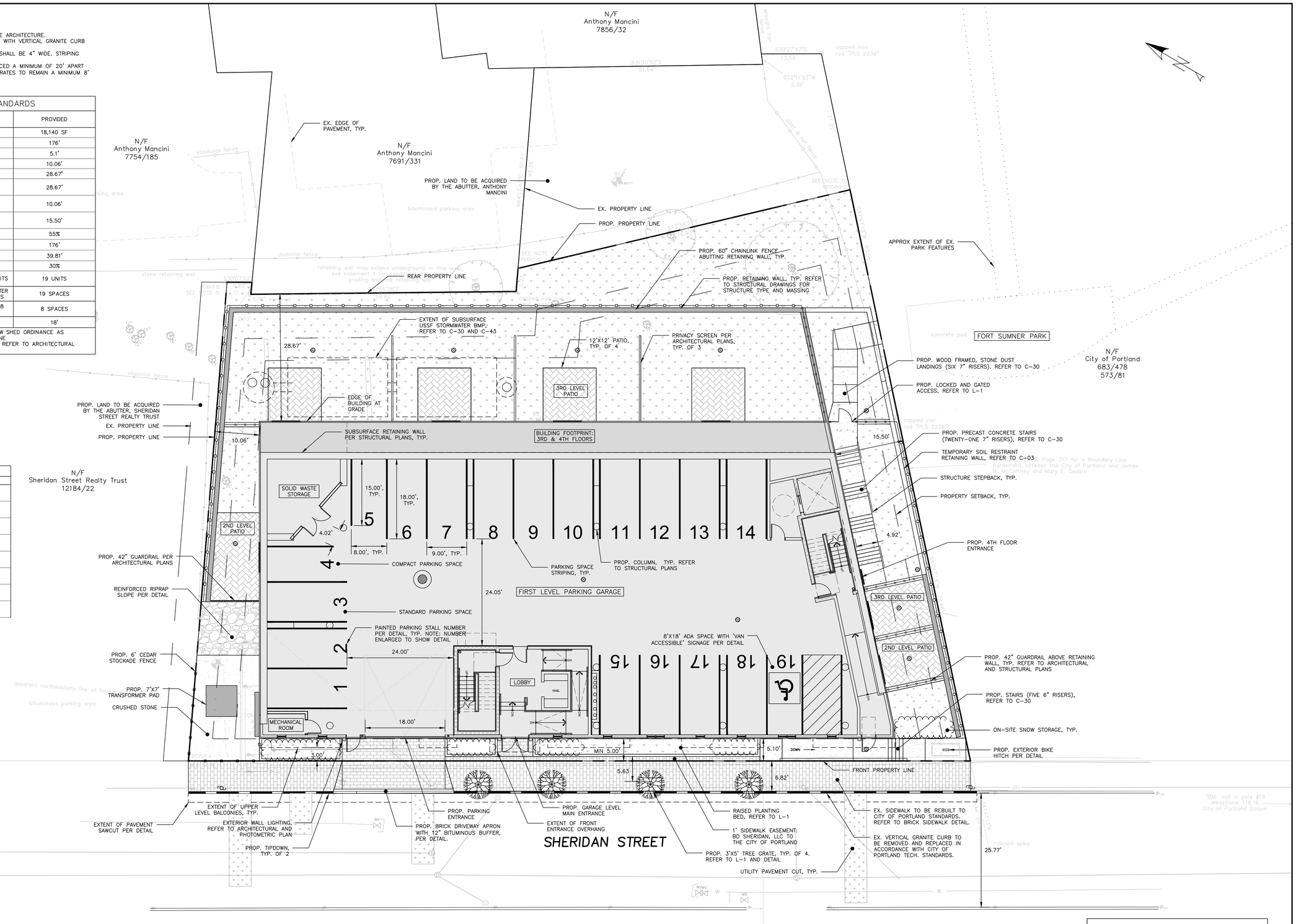
*FINAL BUILDING HEIGHT TO NOT IMPEDE ON THE VIEW SHED ORDINANCE AS DESCRIBED IN THE FORT SUNMER PARK OVERLAY ZONE
**INTERNAL BIKE STORAGE PROVIDED ON 2ND LEVEL. REFER TO ARCHITECTURAL PLANS FOR STORAGE SPACE LOCATION

PARKING SUMMARY

PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	16
COMPACT (8.5'X17.5')	2
ADA (8'X18')	1
TOTAL SPACES	19

LEGEND

HATCH STYLE	ASSOCIATED AREAS
	BRICK SIDEWALK
	RIPRAP SLOPE
	LANDSCAPED AREAS
	CONCRETE
	UTILITY PAVEMENT CUT
	CRUSHED STONE
	PATIO
	DESIGNATED SNOW STORAGE



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ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: SITE PLAN

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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158 DANFORTH ST. PORTLAND, MAINE 04102
(207) 775-2655

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STATE OF MAINE WILLIAM H. SAVAGE No. 11411 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-10

GENERAL NOTES:

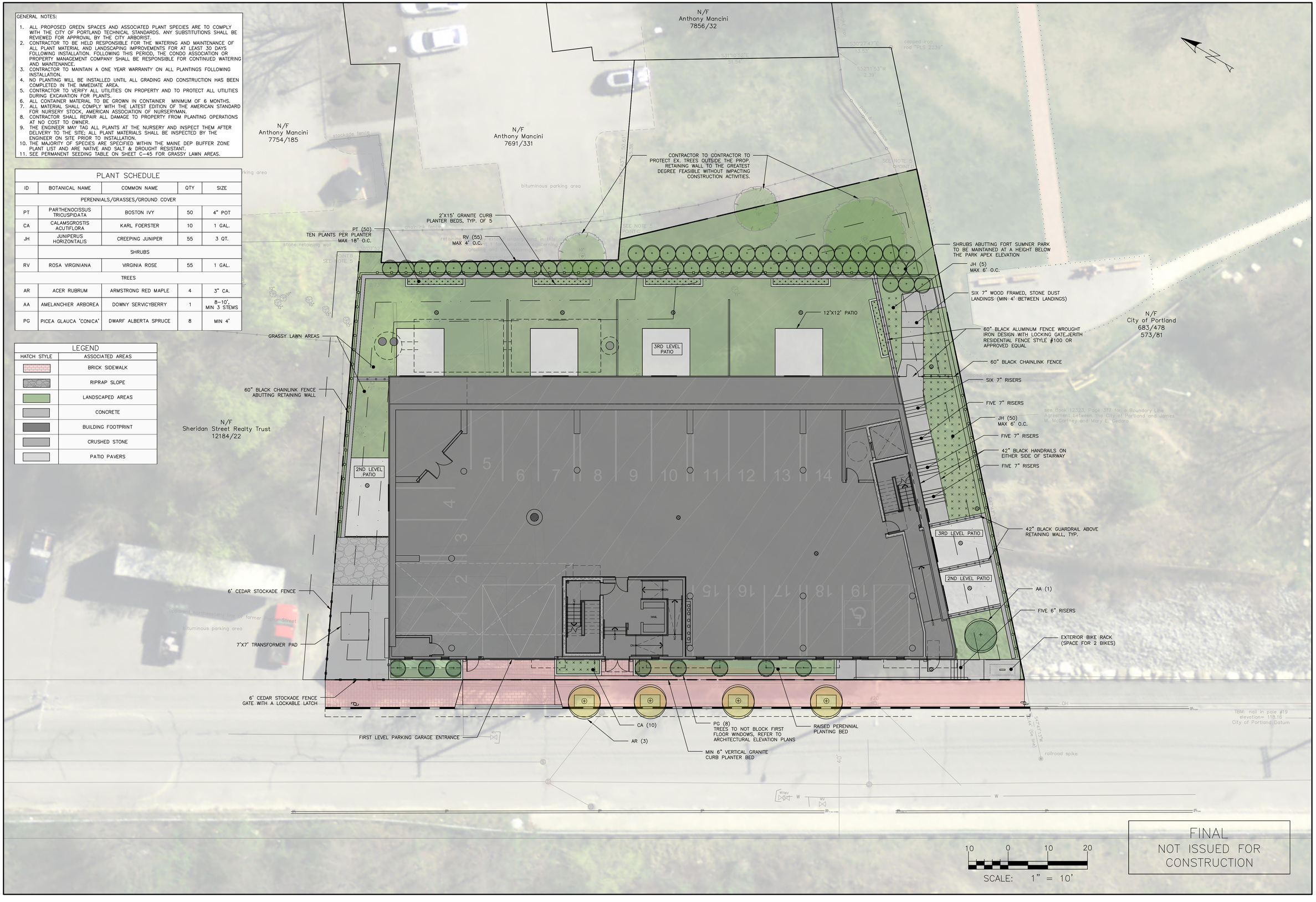
1. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH THE CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST.
2. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS FOR AT LEAST 30 DAYS FOLLOWING INSTALLATION. FOLLOWING THIS PERIOD, THE CONDO ASSOCIATION OR PROPERTY MANAGEMENT COMPANY SHALL BE RESPONSIBLE FOR CONTINUED WATERING AND MAINTENANCE.
3. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
4. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
5. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
6. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER MINIMUM OF 6 MONTHS.
7. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
8. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
9. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE; ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
10. THE MAJORITY OF SPECIES ARE SPECIFIED WITHIN THE MAINE DEP BUFFER ZONE PLANT LIST AND ARE NATIVE AND SALT & DROUGHT RESISTANT.
11. SEE PERMANENT SEEDING TABLE ON SHEET C-45 FOR GRASSY LAWN AREAS.

PLANT SCHEDULE

ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
PERENNIALS/GRASSES/GROUND COVER				
PT	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	50	4" POT
CA	CALAMSGROSTIS ACUTIFLORA	KARL FOERSTER	10	1 GAL.
JH	JUNIPERUS HORIZONTALIS	CREEPING JUNIPER	55	3 QT.
SHRUBS				
RV	ROSA VIRGINIANA	VIRGINIA ROSE	55	1 GAL.
TREES				
AR	ACER RUBRUM	ARMSTRONG RED MAPLE	4	3" CA.
AA	AMELANCHIER ARBOREA	DOWNY SERVICYBERRY	1	8-10', MIN 3 STEMS
PG	PICEA GLAUCA 'CONICA'	DWARF ALBERTA SPRUCE	8	MIN 4'

LEGEND

HATCH STYLE	ASSOCIATED AREAS
	BRICK SIDEWALK
	RIPRAP SLOPE
	LANDSCAPED AREAS
	CONCRETE
	BUILDING FOOTPRINT
	CRUSHED STONE
	PATIO PAVERS



FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: LANDSCAPE PLAN

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2655

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DRAWN BY:	OJD
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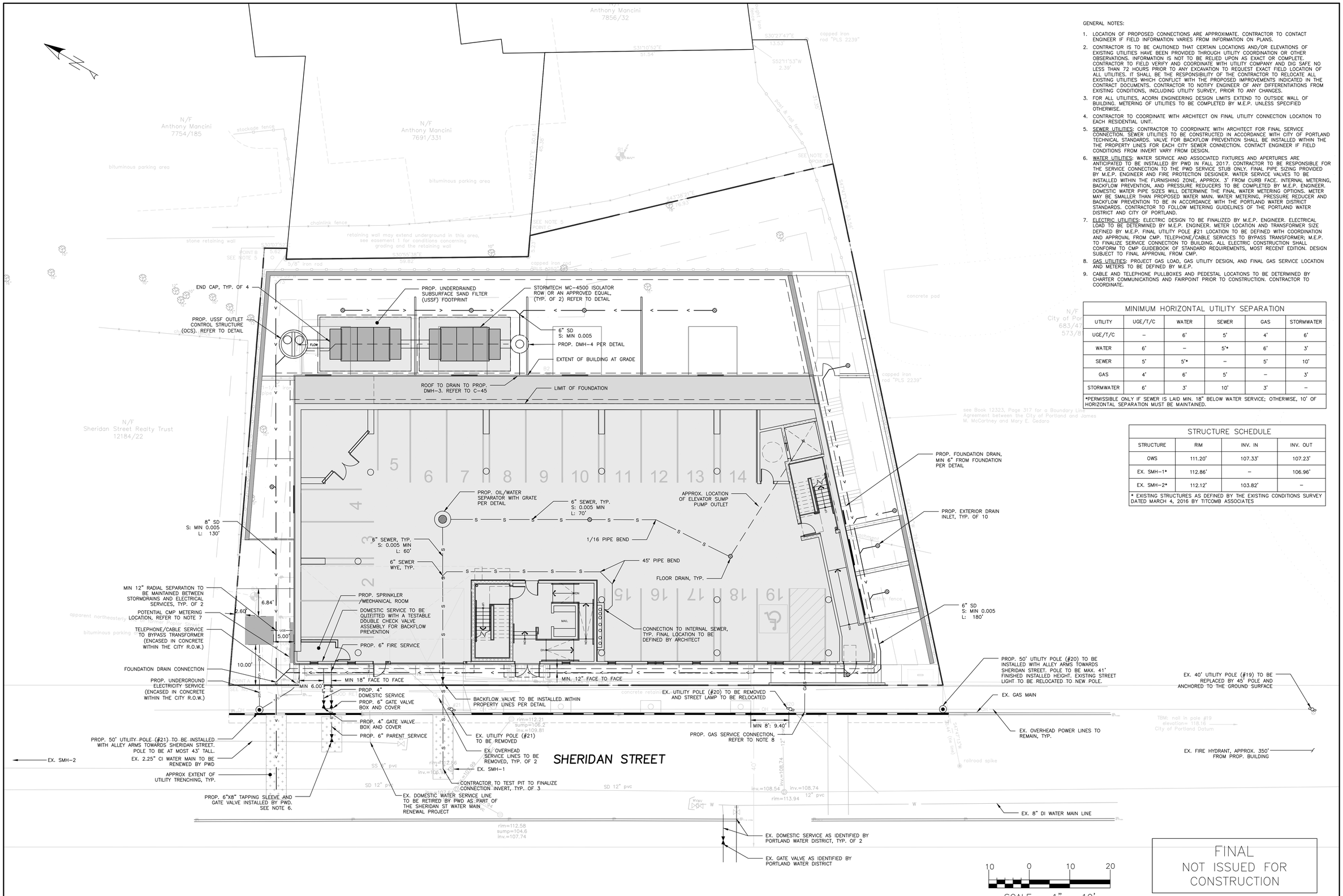
STATE OF MAINE WILLIAM H. SAVAGE No. 11458 PROFESSIONAL ENGINEER 8-3-17

DRAWING NO.
L-1



GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY SURVEY, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTION LOCATION TO EACH RESIDENTIAL UNIT.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
6. WATER UTILITIES: WATER SERVICE AND ASSOCIATED FIXTURES AND APERTURES ARE ANTICIPATED TO BE INSTALLED BY PWD IN FALL 2017. CONTRACTOR TO BE RESPONSIBLE FOR THE SERVICE CONNECTION TO THE PWD SERVICE STUB ONLY. FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. WATER SERVICE VALVES TO BE INSTALLED WITHIN THE FURNISHING ZONE, APPROX. 3' FROM CURB FACE. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE DEFINED BY M.E.P. FINAL UTILITY POLE #21 LOCATION TO BE DEFINED WITH COORDINATION AND APPROVAL FROM CMP. TELEPHONE/CABLE SERVICES TO BYPASS TRANSFORMER; M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
8. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE.

MINIMUM HORIZONTAL UTILITY SEPARATION

UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	–	6'	5'	4'	6'
WATER	6'	–	5'*	6'	3'
SEWER	5'	5'*	–	5'	10'
GAS	4'	6'	5'	–	3'
STORMWATER	6'	3'	10'	3'	–

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.

STRUCTURE SCHEDULE

STRUCTURE	RIM	INV. IN	INV. OUT
OWS	111.20'	107.33'	107.23'
EX. SMH-1*	112.86'	–	106.96'
EX. SMH-2*	112.12'	103.82'	–

* EXISTING STRUCTURES AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED MARCH 4, 2016 BY TITCOMB ASSOCIATES

FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/28/17
PWD REVIEW	OJD	7/18/17
PFD REVIEW	OJD	7/25/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: UTILITY PLAN

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1069_CIVIL
JN:	1069
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	OJD
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STATE OF MAINE
WILLIAM H. SAVAGE
No. 11452
8-3-17
PROFESSIONAL ENGINEER

DRAWING NO.
C-20

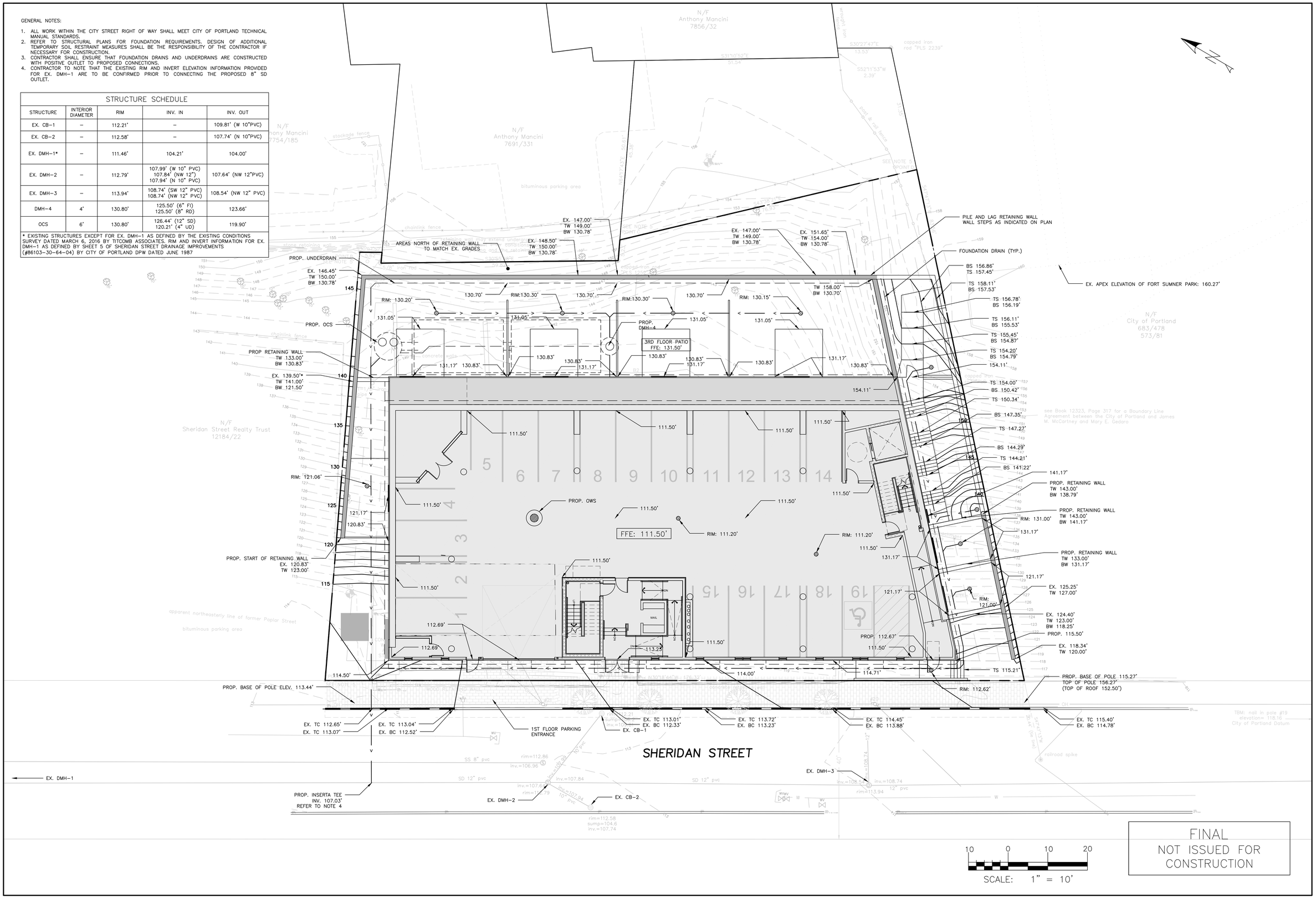
GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. REFER TO STRUCTURAL PLANS FOR FOUNDATION REQUIREMENTS. DESIGN OF ADDITIONAL TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CONTRACTOR TO NOTE THAT THE EXISTING RIM AND INVERT ELEVATION INFORMATION PROVIDED FOR EX. DMH-1 ARE TO BE CONFIRMED PRIOR TO CONNECTING THE PROPOSED 8" SD OUTLET.

STRUCTURE SCHEDULE

STRUCTURE	INTERIOR DIAMETER	RIM	INV. IN	INV. OUT
EX. CB-1	–	112.21'	–	109.81' (W 10"PVC)
EX. CB-2	–	112.58'	–	107.74' (N 10"PVC)
EX. DMH-1*	–	111.46'	104.21'	104.00'
EX. DMH-2	–	112.79'	107.99' (W 10" PVC) 107.84' (NW 12") 107.94' (N 10" PVC)	107.64' (NW 12"PVC)
EX. DMH-3	–	113.94'	108.74' (SW 12" PVC) 108.74' (NW 12" PVC)	108.54' (NW 12" PVC)
DMH-4	4'	130.80'	125.50' (6" FI) 125.50' (8" RD)	123.66'
OCS	6'	130.80'	126.44' (12" SD) 120.21' (4" UD)	119.90'

* EXISTING STRUCTURES EXCEPT FOR EX. DMH-1 AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED MARCH 6, 2016 BY TITCOMB ASSOCIATES. RIM AND INVERT INFORMATION FOR EX. DMH-1 AS DEFINED BY SHEET 5 OF SHERIDAN STREET DRAINAGE IMPROVEMENTS (#86103-30-64-04) BY CITY OF PORTLAND DPW DATED JUNE 1987



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NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2855

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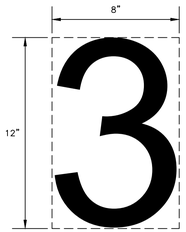
STATE OF MAINE WILLIAM H. SAVAGE No. 11452 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-30

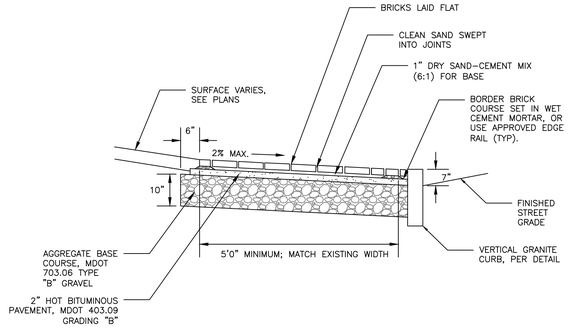


NOTES:

1. NUMBERS TO BE PAINTED AS THE SAME COLOR AS THE CORRESPONDING PARKING SPACE.
2. BOTTOM OF NUMBER TO BE FLUSH WITH THE FRONT OF THE PARKING SPACE.

PARKING STALL NUMBER DETAIL

NOT TO SCALE



NOTES:

1. BRICKS TO BE USED:

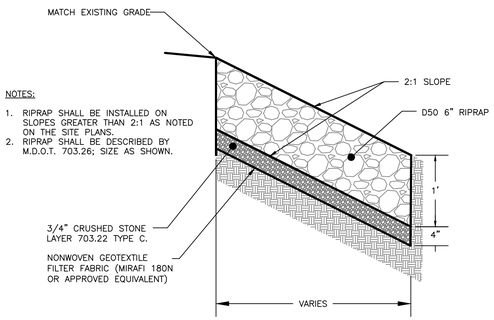
   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

   REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
   VERMONT BACKER SUPPLIED BY GAGNE AND SONS SPECIFICATION NUMBER: "VERMONT PAVER BRICK", ITEM NUMBER #VBBB

2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL

NOT TO SCALE



NOTES:

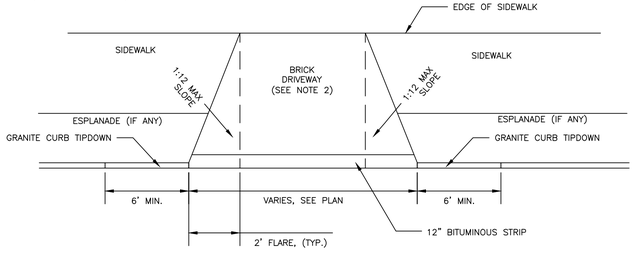
1. RIPRAP SHALL BE INSTALLED ON SLOPES GREATER THAN 2:1 AS NOTED ON THE SITE PLANS.
2. RIPRAP SHALL BE DESCRIBED BY M.D.O.T. 703.26; SIZE AS SHOWN.

RIPRAP CROSS–SECTION

NOT TO SCALE

NOTES:

1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2. REFER TO BRICK DRIVEWAY APRON WITH BITUMINOUS BASE DETAIL FOR APRON CROSS–SECTIONS
3. MATERIALS/DETAILS OF DRIVEWAY APRON TO BE APPROVED BY CITY (DPW AND PLANNING) PRIOR TO IMPLEMENTATION



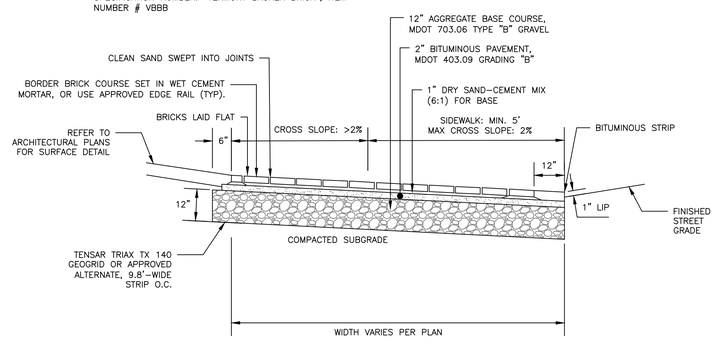
BRICK DRIVEWAY APRON LAYOUT DETAIL

NOT TO SCALE

BRICKS TO BE USED:

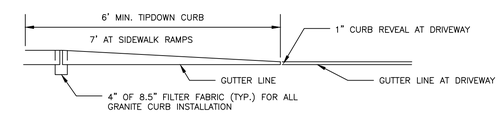
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: "VERMONT BACKER BRICK", ITEM NUMBER # VBBB

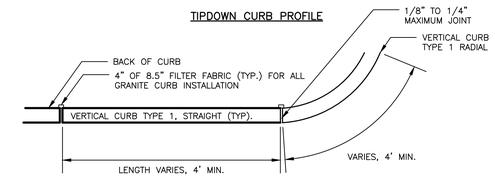


BRICK DRIVEWAY APRON WITH BITUMINOUS BASE DETAIL

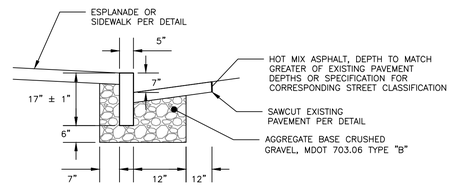
NOT TO SCALE



TIPDOWN CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



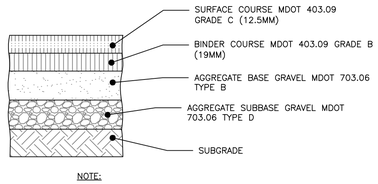
VERTICAL GRANITE CURB CROSS SECTION

NOTES:

1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL

NOT TO SCALE



NOTE:

COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557

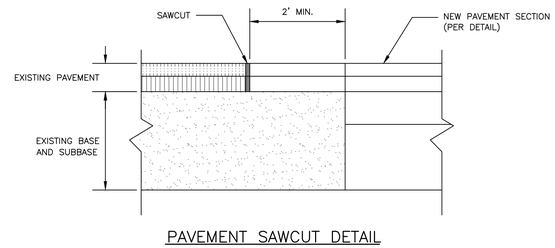
THICKNESS OF LAYERS	
STANDARD	LAYERS
1–1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND: LOCAL ROAD BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE

NOTES:

1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND LOCAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL

NOT TO SCALE

FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM APP	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: SITE DETAILS – 1

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775–2655

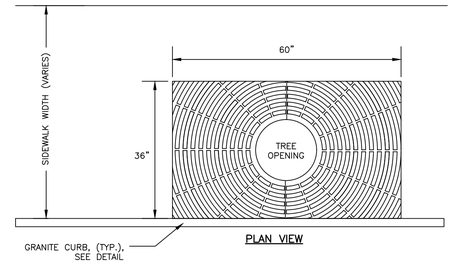
FILE:	CIVIL_1069
JN:	1069
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11418 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-40

PLANTING NOTES:

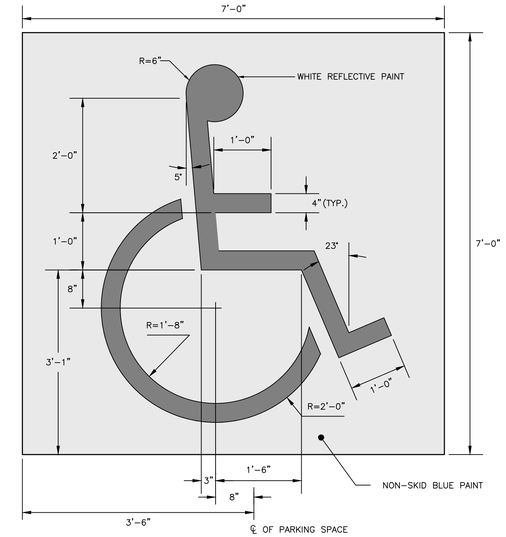
1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WILL THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN PLANT LIST (IF ANY), THE NUMBER OF PLANTS SHOWN ON PLAN WILL TAKE PRECEDENCE.
4. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
5. ALL DISTURBED AREAS NOT TO BE PAVED OR PLANTED SHALL BE LOAMED AND SEEDED AS SHOWN. THE SEED MIX SPECIFICATIONS ARE AS FOLLOWS: LESCO FINE FESCUE LINKS BLEND OF 35% HARD FESCUE, 35% CREEPING RED FESCUE, 20% CHEWINGS FESCUE AND 10% SHEEP FESCUE. ADD 5% LITTLE BLUESTEM AND 5% NORTHEAST WILDFLOWER SEED MIXTURE BY WEIGHT TO THE LINKS BLEND.
6. FOR PRICING PURPOSES, PROVIDE A PER TREE UNIT COST FOR STAKING AND GUYING. IF STAKING AND GUYING IS REQUIRED, REMOVE TREE WRAP, STAKES, AND GUY WIRES AT END OF FIRST GROWING SEASON.
7. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDED AS NECESSARY.
8. NEW TREES TO BE INSTALLED WITH A SLOW RELEASE WATERING BAG.
9. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS FOR AT LEAST 30 DAYS FOLLOWING INSTALLATION. FOLLOWING THIS PERIOD, THE LANDOWNER OR PROPERTY MANAGEMENT SHALL BE RESPONSIBLE FOR CONTINUED WATERING AND MAINTENANCE. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING FINAL INSTALLATION.
10. ALL PROPOSED PLANTS SHALL BE LOCATED AS SHOWN ON THE PLANS. CONTRACTOR TO NOTIFY ENGINEER WHEN PLANTINGS HAVE BEEN MOBILIZED ON SITE. ENGINEER TO INSPECT AND ACCEPT OR REJECT ANY SPECIMENS ON THE BASIS OF APPARENT HEALTH, HARDINESS, AND CONFORMANCE WITH THE PLANTING SCHEDULE. REJECTED SPECIMENS ARE TO BE REPLACED BY THE CONTRACTOR AT NO ADDED COST TO THE OWNER. ACCEPTANCE DOES NOT WAIVE THE REQUIRED ONE YEAR PLANTING WARRANTY.



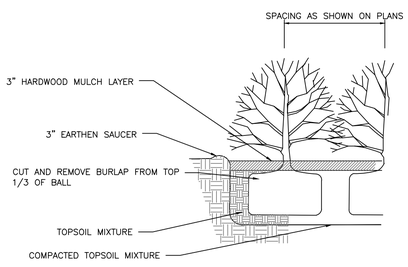
NOTES:

1. 16" EXPANDABLE TREE OPENING; .25" SLOT OPENINGS.
2. SIDEWALK MATERIAL PER PLAN.
3. WHEN INSTALLED IN A BRICK SIDEWALK, GRATE REQUIRES A FRAME TO BE INSTALLED TO HOLD GRATE IN PLACE. CONTRACTOR TO INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION PROCEDURE FOR PAVERS. CONTRACTOR TO SUBMIT INSTALLATION PROCEDURES FOR REVIEW FROM ENGINEER PRIOR TO CONSTRUCTION.

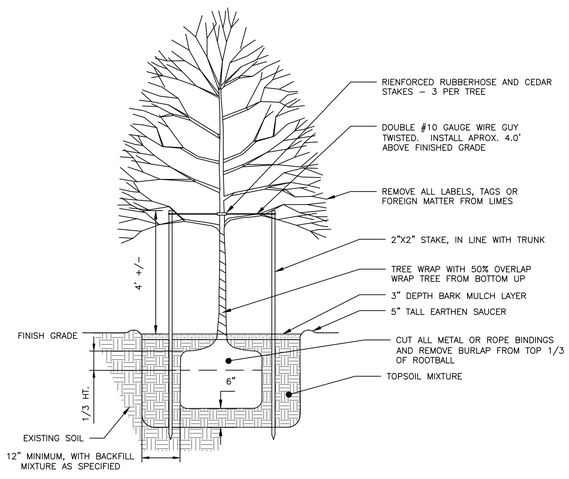
EXPANDABLE TREE GRATE
NEENAH MODEL R-8810
NOT TO SCALE



INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE



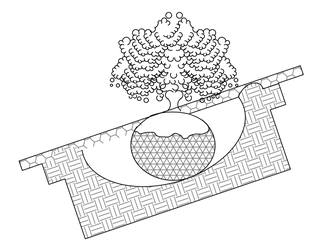
SHRUB PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

NOTES:

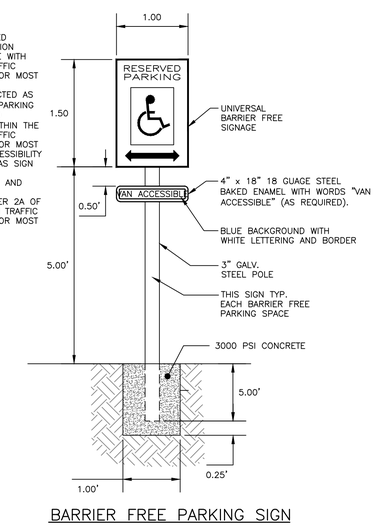
1. DIG HOLE AT LEAST 2 TIMES THE DIAMETER OF THE ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH THE TOP AT DOWNHILL EDGE OF THE HOLE.
2. TOPSOIL BACKFILL SHALL BE NATURAL FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING THE CHARACTERISTICS OF TOPSOIL IN THE VICINITY WHICH PRODUCE A HEAVY GROWTH. TOPSOIL SHALL CONTAIN NOT LESS THAN 6% NOR MORE THAN 20% ORGANIC MATTER. TOP SOIL SHALL HAVE A pH VALUE OF NOT LESS THAN 5.5 NOR MORE THAN 7.0.
3. CONTAINER GROWN STOCK – REMOVE CONTAINER PROTECTING THE ROOT BALL. GENTLY COMB OUT THE ROOTS. PRUNE DAMAGED ROOTS.
4. BACKFILL THE HOLE WITH TOPSOIL TO A DEPTH NOT TO EXCEED 8" THEN WATER SUFFICIENTLY TO SETTLE TOPSOIL. REPEAT SOIL BACKFILL, WATER, DRAIN. TOPSOIL SHALL BE TAMPED UNDER EDGES OF THE BALLED PLANTS. BACKFILL TO FINISH GRADE AND CREATE AN EARTHEN SAUCER. SOAK PLANTS TWICE WITHIN THE FIRST TWENTY-FOUR HOURS OF PLANTING.



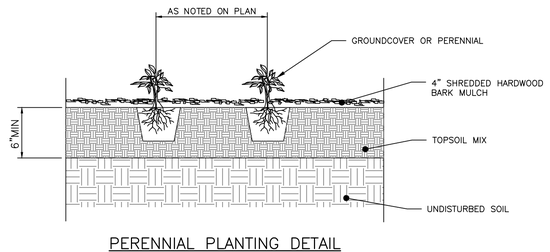
TYPICAL PLANTING
NOT TO SCALE

NOTES:

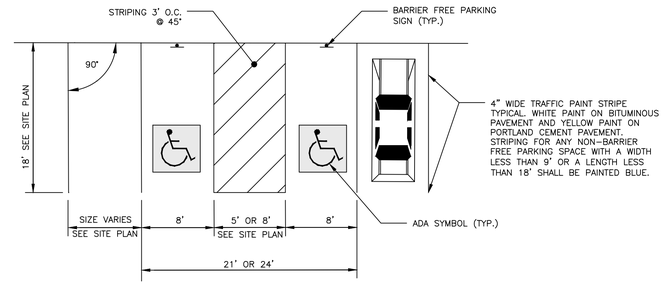
1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7-8a OR R7-8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



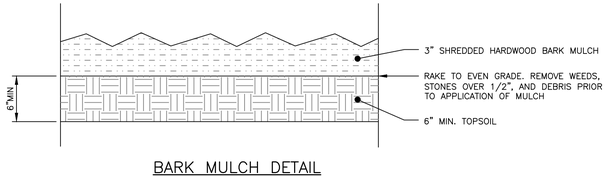
BARRIER FREE PARKING SIGN
NOT TO SCALE



PERENNIAL PLANTING DETAIL
NOT TO SCALE



PARKING SPACE DIMENSIONS
NOT TO SCALE



BARK MULCH DETAIL
NOT TO SCALE

FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM APP	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: SITE DETAILS – 2

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
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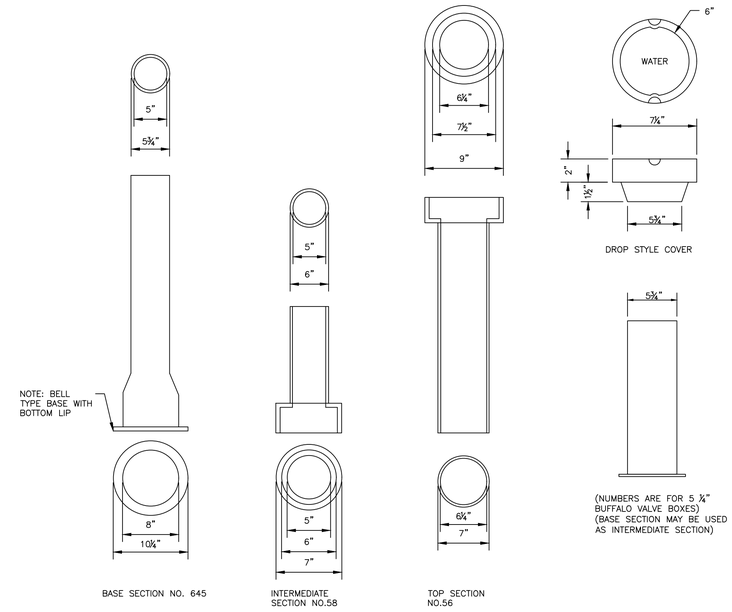
FILE:	CIVIL_1069
JN:	1069
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

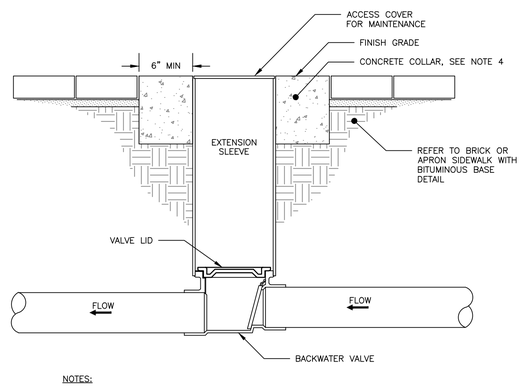
STATE OF MAINE WILLIAM H. SAVAGE No. 11415 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-41



VALVE BOX & COVER

NOT TO SCALE

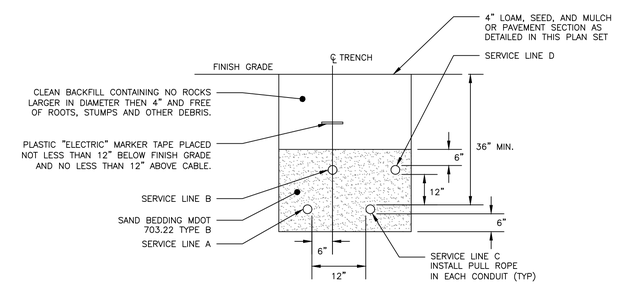


NOTES:

1. BACKFLOW VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.
2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF PORTLAND TECHNICAL MANUAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE 'SEWER' ON LID FLUSH TO SURFACE. REFER TO VALVE & BOX COVER DETAIL FOR ADDITIONAL INFORMATION.
4. CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.

BACKFLOW VALVE ASSEMBLY

NOT TO SCALE



CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2-4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2-4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE

FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM APP	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: UTILITY DETAILS

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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158 DANFORTH ST PORTLAND, MAINE 04102
(207) 775-2655

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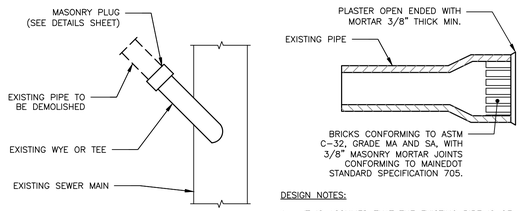
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11411 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-42

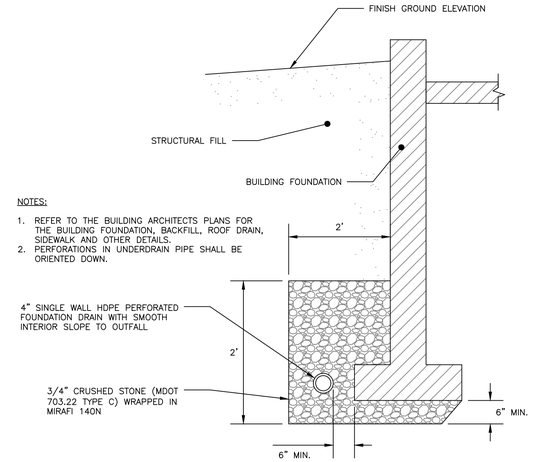


DESIGN NOTES:

1. IT IS ASSUMED THAT THE EXISTING PIPE IS OF VITRIFIED CLAY CONSTRUCTION. USE CAP OR PLUG FOR PVC PIPE

MASONRY PLUG DETAIL

NOT TO SCALE

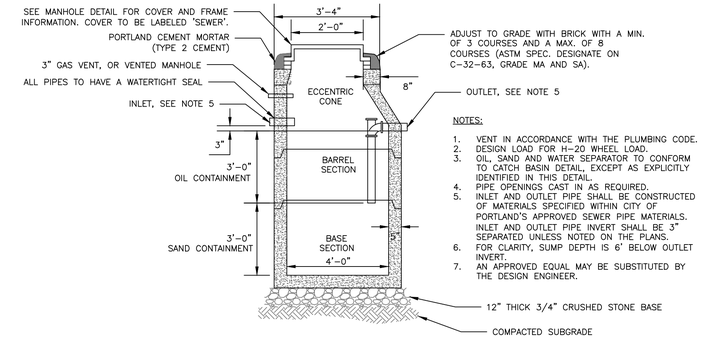


NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

FOUNDATION DRAIN DETAIL

NOT TO SCALE



NOTES:

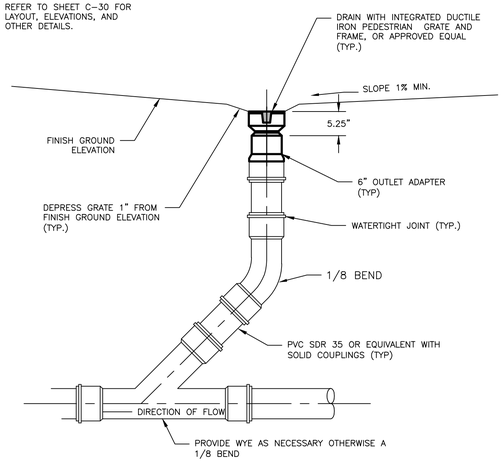
1. VENT IN ACCORDANCE WITH THE PLUMBING CODE.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. OIL, SAND AND WATER SEPARATOR TO CONFORM TO CATCH BASIN DETAIL, EXCEPT AS EXPLICITLY IDENTIFIED IN THIS DETAIL.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. INLET AND OUTLET PIPE SHALL BE CONSTRUCTED OF MATERIALS SPECIFIED WITHIN CITY OF PORTLAND'S APPROVED SEWER PIPE MATERIALS. INLET AND OUTLET PIPE INVERT SHALL BE 3" SEPARATED UNLESS NOTED ON THE PLANS.
6. FOR CLARITY, SUMP DEPTH IS 6' BELOW OUTLET INVERT.
7. AN APPROVED EQUAL MAY BE SUBSTITUTED BY THE DESIGN ENGINEER.

4'-0" DIAMETER PRECAST OIL AND WATER SEPARATOR

NOT TO SCALE

NOTE:

1. REFER TO SHEET C-30 FOR LAYOUT, ELEVATIONS, AND OTHER DETAILS.

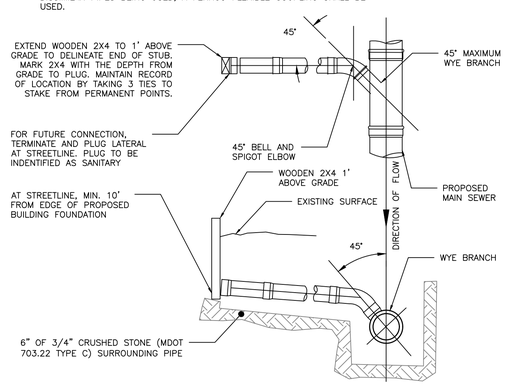


INLINE DRAIN DETAIL

NOT TO SCALE

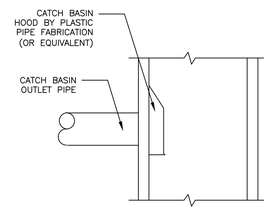
NOTES:

1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL

NOT TO SCALE

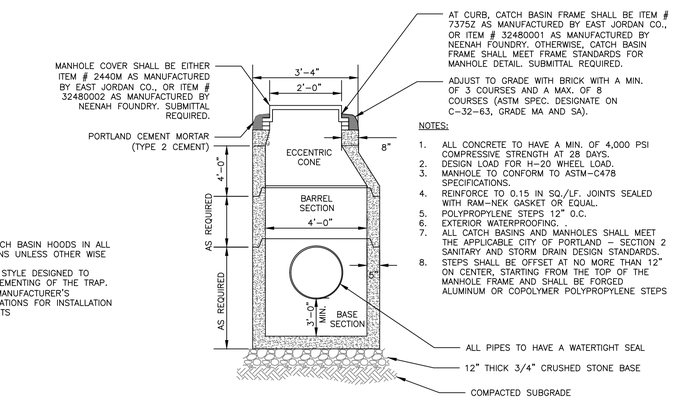


NOTES:

1. INSTALL CATCH BASIN HOODS IN ALL CATCH BASINS UNLESS OTHER WISE NOTED
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS

CATCH BAIN HOOD DETAIL

NOT TO SCALE

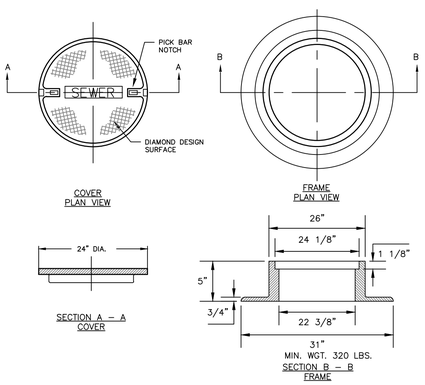


NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. MANHOLE TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND - SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
8. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

4'-0" DIAMETER PRECAST DRAINAGE MANHOLE

NOT TO SCALE

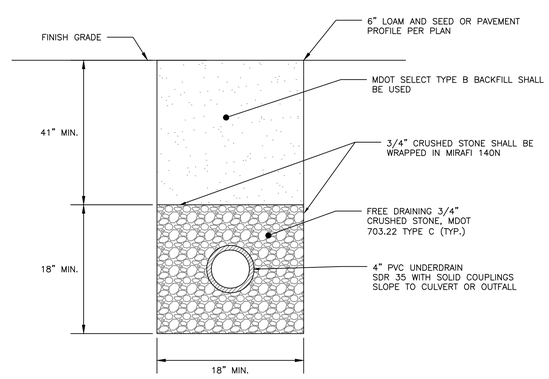


NOTES:

1. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
2. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
3. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
4. APPROVED MANHOLE FRAMES:
   4.1 EAST JORDAN = 1690Z
   4.2 OR APPROVED EQUAL
5. APPROVED MANHOLE COVERS
   5.1 EAST JORDAN = 2160A
   5.2 OR APPROVED EQUAL
6. FRAME AND COVER CONSTRUCTION SHALL BE COMPATIBLE WITH STANDARD PRECAST SEWER MANHOLE DETAIL

CAST IRON MANHOLE COVER AND FRAME

NOT TO SCALE

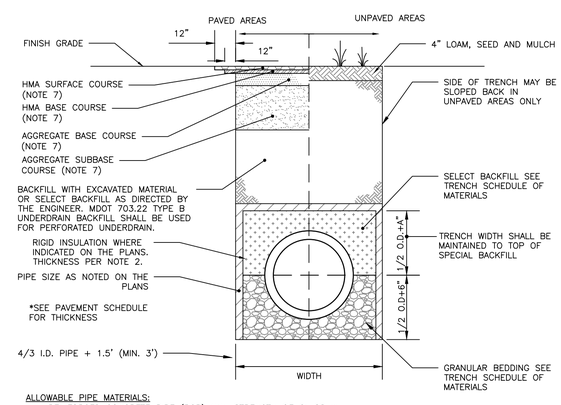


NOTES:

1. MINIMUM UNDERDRAIN SLOPE 0.0025 (0.25%)
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

UNDERDRAIN DETAIL

NOT TO SCALE



ALLOWABLE PIPE MATERIALS:

- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   4.1. 2'-0" - STORM DRAIN
   4.2. 5'-0" - SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS

STORM DRAIN AND SEWER TYPICAL TRENCH SECTION

NOT TO SCALE

FINAL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM APP	WHS 3/28/17
FINAL APP.	WHS 8/4/17

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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ACORN ENGINEERING, INC.
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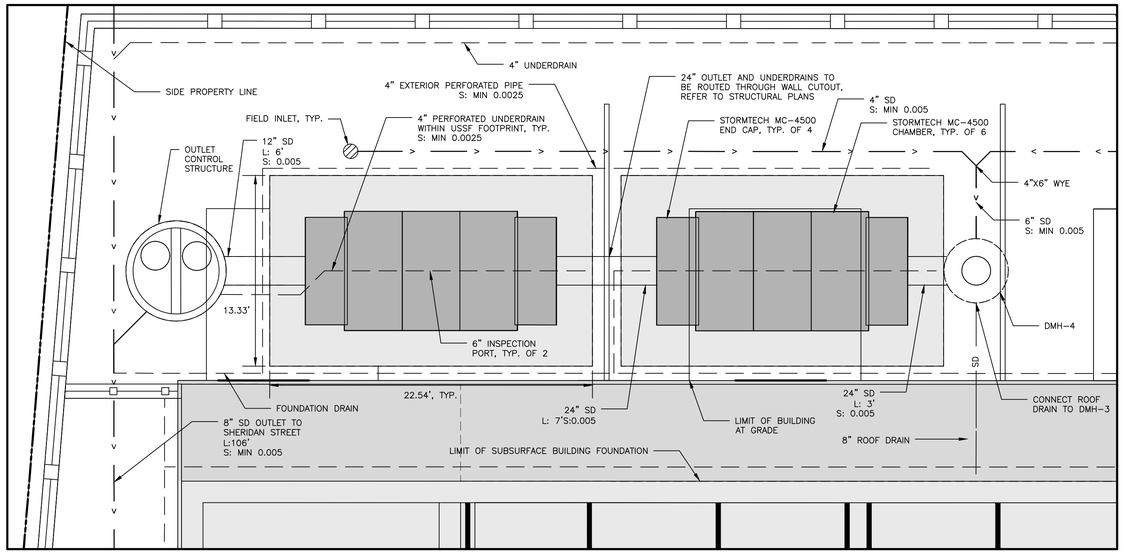
FILE:	CIVIL_1069
JN:	1069
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

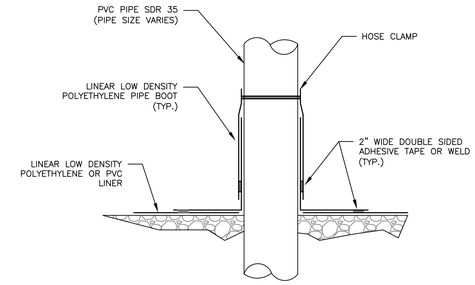
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
8-3-17
PROFESSIONAL ENGINEER

DRAWING NO.
C-43



USSF PLAN VIEW

1"=5'



TYPICAL PIPE PENETRATION DETAIL

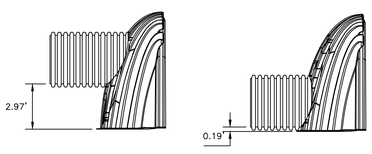
NOT TO SCALE

MANUFACTURER'S NOTES:

1. ALL DESIGN SPECIFICATIONS FOR STORMTECH MC-4500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL.
2. THE INSTALLATION OF STORMTECH MC-4500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL 1-888-892-2694 OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

ENGINEER'S NOTES:

1. THE LAYOUT AND DIMENSION OF THE SUBSURFACE DETENTION MAY BE MODIFIED WITH AN ENGINEER APPROVED EQUAL WHICH PROVIDES EQUAL DETENTION STORAGE AND WATER QUALITY TREATMENT.
2. THE SUBSURFACE DETENTION SHALL BE INSPECTED BY THE DESIGN ENGINEER AT THE FOLLOWING INTERVALS:
   - AFTER PRELIMINARY CONSTRUCTION OF THE SUBSURFACE DETENTION GRADES
   - ONE SITE VISIT DURING THE INSTALLATION OF THE IMPERVIOUS LINER
   - ONE SITE VISIT AFTER THE UNDERDRAINS ARE INSTALLED BUT BEFORE THEY ARE BACKFILLED
   - DURING THE CONSTRUCTION OF THE SAND FILTER LAYER
   - DURING THE INSTALLATION OF THE STORMTECH ISOLATOR ROW
   - BEFORE BACKFILLING THE STORMTECH UNITS
3. THE FIRST YEAR OF MAINTENANCE SHALL BE PERFORMED BY THE MANUFACTURER TO ENSURE THAT THE SYSTEM IS OPERATING ACCORDING TO THE ESTABLISHED SPECIFICATIONS.
4. REFER TO THE MANUFACTURER'S GUIDE FOR THE OPERATION AND MAINTENANCE PLAN.

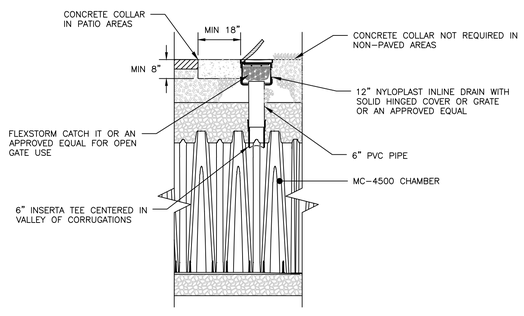


STORMDRAIN OUTLET CONNECTION

STORMDRAIN INLET CONNECTION

STORMTECH – CONNECTION

NOT TO SCALE

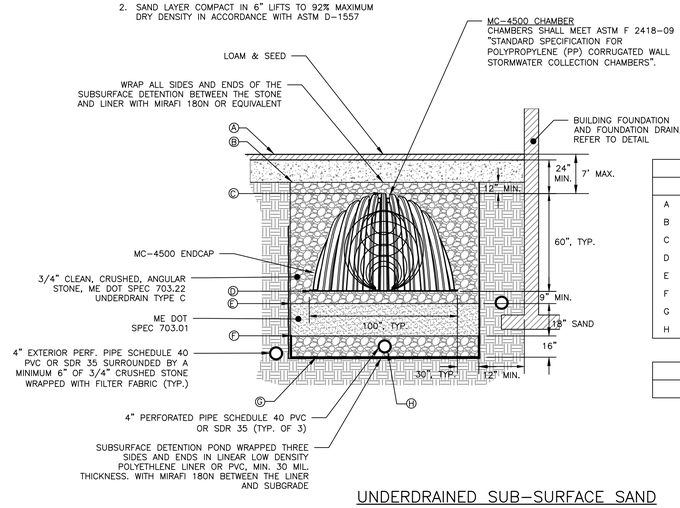


INSPECTION PORT DETAIL

NOT TO SCALE

NOTES:

1. REFER TO THE MAINE DEP TECHNICAL DESIGN MANUAL SECTION 7.3 FOR ADDITIONAL DESIGN DETAILS.
2. SAND LAYER COMPACT IN 6" LIFTS TO 92% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557



SCHEDULE		
ITEM		ELEVATION
A	TOP OF GRADE	130.80'
B	TOP OF CRUSHED STONE	129.47'
C	TOP OF CHAMBER	128.47'
D	BOTTOM OF CHAMBER	123.47'
E	TOP OF SAND	122.72'
F	BOTTOM OF SAND	121.22'
G	BOTTOM OF SYSTEM	119.88'
H	UNDERDRAIN INVERT	120.21'

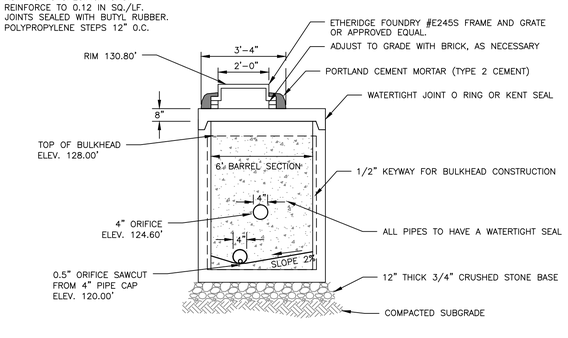
STRUCTURE SCHEDULE
REFER TO C-30 FOR INVERTS

UNDERDRAINED SUB-SURFACE SAND FILTER TYPICAL CROSS SECTION

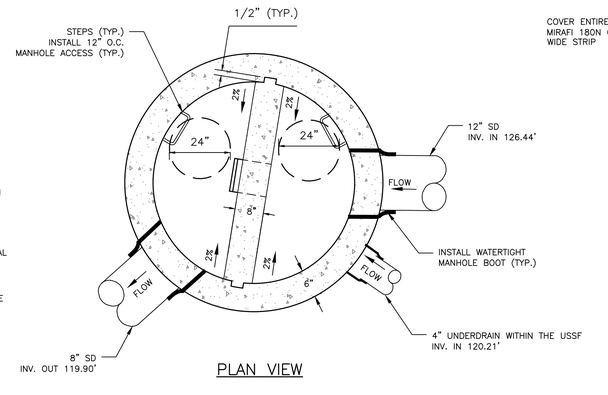
NOT TO SCALE

NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.
5. JOINTS SEALED WITH BUTYL RUBBER.
6. POLYPROPYLENE STEPS 12" O.C.



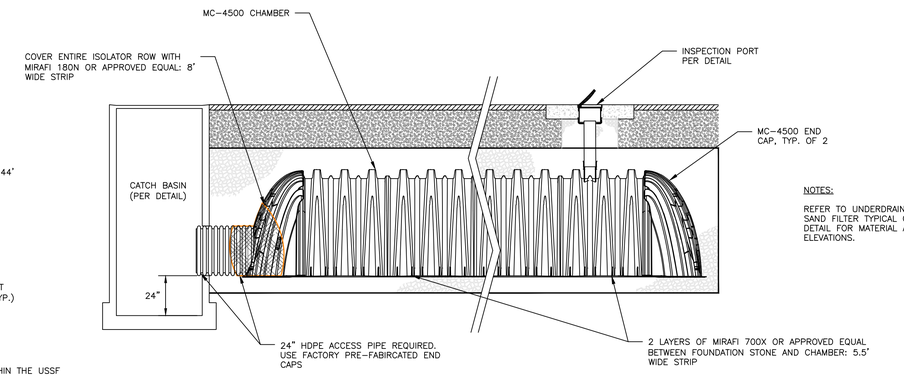
SIDE PROFILE



PLAN VIEW

OUTLET CONTROL STRUCTURE

NOT TO SCALE



NOTES:

REFER TO UNDERDRAINED SUB-SURFACE SAND FILTER TYPICAL CROSS SECTION DETAIL FOR MATERIAL AND STRUCTURE ELEVATIONS.

ISOLATOR ROW – PROFILE VIEW

NOT TO SCALE

FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM APP	WHS 3/28/17
FINAL APP.	WHS 8/4/17

DRAWING NAME: UNDERDRAINED SUBSURFACE SAND FILTER DETAILS

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

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DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11415 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-44

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 SHERIDAN STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 8 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.2 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT. #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT. #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

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

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
4. INSTALL SEDIMENTATION BASIN
5. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
6. PRIORITIZE THE DOWNHILL RETAINING AND FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN SHERIDAN STREET.
7. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
8. COMMENCE INSTALLATION OF UTILITIES.
9. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
10. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
11. COMPLETE REMAINING EARTHWORK OPERATIONS.
12. INSTALL SUB–BASE AND BASE GRAVELS BELOW BUILDING FOUNDATION.
13. INSTALL PAVING, CURBING AND BRICKWORK.
14. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
15. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
16. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
17. COMPLETE SITE SIGNAGE AND STRIPING.
18. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY AND PERMANENT SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLES:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

MULCHING

MULCH SHALL BE APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

FINAL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM APP	WHS	3/28/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: EROSION & SEDIMENTATION CONTROL NOTES

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE WITHOUT WRITTEN PERMISSION OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775–2655

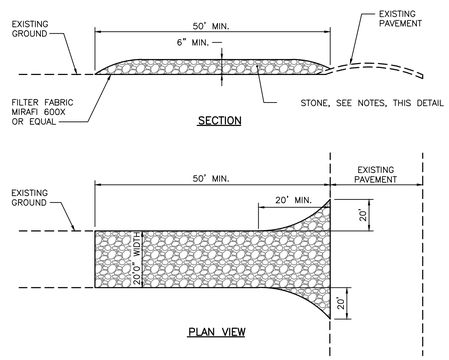
FILE:	CIVIL_1069
JN:	1069
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-45

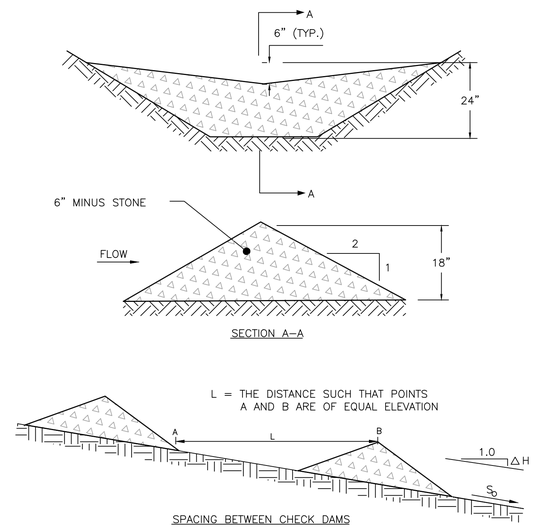
NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

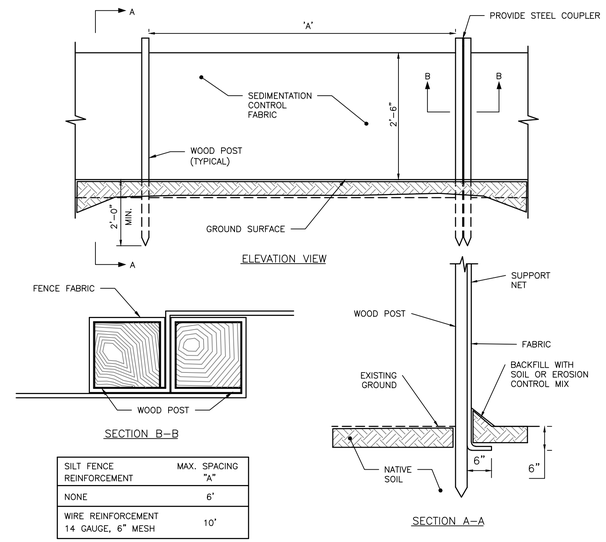


SPACING BETWEEN CHECK DAMS

S_o (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM

NOT TO SCALE



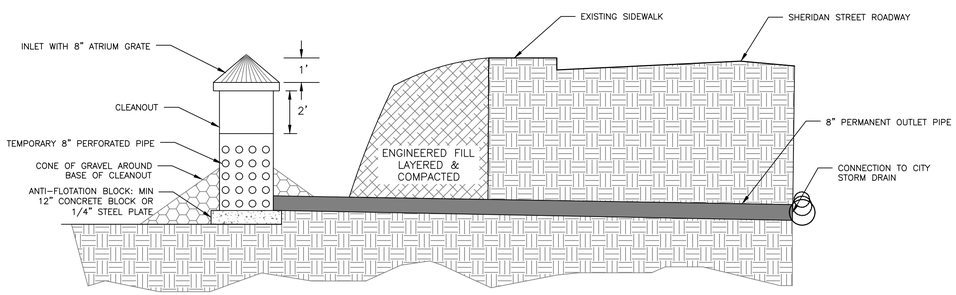
SILT FENCE REINFORCEMENT	MAX. SPACING "A"
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

SILTATION FENCE DETAIL

NOT TO SCALE

NOTES:

1. EMBANKMENT FOUNDATION AREA SHALL BE CLEARED OF STUMPS, ROOTS, BRUSH, ETC. TO PROVIDE GOOD CONTACT.
2. BASINS ARE TO BE CONSTRUCTED BEFORE THE GROUND IS FROZEN.
3. ALL NATIVE SOIL IS TO BE SCARIFIED BEFORE THE FIRST LAYER OF FILL.
4. ALL EMBANKMENTS NOT SUPPORTED BY RIP RAP SHALL BE COVERED WITH EROSION CONTROL MIX IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN.
5. ALL PIPE JOINTS ARE TO BE WATERTIGHT USING COUPLINGS, GASKETS, CAULKING, OR WELDING.



SEDIMENTATION BASIN CROSS–SECTION

NOT TO SCALE

NOTES:

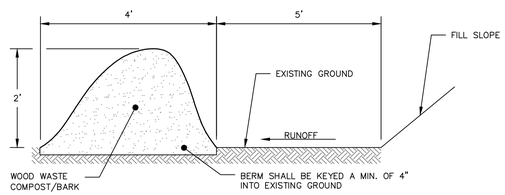
1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DEP'S EROSION AND SEDIMENT CONTROL BMPS SECTION B–1:

   A. THE ORGANIC PORTIONS SHALL BE FIBROUS AND ELONGATED TO ALLOW FOR THE INTERLOCKING OF MATERIAL
   B. pH – 5.0 – 8.0.
   C. PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70% TO A MAXIMUM 85% PASSING A 0.75" (3/4") SCREEN.
   D. THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100% DRY WEIGHT BASIS
   E. NO STONES LARGER THAN 4" IN DIAMETER.
   F. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.

2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.

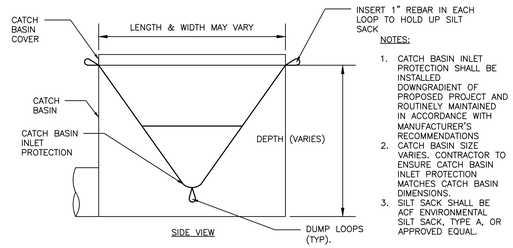
3. THE BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.

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



EROSION CONTROL MIX BERM DETAIL

NOT TO SCALE



NOTES:

1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION

NOT TO SCALE

FINAL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM APP	WHS 5/17
FINAL APP.	WHS 8/4/17

DRAWING NAME: EROSION & SEDIMENTATION CONTROL DETAILS

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS, ALTERATIONS OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DAMARISCOTTA ROAD, MAINE 04102
(207) 775-2655

FILE:	CIVIL_1069
JN:	1069
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

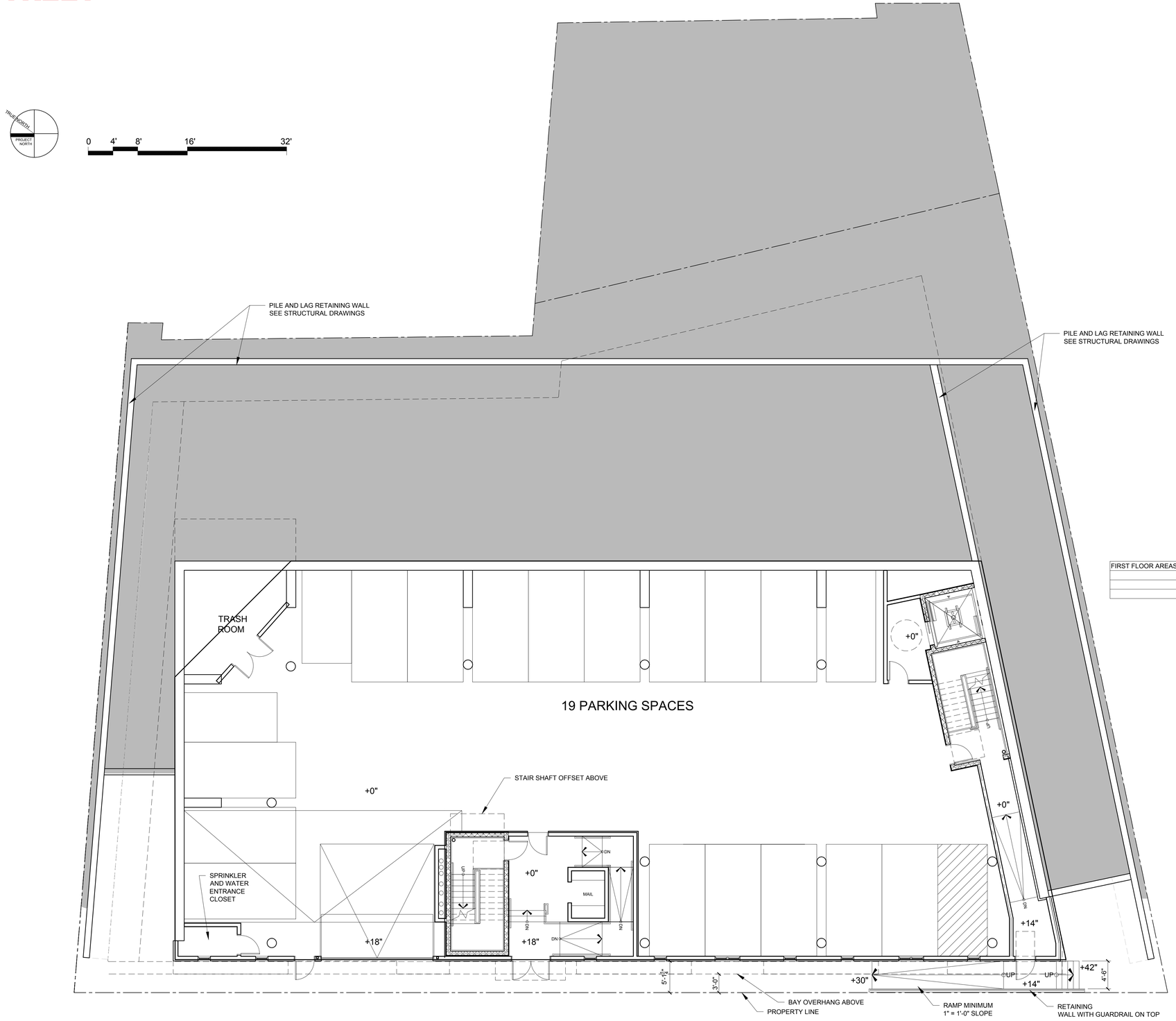
STATE OF MAINE WILLIAM H. SAVAGE No 11410 8-3-17 PROFESSIONAL ENGINEER

DRAWING NO.
C-46

155 SHERIDAN STREET

PORTLAND, MAINE

JULY 14, 2017



FIRST FLOOR AREAS
(TOTAL FLOOR PLATE)
TOTAL = 8,620 SQFT

PROGRESS PRINT ONLY
Not for Construction

RSA

FIRST FLOOR CONCEPT PLAN

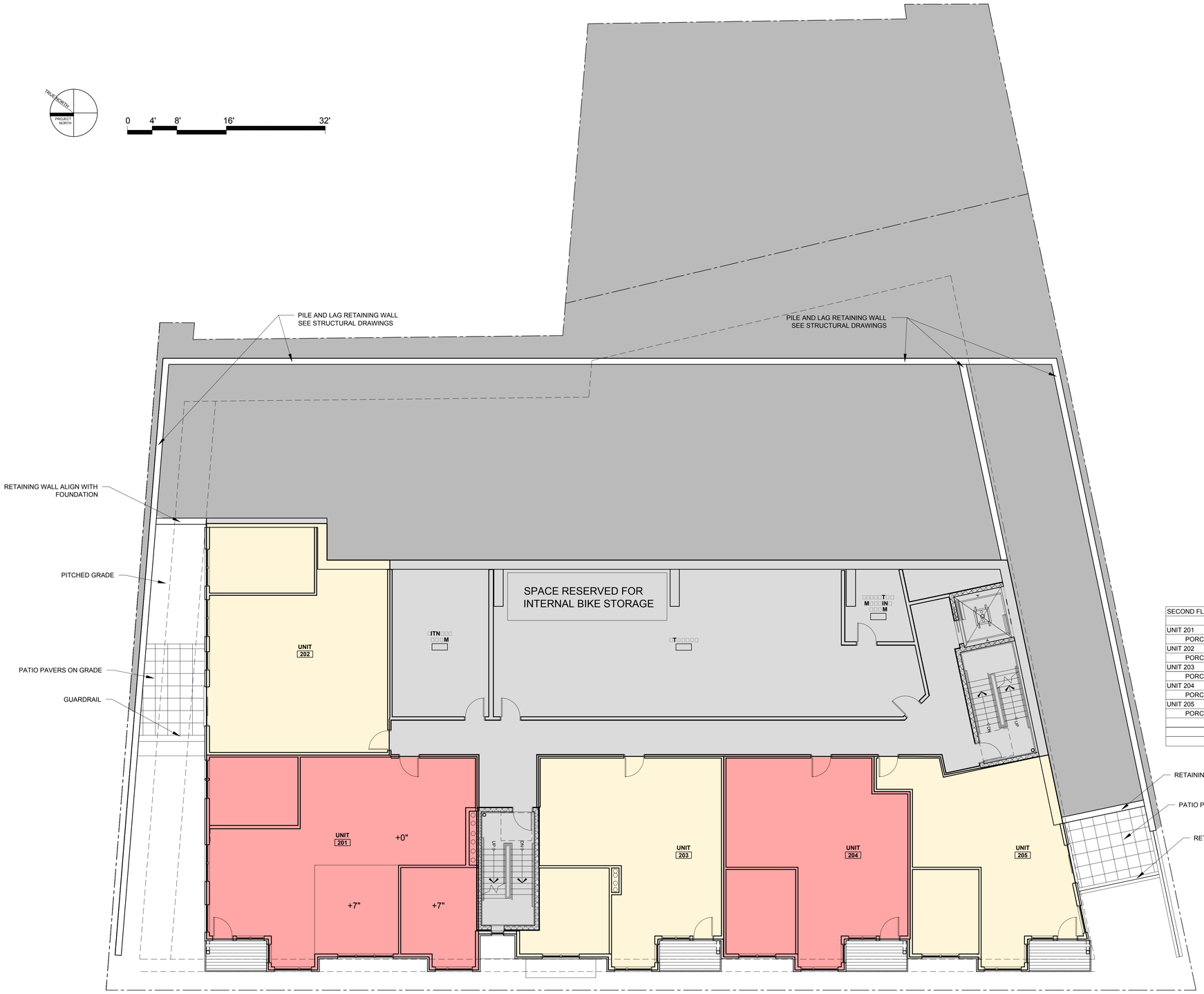
1/8" = 1'-0"

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

JULY 14, 2017



SECOND FLOOR AREAS	
UNIT 201	1,438 SQFT
PORCH	50 SQFT
UNIT 202	1,051 SQFT
PORCH	40 SQFT
UNIT 203	972 SQFT
PORCH	50 SQFT
UNIT 204	932 SQFT
PORCH	50 SQFT
UNIT 205	836 SQFT
PORCH	50 SQFT
	(TOTAL FLOOR PLATE)
	TOTAL = 8,812 SQFT

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SECOND FLOOR CONCEPT PLAN

1/8" = 1'-0"

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

THIRD FLOOR AREAS	
UNIT 301	1,438 SQFT
PORCH	50 SQFT
UNIT 302	1,136 SQFT
PORCH	40 SQFT
UNIT 303	972 SQFT
PORCH	50 SQFT
UNIT 304	891 SQFT
UNIT 305	930 SQFT
PORCH	50 SQFT
UNIT 306	916 SQFT
UNIT 307	836 SQFT
PORCH	50 SQFT
UNIT 308	1,131 SQFT
PORCH	50 SQFT
	(TOTAL FLOOR PLATE)
	TOTAL = 9,569 SQFT

THIRD FLOOR CONCEPT PLAN

1/8" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

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BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

FOURTH FLOOR AREAS	
UNIT 401	1,280 SQFT
PORCH	199 SQFT
UNIT 402	916 SQFT
PORCH	50 SQFT
UNIT 403	959 SQFT
PORCH	50 SQFT
UNIT 404	834 SQFT
PORCH	50 SQFT
UNIT 405	933 SQFT
PORCH	50 SQFT
UNIT 406	836 SQFT
PORCH	50 SQFT
	(TOTAL FLOOR PLATE)
	TOTAL = 7,045 SQFT

FOURTH FLOOR CONCEPT PLAN

1/8" = 1'-0"

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Not for Construction

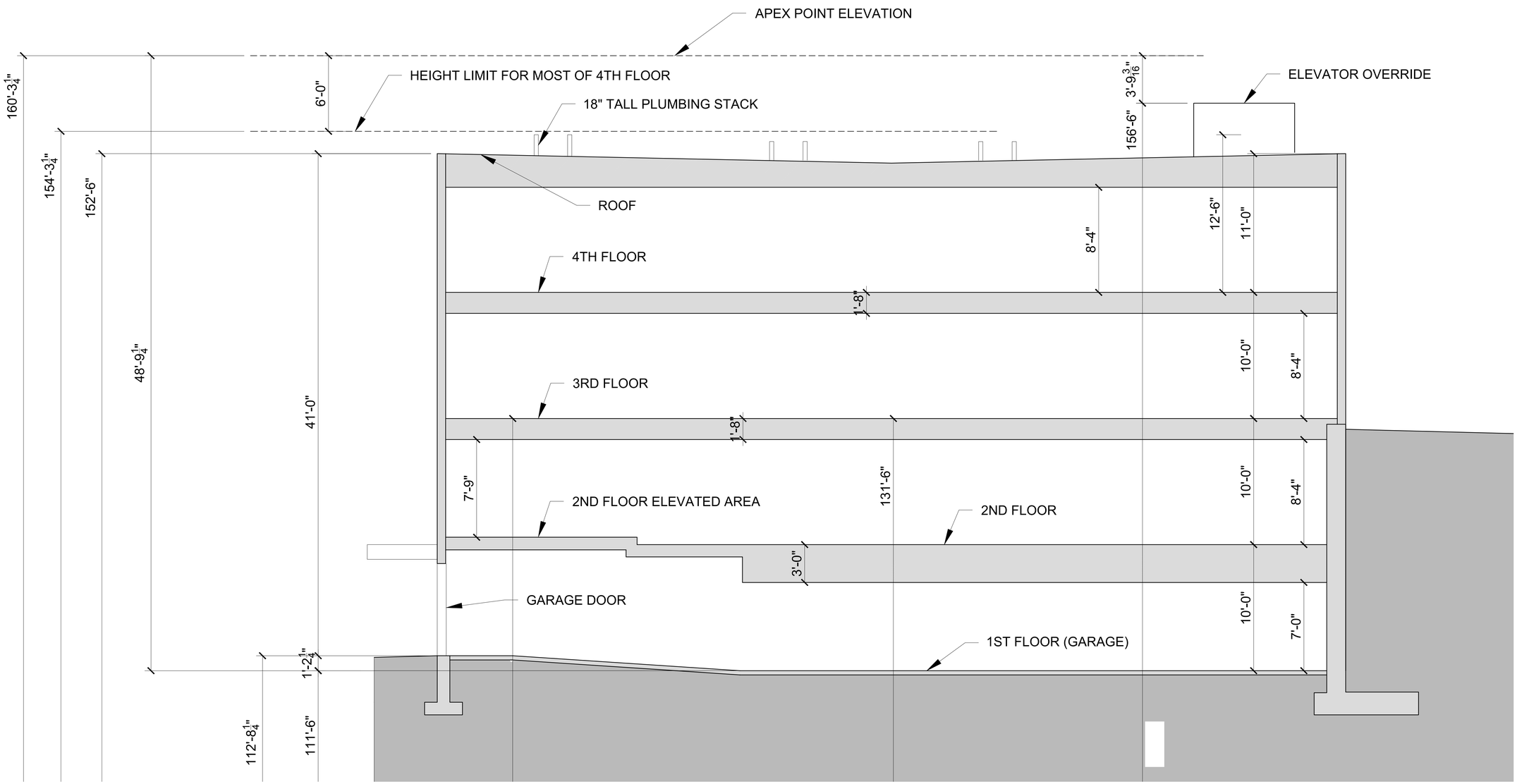
BD SHERIDAN LLC

RSA

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017



SECTION

1/4" = 1'-0" (WHEN PRINTED AT 24" X 36")

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BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

AUGUST 4, 2017

WEST ELEVATION

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")

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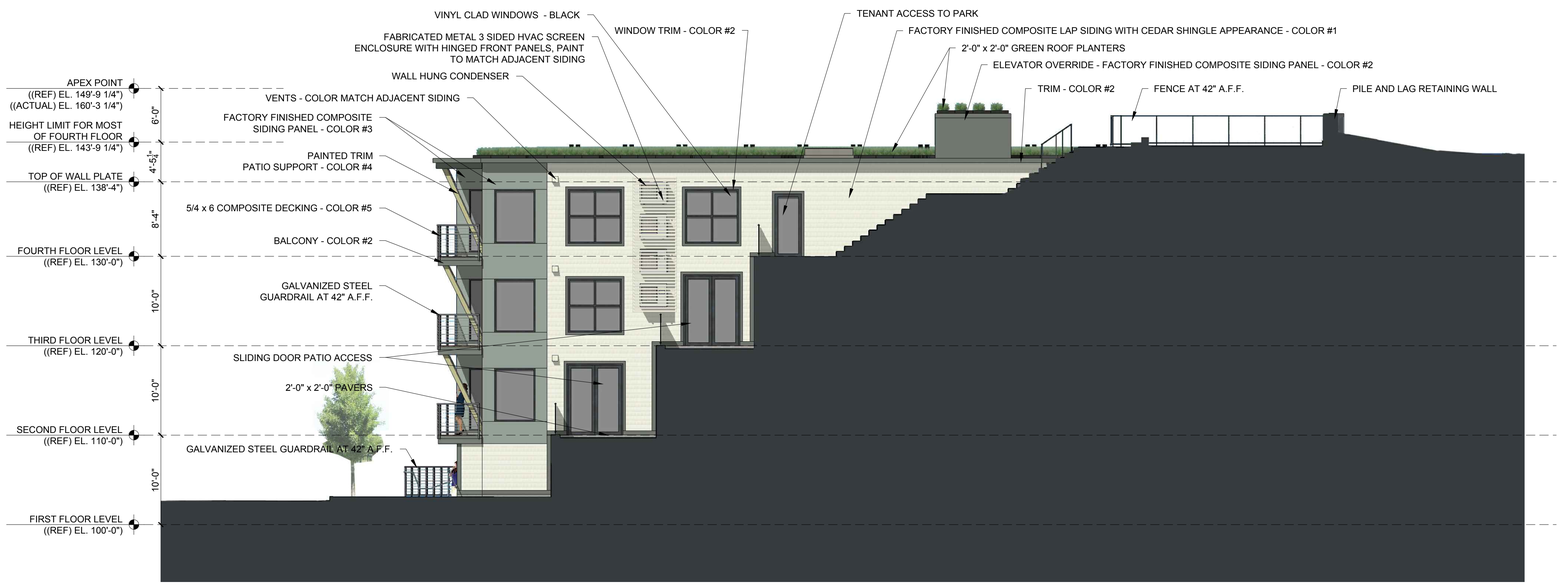
RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

JULY 5, 2017



SOUTH ELEVATION

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

EAST ELEVATION

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

JULY 12, 2017

NORTH ELEVATION #1

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

VIEW LOOKING SOUTH

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

VIEW LOOKING SOUTH

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

VIEW LOOKING NORTH

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

VIEW LOOKING NORTH

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017

VIEW FROM WASHINGTON AVE.

PROGRESS PRINT ONLY
Not for Construction

RSA

BD SHERIDAN LLC

155 SHERIDAN STREET

PORTLAND, MAINE

JULY 14, 2017

VIEW FROM FORT SUMNER PARK APEX

PROGRESS PRINT ONLY
Not for Construction

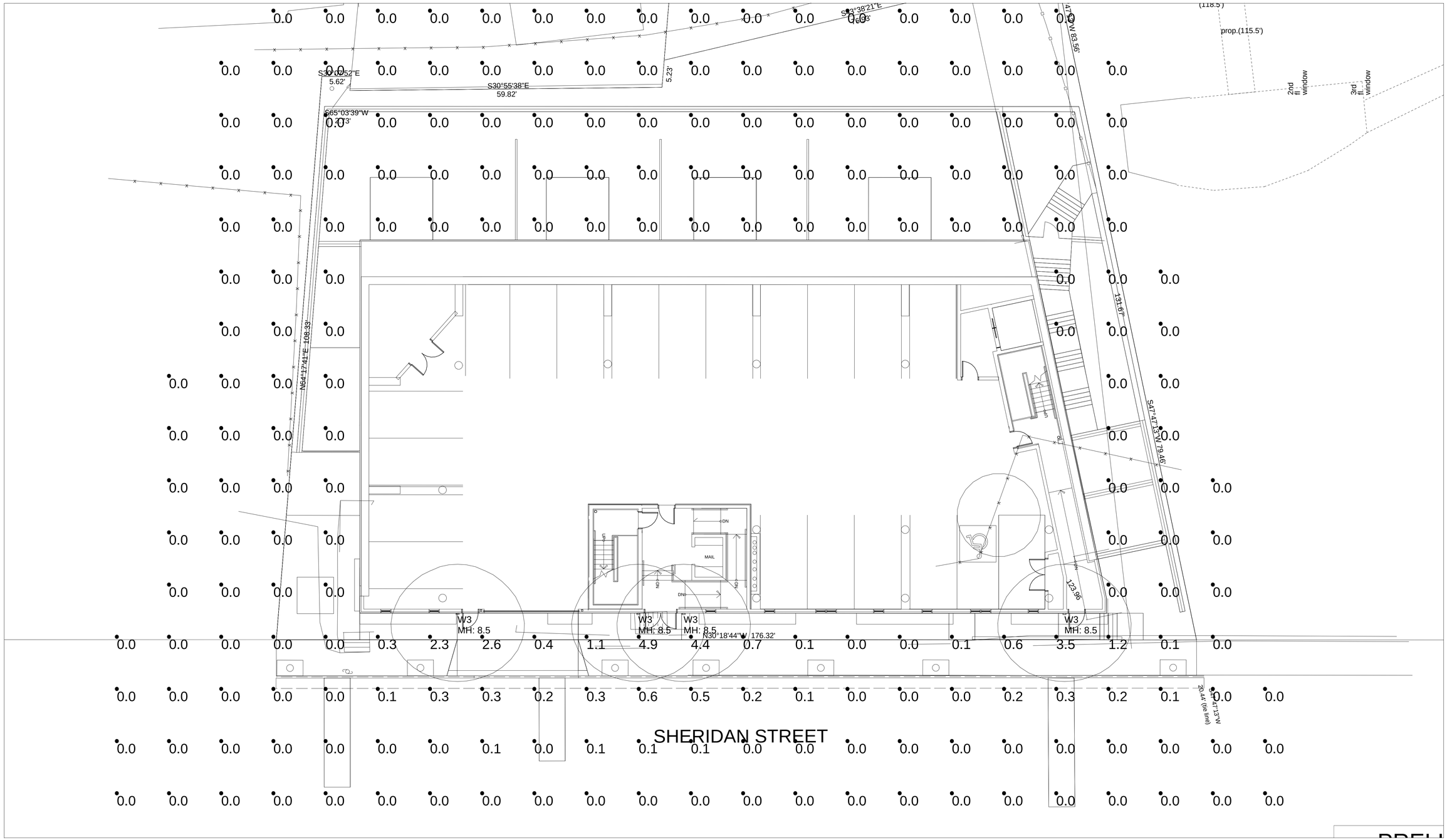
RSA

BD SHERIDAN LLC

Calculation Summary					
Label	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
site	0.09	4.9	0.0	N.A.	N.A.

Luminaire Schedule (note fixture cataloge numbers are not complete)						
Type	**Symbol**	**Qty**	**Lum. Lumens**	**LLF**	**Lum. Watts**	**Description**
W3		4	1906	0.500	25.7	CY2-25-3K7-1-3D-R

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS MAY 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 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) CHECK GRAPHIC SCALE. DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY OCCUR 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.



PLAN VIEW

TITLE
155 SHERIDAN ST
PORTLAND, ME
PRELIM SITE LIGHTING LAYOUT

GENERATED FOR:
RSA ARCHITECTS
ACORN ENG

SCALE NOT TO SCALE
prelim site AGI

Page 1 of 1

Date:7/11/2017

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

SWANEY LIGHTING ASSOCIATES, INC.

NOTICE: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SWANEY LIGHTING ASSOCIATES. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT THE DRAWING WILL BE TREATED AS CONFIDENTIAL. THIS DRAWING IS TO BE USED FOR NO PURPOSE OTHER THAN AS DETAILED IN WRITING BY SWANEY LIGHTING ASSOCIATES. THE DRAWING IS TO BE RETURNED UPON REQUEST AND IS NOT TO BE COMMUNICATED, DISCLOSED OR COPIED, EXCEPT AS EXPRESSLY AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.
THE LIGHTING DESIGN SHOWN IS BASED ON THE BEST UTILIZATION OF LIGHTING FIXTURES INCLUDED IN THIS DRAWING. IT IS PROVIDED USING FIXTURE PHOTOMETRICS ESTABLISHED BY THE MANUFACTURER. SWANEY LIGHTING ASSOCIATES DOES NOT WARRANT THE PERFORMANCE SHOWN IN ISS FILE IS NOT THE RESPONSIBILITY OF THE MANUFACTURER. IT'S USE FOR ANY OTHER PURPOSE IS NOT AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.

GENERAL NOTES:

1. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO UTILITY PLAN, SHEET C–20, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING & DRAINAGE PLAN, SHEET C–30, MOST RECENT VERSION.
3. UNIT TABULATION PROVIDED BY RYAN SENATORE ARCHITECTURE REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
4. TOTAL SITE AREA INCLUDES 0.416 ACRES (18,140 S.F.). R.O.W. WIDTH FOR SHERIDAN STREET IS 40 FEET PER EXISTING CONDITIONS PLAN. REFER TO EXISTING CONDITIONS PLAN COMPLETED BY TITCOMB ASSOCIATES DATED 3/4/2016.
5. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY TITCOMB ASSOCIATES.
6. PER THE PORTLAND GIS WEBSITE AS OF 7/11/17, THE SITE IS BOUNDED BY:
   - 6.1. NORTH R–6 ZONE MULTI–FAMILY RESIDENTIAL
   - 6.2. WEST R–6 ZONE MULTI–FAMILY RESIDENTIAL
   - 6.3. SOUTH B–2b COMMUNITY BUSINESS
   - 6.4. EAST ROS ZONE RECREATIONAL OPEN SPACE & R–6 ZONE MULTI–FAMILY RESIDENTIAL
7. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S CHART, BLOCK, LOT 12–Q–10 & 12–Q–12.
8. LOCUS PARCEL DOES NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 230051 00138, INDEX DATED 7/17/1986.
9. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
10. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO NINETEEN (19) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
11. THE CONDOMINIUM DOCUMENTS OUTLINE THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, RETAINING WALLS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, AND SNOW REMOVAL AS THE RESPONSIBILITY OF THE OWNER.
12. THE CONDOMINIUM ASSOCIATION SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
13. THE CONDOMINIUM ASSOCIATION SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST–CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
14. THE CONDOMINIUM ASSOCIATION MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:

14.1. CONDOMINIUM DOCUMENTS:

BOOK _____ PAGE _____

14.2. POST–CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT:

BOOK _____ PAGE _____

14.3. PER CITY REQUIREMENT, THE PROPERTY IS SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AND DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS. THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AS APPROVED BY THE CITY IS RECORDED AT:

BOOK _____ PAGE _____

WAIVERS & CONDITIONS OF APPROVAL:

TBD

EASEMENTS:

ALL PROPOSED EASEMENTS TO BE REVIEWED BY TITCOMB ASSOCIATES AND RECORDED IN CCRD. ALL EXISTING EASEMENTS WILL BE RELEASED PRIOR TO PROJECT START. THERE ARE NO PROPOSED EASEMENTS.

EXISTING EASEMENT:

GRADING RESTRICTIONS SET FORTH IN THE CONVEYANCE OF GEORGE F. HITCHINGS TO CHARLES BAILEY IN BOOK 314, PAGE 544.

PROPOSED EASEMENT:

PUBLIC ACCESS EASEMENT GRANTED TO THE CITY OF PORTLAND BY BD SHERIDAN, LLC FOR PEDESTRIAN USE OF BRICK SIDEWALK LOCATED WITHIN THE SITE PROPERTY LINES. FINAL EASEMENT LANGUAGE AS REVIEWED AND APPROVED BY THE CITY IS RECORDED AT:

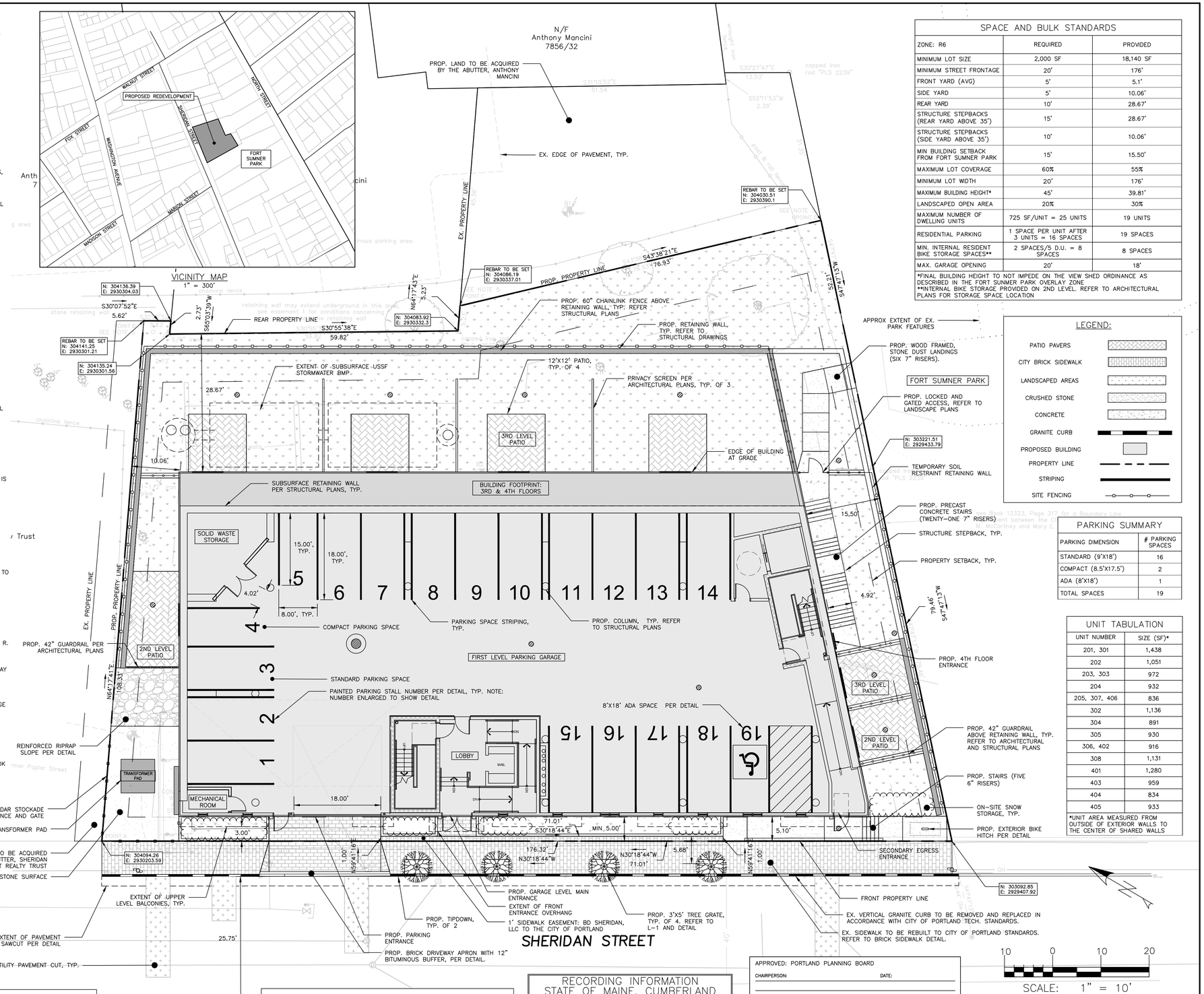
BOOK _____ PAGE _____

SURVEY NOTES:

1. BOOK AND PAGE REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
2. BEARINGS ARE REFERENCED TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, NAD83, WEST ZONE.
3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM.
4. UTILITY INFORMATION ON THIS PLAN IS APPROXIMATE, BASED ON LOCATION OF VISIBLE FEATURES AND INFORMATION CONTAINED ON PLANS AND DRAWINGS PROVIDED BY OTHERS. DIGSAFE AND/OR THE APPROPRIATE UTILITIES SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION.
5. THE LINE BETWEEN POINT A AND POINT B IS TO BE AN AGREEMENT LINE. THE LINE BETWEEN POINT C AND POINT D IS TO BE AN AGREEMENT LINE.

PLAN REFERENCES:

1. CITY OF PORTLAND, MAINE STANDARD BOUNDARY SURVEY OF PROPOSED PROPERTY LINE BETWEEN LAND OF JAMES M. MCCARTNEY, ET AL. AND LAND OF CITY OF PORTLAND AT FORT SUMNER PARK DATED SEPTEMBER, 1995.
2. PLAN SHOWING OLD AND NEW LINES OF POPLAR STREET BY CHARLES R. GOODELL, C.,E., UNDATED (1864?), ON FILE IN THE CITY OF PORTLAND ARCHIVES PLAN 370/42.
3. PLAN SHOWING DIVISION BETWEEN THE FORT SUMNER LOT AND LOT OWNED BY MESSRS. JOSE, GOULD, AND CLARK BY C. R. GOODELL, DATED JANUARY 12, 1865, RECORDED IN PLAN BOOK 2, PAGE 45.
4. UNTITLED WORKING PLAN BY E. C. JORDAN SHOWING BOUNDARY BETWEEN FORT SUMNER PARK AND LANDS FORMERLY OF SHANAHAN AND PIERCE, AS SURVEYED 1886–1927, ON FILE AT OWEN HASKELL, INC., PORTLAND, MAINE.
5. PLAN SHOWING DIVISION LINE BETWEEN LANDS OF HIRAM PIERCE AND CITY OF PORTLAND (SURVEYOR UNKNOWN) DATED MAY 31, 1892, ON FILE IN THE CITY ENGINEER'S ARCHIVES, PLAN 371/1.
6. CITY OF PORTLAND TAX ASSESSOR'S MAP OF 1882, RECORDED IN PLAN BOOK 5, PAGE 12.
7. PLAN SHOWING LITTLE, WEEKS, AND MOODY LOT, MUNJOY HILL (SURVEYOR AND DATE UNKNOWN) ON FILE IN THE CITY ENGINEER'S ARCHIVES, PLAN 86/1.
8. UNTITLED PLAN SHOWING SUBDIVISION OF LAND OF ELIJAH KELLOGG, DATED APRIL 10, 1802, RECORDED IN BOOK 51, PAGE 297.
9. UNTITLED PLAN SHOWING DIVISION OF LAND ON MOUNT JOY NECK BY THE PROPRIETORS, DATED NOVEMBER 14, 1793 RECORDED IN BOOK 39, PAGE 552.
10. PLAN OF LAND (STANDARD BOUNDARY SURVEY) ON NORTH STREET, PORTLAND, MAINE FOR ANTHONY MANCINI BY OWEN HASKELL INC., DATED APRIL 5, 1988, ON FILE AT OWEN HASKELL, INC., PORTLAND, MAINE.
11. PLAN NO. 6 IN BOOK 169 PAGE 478, DATED NOVEMBER 1839.
12. CITY STREET RECORDS, AND WORKING PLANS ON FILE IN THE CITY ENGINEER'S ARCHIVES.
13. BOUNDARY SURVEY MADE FOR ANTHONY MANCINI BY OWEN HASKELL, INC. DATED DECEMBER 6, 2012.
14. BOUNDARY LINE AGREEMENT BETWEEN THE CITY OF PORTLAND AND JAMES M. McCARTNEY AND MARY E. GEDARO, SEE BOOK 12323, PAGE 317.
15. BOUNDARY LINE AGREEMENT BETWEEN McCARTNEY FAMILY, LLC AND SHERIDAN STREET REALTY TRUST, SEE BOOK 33996, PAGE 124.



SPACE AND BULK STANDARDS		
ZONE: R6	REQUIRED	PROVIDED
MINIMUM LOT SIZE	2,000 SF	18,140 SF
MINIMUM STREET FRONTAGE	20'	176'
FRONT YARD (AVG)	5'	5.1'
SIDE YARD	5'	10.06'
REAR YARD	10'	28.67'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	28.67'
STRUCTURE STEPBACKS (SIDE YARD ABOVE 35')	10'	10.06'
MIN BUILDING SETBACK FROM FORT SUMNER PARK	15'	15.50'
MAXIMUM LOT COVERAGE	60%	55%
MINIMUM LOT WIDTH	20'	176'
MAXIMUM BUILDING HEIGHT*	45'	39.81'
LANDSCAPED OPEN AREA	20%	30%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 25 UNITS	19 UNITS
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 16 SPACES	19 SPACES
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES**	2 SPACES/5 D.U. = 8 SPACES	8 SPACES
MAX. GARAGE OPENING	20'	18'

*FINAL BUILDING HEIGHT TO NOT IMPEDE ON THE VIEW SHED ORDINANCE AS DESCRIBED IN THE FORT SUMNER PARK OVERLAY ZONE
**INTERNAL BIKE STORAGE PROVIDED ON 2ND LEVEL. REFER TO ARCHITECTURAL PLANS FOR STORAGE SPACE LOCATION

LEGEND:

- PATIO PAVERS
- CITY BRICK SIDEWALK
- LANDSCAPED AREAS
- CRUSHED STONE
- CONCRETE
- GRANITE CURB
- PROPOSED BUILDING
- PROPERTY LINE
- STRIPING
- SITE FENCING

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	16
COMPACT (8.5'X17.5')	2
ADA (8'X18')	1
TOTAL SPACES	19

UNIT TABULATION	
UNIT NUMBER	SIZE (SF)*
201, 301	1,438
202	1,051
203, 303	972
204	932
205, 307, 406	836
302	1,136
304	891
305	930
306, 402	916
308	1,131
401	1,280
403	959
404	834
405	933

*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS

OWNER/SUBDIVIDER:	CIVIL/SITE ENGINEER:	SURVEYOR:
VAZZA REAL ESTATE GROUP BD SHERIDAN, LLC QUINCY, MASSACHUSETTS CONTACT: BERNIE SAULNIER	ACORN ENGINEERING, INC. PORTLAND, MAINE CONTACT: WILLIAM SAVAGE, P.E.	TITCOMB ASSOCIATES GRAY, MAINE CONTACT: REX CROTEAU, P.L.S.

REX CROTEAU, MAINE P.L.S. #2273

TITCOMB ASSOCIATES DATE:

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED:

RECORDED IN

ATTEST: REGISTRAR

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
ATTORNEY REVIEW	WHS	7/14/17
FINAL APP.	WHS	8/4/17

DRAWING NAME: SUBDIVISION PLAT

PROJECT NAME: 155 SHERIDAN STREET

CLIENT: VAZZA REAL ESTATE GROUP
BD SHERIDAN, LLC
1266 FURNACE BROOK PARKWAY, SUITE 300 QUINCY, MA 02169

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS, WHETHER OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775–2655

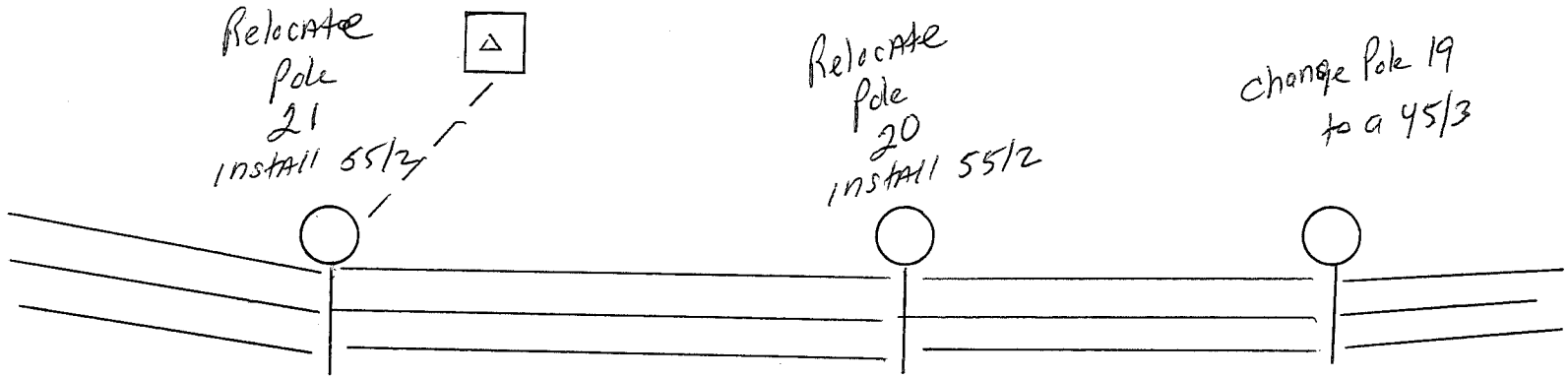
FILE:	1069_CIVIL
JN:	1069
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 PROFESSIONAL ENGINEER 8-3-17

DRAWING NO.
PLAT

155 Sheridan

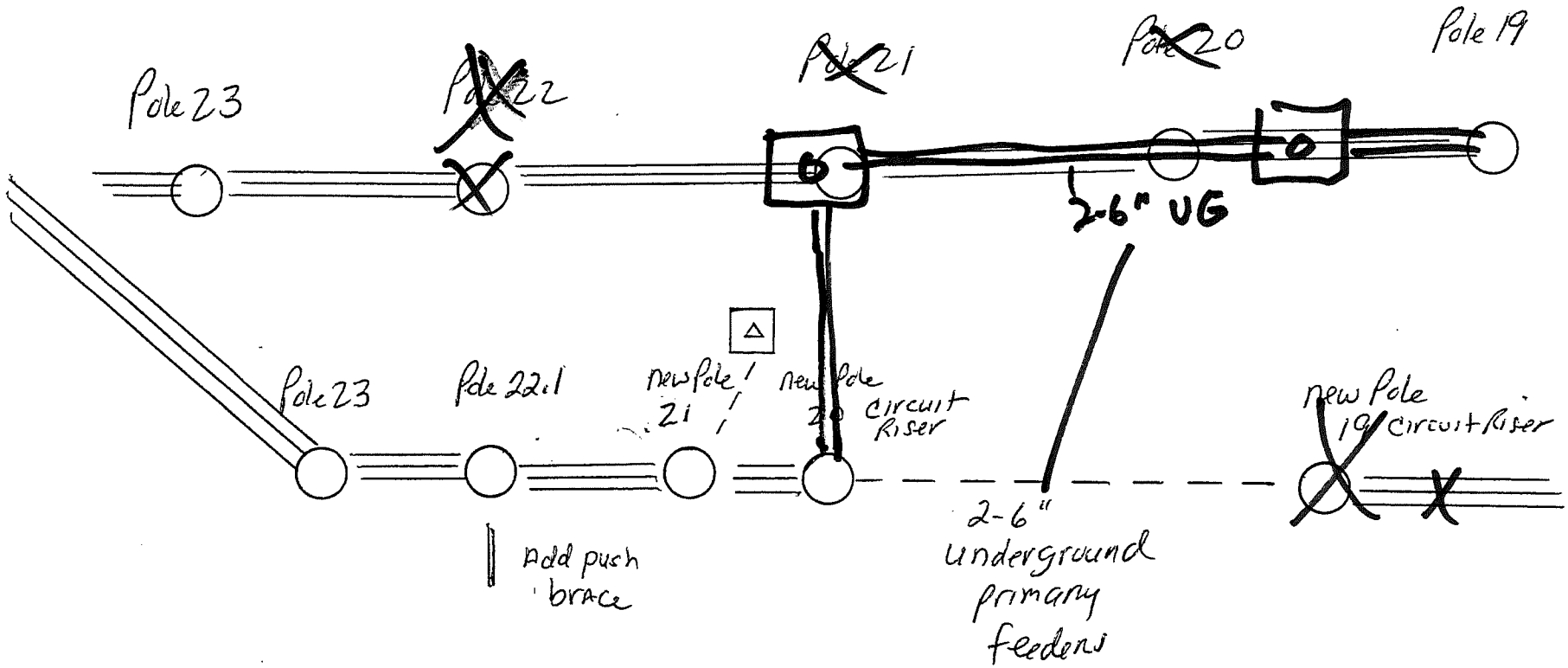
* overhead Plan
* non-binding estimate
70K based on India Street work



install primaries on alley-arm construction

155 Sheridan

* underground plan
* non-binding estimate 120-140K



* Relocate Poles 23, 22, 21, 20 to other side of street

Memorandum
Planning and Urban Development Department
Planning Division

To: Elizabeth Boepple , Chair and Members of the Portland Planning Board

From: Barbara Barhydt, Development Review Services Manager

Date: September 8, 2017

Re: Deering Place , 510 Cumberland Avenue, Avesta Housing Development Corporation

Project #: 2017-132 (Level III) and 2017-156 (Conditional Use) CBL: 047 B Lots 1,2,3 and 29

Meeting Date: September 12, 2017

I. INTRODUCTION

Avesta Housing Development Corporation is requesting an introductory workshop on a preliminary Level III application for subdivision and site plan review of their project called Deering Place. The proposal includes renovating and expanding the existing building at 510 Cumberland Avenue, building a new structure facing Deering Street, and creating a separate lot for the building located on the corner of Deering and Mellen Street. A total of 80 units are proposed in the two buildings and 48 of the units are proposed as affordable housing units.

The application is subject to review under Portland's Subdivision and Site Plan Ordinances. It is also being reviewed as a conditional use under Portland's Affordable Housing Ordinance. The site is within an Historic District and both the addition and new building are subject to review by the Historic Preservation Board.

Applicant: Avesta Housing Development Corporation, Matthew Peters
Consultants: Tom Greer, Pinkham and Greer, Engineer; David Lloyd, Archetype, Architect; and Owen Haskell, Owen Haskell Inc, Surveyor.

II. REQUIRED REVIEWS

Review	***Applicable Standards***
Subdivision	Article IV- Section 14-497
Site Plan	Article V - Section 14-526
Ensuring Work Force Housing	Division 30 - Section 14-487
Historic Preservation	Article IX

III. POTENTIAL WAIVERS

Waiver of required parking from 84 to 71 spaces.	Division 20. Off Street Parking – Sec 14-332.2 (b) Incentives for affordable housing-parking reductions
Waiver of drive aisle width from 24 to 19.8 ft	Technical Manual – Transportation – 1.7.2.3

IV. PROJECT DATA

Existing Zoning	Residential R-6
Existing Use	13 units above office
Proposed Use	Building A – 53 units Building B – 27 units
Proposed Development Program	Building A would include a community room and parking on the first level of the existing structure. Building B would be all residential. Lot to be split includes an existing structure with office space and residential units.
Parcel Size	53,368 sf
Proposed Disturbed Area	27,900 sf

	Existing	*Proposed*
Building Footprint Bldg A	20,655	28895
Bldg B	0	5165
73 Deering Street Bldg C	2250	
Building Floor Area - Bldg A	46681	73361
Bldg B	0	19433
Impervious Surface Area	44123	45058
Parking Spaces (on site)	58	64
Bicycle Parking Spaces	0	33
Estimated Cost of Project	$10,000,000	

IV. EXISTING CONDITIONS

Avesta Housing Development Corporation owns the buildings at 510 Cumberland Avenue and at 73 Deering Street. The combined lots have frontage on Cumberland Avenue, Mellon Street and Deering Street. The three-story building at 510 Cumberland Avenue has a building footprint of 20,655 sf and there is a surface parking area for 36 vehicles with access from Cumberland Avenue. Currently there are 13 3-bedroom units in this building on the third floor with office space on two floors. The existing building at 73 Deering Street has 3 residential units and office space on the first and second floors with a 22-space parking lot. The site is located within the Deering Street Historic District.

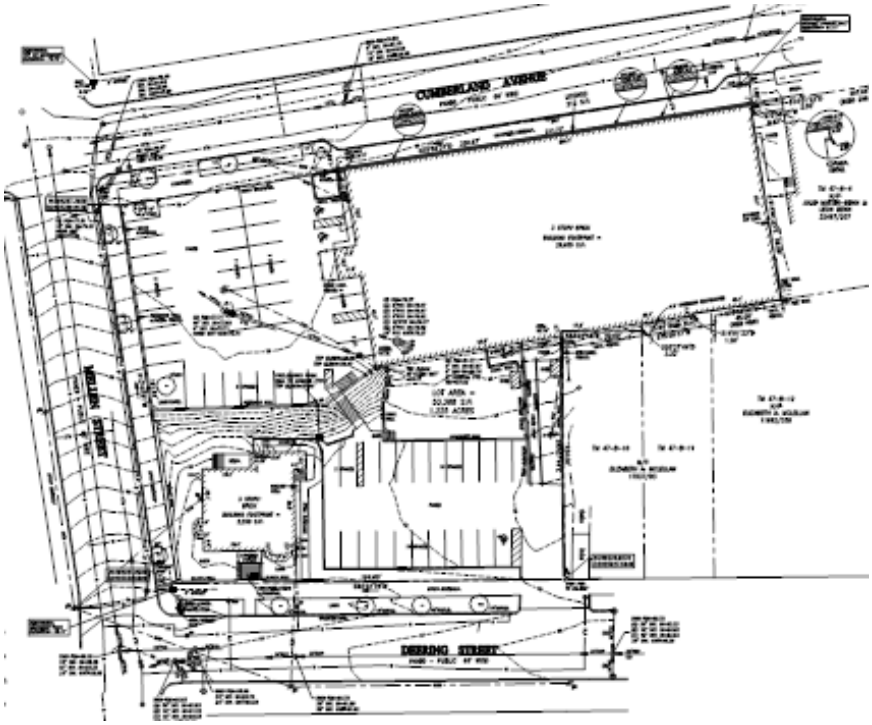


Figure 1 Survey of Existing Conditions

V. PROPOSED DEVELOPMENT

The preliminary application before the Planning Board has several components to the overall project. The project has been revised since the neighborhood meeting to reduce the total number of units from 82 to 80 and to revise the bedroom mix. The full application will need to be updated for the final plan submission.

The site has frontage along Cumberland Avenue, Mellen Street and Deering Street with an overall area of 53,368 sf (1.23 acres). The proposed site plan includes a building addition to 510 Cumberland Avenue with parking on the first level and a new building facing Deering Street. The proposal also includes creating a separate lot for the existing building at 73 Deering Street with 5729 square feet.

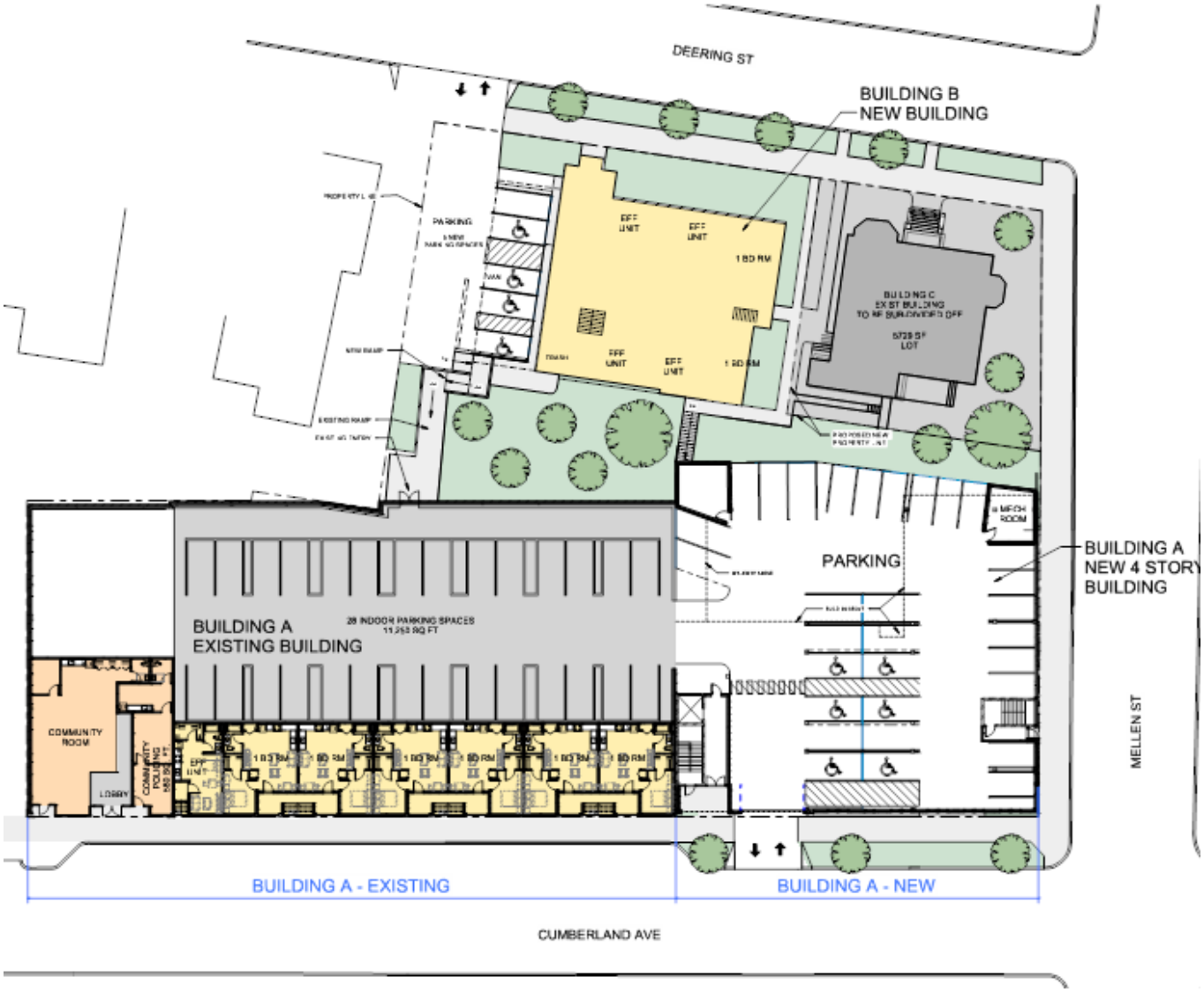


Figure 2: Proposed site plan

510 Cumberland Avenue is referred to as Building A. There are 13 existing three-bedroom apartments on the third floor. This building will be renovated with 7 units and a community room on the first level. A total of 11,250 square feet of the first level will be converted to indoor parking for 28 vehicles and the remainder of the first floor is proposed for community room, 2 lobbies, and a community policing office. An addition is proposed that would extend toward Mellen Street for a total building length of approximately 319 feet. The addition would have three floors of units above the first level of structured parking. Building A is proposed with a total of 53 units (20 in the existing building and 33 in the proposed

addition) and 59 parking spaces. The bedroom mix is 7 efficiencies, 25 one-bedroom, 8 two-bedroom, and 13 three-bedroom units.

Figure 3: Building A Cumberland Avenue elevation

The Deering Street building is proposed on the current surface parking lot that has 22 spaces. The structure would have 27 units with a bedroom mix of 8 efficiencies, 15 one-bedroom, and 4 two-bedroom units. A shared curb cut with the adjoining property is shown on the plan. The building is cantilevered over a small parking area with 5 spaces (4 handicap spaces).

Figure 4: Northwest view of Deering Street building

Figure 5: Deering Street looking north

VI. PUBLIC COMMENT

The required neighborhood meeting was held on August 17, 2017 and the materials from that meeting are included in the Applicant's submission (Attachment F through I). Approximately 50 residents attended the meeting. According to the meeting summary, issues raised by the neighbors focused on a shortage of parking in the neighborhood and that the current parking lot provides parking for a nearby church. There were also comments regarding the building design, building size and massing, and number of units. In response to the neighborhood meeting, the applicant has revised the original proposal by reducing the unit count to 80 apartments and reducing the affordable units from 50 to 48. In addition, the number of one-bedroom apartments were reduced by 3 and one 2-bedroom was added.

The Planning Division has received written comments from three neighbors on the project, which are included in the packet. As with the comments from the neighborhood meeting, concerns raised include lack of parking, increased density in the neighborhood, and design considerations of the proposed building in relation to the existing historic context of the district. The proposal for both buildings is subject to Historic Preservation Board review and this review has not been initiated at this time.

VII. RIGHT, TITLE, & INTEREST

The applicant has submitted a deed for the properties at 510 Cumberland Avenue and for 61-73 Deering Street.

VIII. FINANCIAL & TECHNICAL CAPACITY

The estimated cost of the development is $10,000,000.00. In the cover letter, the consulting team is listed as Archetype, Owen Haskell and Pinkham Greer. The financing for the project will be through a combination of LIHTC equity and private bank financing. As part of the final plan submission, the applicant and the consultant team must submit documentation for both the technical and financial capacity.

IX. ZONING ANALYSIS

A preliminary review of the zoning for the site has been conducted, but additional staff review is required. Following is the zoning assessment included on the proposed subdivision plat.

ZONE INFORMATION

ZONE: R-6, RESIDENTIAL
PERMITTED USE: MULTI-FAMILY DWELLING

SPACE STANDARDS	REQUIRED	EXISTING	LOT A	LOT B	TOTAL SUBDIVISION
MINIMUM LOT SIZE	2,000 SQ. FT.	53,368 SQ. FT.	47,620 SQ. FT.	5,748 SQ. FT.	5,748 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	3,336 SQ. FT.	581 SQ. FT. ①	1,916 SQ. FT.	581 SQ. FT.
MINIMUM STREET FRONTAGE	20 FEET	191.8 FEET	115.5 FEET	70.8 FEET	70.8 FEET
MINIMUM FRONT YARD	5 FEET	0 FEET	0 FEET	10.6 FEET	0 FEET
MINIMUM REAR YARD	10 FEET	0.2 FEET	0.2 FEET	10.2 FEET	0.2 FEET
MINIMUM SIDE YARD	10 FEET	0 FEET	0 FEET	5.7 FEET	0 FEET
MAXIMUM LOT COVERAGE (BUILDINGS)	60%	43%	56%	39%	56%
MINIMUM LOT WIDTH	20 FEET	191.8 FEET	115 FEET	70.8 FEET	70.8 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	43 & 36 FEET	35, 43 & 46 FEET	43 FEET	46 FEET
LANDSCAPE OPEN SPACE RATIO	20%	17%	12%	55%	55%

① LOT A AREA:	47,620 S.F.
MIN. AREA PER DWELLING UNIT:	÷ 725 S.F.
UNITS ALLOWED:	65.7 UNITS
DENSITY BONUS OF 25% (FOR AFFORDABLE UNITS, SECTION 14-488.)	x 1.25 BONUS
UNITS ALLOWED:	82 UNITS

The calculations for the density properly exclude the proposed lot area for 73 Deering Street, and the applicant is applying eligible density bonuses under Division 30. Affordable Housing. The Planning Staff is working with the Zoning Administrator to confirm that the lot split and setbacks for the existing and proposed buildings on Deering Street meet the zoning code. In addition, parking for 73 Deering Street must be accounted for in the overall development and evidence of how this will be accommodated must be submitted as part of the final submission. Section 14-333 of the Land Use Code states parking will need to be within 300 feet of the site and the term of the lease is to be 5 years with options to renew. Shukria Wiar notes in her review that:

> the survey does not show the existing, second floor bay window, which needs to be shown on the survey as well as the site plan. This information is needed in order to determine whether side setbacks are being met.

X. Conditional Use Review of Ensure Workforce Housing

The applicant is proposing to create 80 residential units with 48 affordable units. The proposed number of affordable units exceeds the minimum 10% requirement under the city's Affordable Housing ordinance. Victoria Volent, Housing Planner, will review the conditional use application and provide her comments for the Board's public hearing.

XI. SUBDIVISION RECORDING PLAT REQUIREMENTS (Section 14-496)

For the final submission, the boundary survey and recording plat must be updated to meet City standards. The Planning staff note that the subdivision plat shall state all of the final zoning and project information, along with any waivers that are granted, if applicable.

Following are the review comments from William Scott, Surveyor, Portland's Department of Public Works.

Boundary Survey Plan by Owen Haskell

1. We need a copy that's signed and stamped by the surveyor.

Subdivision Recording Plat by Pinkham & Greer

1. I think this plan needs to be stamped by a Professional Land Surveyor. Lot B is a new lot shown on this plan alone, not on the Owen Haskell Boundary Plan.

2. The proposed boundary lines for Lot B are hard to tell apart from the existing boundary lines of the whole property that was surveyed. I think the new lines should be more clearly labeled as such.

3. All end points of the new boundary lines of Lot B should be marked with iron rods on site after approval of the subdivision plan. The plan only appears to show one iron to be set instead of three. Also, the "existing" and "proposed" irons look the same in the legend. They should look different from each other.

4. Note 4 on Sheet C1.1 references a survey by Owen Haskell but it would be better if it referenced the specific name and date of the Owen Haskell boundary plan.

XI. DEVELOPMENT REVIEW

The preliminary plans for Deering Place are being reviewed by staff for conformance with the relevant review standards of the City of Portland's Land Use Code. Preliminary staff comments are below.

1. Transportation Standards

Currently there are 2 curb cuts along Cumberland Avenue that provide access to the surface parking lot serving 510 Cumberland Avenue. One curb cut is roughly 88 feet from the Mellen Street intersection and the other one is approximately 30 feet. One access driveway is proposed along Cumberland Avenue that would be approximately 83 feet from the intersection. A 20-foot wide curb cut would lead into a garage entrance that provides access to the 28 parking spaces in the existing building and the 31 spaces on the first floor of the addition.

The second access point on the site is a 20-foot wide driveway off Deering Street. The location of this curb cut is not changing from existing conditions and it serves as a shared curb cut with the adjoining property. While this is the existing condition, there are no cross easements for access shown on the proposed subdivision plan. This needs to be clarified for the final submission. The driveway serves a parking area with four handicap spaces and one shared car space.

The total number of parking spaces on the site is 64. One of the spaces is proposed for a shared use vehicle, which can be used to satisfy 8 required parking spaces in the R-6 zone per the Off-street parking provisions. In addition, only one parking space per unit is required for affordable housing units and the Planning Board may establish a parking ratio that is less than 1 per unit as part of the final review. Since the proposal is to provide less than one for one parking, the staff recommends that the applicant provide documentation on the implementation of the shared car and address the overall parking demand for the project.

The plans show building entrances and walkways connecting with the public sidewalk. A brick sidewalk is shown on both Mellen and Deering Streets. There is an existing concrete sidewalk along Cumberland Avenue. The sidewalk policy requires brick in Historic Districts. It is assumed that at a minimum the sidewalk along Cumberland Avenue will be disturbed in front of building addition, so this will need to be brick. The Department of Public Works will review the condition of the concrete walk.

Transit service is available on Congress Street and Forest Avenue. Route 1 (Congress), Route 8 (Peninsula Loop) and Route 9 (Deering and North Deering) run on Congress Street. Route 2 is available from Forest Avenue.

Tom Errico, Consulting Traffic Engineer, has reviewed the preliminary plans and has submitted the following comments.

The following presents my initial preliminary traffic comments following a review of the site plan.

- I find the location of the Cumberland Avenue driveway to be reasonable, particularly in combination with the closing of the driveway nearest the Mellen Street intersection. The applicant should note if corner clearance standards are met and if a waiver is required.
- The applicant shall provide vehicle auto-turn graphics supporting the 19.8 foot wide parking aisle.
- I support waivers for the 22 foot and 22.4-foot aisle widths, although the applicant should formally request waivers with documentation.
- The applicant shall provide supporting documentation for exceeding the allowable percentage of compact spaces per City Ordinance.
- How will existing parked vehicles be accommodated.
- An auto-turn schematic shall be provided for the HC parking spaces off Deering Street.
- The applicant shall provide a driveway separation waiver evaluation for the driveway on Deering Street. I am supportive of a waiver given that it is an existing condition and traffic from the proposed site will decline.

2. **<u>Environmental Quality Standards</u>**

a. Landscaping and Street Trees

As part of the final submission a landscape plan must be submitted for review. The applicant will also want to address the street tree requirement for residential development in the updated application.

b. Water Quality/Stormwater Management/Erosion Control

Tom Greer states in the cover letter and in the project data of the application that the total increase in impervious surface area is less than 1,000 sf and that the building placement over the impervious surface area is exempt from the 5,000 sf redevelopment review. Lauren Swett, Consulting Civil Engineer, notes that the project is subject to meeting the basic standards under Section 5 of the technical manual. She is seeking more information regarding the basic standards, utility capacity letters, and a stormwater management plan, if stormwater infrastructure is proposed (<u>Attachment 4</u>). Keith Gray notes in his memo (Attachment 5) that the newly installed green infrastructure at the corner of Deering and Mellen shall be protected during construction. Lauren Swett's comments are as follows:

1) The application is preliminary. As such, we anticipate that additional documents will be submitted for the final application including a utility plan, detail sheets, an erosion and sediment control plan, and letters from utilities confirming capacity to serve the proposed development. Woodard & Curran will perform a review of the Final Application upon receipt of those documents.
2) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. As described below, this project only meets the thresholds to require compliance with the Basic Standards. We offer the following comments:
   a) Basic Standards: Plans, notes, and details should be provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. The Stormwater Management Plan should include a stormwater inspection and maintenance plan developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances.
   b) General Standards: The project will result in a de minimis increase in impervious area of approximately 935 square feet. As such, the project is not required to include any specific stormwater management features for stormwater quality control. We encourage the Applicant to review the City's Stormwater Service Charge Credit Manual (available online) to evaluate whether they may want to incorporate stormwater quality treatment measures that qualify for a future Stormwater Service Charge credit.
   c) Flooding Standards: The project will result in a de minimis increase in impervious area of approximately 935 square feet. As such, the project is not required to include any specific stormwater management features to control the rate or quantity of stormwater runoff from the site.
3) If the Applicant incorporates any stormwater management systems on the site, a stormwater inspection and maintenance plan developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances.
4) The Applicant's site plan notes that no waivers are being requested; however, the application notes the specific waiver request. The final plans should be consistent with waiver requests.

3. Public Infrastructure and Community Safety Standards

a. Public Safety and Fire Prevention

The proposed lot split and new building is being reviewed for zoning and the fire department is looking at the separation for access and safety to the existing building. Lieutenant John Brennan of the Fire Department has submitted the following comments:

- Access between new Building B and existing Building C appears to be tight. Access to the egress windows of the upper floors will need to be made via portable ground ladders. The new building shall not affect the egress or required Fire Department access for the neighboring building.
- Emergency vehicle access is excellent for the building on Cumberland Avenue, Mellen St and Deering Avenue.
- Premises Identification:
    - The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
    - Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.
    - If the building entry faces a different street, both the street name and number should be large enough to read from the street.
    - Address numbers must be a minimum of 6 inches high.
    - The number should be in Arabic numerals rather than spelled out (for example, "130" instead of "One Hundred and Thirty').
    - Color: Addresses should be in a color that contrasts with the background.
    - Whenever possible, should be illuminated.
    - Provide additional address signs at entrances to the property when the building address is not legible from the public street.
    - Buildings set back in groups that share common entrances can make quickly locating a specific building and the shortest route difficult. On such sites, additional signs with directional arrows and/or diagrams of the buildings and access layout should be posted.

b. Availability and Capacity of Public Utilities

Evidence of sufficient capacity to serve the proposed development from the relevant utilities is required for the final submission. The applicant has submitted the sewer capacity application, which is being reviewed by the Water Resources Division of Public Works.

c. Construction Management Plan

As one of the submissions, a construction management plan was submitted for review. Keith Gray, Senior Engineer at DPW has reviewed the plan and his comments are included as Attachment 5. The city has also drafted a template for construction management plans, which is included as Attachment 6 and the staff are recommended that this template be used for the final submission.

4. Site Design Standards

a. Historic Resources

The proposed site is within the Deering Street Historic District and both the building addition to 510 Cumberland Avenue and the new building on Deering Street are subject to Historic Preservation Review. Thus, the design review will be conducted by the Historic Preservation Board. The staff recommend that that the applicant initiate that review process, so the reviews can proceed concurrently.

b. Exterior Lighting
Details regarding exterior lighting have not been provided at this time. A photometric plan and cut sheets will be required at the time of final review.

c. Noise and Vibration
Information on the HVAC and mechanical equipment should be provided with the final plans.

d. Signage and Wayfinding
No signage or wayfinding is proposed at this time.

5. Final Plan Submission
A final plan submission must be submitted for final review meeting the submission requirements of the Site Plan and Subdivision ordinances. In addition to the items identified to be addressed within this memo, other items include:

1. Written summary of fire safety- Address Fire Safety Checklist.
2. Written summary of solid waste generation and proposed management of solid waste.
3. Address Snow and Ice Loading on the site
4. Update any waivers being requested.
5. Preliminary infrastructure improvements (e.g. - curb and sidewalk improvements, roadway intersection modifications, utility connections, transit infrastructure, roadway improvements).
6. Grading and Utilities Plan

XIII. NEXT STEPS

1. Finalize zoning review with staff and applicant;
2. Address staff comments;
3. Address additional comments of the Planning Board;
4. Prepare final plan submission, including subdivision and site plan submittal requirements as included in 14-496(a) and (b) and 14-527(e) and (f) for review by the Planning Authority and Planning Board; and
5. Hold another workshop or Planning Board Hearing.

XIV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. William Scott – Survey Review Comments (9-8-17)
2. Traffic Engineer review (memo from Thomas Errico, 8/21/17)
3. Civil Engineer review (memos from Lauren Swett, 9/8/17)
4. John Brennan Fire Comments (9-8-17)
5. Keith Gray – DPW Comments (9-8-17)
6. Draft Construction Management Template

PUBLIC COMMENT

PC 1 Richard Bilodeau 8-4-17
PC 2 Steven Fender 8-31-17
PC 3 Christopher Ring 9-6-17

APPLICANT'S SUBMITTALS

A. Cover Letter (from Tom Greer, June 1, 2017)
B. Level III Site Plan application
C. Authorization Letter

D. Recorded Deed
E. Wastewater Capacity Application
F. Neighborhood Meeting Notice
G. Neighborhood Meeting Certification
H. Attendee List
I. Neighborhood Meeting Summary

PLANS
Plan 1 Survey
Plan 2 Civil Engineer Site Plan
Plan 3 Archetype Site plan
Plan 4 Building A – Floor Plans
Plan 5 Building B Floor Plans
Plan 6 Sheet 1 – Subdivision Plat
Plan 7 Sheet 2 Subdivision Plat
Plan 8 Architectural Looking Southeast
Plan 9 Architectural Deering Street North
Plan 10 Deering Street Northwest
Plan 11 Mellen Street East

MEMORANDUM

To: FILE

From: Shukria Wiar

Subject: Application ID: 2017-132

Date: 9/8/2017

Comments Submitted by: William Scott/Public Works on 8/25/2017

Boundary Survey Plan by Owen Haskell

1. We need a copy that's signed and stamped by the surveyor.

Subdivision Recording Plat by Pinkham & Greer

1. I think this plan needs to be stamped by a Professional Land Surveyor. Lot B is a new lot shown on this plan alone, not on the Owen Haskell Boundary Plan.

2. The proposed boundary lines for Lot B are hard to tell apart from the existing boundary lines of the whole property that was surveyed. I think the new lines should be more clearly labeled as such.

3. All end points of the new boundary lines of Lot B should be marked with iron rods on site after approval of the subdivision plan. The plan only appears to show one iron to be set instead of three. Also, the "existing" and "proposed" irons look the same in the legend. They should look different from each other.

4. Note 4 on Sheet C1.1 references a survey by Owen Haskell but it would be better if it referenced the specific name and date of the Owen Haskell boundary plan.

Att. 2

Portland Maine Yes. Google's good here.

Barbara Barhydt <bab@portlandmaine.gov>

FW: 510 Cumberland Avenue -- Initial Preliminary Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com> Wed, Sep 6, 2017 at 3:30 PM
To: "Barhydt, Barbara" <bab@portlandmaine.gov>

See below. Thanks

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
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Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

From: Tom Errico
Sent: Monday, August 21, 2017 4:42 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Katherine Earley <kas@portlandmaine.gov>; Keith Gray <kgray@portlandmaine.gov>; Jeff Tarling (JST@portlandmaine.gov) <JST@portlandmaine.gov>; Jeremiah Bartlett <JBartlett@portlandmaine.gov>; Swett, Lauren <lswett@woodardcurran.com>
Subject: 510 Cumberland Avenue -- Initial Preliminary Traffic Comments

Hi Shukria – The following presents my initial preliminary traffic comments following a review of the site plan.

- I find the location of the Cumberland Avenue driveway to be reasonable, particularly in combination with the closing of the driveway nearest the Mellen Street intersection. The applicant should note if corner clearance standards are met and if a waiver is required.
- The applicant shall provide vehicle auto-turn graphics supporting the 19.8 foot wide parking aisle.
- I support waivers for the 22 foot and 22.4-foot aisle widths, although the applicant should formally request waivers with documentation.
- The applicant shall provide supporting documentation for exceeding the allowable percentage of compact spaces per City Ordinance.
- How will existing parked vehicles be accommodated.
- An auto-turn schematic shall be provided for the HC parking spaces off Deering Street.

- The applicant shall provide a driveway separation waiver evaluation for the driveway on Deering Street. I am supportive of a waiver given that it is an existing condition and traffic from the proposed site will decline.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY·LIN INTERNATIONAL
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Falmouth, ME 04105
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"One Vision, One Company"

COMMITMENT & INTEGRITY
DRIVE RESULTS

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T 800.426.4262
T 207.774.2112
F 207.774.6635

Att. 3

MEMORANDUM

TO: Shukria Wiar, Planner
FROM: Lauren Swett, P.E. & Loren Joyce, E.I.T.
DATE: August 4, 2017 (updated September 8, 2017)
RE: 510 Cumberland Avenue, Level III Site Plan Application

Woodard & Curran has reviewed the Level III Site Plan Application for the proposed Avesta Deering Place Project located at 510 Cumberland Avenue in Portland, Maine. The project involves construction of two (2) new four story buildings with ground level parking; one on the Cumberland Avenue Lot and another four story building on the Deering Street Lot.

Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments, dated June 1, 2017, prepared by Thomas S. Greer, P.E. of Pinkham & Greer Civil Engineers, on behalf of Matthew Peters of Avesta Housing Development Corporation.
- Engineering Plans, Sheets, dated May 31, 2017, prepared by Thomas S. Greer, P.E. of Pinkham & Greer Civil Engineers, on behalf of Matthew Peters of Avesta Housing Development Corporation.

Comments

1) The application is preliminary. As such, we anticipate that additional documents will be submitted for the final application including a utility plan, detail sheets, an erosion and sediment control plan, and letters from utilities confirming capacity to serve the proposed development. Woodard & Curran will perform a review of the Final Application upon receipt of those documents.
2) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. As described below, this project only meets the thresholds to require compliance with the Basic Standards. We offer the following comments:
   a) Basic Standards: Plans, notes, and details should be provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. The Stormwater Management Plan should include a stormwater inspection and maintenance plan developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances.
   b) General Standards: The project will result in a de minimis increase in impervious area of approximately 935 square feet. As such, the project is not required to include any specific stormwater management features for stormwater quality control. We encourage the Applicant to review the City's Stormwater Service Charge Credit Manual (available online) to evaluate whether they may want to incorporate stormwater quality treatment measures that qualify for a future Stormwater Service Charge credit.
   c) Flooding Standards: The project will result in a de minimis increase in impervious area of approximately 935 square feet. As such, the project is not required to include any specific stormwater management features to control the rate or quantity of stormwater runoff from the site.
3) If the Applicant incorporates any stormwater management systems on the site, a stormwater inspection and maintenance plan developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances.
4) The Applicant's site plan notes that no waivers are being requested; however, the application notes the specific waiver request. The final plans should be consistent with waiver requests.

MEMORANDUM

To: FILE

From: Shukria Wiar

Subject: Application ID: 2017-132

Date: 9/8/2017

Comments Submitted by: John Brennan/Fire on 8/17/2017

Access between new Building B and existing Building C appears to be tight. Access to the egress windows of the upper floors will need to be made via portable ground ladders. The new building shall not affect the egress or required Fire Department access for the neighboring building.

Comments Submitted by: John Brennan/Fire on 8/17/2017

Premises Identification
The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.
If the building entry faces a different street, both the street name and number should be large enough to read from the street.
Address numbers must be a minimum of 6 inches high.
The number should be in Arabic numerals rather than spelled out (for example, “130” instead of “One Hundred and Thirty’).
Color: Addresses should be in a color that contrasts with the background.
Whenever possible, should be illuminated.
Provide additional address signs at entrances to the property when the building address is not legible from the public street.
Buildings set back in groups that share common entrances can make quickly locating a specific building and the shortest route difficult. On such sites, additional signs with directional arrows and/or diagrams of the buildings and access layout should be posted.

Comments Submitted by: John Brennan/Fire on 8/17/2017

Emergency vehicle access is excellent for the building on Cumberland Avenue, Mellen St and Deering Avenue.

City of Portland Maine
Dept. of Public Works
Engineering Division

Memo

To: Shukria Wiar - Planner

From: Keith Gray, PE – Senior Engineer, DPW

Date: September 8, 2017

Re: 510 Cumberland Ave (2017-132) – Deering Place - Level III Site Plan Application

---

The following comments/concerns are in regards to the Level III Site Plan Application prepared by Pinkham and Greer, on behalf of the applicant, Avesta Housing Development Corp., with last plan revision submitted on August 17th, 2017 and Construction Management Plan submitted on June 14th, 2017. Please feel free to contact me with questions.

Comments:

Construction Management Plan:

- Provide a complete Construction Management Plan that includes: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories identified within the enclosed Draft Construction Management Plan General Template.
- CM Plan dated 6/13/17
    - The dumpster shown on Cumberland Ave shall be relocated outside of the City ROW
    - How long is the sidewalk along Cumberland proposed to be closed?
    - Will the construction be phased? If so, provide a phasing plan.
    - Will the Mellon Street sidewalk need to be closed?
    - Provide dimensions, durations and purpose for ROW closures.
    - Temporary sidewalks need to be considered for all sidewalk closures

Site Design:

- The applicant shall protect the City installed green infrastructure at the corner of Deering and Mellen Street.
- Refer to the City's sidewalk policy for proposed sidewalk material.
- In general, refer to the Site Plan standards for the level of detail required for submission.

Construction Management Plan
General Template
[Applicant and Project Name]

Construction Management Plans shall depict the overall planning, coordination, and control of a construction site, including phases as applicable, from beginning to completion. The City's goal for a construction management plan is to support a safe construction site and protect the public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the city), and welfare during construction. In addition, the construction management plan shall minimize construction impacts in their duration and magnitude to the surrounding area and develop an effective communication process for resolving concerns and conflicts.

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories below.

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that the [Applicant and Contractor] has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

B. Development Review of Construction Management Plan

[Applicant and Contractor] shall submit a construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. The plan minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process. The following details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, [Applicant and Contractor] shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.

2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

[Applicant and Contractor] will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan shall provide for the following:

1. Contact Person and contact information for the [applicant and contractor] and who is available 24 hours
2. Construction Signage posted on the site with Contact Information for Contractor
3. Describe any additional communication strategies
4. All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing.
2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

F. Security & Public Safety

1. The Construction Management Plan will depict all proposed fencing or other barriers and access gates (with knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program. An overall construction of demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security

DRAFT

- Installation of new fire protection systems as construction progresses
- Preservation of existing systems during demolition
- Organization and training of an on-site fire brigade
- Development of a pre-fire plan with the local fire department
- Rapid communication
- Consideration of special hazards resulting rom previous occupancies
- Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.
2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects that will occur along arterial and or collector streets are required to submit a satisfactory 'maintenance of traffic" (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

   Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for n the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic
   - Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
   - In extreme situations, flaggers may be required.

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- Police detail is required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
   1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
   2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or site lines with the piles of snow.
   3) Clear all walks & ramps with the work zone
   4) Sand or Salt as needed
   5) Clear all basin or drainage to help snow melt
   6) This would include Monday-Friday Sat/Sunday/Holidays

DRAFT

I. Erosion Control and Preservation of Trees

1. The [contractor] shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. The [contractor] shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan (Exhibit) within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.
3. Delivery Truck Holding Areas Off-Site: In the event that adequate on-site area for holding of trucks is not available, an off-site marshalling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan.

K. Parking During Construction

1. Construction Parking: Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements shall be included in the construction management plan.
2. Parking: Where existing facilities are remaining in operation during construction, the construction management plan shall identify how the parking for employees and others shall be managed.
3. Truck Routes and Volumes: The Construction Management Plan shall address the designated truck routes and expected truck volumes.

L. Special Measures as Necessary

For construction work that will take place over a long period (e.g. 12 months or more), involve major demolition/ deep excavation/ piling and/or special construction techniques, or are located near sensitive uses (e.g. medical care facilities, schools), the Construction Management Plan should provide details and demonstrate that all appropriate special measures have been taken to avoid, minimize, or possibly compensate for potential impacts. This may include taking baseline measurements before construction, such as arranging to

photograph the foundations of nearby properties upon consent of the owners, in order to assess any future impacts of vibration, noise, etc.

DRAFT

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

File: 17127

June 1, 2017

Barbara Barhydt
City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: LEVEL III PRELIMINARY SITE PLAN APPLICATION
AVESTA'S DEERING PLACE

Dear Barbara,

Attached is supporting data for the Avesta Deering Place Project. This project includes the renovation of the existing building on Cumberland Avenue, adding an addition to the building over the existing parking lot, adding a new building to the Deering Street side of the property, and creating a separate lot for the building on the corner of Deering Street and Mellen Street.

This project requires Site Plan and Subdivision approvals from the City of Portland. It does not require any State or Federal permits.

Zoning Assessment:

Below is a chart showing compliance with the R-6 Zone. The building will be reviewed by Historic Preservation.

ZONE: R-6, RESIDENTIAL
PERMITTED USE: MULTI-FAMILY DWELLING

SPACE STANDARDS	REQUIRED	EXISTING	LOT A	LOT B	TOTAL SUBDIVISION
MINIMUM LOT SIZE	2,000 SQ. FT.	53,368 SQ. FT.	47,620 SQ. FT.	5,748 SQ. FT.	5,748 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	3,336 SQ. FT.	581 SQ. FT. ①	1,916 SQ. FT.	581 SQ. FT.
MINIMUM STREET FRONTAGE	20 FEET	191.8 FEET	115.5 FEET	70.8 FEET	70.8 FEET
MINIMUM FRONT YARD	5 FEET	0 FEET	0 FEET	10.6 FEET	0 FEET
MINIMUM REAR YARD	10 FEET	0.2 FEET	0.2 FEET	10.2 FEET	0.2 FEET
MINIMUM SIDE YARD	10 FEET	0 FEET	0 FEET	5.7 FEET	0 FEET
MAXIMUM LOT COVERAGE (BUILDINGS)	60%	43%	56%	39%	56%
MINIMUM LOT WIDTH	20 FEET	191.8 FEET	115 FEET	70.8 FEET	70.8 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	43 & 36 FEET	35, 43 & 46 FEET	43 FEET	46 FEET
LANDSCAPE OPEN SPACE RATIO	20%	17%	12%	55%	55%

① LOT A AREA:	47,620 S.F.
MIN. AREA PER DWELLING UNIT:	÷ 725 S.F.
UNITS ALLOWED:	65.7 UNITS
DENSITY BONUS OF 25% (FOR AFFORDABLE UNITS, SECTION 14-488.)	x 1.25 BONUS
UNITS ALLOWED:	82 UNITS

This project meets the goals of the Comprehensive Plan by providing housing within the central portion of the city and by providing affordable housing.

Easements and Covenants:

This site will be burdened by an affordable income renter standard by Maine State Housing as part of the finance package.

Waivers:

Currently the existing building on Cumberland Avenue is located on the front boundary line. We request a waiver to construct the addition in line with that, creating a consistent street frontage on Cumberland Avenue and Mellen Street.

We request a waiver for the parking standards, to allow the reduction in spaces from the required 71 down to 64. Based on the history of other affordable housing projects, this will provide adequate parking for residents and guests.

We request a waiver from the dimensional parking standards. The drive aisles will be reduced from 24 to 19.8 feet where shown on the site plan.

Stormwater:

This project does not increase the impervious area by more than 1,000 sq. ft. The placement of the building over impervious area is exempt from the 5,000 sq. ft. redevelopment rule. No stormwater treatment is required.

Finance and Technical Ability:

Avesta has extensive experience in the construction and operation of affordable housing in the City of Portland. They have assembled a team of experienced consultants to design the project. They include Architype, Owen Haskell, and Pinkham & Greer.

Final financing of the project will be a combination of LIHTC equity and private bank financing.

PINKHAM & GREER
CIVIL ENGINEERS

Attached are Architectural plans providing the details on the building construction.

If you have any questions please let me know.

Sincerely,

PINKHAM & GREER,
CIVIL ENGINEERS

Thomas S. Greer, P.E.

Enclosures

cc: Matthew Peters, David Lloyd, File

TSG/rjs

Level III – Preliminary and Final Site Plans
Development Review Application
Portland, Maine

Planning and Urban Development Department
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

Level III: Site Plan Development includes:

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14), Design Manual and Technical Manual.

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719
planning@portlandmaine.gov

Office Hours
Monday thru Friday
8:00 a.m. – 4:30 p.m.

I. Project Information (Please enter n/a on those fields that are not applicable)

Project Name:	Deering Place
Proposed Development Address:	510 Cumberland Avenue / 61 Deering Street
Project Description:	Construction of 2 Apartment Buildings for 84 Units.
Chart/Block/Lot:	Map 47, Block B / Lots 1, 2, 3, & 29
Preliminary Plan	Yes
Final Plan	

II. Contact Information (Please enter n/a on those fields that are not applicable)

APPLICANT

Name:	Matthew Peters
Business Name:	Avesta Housing Development Corporation
Address:	307 Cumberland Avenue
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-245-3370
Home #:	
Cell #:	
Fax #:	
E-mail:	MPeters@avestahousing.org

OWNER

Name:	Same as Applicant
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Thomas S. Greer, P.E. (Pinkham & Greer Civil Engineers)
Address:	28 Vannah Avenue
City/State:	Portland, ME
Zip Code:	04103
Work #:	207-781-5242
Home #:	
Cell #:	
Fax #:	207-781-4245
E-mail:	tgreer@pinkhamandgreer.com

BILLING (to whom invoices will be forwarded to)

Name:	Avesta Housing Development Corporation
Address:	307 Cumberland Avenue
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-245-3370
Home #:	
Cell #:	
Fax #:	
E-mail:	MPeters@avestahousing.org

ENGINEER

Name:	Thomas S. Greer, P.E. (Pinkham & Greer Civil Engineers)
Address:	28 Vannah Avenue
City/State:	Portland, ME
Zip Code:	04103
Work #:	207-781-5242
Home #:	
Cell #:	
Fax #:	207-781-4245
E-mail:	tgreer@pinkhamandgreer.com

SURVEYOR

Name:	Owen Haskell
Address:	390 US Route One #10
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	207-774-0424
Home #:	
Cell #:	
Fax #:	207-774-0511
E-mail:	

ARCHITECT

Name:	David Lloyd (Archetype Architects)
Address:	48 Union Wharf
City/State:	Portland, ME
Zip Code:	04101
Work #:	207-772-6022
Home #:	
Cell #:	
Fax #:	207-772-4056
E-mail:	lloyd@archetypepa.com

ATTORNEY

Name:	
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Rita Sawyer
E-mail:	rsawyer@pinkhamandgreer.com
Name:	Thomas S. Greer
E-mail:	tgreer@pinkhamandgreer.com
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

☑	Less than 50,000 sq. ft.	$750.00
☐	50,000 – 100,000 sq. ft.	$1,000.00
☐	100,000 – 200,000 sq. ft.	$2,000.00
☐	200,000 – 300,000 sq. ft.	$3,000.00
☐	Over 300,000 sq. ft.	$5,000.00
☐	Parking lots over 100 spaces	$1,000.00
☐	After-the-fact Review	$1,000.00 + applicable application fee above

PLAN AMENDMENTS (check applicable review)

☐	Planning Staff Review	$250.00
☐	Planning Board Review	$500.00

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	$1,500.00
☐	Stormwater Quality	$250.00
☑	Subdivision	$500.00
	# of Subdivision Lots 69 x $25.00 (per lot)	$ 1,725.00
☐	Site Location	$3,500.00
	# of Site Location Lots x $200.00 (per lot)	$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☑	Historic Preservation	
	TOTAL APPLICATION FEE DUE:	$ 2,231.25

IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) ($.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review ($50.00 hour)
- Legal Review ($75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

V. PROJECT DATA (Please enter n/a on those fields that are not applicable)

Original 53,368

TOTAL AREA OF SITE	A-47,620, B-5,748	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	27,900	sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	A-40,945, B-3,178	sq. ft.
Impervious Area (Total Proposed)	A-41,885, B-3,173	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	A-20,655, B-2,250	sq. ft.
Building Footprint (Total Proposed)	A-26,628	sq. ft.
Building Floor Area (Total Existing)	A-61,965, B-6,750	sq. ft.
Building Floor Area (Total Proposed)	A-87,927	sq. ft.
ZONING		
Existing	R6	
Proposed, if applicable	R6	
LAND USE		
Existing	Residential	
Proposed	Residential	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	Lot A 13, Lot B 3	
# of Residential Units (Total Proposed)	Lot A 84, Lot B 3	
# of Lots (Total Proposed)	2	
# of Affordable Housing Units (Total Proposed)	Lot A 84, Lot B 0	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	11	
# of One-Bedroom Units (Total Proposed)	47	
# of Two-Bedroom Units (Total Proposed)	11	
# of Three-Bedroom Units (Total Proposed)	13	
PARKING SPACES		
# of Parking Spaces (Total Existing)	58	
# of Parking Spaces (Total Proposed)	64	
# of Handicapped Spaces (Total Proposed)	10	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	33	
ESTIMATED COST OF THE PROJECT	$10,000,000.00	

VI. APPLICANT SIGNATURE

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a ***legal signature*** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:	Thomas S Peer agent
Date: 6/1/17	

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
x		1	Completed Application form
x		1	Application fees
x		1	Written description of project
x		1	Evidence of right, title and interest
n/a		1	Evidence of state and/or federal approvals, if applicable
x		1	Written assessment of proposed project's compliance with applicable zoning requirements
x		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
x		1	Written requests for waivers from site plan or technical standards, if applicable.
x		1	Evidence of financial and technical capacity
n/a		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
x		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
x		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
x		Proposed grading and contours;	
x		Existing structures with distances from property line;	
x		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
n/a		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
n/a		Preliminary infrastructure improvements;	
		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
x		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
x		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
x		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
x		Exterior building elevations.	

Att. C

AVESTA HOUSING
307 Cumberland Avenue
Portland, ME 04101

(207) 245-3370

May 25, 2017

To Whom It May Concern

This letter is to inform you that Thomas S. Greer and his associates of Pinkham & Greer Civil Engineers in Portland are hereby authorized to represent me throughout the approval process of the Deering Place located at 510 Cumberland Avenue and 61 Deering Street in Portland, Maine.

This includes representing me with the City of Portland and any other State or local agencies who may become involved in the process.

Should you have any questions or concerns, please feel free to contact me.

Sincerely,

Matthew Peters
Vice President of Real Estate Services

Att. D

Doc#: 56966 Bk:33552 Pg: 280

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT

The Opportunity Alliance, a non-profit corporation organized and existing under the laws of the State of Maine, with a place of business at 50 Lydia Lane, South Portland, Maine 04106, for consideration paid, grants to **Avesta Housing Development Corporation,** a Maine non-profit corporation, with a mailing address of 307 Cumberland Avenue, Portland, Maine 04101, with Quitclaim Covenant, certain real property situated at 510 Cumberland Avenue (a/k/a 498-500 Cumberland Avenue) and 61-73 Deering Street, Portland, Cumberland County, Maine, as more fully described in Schedule A appended hereto and incorporated herein (the "Premises").

IN WITNESS WHEREOF, **The Opportunity Alliance** has caused this instrument to be executed and delivered in its corporation name by Michael J. Tarpinian, its President thereunto duly authorized this 25th day of October, 2016.

The Opportunity Alliance

By: _____
Michael J.Tarpinian
Its President

State of Maine
Cumberland, ss

October 25, 2016

Then personally appeared the above-named Michael J. Tarpinian, President of The Opportunity Alliance, and acknowledged the foregoing instrument to be his free act and deed in such capacity, and the free act and deed of The Opportunity Alliance.

Before me,

_____
Notary Public/Attorney at Law

Gary D. Vogel
Print name

SCHEDULE A
to
Quitclaim Deed with Covenant
The Opportunity Alliance to Avesta Housing Development Corporation

A certain lot or parcel of land, with the buildings thereon, situated in Portland, Cumberland County, Maine, and bounded and described as follows:

Beginning at the intersection of the easterly sideline of Mellen Street and the southerly sideline of Cumberland Avenue; thence easterly along the southerly sideline of Cumberland Avenue three hundred twenty (320) feet and eight (8) inches to land now or formerly of Donald L. Donnelly, Jr., et al.; thence southerly by said Donnelly land twenty-four (24) inches to a point; thence westerly at right angles to the last course of eight (8) inches to a point; thence southerly ninety-six and eight tenths (96.8) feet, more or less, to land formerly of one Harris; thence westerly by land formerly of Harris forty-five (45) feet to a point; thence southerly one and two tenths (1.2) feet to a point; thence westerly twenty-five and eight tenths (25.8) feet to a point, which point is one hundred (100) feet southerly from Cumberland Avenue; thence southerly three and forty-six hundredths (3.46) feet to land formerly of Marion D. Noyes; thence westerly by said Noyes land forty (40) feet to a corner thereof; thence southerly by said Noyes land one hundred twenty-four (124) feet to the northerly sideline of Deering Street; thence westerly by the northerly sideline of Deering Street, one hundred ninety-four (194) feet, more or less, to the easterly sideline of Mellen Street; thence northerly by the easterly sideline of Mellen Street to the southerly sideline of Cumberland Avenue and the point of beginning.

Also hereby conveying the right to enter on land of Donald L. Donnelly, Jr., et al. for the maintenance of a pilaster as set forth in Deed to Lloyd H. Holmes, et al. dated October 15, 1976, recorded in Book 3926, Page 199.

Together with an easement for the construction, maintenance, repair, replacement and use of a fire emergency exit and all purposes related thereto, but no other purposes, described in Easement Deed from Peter L. Adams et ux. to People's Regional Opportunity Program dated April 28, 1992, recorded in Book 10064, Page 216.

The premises is conveyed subject to all encumbrances of record, which Grantee by its acceptance of this deed agrees to satisfy, other than with respect to the obligations, set forth in an Agreement between the City of Portland and People's Regional Opportunity Program dated May 13, 1993, recorded in Book 10693, Page 290 which shall remain the obligation of Grantor to the extent, if any, not satisfied.

For Grantor's title see Deed dated May 13, 1992, from Fleet Bank of Maine to Peoples Regional Opportunity Program, recorded with Cumberland County Registry of Deeds in Book 10064, Page 213. As reflected in the records of the Maine Secretary of State, The Opportunity Alliance was formerly known as Peoples Regional Opportunity Program.

Received
Recorded Register of Deeds
Oct 26,2016 09:55:26A
Cumberland County
Nancy A. Lane

Att. E

Neighborhood Meeting

August 2, 2017

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for the construction of two (2) apartment buildings with 82 units at 510 Cumberland Avenue.

Meeting Location: 510 Cumberland Avenue (Community Room)
Meeting Date: August 17, 2017 (Thursday)
Meeting Time: 6:00pm

The purpose of this meeting is to introduce the project to our neighbors as part of the City approval process.

If you have any questions, please call Thomas S. Greer, P.E., Pinkham & Greer, Civil Engineers at 207-781-5242 or email him at tgreer@pinkhamandgreer.com.

PARKING INFORMATION

	82 UNITS
EXISTING VEHICLE SPACES:	58
CONVENTIONAL VEHICLE SPACES REQUIRED:	
FIRST 3 UNITS:	0
REMAINING UNITS, 1 PER UNIT:	79
SHARED CAR BONUS:	-8 ①
TOTAL VEHICLE SPACES REQUIRED:	71
VEHICLE SPACES PROVIDED:	
9'x18' STANDARD SPACES:	39
9'x18' CAR SHARE SPACE:	1 ①
8'x18' COMPACT SPACES:	14
8'x18' HANDICAP ACCESSIBLE SPACES:	0
TOTAL VEHICLE SPACES PROVIDED:	64

① AVESTA IS COMMITTED TO PROVIDING ONE SHARE CAR FOR USE BY THE RESIDENTS OF THIS PROJECT.

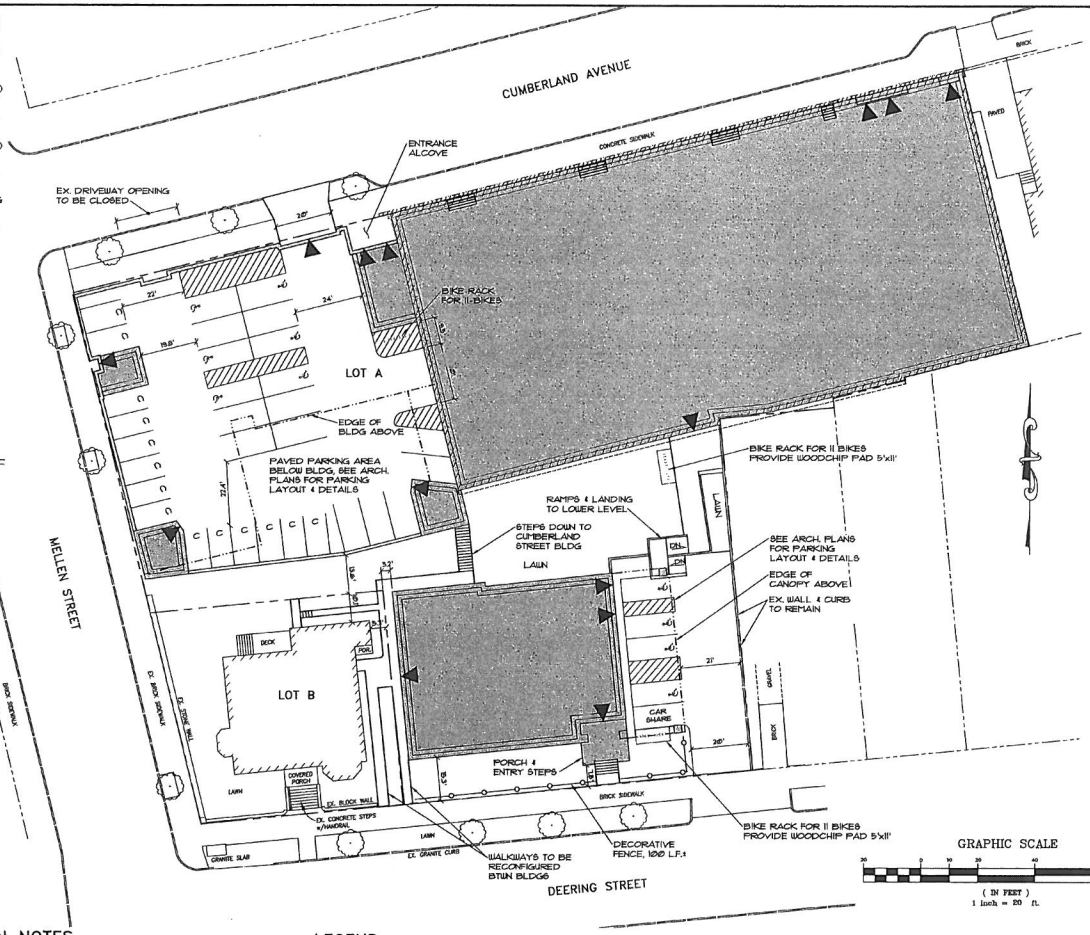
BIKE SPACES REQUIRED:
2 BIKE SPACES PER
5 DWELLING UNITS (82/25) 33
PROVIDED: 3 RACKS OF 11 BIKES = 33 BIKES

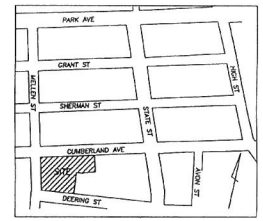
IMPERVIOUS INFORMATION

	LOT A	LOT B
EXISTING IMPERVIOUS	40,945 SQ. FT.	3,118 SQ. FT.
PROPOSED IMPERVIOUS	41,885 SQ. FT.	3,113 SQ. FT.
NET IMPERVIOUS	+940 SQ. FT.	+5 SQ. FT.

PROJECT DRAWINGS

C1.1 SUBDIVISION RECORDING PLAT, SHEET 1 of 2
C1.2 SUBDIVISION RECORDING PLAT, SHEET 2 of 2
C2.1 SITE PLAN
1 BOUNDARY PLAN





LOCATION PLAN

SCALE: 1"=250'±

GENERAL NOTES

1. OWNER/DEVELOPER: AVESTA HOUSING DEVELOPMENT CORP., 307 CUMBERLAND AVENUE, PORTLAND MAINE 04101, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 33552, PAGE 280, RECORDED DATE 10/26/16.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVENUE, PORTLAND, MAINE 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC AND BOUNDARY INFORMATION PROVIDED BY OWEN HASKELL, INC. 390 US ROUTE ONE, FALMOUTH, MAINE.
5. ZONE: R-6, RESIDENTIAL, PROPOSED USE: MULTIFAMILY DWELLING
6. TAX MAP REFERENCE: MAP 41 / BLOCK B / LOTS 1, 2, 3 & 29.
7. TOTAL PARCEL = 1.225 acres
8. WAIVERS: NONE REQUESTED AT THIS TIME.
9. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 811 OR 1-888-DIG-SAFE.
10. UNITS TO BE SERVICED BY: EXISTING PUBLIC WATER, SEWER, AND GAS FROM CUMBERLAND, MELLEN OR DEERING STREETS. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
11. POWER, TELEPHONE AND CABLE SERVICES ARE TO BE UNDERGROUND FROM CUMBERLAND, MELLEN OR DEERING STREETS. THESE SERVICES ARE SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
12. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. THE SUBJECT PARCEL KNOWN AS 510 CUMBERLAND AVENUE IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
14. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR DEERING PLACE SITE PLAN.
15. FLOODPLAIN: THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0014 B, EFFECTIVE DATE JULY 17, 1986. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
16. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON SHEET C1.2 UNDER SNOW CLEARANCE NOTES.
17. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION. ANY MONUMENTATION DAMAGED BY CONSTRUCTION IS TO BE REPLACED.
18. ALL CONSTRUCTION AND SITE ALTERATIONS SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION, MARCH 2003.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

CITY OF PORTLAND SITE PLAN NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN, APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EASEMENT
- EDGE OF PAVEMENT
- BUILDING
- EDGE OF GRAVEL
- CURB
- DECIDUOUS TREE
- CONIFEROUS TREE

PROPOSED

- LOT LINE
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- GRADE BREAKS AT SIDEWALK
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING EDGE OVERHEAD
- HANDICAP PARKING
- DECORATIVE FENCE
- BUILDING HATCH
- BIKE RACK
- RETAINING WALL

WAIVERS REQUESTED

1. LANDSCAPE OPEN SPACE RATION FOR LOT A. THE TOTAL SUBDIVISION COMPLIES.
2. FRONT, REAR AND SIDE SETBACKS OF 5, 10 & 10 FEET FOR THE EXISTING BUILDING. THE EXISTING BUILDING TO BE RENOVATED HAS SETBACKS OF 0 FEET.
3. WAIVER FOR REQUIRED PARKING SPACES FROM 71 SPACES TO 64 SPACES.
4. REDUCTION OF DRIVE AISLE FROM 24 FEET TO 19.8 FEET.

ZONE INFORMATION

ZONE: R-6, RESIDENTIAL
PERMITTED USE: MULTI-FAMILY DWELLING

SPACE STANDARDS	REQUIRED	EXISTING	LOT A	LOT B	TOTAL SUBDIVISION
MINIMUM LOT SIZE	2,000 SQ. FT.	53,368 SQ. FT.	47,620 SQ. FT.	5,748 SQ. FT.	5,748 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	3,336 SQ. FT.	581 SQ. FT. ①	1,916 SQ. FT.	581 SQ. FT.
MINIMUM STREET FRONTAGE	20 FEET	198.8 FEET	115.5 FEET	70.8 FEET	70.8 FEET
MINIMUM FRONT YARD	5 FEET	0 FEET	0 FEET	10.6 FEET	0 FEET
MINIMUM REAR YARD	10 FEET	0.2 FEET	0.2 FEET	10.2 FEET	0.2 FEET
MINIMUM SIDE YARD	10 FEET	0 FEET	0 FEET	5.1 FEET	0 FEET
MAXIMUM LOT COVERAGE (BUILDINGS)	60%	43%	56%	39%	56%
MINIMUM LOT WIDTH	20 FEET	198.8 FEET	115 FEET	70.8 FEET	70.8 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	43 & 36 FEET	35, 43 & 46 FEET	43 FEET	46 FEET
LANDSCAPE OPEN SPACE RATIO	20%	17%	12%	55%	55%

① LOT A AREA: 47,620 S.F.
MIN. AREA PER DWELLING UNIT: ÷ 725 S.F.
UNITS ALLOWED: 65.7 UNITS
DENSITY BONUS OF 25% × 1.25 BONUS
(FOR AFFORDABLE UNITS, SECTION 14-488.)
UNITS ALLOWED: 82 UNITS

PINKHAM & GREER CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME 04103
TEL. 207.797.1242 FAX. 207.797.4243

STATE OF MAINE THOMAS S. GREER No. 4206 PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION

AVESTA HOUSING DEVELOPMENT CORP.
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: MAY 31, 2017
PROJECT: 15108
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

DEERING PLACE
61 DEERING ST. & 510 CUMBERLAND AVE.
PORTLAND, MAINE

SITE PLAN

C2.1

MAPLOT 47/B/1, 2, 3 & 29

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division

Date: June 1, 2017

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

Site Address: 510 Cumberland Avenue / 61 Deering Street

Chart Block Lot Number: 47/B/1, 2, 3 & 29

Proposed Use: Residential
Previous Use: Residential
Existing Sanitary Flows: 936 GPD
Existing Process Flows: 5,906 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.
Cumberland Avenue & Deering Street

Site Category		
	Commercial *(see part 4 below)*	
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	X
	Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8699
Owner/Developer Name: Avesta Housing
Owner/Developer Address: 307 Cumberland Avenue, Portland, ME 04101
Phone: 207-245-3370 Fax: E-mail: MPeters@avestahousing.org
Engineering Consultant Name: Thomas S. Greer, P.E. Pinkham & Greer Civil Engineers
Engineering Consultant Address: 28 Vannah Avenue, Portland, ME 04103
Phone: 207-781-5242 Fax: 207-781-4245 E-mail: tgreer@pinkhamandgreer.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: 82x1.2x60 per person, per day = 5,906 GPD
Peaking Factor/ Peak Times: am & pm domestic peak times
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine," __ "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, Other (specify)* 60 gallons per day per person

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: n/a

Retention Time: n/a

Peaking Factor/ Peak Times: n/a

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.

Att. G

PINKHAM & GREER
CIVIL ENGINEERS

28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

Neighborhood Meeting Certification

I, Thomas S. Greer hereby certify that a neighborhood meeting was held on August 17, 2017 at 510 Cumberland Avenue, in Portland at 6:00PM concerning the 510 Congress Street Apartments.

I also certify that on August 2, 2017, invitations were mailed to all addresses on the mailing list provided by the Planning Division, including property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change and the residents on the "interested parties" list.

Signed,

Thomas S. Greer _____ 8/30/17 (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

Att. H

NEIGHBORHOOD MEETING ATTENDEE LIST
510 Cumberland Avenue
August 17, 2017

Name & Address	Name & Address
Thomas S. Greer Pinkham & Greer Civil Engineers 28 Vannah Avenue Portland, ME 04103	
TONY HOLT & DEB COOK	35 DEERING ST.
PAUL YOUNG 477 CUMBERLAND AVE 04101	
Rebecca Hatfield	Avesta
Travis Heynen, Avesta	
Catherine Elliott Avesta	
Kate Cordaro Avesta	
Pat ODonnell	442 Cumberland Ave #2
JOAN GRANT	442 Cumberland #4
Bettyduggan	420 Danforth St duggan.betty@gmail.com SHSD parishioner

Name	Address
Evan Howard	146 Sherman St.
Adam Smith	450 Cumberland Ave
Laurel McClead	51 Deering St.
Tom Walsh	519 Cumberland
Meagan L Lauer	288 State St, #1
Emma Hodes	78 Mellen
Jake Lory	78 Mellen
Michael Patterson	66 DEERING ST
Keri Lord klord@maine.rr.com	58 Deering St
HENRY SHANOSKI	64 DEERING ST
JOE TACKA	49 Deering St
MATTHEW CALLAHAN	57 grant St
STEVEN WOITASEK	
Andrea Zimble	46 Deering St.

NEIGHBORHOOD MEETING ATTENDEE LIST
510 Cumberland Avenue
August 17, 2017

	ADDRESS
CAROL + STEVE LEASE	
Marilyn MacDonald	
CHRIS SHEA	78 Mellen St.
Maryann Shea	78 Mellen St.
Ray Rier	71 Smith St South Portland, ME 04106
Richard Glodeau Scott Chapotteau	492 Cumberland Ave. Portland ME 04101
Julie Mattei-Benn Leon Benn	494 Cumberland Ave Portland ME 04101
Janet Stebbins	501 Cumberland Ave #1 Portland, ME 04101
Wendy Cherubini	33 May Street Ptld 04102
Jeanne Orlando	235 Brackett #5 Portland 04102

510 Cumberland Avenue, Portland
August 17, 2017

SUMMARY OF PUBLIC INFORMATIONAL MEETING

The meeting started at 6:00 on August 9th. About 50 people attended. Dana Totman started the meeting with an overview of Avesta noted how Avesta came to own the property and its mission. Matt Peters described the project with the housings mix and how residents qualify for housing. Tom Greer went over the site aspects of the project and David Lloyd went over the architecture.

The public had multiple comments on the project and as expected most were concerning parking. It was noted multiple times that parking in the neighborhood is difficult.

There were a couple of people who go to the nearby church. They use the parking on the Deering side of the property. The loss of that parking would make it difficult.

There were several questions concerning the architecture. One was on the size of the Deering Street building and noted it is larger than anything else on the street. Several noted that the number of units is too many for the neighborhood.

It was noted this is the first public meeting. The Planning Board will hold a couple of meetings and the Historic Board will also hold meetings on the design aspects.

A City Counselor was present and noted the comments raised by the group.

The meeting ended at 7:45.

Respectfully Submitted

Thomas S. Greer P.E.

File: 17127

PC1

Google Groups

Concerns about 510 Cumberland Ave

Richard Bilodeau <bilodeaurj@hotmail.com> Aug 4, 2017 9:51 AM
Posted in group: **Planning Board**

To Whom It May Concern,

My name is Richard Bilodeau and I reside at 492 Cumberland Ave (the property located next to 510 Cumberland Ave). I am deeply concerned about the proposal to add on to the existing structure to create an apartment complex on the corner of Cumberland and Mellen. Here are my concerns:

1) This is a historic district. As an individual home owner I cannot change the color of my house or my windows without being sure that I comply with the standards of the historic society. These standards exist for a reason. I have reviewed the tax photos at city hall in the past to better understand these standards. I can assure you the building you are proposing will not comply!

2) The additional units you are proposing will more than double the number of people living in this single neighborhood block (between Mellen and State). This means a lot more foot traffic and more cars. When I decided to buy a house in Portland the "environment" of the neighborhood that I choose was important in my decision making. For example, I avoided buying on Congress Street or in the Old Port. The building you are proposing has the potential to transform the neighborhood into a mini-Congress Street in terms of noise and this seems unfair to the residents who currently live here.

3) Another reason I chose my house, the backyard. Currently I have a pleasant view of trees as I look towards the direction of Mellen St. After you build, I will be looking at your building.

4) This project could have an adverse effect on my property values. It will take away the "suburby" neighborhood feel the street currently has and potentially make it feel like a busy city street. A selling point for us when we purchased this house is we were living in the city without feeling like we were living in the city.

I fully understand the need to develop more affordable housing options in Portland. But I do understand the need to totally transform the neighborhood that I live in by building a four story addition onto the existing structure at 510 Cumberland Ave. It will forever change the neighborhood, and not for the better.

I believe the plan you are proposing in unfair to the residence of Cumberland Ave and I would urge you to reconsider the size of the project you are planning.

Sincerely,

Richard Bilodeau

492 Cumberland Ave

Portland Maine 04101

(207) 774-2793

PC2

Google Groups

Re: 510 Cumberland Avenue Project

Steven Fender <steven.fender@yahoo.com> Aug 31, 2017 2:48 PM

Posted in group: **Planning Board**

Hello, John Olson and I own Unit #3, at 14 Mellen Street, Portland, Maine, 04101. Our unit is within 500 feet of the proposed Avesta Development Corporation project at 510 Cumberland Avenue and the adjoining lots.

We are very concerned about this proposed development. We have lived here since 2012 and these blocks around us have becoming increasing more dense in population in the last 5 years. It has become very difficult to find any street parking in the blocks surrounding this area at any time of the day or night. The blocks are filled with pedestrians at all times of the day and night and it is already loud. The City has approved the conversion of the empty funeral home behind us into a luxury hotel, together with the construction of 7 condo units in the currently vacant parking lot behind us. The house across the street at 11 Mellen Street now has 4 units that are being sold as condominiums. The house next to it has been recently sold and is being turned into a multi-unit use. The house at 10 Mellen has just sold with a family moving in. The addition of an 82-unit multiresidential structure would bring at least 82 new people, not including their family members, into this area which is already bursting at the seams and make it even more congested. Two blocks off Congress in a residential neighborhood with three story structures, most of which have already been turned into multi-unit dwellings, is no place for an 82-unit structure and would make this section of town chaos and destroy its quaint historic nature. This area is already overcrowded, not even taking into account the terrible parking problem this proposed project would significantly compound.

The addition of 59 parking spaces does not remedy the addition of 82 more units. And building a multi-story garage is wholly inconsistent with this neighborhood. This is a residential area and while many of the large homes have been converted to multi-unit dwellings, these large homes remain intact on the outside and preserve the architectural integrity of the neighborhood. We tried to add a railing on the elevated rear roof on our building that was not visible to the street and the City turned us down flat as being inconsistent with the neighborhood. But a multi-story parking garage isn't far worse? The need to build a multi-story parking garage as bait to allow this development unscores the problem with building this proposed development.

The Deering Historical District, in which this project would be located, consists almost entirely of three story buildings, mostly brick, and mostly constructed a century or more ago. Our home was built in 1881; most homes in the neighborhood are of similar vintage and are, collectively, historically significant. Most of the homes in the neighborhood have been substantially renovated in the last 5-10 years. For example, Deering Street -- which this project abuts -- is with singular exception among the best kept, late 19th century streets in the City. The proposed development is an architectural abomination which is completely inconsistent with the neighborhood and mocks the entire concept of a historical district. The proposed development is both ugly as sin and completely inapprpropriate for this area.

We rode home on CBL last night from Peaks Island and were reminded again of how the huge yellow brick condo tower on Munjoy Hill sticks out like a sore thumb and significantly detracts from the architectural beauty of the Eastern Prom. The City planning officials who approved that construction should be ashamed of themselves; they were surely wrong. The proposed development at 510 Cumberland Street would similarly blot our neighborhood. Please don't inflict that upon us.

Thank you for your consideration.
Steven Fender

Sent from Yahoo Mail for iPad

PC3

Google Groups

proposal at 510 Cumberland

Christopher Ring <untermarmot@yahoo.com> Sep 6, 2017 2:07 PM
Posted in group: **Planning Board**

Christopher Ring, Owner
CPR at 60 Mellen, LLC
41 Boban Street
York, ME 03909
207-475-5195

September 6, 2017

Re: Avesta Housing proposal / 510 Cumberland Avenue

To The Planning Board,

I am writing to express my concerns regarding the proposal for the 42 residential addition to 510 Cumberland Street by Avesta Housing. I am (through my LLC) the owner of 60 Mellen Street in Portland. I also own 477 Cumberland Avenue; though I did not receive a formal notice of proposal at this address, 477 Cumberland is situated on the same block as 510 Cumberland and likely to be impacted just as much.

First, I would like to note that I believe all building owners on the same block as 510 Cumberland Avenue should have received the notice I received for my building at 60 Mellen Street. Though some of these buildings may be situated beyond the 500 foot circumference, they will be equally impacted by such an addition, none the less.

Secondly, I do not believe the proposal is a sensible proposal for this neighborhood. This is a residential neighborhood with a historic character. The plans for 510 are not only out of sync with the existing feel of the area, they call into question existing restrictions on other building owners. Upon purchasing my building I desired to replace its windows using replacement windows. These windows would have improved the life of the building, the efficiency of the building and would have (by giving just incentive to remove the existing storm windows) provided a more historic appearance. However, due to the narrow scope of what the historic committee deems acceptable, my plans were denied. So, this all begs the question: how could a proposal such as the one at 510 Cumberland even be considered when a simple matter of installing better windows was denied to me. The other options proposed by the historic committee were entirely unaffordable. As a building owner, I expect equity in how properties are treated throughout the city. Approving this addition would, in my opinion, be proof of a great equity.

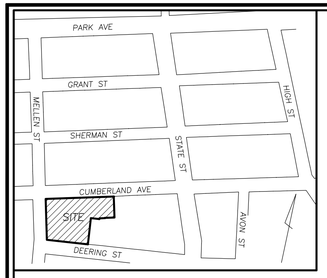
Third, and perhaps most importantly. As is, there is sufficient parking for 10 cars on this block of Cumberland, two of those spaces being designated for handicapped drivers. Lack of parking is already a problem in this neighborhood. The proposed amount of parking is extremely insufficient. There are 59 parking spaces proposed for a building of 55 apartments (on Cumberland Street alone) and another 27 residential units on Deering Street, with 1, 2 and 3 bedroom apartments. That is 18 fewer parking spaces then actual units. That shortage fails to account for the amount of units with multiple residents. Couples with one car each may occupy 1 bedroom units. Two and three bedroom units may have occupants with up to three cars. Permitting this plan, as proposed, is courting serious problems for the neighborhood.

Will people desire living in this neighborhood when parking is such an issue? Will such issues negatively impact the value of my investment; an investment I made so I can send my children to college.

Clearly, this proposal has been created on a maxim of deriving as much income as possible out of limited space. Approval of this project will have a very negative impact on the integrity of the neighborhood. I will stand against this project until a more reasonable proposal is offered – a proposal that properly accounts for parking needs and the integrity of the neighborhood.

Sincerely,

Christopher Ring

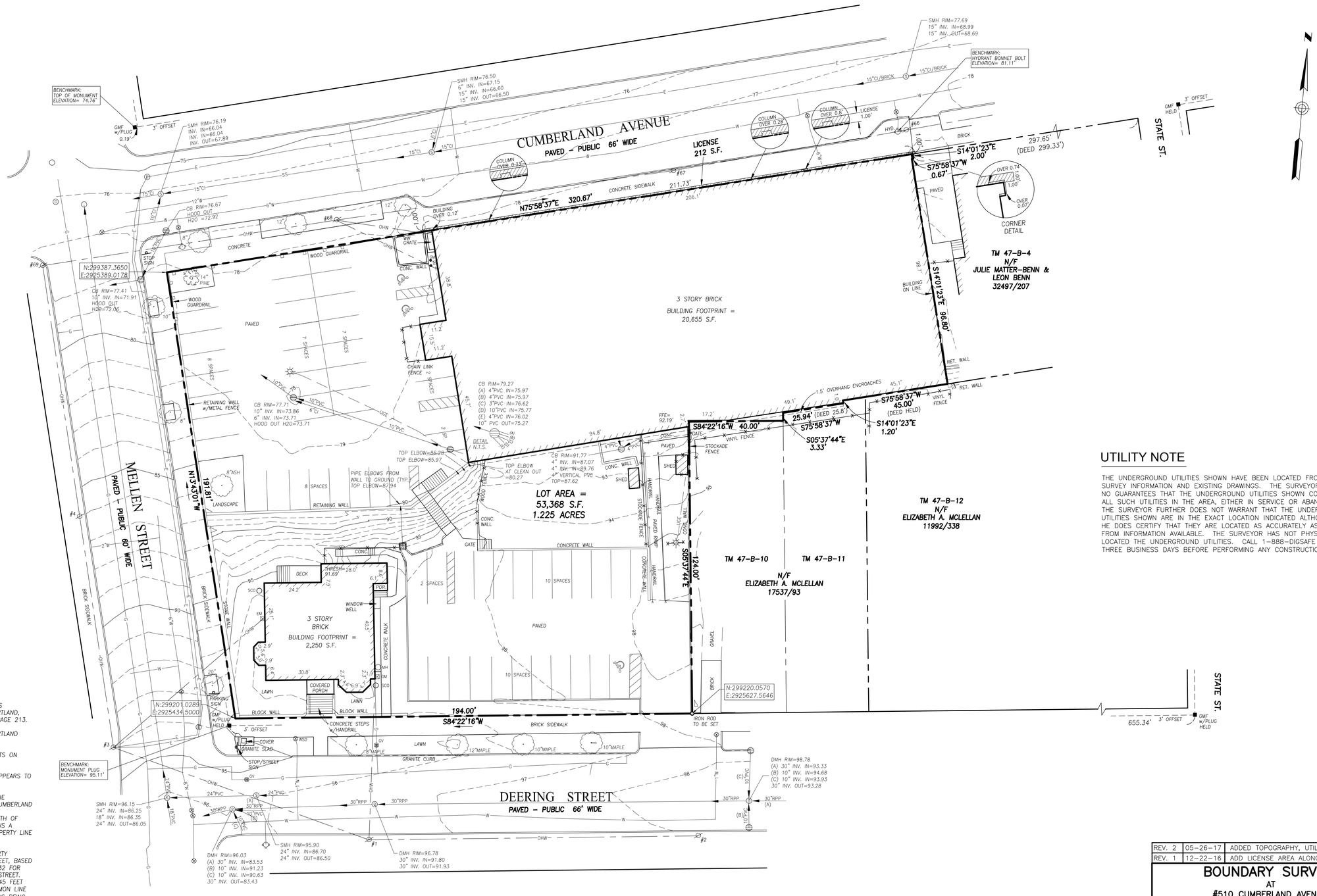


LOCATION MAP

N.T.S.

LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- GAS VALVE
- UTILITY POLE
- MANHOLE
- SIGN
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- LIGHT POLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- FENCE
- CURB
- OHW — OVERHEAD WIRES
- E — UNDERGROUND ELECTRIC
- W — WATER LINE
- G — GAS LINE
- SS — SANITARY SEWER
- SD — STORM DRAIN
- 90 — 1' CONTOUR
- CONC. — CONCRETE
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK AND PAGE



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.

GENERAL NOTES

1. OWNER OF RECORD: THE OPPORTUNITY ALLIANCE F/K/A PEOPLE'S REGIONAL OPPORTUNITY PROGRAM, 510 CUMBERLAND AVENUE, PORTLAND, MAINE; CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 10064, PAGE 213.
2. LOCUS IS SHOWN AS LOTS 1, 2, 3, AND 29 IN BLOCK B ON PORTLAND PROPERTY MAP 47.
3. BEARINGS ARE CITY COORDINATES PROVIDED ON STREET MONUMENTS ON PLAN REFERENCE 5, WHICH IS GRID NORTH.
4. SPACE BETWEEN BUILDING AND FENCE ON LAND OF MCLELLAN APPEARS TO BE USED BY SUBJECT PROPERTY.
5. THE 1883 DEED IN BOOK 495, PAGE 84 FOR THE PORTION OF THE PREMISES WEST OF BENN IS FOR A LOT 100 FEET DEEP FROM CUMBERLAND STREET. THE DEEDS FOR MCLELLAN ARE FOR THAT SAME LINE. SUBSEQUENT DEEDS, STARTING IN 1922, HAVE CALLED FOR A DEPTH OF 98.8 FEET, POSSIBLY BASED ON PLAN REFERENCE 2, WHICH SHOWS A BUILDING LINE 98.8 FEET FROM CUMBERLAND AVENUE AND A PROPERTY LINE OF 100 FEET.
6. THE 1905 DEED IN BOOK 780, PAGE 239 FOR THE BENN PROPERTY DEFINES THE COMMON LINE AS BEING 300 FEET FROM STATE STREET, BASED ON PLAN REFERENCE 4. THE 1874 DEED IN BOOK 433, PAGE 132 FOR THE LOCUS DEFINES THE EAST LINE AS 275 FEET FROM MELLEN STREET. THE 1883 DEED, MENTIONED ABOVE, CALLS FOR A FRONTAGE OF 45 FEET ON CUMBERLAND AVENUE. PLAN REFERENCE 1 SHOWS THIS COMMON LINE (WITH THE EXCEPTION OF THE LATER 2.00 BY 0.67 FOOT STRIP) AS BEING 320 FEET FROM MELLEN STREET, WITH A NOTE "298.37 TO STATE ST. BY MEASURE. PLAN CALLS FOR 300." THE EXISTING BUILDING WAS BUILT TO MATCH THE 320 FEET FROM MELLEN AND THE SMALL PARCEL FOR THE PILASTER, CONVEYED BY A BENN PREDECESSOR, MATCHES ALSO.
7. ELEVATIONS ARE BASED ON NGVD 1929 – CITY DATUM.

GRAPHIC SCALE

0 10' 20' 40' 80'

PLAN REFERENCES

1. "SURVEYED FOR B.F. HARRIS SURVEYED FEB. 1883" IN FILES OF H.I. & E.C. JORDAN – SURVEYORS AND UNDATED UNTITLED MORE RECENT WORKING PLAN OF SAME.
2. "E.C.JORDAN & CO. CIVIL ENGINEERS OCT. 16, 1922" PLAN OF LAND OF HANNAH M. DOOLEY ON DEERING ST. AND ELVIRA LORELLO ON CUMBERLAND ST.
3. "BOUNDARY SURVEY AT 51 DEERING STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD SETH & LAUREL MCCLEAD AUGUST 21, 2014 OWEN HASKELL, INC. JOB NO. 2014-071P"
4. PLAN OF DIVISION BETWEEN DEERING AND PREBLE ESTATES RECORDED IN PLAN BOOK 3, PAGE 37 (TITLE LARGELY UNREADABLE)
5. CITY OF PORTLAND ENGINEERING DEPARTMENT WORKING PLAN PROVIDED OF THIS BLOCK AND SURROUNDING ONES SHOWING EXISTING MONUMENTATION.

CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES TO:

FIRST AMERICAN TITLE INSURANCE COMPANY AND AVESTA HOUSING DEVELOPMENT CORPORATION

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.

DATE

JOHN C. SCHWANDA, PLS NO. 1252

REV. 2	05-26-17	ADDED TOPOGRAPHY, UTILITIES, INVERTS
REV. 1	12-22-16	ADD LICENSE AREA ALONG STREET

BOUNDARY SURVEY

AT

#510 CUMBERLAND AVENUE
A/K/A #498-500 CUMBERLAND AVENUE AND
#61-73 DEERING STREET
PORTLAND, MAINE
MADE FOR

AVESTA HOUSING

307 CUMBERLAND AVENUE, PORTLAND, MAINE

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

Drawn By JCS	Date	Job No.
Trace By JLW	SEPT. 28, 2016	2016-286P
Check By JCS	Scale	Drwg. No.
Book No. 1147	1" = 20'	1

PARKING INFORMATION

80 UNITS

EXISTING VEHICLE SPACES:	58
CONVENTIONAL, VEHICLE SPACES REQUIRED:	
FIRST 3 UNITS:	0
REMAINING UNITS, 1 PER UNIT:	77
SHARED CAR BONUS: - 8 SPACES, + 1 SPACE	-8①
	70
~~TOTAL VEHICLE SPACES REQUIRED:~~	
VEHICLE SPACES PROVIDED:	39
9'x18' STANDARD SPACES:	1①
9'x18' CAR SHARE SPACE:	14
8'x18' COMPACT SPACES:	10
~~8'x18' HANDICAP ACCESSIBLE SPACES:~~	
	64
TOTAL VEHICLE SPACES PROVIDED:	

① AVESTA IS COMMITTED TO PROVIDING ONE SHARE CAR FOR USE BY THE RESIDENTS OF THIS PROJECT.

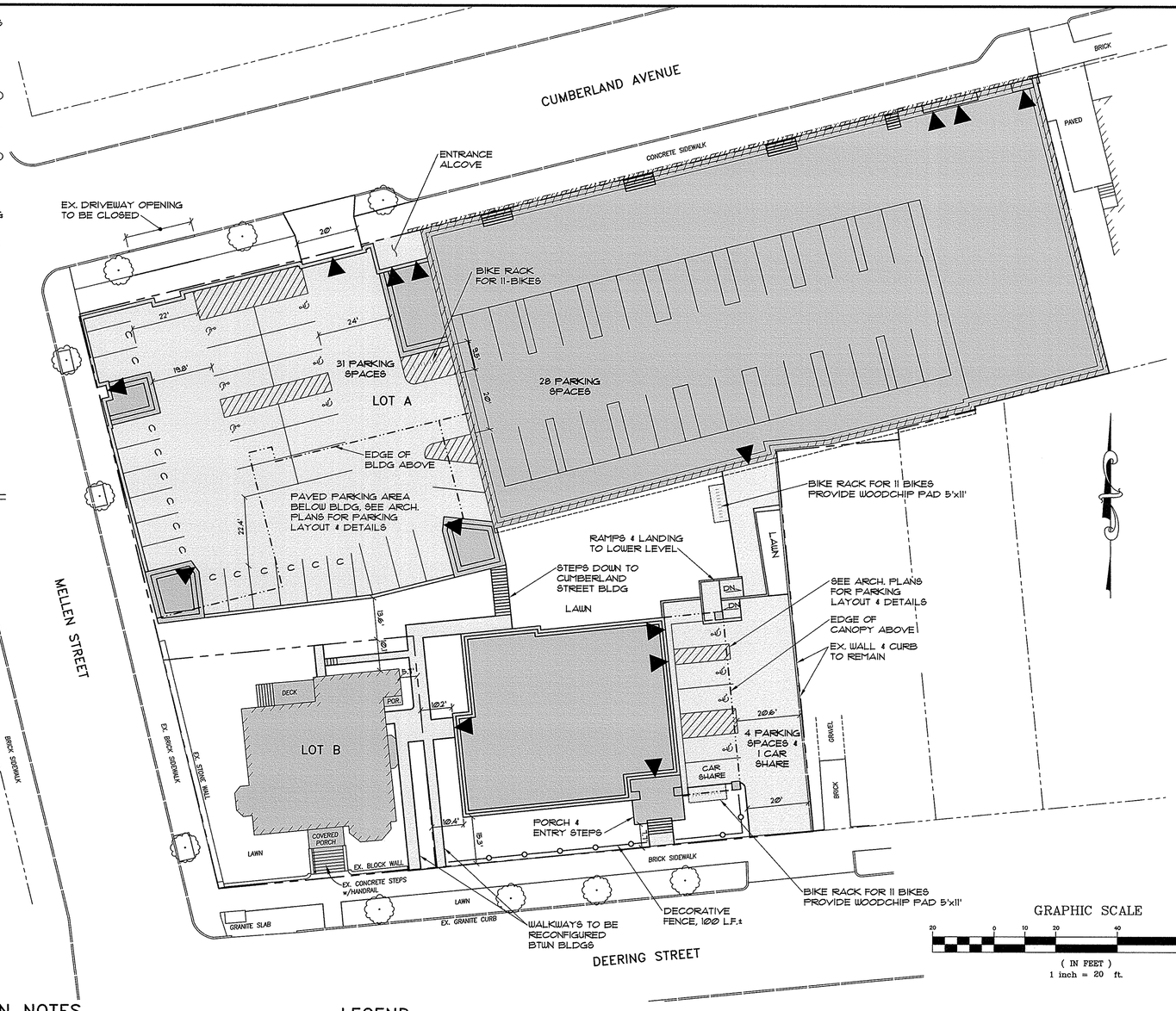
BIKE SPACES REQUIRED:
2 BIKE SPACES PER
5 DWELLING UNITS (82/2.5): 32
PROVIDED: 3 RACKS OF 11 BIKES = 33 BIKES

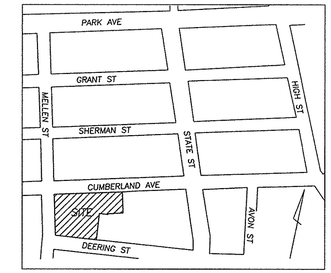
IMPERVIOUS INFORMATION

	LOT A	LOT B
EXISTING IMPERVIOUS	40,945 SQ. FT.	3,178 SQ. FT.
PROPOSED IMPERVIOUS	41,885 SQ. FT.	3,173 SQ. FT.
NET IMPERVIOUS	+ 940 SQ. FT.	+ 5 SQ. FT.

PROJECT DRAWINGS

C1.1	SUBDIVISION RECORDING PLAT, SHEET 1 of 2
C1.2	SUBDIVISION RECORDING PLAT, SHEET 2 of 2
C2.1	SITE PLAN
1	BOUNDARY PLAN





LOCATION PLAN

SCALE: 1"=250'±

GENERAL NOTES

1. OWNER/DEVELOPER: AVESTA HOUSING DEVELOPMENT CORP, 307 CUMBERLAND AVENUE, PORTLAND MAINE 04101. CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 33552, PAGE 280, RECORDED DATE 10/26/16.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVEUNE, PORTLAND, MAINE, 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC AND BOUNDARY INFORMATION PROVIDED BY OWEN HASKELL, INC. 390 US ROUTE ONE, FALMOUTH, MAINE.
5. ZONE: R-6, RESIDENTIAL, PROPOSED USE: MULTIFAMILY DWELLING
6. TAX MAP REFERENCE: MAP 47 / BLOCK B / LOTS 1, 2, 3 & 29.
7. TOTAL PARCEL = 1.225 acres
8. WAIVERS: NONE REQUESTED AT THIS TIME.
9. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 811 OR 1-888-DIG-SAFE.
10. UNITS TO BE SERVICED BY EXISTING PUBLIC WATER, SEWER, AND GAS FROM CUMBERLAND, MELLEN OR DEERING STREETS. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
11. POWER, TELEPHONE AND CABLE SERVICES ARE TO BE UNDERGROUND FROM CUMBERLAND, MELLEN OR DEERING STREETS. THESE SERVICES ARE SHOWN ON SHEET C2.3, GRADING AND UTILITIES PLAN.
12. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. THE SUBJECT PARCEL KNOWN AS 510 CUMBERLAND AVENUE IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
14. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR DEERING PLACE SITE PLAN.
15. FLOODPLAIN: THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0014 B, EFFECTIVE DATE JULY 17, 1986. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
16. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON SHEET C1.2 UNDER SNOW CLEARANCE NOTES.
17. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION. ANY MONUMENTATION DAMAGED BY CONSTRUCTION IS TO BE REPLACED.
18. ALL CONSTRUCTION AND SITE ALTERATIONS SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION, MARCH 2003.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

CITY OF PORTLAND SITE PLAN NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EASEMENT
- EDGE OF PAVEMENT
- BUILDING
- EDGE OF GRAVEL
- CURB
- DECIDUOUS TREE
- CONIFEROUS TREE

PROPOSED

- LOT LINE
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- GRADE BREAKS AT SIDEWALK
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING EDGE OVERHEAD
- HANDICAP PARKING
- DECORATIVE FENCE
- BUILDING HATCH
- BIKE RACK
- RETAINING WALL

WAIVERS REQUESTED

1. LANDSCAPE OPEN SPACE RATION FOR LOT A. THE TOTAL SUBDIVISION COMPLIES.
2. FRONT, REAR AND SIDE SETBACKS OF 5, 10 & 10 FEET FOR THE EXISTING BUILDING. THE EXISTING BUILDING TO BE RENOVATED HAS SETBACKS OF 0 FEET.
3. WAIVER FOR REQUIRED PARKING SPACES FROM 71 SPACES TO 64 SPACES.
4. REDUCTION OF DRIVE AISLE FROM 24 FEET TO 19.8 FEET.

ZONE INFORMATION

ZONE: R-6, RESIDENTIAL
PERMITTED USE: MULTI-FAMILY DWELLING

SPACE STANDARDS	REQUIRED	EXISTING	LOT A	LOT B	TOTAL SUBDIVISION
MINIMUM LOT SIZE	2,000 SQ. FT.	53,368 SQ. FT.	47,620 SQ. FT.	5,748 SQ. FT.	5,748 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	3,336 SQ. FT.	581 SQ. FT. ①	1,916 SQ. FT.	581 SQ. FT.
MINIMUM STREET FRONTAGE	20 FEET	191.8 FEET	115.5 FEET	70.8 FEET	70.8 FEET
MINIMUM FRONT YARD	5 FEET	0 FEET	0 FEET	10.6 FEET	0 FEET
MINIMUM REAR YARD	10 FEET	0.2 FEET	0.2 FEET	10.2 FEET	0.2 FEET
MINIMUM SIDE YARD	10 FEET	0 FEET	0 FEET	5.7 FEET	0 FEET
MAXIMUM LOT COVERAGE (BUILDINGS)	60%	43%	56%	39%	56%
MINIMUM LOT WIDTH	20 FEET	191.8 FEET	115 FEET	70.8 FEET	70.8 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	43 & 36 FEET	35, 43 & 46 FEET	43 FEET	46 FEET
LANDSCAPE OPEN SPACE RATIO	20%	17%	12%	55%	55%

① LOT A AREA:	47,620 SF.
MIN. AREA PER DWELLING UNIT:	÷ 725 SF.
UNITS ALLOWED:	65.7 UNITS
DENSITY BONUS OF 25% (FOR AFFORDABLE UNITS, SECTION 14-488.)	× 1.25 BONUS
UNITS ALLOWED:	82 UNITS

PINKHAM & GREER CIVIL ENGINEERS
28 VANNAH AVE, PORTLAND, ME. 04103
TEL: 207.781.3242 FAX: 207.781.4245

STATE OF MAINE THOMAS J. GREER No. 4206 LICENSED PROFESSIONAL ENGINEER

9/7/17

REV.	DATE	DESCRIPTION
1	9/7/17	REV'D BUILDING & FOOTPRINT, REV'D NUMBER OF UNITS

AVESTA HOUSING DEVELOPMENT CORP.
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: MAY 31, 2017
PROJECT: 17127
DRN BY: JDC
DESG BY: TSG
CHK BY: TJG

DEERING PLACE
61 DEERING ST. & 510 CUMBERLAND AVE.
PORTLAND, MAINE

SITE PLAN

C2.1

MAP/LOT 47/B/1, 2, 3 & 29

BUILDING A TOTALS
EXISTING UNITS -
13 - THREE BEDROOM UNITS
NEW UNITS -
7 - EFFICIENCY UNITS
25 - ONE BEDROOM UNITS
8 - TWO BEDROOM UNITS
53 TOTAL UNITS

59 TOTAL PARKING SPACES
34,870 SF - TOTAL NEW CONSTRUCTION
(INCL NEW UNITS & COMM RM.
IN EXIST BLDG)

BUILDING B TOTALS

8 - EFFICIENCY UNITS
15 - 1 BEDROOM UNITS
4 - 2 BEDROOM UNITS
27 UNITS TOTAL

5 PARKING SPACES
21,160 SF NEW CONSTRUCTION

PROJECT TOTALS

13 - 3 BEDROOM UNITS
12 - 2 BEDROOM UNITS
40 - 1 BEDROOM UNITS
15- EFFICIENCY UNITS
80 UNITS TOTAL

64 PARKING SPACES
56,030 SF -TOTAL NEW CONSTRUCTION
(INCL NEW UNITS & COMM RM.
IN EXIST BLDG A)

ACCESSIBILITY CALCULATIONS

MAINE STATE HOUSING AUTHORITY
MAINE HOUSING QUALITY STANDARDS AND PROCEDURES MANUAL 2016 EDITION.

UNIT COUNT FOR ACCESSIBILITY CALCULATIONS
39 FIRST FLOOR UNITS (INCLUDING 9 EXIST DOUBLE STORY TOWNHOUSES WITH NO ACCESSIBLE ROUTE THROUGH TOWNHOUSES AND 7 NEW UNITS RAISED WITH STAIRS ABOVE CUMBERLAND AVENUE FOR SECURITY AND PRIVACY IN EXIST BUILDING A)
43 UNITS ON ACCESSIBLE UPPER FLOORS
82 UNITS TOTAL

STATE OF MAINE HUMAN RIGHTS ACT
REQUIRES 10% OF GROUND FLOOR AND 10% OF TOTAL UPPER LEVEL UNITS, IF ACCESSIBLE BY ELEVATOR, TO BE ACCESSIBLE PER ANSI 117.1. TYPE A.
GROUND FLOOR = 39 UNITS. 10% OF 39 = 4 UNITS
UPPER LEVEL UNITS (ON ACCESSIBLE ROUTE) = 43. 10% OF 43 = 5 UNITS

TOTAL ACCESSIBLE UNITS REQUIRED = 9 UNITS

UFAS FEDERAL FAIR HOUSING ACT SECTION 504 UNDER THE PROVISIONS OF THE HUD DEEMING NOTICE UFAS WILL NOT BE THE STANDARD USED ON THIS PROJECT. THIS PROJECT WILL CONFORM TO THE REQUIREMENTS OF ADAAG.

ADAAG AMERICAN WITH DISABILITIES ACT 2010 REQUIRES 5% OF TOTAL UNITS TO BE MOBILITY ACCESSIBLE AND 2% OF TOTAL UNITS TO BE FOR THE HEARING AND VISION IMPAIRED. ROUNDING THE NUMBERS UP THIS EQUALS 5 MOBILITY ACCESSIBLE UNITS AND 2 HEARING AND VISUAL IMPAIRED ACCESSIBLE UNITS.

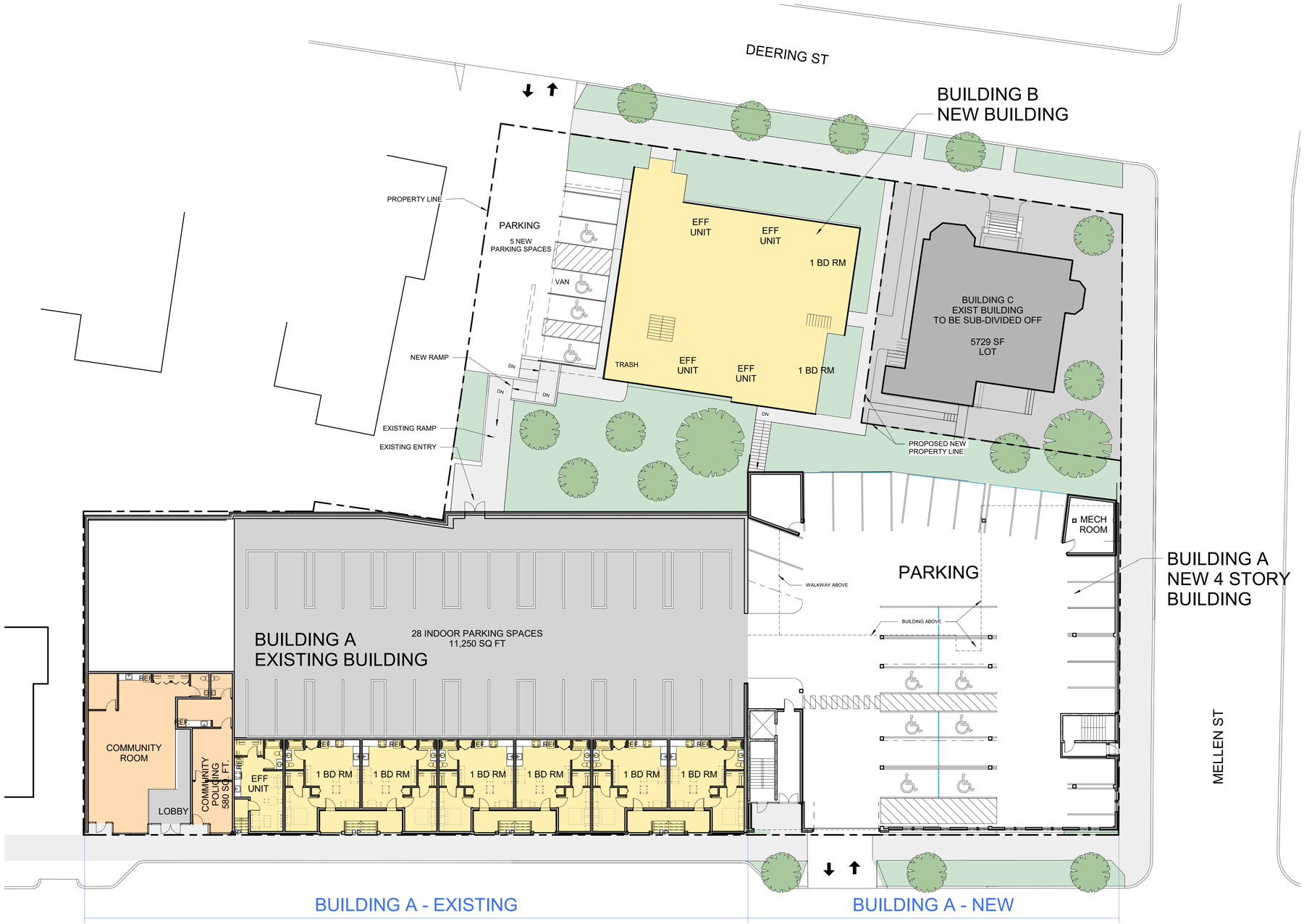
REQUIRED UNITS A TOTAL OF 9 MOBILITY ACCESSIBLE UNITS MUST BE PROVIDED OF WHICH 5 UNITS MUST MEET THE REQUIREMENTS OF BOTH ADAAG AND ANSI 117.1 TYPE A.
A TOTAL OF 2 AUDIO/VISUAL ACCESSIBLE UNIT MUST BE PROVIDED

PLEDGED UNITS 1 ADDITIONAL UNIT IS PLEDGED UNITS FOR A TOTAL OF 10 MOBILITY ACCESSIBLE UNITS.

UNITS PROVIDED:
10 MOBILITY ACCESSIBLE UNITS OF WHICH 5 COMPLY WITH ANSI 117.1 TYPE 'A' UNITS AND OF WHICH 5 COMPLY WITH BOTH ADAAG AND ANSI 117.1 TYPE A.

2 HEARING AND VISUAL IMPAIRED ACCESSIBLE UNIT THAT COMPLIES WITH THE REQUIREMENTS OF ADAAG.

BEYOND THE 10 MOBILITY ACCESSIBLE UNITS, IN ORDER TO MEET THE REQUIREMENTS OF THE MAINE HUMAN RIGHTS ACT, THE REMAINING UNITS, NOT INCLUDING THE 9 DOUBLE STORY TOWNHOUSES WITH INACCESSIBLE UPPER LEVELS AND THE 7 UNITS RAISED WITH STAIRS ABOVE CUMBERLAND AVENUE, WILL COMPLY WITH ANSI 117.A-2003 TYPE 'B' UNITS. THERE WILL BE 56 ANSI 117.A-2003 TYPE 'B' UNITS.



1 SITE PLAN
1/16" = 1'-0"
0 5'-0" 10'-0" 20'-0" 40'-0"

Prepared For:
AVESTA HOUSING

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022ARCHETYPE@ARCHETYPEPA.COM

Project:
510 CUMBERLAND AVENUE HOUSING
Portland, ME 04101

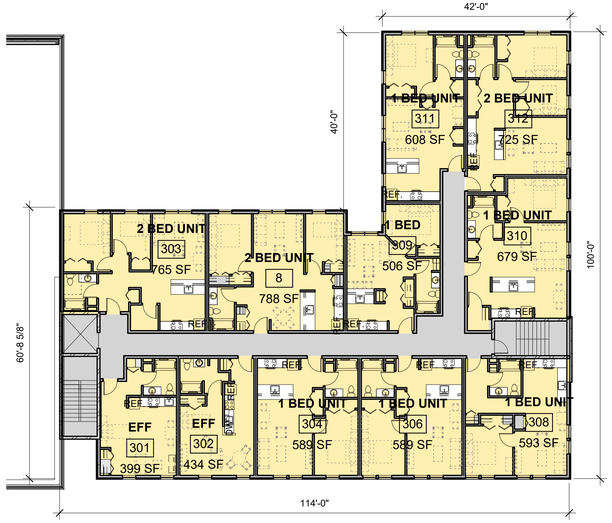
Revisions:

Scale: 1/16" = 1'-0"

Date: 31 AUG 2017

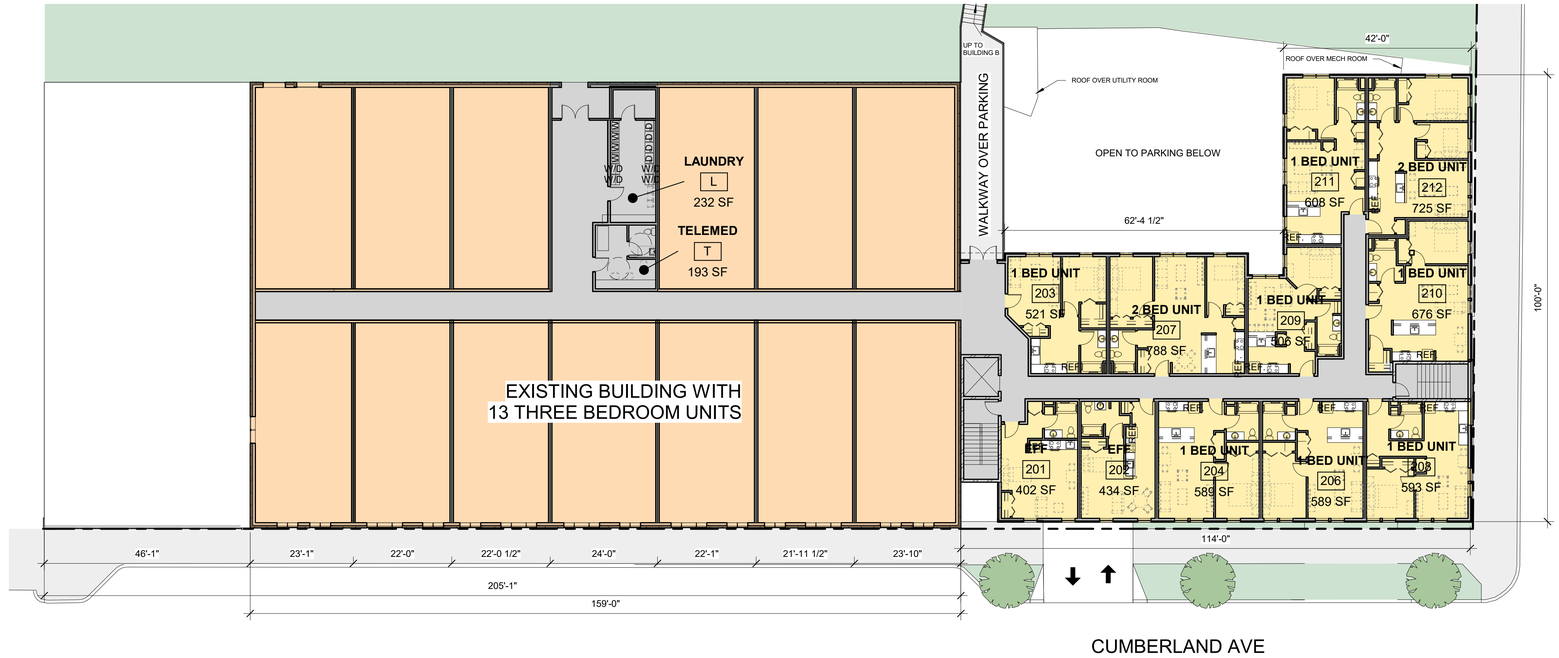
SITE PLAN

A0.00



3 | 3RD & 4TH FLOOR PLANS
1/16" = 1'-0"

NEW CONSTRUCTION 8,584 SF



2 | 2ND FLOOR
1/16" = 1'-0"

NEW CONSTRUCTION - 8,584 SF

BUILDING A TOTALS

EXISTING UNITS -
- 13 - THREE BEDROOM UNITS

NEW UNITS -
- 7 - EFFICIENCY UNITS
- 25 - ONE BEDROOM UNITS
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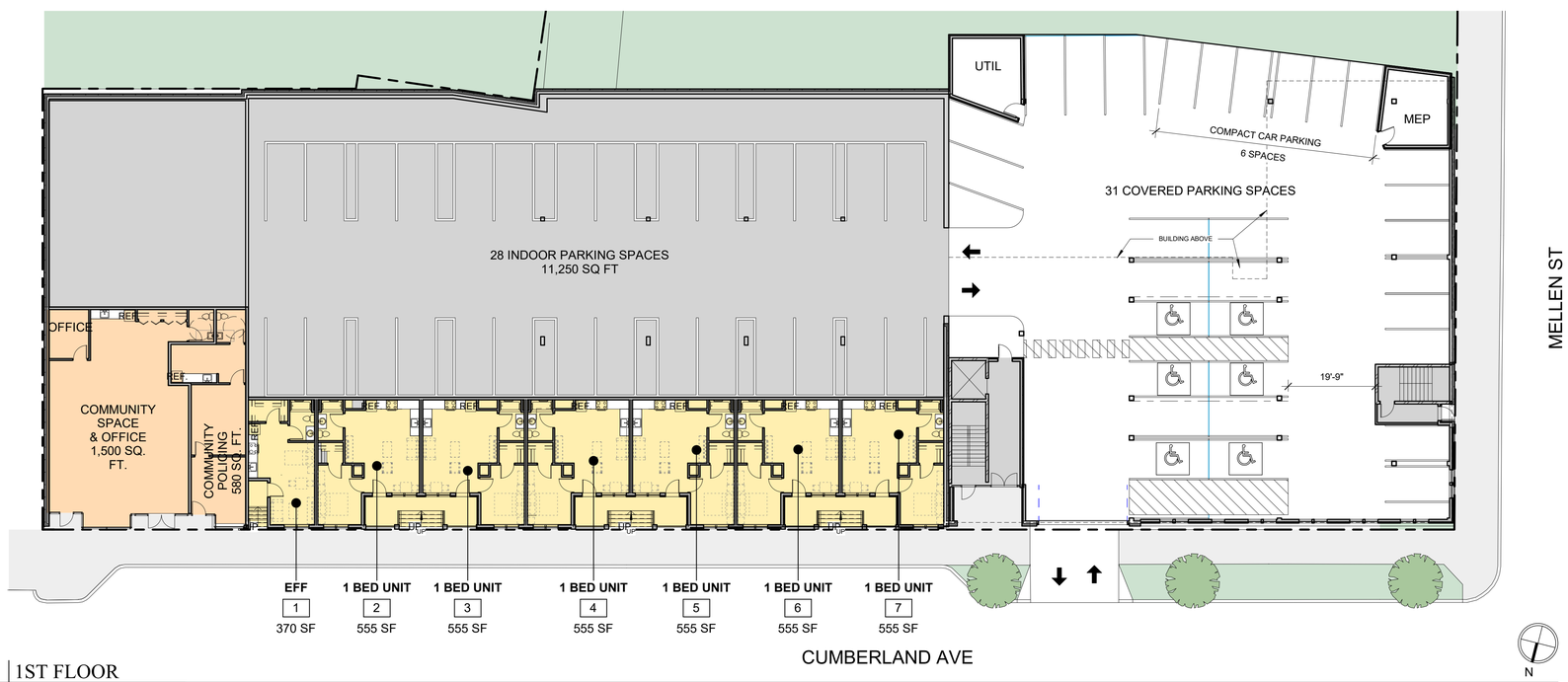
53 TOTAL UNITS

59 TOTAL PARKING SPACES

34,870 SF - TOTAL NEW CONSTRUCTION (INCL NEW UNITS & COMM RM. IN EXIST BLDG)



1 | 1ST FLOOR
1/16" = 1'-0"

NEW CONSTRUCTION - 1,330 SF
NEW UNITS & COMMUNITY IN EXIST BLDG - 5,915 SF

Prepared For: AVESTA HOUSING

Consultant:

Architect: ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project: 510 CUMBERLAND AVENUE HOUSING
Portland, ME 04101

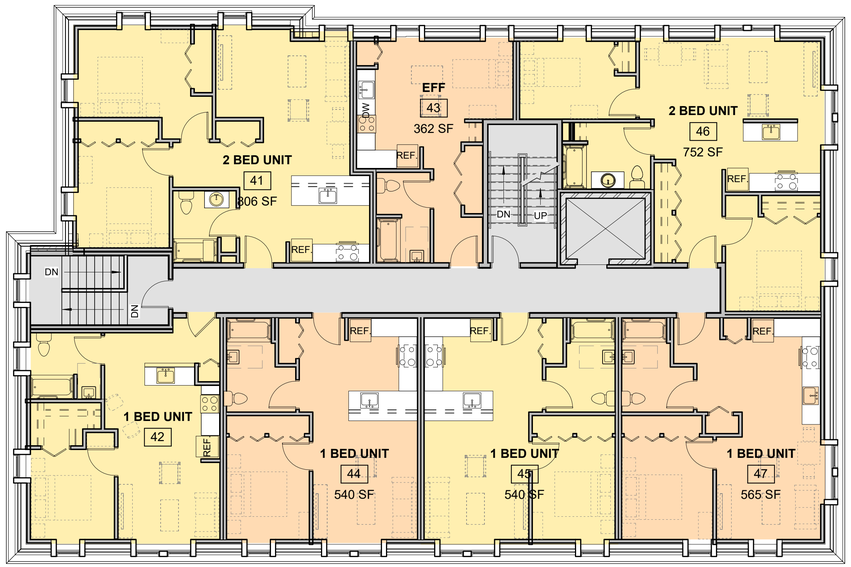
Revisions:

Scale: 1/16" = 1'-0"

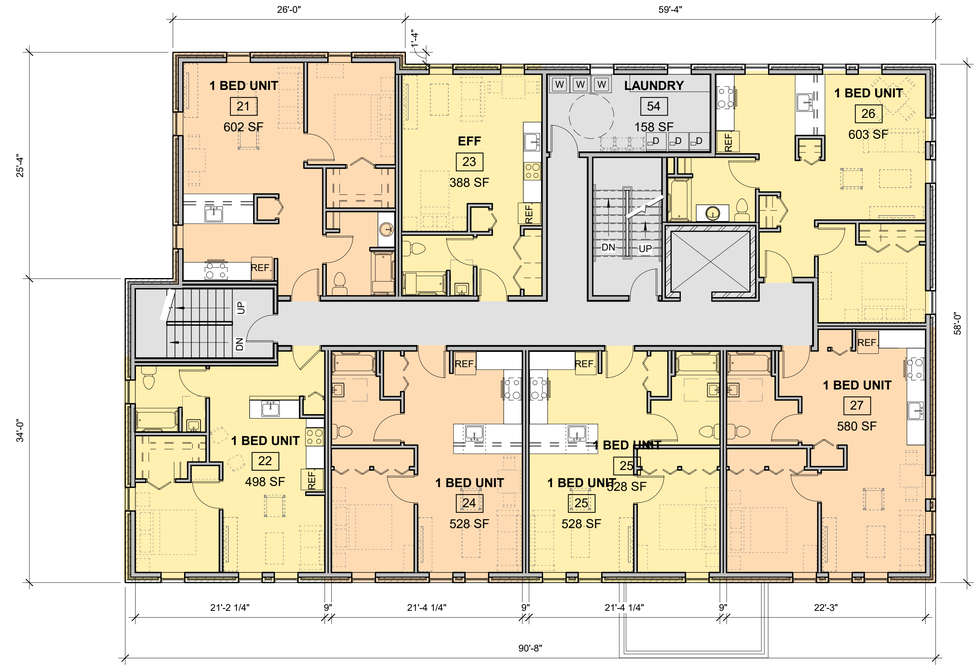
Date: 31 AUG 2017

BUILDING A - FLOOR PLANS

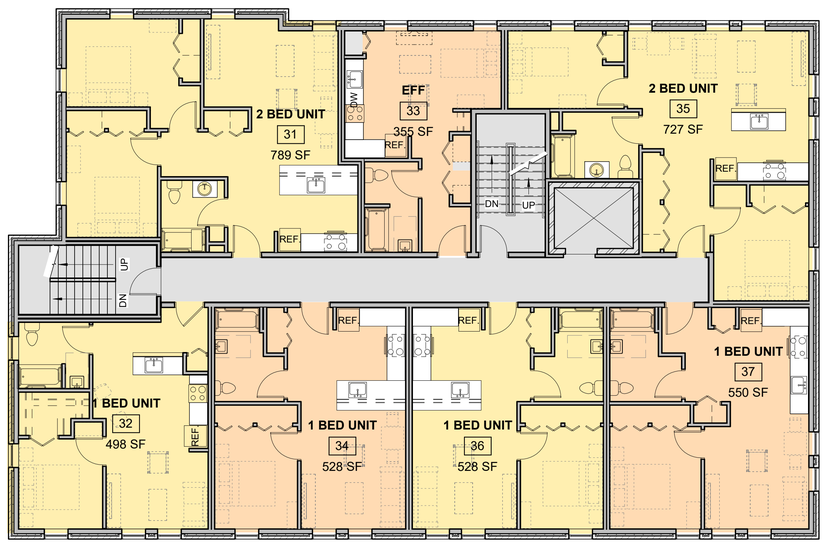
A1.01



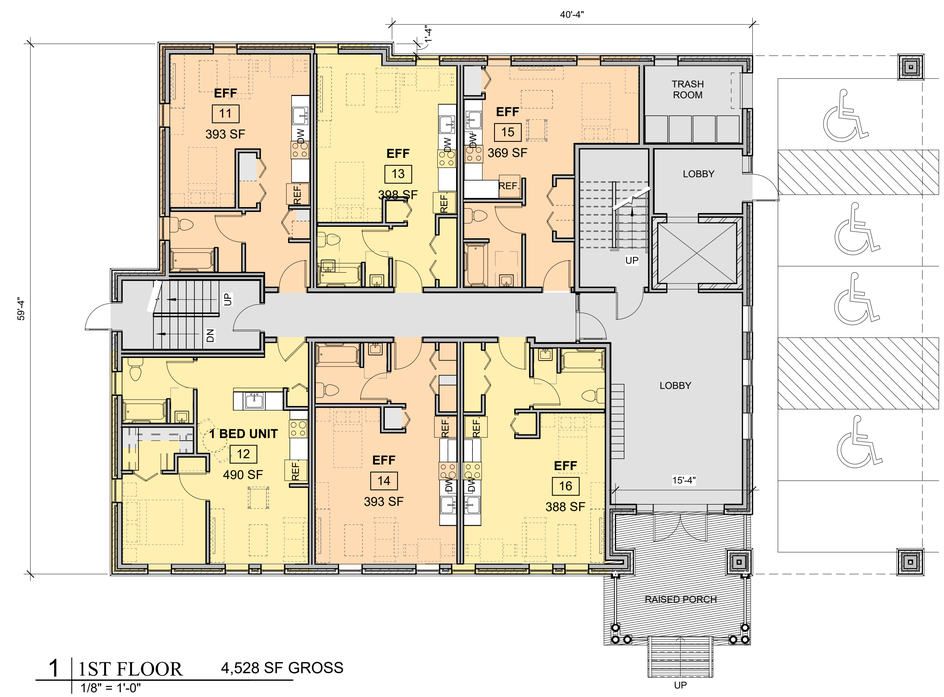
4 | 4TH FLOOR 5,372 SF GROSS
1/8" = 1'-0"



2 | 2ND FLOOR 5,630 SF GROSS
1/8" = 1'-0"



3 | 3RD FLOOR 5,630 SF GROSS
1/8" = 1'-0"



1 | 1ST FLOOR 4,528 SF GROSS
1/8" = 1'-0"

BUILDING B TOTALS

8 - EFFICIENCY UNITS	**27 UNITS TOTAL**
15 - 1 BEDROOM UNITS	21,160 TOTAL GROSS SF
4 - 2 BEDROOM UNITS	5 PARKING SPACES

Prepared For: AVESTA HOUSING

Consultant:

Architect: ARCHETYPE architects, 48 Union Wharf Portland, Maine 04101, (207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project: 510 CUMBERLAND AVENUE HOUSING, 510 Cumberland Ave, Portland, ME 04101

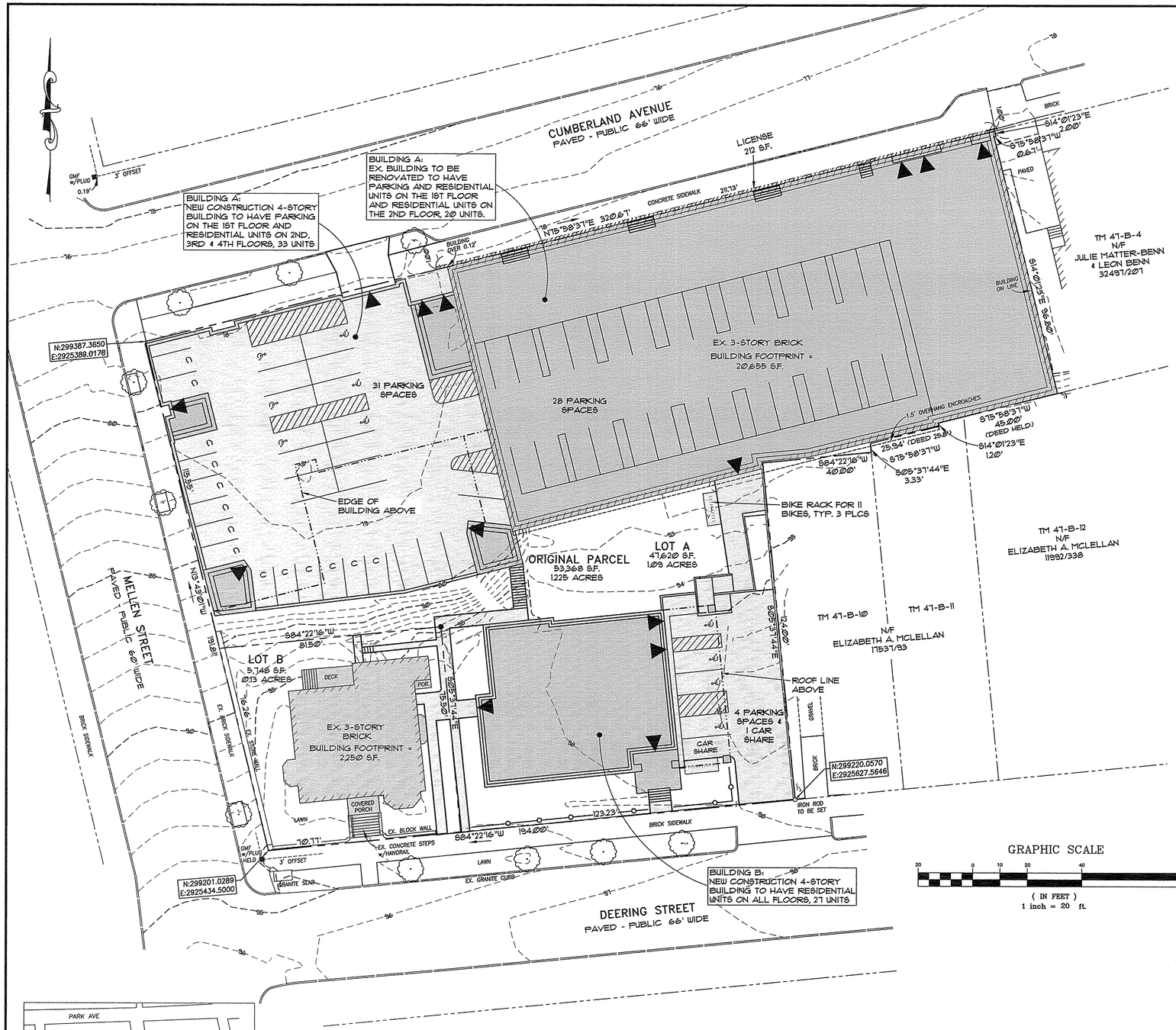
Revisions:

Scale: 1/8" = 1'-0"

Date: 17 AUG 2017

BUILDING B FLOOR PLANS

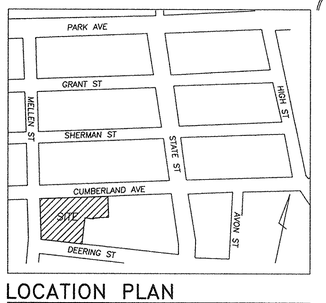
A1.02



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



LOCATION PLAN

SCALE: 1"=250'±

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EASEMENT
- EDGE OF PAVEMENT
- BUILDING
- EDGE OF GRAVEL
- CURB
- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- DECIDUOUS TREE
- CONIFEROUS TREE

PROPOSED

- LOT LINE
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- GRADE BREAKS AT SIDEWALK
- BUILDING
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- HANDICAP PARKING
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- BUILDING HATCH
- BIKE RACK ON WOODCHIP PAD
- RETAINING WALL

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SUBDIVISION PLAT, APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

DATE

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE, PORTLAND, ME. 04103
TEL: 207.781.5242 FAX: 207.781.4265

STATE OF MAINE
THOMAS S. GREER
No. 10420
LICENSED
PROFESSIONAL ENGINEER

9/7/17

REV.	DATE	DESCRIPTION
1	9/7/17	REVD BUILDING B FOOTPRINT; REVD NUMBER OF UNITS

AVESTA HOUSING DEVELOPMENT CORP.
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: MAY 31, 2017
PROJECT: 17127
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

DEERING PLACE
61 DEERING ST. & 510 CUMBERLAND AVE.
PORTLAND, MAINE

SUBDIVISION RECORDING PLAT
SHEET 1 of 2

C1.1

MAP/LOT 47/B/1, 2, 3 & 29

CITY OF PORTLAND
CONDITIONS OF APPROVAL

SURVEY GENERAL NOTES

1. OWNER OF RECORD: THE OPPORTUNITY ALLIANCE F/K/A PEOPLE'S REGIONAL OPPORTUNITY PROGRAM, 510 CUMBERLAND AVENUE, PORTLAND, MAINE: CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 10064, PAGE 213.
2. LOCUS IS SHOWN AS LOTS 1, 2, 3, AND 29 IN BLOCK B ON PORTLAND PROPERTY MAP 47.
3. BEARINGS ARE CITY COORDINATES PROVIDED ON STREET MONUMENTS ON PLAN REFERENCE 5, WHICH IS GRID NORTH.
4. SPACE BETWEEN BUILDING AND FENCE ON LAND OF MCLELLAN APPEARS TO BE USED BY SUBJECT PROPERTY.
5. THE 1883 DEED IN BOOK 495, PAGE 84 FOR THE PORTION OF THE PREMISES WEST OF BENN IS FOR A LOT 100 FEET DEEP FROM CUMBERLAND STREET. THE DEEDS FOR MCLELLAN ARE FOR THAT SAME LINE. SUBSEQUENT DEEDS, STARTING IN 1922, HAVE CALLED FOR A DEPTH OF 98.8 FEET, POSSIBLY BASED ON PLAN REFERENCE 2, WHICH SHOWS A BUILDING LINE 98.8 FEET FROM CUMBERLAND AVENUE AND A PROPERTY LINE OF 100 FEET.
6. THE 1905 DEED IN BOOK 780, PAGE 239 FOR THE BENN PROPERTY DEFINES THE COMMON LINE AS BEING 300 FEET FROM STATE STREET, BASED ON PLAN REFERENCE 4. THE 1874 DEED IN BOOK 433, PAGE 132 FOR THE LOCUS DEFINES THE EAST LINE AS 275 FEET FROM MELLEN STREET. THE 1883 DEED, MENTIONED ABOVE, CALLS FOR A FRONTAGE OF 45 FEET ON CUMBERLAND AVENUE. PLAN REFERENCE 1 SHOWS THIS COMMON LINE (WITH THE EXCEPTION OF THE LATER 2.00 BY 0.67 FOOT STRIP) AS BEING 320 FEET FROM MELLEN STREET, WITH A NOTE "298.37 TO STATE ST. BY MEASURE. PLAN CALLS FOR 300'." THE EXISTING BUILDING WAS BUILT TO MATCH THE 320 FEET FROM MELLEN AND THE SMALL PARCEL FOR THE PILASTER, CONVEYED BY A BENN PREDECESSOR, MATCHES ALSO.

SURVEY PLAN REFERENCES

1. "SURVEYED FOR B.F. HARRIS SURVEYED FEB. 1883" IN FILES OF H.I. & E.C. JORDAN - SURVEYORS AND UNDATED UNTITLED MORE RECENT WORKING PLAN OF SAME.
2. "E.C. JORDAN & CO. CIVIL ENGINEERS OCT. 16, 1922" PLAN OF LAND OF HANNAH M. DOOLEY ON DEERING ST. AND ELVIRA LORELLO ON CUMBERLAND ST.
3. "BOUNDARY SURVEY AT 51 DEERING STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD SETH & LAUREL MCCLEAD AUGUST 21, 2014 OWEN HASKELL, INC. JOB NO. 2014-0715P"
4. PLAN OF DIVISION BETWEEN DEERING AND PREBLE ESTATES RECORDED IN PLAN BOOK 3, PAGE 37 (TITLE LARGELY UNREADABLE)
5. CITY OF PORTLAND ENGINEERING DEPARTMENT WORKING PLAN PROVIDED OF THIS BLOCK AND SURROUNDING ONES SHOWING EXISTING MONUMENTATION.

SNOW CLEARANCE NOTES

1. SNOW IS TO BE STORED WITHIN THE SNOW STORAGE AREAS.
2. SNOW MAY BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE IF NECCESSARY.
3. SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXEMPTION REQUIREMENTS SPECIFIED WITHIN CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.
4. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, CURBING, LIGHTING, FENCING ETC. RESULTING FROM THEIR ACTIVITIES.
5. THE SNOW CONTRACTOR SHALL USE SALT OR CHLORIDE SUBSTITUTE TO DEICE THE PARKING LOT.
6. THE OWNER IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

WAIVERS REQUESTED

1. LANDSCAPE OPEN SPACE RATION FOR LOT A. THE TOTAL SUBDIVISION COMPLIES.
2. FRONT, REAR AND SIDE SETBACKS OF 5, 10 & 10 FEET FOR THE EXISTING BUILDING. THE EXISTING BUILDING TO BE RENOVATED HAS SETBACKS OF 0 FEET.
3. WAIVER FOR REQUIRED PARKING SPACES FROM 71 SPACES TO 64 SPACES.
4. REDUCTION OF DRIVE AISLE FROM 24 FEET TO 19.8 FEET.

PARKING INFORMATION

82 UNITS

EXISTING VEHICLE SPACES:	58
CONVENTIONAL, VEHICLE SPACES REQUIRED:	
FIRST 3 UNITS:	0
REMAINING UNITS, 1 PER UNIT:	77
SHARED CAR BONUS: - 8 SPACES, + 1 SPACE	-8 ①
	70
~~TOTAL VEHICLE SPACES REQUIRED:~~	
VEHICLE SPACES PROVIDED:	39
9'x18' STANDARD SPACES:	10 ①
9'x18' CAR SHARE SPACE:	14
8'x18' COMPACT SPACES:	10
~~9'x18' HANDICAP ACCESSIBLE SPACES:~~	
	64

TOTAL VEHICLE SPACES PROVIDED:

① AVESTA IS COMMITTED TO PROVIDING ONE SHARE CAR FOR USE BY THE RESIDENTS OF THIS PROJECT.

BIKE SPACES REQUIRED:	
2 BIKE SPACES PER	
5 DWELLING UNITS (82/25):	32
PROVIDED: 3 RACKS OF 11 BIKES = 33 BIKES	

IMPERVIOUS INFORMATION

	LOT A	LOT B
EXISTING IMPERVIOUS	40,945 SQ. FT.	3,178 SQ. FT.
PROPOSED IMPERVIOUS	41,885 SQ. FT.	3,173 SQ. FT.
NET IMPERVIOUS	+ 940 SQ. FT.	+ 5 SQ. FT.

ZONE INFORMATION

ZONE: R-6, RESIDENTIAL
PERMITTED USE: MULTI-FAMILY DWELLING

SPACE STANDARDS	REQUIRED	EXISTING	LOT A	LOT B	TOTAL SUBDIVISION
MINIMUM LOT SIZE	2,000 SQ. FT.	53,368 SQ. FT.	47,620 SQ. FT.	5,748 SQ. FT.	5,748 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	3,336 SQ. FT.	581 SQ. FT. ①	1,916 SQ. FT.	581 SQ. FT.
MINIMUM STREET FRONTAGE	20 FEET	191.8 FEET	115.5 FEET	70.8 FEET	70.8 FEET
MINIMUM FRONT YARD	5 FEET	0 FEET	0 FEET	10.6 FEET	0 FEET
MINIMUM REAR YARD	10 FEET	0.2 FEET	0.2 FEET	10.2 FEET	0.2 FEET
MINIMUM SIDE YARD	10 FEET	0 FEET	0 FEET	5.7 FEET	0 FEET
MAXIMUM LOT COVERAGE (BUILDINGS)	60%	43%	56%	39%	56%
MINIMUM LOT WIDTH	20 FEET	191.8 FEET	115 FEET	70.8 FEET	70.8 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	43 & 36 FEET	35, 43 & 46 FEET	43 FEET	46 FEET
LANDSCAPE OPEN SPACE RATIO	20%	17%	12%	55%	55%

① LOT A AREA:	47,620 S.F.
MIN. AREA PER DWELLING UNIT:	÷ 725 S.F.
UNITS ALLOWED:	65.7 UNITS
DENSITY BONUS OF 25% (FOR AFFORDABLE UNITS, SECTION 14-488.)	x 1.25 BONUS
UNITS ALLOWED:	82 UNITS

CITY OF PORTLAND SUBDIVISION NOTES

1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORK'S REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.
10. SUBDIVISION AT THE TIME OF APPROVAL IS DEFINED AS "SUBDIVISION SHALL MEAN THE DIVISION OF A LOT, TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE LOTS, INCLUDING LOTS OF FORTY (40) ACRES OR MORE, WITHIN ANY FIVE-YEAR PERIOD WHETHER ACCOMPLISHED BY SALE, LEASE, DEVELOPMENT, BUILDINGS OR OTHERWISE AND AS FURTHER DEFINED IN 30-A M.R.S.A. SECTION 4401. THE TERM SUBDIVISION SHALL ALSO INCLUDE THE DIVISION OF A NEW STRUCTURE OR STRUCTURES ON A TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD AND THE DIVISION OF AN EXISTING STRUCTURE OR STRUCTURES PREVIOUSLY USED FOR COMMERCIAL OR INDUSTRIAL USE INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD. THE AREA INCLUDED IN THE EXPANSION OF AN EXISTING STRUCTURE IS DEEMED TO BE A NEW STRUCTURE FOR THE PURPOSE OF THIS PARAGRAPH. A DWELLING UNIT SHALL INCLUDE ANY PART OF A STRUCTURE WHICH, THROUGH SALE OR LEASE, IS INTENDED FOR HUMAN HABITATION, INCLUDING SINGLE-FAMILY AND MULTIFAMILY HOUSING CONDOMINIUMS, TIME-SHARE UNITS AND APARTMENTS."

SUBDIVISION PLAT, APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

DATE

PINKHAM & GREER
CIVIL ENGINEERS
28 WAYMAN AVE, PORTLAND, ME 04102
TEL: 207.781.5242 FAX: 207.781.4295

STATE OF MAINE THOMAS S. GREER No. 4206 LICENSED PROFESSIONAL ENGINEER

9/7/17

REV.	DATE	DESCRIPTION
1	9/7/17	REVD BUILDING & FOOTPRINT, REVD NUMBER OF UNITS

AVESTA HOUSING DEVELOPMENT CORP.
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: MAY 31, 2017
PROJECT: 17127
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

DEERING PLACE
61 DEERING ST. & 510 CUMBERLAND AVE.
PORTLAND, MAINE

SUBDIVISION RECORDING PLAT
SHEET 2 of 2

C1.2

MAP/LOT 47 / B / 1, 2, 3 & 29

510 CUMBERLAND