1. Legal Ad

   Documents: PB LEGAL AD 3-22-16.PDF

2. Agenda

   Documents: PB AGENDA 3-22-16.PDF

3. 605 Stevens Avenue

   3.I. Report

   Documents: STEVENS AVE. - 605 (REPORT).PDF

   3.II. Report Attachments

   Documents: STEVENS AVE. - 605 (STAFF ATTACHMENTS).PDF

   3.III. Applicants Submittal

   Documents: STEVENS AVE. - 605 (APPLICANTS SUBMITTAL).PDF

   3.IV. Plans

   Documents: STEVENS AVE. - 605 (PLANS).PDF

4. Forest Avenue B-2b Map Amendment

   4.I. Report And Attachments

   Documents: FOREST AVE. (REPORT AND ATTACHMENTS).PDF

5. 169 Newbury Street

   5.I. Report

   Documents: NEWBURY ST. - 169 (REPORT).PDF

   5.II. Report Attachments

   Documents: NEWBURY ST. - 169 (REPORT ATTACHMENTS).PDF

   5.III. Applicants Submittal

   Documents: NEWBURY ST. - 169 (APPLICANTS SUBMITTAL).PDF

   5.IV. Plans

   Documents: NEWBURY ST. - 169 (PLANS).PDF

6. 235 Ocean Avenue

   6.I. Report

   Documents: OCEAN AVE. - 235 (REPORT).PDF

   6.II. Applicants Submittal

   Documents: OCEAN AVE. - 235 (APPLICANTS SUBMITTAL).PDF

   6.III. Plans

Documents: OCEAN AVE. - 235 (PLANS).PDF

7. 31 Fore Street

7.I. Report

Documents: FORE ST. - 31 (REPORT).PDF

7.II. Report Attachments

Documents: FORE ST. - 31 (REPORT ATTACHMENTS).PDF

7.III. Applicants Submittal

Documents: FORE ST. - 31 (APPLICANTS SUBMITTAL).PDF

7.IV. Public Comment

Documents: FORE ST. - 31 (PUBLIC COMMENTS).PDF

7.V. Plans

Documents: FORE ST. - 31 (PLANS).PDF

7.V.i. Plan C42

Documents: FORE ST. - 31 (PLAN C-42 (LEFT OUT OF PLAN P7).PDF

LEGAL ADVERTISEMENT
PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will hold a meeting on Tuesday, March 22, 2016, Council Chambers, 2nd Floor, City Hall, 389 Congress Street. **Public comments will be taken at this meeting.**

Workshop – 4:30 p.m.

i. Master Development Application; Senior Housing at 605 Stevens Avenue; Seacoast at Baxter Woods Associates, Applicant. (4:30 – 6:00 p.m. estimated time) The proposed master development plan (MDP) presents four phases of development with a total of 249 units of senior housing, including the Planning Board approved conversion of the former Motherhouse convent into 88 units. The additional 161 units are proposed in 5 new four- and five-story buildings. The Master Development application includes information regarding access to Stevens Ave. and Walton St., parking and landscaping. This is the first workshop on the MDP, which will provide an overview and focus on traffic and parking.

Public Hearing – 7:00 p.m.

i. Zoning Map Amendment from B-2 and R-5 to B-2b; Vicinity Forest Avenue, Preble Street Extension and Baxter Boulevard, City of Portland, Applicant. (7:00 -8:00 p.m estimated time) The Planning Board will hold a public hearing on a proposal to rezone an area along Forest Avenue from Community Business B-2 and Residential R-5 to the Community Business B-2b Zone. The proposed zone change is in the vicinity of the block bounded by Forest Avenue, Preble Street Extension and Baxter Boulevard and includes additional parcels at the intersection of Forest Avenue, Baxter Boulevard and Bedford Street.

ii. Subdivision Review and Conditional Use Review for Ensuring Affordable Housing; 169 Newbury Street; Luminato Condominium, LLC., Applicant. (8:00 – 8:45 p.m. estimated time) The Board will hold a public hearing to consider the Subdivision Plan for 26 new residential units in a seven-story building at 169 Newbury Street and the renovation of three existing units. The application is subject to a conditional use review under the provisions to ensure workforce housing. The site plan is a Level II administrative review under the the India Street Form-Based Code zone.

iii. Conditional Use; 235 Ocean Avenue; Cheverus High School, Applicant. (8:45- 9:15 p.m. - estimated time) The Board will hold a public hearing on the proposed conversion of a single family house located at 235 Ocean Avenue to office space for the high school. The proposed expansion is considered an institutional expansion, which triggers a conditional use review with the Planning Board. The applicant is not proposing any changes to the exterior of the building or site.

iv. Level III Site Plan and Subdivision; 4 Unit Residential Building; 31 Fore Street; Bob and Carrie LeBlanc, Applicants. (9:15- 10 p.m. estimated time) The Planning Board will hold a public hearing on a new four-unit residential building at 31 Fore Street. The proposal is to replace the existing three-unit building with a new structure that includes on-site parking for 6 vehicles. The proposal includes a mix of 1 one-bedroom, 1 two-bedroom, and 2 three-bedroom units. The site is located within the R-6 zone and is subject to the R6 Design Standards.

ELIZABETH BOEPPLE, CHAIR - PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE
PLANNING BOARD

Elizabeth Boepple, Chair
Sean Dundon, Vice Chair
Carol Morrissette
David Eaton
Kristien Nichols
Lisa Whited
Maggie Stanley

AGENDA
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PUBLIC HEARING – 7:00 p.m.

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATIONS AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON MARCH 8, 2016:

Workshop: No workshop

Public Hearing: Boepple, Eaton, Hall, Morrissette (left at 5:30 p.m.) and Soley (arrived at 5:30 p.m.) present. Dundon absent.

4. REPORT OF DECISIONS AT THE MEETING HELD ON MARCH 8, 2016:

i. Appeal of Partial Curb Cut Waiver for a Level I: Minor Residential Application; 40 Quebec Street, Katherine Howe and Matthew Murrell, Applicant. Hall moved and Morrissette seconded a motion to waive the driveway separation requirement of 20 feet in Section 1.7.1 of the Technical Manual to allow for a separation of 18 feet at the property line. Vote: 4-0, (Dundon and Soley absent). Hall moved and Morrissette seconded to approve the Level I Minor Residential Application with two (2) conditions of approval. Vote: 4-0, (Dundon and Soley absent).

ii. Level III Site Plan and Conditional Use to Ensure Workforce Housing; 443 Congress Street; Northland Enterprises, LLC., Applicant. Hall moved and Soley seconded a motion to find the proposal in conformance with the conditional use standards of 14-484 of the Land Use Code, subject to two (2) conditions. Vote: 4-0 (Dundon and Morrissette absent). Hall moved and Soley seconded a motion to waive the street tree requirement and allow a contribution to the street tree fund of $5,600. Vote: 4-0 (Dundon and Morrissette absent). Hall moved and Soley seconded a motion to approve the subdivision plat with one (1) condition of approval.

iii. Level III Site Plan and Subdivision; 5-9 Romasco Lane; David Klenicki, representing Legacy 18 Development, Inc., Applicant. Hall moved and Soley seconded a motion to waive the technical manual standards to allow for a driveway with of 18 feet and a parking space width of 9.5 feet. Vote: 4-0 (Dundon and Morrissette absent). Hall moved and Soley seconded a motion to waive the street tree requirement and make a financial contribution of $800.00 for four (4) trees. Vote: 4-0 (Dundon and Morrissette absent). Hall moved and Soley seconded a motion to approve the subdivision plat with four (4) conditions of approval. Vote: 4-0 (Dundon and Morrissette absent). Hall moved and Soley seconded a motion to approve the site plan with three (3) conditions of approval. Vote: 4-0 (Dundon and Morrissette absent).

iv. Level III Site Plan, Design Review; 101 York Street; JB Brown & Sons, Applicant. Hall moved and Soley seconded a motion to find the applicant has met the condition of approval regarding the building design. Vote: 4-0 (Dundon and Morrissette absent).

v. Proposed text amendments to Sections 14-485 and 14-486, Affordable Housing, of the Land Use Code, City of Portland, Applicant. A full consensus of the Board found the proposed amendments to Section 14-485 and 14-486 meets the Council's goals and suggests that projects with pending site plan applications be included in the proposed text amendments for Chapter 6.

5. NEW BUSINESS

i. Zoning Map Amendment from B-2 and R-5 to B-2b; Vicinity Forest Avenue, Preble Street Extension and Baxter Boulevard, City of Portland, Applicant. (7:00 - 8:00 p.m. estimated time) The Planning Board will hold a public hearing on a proposal to rezone an area along Forest Avenue from Community Business B-2 and Residential R-5 to the Community Business B-2b Zone. The proposed zone change is in the vicinity of the block bounded by Forest Avenue, Preble Street Extension and Baxter Boulevard and includes additional parcels at the intersection of Forest Avenue, Baxter Boulevard and Bedford Street.

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ELIZABETH BOEPPLE, CHAIR - PORTLAND PLANNING BOARD

Memorandum
Planning and Urban Development Department
Planning Division

To:	Elizabeth Boepple, Chair and Members of the Portland Planning Board
From:	Jean Fraser, Planner
Date:	March 18, 2016
Re:	Level III Master Development Plan; 605 Stevens Avenue; Sea Coast at Baxter Woods Associates, LLC, Applicant Project #: CBL: 136 E006001
Meeting Date:	March 22, 2016

I. INTRODUCTION

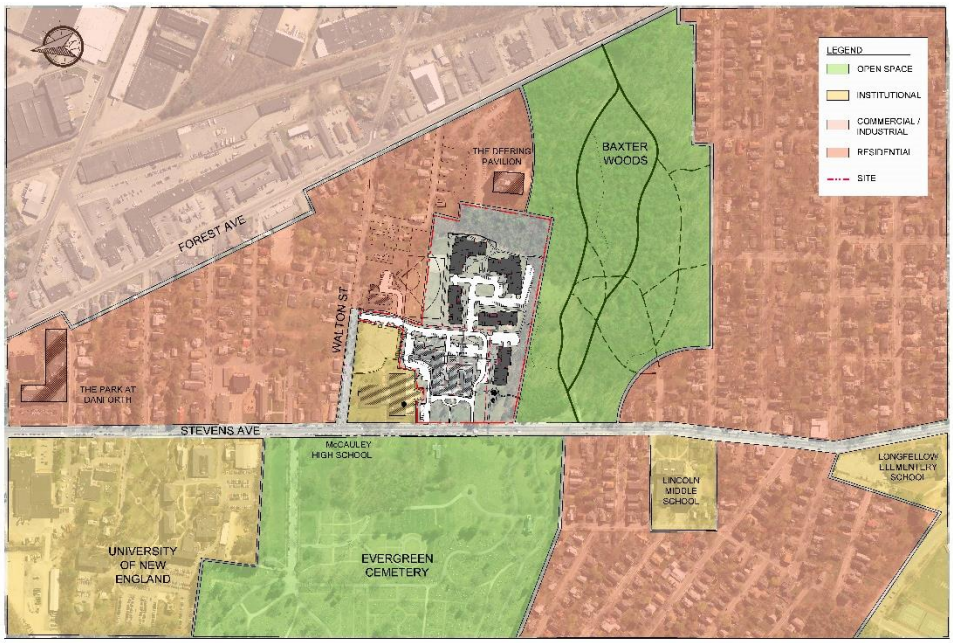
Sea Coast at Baxter Woods Associates, LLC have submitted a Level III Master Development Plan (MDP) for 249 dwelling units of senior housing on two lots (approximately 13.5 acres) at the corner of Walton Avenue and Stevens Avenue. The 249 units would be made up of 88 apartments in the converted Motherhouse and 161 dwellings (condos) in five new 4-5 story new buildings nearby, along with 395 parking spaces and approximately 5 acres of open space.

The required review is under ***Section 14-524(a)3c(iii) Master Development Plan Review*** *including* ***Standards for Review.*** An approved Master Development Plan has an approval period of 6 years, which may be extended and/or amended.

This is the first Workshop on the MDP and will provide an overview and a focus on traffic, parking, and pedestrian accommodations (the Traffic Engineering Reviewer and the applicants Traffic Engineering Consultant will be at the Workshop to clarify data and answer questions). A second Workshop is planned in April with a focus on Design and Landscape and any residual issues.

II. THE SITE

The MDP site is part of an approximately 20 acre site that was previously owned by the Sisters of Mercy and included the Motherhouse (now mostly vacant); the Catherine McAuley High School and associated playing fields; and the St Catherine apartments on Walton Street. The MDP does not include the ongoing uses of the School (except the playing field area) and the apartments, but does include the Motherhouse.



The site is adjacent to two valued open areas, Evergreen Cemetery and Baxter Woods and located on an arterial street with good public transit. The wider neighborhood is a cohesive and family-focused community with a mix of institutions (including 2 existing senior housing developments, several schools and UNE) and some retail.

III. PREVIOUS REVIEWS AND APPROVALS

The MDP was submitted after a year of discussions with the Planning Division, Planning Board, members of the public and City Council regarding zoning text and map amendments to guide the appropriate scale of senior housing development on this site. The text and map amendments are outlined in more detail in section **V b**. below.

The associated policy decisions regarding density considerations and associated traffic, parking and visual impacts were the subject of extensive Planning Board and City Council discussion, including hours of public testimony (41 written comments on the rezoning).

The MDP submission and review is a "middle" stage between the rezoning that allowed for this particular use, and the implementation of four phases of senior housing development. The conversion of the Motherhouse as a first phase was approved by the Planning Board in August 2015 to facilitate housing and historic tax credits. The MDP, once approved, would provide a conceptual plan that integrates the existing buildings and uses into the anticipated final build out that includes 5 new buildings with associated access, parking and open space/landscape amenities.

The overall review and approval chronology is outlined in the following table:

Subject of application	Application Date	PB Workshop(s)	PB Hearing approval	City Council approval
Rezone 17 acres from R5 to R6A for senior housing/congregate care	February 2015	March 2015		
Rezone 13.5 acres to R5A senior housing/congregate care	April 2015	April 2015	May 2015	
Rezone 7.5 acres to R5A senior housing/congregate care				July 6, 2015 (amended PB recommendation)
Amendment to R5A Text	April 2015	April 2015	May 2015	June 15, 2015
Convert Motherhouse (part in R5A) to 88 senior units, incl. 66 units of affordable housing (Ph 1)	June 2015	July 2015	August 2015	N/A
Subdivision of the entire approx. 20 acre site into 4 lots	June 2015	July 2015	August 2015	N/A
(THIS APPLICATION) Master Development Plan for Lots 3 & 4 (Motherhouse and land to south and east of Motherhouse (total of 13.5 acres) /	February 2016	March 22, 2016	TBD	N/A
(ANTICIPATED NEAR FUTURE) Phase 1 of senior housing in 21 unit building near Motherhouse	Expected in 2016			N/A
(ANTICIPATED FUTURE) A further two phases as outlined in MDP	Not confirmed			N/A

IV. PROJECT DATA for Lots 3 and 4 only (Lot #3 is Motherhouse site; Lot #4 is the area to south and east of the Motherhouse- see Background below)

	Existing	*Proposed*
Zoning	R5 and R5a	Previously amended
Uses	Vacant Motherhouse; playing fields; open land	Senior housing and associated parking and open space; reconfigured playing field
Parcel Size	13.5 acres	13.5 acres
Dwelling Units	none	Motherhouse: 88 units (68 efficiency; 20 1-BR) Lot #4: 161 units, all 2BR
Building footprint	24,065 sf (Motherhouse)	Motherhouse: 24,065 sf Lot #4: 74,188sf
Building floor area	102,241 sf (Motherhouse)	Motherhouse; 102,241 sf Lot #4: 349,626 sf
Impervious Surface		272,946 sf
Parking spaces	Approx. 34	395

V. BACKGROUND

a. Site History

The site was the location for a convent in the late 19th century for the Sisters of Mercy in Portland and originally included a church. Other uses were introduced over the years:

- A girl's school in 1881 (later expanded into what is known as Catherine McAuley High School in 1971); the expansion of the playing fields at the back were added in the last 10 years;
- St Catherine's Hall in 1888 as St Joseph's Home for Aged Women, which later became St Joseph's college from 1917 to 1954 (now 18 apartments for Sisters of Mercy and will continue for foreseeable future);
- Motherhouse, completed in parts between 1909 and 1921, which was the home of up to 300 nuns but was closed about 10 years ago.

Motherhouse Building

b. Rezoning part from R5 to R5A

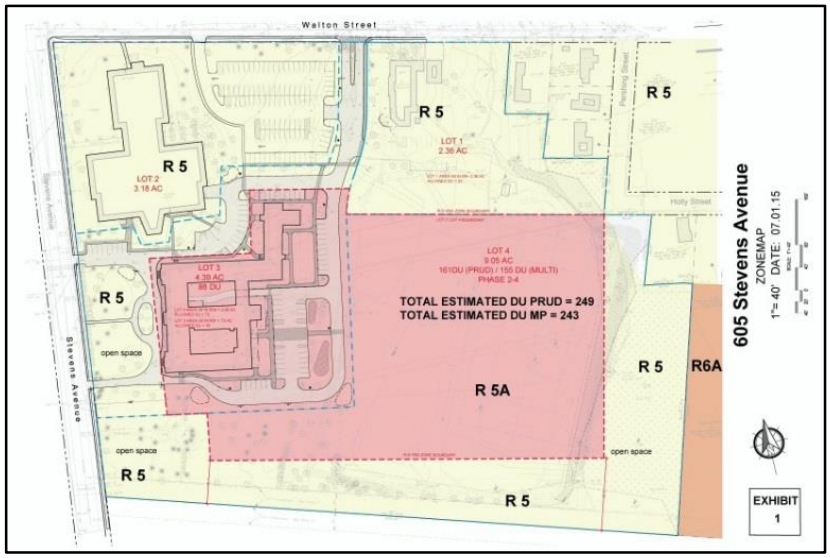
The applicant initially applied to rezone more of the site from R5 to R6A to allow for 300+ dwellings. During the review the Planning Board received extensive public comment raising concerns that the allowed density (which would have been higher) was out of scale with the surrounding neighborhood, and the lower density R5A zone emerged as an option with both a map amendment and associated text amendments (see Att 8 for the amended dimensional requirements that impact density).

In summary the final zone amendments to the R5A zone text were:

- Adding "multifamily " and "congregate care" to the permitted uses, with associated minimum lot sizes;
- Amend definition of "congregate care";
- Clarification of the minimum lot area per dwelling (1600 sf) for both uses;
- Include a maximum structure height of 55 feet;
- Remove the requirement that the R5A zone be applied through the contract zone provisions;
- Streamlining the definition of "net land area" to meet current development review practices;
- Removal of unnecessary text and placing the dimensional requirements into a table;
- Amend the Site Plan ordinance regarding Master Development Plans to include the proposed uses.

The Planning Board recommendation to the City Council was for all of Lots 3 and 4 to be rezoned to R5A and was informed by the Conceptual Site Plan in Att 6.

In response to public comments, the City Council approved a smaller final boundary of the R5A zone (shown right) which allows for a maximum of 249 dwellings on the Lot 3 and Lot 4 site. This number of dwellings was based on the total entire land area of both zones with pro-rata densities. The zone boundaries are not the same as the property or lot boundaries and the data is split out in Att 7.

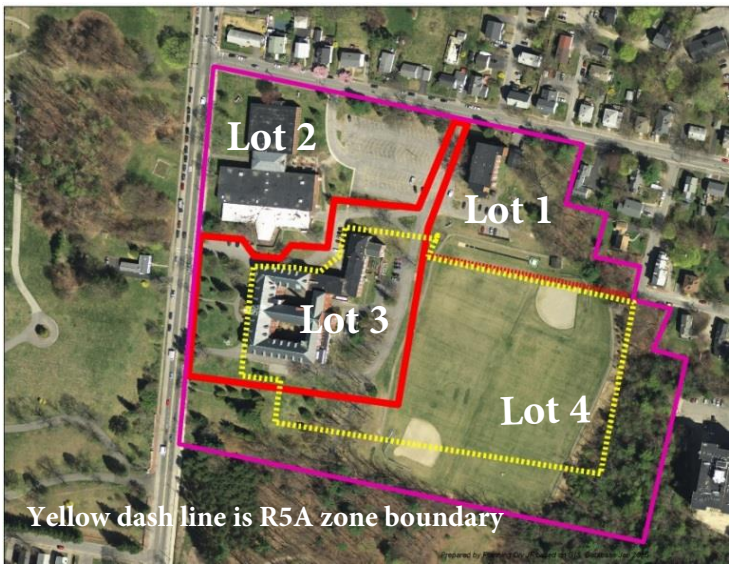


c. Subdivision into 4 lots

The Planning Board approved (August 2015) the creation of an overall Subdivision to define the following 4 lots within the overall site:

- Lot 1: St Catherines Hall (2.36 acres)
- Lot 2: Catherine McAuley High School (3.18 acres)
- Lot 3: Motherhouse (4.39 acres)
- Lot 4: Open area and fields (9.05 acres)

The Master Development Plan is for Lots 3 and 4 (developed for senior housing) as Lots 1 and 2 are anticipated to remain as existing for the period of the Master Development Plan.

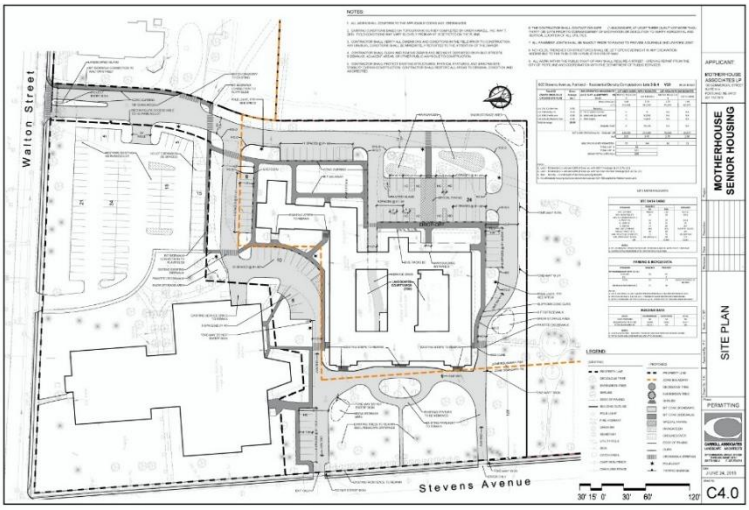


d. Review and Approval to Conversion of existing Motherhouse building

The applicant received Planning Board approval to the Phase 1 project to rehabilitate the main Motherhouse building for 66 affordable housing units and 22 market rate units - with a mix of 68 studio and 20 single bedroom apartments.

The site plan (see right) included:

- Redesign of the existing high school parking lot to better organize access and parking
- Creation of a rear main ADA entrance and associated drop-off and parking areas;
- New walkways to create an interconnected walkway system;
- Contribution to Stevens Avenue crosswalk improvements;
- Stormwater measures;
- Landscaping.



VI. EXISTING CONDITIONS

The site abuts Baxter Woods and the Deering Pavilion. The north and north-east parts of the site abut an area of single and multifamily homes and the Forest Avenue RP zone is nearby. Evergreen Cemetery is opposite on Stevens Avenue.

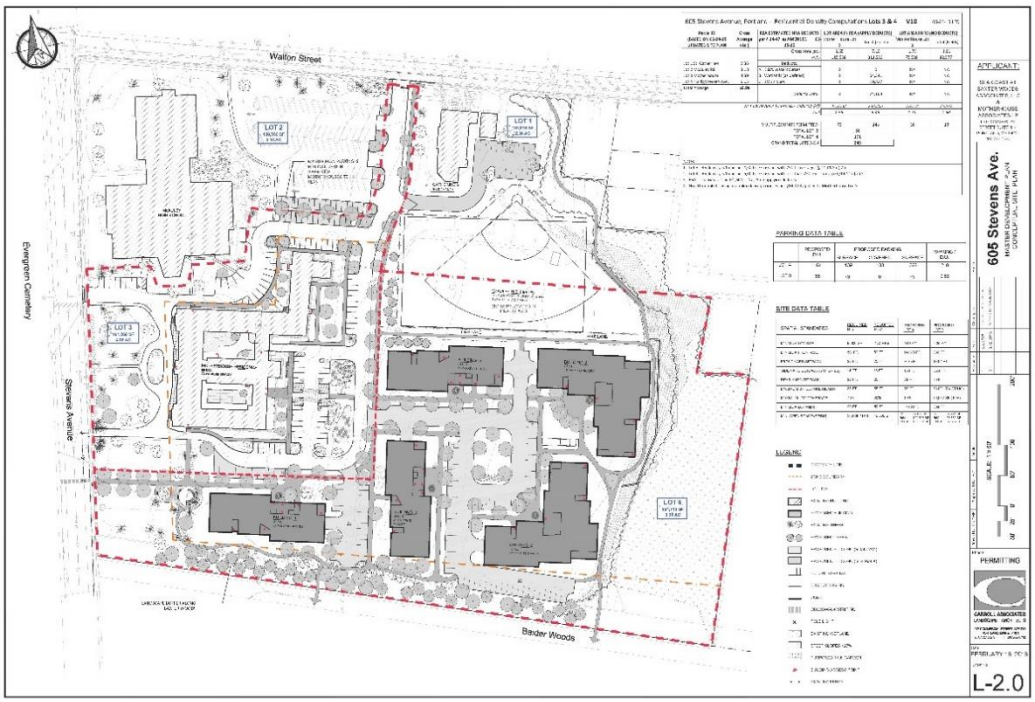
The existing Catherine McAuley High School is currently accessed by two one-way drives from Walton Street direct into the existing parking lot. There are two small drives with gates on Stevens Avenue that go directly to the front of the Motherhouse.

Walton Street is a residential street connecting Stevens Avenue and Forest Avenue, with signals at both intersections. Under the Federal Street Classification system Stevens Avenue is classified as a "Minor Arterial" (other "Minor Arterials" in Portland are Warren Avenue and Washington Avenue) and Forest Avenue is classified a "Principal Arterial" (other "principal Arterials" in Portland are Brighton Avenue and outer Congress Street).

VII. MASTER DEVELOPMENT PLAN PROGRAM

The applicant has described the proposal in detail in the cover letter and narrative (Attachment B) and in the Plan set (Plans P1 to P13); in summary the MDP includes (see Conceptual Site Plan below):

- A four phase development to create 249 units of senior housing, of which 88 units are approved and are located within the existing Motherhouse building which will be refurbished and converted;
- Five new buildings, one at 4 stories (between the Motherhouse and Baxter Woods on the Stevens Avenue frontage) and 4 5-story buildings behind the Motherhouse;
- A total of 395 parking spaces, of which about half are underneath the new buildings;
- Several acres of open space, with connections to Baxter Woods;
- Extensive new tree planting with a network of pedestrian walkways.



Conceptual Site Plan (Plan P6) showing full build out at the end of Phase 4

VIII. PUBLIC COMMENT

A total of 129 notices were sent to property owners within 500 feet of the site and interested parties, and a legal ad was published in the *Portland Press Herald* on March 14 and 15, 2016. A Neighborhood Meeting was held on March 14, 2016 (Invitation in Attachment G) which was attended by about 20 neighbors. As of the time of completing this Memorandum, the Planning Division has not received any written public comments.

IX. ZONING ANALYSIS

The Master Development Plan proposals comply with the R5 and R5A requirements; the applicant has included this information on Plan P9. and the R5A dimensional standards are included in Attachment 8. It should be noted that the density and open space calculations are based on the R5A requirements but (based on the principle established by the City Council when the R5A area was reduced) the R5 parts of these lots is not built upon but the area is used to calculate the density and open space for a unified development plan.

X. STAFF REVIEW

A. MASTER DEVELOPMENT PLAN OBJECTIVES

The Site Plan ordinance outlines that an approved Master Development Plan (MDP) establishes the general parameters to be adhered to for the development, including the supporting documentation for floor area ratio and/or residential density, general types of uses, building coverage, generalized open space plans and infrastructure systems. It is not a final authorization for development, but it does confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of the approval for as long as the MDP approval remains valid, including permissible extensions. All Level III site plans for each phase shall be in general conformance with the approved MDP (6 years initially, which may be extended).

B. MASTER DEVELOPMENT PLAN SUBMISSION REQUIREMENTS (*Section 14-527(e)*)

Section 14-527 of the city's site plan ordinance outlines Master Development Plan submittal requirements. The Planning Authority or Planning Board may give direction regarding the form of the information required for the MDP review.

The majority of the submission requirements have been met, but further information has been requested on the following:

- (v) Further modelling and graphics to illustrate how the proposed development will fit into the surrounding building and environmental context, including illustrations showing how the proposal would impact views of the Motherhouse building (eg from Stevens Avenue south of the site) and from Baxter Woods;
- (x) Further explanation of how drainage will be achieved to avoid any impacts on surrounding uses
- (xiii) Further information to confirm that the utilities will have the capacity to support the full build out of the site. (see Peer Engineer comments in Attachment 3.)

C. MASTER DEVELOPMENT PLAN STANDARDS (*Section 14-524(a)3.c(iii)*)

Section 14-524 of the city's land use code establishes standards under which Master Development Plan applications must be reviewed. Per this section, Master Development Plans shall adhere to the following general requirements and features:

a. A designated tract of land consisting of a parcel or parcels of contiguous land or land on both sides of a public street, totaling one (1) acre or more;

Staff comments: The 13.5 acre site meets this requirement.

b. Developed in a comprehensive, design-integrated manner, according to an overall master development plan;

Staff comments: The applicant has submitted a Master Development Plan for Lots #3 and #4 where the proposed senior housing development will be located, and shows how the area integrates with the surrounding area.

c. Consistent with the objectives of this ordinance; and *d. Consistent with the City's Comprehensive Plan and consistent with City Council approved master plans and facility plans for off-premise infrastructure, including but not limited to, trails, pedestrian and bicycle network, view corridors, environmental management, sewer and stormwater, streets, or other facilities (see Section 15 of the Technical Manual);*

Staff comments: This is still under review and will be discussed in detail at the second Workshop.

e. Developed so as to locate buildings and improvements in a manner that provides usable open space, preserves significant natural features, as defined by the site plan ordinance standards, and preserves existing trees to the maximum extent possible;

Staff comments: The Conceptual Site Plan in Plan P6. shows the trees to be preserved, and new trees proposed to be planted, along with an indication that the Stevens Avenue and Baxter Woods frontages will be usable open space areas. Plan P9. Clearly shows the extent of impervious surfaces, wetland and open space, which helps in understanding the areas of usable open space. Further information and discussion on this subject is anticipated at the second PB workshop.

f. Ordinance standards for designated landmarks or for properties within designated historic districts or designated historic landscapes, if applicable. When proposed adjacent to or within one hundred (100) feet of designated landmarks, historic districts or historic landscapes, the Master Plan shall be developed so as to be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development;

Staff comments: Although the Motherhouse building is considered of historic and architectural interest, the building is not yet designated a landmark and is not located in a Historic Preservation District. It is understood that the applicant is pursuing its designation as a Landmark on the National Register and that this may require the preservation of some existing site elements. Such a designation would also require Historic Preservation review of one or more of the new buildings nearest to the Motherhouse.

The site is opposite and within 100 feet of Evergreen Cemetery, which is an Historic Landscape, so the proposals for the frontage along Stevens Avenue will be reviewed by the Historic Preservation Program Manager.

g. An efficient use of land which properly considers topography and protects significant natural features including, but not limited to, waterways, wetlands, floodplains and wildlife;

Staff comments: This aspect is still under review; no issues have been identified to date.

h. An efficient use of land demonstrating full coordination of its own site development and surrounding context including, but not limited to, the land uses and functions contemplated, architecture, open space and pedestrian networks, vehicular access and circulation, and all other infrastructure;

Staff comments: This requirement is still under review.

i. Linked and coordinated with surrounding land uses, infrastructure and off-site public facilities, including but not limited to the public school system, where appropriate, in a manner that is safe, efficient, non-injurious to the public, and an improvement or benefit to the public where possible; and
j. Designed with sizing of street and other infrastructure systems to accommodate the overall service demand of the Master Plan;
k. Designed to create a street grid pattern that reflects average city block sizes of the neighborhood for street connectivity;

Staff comments: This subject will be presented and discussed in greater detail at this PB Workshop. The following outlines the initial staff comments:

- ***Impact on surrounding streets***

The applicants consulting traffic engineer has submitted a Traffic Impact Study (Att. H.) that considers trip generation, impact on intersections, accidents and sightlines. The consultant will be giving a presentation at the PB Workshop to further explain the anticipated impacts.

Tom Errico, the City's Traffic Engineering reviewer, will also be at the PB Workshop to provide further elaborate on his initial comments below (Attachment 2):

> *The applicant submitted a preliminary trip generation analysis that was based upon data from the Trip Generation Manual, Institute of Transportation of Engineers (ITE). The estimate was based upon Land Use Code 252 – Senior Adult Housing. I requested additional information on the ITE Land Use development type and is the data based upon current developments. Additionally, I requested the applicant provide local data for comparison. The applicant provided information that indicates the most recent publication provided by ITE does include current developments sites. Additionally, the applicant provided actual trip generation data collected at the Highlands in Topsham, which indicates similar trip levels as ITE. Based upon the applicant's analysis the project would be expected to generate 97 trips entering and exiting during the Weekday AM Peak hour and 87 trips entering and exiting during the Weekday PM Peak hour.*
>
> · *A meeting with the applicant was held on March 9, 2016 to discuss the outcome of the trip generation analysis and for the City to provide guidance on the study area for a traffic impact study.*

· *Based upon the trip generation estimate, the project does not meet trip threshold requirements for a Traffic Movement Permit (TMP). The TMP threshold is 100 trips. Please note the following:*

- *During the Rezoning review process there were trip generation estimates that indicated a TMP would be required. That conclusion was based upon a development scenario with a greater number of dwelling units.*
- *Given that this project will be constructed in phases, I have recommended that a traffic monitoring study be required as a condition of approval with the intent of surveying actual traffic levels following occupancy of each phase, and if that study identifies higher trip generation levels, a TMP may be needed.*
- *The applicant is responsible for the preparation of a comprehensive traffic impact study for the proposed project. A traffic study was submitted on March 15, 2016. The traffic impact study reviewed impacts to the public street system including the Stevens Avenue/Walton Street, Stevens Avenue/Pleasant Avenue, Forest Avenue/Walton Street and Site Drive intersections. This type of study would likely be the same under a TMP submittal. Preliminary comments will be provided at the Workshop on March 22, 2016.*

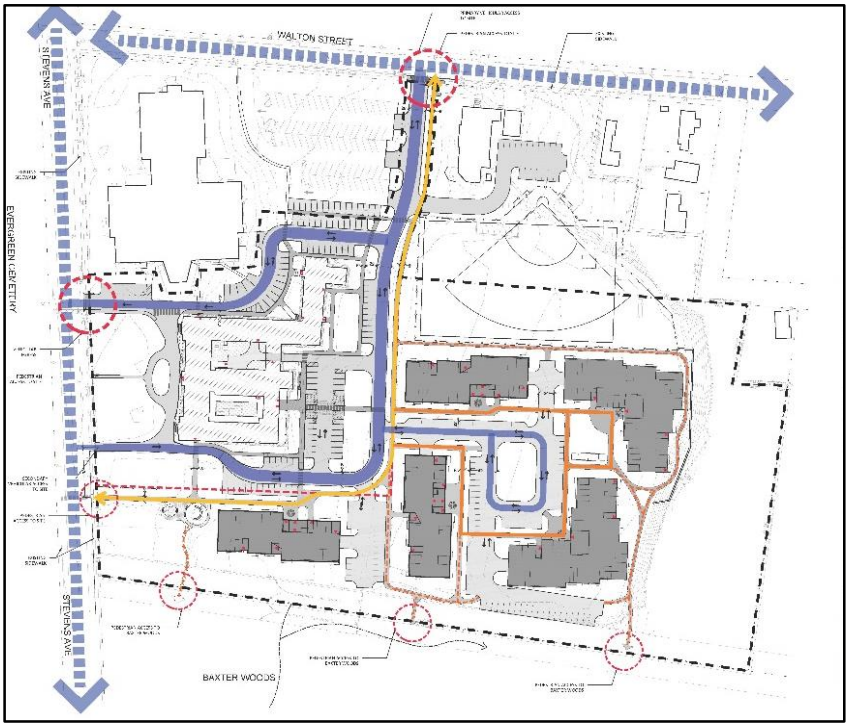
- *The applicant will be requested to confirm the measures that will be implemented to reduce vehicle trips, such as car share vehicles; van service for local trips; bicycle facilities, etc. that would be considered to be a component of a Senior Housing development that would have been reflected in the developments surveyed by ITE for use in estimating trip generation.*

- ***Fire Access***

Deputy Chief Gautreau met with the developers and architects in February and explained his concern that the emergency access to the larger proposed building in the rear of the project had limited fire department emergency vehicle access. He suggested that possibly an additional fire lane would address this access problem. The applicants confirmed they would address this comment as part of the next iteration of the plans.

- ***Internal Circulation/Public Transit/Bicycles***

The applicant has proposed a full turn access on Walton Street and a one way system in front of the Motherhouse that allows a right out and right in only. This was proposed to address concerns about congestion and safety in Stevens Avenue and direct vehicles to the signaled turn locations. The circulation is shown in Plan P7 and at right:



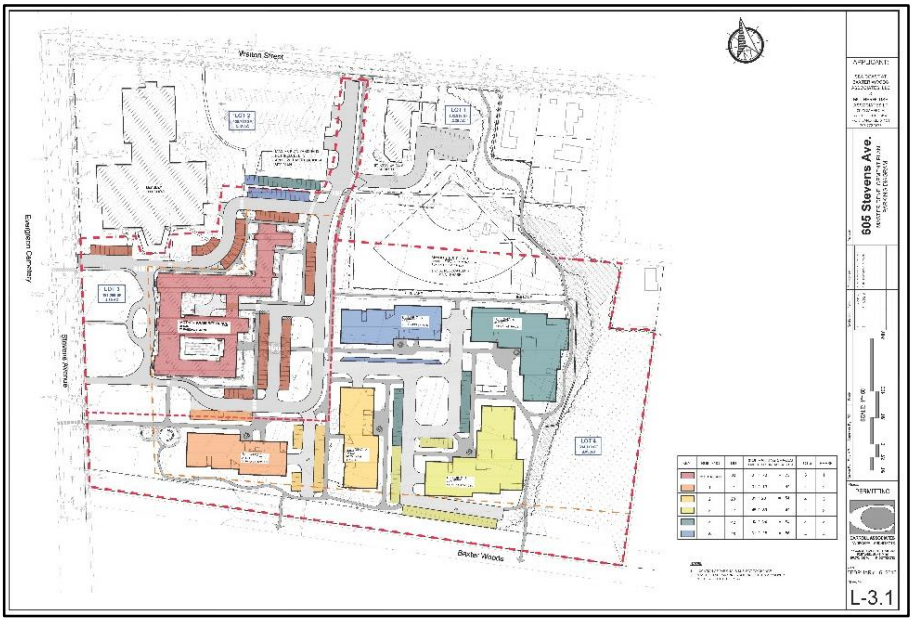
Circulation Plan (Plan P7)

Tom Errico, the Traffic Engineering Reviewer, comments (Att 2):

· *City staff continues to review and provide comments on pedestrian, bicycle, and transit improvements in conjunction with this project. In conjunction with the Motherhouse project, improvements associated with transit and crosswalks (location and ADA compliance) were required. The MDP includes a relocated crosswalk location and associated links that are based on the discussions with the City and METRO.*

- ***Parking***

The Parking Diagram (Plan P8 and at right) shows a total of 395 parking spaces, of which 212 spaces are on the surface and 183 are beneath the buildings.



The allocation of the surface parking is shown as color-coded on the Parking Diagram.

The proposals outlined in the Master Development Plan are based on the approved parking ratio for the Motherhouse (73 dedicated parking spaces for the 88 units) and on the zoning requirement for the rest of the area (2 parking spaces per unit).

The objective is to ensure that the proposed parking levels will not result in overflow parking to streets outside of the site. Staff generally consider that the parking is adequate, but would suggest that this be monitored and that the later phases be revised to address the actual parking demands.

- ***Utilities; Stormwater; other***

These aspects will be covered in the second PB Workshop, although it should be noted that the Peer Engineer David Senus is generally in agreement with the approach being taken to stormwater management (Att. 3)..

l. Designed as to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials, architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located;

Staff comments: The submission in this PB Memo includes Elevations (Plan P11), Renderings giving an indication of architecture and materials (Plan P12) and existing and perspective views from three vantage points (Plan P13). These are under review, and it is anticipated that additional material will be submitted as requested, with all of the submissions to be discussed in detail at the second PB Workshop.

m. *Inclusive of provisions for the ownership and maintenance of usable open space as appropriate;*

Staff comments: The submission includes the draft Condominium Documents that outline the management arrangements for the MDP area.

n. For areas proposed as future development phase(s), the proposed interim conditions shall be managed and maintained to ensure stable, safe and attractive site conditions.

Staff comments: The applicant has submitted a Phasing Diagram as extracted below (Plan P5):

XI. NEXT STEPS

1. Address staff, Planning Board and public comments;
2. Submit further information as outlined in the PB Memorandum;
3. Revise proposals for consideration at a second PB Workshop in April.

ATTACHMENTS

MEMORANDUM ATTACHMENTS

1. Fire Department comments
2. Traffic Engineer comments
3. Peer engineer Comments
4. Department of Public Services comments
5. City Arborist comments
6. Conceptual Site Plan shown to PB and CC at Rezone Hearings 2015
7. Lots AND zoning data table based on R5A zone boundaries
8. Dimensional Requirements of the R5A Zone

PUBLIC COMMENTS (None received to date)

APPLICANT'S SUBMITTAL

A. Master Development Plan Development Review Application 2.1.2016 (+see amended data sheet)
B. Cover Letter and Narrative (from Rick Licht, Licht Env Design) 2.16.2016
C. RTI
D. Draft Condo Docs

APPLICANT'S SUBMITTAL (CONTINUED)

E. Financial Capability
F. Utilities
G. Neighborhood Meeting Invitation
H. Traffic Impact Study

PLANS

P1. Cover Sheet
P2 Draft Subdivision Plat
P3 Overall Existing Conditions Plan
P4 Neighborhood Context Plan
P5 Phasing Diagram
P6 Conceptual Site Plan (full build out)
P7 Circulation Plan (full build out)
P8 Parking Diagram (full build out)
P9 Open space Calculations (full build out)
P10 Concept Stormwater and Utilities Plan (full build out)
P11 Elevations (3 sheets)
P12 Renderings of alternative indicative materials
P13 Existing & Proposed Perspective Views

Att. 1

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2016-033

Date: 3/17/2016

Comments Submitted by: Keith Gautreau/Fire on 3/17/2016

Had a preliminary meeting with the developers and architects and emergency access to the larger proposed building in the rear of the project had limited fire department emergency vehicle access. Possibly an additional fire lane would address this access problem. The applicant will propose something to be reviewed by the Authority Having Jurisdiction.

Comments Submitted by: Keith Gautreau/Fire on 3/17/2016

We mentioned that a proposed new private hydrant could be located at the intersection of the new access roads.

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

605 Stevens Avenue Master Development Plan - Initial Traffic Review Overview

1 message

Tom Errico <thomas.errico@tylin.com> Thu, Mar 17, 2016 at 1:37 PM
To: Jean Fraser <jf@portlandmaine.gov>
Cc: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Jeff Tarling <JST@portlandmaine.gov>

Hi Jean – In advance of next Tuesday's Planning Board Workshop I have provided a summary of current traffic review items in conjunction with the above project.

- The applicant submitted a preliminary trip generation analysis that was based upon data from the Trip Generation Manual, Institute of Transportation of Engineers (ITE). The estimate was based upon Land Use Code 252 – Senior Adult Housing. I requested additional information on the ITE Land Use development type and is the data based upon current developments. Additionally, I requested the applicant provide local data for comparison. The applicant provided information that indicates the most recent publication provided by ITE does include current developments sites. Additionally, the applicant provided actual trip generation data collected at the Highlands in Topsham, which indicates similar trip levels as ITE. Based upon the applicant's analysis the project would be expected to generate 97 trips entering and exiting during the Weekday AM Peak hour and 87 trips entering and exiting during the Weekday PM Peak hour.

- A meeting with the applicant was held on March 9, 2016 to discuss the outcome of the trip generation analysis and for the City to provide guidance on the study area for a traffic impact study.

- Based upon the trip generation estimate, the project does not meet trip threshold requirements for a Traffic Movement Permit (TMP). The TMP threshold is 100 trips. Please note the following:

- During the Rezoning review process there were trip generation estimates that indicated a TMP would be required. That conclusion was based upon a development scenario with a greater number of dwelling units.

- Given that this project will be constructed in phases, I have recommended that a traffic monitoring study be required as a condition of approval with the intent of surveying actual traffic levels following occupancy of each phase, and if that study identifies higher trip generation levels, a TMP may be needed.

- The applicant is responsible for the preparation of a comprehensive traffic impact study for the proposed project. A traffic study was submitted on March 15, 2016. The traffic impact study reviewed impacts to the public street system including the Stevens Avenue/Walton Street, Stevens Avenue/Pleasant Avenue, Forest Avenue/Walton Street and Site Drive intersections. This type of study would likely be the same under a TMP submittal. Preliminary comments will be provided at the Workshop on March 22, 2016.

- City staff continues to review and provide comments on pedestrian, bicycle, and transit improvements in conjunction with this project. In conjunction with the Motherhouse project, improvements associated with transit and crosswalks (location and ADA compliance) were required. The MDP includes a relocated crosswalk location and associated links that are based on the discussions with the City and METRO.

- On-site traffic circulation and parking will be closely reviewed particularly as it relates to interaction with McAuley School (both typical school days and during events).

- The applicant will be requested to confirm the measures that will be implemented to reduce vehicle trips, such as car share vehicles; van service for local trips; bicycle facilities, etc. that would be considered to be a component of a Senior Housing development that would have been reflected in the developments surveyed by ITE for use in estimating trip generation.

Please let me know if you have any questions.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL T.Y. Lin International

12 Northbrook Drive

Falmouth, ME 04105

207.781.4721 (main)

207.347.4354 (direct)

207.400.0719 (mobile)

207.781.4753 (fax)

thomas.errico@tylin.com

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www.woodardcurran.com

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T 207.774.2112
F 207.774.6635

Att. 3

MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, PE
DATE: March 17, 2016
RE: 605 Stevens Ave – Master Development Plan Application

Woodard & Curran has reviewed the initial application materials for a Master Development Plan for a proposed senior living / active adult community at the former Sisters of Mercy campus located at 605 Stevens Avenue. We also attended a meeting with the Applicant and their consultant team on February 24, 2016.

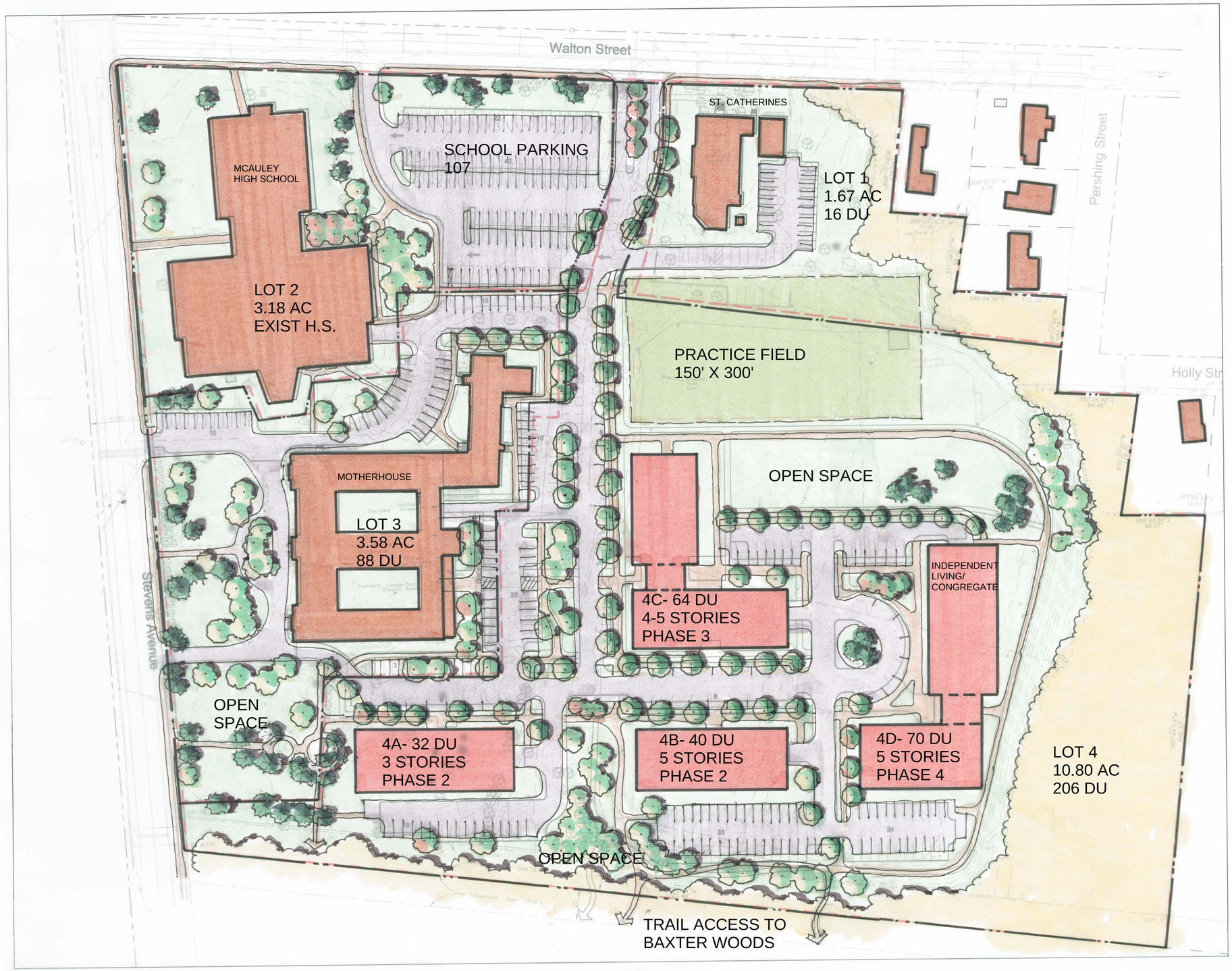
Documents Reviewed by Woodard & Curran

- Master Development Plan Application and Narrative prepared by Licht Environmental Design, dated February 16, 2016.
- Master Plan Design Set, sheets G-1, C-1 through C-3, and L-1 through L-4, prepared by Titcomb Associates and Carroll Associates, dated February 16, 2016.

Comments

1. At the time of our meeting on February 24th, the consultant team was continuing to follow up with utility companies to ensure that the approach to utility service connections to Stevens Ave (Gas & Water) and Walton Street (Sewer & Electrical) were suitable as initially presented. The Design team was awaiting updated capacity to serve letters from these utility companies, and was actively working on sizing utility stub-ins across the current Motherhouse development site to ensure that the utility feeds were adequately sized to accommodate the overall development (the full build-out of the Master Plan). The Applicant's approach to utility design for the overall Master Development Plan is acceptable; we await additional information on proposed utility service sizes and confirmation of ability to serve.
2. The approach to stormwater management for the site is acceptable as presented in the initial Master Development Plan submittal and as described by the consultant team at our February 24th meeting. The proposal presents a Low Impact Development (LID) approach to stormwater management, seeking to treat and infiltrate stormwater at multiple locations close to the runoff source, and attempting to match the pre- and post- development hydrological conditions. The Applicant is aware of the importance of not increasing the discharge rate into Baxter Woods as a result of the development, and maintaining the existing discharge locations from the site. The Applicant's engineer has proposed to develop a broad HydroCAD model for the site and to identify the conceptual size and location of stormwater BMP's on the site. We await this additional information, and find the approach as presented to be in conformance with City of Portland and State of Maine Stormwater Standards.

Att. 6



SCALE: 1"= 50'

500' 25' 0' 50' 100' 200'

605 Stevens Avenue

CONCEPTUAL MASTER PLAN

Att. 7

605 Stevens Avenue, Portland - Residential Density Computations **Lots 3 & 4 V13**

07-01-15 LED

PRUD & MULTIPLEX/MULTIFAMILY ANALYSIS

Parcel ID (BASED ON 06-24-15 UPDATED SITE PLAN	**Gross Acreage (Ac.)**	**R5A ESTIMATED NRA DEDUCTS per § 14-47 as AMENDED 06-15-15**	**LOT 3 - MOTHERHOUSE-MULTIFAMILY/ MULTIPLEX**		**LOT 4-FIELDS MULTIFAMILY/ MULTIPLEX**		**LOT 4 - FIELDS PRUD**	
		Gross Area (ac.)	4.39		9.05		9.05	
		(s.f.)	191,066		394,110		394,110	
		Zone	R5	R5A	R5	R5A	R5	R5A
		Proposed Area in Ea. Zone (Ac.)	1.73	2.66	4.20	4.85	4.20	4.85
Lot 1 St. Catherines	2.36	Deducts:						
Lot 2 McAuley HS	3.18	A. Exist. watercourses	0	0	0	0	0	0
Lot 3 Motherhouse	4.39	B. Wetlands & Slopes	0	0	0	0.25	1.66	0.25
Lot 4 Fields/Stevens Ave.	9.05							
Total Acreage	**18.98**	*Deducts Total:*	0	0	0	0.25	1.66	0.25
		NET LAND AREA (Gross Ac.- Deducts) (Ac.)	*1.73*	*2.66*	*4.20*	*4.60*	*2.54*	*4.60*
		MULTIPLEX UNITS PERMITTED	16	72	30	125	36	125
		TOTAL	88		155		161	

TOTAL LOT 3 + 4 PRUD **249**

TOTAL LOT 3 +4 MULTI **243**

Notes:

1. Under Multiplex Analysis: R5 density is 1 unit per 4,500 sf **Gross** ac. with 250 ft frontage (Lot 3) and 1 unit per 6,000 sf Gross ac. with < 250 ft. frontage (Lot 4) per (§ 14.117(a.) 2.)
2. Under Multifamily Analysis: R5A density is 1 unit per 1600 sf **NET** ac. based on Amended § 14-47 Net Land Area def. of 06-15-15
3. Under PRUD Analysis: R5 density is 1 unit per 3000/sf **NET** ac and R5A is 1 unit per 1600 sf **NET** ac.
4. No affordable housing multiplex density bonuses per §14-488 applied to Motherhouse Lot 3

R5A Zone - Extract

Sec. 14-130. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, lots in the R-5A zone shall meet or exceed the following requirements:

Minimum Lot Size	Residential(Single-, two-and three-family dwellings): 6,000 SF and a maximum lot size up to 2 acres 1
	Planned residential unit development (PRUD), multifamily development of 4 or more dwelling units, and Congregate Care: 2 acres gross area
	Intermediate, extended or long-term care facilities: 1 1/2 acres.
Min. Lot Area per D.U.	Single-, two-and three-family dwellings: 1,600 SF.
	Planned residential unit development (PRUD), Congregate Care and Multifamily development of 4 or more dwelling units: 1600 SF of net land area.
Min. Lot Area per Resident	*Minimum land area per intermediate care facility resident:* 8,000 SF gross land area for the first thirty-five (35) residents, plus three hundred fifty (350) square feet for each additional resident.
Min. Street Frontage	50 feet.

1 A lot in an unsewered residential district shall meet the provisions of the state Minimum Lot Size Law, 12 M.R.S.A. Section 4807-A, or the applicable zoning lot size, whichever is the largest. Except as provided for lots of record in section 14-433 (lots of record and accessory structure setbacks for existing buildings) of this article.

Min. Yard Dimensions for Single-, two-and three-family dwellings2	1.*Front yard:* Principal or accessory structures: 25 feet. 2.*Rear yard:* a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet: 25 feet. b. Accessory detached structures with a ground coverage of one hundred and forty-four (144) square feet or less: 5 feet. Setbacks for swimming pools shall be as provided for in section 14-432 (swimming pools) of this article. (continued) 3. *Side yard:* a. Principal or accessory structures with ground coverage greater than one hundred (100) square feet: *Height of Structure* *Required Side Yard* 1 story . . . . . 10 feet 1 1/2 stories . . . . . 10 feet 2 stories . . . . . 14 feet 2 1/2 stories . . . . . 16 feet The width of one (1) side yard may be reduced one (1) foot for every foot that the other side yard is correspondingly increased, but no side yard shall be less than ten (10) feet. In the case of a lot of record existing as of June 5, 1957, and held under separate and distinct ownership from adjacent lots, the required side yard may be reduced in order to provide a buildable width of up to twenty-four (24) feet, but in no case shall the resulting side yards be less than ten (10) feet. b. Accessory detached structures with ground coverage of one hundred and forty-four(144) square feet or less: 5 feet. 4. *Side setback on side streets:* Principal or accessory structures: 20 feet.

2 Yard dimensions include setbacks of structures from property lines and

Maximum Structure Height	Principal residential (single, two and three-family) or attached accessory structure: 35 feet.
	Accessory detached structure: 18 feet.
	Principal or attached accessory structure for PRUD, Multifamily development of 4 or more dwelling units, Congregate Care and Intermediate, extended or long-term care facilities: 55 feet.
Max. Lot Coverage	30%
Minimum Lot Width	60 feet
Minimum building setback from external subdivision property lines	PRUD, multifamily development of 4 or more dwelling units, Congregate Care, and Intermediate, extended or long-term care: a. Building length of one hundred (100) feet or less: 25 feet. b. Building length of greater than one hundred (100) feet: 35 feet.
Minimum recreation open space area	PRUD, multifamily development of 4 or more dwelling units, and Congregate Care: 200 SF per dwelling unit or living unit of common area designated on the site for recreation purposes.

(Ord. No. 537-84, 5-7-84; Ord. No. 84-88, § 4, 7-19-88; Ord. No. 58-97, § 2, 8-18-97; Ord. No. 165-97, § 5, 12-1-97; Ord. No. 131-08/09, 12-15-08; Ord. No. 278-09/10, 7-19-10; Ord. 276-14/15, 6-15-2015)

---

setbacks of structures from one another. No structure shall occupy the minimum yard of another structure.

Att. A

Portland, Maine | Yes. Life's good here.

Jeff Levine, AICP, Director
Planning & Urban Development Department

Electronic Signature and Fee Payment Confirmation

Notice: Your electronic signature is considered a legal signature per state law.

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. You are also signifying your intent on paying your fees by the opportunities below.

I, the undersigned, intend and acknowledge that no Site Plan or Historic Preservation Applications can be reviewed until payment of appropriate application fees are ***paid in full*** to the Inspections Office, City of Portland Maine by method noted below:

☐ Within 24-48 hours, once my complete application and corresponding paperwork has been electronically delivered, I intend to **call the Inspections Office** at 207-874-8703 and speak to an administrative representative and provide a credit/debit card over the phone.

☒ Within 24-48 hours, once my application and corresponding paperwork has been electronically delivered, I intend to **call the Inspections Office** at 207-874-8703 and speak to an administrative representative and provide a credit/debit card over the phone.

☐ I intend to deliver a payment method through the U.S. Postal Service mail once my application paperwork has been electronically delivered.

_____ _____
Applicant Signature: Date:

_____ _____
I have provided digital copies and sent them on: Date:

NOTE: All electronic paperwork must be delivered to buildinginspections@portlandmaine.gov or by physical means i.e. a thumb drive or CD to the Inspections Office, City Hall, 3rd Floor, Room 315.

389 Congress Street * Portland Maine 04101-3509 * Phone: (207) 874-8703 * Fax: (207) 874-8716
http://www.portlandmaine.gov/planning/buildinsp.asp * E-Mail: buildinginspections@portlandmaine.gov

Master Development Plan
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 to be used for a Master Development 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.

Purpose of a Master Development Plan:

- The purpose of a Master Development Plan is to provide for a mix of land uses at designated locations to achieve a land development responsive to the assets of a site. A Master Development Plan is a well-integrated development in terms of land uses, functional activities, and major design elements such as buildings, roads, utilities, drainage systems and open space. The Master Development Plan is deemed appropriate to large scale mixed use projects that are intended to be developed in phases. The Master Development Plan shall be reviewed by the Planning Board and may be reviewed independently or concurrently with review of a Level III site plan application for a phased development.

A Master Development Plan is applicable as follows:

- A Master Development Plan is applicable for a site with one acre or larger in cumulative lot area that is designed as a cohesive and integral development program consisting of multiple buildings and associated site improvements proposed to be built in phases.
- The Master Development Plan option shall not apply in residential zones, except for institutional uses.

Planning Board Decision:

- A Master Development Plan approval shall not be construed as final authorization of the development. An approval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the Master Development approval remains valid (6 years from date of approval), including permissible extensions if granted (two 2-year extensions may be granted based upon criteria). All Level III site plans for each phase shall be in general conformance with the Master Development Plan.

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

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

Updated: April 23, 2014

PROJECT NAME: 605 Stevens Avenue

PROPOSED DEVELOPMENT ADDRESS:

605 Stevens Avenue

PROJECT DESCRIPTION:

Master planned Senior Housing community consisting of 88 affordable and market rate apartments created through renovation of the former St. Joseph's Convent (Lot 3) and new construction of 161 market rate condominiums to be located on land directly behind and south of the convent building (Lot 4)

CHART/BLOCK/LOT: 135 X003/ 136-E006001/ 143-F004/ 144-B001

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Kevin Bunker/ Matthew Teare Business Name, if applicable: Seacoast at Baxter Woods,LLC Address: 100 Commercial St, Suite 414 City/State : Portland, ME Zip Code: 04101	**Applicant Contact Information** Work # Kevin Bunker Matthew Teare Home# 207-766-1632 (c) 207-837-2418(c) Cell # Fax# e-mail: kbunker@gmail.com mteare@highlandgreenlifestyle.com
Owner – (if different from Applicant) Name: St. Joseph'sConvent and Hospital C/O Sisters of Mercy of the Americas Northeast Community, Inc. Address: 15 Highland View Road City/State : Cumberland, RI Zip Code: 02864	**Owner Contact Information** Work # Attn: Sister Lindora Cabral Home# Cell # Fax# 207-333-6450 e-mail: lcabral@mercyne.org
Agent/ Representative Name: Frederic (Rick) Licht, PE, LSE Licht Environmental Design Address: 35 Fran Circle City/State : Gray, ME Zip Code: 04039	**Agent/Representative Contact information** Work # Cell # e-mail:
Billing Information Name: Matthew Teare SeaCoast at Baxter Woods Associates, LLC Address: 100 Commercial Street, Suite 414 City/State : Portland, ME Zip Code: 04101	**Billing Information** Work # Cell # 207-837-2418 Fax# e-mail: mteare@highlandgreenlifestyle.com

Updated: April 23, 2014

Engineer	Engineer Contact Information
Name: Andrew Johnston Stantec,Inc. Address: 778 Main Street, Suite 8 South Portland, ME 04106 City/State : Zip Code:	Work # 207-775-1121 Cell # Fax# 207-879-0896 e-mail: ajohnston @fstinc.com
Surveyor	**Surveyor Contact Information**
Name: David Titcomb, PLS Titcomb Associates Address: 133 Gray Road Falmouth, ME 04105 City/State : Zip Code:	Work # 207-797-9199 Cell # 207-797-9018 Fax# e-mail: dtitcomb@titcombsurvey.com
Architect	**Architect Contact Information**
Name: David Lloyd Archtype 48 Union Wharf Portland, ME 04101 Address: Patrick Carroll Carroll Associates City/State : 217 Commercial St, Portland, ME 04101 Zip Code:	Work # Archtype- 207-772-6022 (w) 207-772-4056 (f) Cell # Carroll Associates Fax# 207-772-1552(w) 207-772-0712(f) e-mail: lloyd@archtype.com pcarroll@carroll-assoc.com
Attorney	**Attorney Contact Information**
Name: Ron Epstein/ Natalie Burns Jensen, Baird, Gardner, and Henry Address: 10Free Street, PO Box 04112 Portland, ME 04112 City/State : Zip Code:	Work # 207-775-7271 Cell # Fax# 207-775-7935 e-mail: repstein@jbgh.com nburns@jbgh.com

APPLICATION FEES:
Check all reviews that apply. (Payment may be made by Credit Card, Cash or Check payable to the City of Portland.)

Master Development Plan (check applicable reviews)	The City invoices separately for the following:
X Application Fee ($1,000.00)	• Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($40.00 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.

APPLICATION SUBMISSION:

1. All site plans and written application materials must be submitted electronically on a CD or thumb drive with each plan submitted as separate files, with individual file which can be found on the **Electronic Plan and Document Submittal** page of the City's website at http://me-portland.civicplus.com/764/Electronic-Plan-and-Document-Submittal

2. In addition, one (1) paper set of the plans (full size), one (1) paper set of plans (11 x 17), paper copy of written materials, and the application fee must be submitted to the Building Inspections Office to start the review process.

The application must be complete, including but not limited to the contact information, project data, application checklists, wastewater capacity, plan for fire department review, and applicant signature. The submissions shall include one (1) paper packet with folded plans containing the following materials:

1. **One (1) full size site plans** that must be **folded.**
2. One (1) copy of all written materials or as follows, unless otherwise noted:
   a. Application form that is completed and signed.
   b. Cover letter stating the nature of the project.
   c. All Written Submittals (Sec. 14-525 2. (c), including evidence of right, title and interest.
3. A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet.
4. Plans and maps based upon the boundary survey and containing the information found in the attached sample plan checklist.
5. One (1) set of plans reduced to 11 x 17.

Please refer to the application checklist (attached) for a detailed list of submission requirements.

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 Master Development Plan review. It is not a permit to begin construction. An approved Level III 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:**
	02/16/2016

PROJECT DATA

The following information is required where applicable, in order complete the application.

	Lot 3	Lot 4	
Total Area of Site	191,066	394,110	sq. ft.
Proposed Total Disturbed Area of the Site	135,036	268,100	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)		0	sq. ft.
Impervious Area (Total Proposed)	111,050	131,500	sq. ft.
Building Ground Floor Area and Total Floor Area			
Building Footprint (Total Existing)	24,065	0	sq. ft.
Building Footprint (Total Proposed)	24,065	74,188	sq. ft.
Floor Area (Total Existing)	102,241	0	sq. ft.
Floor Area (Total Proposed)	102,241	349,626	sq. ft.
Zoning			
Existing	R-5/ R-5A	R-5/ R-5A	
Proposed, if applicable	NA	NA	
Land Use			
Existing	Former Convent and Campus		
Proposed	Senior Living Campus		
Residential, If applicable			
# Residential Units (Total Existing)	0	0	
# Residential Units (Total Proposed)	88	161	
# Number of Lots (Total Proposed)	1	1	
# Affordable Housing Units (Total Proposed)	66	0	
Proposed Bedroom Mix			
# Efficiency Units (Total Proposed)	68	0	
# One-Bedroom Units (Total Proposed)	20	0	
# Two-Bedroom Units (Total Proposed)	0	161	
# Three-Bedroom Units (Total Proposed)	0	0	
Parking Spaces			
# Parking Spaces (Total Existing)	Lot 3- 34+/-	Campus = +/- 155	
# Parking Spaces (Total Proposed)	77	322 (139 surface/ 183 covered)	
# Handicapped Spaces (Total Proposed)	9	10	
Bicycle Parking Spaces			
# Bicycle Spaces (Total Existing)	0		
# Bicycle Spaces (Total Proposed)	12 ext/ 24 int= 36	20 ext + 45 int = 65	
Estimated Cost of Project		TBD	

Updated: April 23, 2014

MASTER DEVELOPMENT PLAN SUBMISSIONS			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST Sec. 14-527 (c) and (e)**
x		1	Completed Application form
x		1	Application fees
x		1	Written description of project
x		1	A written statement and/or plan as to the general impact of the proposed Master Development plan upon the area, relationship to surrounding properties, and measures to create appropriate transitions and access to abutting public properties and neighboring tracts.
x		1	Evidence of right, title and interest
NA		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	General statements concerning storm water management techniques.
Pending		1	Traffic Analysis and recommendations prepared by a registered professional engineer, including current traffic counts, existing street capacity, traffic generation projections, and ability to absorb the increased traffic. If Traffic Movement Permit applies, the TMP submissions and review supersede. (Section 14-527 (e) xii)
x		1	Utilities analysis and recommendations prepared by registered professional engineer. (see utility plan below) Analysis shall assess capacity, identify deficiencies and recommend improvements, including timing, funding mechanisms and coordination with City (14-527 (e) xiii
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST Sec. 14-527 (c) and (e)**
x		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
x		1	**Master Development Plan Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase) – scale not less than 1 inch equaling 50 feet**
x		Neighborhood context map, at a scale not less than 1 inch 100 feet	
x		Approximate boundary lines of existing and proposed lots with areas and dimensions	
x		Plan show north arrow, date, scale, legend, title Master Development Concept Site Plan, followed by project name, applicant, engineer, designer, and/or agents	
x		For residential areas, proposed density, lot configuration, circulation and plot plan	
x		Analysis of natural features of the site, including natural waterways, wetlands, floodplains, topography, soil conditions and other natural features	
x		Analysis of designated view corridors, historic resources, and archeological resources associated with the site	
x		Existing/proposed buildings and other significant structures, building groupings, exterior building elevations and entrances, parking areas and other significant physical features of the site	

Updated: April 23, 2014

Pending		Context drawings, perspective renderings, photographic montages, or computer generated graphics depicting the proposed development within the surrounding building and environmental context
Pending		Building elevation drawings shall include: • Illustration of all sides of the structures
		• Views of major entries or prominent building features
		• Illustration of building articulation and elements
		• Building finish composition
Pending		• Pedestrian and streetscape elements of the Master Development Plan
Pending		Digital 3-D model tied to specific location that is submitted as a KML, KMZ, DXF or DWG file on a CD or DVD or such format as approved by the Planning Authority (Sec. 14527 (e)2)
x		Major circulation patterns surrounding and serving the site, existing and proposed street lines, ways, easement and public areas within or next to the site
x		Major landscaping elements, features, open space, and plans for preservation of natural features
x		Analysis of the public safety services needed to support the Master Development Plan
x		Analysis of the anticipated impacts on the public school system to support the Master Development Plan
x		Generalized drainage plan for the site, drainage ways, flows, points of outfall and indicating impacts of development on affected drainage basins. Contour information at not less than 2 ft. intervals and document run-off characteristics
x		Inventory of existing utilities (storm water, sanitary, electrical , fire alarm boxes & lines, gas, water, lighting, curb and gutter and etc.) illustrating locations, sizes, diameters carrying capacity and present load

PORTLAND FIRE DEPARTMENT
SITE REVIEW
FIRE DEPARTMENT CHECKLIST

A separate drawing[s] shall be provided to the Portland Fire Department for all site plan reviews.

1. Name, address, telephone number of applicant.
2. Name address, telephone number of architect
3. Proposed uses of any structures [NFPA and IBC classification]
4. Square footage of all structures [total and per story]
5. Elevation of all structures
6. Proposed fire protection of all structures
   - ***As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)***
7. Hydrant locations
8. Water main[s] size and location
9. Access to all structures [min. 2 sides]
10. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.

Some structures may require Fire flows using annex H of NFPA 1

Updated: April 23, 2014

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Date: _____

Mr. Frank J. Brancely,
Senior Engineering Technician,
Phone #: (207) 874-8832,
Fax #: (207) 874-8852,
E-mail:fjb@portlandmaine.gov

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

Site Address: _____

Chart Block Lot Number: _____

Proposed Use: _____

Previous Use: _____

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)* ☐
- 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: _____

Owner/Developer Address: _____

Phone: _____ Fax: _____ E-mail: _____

Engineering Consultant Name: _____

Engineering Consultant Address: _____

Phone: _____ 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: _____ GPD

Peaking Factor/ 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)*

_____

(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: _____
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: _____ 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 below, or attached, as a separate sheet)

Notes, Comments or Calculation

A Guide to Holding Neighborhood Meetings
Portland, Maine

Planning and Urban Development Department
Planning Division and Planning Board

In order to improve communication between applicants and neighbors, the City of Portland requires applicants who are proposing certain types of development review projects, to hold a neighborhood meeting.

Developments requiring a neighborhood meeting

- Proposed map amendments, contract zones and zoning text amendments that would result in major development;
- Subdivisions of five or more units or lots;
- Master Development Plans; and
- Level III site plan proposals as defined in Section 14-523.

  (The Land Use Code, including Article II (Planning Board) and Article V (Site Plan – which contains the neighborhood meeting requirements), are available on the City's web site at www.portlandmaine.gov/citycode/chapter014.pdf)

Timing of meeting

- **Subdivisions of 5 or more units or lots, zone changes, contract zones, zoning text amendments and Level III site plans:**
  - Preliminary Site Plan - The meeting should be held within 30 calendar days of filing the application.
  - Final Site Plan – If only a final plan is submitted, the meeting should be held within 21 calendar days of filing the application and no less than 7 calendar days before the public hearing.
- **Master Plan Development:**
  - The meeting should be held within 30 calendar days of filing the application.
  - The meeting should be held on a date no less than 7 calendar days before a public workshop or public hearing.
  - The meeting shall not be combined with any required neighborhood meeting for the Level III applications.

Location of meeting

- The meeting should be held in the evening, during the week, at a convenient location within the Portland neighborhood surrounding the proposed site. Community meeting spaces at libraries, schools or other places of assembly are recommended. Neighborhood schools are usually available for evening meetings.
- Meetings should not be held on the same day as scheduled Planning Board or City Council meetings. The City Council generally meets on the 1st and 3rd Monday of each month and the Planning Board generally meets on the 2nd and 4th Tuesday of each month; however additional meetings may be scheduled. An updated schedule may be found on the City's website: www.portlandmaine.gov

Invitation List

- Property owners within 500 feet of the proposed development (1000 feet for proposed industrial subdivisions and industrial zone changes)
- Interested citizens and neighborhood groups.

The Planning Division provides the mailing labels. We require at least 48 hours notice to generate the mailing labels and a charge of $1.00 per sheet will be payable upon receipt of the labels. An electronic version (excel or word format) of the labels can also be e-mailed upon request.

A digital copy of the notice must be provided to the Planning Office (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner, which will then be forwarded to those on the interested citizen list who receive e-mail notices.

When to Send Invitations

- Invitations must be sent **no less than 10 days (to include weekends)** prior to the neighborhood meeting.
- Notices may be sent by regular mail and do not need to be sent by certified mail.

Notice Description

A recommended invitation format is included in this packet of material.

Attendance Sheet and Meeting Minutes

- Sign-in sheet must be circulated for those in attendance.
- Applicant shall take accurate minutes of the meeting.
- The sign-in sheet and minutes shall be submitted to the Planning Division.

A public hearing will not be scheduled until the meeting minutes and sign-up sheet are submitted to the Planning Division.

A Certification form is included with this packet to be completed and signed by the applicant.

Please call the Planning Division at 874-8721 or 874-8719 if you have any questions.

Attachments

1. Neighborhood Meeting Invitation Format
2. Neighborhood Meeting Certification

EXAMPLE: Neighborhood Meeting Invitation Format

Applicant/Consultant
Letterhead

(Date)

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a (development proposal) located at (location/number and street address).

Meeting Location: _____
Meeting Date: _____
Meeting Time: _____

(The City code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone changes) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.)

If you have any questions, please call (telephone number of applicant or consultant).

Sincerely,

(Applicant)

Note:
Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plans 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

EXAMPLE: Neighborhood Meeting Certification

I, (applicant/consultant) hereby certify that a neighborhood meeting was held on (date) at (location) at (time).

I also certify that on (date at least ten (10) days prior to the neighborhood meeting), 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,

_____ _____ (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

Att. B

LICHT
ENVIRONMENTAL DESIGN, LLC

February 16, 2016 J14.067

Ms. Barbara Barhydt
Development Review Manager
Planning and Urban Development Department
Planning Division
389 Congress Street, 4th Floor
Portland, Maine 04101

605 Stevens Avenue
Master Development Plan Preliminary Application
(CBL 135 X003, 136 E006001, 143 F004000, 144 B001000)

Dear Barbara:

We are pleased to submit this application for Master Plan Review of the former Sisters of Mercy campus located at 605 Stevens Avenue on behalf of Motherhouse Associates, LP (for the Motherhouse redevelopment project) and Sea Coast at Baxter Woods Associates, LLC (for the market rate active adult community). Our team is seeking to redevelop the Motherhouse and the surrounding grounds into a senior living / active adult community. This Master Plan application comes after a rezoning of portions of the campus and level III site plan approval of the Motherhouse project in 2015.

As part of the earlier zoning and approval process, our team agreed to participate in the Master Plan Review process due to our lengthy and positive experience with master planning in other Maine communities. Sea Coast Management has utilized a master plan process to update and expand the OceanView at Falmouth Retirement Community since the passage of a special overlay district by the Town of Falmouth in the late 1990's. In Topsham, the Highland Green active adult community has utilized a master planning process with both the Town of Topsham and the Maine Department of Environmental Protection since 2000. The Developers Collaborative utilized a similar approach with its redevelopment of the historic Brick Hill campus located in South Portland.

In each example, the master planning process allowed both the development team and the local planning authorities to take a holistic, comprehensive approach to the development and this generally leads to a better, more integrated design. Neighbors and other stakeholders can also participate in the master planning process to ensure that their concerns and input are addressed in a comprehensive manner with no surprises during future phases of development. Once the master plan is approved, it is quick and efficient to review and approve the subsequent, specific phases of the development. The planning board knows how the specific phases fit into the overall plan for the development and the development team knows that it will receive approval of subsequent phases in a timely manner as long as they remain generally consistent with the master plan.

As we begin this master planning process, we note that the City of Portland's requirements for a master plan application are quite detailed. We look forward to working with the City, neighbors, various planning consultants and other stakeholders during this evolutionary process. This first application is simple and basic. As we proceed with the numerous meetings and complete the various planning studies, the application and the details of the master plan will evolve until a detailed blueprint for the redevelopment of the campus.

This application is being submitted pursuant to the Portland Land Use Code Articles IV Subdivision and Article V Site Plan Sections 14-523 through 14-527 - Master Development Plan review. The project proposes development of a residential senior living campus on the grounds of the former Joseph's Convent and McAuley High School fields. This application and the following sections follow the MDP Application Checklist with additional information added as deemed necessary to provide a thorough summary of the proposed project.

PROJECT DESCRIPTION

The former Sisters of Mercy campus is located at the corner of Stevens Avenue and Walton Streets in the Deering Center neighborhood of Portland. The entire campus is 18.98 acres and includes Catherine McAuley High School (Lot 1), Saint Catherine's residence hall (Lot 2), Saint Joseph's Convent (the Motherhouse / Lot 3) and the surrounding land (Lot 4). This Master Development Plan (MDP) application commences the formal review process for the creation of a senior living / active adult community on Lot 4 and the integration of the Lot 3 Motherhouse into the overall campus masterplan. At this time, the status of the school and St. Catherine's is unchanged and those elements of the property will remain "as is" for the purpose of the master plan but will be integrated in terms of access, parking and circulation. The master planning process will focus on the redevelopment and repurposing of the historic Motherhouse and its surrounding land. This land, rather than the entire campus, was rezoned in 2015 from the R-5 zone to the R-5A zone.

The redevelopment of the iconic Motherhouse into a mixed income project of affordable and market rate senior housing is the first phase of the project and the centerpiece of the master planned campus. The Motherhouse project will be financed in part through Low Income Housing Tax Credits (LIHTC) and Historic Tax Credits (HTC). Sixty six (66) apartments will be offered at affordable rents and twenty two (22) will be offered at market rate rents. Consistent with the parameters of the Maine State Housing Authority's LIHTC program, the residents can access the assistance of a part-time resident service coordinator but the services will otherwise be minimal. However, there will be an abundance of shared common areas to facilitate congregate living at the Motherhouse.

The second component of the community will be a market rate active adult community with approximately 160 apartments located in new buildings to the side and rear of the Motherhouse. This community will target younger seniors from age 55 to 75 looking to simplify their living arrangements and spend more time enjoying an active lifestyle. The general idea is to offer younger seniors a wide array of senior-friendly apartment living options that include a number of shared amenities and spaces. This is a concept generally known as congregate living for independent residents. Layered on top of the physical design of the community is an array of services – some included / some ala carte -- that support healthy, active and independent living as residents age.

The following are some of the important aspects of the active adult market rate community:

- The five apartment buildings will be marketed, pre-sold and constructed in phases to ensure the financial stability of the new community. Each building will include parking underneath the building to reduce surface parking and to provide an attractive amenity to residents. The buildings will range from three to four floors in height not including the under building parking.
- The apartments will be sold as condominiums and include both one and two bedroom models. They will all be single level, senior friendly apartments designed to accommodate a residents changing needs as they age.
- The community will include a series of amenities and common spaces designed to encourage an active, healthy lifestyle. These amenities may include common living rooms

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and libraries, a fitness center, a café, a theater, a conference room, a private dining room and a variety of outdoor common spaces.

- The service component of the community will include comprehensive building maintenance and concierge services from housekeeping and laundry to fitness classes and transportation. As a residents need for support increases, the community will contract with an in-home providers of senior services – from homemaking assistance to personal care and assistance with the activities of daily living.

The design of the new campus is a careful balance of several important and sometimes competing elements. These elements include the preservation of the historic streetscape and view of the Motherhouse along Stevens Avenue; the preservation of a playing field for the school; and provision of an over-sized buffer along the property line with Baxter Woods. As a result, the new buildings are grouped in a close-knit neighborhood to the side and rear of the Motherhouse. This grouping of buildings and preservation of open spaces – combined with sidewalks, pathways, landscaping and hardscaping running throughout the campus and new buildings – will create an attractive campus setting.

The new community can also integrate the former Sisters of Mercy campus into the surrounding community as never before. Pathway connections with Baxter Woods can be re-established and the entire corridor cleaned up and landscaped. The large green spaces along Stevens Avenue can be literally opened up by establishing new entrances and/or removing fencing (consistent with the National Park Service Review); re-establishing proper and well-maintained landscaping; and creating new sitting areas. The entrance and parking areas along Walton Street will be upgraded, landscaped and maintained to ensure an attractive, safe and welcoming view of the new community.

AFFORDABILITY

At a time when the City of Portland is facing a serious challenge due to the lack of affordable housing, it is important to note that this project provides a significant contribution of housing. Of the 249 apartments planned for the site, 66 of those apartments are just under 25% are affordable per the terms of the Maine State Housing Authorities Low Income Tax Credit Program. Additionally, the remaining 22 market rate apartments in the Motherhouse are moderate in price.

In addition to the new apartments created with this project, the project is designed to appeal to older adults living throughout Portland and particularly in the off-peninsula neighborhoods. To the extent that individuals move to the new housing from these neighborhoods, numerous existing homes will become available for younger families. We believe this new project – and other like it – are an important step toward addressing the housing crises.

IMPACT ON SCHOOLS / SERVICES

The new community will have an impact on the local schools and services and it will be extremely positive. The Sea Coast senior communities are the number one tax payer in both Topsham and Falmouth – by far. This includes both residential and commercial taxpaying entities. A preliminary projection for the tax revenues from this project is approximately $900,000 per year. These tax revenues can be utilized in a number of ways and with instruments such as the TIF program to direct funds directly into the Deering Center neighborhood. In addition to tax revenues, our senior communities have been strong supporters of the local schools. This support includes intergenerational programs of all types and specific fundraising efforts to support the schools.

Another impact on the local community comes from general economic development. Seniors moving into a market rate community bring their savings and investments with them and reinvest it

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into the local community and its businesses and services. These seniors are affluent and the investment is significant – amounting to tens of millions of dollars. The significant, positive impact of senior communities was heralded by the Governor Angus King administration is an effort entitled "The Golden Opportunity".

An often repeated misconception of market rate senior communities is that they are a major drain on municipal services. In fact, the opposite is true. Senior communities utilize very few municipal services whiling paying significant amount of taxes. While this is partially due to the fact that they place no children in the schools, its extends to many other services as well. For example, we recently did an analysis of the fire and ambulance trip to our 175 home active adult community in Topsham, Maine. Records indicate that there were 17 emergency service visits over a six month period in 2014. This equates to just over 1 trip every 2 weeks.

Lastly, the design of the new buildings reduces and simplifies the burden placed on emergency responders. First, all of our buildings are fully covered by the modern, fully code compliant fire sprinkler systems. Second, there is a comprehensive life safety system in each building – from an emergency call system to security to all of the required smoke, fire and carbon monoxide detectors. Third, the size of the building requires that is designed and approved in conjunction with the State Fire Marshall's Office.

NEIGHBORHOOD CONTEXT

The Sisters of Mercy Convent and Campus have been located in Deering Center for well over 100 years. Its early neighbors included the remarkable greens spaces represented by Baxter Woods and Evergreen Cemetery but since those early days a truly diverse neighborhood has grown up around it. There is a wide variety of commercial, industrial, residential and institutional uses in the immediate vicinity in and around the campus. While the Motherhouse has long been an iconic presence along Stevens Avenue, this project provides an opportunity to fully realize the potential of the campus to become an attractive, integrated part of its surrounding community.

The first and most important element of the campus in terms of the surrounding community is the Motherhouse. The Sisters of Mercy have spent millions of dollars maintaining and studying a potential reuse of the Motherhouse since approximately 1995. The Motherhouse has been empty for the past 10 years but still requires over $200,000 annually to maintain. This project will renovate and repurpose the Motherhouse so that it will remain impressive and financially viable for the next 100 years. Equally important, it will continue to serve the Sisters of Mercy legacy of caring for those in the surrounding community.

There are several large housing, institutional and educational uses in direct proximity to the campus. These include the abutting 11 story Deering Pavilion, the University of New England, the Park Danforth, Saint Brigid School, Lincoln Middle School and Deering High School to name a few. Deering Pavilion, UNE and the Park Danforth are more institutional in practice and appearance while the schools form a remarkable continuum of education along Stevens Avenue.

The proposed campus – from the preserved Motherhouse to the McAuley School to the new senior housing – is an important and consistent part of this neighborhood. But while the larger entities are more institutional, the design of the proposed senior community will be more residential in nature. It will provide a smooth transition from the larger institutional and commercial buildings on the north end of Stevens Avenue and the nearby Forest Avenue to the residential neighborhoods that dominate in and around Deering Center. The new buildings will be shorter and smaller than both

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Deering Pavilion and the Motherhouse itself. Moreover, they will be set back from both Stevens Avenue and Walton Street.

An unlike the institutional and educational entities lining Stevens Avenue, the proposed senior community will be quiet and attractive. All seniors, including youthful seniors, generate significantly less traffic and parking than a young family or a business or a school. Additionally, it is the development team's intention that the campus is designed so that all parking will be contained on campus. This is accomplished in an attractive, sustainable manner but placing a significant amount of required parking under the apartment buildings.

Additionally, it is important that the new community properly integrate with and compliment the surrounding green spaces at Baxter Woods and Evergreen Cemetery. This is the most important element of the site design as it relates to neighborhood context. We believe this can be accomplished in three ways. First, the proposed new buildings will be grouped in a close-knit neighborhood to the side and the rear of the campus. This will provide significant green space and distance between the primary view sheds along Stevens and Walton Street. Second, an oversized buffer and planting will occur along the border with Baxter Woods. There is already a significant wooded buffer between the main pathways in Baxter Woods and the campus but clean up and additional landscaping will improve the appearance and enjoyment of this buffer area. Lastly, the campus will be opened up and integrated with the neighborhood as never before via a network of drives, sidewalks, pathways, hardscaping and landscaping. And the residents of the new community – along with family, friends and neighbors – can enjoy the campus.

Finally, we have heard from those who oppose the development that the proposed community is completely out of context with the surrounding residential neighborhoods. First, a review of the surrounding neighborhood indicates that is simply not true. There is a wide variety of residential, commercial and institutional uses in the neighborhood and they are housed a wide variety of buildings and settings. Second, and more importantly, to attempt design the campus so that it mimics the surrounding single family home neighborhoods is inadvisable. This would require covering the entire campus with streets and smaller homes and a proliferation of cars and parking throughout the campus and beyond. It would eliminate all green space and detract from the Motherhouse, the school and Baxter Woods. It would appear both out of place and out of time. The proposed design fits into the context of the existing campus. Moreover, it is a sustainable design with preserved open spaces, parking underneath and attractive buildings.

RIGHT, TITLE & INTEREST

The applicants have secured a Purchase Option for the campus from Saint Joseph's Convent and Hospital, included as *Attachment 1.*

The draft Declaration of Condominium and Declaration of Covenants and Easements for the Lot 3 Motherhouse are also included as Attachment 1.

STATE & FEDERAL APPROVALS

The project will develop 3 or more acres of impervious area meeting the thresholds for a Department of Environmental Protection Site Law permit. A formal DEP Permit is not required as the City Portland has delegated review and will review the project as part of the formal site plan submission.

No wetland impacts are anticipated for the project and no permit from the Corps of Engineers under Section 404 of the Clean Water Act will be required.

COMPLIANCE WITH ZONING

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The project site contains areas of R-5 and R-5A zone districts as a result of an extensive rezoning process that was adopted in 2015. All proposed building and site development is located entirely within the R-5A zone. A summary of the Space and Bulk requirements for Lot 4 is included on the Conceptual Site Plan (Sheet L-2). We believe that the project meets or exceeds all Spatial Standards for the R-5A Zone District.

EASEMENTS AND RIGHTS OF WAYS

Existing Easements: The existing site contains a 33-foot right of way easement along the southern property line at Baxter Woods deeded in 1908 by James Baxter as part of a 66-foot wide paper street. The applicants intend to preserve that right of way as a natural buffer subject to any rights or interests the City may have in the right of way.

The site is subject to an overhead utility line easement over Lot 1 to service the Motherhouse.

Proposed Easements: As a 4-lot subdivision and master planned site, cross-easements are typically required for shared utilities, access, stormwater management, etc. Shared easements for sewer, water and storm drainage are shown on the Subdivision Plat. It is anticipated that shared parking and access easements may be required between the subdivision lots which will be added to the updated subdivision plan for the campus.

A reciprocal easement agreement will b e created between Lots 3 and 4 providing covenants and restrictions as required.

The stormwater easement across Lot 4 will be conditioned to allow that storm drain line to be moved upon development of Lot 4 Senior Housing.

WAIVER REQUESTS

The following MDP Application waiver is requested:

a. Ordinance 14-527 (e) 1. – Scale of Context Map. We respectfully request a waiver of the plan scale of one inch = 100 ft. to one inch = 150 feet. This request is being made to fit the neighborhood context map on to a standard plan sheet size.

FINANCIAL AND TECHNICAL CAPACITY

a. Financing: A letter of Financial Capacity from from Bath Savings Institution is attached to this application as Exhibit 2.

b. Technical Capacity:

The development team for this project includes Sea Coast Management Company based in Falmouth, Maine; the Developers Collaborative of Portland, Maine; and a team of very qualified and experienced consultants.

Sea Coast Management Company is Maine's leading developer, owner and operator of market rate senior living communities including OceanView at Falmouth and Highland Green in Topsham. Over the last 30 years, our communities have grown and prospered. Some of their development related projects include:

- OceanView at Falmouth, a full service retirement community located in Falmouth, Maine.

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- Highland Green, an active adult community located in Topsham, Maine.
- The Highlands of Topsham, a full service retirement community located in Topsham, Maine.
- Granite Hill Estates, a full service retirement community located in Augusta, Maine.

Developers Collaborative of Portland is the leading developer of community-oriented smart growth projects with a strong emphasis on the creative use of tax credits to support the redevelopment of in-town historic buildings and sites. Many of their projects include the same qualities and challenges posed by the Motherhouse redevelopment project. Some of their development projects include:

- Nathan Clifford School, historic rehabilitation into market rate apartments, Portland, Maine
- Healy Terrace, historic rehabilitation of a former Catholic children's home in senior affordable apartments, Lewiston, ME
- Gilman School, historic rehabilitation into workforce housing, Lewiston, ME
- Brick Hill, redevelopment of the former Maine Youth Center campus, South Portland, ME

Our design team includes a seasoned team of the following professionals:

- Licht Environmental Design, LLC – Project Manager
- Carroll Associates – Master Planning and Landscape Architecture
- Stantec– Civil Engineering
- Archetype, PA –Architecture
- Maine Traffic Resources – Traffic Assessment
- Titcomb Associates – Surveying
- Tremont Preservation Services/ Christine Beard – Historical Consultant

9. STORMWATER MANAGEMENT

The project will take a Low Impact Development (LID) approach to stormwater management. This will focus on source capture, treatment and detention of runoff from newly developed areas of the site using a series of small, localized Best Management Practices (BMPs). The design approach is intended to mimic existing drainage patterns and maintain surface runoff and groundwater recharge rates at predevelopment levels. The project site is underlain by Adams series, coarse grained, sandy soils, providing ideal conditions for the use of infiltrating stormwater BMPs, similar to those used on the recently approved adjacent Motherhouse - McAuley project.

Several types of BMP will be proposed for use at the site, all of which are designed to fit with the site topography and be incorporated into the existing and proposed landscape features. These include small-scale planted rain gardens adjacent to the buildings, filtering drip edge filters to capture and treat roof runoff, and infiltration trenches along linear impervious edges with low pollutant loading potential. The use of pervious pavement sections is also an option particularly for lightly loaded parking areas. This approach will be vetted to ensure viability from a cost and maintenance perspective, but offers potential aesthetic value in addition to the stormwater treatment and detention benefits. All BMPs will be designed with underdrain and overflow outlets to a piped storm drain system. However, it is anticipated that during all but the largest storm events, the majority of runoff from the developed site will drain by infiltration to the underlying soils.

All stormwater BMPs will be designed to current State of Maine Chapter 500 Stormwater Law standards. The design will ensure that post-development surface runoff rates do not increase over

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the existing conditions for the 2-year, 10-year and 25-year design storm events, and the downstream discharge points from the new stormwater system will remain the same as currently exist at the site.

10. TRAFFIC ANALYSIS and PARKING

a. Traffic Analysis: The project traffic engineer, Diane Morabito. PE, PTOE of Maine Traffic Resources is preparing a traffic impact analysis for the proposed campus development of the additional 161 senior housing units together with the Motherhouse trips for the submission of a Traffic Movement Permit (TMP) application if the 100-200 pce trip rates are triggered. Trip generation data and study area limits will be reviewed with the City traffic consultant, Tom Errico of TYLin Internatiional as part of the scoping process.

   A scoping meeting and final traffic impact study and TMP Application will be provided as part of the Master Development review process.

b. Parking Summary: The proposed project envisions a mixture of covered and surface spaces to meet its parking demand. A total of 322 parking spaces are provided for residents and guests, a parking ration of 2.0 PS/ Dwelling Unit. The majority of parking is provided in the lower level of the buildings, allowing convenient and desirable parking for residents and freeing up a significant portion of the site for open space. This number meets the existing R-5A zoning requirement for Multiplex use.

   The project has always been envisioned as a campus, and there is great opportunity for the project to share parking needs with McAuley High School and the Motherhouse if necessary. The school needs are typically during daytime hours and residential parking is an evening activity, so the school could benefit for event parking and residents/ guests could utilize other on-site parking as needed.

11. UTILITIES ANALYSIS

The project proposes a comprehensive utility masterplan to provide the following utility services Appropriate utility easements will be provided as needed to service Lot 4 over Lots 1, 2 and 3. The final utility design will be submitted for the respective utility company approvals. The campus utility infrastructure improvements will be financed by the developers and coordinated with City staff with respect to sewer CSO's and street opening connections.

Refer to the Conceptual Stormwater and Utility Plan and *Attachment 3* for Letters of Serviceability.

1. Natural Gas – To be provided from Stevens Avenue with a new main servicing the Motherhouse and extending into Lot 4 to service the 5 new campus buildings.

2. Water – A new fire and domestic service will be connected from Stevens Ave.to the Motherhouse and extended into Lot 4. An main extension easement will be provided to the Portland Water District across Lot 3.

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3. Sanitary Sewer – An onsite 8 -inch sewer main services the existing Motherhouse and discharges to the City sewer in Walton Street. That main is expected to be utilized and upgraded as necessary to service the additional Lot 4 development. A new service connection and manhole at Walton Street will be installed as part of the Motherhouse project and coordinated with the Department of Public Services. Cross easements between Lots 2,3 and 4 will be provided and updated on the subdivision plan.

   The applicant has submitted the Wastewater Capacity Application and supporting flows to the Department of Public Services (DPS) for review with estimated flows of 6,776 gallons per day of water/wastewater projected for the Motherhouse development. Updated flow data will be provided to the DPS for the 161 unit Lot 3 development as part of the MDP review process.

4. Electric/Communications – Electric and communications service to the Motherhouse is currently provided from Walton Street via an overhead line and easement to the rear of the Motherhouse and Smith Wing. The approved LIII Motherhouse project will continue to use the overhead lines upgrading from single to 3-phase power and provide a pad mounted 3-phase transformer at the Motherhouse (refer to approved Motherhouse LIII Site Plans.)

   The Lot 4 campus development anticipates replacing the overhead lines from Walton Street with a new underground service and extending into Lot 4 from the new pad mounted transformer at the Motherhouse. The final utility design will be reviewed with Central Maine Power Company. Appropriate utility easements will be provided between the campus lots.

5 . Site Lighting – Site lighting has been approved for the Motherhouse project parking and pedestrian areas and access drive from Walton Street. A similar phased site lighting theme will be carried forward into the Lot 4 senior housing project as part of the final review of the campus buildings.

Enclosed are one (1) hard copy of the following materials and Site Plans and PDF copies on an attached CD-ROM:

- Cover Letter
- City of Portland Master Development Plan Review Application
- Site Plan/Subdivision Application Fee (Submitted separately)
- Sections
  1 – Project Description & Consistency with Comprehensive Plan
  2 – Neighborhood Context
  3 - Right, Title & Interest
  4 - State & Federal Approvals
  5 - Compliance with Zoning
  6 - Easements & ROWs
  7 – Waiver Requests
  8 - Financial and Technical Capacity
  9 – Stormwater Management
  10 –Traffic Analysis
  11 – Utilities Analysis

Attachments:

1. RT&I -P&S Agreement and Lot 3 Condominium Documents

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2. Financial Ability
3. Utility Serviceability Letters

Site Plans

A. Cover Sheet
B. Subdivision Plan
C. Context Plan
D. Conceptual Site Master Plan
E. Circulation Plan
F. Phasing Plan
G. Conceptual Stormwater and Utilities
H. Architectural Plans and Elevations

We look forward to working closely with staff towards a series of workshops with the Planning Board over the coming months. A neighborhood meeting will be noticed and held in accordance with the MDP process requirements and we envision additional meetings as the project progresses. In the meantime our project team remains available to meet with staff to review the application in further detail or to provide any additional information if required.

Sincerely,

Frederic (Rick) Licht, PE, LSE
Principal

Matthew Teare
Seacoast at Baxter Woods Associates, LLC

Encl: As Noted

Cc: (via email - PDF copy)
John Wasileski; Sea Coast at Baxter Woods Associates, LLC
Sister Lindora Cabral; Sisters of Mercy of the Americas Northeast Community, Inc.
Daniel Justynski: Sisters of Mercy of the Americas Northeast Community, Inc.
Dennis Keeler; Pierce Atwood, LP
Kevin Bunker; Motherhouse, LLC
Ron Epstein; Jensen, Baird, Gardner & Henry
Natalie Burns; Jensen, Baird, Gardner & Henry
Pat Carroll; Carroll Associates, Landscape Architects
Andrew Johnston; Stantec
Diane Morabito, Maine Traffic Resources

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ATTACHMENT 1
RIGHT, TITLE, INTEREST

Att. C

Memorandum of Purchase and Sale Agreement

Notice is hereby given of the existence of a Purchase and Sale Agreement, dated June 16, 2014 (the "Agreement") between St. Joseph's Convent and Hospital, a Maine non-profit corporation (hereinafter called "Seller") and Sea Coast Healthcare, Inc., a corporation existing under the laws of the State of Maine or its nominee (hereinafter called "SCH"), and of an Assignment, dated September 15, 2014 by SCH to Sea Coast at Baxter Woods Associates, LLC ("Purchaser") of all of its rights as Purchaser under said Agreement.

Under the Agreement, Purchaser has the right and obligation to purchase, on and subject to the terms and conditions of the Agreement, the following property at the First Closing, as hereafter defined: (i) a portion of that certain real property consisting of the real estate situated at 605 Stevens Avenue in Portland, Maine, which portion is to contain approximately 17.36 acres, and all buildings and improvements thereon, including the Motherhouse, the Catherine McAuley school, the land between the Motherhouse and Baxter Woods and the "ball fields" and being the premises described in Exhibit A hereto (but excluding the St. Catherine's Parcel, as hereafter described) and generally shown as Lots 1, 3, 4 and 5 on the Conditional Zone Concept Plan, McAuley Place at Baxter Woods, Stevens Avenue, Portland, Maine prepared by Belanger Engineering, March 21, 2014 attached hereto as Exhibit A (hereinafter the "Plan"), together with easements over the St. Catherine's Parcel for existing and proposed underground drainage and utilities, including sewer, water and other utilities, a parking easement for use of up to a 20 parking space expansion of the parking lot on the St. Catherine's Parcel, and an easement for secondary ingress and egress from Walton Street, all for the benefit of said Lots 1, 3,4 and 5 (with Purchaser to have the right but not the obligation after the First Closing to construct the drainage and utility lines, parking lot expansion and secondary access permitted by such Easements) (collectively, the "Easements"), which Easements shall be located substantially as shown on the Plan attached hereto as Exhibit A-1(hereinafter the "Property"), and (ii) an assignment by McAuley Place at Baxter Woods Retirement Community, Inc. of the Credit Enhancement Agreement, dated May 2009 between the City of Portland and McAuley Place at Baxter Woods Retirement Community, Inc. (which is an affiliate of Seller), to the extent assignable, relating to the existing tax increment financing district, with no representations or warranties other than the fact that Seller has not assigned or caused to be assigned such agreement to any third party. At the Second Closing, as hereinafter defined, Purchaser has the right and obligation to purchase, on and subject to the terms and conditions of the Agreement, the following property, for the price and upon the terms and conditions hereinafter set forth, the St. Catherine's Residence, being the land and 18 unit apartment building generally as depicted as Lot 2 on the Plan and referred to herein as the "St. Catherine's Parcel" and also as generally depicted on Exhibit A-1.

The First Closing shall occur on the earlier of the following dates: (a) the date of the construction loan closing with Maine State Housing Authority relating to an award of low income housing tax credits (such loan closing is anticipated to be in April 2015 if low income housing tax credits are awarded to Purchaser or its nominee in the fall of 2014, or in April 2016 if low income housing tax credits are awarded to Purchaser or its nominee in the fall of 2015); or (b) June 30, 2016. The First Closing shall also occur on any earlier date as specified by Purchaser by at least ten days prior written notice to Seller. The Second Closing shall occur on the earlier of: (i) the date that is ten years after the date of this Agreement, or (ii) the date that is 180 days after Seller certifies to Purchaser in writing that all Non-Market Rate Leases have expired or been terminated, and that the Second Closing Date has been scheduled for 180 days after the date of such certification.

This Memorandum does not modify or alter the terms of the Purchase and Sale Agreement in any way.

Dated as of this __ day of October 2014.

WITNESS:

_____

Sea Coast at Baxter Woods Associates, LLC

By: _____

DECLARATION OF CONDOMINIUM OF 605 STEVENS AVENUE CONDOMINIUM

This Declaration of Condominium is executed as of this 1st day of _____ 2015 by Sea Coast at Baxter Woods Associates, LLC, a Maine limited liability company, pursuant to the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended, 33 M.R.S.A. §1601-101 et seq. (hereinafter the "Act").

ARTICLE I: CREATION OF CONDOMINIUM: DEFINED TERMS

A. Declaration of Property. Sea Coast at Baxter Woods Associates, LLC, a Maine limited liability company, with an address of 20 Blueberry Lane, Falmouth, Maine, owner in fee simple of the land described in Schedule A annexed hereto, located in the City of Portland, Cumberland County, Maine (hereinafter the "Land"), hereby submits the Land, together with all buildings, improvements, easements, rights, privileges and appurtenances now or hereafter thereon or pertaining thereto (hereinafter the "Property") and together with the rights and easements described in Schedule hereto and subject to all covenants, restrictions, and easements described or referred to in Schedule A, to the provisions of the Act, as amended from time to time, and hereby creates with respect to the Property a condominium, known as 605 Stevens Avenue Condominium (hereinafter the "Condominium"). The Property is depicted on the plat prepared by Titcomb Associates and floor plans prepared by _____, which plat and plans, as amended from time to time, being herein referred to respectively as "Plats" and "Plans", are recorded in the Cumberland County Registry of Deeds. The Property shall hereafter be held, sold and conveyed subject to the terms, conditions, covenants, easements and restrictions set forth in this Declaration of Condominium as amended from time to time (hereinafter the "Declaration") and in the Act, which shall run with the Property and bind and inure to the benefit of all owners of the Property or any portion thereof, their respective heirs, successors and assigns. Pursuant to the Act, 605 Stevens Avenue Condominium Association, a Maine nonprofit corporation under Title 13-B of the Maine Revised Statutes of 1964, as amended (hereinafter the "Association") shall be the Unit Owners' Association under the Act.

B. Defined Terms. Capitalized terms used in this Declaration shall have the meaning specified hereinabove or hereinbelow or, if not otherwise defined in this Declaration, as it may be amended from time to time, or in the Plats and Plans, shall have the same meanings as specified in the Act:

(1) "Allocated Interests" mean: (a) the Common Element Interest, (b) the Common Expense Liability and (c) the votes in the Association, allocated to each Unit pursuant to this Declaration.

(2) "Assignable Limited Common Elements" has the meaning provided in Article IV(C) of this Declaration.

(3) "Building(s)" means the building or buildings now existing or hereafter erected on the Land containing one or more Units whether in vertical or horizontal arrangement, as well as other improvements comprising a part of the Buildings.

(4) "Bylaws" means the Bylaws of the Association as are adopted pursuant to the Act and this Declaration for the regulation and management of the Property, including such amendments thereof as may be adopted from time to time.

(5) "Common Elements" mean all portions of the Condominium other than the Units.

(6) "Common Element Interest" has the meaning provided in Article IV(E) of this Declaration.

(7) "Common Expenses" mean expenditures made by or financial liabilities of the Association together with any allocation to reserves and include, but are not limited to, (a) the cost of maintenance, management, operation, repair and replacement of the Common Elements and such Limited Common Elements and such parts of the Units as to which pursuant to this Declaration it is the responsibility of the Association to maintain, repair and replace, (b) the cost of all insurance premiums on all policies of insurance required to be or which have been obtained by the Executive Board pursuant to the provisions of this Declaration and the fees and disbursements of the Insurance Trustee, if any, (c) such amounts as the Executive Board may deem necessary for general operating reserve funds, reserve funds for replacements and such other reserve funds as the Executive Board may periodically establish, (d) such amounts as the Executive Board may deem necessary to compensate for any deficits in receipts over expenses for previous periods of time, (e) the charges and fees for energy, electricity, heat, water, gas and sewer services furnished to the Condominium to the extent not separately metered to individual Units and charged to individual Unit Owners; and (f) such other costs and expenses that may be declared by the Act, this Declaration, the Bylaws, or resolution or agreement by the Executive Board or Unit Owners to be Common Expenses of the administration, operation, maintenance and repair of the Condominium and Property and the rendering to Unit Owners of all related services.

(8) "Common Expense Liability" has the meaning provided in Article VI(A) of this Declaration.

(9) "Condominium Documents" mean this Declaration, the Plats, Plans and the Bylaws, as amended from time to time.

(10) "Declarant" means Sea Coast at Baxter Woods Associates, LLC, a Maine limited liability company, its successors and assigns and all successors to any Special Declarant Rights hereunder.

(11) "Development Rights" has the meaning specified in Article V of this Declaration and Section 1601-103(11) of the Act.

(12) "Eligible Mortgage Holder" means the holder of record of a recorded first Mortgage on a Unit in the Condominium which has delivered written notice to the Association by prepaid United States mail, return receipt requested, or by delivery in hand securing a receipt therefor, stating the name and address of such holder, the name and address of the Owner of the Unit encumbered by such Mortgage, the identifying number of such unit, and containing a statement that such Mortgage is a recorded first mortgage.

(13) "Executive Board" means the Executive Board or Board of Directors of the Association authorized to act pursuant to this Declaration and the Act on behalf of the Association.

(14) "Insurance Trustee" has the meaning provided in Article XI(B)(7) of this Declaration.

(15) "Limited Common Elements" mean those portions of the Common Elements the exclusive use of which is reserved as an appurtenance to one or more, but fewer than all, of the Units as allocated pursuant to this Declaration.

(16) "Limited Common Expenses" mean the Common Expense for services benefiting fewer than all the Units, which are assessed pursuant to this Declaration exclusively against the Units benefited in accordance with Section 1603-115(c)(2) of the Act pursuant to Article IV(k) hereof.

(17) "Mortgage" means a recorded mortgage or deed of trust encumbering a Unit in the Condominium held by a Mortgagee; "Mortgagee" means the holder of a recorded Mortgage or deed of trust encumbering a Unit in the Condominium.

(18) "Recorded" means that an instrument has been duly entered of record in the Registry of Deeds in and for Cumberland County, Maine.

(19) "Special Declarant Rights" has the meaning provided in Article V of this Declaration and Section 1601-103(25) of the Act.

(20) "Unit" means a part of the Property designated for separate ownership or occupancy.

ARTICLE II: IDENTIFICATION AND LOCATION OF CONDOMINIUM; ASSOCIATION

The name of the Condominium is 605 Stevens Avenue Condominium. The name of the Association organized under the Act is 605 Stevens Avenue Condominium Association. The Condominium is located in the City of Portland, County of Cumberland and State of Maine (which location is more particularly described in Schedule A hereto) and the address of the Condominium is 605 Stevens Avenue, Portland, Maine.

ARTICLE III: DESCRIPTION OF PROPERTY AND UNITS

A. Description of the Property. A legally sufficient description of the Property included in the Condominium is set forth in Schedule A attached hereto and made a part hereof.

B. Maximum Number of Units. Declarant has created 2 units pursuant to this Declaration. Declarant reserves the right to create up to 2 additional units, and accordingly the maximum number of units that the Declarant has the right to create in the Condominium is 4 Units.

C. Description and Boundaries of Units. The unit numbers, location of units created by this Declaration and their approximate dimensions are shown on the Plats and Plans.

A general description of the Units is as follows (provided, however, that nothing in this paragraph shall alter in any way the Unit boundaries as described below and the unit numbers, location of units created by this Declaration and their approximate dimensions are shown on the Plats and Plans): (1) Unit 1 is a substantial portion of the four-story Motherhouse or convent building that was designed in the Italian Renaissance style and constructed in 1908-1909 but excluding the portions thereof described as Common Elements or Limited Common Elements herein and also excluding the portions thereof shown as part of Unit 2 on the Plans; and Unit 2 is the three-story Smith House building that was constructed in the 1800s, and which is currently used as part of the Catherine McAuley High School and a portion of the basement of the Motherhouse, but excluding the portions thereof described as Common Elements or Limited Common Elements herein. Units 3 and 4, if created by Declaration pursuant to its Development Rights reserved hereunder, would be new construction in the areas as shown on the survey Plat.

A list of all unit numbers, locations (all as shown more fully on the Plats and Plans), and Common Element Interests and Common Expense Liability and votes in the Association appurtenant to each unit is attached hereto as Schedule B.

The boundaries of each unit created by this Declaration are as follows:

Each Unit includes the following items:

(a) All interior partitions (excepting those portions thereof which are load-bearing), interior doors located entirely within a Unit including without limitation their frames, locking systems, hinges and sills, and interior halls and stairways located wholly within the Unit;

(b) Finish flooring, floor coverings, carpeting and the like, and finish walls and ceilings and coverings including the paint, wallpaper, furring, gypsum board, moldings, the panels, framework, lighting, and acoustical tile ceilings if any, and any other materials constituting any part of the finished surfaces thereof which are nonstructural), but excluding exterior masonry or brick walls, exterior windows and excluding interior or exterior doors providing access to the Common Elements or public streets;

(c) Plumbing, electrical, sewer, heating, air conditioning, air handling and ventilating fixtures, pipes, lines, equipment, chimneys, vents, flues, systems, Unit specific security and door access systems, controls and components thereof serving a single Unit, even if located outside of a Unit's general boundaries;

(d) Electrical wiring, equipment, outlets and lighting devices from the point where the feed wire enters the Unit's meter box inwards, and telecommunication and data wiring and equipment serving only a single Unit; and

(e) Fuel, gas, electric, water and utility lines, pipes and equipment serving only a single Unit from the meters inwards, even if located outside of a Unit's general boundaries.

A Unit generally does not include the exterior walls, the roofs, rafters, floor joists, subfloors, foundations, land, sidewalks, and parking areas, nor does a Unit include the pipes, wires, conduits, flues, ducts, pipes, heating, flues, chase ways, roof drains, fuel, telecommunications, data and utility lines running through a Unit which serve more than one Unit, which serve the Common Elements or which serve another Unit. Any internal room configuration shown on the Plans is illustrative only, and is not binding on an Declarant except that the structural support of the Building must be preserved.

Each Unit and the Common Elements shall have an easement for lateral and subjacent support from every other Unit and the Common Elements, and shall have the easement for encroachments established under Section 1602-114 of the Condominium Act.

Subject to such security and card/keypad access restrictions as the Association may establish from time to time, each Unit has an perpetual right of ingress and egress: to such Unit; to emergency egress areas, and stairs; and to the Limited Common Elements which are appurtenant to such Unit, all of which rights shall automatically transfer with a transfer of title to the Unit. Any conveyance, encumbrance, judicial sale, or other transfer (whether voluntary or involuntary) of an interest in the Common Elements shall be void unless the Unit to which that Common Element interest is allocated is also transferred.

If any Unit components or any Common Elements, including without limitation as utility, heating, ventilation, fuel, life safety and sprinkler systems, electrical, telecommunications and data wiring, equipment, ducts, chases and the like which service other Units or the Common Elements extend into or are accessible only through another Unit, then such other Unit is subject to an easement for reasonable access upon prior notice except in an emergency but the other Unit may relocate such items or alter the access at its expense so long as the functionality of such items or access are maintained and any disruption of the use of such items or access is minimized.

Subject to the foregoing provisions, the general boundaries of each Unit created and each Unit that may be created under this Declaration are generally shown on the Plat and Plans, and consist of:

(a) *Horizontal Boundary*: The upper and lower boundaries of each Unit are generally the following boundaries extended to an intersection with the vertical (perimeter) boundaries:

1. Upper Boundaries: The lowest level planes at the lowermost surfaces of: the upper side of any gypsum board or acoustical tiles of the ceiling and any other materials constituting any part of the finished ceiling surfaces; if there is no finished ceiling, then upper boundary is the lowermost surfaces of the floor joists and structural members supporting each Unit and/or Common Elements above; or if there is no floor above, the lowermost surfaces of surfaces of rafters and structural members supporting the roof above, extending to the intersection with the vertical boundaries.

2. Lower Boundary: The horizontal plane at the upper surface of the undecorated upper surface of the sub-floor or of any concrete or masonry floor slab extending to the intersection with the vertical boundaries.

The subsequent alteration of the Property, such as to add an acoustical tile ceiling, shall not alter the initial Unit boundaries hereunder.

(b) *Vertical Boundaries*: The vertical boundaries of each Unit shall be the vertical planes at the interior surfaces of exterior masonry walls or the stud line at the exterior or outer-most surface of the gypsum-board, sheetrock or other wall materials forming its exterior or common walls, extended to the intersections with each other and with the horizontal boundaries.

(c) *Interior Finishes***.** A Unit shall include all lath, furring, wallboard, plasterboard, plaster, paneling, tiles, wallpaper, paint, acoustical tiles, grids and supports, finished flooring, carpeting and any other materials constituting any part of the finished surfaces thereon located within the boundaries of the Unit.

(d) *Interior Space/Other*. All other spaces, interior partitions and other fixtures and improvements within the boundaries of a Unit are a part of the Unit except as otherwise provided herein.

(e) *Relocation and Subdivision*. Relocation of boundaries between Units is permitted by amendment to the Declaration in compliance with the provisions of the Condominium Act. The subdivision of Units is permitted.

D. Subdivision or Relocation of Unit Boundaries. Subject to applicable provisions of this Declaration or law and environmental, subdivision and land-use ordinances and regulations the subdivision of Units and/or relocation of boundaries between Units will be permitted at the expense of the Unit Owners of the Unit or Units to be so subdivided and the boundaries of which are to be so relocated, upon the prior written approval of the Association and subject to compliance with the provisions therefor set forth in Section 1602-113 and Section 1602-112 of the Act. The subdivision of an original Unit created hereby into multiple Units or into Common Areas shall not alter the Unit boundaries except through the exercise of the rights otherwise established herein.

E. Alteration of Partitions. Subject to applicable provisions of law, ordinances, and land-use regulations, a Unit Owner may, after acquiring a horizontally or vertically adjoining Unit or adjoining part of an adjoining Unit, remove or alter any intervening partition or create apertures therein, even if the partition in whole or in part is a Common Element, if such acts do not impair the structural integrity or mechanical systems of the Buildings in which such Units are located or lessen the support of any portion of the Property. Removal of partitions or creation of apertures under this subparagraph is not an alteration of

boundaries.

F. Maintenance Responsibilities. Notwithstanding the ownership of the various portions of the Common Elements and the Units by virtue of the foregoing boundary descriptions, the Units shall be maintained and repaired by each Unit Owner and the Common Elements shall be maintained and repaired by the Association except that if damages are inflicted to any Common Elements, the Unit Owner responsible for the damage is liable for the prompt repair thereof, all in accordance with the provisions of Section 1603-107(a) of the Act, except as may be expressly set forth to the contrary in this Declaration.

ARTICLE IV: COMMON ELEMENTS AND LIMITED COMMON ELEMENTS

A. Common Elements. The Common Elements are all parts of the Property other than the Units. The term "Common Elements" includes:

i. The land, parking areas and drives together with the benefit of and subject to all the accompanying rights and easements described in Exhibit A;

ii. The Chapel located in the Motherhouse building;

iii. Elevators, hallways, vestibules, and stairways serving or providing access to more than one Unit or serving or providing access to the Common Element chapel;

iv. All utility, heating, air conditioning and ventilating, drainage, and life safety system chases, lines, pipes, conduits, ducts, transmission wires, distribution boxes, utility and lines, pipes, conduits and equipment which serve more than one Unit (excepting lines and equipment owned by public and municipal utilities, or which service only a single Unit and are defined as a part of the Unit above), utility chase areas, roof drains, and all fire sprinklers and alarms and life safety and security access systems; and

v. All other parts of the property necessary or convenient to its existence, maintenance and safety or normally in common use, except as otherwise expressly provided in this Declaration.

B. Allocation of Limited Common Elements. A description, including the location and dimensions of all Limited Common Elements other than portions of the Property described as Limited Common Elements pursuant to Section 1602-102(2) and (4) of the Act, and the identifications of the Unit or Units to which the Limited Common Elements are hereby allocated are set forth in or shown on the Plats or Plans and/or described herein. The allocation of Limited Common Elements to the Units cannot be altered except with the written consent of the Owners and Mortgagees of record of the Units affected by the reallocation of Limited Common Elements, and in compliance with the provisions of Section 1602-108(b) of the Act. Limited Common Elements other than those described in Sections 1602-102(2) and (4) of the Act consist of the following:

i. All utility, heating, air conditioning and ventilating equipment, controls, chases, lines, pipes, wires, distribution boxes, ducts, conduits and related accessories if any located outside of a Unit's boundaries (excepting lines and equipment owned by public and municipal utilities) which are not a defined part of a Unit but designed to serve one or more but less than all Units are Limited Common Elements allocated exclusively to such Unit(s);

ii. The areas shown and designated as Limited Common Elements on the Plans, including

without limitation the Limited Common Element parking spaces and areas as set forth below:

To Unit 1, 73 assigned Limited Common Element parking spaces to be designated by the Association; and

To Unit 2, any parking spaces in excess of the first 73 spaces, .

Generally all other parking spaces designated on the Floor Plans and/or Plat which are not assigned pursuant to the foregoing are Common Elements;

iii. All doors, steps, stoops, thresholds and windows, including without limitation their glass, frames, hinges, locks, bolts, handles and sills and any other similar fixture which are not a defined part of a Unit but designed to serve one or more but less than all Units are Limited Common Elements allocated exclusively to such Unit(s);

iv. The elevators and related controls, equipment, structures, shafts, car and controls, and applicable security systems, if any, located in a Building including without limitation those designated as "LCE" on the Plat and/or Floor Plans are Limited Common Elements allocated exclusively to the Units located in the Building serviced;

v. Any HVAC equipment, chimneys, vents and flues servicing a Unit or its Limited Common Elements, if any, which are not otherwise a defined part of the Unit;

vi. The foundations, roofs, exterior walls, exterior windows, doors, fire escapes, chimneys, chase ways, sub-floors, utility lines and conduits, roof drains and all joists, rafters, structural and load bearing portions of the Motherhouse building and the tripled-based gilded cupola and gold Celtic cross thereof are limited common elements assigned to Unit 1 and the foundations, roofs, exterior walls, exterior windows, doors, fire escapes, chimneys, chase ways, sub-floors, utility lines and conduits, roof drains and all joists, rafters, structural and load bearing portions of the Smith House Building are limited common elements assigned to Unit 2; and for an additional Unit(s) created pursuant to the Development Rights reserved by Declarant under this Declaration, the foundations, roofs, exterior walls, exterior windows, doors, fire escapes, chimneys, chase ways, sub-floors, utility lines and conduits, roof drains and all joists, rafters, structural and load bearing portions of the building in which such additional Unit is located are limited common elements assigned to such Unit; and

vii. the portions of the Property shown on the Plat and Plans or as described as Limited Common Elements pursuant to Section 1602-102(2) and (4) of the Condominium Act.

C. Limited Common Elements to be Subsequently Allocated by Declarant. There is no real estate which may be subsequently allocated as Limited Common Elements, other than Limited Common Elements specified in Section 1602-102(2)-(4) of the Act or the Limited Common Elements already allocated, except that Declarant reserves the right to create additional Limited Common Elements as described herein. If Declarant creates Unit 3 and/or Unit 4 in the Condominium pursuant to the Development Rights reserved herein by Declarant, the portions of the new Building(s) that are not within the Unit boundaries, as defined herein, and that are not Common Elements, as defined herein, shall be Limited Common Elements allocated to the adjoining Unit. In addition, Declarant may allocate to Unit 3 or Unit 4, as Limited Common Elements, parking lot spaces shown on the Plats or Plans and not already allocated to specific units and such parking spaces are hereafter called "Assignable Limited Common Elements". Pursuant to Section l602-l05(a)(7) of the Act, the Declarant reserves the exclusive right to assign each Assignable Limited Common

Element as a Limited Common Element for the exclusive use of the respective Unit Owner to whose Units such Assignable Limited Common Elements shall be assigned and become appurtenant. The Declarant may, without consent or action by the Unit Owners or any Mortgagee, allocate each Assignable Limited Common Element as a Limited Common Element pursuant to the provisions of the Section 1602-108 of the Act by causing appropriate amendments to this Declaration or to the Plats or Plans to be executed and recorded by Declarant, which amendments may be set forth in any Unit Deed to a Purchaser. The Declarant shall evidence the right to such an allocation either in the deed to the Unit to which such Assignable Limited Common Element shall appertain as a Limited Common Element or in writing recorded in the Cumberland County Registry of Deeds. After all Units have been sold by Declarant, the Association shall have the right to use or to assign any unallocated Assignable Limited Common Element pursuant to the provisions of Section 1602-108 of the Act.

D. Association Rights to Reserve Common Elements. "Reserved Common Elements" are those parts of the Common Elements (including the parking rights over the Secondary Parking Easement Area described in Schedule A and the "chapel") which the Executive Board may designate from time to time for use by less than all Unit Owners or by non-Unit Owners for specified periods of time. The Executive Board of the Association shall have the power in its discretion from time to time to grant revocable licenses in designated Reserved Common Elements and to establish a reasonable charge for the use and maintenance thereof. Such designation by the Board shall not be construed as a sale or disposition of the Common Elements.

E. Common Element Interest. The fraction of undivided interest in the Common Elements appurtenant to each Unit (the "Common Element Interest") is listed and allocated to each Unit in Schedule B. The Common Element Interest appurtenant to each Unit is a fraction determined as follows: The formula or method used to establish those allocations of votes and common expense liability and interest is as follows: The percentage of each Unit's Common Element Interest and Common Expense Liability is allocated by a formula represented by a fraction wherein the numerator is the number of interior square feet of each Unit located within a Building measured at the boundaries with the Common Element as shown on the Plans, and the denominator is the total such square footage of all the Units subject to rounding in order to permit ease of administration, provided however that the percentage stated in Exhibit B (as it may be amended) shall control in any event. Such square footage measurements may differ from leasing square footage calculations.

In the event a Unit is subsequently divided, a Unit is converted to Common Elements or is withdrawn, or Common Elements are converted to Units or if additional Units are added to the Condominium, then the percentages of all Units shall be allocated and re-determined based on such resulting interior floor areas of the Units.

F. Common Elements to Remain Undivided. The Common Element Interest of a Unit shall be inseparable from each Unit, and any conveyance, lease, devise or other disposition or mortgage or other encumbrance of any Unit shall extend to and include the Common Element Interest, whether or not expressly referred to in the instrument effecting such transfer. Except as otherwise provided by law or this Declaration, the Common Element Interests and the fee titles to the respective Units conveyed therewith shall not be separately conveyed, transferred, alienated or encumbered and each of said Common Element Interests shall be deemed to be conveyed, transferred, alienated or encumbered with its respective Unit notwithstanding that the description in the instrument of conveyance, transfer, alienation or encumbrance may refer only to the fee title to the Unit.

G. Partition or Division of Common Elements. The Common Elements shall remain undivided and no action for partition or division of any part thereof shall be permitted, unless otherwise provided by law and permitted by this Declaration.

H. Amendment of Interest in Common Elements. Except with respect to the subdivision or conversion of Units as provided in Article III(D), or as otherwise provided in the Act, the Common Element Interest appurtenant to each Unit shall have a permanent character, shall be inseparable from each Unit and shall not be altered or changed except by the recording of an amendment to this Declaration, duly executed by all of the Unit Owners and all of the holders of record of any first Mortgage liens upon the Units.

I. Use of Common Elements. Except as their use may otherwise be limited by this Declaration or the By-Laws or otherwise by the Executive Board pursuant to its powers, each Unit Owner, tenant and occupant of a Unit, and the family members and guests of such Unit Owner, tenant and occupant, may use the Common Elements in common with all other Unit Owners and tenants or occupants of other Units, and their respective family members and guests, in accordance with the purposes for which they are intended without hindering or encroaching upon the lawful rights of the other Unit Owners, upon the following terms:

(1) The parking spaces are provided for the parking of private motor vehicles and shall not be used for the parking of commercial vehicles, trailers, motor homes, or trucks with a gross weight of over 6,000 pounds except with the prior written approval of the Executive Board. Parking of permitted motor vehicles by Unit Owners and guests shall be only in any Limited Common Elements or other areas designated as spaces for parking. No unattended vehicles shall at any time be left in such a manner as to impede the passage of traffic or to impair access to parking areas. Parking areas and Common Elements shall at all times be kept free of unreasonable accumulations of debris or rubbish of any kind and no junk or derelict vehicle or other vehicle on which current registration plates are not displayed shall be kept upon any of the Common Elements. Vehicle repairs other than ordinary light maintenance are not permitted on the Property.

(2) Except for such signs as may be posted by the Declarant for promotional or marketing purposes, no signs of any character shall be erected, posted or displayed upon, in, from or about any Unit or Common Element without the prior written approval of the Executive Board. The foregoing provisions of this subparagraph shall not apply to a Mortgagee in possession of a Unit as a result of foreclosure, judicial sale or a proceeding in lieu of foreclosure.

(3) No Unit Owner shall obstruct any of the Common Elements nor shall any Unit Owner place or cause or permit anything to be placed on or in any of the Common Elements without the approval of the Board. Nothing shall be altered or constructed in or removed from the Common Elements except with the prior written consent of the Executive Board. The Common Elements shall be kept clean and free of debris.

(4) The Executive Board, the Association, any Unit Owner and the Declarant shall not be considered a bailee, however, of any personal property stored on the Common Elements (including vehicles parked on the Common Elements), whether or not exclusive possession of the particular area is given to a Unit Owner for parking purposes, and shall not be responsible for the security of such personal property or for any loss or damage thereto, whether or not due to negligence, except to the extent covered by insurance in excess of any applicable deductible.

J. Alteration to Common Elements by Unit Owner. A Unit Owner may make improvements and alterations to the interior of his Unit but no Unit Owner may make any improvements or alterations or do any work whatsoever which would impair the structural integrity or mechanical systems of the Buildings, lessen the support of any portion of the Condominium, or jeopardize the soundness or safety of the Property. No Unit Owner shall impair any easement or hereditament therein without the unanimous consent of the Unit Owners affected thereby. No Unit Owner shall alter any of the Common Elements or paint or otherwise change the appearance of the Common Elements (including the Limited Common Elements) or

paint or otherwise change the exterior appearance of his Unit or any other portion of the Condominium without the prior written approval of the Association acting by the Executive Board, which approval will not be unreasonably withheld. Subject to this Declaration, the Bylaws and the Rules and Regulations of the Association as amended from time to time, a Unit Owner may make nonstructural improvements and alterations within the interior of the Unit in compliance with all applicable governmental requirements and in a good and workmanlike manner, but using reasonable efforts to mitigate disturbance to other Units, even if increased costs result. Any expenses of Americans with Disabilities Act, Maine Human Rights Act, life safety code, building code or other governmental compliance required as a result of such improvements shall be borne by the Unit Owner, even if the required improvements are to be made to the Common Elements but such work shall be subject to approval by the Board of Directors.

The Association shall have the right to require that: (i) copies of the plans and specifications and evidence of compliance with all governmental requirements be submitted to the Board of Directors prior to commencing any work within the interior of the Unit and (ii) to approve all work that takes place in or affects Common Elements upon such terms and conditions as the Board may reasonably require, including without limitation the submission of plans, specifications and permits, evidence of insurance for all contractors, peer review of plans and specifications performed by professionals engaged the Board and the reasonable mitigation of the impact of such construction on other occupants of the Property. The Board may regulate and grant temporary licenses for construction parking, dumpsters and storage of construction materials and waste and other similar activities on the Property and adjacent public areas.

No Unit Owner may make any improvements or alterations or do any work whatsoever which would materially impair the structural integrity or mechanical systems or the walls separating Units, impair life safety or sprinkler systems of the building, lessen the support of any portion of the Condominium, or jeopardize the soundness, noise control components or safety of the Property, all without prior Board consent. All work shall reasonably mitigate any disturbance on other occupants of the Property even if additional costs would result.

All Unit Owner work shall be completed promptly and in a good and workmanlike manner and shall be performed in such a manner that no mechanics, materialmen or other similar liens shall attach to the Property. No Unit Owner shall permit, suffer or authorize any such liens or other claims to be asserted against the Association, other Units or the Common Elements, other than the allocated interest in the Common Elements appurtenant to a Unit. At the completion of all work each Unit Owner shall obtain waivers of mechanics and materialmen's liens from all persons performing work on or furnishing material and upon request provide the Association with copies.

No Unit Owner shall alter any of the Common Elements or paint or otherwise change the appearance of the Common Elements (including without limitation the Limited Common Elements, except for rights to alter Limited Common Element signage as provided in this Declaration) or paint or otherwise change the exterior appearance of the Unit in violation of this Declaration (including, but not limited to, signage or the exterior surfaces of doors or windows leading to a Common Element or a Limited Common Element) or any other portion of the Condominium, without first obtaining: (i) the prior written approval of the Board of Directors of the Association, which shall not be unreasonably withheld, but the applicant shall comply with such standards of general application as may then be established in the Rules and Regulations; and no such approval is required for improvements made pursuant to the exercise of Special Declarant and Development Rights or to change signage located in signage Limited Common Areas, (ii) all required approvals from the City of Portland and the Maine Department of Public Safety including any approvals required under the City of Portland's Historic Preservation Ordinance, if applicable, and Building-Life Safety Codes.

K. Limited Common Elements and Expense. The Association shall maintain, repair and replace all Limited Common Elements except as may otherwise be provided in this Declaration and shall assess except

as otherwise provided herein as a Common Expense the Common Expenses associated with the maintenance, repair or replacement of such Limited Common Elements. The Association shall also have the right to assess an individual Unit for Common Expenses associated with said purposes applicable to such Unit if the Common Expenses shall be incurred due to the negligence, neglect or misconduct of the Owner of such Unit. Maintenance and repair of any shared mechanical equipment will be assessed as a Limited Common Expense against the unit or units benefited.

L. Maintenance of Common Elements. The Association shall be responsible for the maintenance, repair and replacement (unless, in the opinion of the Executive Board such expense was necessitated by the negligence, misuse or neglect of a Unit Owner) of all of the Common Elements (including the Limited Common Elements) whether located inside or outside of the Units, the cost of which shall be charged to the Unit Owners as a Common Expense except as otherwise provided in Article IV(K). Except as otherwise provided in this paragraph, the Association shall be responsible for the maintenance (including but not limited to (i) minimum annual and as needed inspection and maintenance of all drainage facilities; (ii) snow and ice removal; (iii) repair and replacement (unless, such expense was necessitated by the negligence, misuse or neglect of a Unit Owner)) of all of the Common Elements whether located inside or outside of the Units, the cost of which shall be charged to the Unit Owners as a Common Expense. The maintenance, repair and replacement of Common Elements located within a Unit, or for which the Unit Owner is otherwise responsible, to the extent required for the functioning of or for connecting utilities to the Property and Units shall be furnished by the Association as part of the Common Expenses except as provided in Article IV(J) and/or in Article VI(B). The maintenance, repair and replacement of Common Elements located within a Unit, or for which the Unit Owner is otherwise responsible, to the extent required for the functioning of or for connecting utilities to the Property and Units shall be furnished by the Association as part of the Common Expenses except as provided in Article IV(K).

M. Maintenance of Unit. Each Unit Owner shall keep and maintain his Unit and its equipment, appliances and appurtenances in good order, condition and repair and in clean and sanitary condition, whether such maintenance and repair shall be structural or nonstructural, ordinary or extraordinary, and shall do all redecorating, painting and varnishing which may at any time be necessary to maintain the good appearance and condition of his Unit. No Unit Owner shall sweep or throw, or permit to be swept or thrown, from his Unit any dirt, debris or other substance. In addition, each unit Owner shall be responsible for all damage to any other Units or to the Common Elements resulting from his failure or negligence to make any of the repairs required by this Article. Each Unit Owner shall perform his responsibility in such manner as shall not unreasonably disturb or interfere with the other Unit Owners. Each Unit Owner shall promptly report to the Executive Board or the managing agent any defect or need for repairs for which the Association is responsible.

N. Liability of Owner. Each Unit Owner shall be liable, and the Association shall have a lien against his Unit for the expense of maintenance, repair or replacement of any damage to the Common Elements or to another Unit caused by such Unit Owner's act, neglect or carelessness or by that of any member of such Unit Owner's family, or such Unit Owner's guest or tenants, or their pets. Such liability shall include any increase in fire insurance rates occasioned by use, misuse, occupancy, or abandonment of any Unit or its appurtenances. Nothing herein contained, however, shall be construed so as to modify any waiver by insurance companies of rights of subrogation against such Unit Owner.

O. Maintenance, Owner Self-Help. If the Association fails to comply with its obligation to maintain, replace or repair any part of the Condominium as specified in this Declaration, within a reasonable time after the owner of a Unit requests that such required maintenance, replacement or repair be performed by the Association, then such Unit owner shall have the right to perform the required maintenance, replacement or repair, provided that no work done by a Unit Owner shall impair or jeopardize the structural integrity of the Building or any part of the Condominium. Any Unit Owner may at any time

commission an engineer's report regarding the necessity or advisability of such maintenance, replacement or repair, and may present that report to the Association. If the Unit Owner has performed such maintenance, replacement or repair pursuant to this paragraph, the Unit Owner may seek reimbursement from the Association as a Common Expense for any portion of any expense so incurred by the Unit Owner, the cost of which would not have been allocated to such Unit Owner. If, after a reasonable time, a Unit Owner is not satisfied with or disagrees with the Association's response, such Unit Owner may submit the dispute, including, without limitation, any request for reimbursement of expenses, if applicable, to arbitration in accordance with the terms of this Article VII(B). The expenses of such arbitration shall be a Common Expense. If the arbitrator finds in favor of the Unit Owner that commissioned the engineering report, the expense of such report shall be a Common Expense. Otherwise, such expense shall be borne by said Unit Owner.

ARTICLE V: SPECIAL DECLARANT RIGHTS

A. Development Rights. Declarant shall have and hereby reserves the Development Rights: (i) to create up to 2 additional or new units on the Property (and/or on property added to the Condominium) and associated Common Elements and Limited Common Elements, such Units to be located on the Property described in Schedule A to the Declaration and with Units 3 and 4 to be substantially as shown on the Plats and Plans, with any changes thereto as may be approved by the City of Portland Planning Board; (ii) to add all or any portion of Lot 1, Lot 2 and/or Lot 4 as shown on said Plan to the Condominium; and (iii) to create Common Elements and/or Limited Common Elements (including the parking spaces and drives as shown on the Plats and Plans, as the same may be modified from time to time with the approval of the Portland Planning Board, and shared mechanical equipment and rooms) in connection with the additional or new units described hereinabove, with the Units, Common Elements and Limited Common Elements for Units 3 and 4 to be substantially as shown on the Plats and Plan with any changes thereto as may be approved by the City of Portland Planning Board and the related additional parking spaces, driveways and shared mechanical equipment and rooms to be substantially as may be hereafter approved by the Portland Planning Board. The other Units may be declared and built as separate phases, not necessarily in numerical order. The Development Rights may be declaration and built as separate phases, not necessarily in numerical order, and such Development Rights may be exercised with respect to different parcels of the real estate at different times, and no assurances are made in regard to the fixing of the boundaries of those portions and regulating the order in which those portion may be subjected to the exercise of each Development Right, and if any Development Right is exercised in any portion of the real estate subject to that Development Right, that Development Right need not be exercised in all or in any other portion of the remainder of the real estate. Any improvements to future Units, Limited Common Elements and Common Elements created under this Section A including the Buildings, appurtenances, and improvement need not be consistent with the initial Buildings or the initial architectural style, layout and principal materials but shall be constructed substantially consistent with all approvals of the Portland Planning Board.

To exercise any rights under this Section, the Declarant shall prepare, execute and record an amendment to the Declaration pursuant to the Condominium Act, which amendment may include a Condominium Plat and Plans as required by the Condominium Act to the extent not previously recorded and the establishment of said cross easements. Said amendment shall become effective upon recording, without need for the consent of any other person except as otherwise specifically provided herein.

Upon the alteration, conversion or addition of such Units to the Condominium, the Allocated Interests of all Units shall be reallocated in accordance with this Declaration and Exhibit B shall be amended accordingly. Upon the addition of a Unit, the Declarant may create and assign additional Limited Common Elements appurtenant to a Unit.

The exercise of Development Rights shall be subject to the following restrictions: (a) no changes shall be

made by the Declarant or any other person, unless any applicable approvals are obtained pursuant to the City of Portland's and State of Maine's statutes, laws, ordinances and rules to the extent applicable; and (b) any construction shall be at the sole expense of the Declarant and such construction shall reasonably minimize any disruption to the other Units during business hours in a manner consistent with the exercise of such rights, even if extra costs would result.

B. Condominium Association and Executive Board Access. Declarant reserves in favor of itself, the Association and its Executive Board, officers, agents and employees, any managing agent and every other person authorized by the Executive Board the irrevocable right and easement to have access to each Unit as provided in Section 1603-107(a) of the Act as may be necessary for the inspection, maintenance, repair or replacement of any of the Common Elements and Limited Common Elements therein or accessible therefrom or the making of any addition or improvements thereto; or to make repairs to any Unit, the Common Elements or the Limited Common Elements if such repairs are reasonably necessary for the public safety or to prevent damage to any other Unit or Units, the Common Elements or the Limited Common Elements; or to abate any violation of law, orders, rules or regulations of the Association or of any governmental authorities having jurisdiction thereof. In case of an emergency, such right of entry shall be immediate whether or not the Unit Owner is present at the time. The Association and its Executive Board shall have the right to grant to third parties permits, licenses and easements over and through the Common Elements for utilities and other purposes reasonably necessary or useful for the proper maintenance and operation of the Condominium.

C. Declarant's Easement for Marketing. The Declarant reserves the right with respect to its marketing of Units to use the Common Elements and Limited Common Elements for the ingress and egress of itself, its officers, employees, agents, contractors and subcontractors and for prospective purchasers of Units, including the right of such prospective purchasers to park in parking spaces. The Declarant also reserves the right to use any Units owned or leased by the Declarant as models, management offices, sales offices for this and other projects or customer service offices. The Declarant reserves the right to relocate the same from time to time within the Property; upon relocation, the furnishings thereof may be removed. The Declarant further reserves the right to maintain on the Property such advertising signs and lighting as may comply with applicable governmental regulations, which may be placed in any location on the Property and may be relocated or removed, all at the sole discretion of the Declarant. The Declarant shall have the right to restrict the use of certain Common Element parking spaces to sales purposes and to use such spaces for sales purposes. Further, the Declarant shall have the right to erect temporary offices on the Common Elements for models, sales, management, customer service and similar purposes. This easement shall continue until the Declarant has conveyed all Units to Purchasers.

D. Declarant's Easements for Construction. The Declarant reserves the easement, right and privilege without let or hindrance with respect to the creation of the Units, Common Elements, Limited Common Elements, the Development Rights specified in Paragraph A hereinabove and other improvements of the Condominium, to go upon any and all of the Property except for Units conveyed to Purchaser for purposes of construction, reconstruction, maintenance, repair, renovation, replacement, improvement or correction of the Units and Common Elements and for completion of the improvements indicated on the Plats and Plans. Furthermore, the Declarant reserves an easement in the Units and Common Elements pursuant to Section 1602-116 of the Act for the purpose of discharging Declarant's obligations and exercising the Special Declarant rights reserved pursuant to this Declaration. These easements shall continue until all Units in the Condominium are conveyed by Declarant.

E. Declarant's Right to Connect With Utilities. The Declarant further reserves an easement to connect with an make use of utility lines, wires, pipes and conduits located on the Property for construction purposes on the Property, provided that Declarant shall be responsible for the cost of service so used, and to use the Common Elements for ingress and egress and construction activities and for the storage of

construction materials and equipment used in the completion of the Units and Common Elements. This easement shall continue until the Declarant has conveyed all Units.

F. Declarant's Right to Grant Easements. The Declarant shall have the right, until the Declarant has conveyed all Units to Purchasers, to grant and reserve easements and rights of way through, under, over and across the Property for construction purposes, and for the installation, maintenance and inspection of the liens and appurtenances for public or private water, sewer, drainage, gas, electricity, telephone and other utilities. The Units and Common Elements shall be, and are hereby, made subject to easements in favor of the Declarant, appropriate utility and service companies and governmental agencies or authorities for such utility and service lines and equipment as may be necessary or desirable to serve any portion of the Property. The easements created in this Paragraph shall include, without limitation, rights of Declarant, or the providing utility or service company, or governmental agency or authority to install, lay, maintain, repair, relocate and replace gas lines, pipes and conduits, water mains and pipes, sewer and drain lines, elevators, telephone wires and equipment, air conditioning, heating systems, ventilation systems, electric wires, conduits and equipment and ducts and vents over, under, through, along and on the Units and Common Elements.

G. Alteration of Common Elements by Declarant. The Declarant reserves the right (but shall have no obligation) to modify, alter, remove or improve defective, obsolete or nonfunctional portions of the Common Elements, including without limitation any equipment, fixtures and appurtenances when in the Declarant's judgment it is necessary or desirable to do so, until all Units have been conveyed to Purchasers.

H. Transfer of Special Declarant Rights; Termination and Surrender. Declarant reserves the right to transfer from time to time to any one or more transferees any or all reserved Special Declarant Rights in accordance with Section 1603-104 of the Act. Notwithstanding any other provisions in this Declaration, this Article may not be amended without the prior written consent of the Declarant. Notwithstanding the foregoing, Declarant may surrender or terminate any rights reserved under this Article at any time by recording an instrument so providing in the Cumberland County Registry of Deeds.

I. Time. The Development Rights and Special Declarant Rights may be exercised at any time within 50 years after the date of this Declaration.

ARTICLE VI: ASSESSMENTS FOR COMMON EXPENSES

A. Common Expense Liability. Except as provided in Article IV(K), Article IV(L), and Article VI(B), the Common Expense Liability (which is the allocation to each Unit or Unit Owner of the respective liability of each Unit Owner for Common Expenses) allocated to each Unit is a fraction of the Common Expenses assessed against all of the Units that is equal to the Common Element Interest appurtenant to the respective Unit as set forth in Schedule B.

B. Allocation of Assessments of Common Expenses. The total amount of Common Expenses shall be assessed against the Units in the following proportions: (l) the Common Expenses that are not Limited Common Expenses shall be assessed against all of the Units in proportion to the relative Common Expense Liabilities of all the Units; (2) the Limited Common Expenses shall be assessed solely against each Unit benefited except as otherwise provided in this Declaration; except as provided in Article IV(K) and Article IV(L), if a Limited Common Expense benefits more than a single Unit, that Limited Common Expense shall be assessed solely against each Unit benefited equally against the Units to which Limited Common Elements are assigned or appurtenant; (3) assessments to pay a judgment against the Association shall be made as a Limited Common Expense against the Units included in the Condominium at the time such judgment was entered; (4) any utilities which are or are made by Declarant to be separately metered shall be supplied by the public utility company serving the area directly to each Unit through a separate meter and

each Unit Owner shall be required to pay the bills for utilities consumed or used in his Unit; any utilities which are not separately metered shall be paid by the Executive Board as a Common Expense.

The Declarant shall not be liable for any assessments for any Units until after the later to occur of the first conveyance of a Unit to a third person other than an affiliate of the Declarant or the first Common Expense assessment by the Association. Assessments for Common Expenses shall commence on the first day of the first month following the date of the first conveyance of a Unit to a person other than the Declarant.

C. Payment Obligations. Each Unit Owner shall pay to the Association or its authorized representative on the first day of each month, or on such other date that the Association may determine in writing, one-twelfth of the Common Expenses including Limited Common Expenses assessed on an annual basis against his Unit in the proportions required in Paragraph B of this Article in accordance with the By-Laws and subject to Section 1603-103(c) of the Act. If for any reason the Association shall revise the annual budget of the Association in accordance with the By-Laws and subject to Section 1603-103(c) of the Act whereby the Common Expenses or any component thereof may be increased, thence commencing on the first day of the first month subsequent to the adoption of such revised budget each Unit Owner shall pay to the Association or its authorized representative one-twelfth of any such revised annual Common Expenses including Limited Common Expenses assessed against his Unit in the proportions required in Paragraph B of this Article.

D. Interest; Acceleration. In the event of a default by any Unit Owner in paying any sum assessed against his Unit which continues for a period in excess of thirty (30) days, interest at a rate of interest to be established annually by the Executive Board which shall not exceed the lower of the maximum interest rate allowed by law which may be charged by the Association at such time or eighteen percent per annum shall be imposed on the principal amount unpaid from the date when due until paid. If the Executive Board shall fail to set such rate, it shall be deemed to have been set at the rate of Eighteen Percent (18%) per annum. The Association shall have the right to establish and impose charges for late payment of assessments. In any case where an assessment against a Unit Owner is payable in installments, upon a default by such Unit Owner in the timely payment of any two consecutive installments, the maturity of the remaining total of the unpaid installments of such assessments may be accelerated at the option of the Executive Board, and the entire balance of the annual assessment may be declared due and payable in full by the service of notice to such effect upon the defaulting Unit Owner by the Executive Board or its representatives.

E. Lien for Assessments. The total annual assessment levied against each Unit for Common Expenses including Limited Common Expenses, revised Common Expenses including Limited Common Expenses, or any special assessment, and any other sums duly levied against the Unit pursuant to this Declaration, the By-Laws, or the Act and all interest thereon and charges for late payment thereof and legal fees and other costs of collection thereof shall constitute the personal liability of the Owner of the Unit so assessed and also shall, until fully paid, constitute a lien against the Unit in favor of the Association from the date upon which such assessment, special assessment or other sum such as interest becomes due as provided in Section 1603-116 of the Act. Such lien shall, with respect to annual assessments, be effective on the first day of each fiscal year of the Association as to the full amount of the annual assessment, and, as to special assessments and other sums duly levied, on the first day of the next month which begins more than ten (10) days after delivery to the Unit Owner of notice of such special assessment or levy. Such lien is prior to all other liens and encumbrances on a Unit except (a) liens and encumbrances recorded before the recordation of this Declaration, (b) a first Mortgage recorded before or after the date on which the assessment sought to be enforced becomes delinquent, and (c) liens for real estate taxes and other governmental assessments or charges against the Units; provided, however, that such lien is not subject to the provisions of 14 M.R.S.A. §4561 and 18-A M.R.S.A. §2-201, et seq., as they or their equivalents may be amended or modified from time to time.

F. Enforcement. The lien for assessments described in Paragraph E of this Article may be enforced and foreclosed by the Association in like manner as a mortgage on real estate as provided in Section 1603-116(a) of the Act or by any other means presently or hereafter provided by law or in equity. A suit to recover a money judgment for unpaid assessments, interests, penalties, and costs of collection may be maintained against the Unit Owner personally without foreclosing or waiving the lien securing such assessments and a foreclosure may be maintained notwithstanding the pendency of any suit to recover a money judgment. During the pendency of any such suit, the Unit Owner shall be required to pay a reasonable rental of the Unit for any period prior to the sale pursuant to any judgment or order of any Court having jurisdiction over such sale.

G. Exemption from Expenses by Waiver of Use of Common Elements or Unit Elements. No Unit Owner may exempt himself from Common Expense Liability with respect to the payment of assessments for Common Expenses by waiver of the enjoyment of the right to use any of the Common Elements or by abandonment of his Unit or otherwise. The obligation to pay assessments for Common Expenses is absolute and unconditional and shall not be subject to set-offs or counterclaims.

H. Reduction of Expenses. All receipts from payments, fees or charges for the use, rental, operation, or allocation as a Reserved Common Element, of any and all Common Elements shall be applied first to reduce the Common Expense relating to the use of that Common Element giving rise to such Common Expense and any excess thereof shall be applied to Common Expenses generally.

I. Surplus Funds. If at the end of any fiscal year any amounts accumulated from assessments for Common Expenses and income from the operation of the Common Elements to which such Common Expenses pertain shall exceed the amount required or actual Common Expenses and provision for Common Expenses and any payment of reserves for future Common Expenses, such excess shall be applied to the reserve fund unless credited by the Association to each Unit Owner in proportion to their respective Common Expense Liabilities to reduce until exhausted the next monthly installments due from Unit Owners. Similarly, any surplus funds of the Association not so applied to the reserve fund and remaining after payment of or provision for Limited Common Expenses after application to Common Expenses as provided in Paragraph H of this Article, shall be credited to the Owners of the Units giving rise to such Limited Common Expenses in the proportions provided in Paragraphs B and H of this Article to reduce until exhausted the next monthly installments of assessments for such respective Expenses due from such Unit Owners. Surplus funds shall not otherwise be paid or credited to Unit Owners.

J. Service Charges. The Association shall have the express power to separately charge a unit and the owner thereof for services rendered to that unit. Such charges shall be a lien on the unit with the same status as a lien for common expense assessment under this Declaration and By-Laws, which lien for service charges may be foreclosed in like manner as a mortgage on real estate. The recordation of this Declaration constitutes record notice of the lien. Service charges shall include without limitation: (1) if a Unit Owner, members of his family, guests or tenants request the Association to perform repair and maintenance work on his Unit or damages the Common Elements or fails to perform maintenance and repair work required, the expense thereof as determined by the Executive Board or its designee may be assessed as a Service Charge; (2) fees, if any, which may be established by the Executive Board for use and maintenance of water, sewer, heat and/or other utility services; and (3) insurance premiums on permanent improvements to Units installed by Unit Owners and insured by the request of the Unit Owner with the Association's hazard insurance carrier.

K. Liability. In a voluntary conveyance, the Purchaser of a Unit shall be jointly and severally liable with the Seller for all unpaid common charges, assessments, service charges, interest and costs of collection up to the time of the grant or conveyance, although the Purchaser shall not be prevented from exercising any

right to recover from the Seller the amounts paid for those assessments and common charges. A Purchaser or prospective purchaser under a purchase and sale contract for a Unit may obtain, upon request and the payment of such fee as may be established from time to time by the Executive Board, a statement from the Association setting forth the amount of unpaid common charges, assessments and service charges, interest and costs of collection against the unit as of the date of grant or conveyance and such other items required by the Act. The Purchaser shall not be liable for, and the Unit conveyed shall not be subject to a lien for any unpaid amounts due from the Seller before the statement date in excess of the amount set forth in the statement except interest and costs of collection accrued thereafter.

ARTICLE VII: UNIT OWNERS ASSOCIATION

A. Owners Association and Bylaws. Each Unit Owner shall be a member of the Association, a non-profit corporation organized under the laws of the State of Maine known as 605 Stevens Avenue Condominium Association. Membership shall be appurtenant to the Units, and the transfer of title to a Unit shall automatically transfer the membership appurtenant to that Unit to the transferee or transferees. A mortgage, however, shall not transfer membership until foreclosure or sale in lieu of foreclosure. The Bylaws of the Association, which, except as otherwise provided for herein govern the operation and management of the Association, are attached hereto as Schedule C.

B. Disputes. The Association and any aggrieved Unit Owner shall have an appropriate right of action, together with any and all appropriate remedies under the Act, in law or equity, against any of the Unit owners or the Association for failure to comply with any provision of this Declaration or with any decision of the Association made pursuant thereto. The Executive Board shall have the authority to seek a declaratory judgment or other appropriate judicial relief in order to assist it in carrying out its responsibilities under this Article, except as hereinafter provided. Notwithstanding the rights of action described in the preceding two sentences, any dispute resulting in a deadlock among the Executive Board members or described in Article III or Article IV hereof shall be submitted to arbitration in accordance with the procedures set forth herein. In such cases, all of the members of the Executive Board shall, within thirty days after such deadlock occurs, attempt to agree upon a single arbitrator to settle the dispute. If the members are unable to agree on a single arbitrator within such thirty-day period, then the dispute shall be settled by a single arbitrator in accordance with the rules of the American Arbitration Association. The expenses of such arbitration shall be a Common Expense. All Unit Owners and the Association shall be bound by the arbitration decision, including, without limitation, any determination regarding the entitlement of a Unit owner to reimbursement of expenses incurred pursuant to Article IV(O). No other right of action shall arise with respect to a dispute arising out of an Executive Board deadlock or a dispute over maintenance, replacement or repair of all or any part of the Common Elements.

ARTICLE VIII: LIMITATION OF LIABILITY

A. Limited Liability of the Executive Board. No member of the Executive Board or officer of the Association, except to the extent of his or her willful misconduct or gross negligence: (1) shall be liable for the failure of any service to be obtained by the Executive Board and paid for by the Association, or for injury or damage to persons or property caused by the elements or by another Unit Owner or person on the Property, or resulting from electricity, gas, water, rain, dust or sand which may leak or flow from the outside or from any part of the Buildings, or from any of its pipes, drains, conduits, appliances, or equipment, or from any other place; (2) shall be liable to the Unit Owners as result of the performance of the Executive Board members' duties for any mistake of judgment, negligence or otherwise; (3) shall have any personal liability in contract to a Unit Owner or any other person or entity under any agreement, check, contract, deed, lease, mortgage, instrument or transaction entered into by them on behalf of the Executive Board or the Association in the performance of the Executive Board members' duties; (4) shall be liable to a Unit Owner, or such Unit Owner's tenants, employees, agents, customers or guests, for loss or damage

caused by theft of or damage to personal property left by guests in a Unit, or in or on the Common Elements or Limited Common Elements; (5) shall have any personal liability in tort to a Unit Owner or any other person or entity, direct or imputed, by virtue of acts performed by or for them; or (6) shall have any personal liability arising out of the use, misuse or condition of the Buildings, or which might in any other way be assessed against or imputed to the Executive Board members as a result of or by virtue of the performance of their duties.

B. Indemnification. Each member of the Executive Board, in his capacity as an Executive Board member, officer or both, shall be indemnified by the Association against all expenses and liabilities, including attorney's fees, reasonably incurred by or imposed upon him in connection with any proceeding in which he may become involved by reason of his being or having been a member and/or officer of the Executive Board, or any settlement of any such proceeding, whether or not he is an Executive Board member, officer or both at the time such expenses are incurred, except in such cases wherein such Executive Board member and/or officer is adjudged guilty of willful misconduct or gross negligence in the performance of his duties; provided that, in the event of a settlement, this indemnification shall apply only if and when the Executive Board (with the affected member abstaining if he is then an Executive Board member) approves such settlement and reimbursement as being in the best interests of the Association; and provided further that, indemnification hereunder with respect to any criminal action or proceeding is permitted only if such Executive Board member and/or officer had no reasonable cause to believe his conduct was unlawful. The indemnification by the Unit Owners set forth in this Paragraph shall be paid by the Association on behalf of the Unit Owners and shall constitute a Common Expense and shall be assessed and collectible as such. Such right of indemnification shall not be deemed exclusive of any other rights to which such Executive Board member and/or officer may be entitled as a matter of law or agreement or by vote of the Unit Owners or otherwise.

C. Defense of Claims. Complaints brought against the Association, the Executive Board or the officers, employees or agents thereof in their respective capacities as such, or the Condominium as a whole, shall be directed to the Executive Board of the Association, which shall promptly give written notice thereof to the Unit Owners and the Eligible Mortgage Holders and the Mortgagees of Units identified to the Association, and such complaints shall be defended by the Association. The Unit Owners shall have no right to participate in such defense other than through the Association.

ARTICLE IX: EMINENT DOMAIN

A. Entire Unit. If any Unit shall be taken or condemned by any authority having the power of eminent domain, or if part of a Unit is taken or condemned by any authority having the power of eminent domain leaving the Unit Owner with a remnant which may not practically or lawfully be used for any purpose permitted by this Declaration, the award for such taking or condemnation shall be paid to the Unit Owner as compensation for his Unit and its Allocated Interest in the Common Elements, whether or not any Common Elements are taken or condemned. Upon such taking or condemnation, unless the decree provides otherwise, that Unit's entire Allocated Interests shall be automatically reallocated to the remaining Units in proportion to the respective Allocated Interests of those Units prior to the taking or condemnation, and the Association shall promptly prepare, execute and record as a Common Expense an amendment to this declaration reflecting such reallocation. Any remnant of a Unit remaining after part of a Unit is taken or condemned under this Article IX(A) shall thereafter be a Common Element.

B. Part of Unit. Except as otherwise provided in Paragraph A, if part of a Unit is taken or condemned by any authority having the power of eminent domain, any award therefor shall be paid to the Owner of such Unit as compensation for the reduction in value of the Unit and its Allocated Interest in the Common Elements, whether or not any Common Elements are taken or condemned. After such part of a Unit is taken or condemned: (1) That Unit's Allocated Interests shall be reduced in proportion to the

reduction in relative value of the Unit as determined by the Executive Board; and (2) The portion of the Allocated Interests, Common Element Interest, Votes and Common Expense Liability which has been divested by virtue of the taking or condemnation from the partially-acquired Unit shall be automatically reallocated to such Unit and the remaining Units in proportion to the respective Allocated Interests appurtenant to each of the Units before the taking or condemnation, and the Association shall promptly prepare, execute and record as a Common Expense an amendment to this Declaration reflecting such reallocation, with the partially taken or condemned Unit participating in the reallocation on the basis of its reduced Allocated Interests.

C. Common Elements. If part of the Common Elements shall be taken or condemned by any authority having the power of eminent domain, the Association shall represent the Unit Owners in any condemnation proceedings or in negotiations, settlements and agreements with the condemning authority, and the portion of the award attributable to the Common Elements taken shall be paid to the Association for the use and benefit of the Unit Owners and their Mortgagees as their interests may appear. Each Unit Owner appoints the Association as attorney-in-fact for this purpose. Subject to the provisions of Article IX(D), the Association shall divide any portion of remaining Common Elements among the Unit Owners and their Mortgagees, in proportion to their respective interests in the Common Elements prior to such taking or condemnation, but the portion of the award attributable to the acquisition of any Limited Common Element shall be equally divided among the Owners of the Units to which such Limited Common Element was allocated at the time of such taking or condemnation. The Association shall promptly prepare, execute and record as a Common Expense an amendment to this Declaration reflecting such reallocation.

D. Decree, Prior Liens. The court decree shall be recorded. Notwithstanding anything to the contrary in this Article, lien holders on any Unit, Common Element or Limited Common Element, shall have a lien on any such awards in order of priority of their respective liens.

ARTICLE X: REPAIR AND RECONSTRUCTION AFTER FIRE OR OTHER CASUALTY

A. Required Repair and Reconstruction. In the event of damage to or destruction of all or any part of the Property as a result of fire or other casualty, the Executive Board on behalf of the Association shall promptly arrange for and supervise the prompt repair, replacement and restoration thereof (including any damaged Units, service fixtures, service machinery and other apparatus initially installed therein by the Declarant, but not including any other furniture, furnishings, fixtures, equipment or other personal property supplied or installed by the Unit Owners in the Units), substantially in accordance with this Declaration, Plats and Plans, the original elevation thereof and the original plans and specifications therefor unless (a) the Condominium is terminated, or (b) repair, replacement or restoration would be illegal under any state or local health, safety, land-use or environmental statute, code or ordinance, or (c) eighty percent (80%) of the Unit Owners vote not to repair, restore or replace the damaged or destroyed Property, and such decision is approved by every Owner of a Unit or Limited Common Element, which will not be repaired, replaced or restored, and by all Eligible Mortgage Holders of all Mortgages thereon.

B. Procedure for Reconstruction and Repair. If repair, replacement or restoration shall be required pursuant to Paragraph A of this Article: (1) Cost Estimates: The Executive Board shall promptly obtain reliable and detailed estimates of the cost of repairing and restoring such portion (including any damaged Units, fixtures, service machinery and other apparatus initially installed by Declarant, but not including any other furniture, furnishings, fixtures or equipment installed by the Unit Owner in the Unit) substantially in accordance with this Declaration, the Plats and Plans, the original elevation thereof and original building plans and specifications therefor unless other action or repair or replacement is approved by at least 80% of the Unit Owners and 51% of the Eligible Mortgage Holders; such costs may also include professional fees and premiums for such bonds as the Insurance Trustee may determine to be necessary; (2) Assessments: If the net proceeds of insurance, if any, are not sufficient to defray such estimated costs of reconstruction,

repair and replacement, or if upon completion of reconstruction and repair the funds for the payment of the costs thereof are insufficient, the amount necessary to complete such reconstruction and repair may be obtained from the appropriate reserve for replacement funds, and any such costs in excess of insurance proceeds and reserves shall be deemed a Common Expense and a special assessment therefor shall be levied by the Association; and (3) Construction Fund and Disbursement: The proceeds on insurance collected on account of the casualty, and the sums received by the Association from collections of assessments against Unit Owners pursuant to Paragraph B(2) of this Article on account of such casualty, shall constitute a construction fund which shall be held in trust by the Insurance Trustee or Association as provided in this Declaration and disbursed in payment of the costs of reconstruction and repair in the following manner: (a) if the estimated cost of reconstruction and repair is less than Two Hundred Thousand ($200,000.00) Dollars, then the construction fund shall be disbursed in appropriate progress payments, or upon order of the Executive Board; provided, however, that upon request of fifty percent (50%) of the Eligible Mortgage Holders (based upon one vote for each mortgage held) such funds shall be disbursed pursuant to subparagraph B(3)(b); (b) if the estimated cost of reconstruction and repair is Two Hundred Thousand ($200,000.00) Dollars or more, then the construction fund shall be disbursed in payment of such costs upon approval of an architect qualified to practice in the State of Maine employed by the Association (the "Architect") or Insurance Trustee to supervise such work and approved by such fifty percent (50%) of the Eligible Mortgage Holders, payment to be made from time to time as the work progresses; the Architect shall be required to furnish a certificate giving a brief description of the services and materials furnished by various contractors, subcontractors, materialmen, the architect and other persons who have rendered services or furnished materials in connection with the work stating that: (i) the sums requested by them in payment are justly due and owing and that such sums do not exceed the value of the services and materials furnished; (ii) there is no other outstanding indebtedness known to such Architect for the services and materials described; (iii) the cost as estimated by such Architect for the work remaining to be done subsequent to the date of such certificate does not exceed the amount of the construction fund remaining after payment of the sum so requested; and (c) when the damage is to both Common Elements and Units, the insurance proceeds shall be applied first to the cost of repairing the Common Elements and thereafter to the cost of repairing the Units; and (d) the first monies disbursed in payment of the cost of reconstruction and repair shall be from any insurance proceeds and, if there is a balance in the construction fund after the payment of all of the costs of the reconstruction and repair for which the fund is established, such balance shall be distributed among all Unit Owners, Mortgage holders and lien holders, as their respective insurable interests may appear, in proportion to their respective Common Element Interests or the Common Element Interests to which their respective Mortgages are subject.

C. Damage or Destruction; No Repair or Replacement. If the entire Condominium is not repaired or replaced: (1) the insurance proceeds attributable to the damaged Common Elements shall be used to restore the damaged areas of the Common Elements to a condition compatible with the remainder of the Condominium as determined by the Executive Board or Architect; (2) the insurance proceeds attributable to Units and Limited Common Elements which are not rebuilt shall be distributed to the Owners and Mortgagees of those Units as their insurable interests appear and the Owners and Mortgagees of the Units to which those Limited Common Elements were assignable or allocated, as their insurable interests may appear; and (3) the remainder of the proceeds shall be distributed to all the Unit Owners and Mortgagees, as their insurable interest may appear, in proportion to their respective Common Element Interests or the Common Element Interests to which their respective Mortgagees are subject.

If the Unit Owners and their Mortgagees vote not to rebuild any unit, that Unit's entire Allocated Interests shall be automatically reallocated upon said vote as if the Unit had been condemned as provided in Article IX of this Declaration and the Association shall prepare, execute and record an amendment to this Declaration reflecting the reallocations. Notwithstanding any provisions of this Article to the contrary, Section 1602-118 of the Act governs the distribution of insurance proceeds if the Condominium is terminated.

ARTICLE XI: INSURANCE

A. General. No later than the date of the first conveyance of a Unit to a person other than the Declarant, the Association, shall obtain and maintain as a Common Expense, the policies of insurance described below to the extent such policies shall be reasonably available. If such insurance is not maintained, then the Association shall give written notice thereof to the Unit Owners and the Eligible Mortgage Holders. To the extent that such insurance subsequently becomes unavailable, the Association shall obtain as a substitution the most comparable insurance available. The Board of Directors is hereby irrevocably appointed as attorney-in-fact for each Unit Owner and for each Mortgagee and Eligible Mortgage Holder and for each owner of any other interest in the Property, for purchasing and maintaining the insurance, for the collection and disposition of any insurance, including distribution pursuant to Section 1603-113(c) of the Condominium Act, for the negotiation of losses and execution of releases of liability, and for the execution of all documents, and performance of all other acts necessary to accomplish these purposes.

B. Property and Casualty Insurance for Units and Common Elements. The Association shall obtain and maintain in effect an "extended coverage" fire and casualty insurance policy covering the Units and Common Elements (including the Limited Common Elements) with vandalism, malicious mischief, windstorm, debris removal, cost of demolition and water damage endorsements, issued by an insurance company authorized to do business in the State of Maine, *excluding* the land, foundations and excavations and other similar items customarily excluded from property insurance policies, *excluding* risks customarily excluded from commercial property insurance policies as determined by the Board of Directors, and *excluding* furniture, furnishings, inventory, equipment and other personal property supplied or installed by Unit Owners. The policy shall cover the interests of and benefit as insureds the Association, the Board of Directors, and all Unit Owners and their Mortgagees as their insurable interests may appear.

The Association's blanket or master insurance policy shall be in an amount equal to one hundred percent (100%) of the then current fair market value of such insured Units and Common Elements (exclusive of the land, excavations, foundations and other similar items customarily excluded from such coverage), without deduction for depreciation, which coverage may be "replacement cost" coverage if the Board of Directors determines such coverage is reasonably available. Such insurance policy may, at the option of the Board of Directors, contain such deductible and exclusions as the Board of Directors shall reasonably deem appropriate but the deductible not to exceed the lesser of $10,000 or one (1) percent of the policy's face amount, unless approved by a majority vote of the Owners.

Unless otherwise established under Rules and Regulations adopted by the Board of Directors from time to time, a Unit Owner shall pay the expense of repair of damage to its Unit, to the Common Elements or to another Unit if caused by the neglect of the Unit Owner in the amount of the Association's insurance deductible (or such greater amount as may be established by the Rules and Regulations adopted by the Board of Directors from time to time); the Association shall not be responsible to such Unit Owner for the costs of such repair or damage. In the event of a casualty affecting both the Common Elements and Unit(s) the Board of Directors may allocate responsibility for the insurance deductible among the Common Elements and Unit(s).

Notwithstanding the foregoing, each Unit Owner shall procure "builder's risk" insurance coverage on a Unit while the Unit is undergoing construction or significant repairs and renovations such that the Unit is not otherwise covered by the Association's policy, and the Association shall have no responsibility for any design error, faulty workmanship or defective construction carried on by or at the request of a Unit Owner

Since the Common Elements are believed to have been originally constructed a number of years ago, the Association is not required to carry casualty insurance for the replacement or repair of the Common

Elements to their exact prior state and the Board of Directors may limit the scope of insurance coverage to the market value of the Common Elements and limit repair or replacement to more modern materials and techniques based on available casualty insurance proceeds.

Such casualty insurance policy shall also include the following provisions:

(i) The following endorsements or their equivalent: (a) "no control," meaning that coverage shall not be prejudiced by any act or neglect of any occupant or Unit Owner or their agents, when such act or neglect is not within the control of the insured, or the Unit Owners collectively, nor by any failure of the insured, or the Unit Owners collectively, to comply with any warranty or condition with regard to any portion of the Condominium over which the insured, or the Unit Owners collectively, have no control; (b) "Construction Code Endorsement" or "increased cost of construction," (c) "agreed amount" or elimination of co-insurance clause; and (d) "inflation guard," when it can be obtained.

(ii) That any "no other insurance" clause shall expressly exclude individual Unit Owners' policies from its operation, so that the physical damage policy purchased by the Board of Directors shall be deemed primary coverage and any individual Unit Owners' policies shall be deemed excess coverage, and in no event shall the insurance coverage obtained and maintained by the Board of Directors hereunder provide for or be brought into contribution with insurance purchased by individual Unit Owners or their Mortgagees;

(iii) The recognition of any Insurance Trust Agreement whereby the Board of Directors may designate in writing an Insurance Trustee to hold any insurance proceeds in trust for disbursement, as provided in Section C below; and

(iv) A standard "mortgagee clause" which shall: (a) provide that any reference to a mortgagee in such policy shall mean and include all holders of mortgages of any Unit, in their respective order and preference, whether or not named therein; (b) provide that such insurance as to the interest of any mortgagee shall not be invalidated by any act or neglect of the Association or owners or any persons under any of them; and (c) waive any provision invalidating such mortgagee clauses by reason of the failure of any mortgagee to notify the insurer of any hazardous use or vacancy, and requirement that the mortgagee pay any premium thereon, and any contribution clause.

C. Casualty Losses, Adjustment and Payment; Insurance Trustee. Any loss covered by the insurance policy described in Section B above shall be adjusted with the Association acting through its Board of Directors, but the insurance proceeds shall be payable to the Insurance Trustee designated for that purpose by the Board of Directors, if any, as provided in the Condominium Act and otherwise to the Association, and not to any Mortgagee.

The Insurance Trustee or the Association as applicable shall hold any insurance proceeds in trust for Unit Owners, Mortgagees and other lien holders as their interests may appear. The Board of Directors shall cause the Insurance Trustee or the Association to obtain a surety bond in 100% of the amount of the insurance proceeds for the faithful performance of the duties as insurance trustee before it shall be entitled to receive such proceeds. Subject to the provisions of this Article, the Bylaws and Section 1603-113(e) of the Condominium Act, the proceeds shall be disbursed first for the repair or restoration of the damage to the Common Elements. Unit Owners, Mortgagees and other lien holders are not entitled to receive payment of any portion of the proceeds, unless either (i) there is a surplus of proceeds after the damaged Units and Common Elements have been repaired or restored, or (ii) the decision has been made not to repair or restore the damage as provided in Section 1603-113(h) of the Condominium Act, or (iii) the Condominium is terminated in whole or part.

D. Liability Insurance. The Board of Directors shall obtain and maintain, as a Common Expense,

comprehensive general public liability insurance (including medical payments insurance) and property damage insurance in such limits as the Board may from time to time determine, insuring each Board of Directors member, the managing agent, each Unit Owner and the Declarant against any liability to the public or to the Unit Owners (and their invitees, agents and employees) covering all occurrences commonly insured against for death, bodily injury or property damage, arising out of the maintenance, ownership or use of the Common Elements, and for any legal liability resulting from suits or actions related to employment contracts to which the Association is a party. Such insurance shall be issued on a comprehensive liability basis and shall contain: (a) a cross liability endorsement, under which the rights of a named insured under the policy shall not be prejudiced with respect to his action against another named insured; (b) hired and non-owned vehicle coverage; (c) a "severability of interest" endorsement, which shall preclude the insurer from denying liability to a Unit Owner because of negligent acts of the Association or of another Unit Owner; and (d) a broad form liability extension endorsement including "personal injury," contractual liability, and other coverage commonly included in such broad form endorsement. The Board of Directors shall review such limits once each year, but in no event shall such insurance be less than two million dollars ($2,000,000.00) covering all claims for bodily injury or property damage arising out of one occurrence.

E. Additional Required Provisions. All insurance policies required to be carried by the Association under this Article shall in addition contain the following provisions or features:

i. The insurer waives any right to claim by way of subrogation against the Declarant, the Association, the Board of Directors, the managing agent or the Unit Owners, and their respective agents, employees, guests and, in the case of the Unit Owners, the members of their households;
ii. The Declarant, so long as the Declarant shall own any Unit, shall be protected by all such policies as a Unit Owner.
iii. Each Unit Owner is an insured person under the policy with respect to liability arising out of the ownership of an undivided interest in the Common Elements or membership in the Association;
iv. The insurer waives its right to subrogation under the policy against any Unit Owner, its principles, managers, officers, employees or directors or members of his household;
v. No act or omission by any Unit Owner, unless acting within the scope of his authority on behalf of the Association, will void the policy or be a condition to recovery under the policy; and
vi. If at the time of a loss under the Association's policy, there is other insurance in the name of a Unit Owner covering the same risk covered by the policy, the Association's policy provides primary insurance.

F. Other Insurance. The Board of Directors shall obtain and maintain as a Common Expense:

(i) To the extent reasonably available, "directors' and officers'" liability insurance, to satisfy the indemnification obligations of the Association;

(ii) Workers' compensation insurance, if and to the extent necessary to meet the requirements of law;

(iii) Flood insurance if any or all of the Property is located in a special flood hazard area equal to the greater of 100% of the insurable value of the Property or the maximum coverage available under the appropriate national Flood Insurance Administration program. A blanket or master policy shall be obtained which includes a maximum deductible of one percent (1.00%) of the policy face amount; and

(iv) Such other insurance as the Board of Directors may determine, as may be requested by a majority of the Unit Owners (including, without limitation, "fidelity bond" or employee dishonesty coverage).

G. Memoranda and Cancellation. All insurers that shall issue an insurance policy or policies under this Article shall issue certificates or memoranda of insurance to the Association, and, upon request, to any Unit Owner or Mortgagee.

All such insurers issuing the policy may not cancel (including cancellation for non-payment of premium), substantially modify, or refuse to renew such policy or policies until twenty (20) days (10 days notice for non-payment of premiums) after notice of the proposed cancellation of non-renewal has been mailed to the Association, the managing agent, each Unit Owner and each Mortgagee to whom a certificate or memorandum of insurance has been issued at their respective last known addresses.

H. Separate Insurance Required to be Maintained by Owners. Each Unit Owner should obtain at its own expense, a condominium insurance policy for damage to its Unit not insured through the Association, and all personal property located in a Unit for its own benefit and for its personal liability, as well as upon any improvements made by him to its Unit under coverage normally called "improvements and betterments coverage;" provided, however, that no Unit Owner shall be entitled to exercise its right to acquire or maintain such insurance coverage which would decrease the amount which the Association on behalf of all Unit Owners may realize under any insurance policy maintained by the Association, or to cause any insurance coverage maintained by the Association to be brought into contribution with insurance coverage obtained by a Unit Owner.

All such Unit Owner's policies must contain waivers of subrogation in favor of the Association.

The Association shall have no responsibility for ascertaining whether or not the Unit Owner maintains such insurance in effect.

Each Unit Owner shall notify the Board of Directors in writing of all structural improvements made by the Unit Owner to his Unit; provided, however, that this sentence shall not be construed as an authorization to Unit Owners to make structural improvements to Units otherwise than in accordance with this Declaration, the Bylaws and Rules and Regulations promulgated by the Board of Directors. Any premium increase caused by such improvements may be assessed to the Owner of the improved Unit. No Unit Owner shall be entitled to receive insurance proceeds for the repair, restoration or rebuilding of any such improvements not so reported to the Board of Directors and not insured by the Association, unless otherwise consented to by vote of the Board of Directors.

At the request of the Association, any Unit Owner who obtains an individual insurance policy covering any portion of the Condominium shall file a certificate or copy of such individual policy or policies with the Board of Directors within thirty (30) days after the purchase of such insurance but failure to request or provide such certificate or insurance copes shall not impair any terms of this Declaration.

ARTICLE XII: ADDITIONAL RESTRICTIONS ON USE, OCCUPANCY OR ALIENATION

A. Use and Occupancy Restrictions. Each Unit shall be occupied and used subject to the following restrictions: (1) Unit 1 will be used solely for residential purposes; and (2) each Unit will be subject to reasonable rules and regulations as adopted by the Association from time to time. Nothing in this Declaration shall be construed to prohibit the Declarant from exercising any easements and rights reserved by the Declarant pursuant to this Declaration for any purposes including promotional, marketing or display purposes, from using any appropriate portion of the Common Elements for exercising these reserved rights,

settlement of sales of Units and for customer service purposes, or from leasing Units owned by Declarant as provided in this Declaration.

B. Leasing Restrictions. No Unit Owner shall lease a Unit other than on written form of lease requiring the lessee to comply with the Condominium Documents and rules and regulations of the Association. Each Unit Owner shall, promptly following the execution of any lease of a Unit, notify the Association in writing of the name of the tenant and the term of the lease and any options in the lease to renew, extend or purchase. The Declarant retains and reserves the right, without complying with the restrictions contained in the foregoing Paragraphs, to enter into leases with any persons for the occupancy of any of the Units owned by the Declarant during the period ending 30 years from the date of this Declaration.

C. Voluntary Resale of Units. The following provisions apply to the sales of Units by all Unit Owners other than the Declarant: No Unit Owner shall be liable for the payment of any part of the Common Expenses assessed against his Unit subsequent to the date of recordation of a bona fide conveyance in fee of such Unit by the Owner. In a voluntary transfer of a Unit, the grantee of the Unit shall be jointly and severally liable with the grantor for all unpaid assessments and special assessments for Common Expenses made by the Executive Board against the latter up to the time of the recordation of grantor's transfer, without prejudice to the grantee's right to recover from the grantor the amounts paid by the grantee therefor. However, any person who shall have entered into an agreement to purchase a Unit from a Unit Owner shall be entitled to a certificate from the Executive Board as provided by Section 1604-108(b) of the Act, and the grantee shall not be liable for, nor shall the Unit conveyed by subject to a lien for, any assessments or unpaid special assessments made by the Executive Board against the grantor for Common Expenses in excess of those disclosed on such certificate. All Unit Owners shall comply with Section 1604-108 of the Act. Except as provided in this Article, there are no other restrictions governing the voluntary transfer of a Unit.

D. Restriction on Demolition and Rehabilitation of Unit 2: Unit 2 (the Smith Wing) shall not be demolished within five years of the completion of the initial rehabilitation of Unit 1; and any work on the Unit 2 within 5 years of Unit 1 placement in service of the Unit 1 (Motherhouse) rehabilitation project must be performed in accordance with NPS standards for historic preservation to the extent required so that such rehabilitation shall not adversely affect historic tax credits arising from the rehabilitation of Unit 1.

E. Rules and Regulations. Each Unit, appurtenant Limited Common Elements and the Common Elements shall be subject to all restrictions contained in the Unit deed, this Declaration, the By-Laws of the Association, and any reasonable Rules and Regulations adopted by the Association from time to time, as amended from time to time.

ARTICLE XIII: APPLICABILITY; COMPLIANCE AND DEFAULT

A. Applicability. All present and future Owners and tenants, their guests, servants, agents and employees and any other person or persons that shall be permitted to use the Common Elements shall be subject to this Declaration, the By-Laws and to such rules and regulations as may be issued by the Executive Board of the Association from time to time to govern the conduct of its members and the use and occupancy of the Property. Ownership, rental or occupancy of any of the Units in the Condominium shall be conclusively deemed to mean that said Owner, tenant or occupant has accepted and ratified this Declaration, the By-Laws and the rules and regulations of the Association and will comply with them. The acceptance of a deed or conveyance (other than as security) or the entering into of a lease or the entering into of occupancy of any Unit (other than possession by a Mortgagee prior to either the completion of foreclosure or the acceptance of a deed to the Unit subject to the Mortgage held by such Mortgagee) shall signify that the provisions of this Declaration and the By-Laws, the rules and regulations of the Condominium and the decisions of the Executive Board are accepted and ratified by such Owner, tenant or

occupant, and all of such provisions shall be deemed and taken to be covenants running with the land and shall bind any person having at any time any interest or estate in such Unit, as though such provisions were recited and stipulated at length in each and every deed or conveyance or lease thereof.

B. Compliance and Default. (1) Each Unit Owner shall be governed by and shall comply strictly with the terms, covenants, conditions and restrictions of this Declaration, By-Laws and the rules and regulations adopted pursuant thereto, and the same as they may be amended from time to time. The Executive Board shall have the power to adopt, amend and enforce compliance with such reasonable rules and regulations relative to the operation, use and occupancy of the Units and the Common Elements consistent with the provisions of this Declaration and the Act, including, but not limited to the appointment of such committees and the enactment and enforcement of such enforcement procedures and penalties for violations as the Executive Board shall deem appropriate. Any such rules and regulations shall be adopted or amended, from time to time, by means of appropriate resolutions duly approved by the Executive Board in accordance with the By-Laws. A copy of such rules and regulations and copies of any amendments thereto shall be delivered or mailed to each Owner or occupant of a Unit promptly after the adoption thereof. Failure of the Unit Owner to comply therewith shall entitle the Association or Unit Owners to the remedies provided in this Declaration and the Act, and also to the following relief, none of which remedies shall be exclusive of any other remedies: (1) Suits: Failure to comply with the terms of this Declaration, the By-Laws and the rules and regulations adopted pursuant thereto, as the same may be amended from time to time, shall entitle the Association or any aggrieved Unit Owner to sue for the recovery of damages or for injunctive relief, or both. Such relief shall not be exclusive of other remedies provided by law; (2) Costs and Attorney's Fees: In any proceeding arising because of an alleged failure of a Unit Owner to comply with the terms of the Condominium Documents and rules and regulations adopted pursuant thereto, as the same may be amended from time to time, the prevailing party shall be entitled to recover the costs of the proceeding and reasonable attorney's fees; provided, however, that no attorney's fees may be recovered against the Executive Board in any such action unless the court shall first expressly find that the Executive Board acted in bad faith. (3) No Wavier of Rights: The failure of the Declarant, or the Executive Board, or any Unit Owner to enforce any covenant, restriction or other provision of the Act, the Condominium Documents or the rules and regulations adopted pursuant thereto, shall not constitute a waiver of the right to do so thereafter.

C. Appeal and Hearing Procedure; Actions by Owners. No Unit Owner shall have the right to object, challenge, commence any suit at law or in equity or take any other action under any act, power or authority now in force or hereafter adopted except after following such procedures as are established by the Executive Board by rule or regulation consistent with the provisions of this Paragraph. The Executive Board, or a committee as may be appointed by the Executive Board, shall hear appeals from Unit Owners or lessees of alleged violations of the Condominium Documents and rules and regulations of the Association. Unit Owners shall not have the right to appeal assessments for or collections of assessments for Common Expenses. The Executive Board or such committee shall hold a hearing on any such appeal within thirty (30) days after the receipt by the Executive Board of a formal notice of appeal from a Unit Owner or resident. A decision shall be issued in writing by the Executive Board within ten (10) days after the conclusion of the hearing. The Executive Board shall have the right to establish various rules and procedures governing the operation and administration of the appeal and hearing process and the enforcement of the Condominium Documents and rules and regulations. Unless the internal remedies provided by this Paragraph and such rules and regulations as may be promulgated by the Executive Board shall be expressly waived by the Association or the Association fails or refuses to act, no action at law or in equity shall be commenced by any Unit Owner or resident until such internal remedy is pursued to exhaustion. Any action by a Unit Owner against any other Unit Owner or resident arising out of any term, covenant or condition contained in the Condominium Documents or any rule or regulation made pursuant thereto shall be subject to the same procedures. In hearings before the Executive Board or the committee designated by the Executive Board, all parties shall be entitled to be represented by counsel.

ARTICLE XIV: MORTGAGES OF UNITS; RIGHTS OF MORTGAGEES

A. Right to Mortgage. Each Unit Owner shall have the right to mortgage or encumber his own respective Unit together with the Allocated Interests appurtenant to such Unit. Except as otherwise permitted by Section 1603-112 of the Act and subject to this Declaration, no Unit Owner shall have the right or authority to mortgage or otherwise encumber in any manner whatsoever the Common Elements or any part thereof except his own Unit and the Limited Common Elements and Allocated Interests appurtenant to his Unit. A Unit Owner who mortgages his Unit shall notify the Executive Board in writing of the name and address of his Mortgagee(s) and shall file a conformed copy of the note and mortgage with the Executive Board; provided, however, that failure to do so shall not in any way affect the validity or enforceability of any mortgage.

B. Mortgage Foreclosure. Any Mortgagee of a Unit holding a recorded first mortgage on a Unit that obtains title to the Unit pursuant to the remedies provided in the Mortgage, or through a completed foreclosure of the Mortgage, or through deed (or assignment) in lieu of foreclosure, shall take the Unit with the Allocated Interests appurtenant thereto free of such claims and liens for unpaid assessments for Common Expenses, interest and costs levied against such Unit which accrue prior to the acquisition of title to such Unit by the Mortgagee, other than the proportionate share of the Common Expenses which become due and payable from and after the date on which the Mortgagee shall acquire title to the Unit through a completed foreclosure of deed (or assignment) in lieu of foreclosure.

C. Notices to Eligible Mortgage Holder. The Association shall send written notice by prepaid United States mail to each Eligible Mortgage Holder at the address identified pursuant to Article XVII(C) of this Declaration of the following proposed actions either within a reasonable period prior to the taking of any such proposed actions or at the time that notice thereof is given to Unit Owners unless another time is specified herein: (1) any condemnation loss or any casualty loss which affects a material portion of the Condominium or any unit in which there is a first Mortgage held by such Eligible Mortgage Holder; (2) notice of any default or delinquency in the payment of assessments for Common Expenses or any other charges owed by an Owner of a Unit subject to a Mortgage held of record by such an Eligible Mortgage Holder, or any other default in the performance or payment by such an Owner of a Unit of any obligation under this Declaration, the By-Laws or any rules and regulations of the Association, which delinquency or other default continues for a period of sixty (60) days, to the Eligible Mortgage Holder of the Mortgage to which such Owner's Unit is subject; (3) any lapse, cancellation or material modification of any insurance policy or fidelity bond required to be maintained under the Declaration or By-Laws by the Association; (4) the proposed use of any proceeds of Property Insurance required to be obtained and maintained by the Association pursuant to Section 1603-113, subsection (a) of the Act, for purposes other than repair or restoration of the damaged property; (5) the adoption by the Executive Board of any proposed budget under Section 1603, subsection (c) of the Act, the date of the meeting of Unit Owners scheduled to consider ratification of such proposed budget, and a summary of the proposed budget; (6) any proposed action which would require the consent of a specified percentage of Eligible Mortgage Holders as specified in Paragraph E of this Article; (7) the termination of the Condominium pursuant to Section 1602-118 of the Act and this Declaration; (8) a change in the Allocated Interests appurtenant to any Unit, a change in the boundaries of a Unit, or the subdivision of a Unit; (9) the merger or consolidation of the Condominium with another condominium; or (10) the conveyance or subjection to a security interest of any portion of the Common Elements. Upon written request of any Eligible Mortgage Holder, the Association will provide an audited financial statement of the Association for the preceding fiscal year.

D. Mortgagee Approval Rights. For purposes of this Paragraph and the following subparagraphs, where approval by a stated percentage of Eligible Mortgage Holders is required, such approval shall be based upon one (1) vote for each Unit on which a mortgage is held. Any repair, replacement or restoration

of the Condominium, after a partial condemnation or damage due to an insurable hazard, shall be performed as provided in this Declaration, unless other action is approved by at least fifty-one (51%) percent of Eligible Mortgage Holders. Any election to terminate the legal status of the Condominium pursuant to Section 1602-118 of the Act, and this Declaration after substantial destruction or a substantial taking in condemnation of the Condominium Property shall require the approval of at least fifty-one (51%) percent of all Eligible Mortgage Holders. Any abandonment or termination of the legal status of the Condominium pursuant to Section 1602-118 of the Act by act or omission for reasons other than said substantial destruction or taking shall require the prior written approval of at least fifty-one (51%) percent of Eligible Mortgage Holders of first Mortgages on Units. Any abandonment, partition, subdivision, encumbrance, sale or transfer of any of the Common Elements (except for grant easements for utilities or other public purposes consistent with the intended use of the Common Elements) by act or omission shall require the prior written approval of at least fifty-one (51%) percent of the Eligible Mortgage Holders. With respect to amendments to the Condominium Documents other than amendments to the Condominium Documents or termination of the Condominium made as a result of destruction, damage, or condemnation as provided in this Article, the approval of at least fifty-one percent (51%) of the Eligible Mortgage Holders shall be necessary to terminate the Condominium as provided hereinabove.

The written consent or approval of at least fifty-one (51%) percent of the Eligible Mortgage Holders of Units affected by such amendments, shall be required to add or amend any material provisions of the Condominium Documents which establish, provide for, govern or regulate any of the following matters: (i) Voting; (ii) assessments, assessment liens or subordination of such liens; (iii) reserves for maintenance, repair and replacement of the Common Elements (or Units if applicable); (iv) insurance or fidelity bonds; (v) rights to use of the Common Elements; (vi) responsibility for maintenance and repair of the Common Elements of the Condominium; (vii) expansion or contraction of the Condominium or the addition, annexation or withdrawal of property to or from the Condominium; (viii) the interests in the Common Elements or Limited Common Elements; (ix) convertibility of Units into Common Elements or of Common Elements into Units; (x) leasing of Units; (xi) imposition of any restriction on a Unit Owner's right to sell, transfer, or otherwise convey his Unit; (xii) any proposed action described in Paragraph C(4), C(7), C(8), C(9) or C(10) of this Article; (xiii) a decision by the Association to establish self-management when professional management had previously been required by an Eligible Mortgagee; or (xiv) any provisions which are for the express benefit of Eligible Mortgage Holders. An addition or amendment to the Condominium Documents shall not be considered material if it is for the purpose of correcting technical errors.

An Eligible Mortgage Holder who receives a written request to approve any additions or amendments which do not constitute either a material change to the Condominium Documents or any amendment described in the preceding paragraph hereof and who does not deliver to the requesting party a negative response within thirty (30) days after the giving of notice shall be deemed to have approved such request in writing.

E. Voting and Other Rights of Eligible Mortgage Holders. In the event of any default by a Unit Owner in payment of assessments or performance of obligations pursuant to the Condominium Documents as more fully described in Paragraph C(2) of this Article, the Eligible Mortgage Holder of the Mortgage on such Owner's Unit shall have the right but not the obligation to cure such default. In addition to, but not by way of limitation of, all rights granted to Eligible Mortgage Holders pursuant to this Declaration to cast the votes allocated to a Unit in lieu of the Unit Owner, any Eligible Mortgage Holder, or its representative, shall have the right to attend meetings of the Association and Executive Board of the purposes of discussing the matters described in Paragraphs C(4), C(5), C(7), C(8), C(9) and C(10). No provision of the Condominium Documents shall be deemed or construed to give a Unit Owner, or any other person, priority over the rights of any Eligible Mortgage Holder pursuant to its Mortgage in the case of a distribution to Unit Owners of insurance proceeds or condemnation awards for losses to or a taking of Units, Common Elements, or both.

Each Eligible Mortgage Holder shall be entitled to examine the financial records and books of account of the Association upon reasonable prior written notice to the Association.

F. Rights of First Refusal. Notwithstanding anything to the contrary elsewhere contained in this Declaration, the By-Laws or said rules and regulations, in the event that the Unit Owners in the future adopt any right of first refusal (which right may be adopted only by amending this Declaration) in the case of the sale of any Unit, such right of first refusal shall not affect, impair or apply to the right of any Mortgagee to: (1) foreclose or take title to the Unit pursuant to the remedies provided in the Mortgage, (2) accept a deed (or assignment) in lieu of foreclosure in the event of a default by a mortgagor, or (3) sell or lease a Unit acquired by the procedures hereinabove set forth.

ARTICLE XV: AMENDMENT

Except in cases of amendments to this Declaration that may be unilaterally executed and recorded by the Association as described in Sections 1601-107, Eminent Domain, 1602-108(c), Allocation of Limited Common Elements, 1602-113(a) Reallocation of Boundaries Between Adjoining Units, 1602-113, Subdivision of Units and 1602-1117(a), Amendment of Declaration, of the Act and except in cases of amendments to this Declaration by certain Unit Owners, as described in Sections 1602-108(b), Reallocation of Limited Common Elements, 1602-1112(a), Relocation of Boundaries Between Adjoining Elements, 1602-1113(a), Relocation of Boundaries Between Adjoining Units, 1602-113(b), Subdivision of Units, or 1606-118(b), Termination of Condominium, of the Act, and except in cases of amendments to the Declaration that may be executed by the Declarant under Section 1602-109(f) Plats and Plans or under Section 1602-110, Exercise of Development Rights of the Act, and subject to the other provisions of this Declaration and of the Act, this Declaration, the Plats and Plans may be amended as follows:

A. Before Any Conveyance. Prior to the conveyance of any Unit by the Declarant to a Unit Owner other than as security for an obligation, the Declarant shall have the right to amend and re-amend this Declaration in any manner that the Declarant may deem appropriate.

B. After First Conveyance. After the first conveyance of a Unit by a Declarant, the terms of the following subparagraphs shall apply to the amendment of this Declaration:

(1) Notice. Notice of the subject matter of a proposed amendment shall be included in the notice of any meeting of the Executive Board in which a proposed amendment is considered, and shall be served upon all Unit Owners in the manner provided in Article XVII(a) for service of notices and upon Eligible Mortgage Holders in the manner identified in Article XVII(C).

(2) Resolution. An amendment may be proposed by either the Executive Board or by Unit Owners holding in the aggregate no less than 1/5th of the votes in the Association. No resolution of the Executive Board adopting a proposed amendment shall be effective unless it has been adopted at a meeting of the Association duly called and held in accordance with the By-Laws of the affirmative vote of at least 2/3rds in voting interest of the Unit Owners and then executed and recorded as provided in Paragraph B(5) of this Article.

(3) Agreement. In the alternative, an amendment may be made by an agreement signed by the record Owners of the Units to which at least 2/3rds of the votes in the Association are allocated in the manner required for the execution of a deed and acknowledged by at least one of them, and such amendment shall be effective when recorded.

(4) Certain Amendments. Notwithstanding the foregoing provisions of this Article, except as otherwise permitted by the Act and provided in this Declaration, no amendment may increase the number of

Units or change the boundaries of any Unit, the Allocated Interests allocated to a Unit, or the uses to which any Unit is restricted without the unanimous consent of the Unit Owners and the consent of the Eligible Mortgage Holders representing or holding mortgages on Units having at least 2/3rds of the votes in the Association. No amendment of this Declaration shall make any change which would in any way affect any of the rights, privileges, powers and options of the Declarant, its successors or assigns, unless the Declarant, or its successors or assigns shall join in the execution of such amendment.

(5) Execution and Recording. A copy of each amendment shall be attached to or included with a certificate, certifying that the amendment was duly adopted, which certificate shall be executed and acknowledged by such officer or officers of the Association and/or member or members of the Executive Board designated for that purpose in the By-Laws. The amendment shall be effective when such certificate and copy of the amendment are recorded.

(6) Notice and Challenge. No action to challenge the validity of an amendment to this Declaration adopted by the Association pursuant to this Article may be brought more than one year after such amendment is recorded. After each amendment to this Declaration adopted pursuant to this Article has been recorded, notice thereof shall be sent to all Unit Owners and to all Eligible Mortgage Holders at the address last furnished to the Executive Board, but failure to send such notices shall not affect the validity of such amendment. The Association shall make copies of the Declaration and all amendments thereto available for inspection at reasonable times upon reasonable request for such inspection.

ARTICLE XVI: EASEMENTS AND LICENSES

A. Recorded Easements and Licenses. The recording data for recorded easements and licenses appurtenant to or included in the Condominium or by virtue of any reservation contained in this Declaration, are stated and set forth in Schedule A hereto.

B. Utilities, Pipes and Conduits. Each Unit Owner shall have an easement in common with all other Unit Owners to use all pipes, wires, ducts, cables, conduits, public utility lines and other Common Elements serving his Unit and located in any of the other Units. Each Unit shall be subject to an easement in favor of all other Unit Owners to use the pipes, ducts, cables, wires, conduits, public utility lines and other Common Elements serving such other Units and located in such Unit.

C. Structural Support. Each Unit shall have an easement to the extent necessary for structural and subjacent support over every other Unit and over the Common Elements, and each Unit and the Common Elements shall be subject to an easement for structural and lateral support in favor of every other Unit.

D. Ingress, Egress and Regress. Each Unit Owners shall have an easement, subject to any rules and regulations established by the Executive Board, in common with all other Unit Owners to use the entrances, exists, corridors and other Common Elements as a means of ingress, egress and regress to and from the Property and the adjoining public streets. The Executive Board shall not and cannot establish any rules and regulations depriving any Unit Owner of reasonable ingress, egress and regress to and from his Unit, the Property and Common Elements, and the adjoining public streets.

E. Encroachments. If any portion of the Common Elements or Limited Common Elements hereafter encroaches upon any Unit, or if any Unit hereafter encroaches upon any other Unit or upon any portion of the Common Elements or Limited Common Elements, as a result of settling or shifting of any Building or Buildings in which they are located or otherwise than as a result of the purposeful or negligent act or omission of the Owner of the encroaching Unit, or of the Association in the case of encroachments by the Common Elements or Limited Common Elements, a valid easement appurtenant to the encroaching Units, Common Elements or Limited Common Elements for the encroachment and for the maintenance of

the same shall exist for so long as the encroachment shall exist. In the event that any Building shall be partially destroyed as a result of fire or other casualty or as a result of taking by the power of, or in the nature of, eminent domain or by an action or deed in lieu of condemnation, and then is rebuilt, encroachments of a portion or portions of the Common Elements or Limited Common Elements upon any Unit or of any Unit upon any other Unit or upon any portion of the Common Elements or Limited Common Elements, due to such rebuilding, shall be permitted, and valid easements appurtenant to the encroaching Units, Common Elements or Limited Common Elements for such encroachments and the maintenance thereof shall exist so long as the Building as so rebuilt shall stand.

F. Common Elements Easement in Favor of Unit Owners. The Common Elements (including, but not limited to, the Limited Common Elements) shall be and are hereby made subject to the following easements in favor of the Units benefited: (1) for the installation, repair, maintenance, use, removal and/or replacement of lighting fixtures, electrical receptacles, and other electrical installations which are Common Elements adjacent to such Unit; provided that the installation, repair, maintenance, use, removal or replacement of any such item does not unreasonably interfere with the use of any part of the Common Elements, adversely affect either the thermal or acoustical character of any Building or impair or structurally weaken any Building; (2) for driving and removing nails, screws, bolts and other attachment devices into the Unit side surface of the stone, block, brick or other masonry walls bounding the Unit and the Unit side surface of the studs which support the dry wall or plaster perimeter walls bounding the Unit the bottom surface of floor joists above the Unit to the extent such nails, screws, bolts and other attachment devices may encroach into a part of a Common Elements adjacent to such unit; provided that any such action will not unreasonably interfere with the common use of any part of the Common Elements, adversely affect either the thermal or acoustical character of any Building or impair or structurally weaken any Building; and (3) for the maintenance of the encroachment of any lighting devices, outlets, exhaust fans, ventilation ducts, registers, grilles and similar fixtures which serve only one Unit but which encroach into any part of any Common Elements or Limited Common Elements on the date this Declaration is recorded.

G. Association's Rights. The Association shall have a reasonable right of entry upon any Unit to make emergency repairs and to do other work reasonably necessary for the proper maintenance or operation of the Condominium. The Association shall have the right to grant permits, licenses and easements over the Common Elements for utilities, ways and other purposes reasonably necessary or useful for the proper maintenance or operation of the Condominium. The Association has a right of access to each Unit for the purpose of making inspections or for the purpose of correcting any condition originating in this Unit or elsewhere and threatening another Unit or a Common Elements, or for the purpose of performing installations, alterations or repairs to the mechanical or electrical services, other Common Elements or units, provided that requests for entry are made in advance and that any such entry is at a time reasonably convenient to the Unit Owner, and provided further that judicial proceedings shall be instituted by the Association before any items of construction can be altered or demolished. In case of an emergency, such right of entry shall be immediate, whether the Unit Owner is present at the time or not.

H. Special Declarant Rights. The Association, Executive Board and others and Declarant, its successors and assigns have the easements specified in this Article of this Declaration entitled Special Declarant Rights.

ARTICLE XVII: NOTICES TO UNIT OWNERS BY ASSOCIATION

A. To Unit Owners. All notices, demands, bills, statements or other communications affecting the Condominium shall be given to Unit Owners by the Association in writing and shall be deemed to have been duly given if delivered personally or sent by United States mail, postage prepaid, or if such notification is of a default or lien, sent by registered or certified United States mail, return receipt requested, postage prepaid, addressed to the Unit Owner at the address which the Unit Owner shall designate in writing and file

with the Secretary of the Association, or if no such address is so designated, the address of the Unit of such Unit Owner who is the record owner thereof.

B. To the Association. All notices, demands, statements or other communications affecting the Condominium given by the Association shall be in writing and shall be deemed to have been duly given to the Association if delivered personally or sent by United States mail, postage prepaid, return receipt requested, addressed to the Association at the principal office of the managing agent, or if there shall be no managing agent, then to the Secretary of the Association at the address of the Unit of which the Secretary is the record Unit Owner thereof.

C. Eligible Mortgage Holder. All notices, demands or other communications affecting the Condominium given by the Association to any Eligible Mortgage Holder shall be in writing and shall be deemed to have been duly given if delivered personally or sent by United States mail, postage prepaid, addressed to the Eligible Mortgage Holder at the address identified pursuant to this Declaration.

ARTICLE XVIII: TAXATION

A. Separate Taxation. If there is any Unit Owner other than the Declarant, each Unit and its Allocated Interests shall be deemed to be a separate tax parcel and shall be separately taxed and assessed by the City of Portland. Except to any extent required by law, neither the Buildings, the Property nor any of the Common Elements shall be deemed to be or assessed as a separate tax parcel.

B. Units Not Yet Separately Assessed. In the event that for any year real estate taxes assessed by the City of Portland are not separately taxed and assessed to each separate Unit Owner but are taxed on the Property as a whole, then each Unit Owner shall pay his proportionate share thereof in accordance with his respective Common Element Liability.

ARTICLE XIX: TERMINATION OF CONDOMINIUM

The Condominium shall not be terminated except as provided in and subject to Section 1602-118 of the Act and by agreement of Unit Owners of Units to which at least eighty (80%) percent of the votes in the Association are allocated and at least 80% of the votes of Eligible Mortgage Holders.

ARTICLE XX: MISCELLANEOUS

A. Interpretation; Conflict. In the event of any conflict or discrepancy between this Declaration, the By-laws and the Plats and Plans, this Declaration shall govern. If any provision of this Declaration, the By-Laws or the rules and regulations, or any section, sentence, clause, phrase, or word therein, or the application thereof in any circumstances be judicially held in conflict with any applicable laws, including, but not limited to, the Condominium Act, then the laws shall be deemed controlling; but the validity of the remainder of this Declaration, the By-Laws and rules and regulations, and the application of any such provision, section, clause, phrase, or word in other circumstances shall not be affected thereby and all of the other provisions of this Declaration shall continue in full force and effect as if such invalid provision had never been included herein. The captions herein are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of this Declaration or the intent of any provisions hereof. The use of the singular number in this Declaration shall be deemed to include the plural, and the use of any one gender shall be deemed applicable to all genders. No provision contained in this Declaration shall be deemed to have been abrogated or waived by reason of any failure to enforce the same irrespective of the number of violations or breaches which may occur. Any dispute or disagreement between Unit Owners with respect to interpretation or application of this Declaration or the By-Laws or rules and regulations shall be determined by the Board of Directors, which determination shall be final and

binding on all parties.

B. Remedies Cumulative. All rights, remedies and privileges granted to the Executive Board of a Unit Owner pursuant to any terms, provisions, covenants or conditions of the Condominium Documents shall be deemed to be cumulative, and the exercise of any one or more shall not be deemed to constitute an election of remedies nor shall it preclude the party thus exercising the same from exercising such other and additional rights, remedies, or privileges as may be granted to such party hereunder or by any instruments or documents incorporated herein by reference or at law or in equity.

IN WITNESS WHEREOF, Sea Coast at Baxter Woods Associates, LLC, a Maine limited liability company, by its Manager, hereunto duly authorized, has executed and delivered this Declaration as of the date first above written.

Signed, Sealed and Delivered
In the Presence of:

Sea Coast at Baxter Woods Associates, LLC

_____

By: _____
John B. Wasileski, Its Manager

STATE OF MAINE
CUMBERLAND, ss.

Personally appeared the above-named John B. Wasileski, this __ day of _____, 2016 and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public/Attorney-at-Law

Draft

SCHEDULE A
605 STEVENS AVENUE CONDOMINIUM DECLARATION OF CONDOMINIUM

A certain lot or parcel of land situated on the easterly side of Stevens Avenue and the southerly side of Walton Street in the City of Portland, County of Cumberland, State of Maine, being Lot #3 as shown on the Overall Subdivision Plan 605 Stevens Avenue, Stevens Avenue and Walton Street, Portland, Maine, made for Sea Coast at Baxter Woods Associates, LLC by Titcomb Associates, dated June 24, 2015, as revised from time to time (hereinafter the "Subdivision Plan").

Said Lot #3 is bound by the covenants and is subject to the easements and rights over such lot excepted and reserved for the benefit of Lots 1, 2 and 4 shown on said Subdivision Plan set forth in the Declaration of Covenants and Easements, by Sea Coast at Baxter Woods Associates, LLC, as Declarant, dated _____, 2016 and recorded in the Cumberland County Registry of Deeds, Book ___, Page _____ (the "Declaration of Covenants and Easements"). Said Lot #3 is submitted to this Declaration of Condominium together with the benefit of the easements and rights over said Lots 1, 2 and 4 and together with the benefit of the covenants set forth in said Declaration of Covenants and Easements. Said covenants, rights and easements shall be appurtenant to and shall burden and run with the land.

The premises described above as Lot 3 are also subject to:

1. Rights and easements reserved and set forth in the deed from James P. Baxter to the Roman Catholic Bishop of Portland, dated March 10, 1908 and recorded in the Cumberland County Registry of Deeds, Book 821, Page 59.

2. Declarant, its successors and assigns, except and reserve, for the benefit of Declarant in gross and for the benefit of Lots #1, 2 and 4 shown on the Subdivision Plan, a non-exclusive easement, in common with the Unit owners and others, to access and use the chapel located in the Motherhouse building located on Lot #3; the Association shall establish procedures for the scheduling of events in the chapel and for communication to all unit owners and to Declarant, its successors and assigns, when events are scheduled that will affect use of such chapel in order to avoid having multiple events scheduled for the same time that would impact use of such chapel. The Association may also establish reasonable times when the chapel is available for events and reasonable rules for use of and access to the chapel.

3. Rights and easements excepted and reserved by St. Joseph's Hospital and Convent in its deed to Sea Coast at Baxter Woods Associates, LLC, dated _____, 2016 and recorded in the Cumberland County Registry of Deeds, Book __, Page ___.

Draft

SCHEDULE B
605 STEVENS AVENUE CONDOMINIUM
DECLARATION OF CONDOMINIUM

The unit numbers, fraction of ownership of Common Elements, fraction assessment of Common Element expense, and number of votes in the 605 Stevens Avenue Condominium Association are as follows:

Unit Number	Votes	Fraction or percentage of ownership of common elements and fraction assessment of Common Element expense
1	1	__%
2	1	__%

The percentage of each Unit's Common Element Interest and Common Expense Liability is allocated by a formula represented by a fraction wherein the numerator is the number of interior square feet of each Unit located within a Building measured at the boundaries with the Common Element as shown on the Plans, and the denominator is the total such square footage of all the Units subject to rounding in order to permit ease of administration, provided however that the percentage stated in Exhibit B (as it may be amended) shall control in any event. Such square footage measurements may differ from leasing square footage calculations. If any additional Unit or Units are added to the Condominium, each Unit will have one vote and the fraction or percentage of ownership of common elements and fraction assessment of Common Element expense of each Unit will be revised in accordance with the formula set forth in this paragraph.

Draft

SCHEDULE C
605 STEVENS AVENUE CONDOMINIUM DECLARATION OF CONDOMINIUM

BYLAWS OF 605 STEVENS AVENUE CONDOMINIUM ASSOCATION

ARTICLE I: Name, Location, and Fiscal Year

Section l. Name. The name of the corporation is 605 Stevens Avenue Condominium Association (the "Corporation").

Section 2. Location. The principal office of the Corporation shall be located at 605 Stevens Avenue, Portland, Maine.

Section 3. Fiscal Year. The fiscal year of the Corporation shall, unless otherwise decided by the Board of Directors, ends December 31.

ARTICLE II: Purposes

Section l. Purposes. The purposes of said Corporation are to act on behalf of its members collectively as their governing body with respect to the administration, maintenance, repair and replacement of certain property which will be submitted to the provisions of Maine Condominium Act, Title 33, Chapter 31, Section 1601-101 *et seq*. and to be known as 605 Stevens Avenue Condominium Association and as such to own and acquire any real estate or interest or rights therein or appurtenances thereto and any and all personal property in connection therewith as may be incidental or necessary to such purpose.

ARTICLE III: Members

Section l. Membership. The owner or owners of record from time to time of each unit of the Condominium, shall constitute one member of the Corporation, and each such member shall have the fraction of common interest, common expenses liabilities and voting rights in the Corporation that are set forth in the Declaration of 605 Stevens Avenue Condominium, recorded in the Cumberland County Registry of Deeds, as it may be amended from time to time.

Section 2. Termination of Membership. The membership of each unit owner shall terminate when he ceases to be a unit owner, and upon the sale, transfer or other disposition of his ownership interest in the property his membership in the Corporation shall automatically be transferred to the new unit owner succeeding to such ownership interest.

Section 3. Meetings and Notice. Meetings of members shall be held at the Condominium in Portland, Maine. An annual meeting of the members shall be held on the first Tuesday in October in each year, commencing with October 1, 2016 at 7 p.m. Special meetings of the members may be called by the President, the Board of Directors or upon a petition signed by fifty (50) percent of the members. Written notice of any meeting shall be given to each member by the Secretary not less than ten (10) days nor more than thirty (30) days before the meeting by mailing it postage prepaid to the member's mailing address or to any other mailing address designated in writing by the member. The notice shall specify the time and place of the meeting and the items on the agenda.

Section 4. Quorum. A quorum for any meeting shall be constituted by persons entitled to cast 50 percent of the votes for election of the executive board, attending in person or represented by proxy.

Draft

ARTICLE IV: The Board of Directors

Section l. Composition. The Board of Directors shall consist of four members. Two Directors shall be elected by the owner of Unit 1; and two Directors shall be elected by the owner of Unit 2.

Section 2. Election and Term. The directors, except as provided in Article III, Section 5 and Sections 7 and 8 of this Article, shall be elected at the annual meeting from among the members or spouses of members. The directors shall hold office until their successors have been elected.

Section 3. Powers. The business of the Corporation shall be managed by the Board of Directors which shall have and may exercise all the powers of the Corporation, except those powers reserved to the members by the Act or by these Bylaws. The Board shall have the power to engage a managing agent for the property and to fix the term, compensation and authority of the manager or managing agent which, initially, shall be the Declarant.

Section 4. Meetings of Directors. Meetings of the Board of Directors may be held at any time and place upon call by the President or by a majority of the Directors, reasonable notice thereof being given to each Director. Notice that a meeting has been called may be given by the President, Secretary or Assistant Secretary, if one is appointed, or by one of the Directors. Notice of any meeting of the Board of Directors may be waived in writing signed by the person or persons entitled to such notice, whether before or after the time of such meeting, and shall be equivalent to the giving of such notice. Attendance of a Director at such meeting shall constitute a waiver of notice thereof, except where a Director attends a meeting for the express purpose of objecting to the transaction of any business because such meeting is not lawfully convened. Neither the business to be transacted at, nor the purpose of, any meeting of the Board of Directors need be specified in the notice, or waiver of notice, of such meeting.

Section 5. Quorum and Voting. A majority of the directors then in office shall constitute a quorum. A majority of less than a quorum may, from time to time postpone to a new time or place any meeting and the adjourned meeting may be held without further notice. If a quorum exists, a majority of the directors present may take any action, except the removal of a director for cause which shall require a majority vote of all directors then in office.

Section 6. Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors may be taken without a meeting if a written consent thereto is signed by all the directors. The Secretary shall file such written consent with the records of the meetings of the Board of Directors. Such consent shall be treated as a vote of the Board of Directors for all purposes.

Section 7. Vacancies. A vacancy in the Board of Directors shall be filled by the owner of the Unit that appointed the Director to hold office for the unexpired term of the director whose place is vacant and until his successor is elected.

Section 8. Removal. A director may be removed from office by a vote of all of the owner of the Unit or Units that elected such Director. A director may be removed for cause by a majority vote of all directors then in office.

Section 9. Compensation. Directors shall not receive compensation for their services except as provided by resolution of a majority of the members of the Corporation. Directors shall be reimbursed for any out-of-pocket expenses incurred which are reasonable and necessary in performing their duties on behalf of the Corporation.

Section 10. Delegation to Managing Agent. The Board of Directors may delegate to a managing

agent all of the powers of the Board, except the responsibility of preparing the annual budget and any supplemental budgets and any powers requiring approval of any specified percentage of members.

ARTICLE V: Officers

Section 1. Designation and Qualification. The officers of the Corporation shall consist of a President, a Treasurer, a Secretary and such other officers as the Board of Directors may elect. The President and Treasurer shall be members, or spouses of members, or in the case of a unit owner which is a Corporation, partnership, trust or estate, a designated agent thereof. The Secretary need not be a member, but shall be a resident of Maine.

Section 2. Election and Term. All officers shall be elected by the Board of Directors at its first meeting following the annual meeting of the members and shall hold office until the first meeting of the Board of Directors following the next annual meeting of members and until their successors are elected.

Section 3. President. The President shall be a Director and shall be the chief executive officer of the Corporation. The President shall have general supervision and control of the business of the Corporation subject to the direction of the Board of Directors and shall also have such other powers and duties as the Board of Directors may decide. The President shall preside at all meetings of the members and at all meetings of the Board of Directors. If the President is absent from any meeting of the members or Board of Directors, the Treasurer shall preside at such meeting. The President shall prepare, execute, certify and record amendments to the Declaration on behalf of the Corporation.

Section 4. Treasurer. The Treasurer shall have, subject to the direction of the members or Board of Directors, general charge of the financial affairs of the Corporation and shall keep full and accurate records thereof, which shall always be open to the inspection of any member or holder of a first mortgage on a unit. He shall render to the President and directors, at the regular meetings of the Board of Directors, or whenever they may require it, a statement of the accounts of his transactions as Treasurer and of the financial condition of the Corporation.

Section 5. Secretary. The Secretary shall record the proceedings of all meetings of the members and of the Board of Directors in books kept for that purpose. Record books of members' meetings shall be open at all reasonable times to the inspection of any member or holder of a first mortgage on a unit. The Secretary shall also keep the membership transfer books of the Corporation. He shall notify the members and the directors of all meetings in accordance with the Bylaws. If the Secretary is absent from any meeting of the members or the Board of Directors, a Temporary Secretary shall be chosen to exercise the duties of the Secretary at such meeting.

Section 6. Vacancies. A vacancy in any office may be filled by the Board of Directors by the election of a successor to hold office for the unexpired term of the officer whose place is vacant and until his successor is chosen and qualified.

Section 7. Removal. All officers may be removed from their respective offices by the Board of Directors.

Section 8. Resignation. Any officer may at any time resign his office by a resignation in writing delivered to the Corporation at its principal office or to the President or Secretary. Such resignation shall be effective upon receipt and acceptance thereof shall not be necessary to make it effective unless it so states.

Section 9. Compensation. The officers shall receive no compensation for their services unless expressly provided for in a resolution adopted by the majority of the members of the Corporation. The

officers shall be reimbursed for out-of- pocket expenses incurred which are reasonable and necessary in performing their duties on behalf of the Corporation.

ARTICLE VI: Assessments

Section 1. Budget. The Board of Directors shall cause to be prepared an estimated annual budget for each fiscal year of the Corporation. Such budget shall take into account the estimated common expenses and cash requirements for the year, including salaries, wages, payroll taxes, supplies, materials, parts, services, maintenance, repairs, replacements, landscaping, insurance, fuel, snow removal, trash pickup and other common expenses (as distinguished from individual mortgage payments, real estate taxes and individual telephone, electricity and other individual utility expenses billed or charged to the separate members on an individual or separate basis rather than a common basis). The Board shall establish and maintain an adequate reserve fund for the periodic maintenance, repair and replacement of improvements to the common areas and limited common areas. The reserve fund shall be included in the budget and maintained out of regular assessments for common expenses. To the extent that the assessments and other cash income collected during the preceding year shall be more or less than the expenditures for such preceding year, the surplus or deficit, as the case may be, shall also be taken into account in setting the budget and determining assessments for the current year so as to credit to such assessment any surplus from the preceding year or repay to said reserve fund any deficit from the preceding year.

Section 2. Payment. The estimated annual budget for each fiscal year shall be approved by the Board of Directors, and copies thereof shall be furnished to each member and eligible mortgage holder within thirty (30) days of adoption, and in any event not later than 90 days after the beginning of such year. The Board shall set a date for a meeting of the members to consider ratification of the budget not less than fourteen (14) or more than thirty (30) days after mailing of the budget. Notice of said meeting shall accompany the budget. Unless at that meeting all members reject the budget, the budget is deemed ratified, whether or not a quorum is present. In the event the proposed budget is rejected, the periodic budget last ratified by the members shall be continued until such time as the members ratify a subsequent budget proposed by the Board of Directors. On or before the first day of the next quarter and of each succeeding month or quarter of the year covered by the annual budget, each member shall pay, as his respective monthly or quarterly assessment for the common expenses, one-twelfth (1/12) or one-fourth (1/4), as the case may be, of his proportionate share of the common expenses for such year as shown by the annual budget, all as determined by the Board of Directors. Such proportionate share for each member shall be in accordance with his respective ownership interest in the common areas and facilities. No member shall be relieved of his obligation to pay his assessments for common expenses by abandoning or not using his unit or the common areas and facilities.

Section 3. Statements. Within ninety (90) days after the end of each year covered by an annual budget, or as soon thereafter as shall be practicable, the Treasurer shall cause to be furnished to each member a statement for such year so ended, showing the receipts and expenditures and such other information as he may deem desirable.

Section 4. Separate Accounts. The Treasurer shall cause to be kept a separate account for each member showing the respective assessments charged to and paid by such member, and the status of his account from time to time.

Section 5. Additional Assessments. In the event that during the course of any year, it shall appear to the Treasurer that the monthly assessments, determined in accordance with the estimated annual budget for such year, are insufficient or inadequate to cover the estimated common expenses for the remainder of such year, then the Board of Directors shall prepare and approve a supplemental budget covering the estimated deficiency for the remainder of such year, and shall cause the same to be presented to the

members for ratification in the same manner as the budget. Upon ratification of the supplemental budget, a supplemental assessment shall be made to each member for his proportionate share of such supplemental budget.

Section 6. Common Expenses. It shall be the duty of every member to pay his proportionate share of the common expenses, in the same ratio as his fraction of ownership in the common areas and facilities. If any member shall fail or refuse to make any such payment of the common expenses when due, the amount thereof together with interest at the rate established by the Corporation, costs and reasonable attorney's fees shall constitute a lien on such unit. The Corporation shall have the authority and responsibility to exercise and enforce any and all rights and remedies as provided for in Maine Revised Statutes, Title 33, Chapter 31, the Declaration and these Bylaws, or otherwise available at law or in equity for the collection of all unpaid assessments.

Section 7. Budget Expenses. The President and/or Treasurer, subject to Board direction, shall have the authority to enter into contracts on behalf of the Corporation for work and expenses provided in the budget and to make payment therefor from the funds of the Corporation.

Section 8. Expenses Assessed Subsequent to Conveyance of Unit. A member may not exempt himself from liability for his shares of common expenses subsequently to be assessed by a conveyance of his unit to the Corporation, except by approval of all of the other members and their first mortgagees.

Section 9. Availability of Documents. The Corporation is required to make available to unit owners, lenders and the holders, insurers and guarantors of the first mortgage on any unit current copies of the Declaration, Bylaws and any other rules and regulations governing the condominium and other books, records and financial statements of the Corporation. In addition thereto, the Corporation shall also make available to prospective purchasers current copies of the Declaration, Bylaws, other rules governing the condominium, and the most recent annual audited financial statement, if such is prepared. The Corporation may impose a reasonable charge for copies.

ARTICLE VII: Amendments

Section l. Amendment of By-Laws. These Bylaws may be amended or modified from time to time by action or approval of all of the members, except that no amendment may violate the provisions of Maine Revised Statutes, Title 33, Chapter 31.

Section 2. Amendment of Declaration. The Declaration may be amended in accordance with the terms thereof. Except for amendments exercising Development Rights by Declarant, the President and/or Treasurer of the Corporation shall execute a certificate setting forth the text of the amendment, which certificate shall be attested by the Secretary and recorded in the Cumberland County Registry of Deeds.

Draft

ATTACHMENT 2
FINANCIAL CAPACITY

Att. E

Benj. F. Packard

Bath Savings Institution

Since 1852

February 16, 2016

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

RE: Sisters of Mercy's Master Plan

To Whom It May Concern:

John Wasileski has been a customer of Bath Savings for 25 years. We have financed much of his development activities.

We are familiar with the Sisters of Mercy project and we welcome the opportunity to assist in the financing of this multi-million dollar project.

Our experience with Wasileski and his team has shown us their ability to design, construct, sell and operate a large scale planned community. We believe that John Wasileski has the financial capacity to undertake the Sisters of Mercy project.

Please feel free to contact me regarding the contents of this letter.

Sincerely,

Geoff Gattis
EVP Commercial Lending
Bath Savings

105 Front Street, PO Box 548, Bath, Maine 04530
Tel. 207-442-7711 Fax 207-442-9137
1-800-447-4559
Member FDIC

State of Maine

Department of the Secretary of State

I, the Secretary of State of Maine, certify that according to the provisions of the Constitution and Laws of the State of Maine, the Department of the Secretary of State is the legal custodian of the Great Seal of the State of Maine which is hereunto affixed and that the paper to which this is attached is a true copy from the records of this Department.

In testimony whereof, I have caused the Great Seal of the State of Maine to be hereunto affixed. Given under my hand at Augusta, Maine, this seventh day of October 2014.

Matthew Dunlap
Secretary of State

File No. 20150771DC Pages 2
Fee Paid $ 175
DCN 2142463600085 DLLC
-----FILED----------
08/26/2014

Deputy Secretary of State

A True Copy When Attested By Signature

Deputy Secretary of State

MAINE
LIMITED LIABILITY COMPANY

STATE OF MAINE

CERTIFICATE OF FORMATION

Pursuant to 31 MRSA §1531, the undersigned executes and delivers the following Certificate of Formation:

FIRST: The name of the limited liability company is:

Sea Coast at Baxter Woods Associates, LLC

(A limited liability company name must contain the words "limited liability company" or "limited company" or the abbreviation "L.L.C.," "LLC," "L.C." or "LC" or, in the case of a low-profit limited liability company, "L3C" or "l3c" – see 31 MRSA 1508.)

SECOND: Filing Date: (select one)

- [x] Date of this filing; or
- [ ] Later effective date (specified here): _____

THIRD: Designation as a low profit LLC (Check only if applicable):

- [ ] This is a low-profit limited liability company pursuant to 31 MRSA §1611 meeting all qualifications set forth here:

  A. The company intends to qualify as a low-profit limited liability company;

  B. The company must at all times significantly further the accomplishment of one or more of the charitable or educational purposes within the meaning of Section 170(c)(2)(B) of the Internal Revenue Code of 1986, as it may be amended, revised or succeeded, and must list the specific charitable or educational purposes the company will further;

  C. No significant purpose of the company is the production of income or the appreciation of property. The fact that a person produces significant income or capital appreciation is not, in the absence of other factors, conclusive evidence of a significant purpose involving the production of income or the appreciation of property; and

  D. No purpose of the company is to accomplish one or more political or legislative purpose within the meaning of Section 170(c)(2)(D) of the Internal Revenue Code of 1986, or its successor.

FOURTH: Designation as a professional LLC (Check only if applicable):

- [ ] This is a professional limited liability company* formed pursuant to 13 MRSA Chapter 22-A to provide the following professional services:

_____
(Type of professional services)

Form No. MLLC-6 (1 of 2)

FIFTH: The Registered Agent is a: (select either a Commercial or Noncommercial Registered Agent)

☐ Commercial Registered Agent CRA Public Number: _____

_____
(Name of commercial registered agent)

☑ Noncommercial Registered Agent

Ronald A. Epstein
(Name of noncommercial registered agent)

10 Free Street, Portland, ME 04112
(physical location, not P.O. Box – street, city, state and zip code)

_____
(mailing address if different from above)

SIXTH: Pursuant to 5 MRSA §105.2, the registered agent listed above has consented to serve as the registered agent for this limited liability company.

SEVENTH: Other matters the members determine to include are set forth in the attached Exhibit _____, and made a part hereof.

****Authorized person(s)**

Dated ~~June~~ August 1, 2014

_____
(Signature of authorized person)

John B. Wasileski, Member
(Type or print name of authorized person)

_____
(Signature of authorized person)

_____
(Type or print name of authorized person)

***Examples** of professional service limited liability companies are accountants, attorneys, chiropractors, dentists, registered nurses and veterinarians. (This is not an inclusive list – see 13 MRSA §723.7)

****Pursuant to 31 MRSA §1676.1.A, Certificate of Formation MUST be signed by at least one authorized person.

The execution of this certificate constitutes an oath or affirmation under the penalties of false swearing under 17-A MRSA §453.

Please remit your payment made payable to the Maine Secretary of State.

Submit completed form to:

Secretary of State
Division of Corporations, UCC and Commissions
101 State House Station
Augusta, ME 04333-0101
Telephone Inquiries: **(207) 624-7752** Email Inquiries: CEC.Corporations@Maine.gov

Form No. MLLC-6 (2 of 2) Rev. 10/31/2012

3/9/2015

Andrew Johnson
Fay, Spofford & Thorndike
778 Main Street
South Portland, ME 04106
Sent via email to: AJohnston@fstinc.com

RE: Ability to Serve Letter for Redevelopment of McAuley High School Campus in Portland

Dear Mr. Johnson:

CMP has the ability to serve the proposed project located at 605 Stevens Avenue in Portland, Maine, 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.

162 Canco Road Portland, ME 04103
Tel (800) 750-4000
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

www.cmpco.com

An equal opportunity employer

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)

If you have any questions, please contact me.

Regards,

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

May 26, 2015

Mr. Frank Brancely
City of Portland
Department of Public Services
55 Portland Street
Portland, Maine 04101-2991

Subject: Proposed Redevelopment of McAuley High School Campus
605 Stevens Avenue and Walton Street, Portland, Maine
Wastewater Capacity Application

Dear Mr. Brancely:

Our office is working as a consultant to Sea Coast Management Company with the site engineering and permitting associated with a proposed redevelopment of the Motherhouse Building on the McAuley High School Campus to provide 88 affordable senior housing units. The project site is located on all or a portion of Map 34, Block C, Lots 009 according to the City of Portland Tax Assessor's Maps. On behalf of the developer, we are requesting a letter affirming that the proposed project can be served by the municipal wastewater treatment system.

This redevelopment project will be the first phase of a larger development of the property to construct a senior living community. The first phase of the project will consist of redevelopment of the Motherhouse to provide 88 affordable senior living apartments. As part of the redevelopment, we will be undertaking mapping and condition assessment of the existing sewer system to ascertain whether the infrastructure is suitable for reuse. Where the system is found to be in poor condition, rehabilitation and replacement options will be investigated. In addition, existing sources of inflow to the sewer system will be investigated and removed to a separate stormwater system. This will reduce infiltration and inflow to the onsite system and increase the available capacity of the system for wastewater flow.

Subsequent phasing will include independent senior living residences and assisted living units. A summary of the anticipated unit counts and estimated wastewater flows associated with each phase of development is as follows:

Phase	Full Master Plan Development	Design Flow
1	Affordable Senior Living Apartments – Motherhouse 88 Units @ 77 gpd	6,776

778 Main Street, Suite 8
South Portland, ME 04106
T: 207.775.1121
F: 207.879.0896
www.fstinc.com

FAY, SPOFFORD & THORNDIKE
Offices in: Massachusetts, New Hampshire, Maine, Connecticut and New York

Subsequent phasing of the project is as follows:

Phase	Full Master Plan Development	Design Flow (gpd)
2	**Independent Residences** 69 Units Single Occupancy @ 60 gpd 23 Units Double Occupancy @ 120 gpd	6,900
3	**Independent/Assisted Living Residences** 70 Units Single Occupancy @ 60 gpd 70 Units Double Occupancy @ 120 gpd	12,600
4	**Assisted Living Apartments in Motherhouse** 36 Units @ 77 gpd	2,772
5	**Long Term Redevelopment at St. Catherine's** 19 Units Single Occupancy @ 60 gpd 19 Units Double Occupancy @ 120 gpd	3,420
	Total Average Daily Flow	**32,468**

It should be noted that this information is provided for outline planning purposes only as the exact unit mix and numbers are subject to change. However, it may inform infrastructure and service decisions throughout the project development.

We trust that the existing wastewater collection and treatment system has adequate capacity to serve this project. We are in the process of completing the Site Plan Application for a submission to the City Planning Staff and would appreciate your response to the Planning Department.

If you have any questions concerning this request, please contact me.

Sincerely,

FAY, SPOFFORD & THORNDIKE

Andrew D. Johnston, P.E.
Principal Engineer

ADJ/cmd

Enclosures

R:\SP-M162-McAuely Place - Motherhouse - Portland, ME\Admin\Correspondence Out\Ability to Serve\SP-M160 2015.05.25 Brancely-WW.doc

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Date: 05.25.2015

Mr. Frank J. Brancely,
Senior Engineering Technician,
Phone #: (207) 874-8832,
Fax #: (207) 874-8852,
E-mail:fjb@portlandmaine.gov

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

Site Address: 605 Stevens Avenue

Chart Block Lot Number: 136 E006001;143 F004000
144 B001000

Proposed Use: Mixed-Use Residential

Previous Use: Mixed-Use Residential

Existing Sanitary Flows: Not Known GPD

Existing Process Flows: None GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

Existing site service to Walton 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: _____ Phone: _____

Owner/Developer Name: Sea Coast at Baxter Woods, LLC and Motherhouse, LLC

Owner/Developer Address: 30 Governors Way - Topsham, ME 04086

Phone: 207-831-2418 Fax: E-mail: MTeare@highlandgreenlifestyle.com

Engineering Consultant Name: Fay, Spofford & Thorndike, Attn: Andrew D. Johnston, P.E.

Engineering Consultant Address: 778 Main Street, Suite 8, South Portland, ME 04106

Phone: 207-775-1121 Fax: 207-879-0896 E-mail: ajohnston@fstinc.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: Phase 1 - 6,776;Total project 25,692 GPD

Peaking Factor/ Peak Times: 6 (TR-16)

Specify the source of design guidelines: *(i.e.* __*"Handbook of Subsurface Wastewater Disposal in Maine,"*
__ *"Plumbers and Pipe Fitters Calculation Manual,"* __ *Portland Water District Records,* __ *Other (specify)*
Handbook of Subsurface Wastewater Disposal in Maine-metered flow records from similar facilities.

(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 - Residential Only

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 below, or attached, as a separate sheet)

Notes, Comments or Calculation

McAuley Place Water Demand Estimate

Phase	Use	Demand/Unit	Units	Demand (gpd)
1	**Affordable Senior Living Apartments**	77	88	6,776
2	**Independent Resident Apartments**			
	Single Occupancy	60	69	4,140
	Double Occupancy	120	23	2,760
3	**Independent Townhouse/Apartment**			
	Single Occupancy	60	70	4,200
	Double Occupancy	120	70	8,400
4	**Assisted Living Units in Motherhouse**	77	36	2,772
5	**Independent Apartments - St Catherine's**			
	Single Occupancy	60	19	1,140
	Double Occupancy	120	19	2,280
	TOTAL MASTER PLAN WATER DEMAND			**32,468**

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

April 15, 2015

Fay Spofford & Thorndike
778 Main Street, Suite 8
South Portland, ME 04106

Attn: Andrew Johnston, P.E.
Re: McAuley High School Campus - 605 Stevens Avenue Portland
Ability to Serve with PWD Water

Dear Mr. Johnston:

The Portland Water District has received your request for an Ability to Serve determination for the noted site submitted on March 6, 2015. Based on the information provided, we can confirm that the District will be able to serve the proposed project as further described in this letter.

Conditions of Service

The following conditions of water service apply:

- The existing services at this site may be used by the proposed development as long as the project team determines that they will provide adequate flow and pressure for the proposed use. If any of the existing services will no longer be used as a result of the development then they must be retired per PWD standards. This includes shutting the corporation valve and cutting the pipe from the water main (for service sizes 2-inch and smaller) or removing the gate valve and capping the tapping sleeve (for service sizes 4-inch and larger).
- Approval of plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.

Existing Site Service

According to District records, the project site does currently have a number of existing water services. The following water service lines are located as shown on the attached water service cards:

- Saint Josephs Convent (605 Stevens Avenue) is served by a 6-inch diameter cast iron domestic water service line and an 8-inch cast iron fire service line.
- Catherine McAuley High School (631 Stevens Avenue) is served by a 4-inch diameter cast iron domestic service line
- Saint Catherines Hall (242 Walton Street) is served by a 1.5-inch diameter copper domestic water service line and a 6-inch cast iron fire service line.

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

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 8-inch diameter cast iron main water main on the east side and a 12-inch cast iron water main on the west side of Stevens Avenue, a 6-inch cast iron water main on the south side of Walton Street and public fire hydrants located on Stevens Avenue and on Walton Street in front of the site.

The current data from the nearest hydrant with flow test information is as follows:

Hydrant Location:	Stevens Ave 200' S of Walton St	Walton St 100' W of Dingley Ct
Hydrant Number:	POD-HYD01287	POD-HYD01922
Last Tested:	3/9/2013	2/14/2013
Static Pressure:	64 psi	64 psi
Residual Pressure:	Not Measured	Not Measured
Flow:	Not Measured	Not Measured

Public Fire Protection

You have not indicated whether this project will include the installation of new public hydrants to be accepted into the District water system. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. 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 the MEANS Division to request a hydrant flow test and we will work with you to get more complete data.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Glissen Havu

Glissen Havu, E.I.
Design Engineer

Att. G

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS

Neighborhood Meeting Invitation

March 4, 2016

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for the Master Development Plan for 605 Stevens Avenue Project, located at 605 Stevens Avenue in Portland.

Meeting Location: Catherine McAuley High School , 631 Stevens Avenue
Meeting Date: Monday, March 14, 2016
Meeting Time: 6:00 PM

(The City code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone changes) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.)

If you have any questions, please call Matt Teare at 207-837-2418.

Sincerely,

Sea Coast Management Company

Patrick J. Carroll,
On behalf of Sea Coast Management Company

Note:
Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plans was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street Portland, ME 04101 or by email: to bab@portlandmaine.gov

Att. H

TRAFFIC IMPACT STUDY
605 Stevens Avenue
Portland, Maine

March 15, 2016

Prepared for:

Sea Coast at Baxter Woods Associates, LLC
and
Motherhouse Associates LP
100 Commercial Street
Suite 414
Portland, Maine 04101

STATE OF MAINE
DIANE W. MORABITO
No. 5077
LICENSED
PROFESSIONAL ENGINEER

Prepared by:

Maine Traffic Resources
25 Vine Street Gardiner, ME 04345
(207) 582-5252 FAX (207) 582-1677
mainetrafficresources.com

Introduction

The purpose of this report is to summarize the traffic impacts of a proposed senior housing development to be located at 605 Stevens Avenue on the McAuley High School Campus in Portland, Maine. The existing Motherhouse building will be renovated to provide eighty-eight (88) senior apartment units. This renovation has already been approved by the City of Portland. Five additional buildings will be constructed to provide 161 additional residential dwelling-units, for a total of 249. Access to the development will be provided by a full-movement drive to Walton Street, by a secondary entrance on Stevens Avenue and by a secondary exit on Stevens Avenue, where exiting movements will be limited to right-turns only. The site location and surrounding area are shown on the map in Figure 1.

Construction of the new buildings is expected to begin in Fall of 2016 with one new building built per year. This results in projected completion and full occupancy in 2021. As a result, 2021 was selected at the staff meeting with the City of Portland as the analysis year.

Trip Generation

The number of trips which will be generated by the proposed senior residential development was estimated using the most recent Institute of Transportation Engineers (ITE) "Trip Generation, 9th Edition" report, published in 2012. Land Use Code 252 – Senior Adult Housing – Attached was used on the basis of 249 total dwelling-units. The results are summarized below:

Time Period	**ITE Trip Generation** One-way Trip-Ends
Weekday	856
AM Peak Hour – adjacent street	50
Entering Site	17
Exiting Site	33
AM Peak Hour – generator	97
Entering Site	45
Exiting Site	52
PM Peak Hour – adjacent street	62
Entering Site	33
Exiting Site	29
PM Peak Hour – generator	87
Entering Site	48
Exiting Site	39

As can be seen in the preceding table, the senior housing development, when fully occupied in 2021, is expected to generate 97 one-way trips during their weekday AM peak hour and 87 trips during their weekday PM peak hour. During the peak hours of the adjacent street system, the more critical peak hour for analysis purposes, the senior residential units will generate 50 one-way trips during the AM peak hour and 62 during the PM peak hour.

Given that the maximum peak hour trip generation will be under 100 trips, a Traffic Movement Permit (TMP) will not be required from the Maine Department of Transportation (MaineDOT). The trip assignments were based upon the travel patterns observed during turning movement counts. The counts were conducted at the following intersections during the AM (7:00 – 9:00) and PM (3:00 – 6:00) peak hour periods. The count records are included in the appendix of this report and are summarized as follows:

Intersection Description (AM Peak Hour)	Count Date	Peak Hour
Stevens Avenue and Walton Street	April 28, 2015	7:15 – 8:15 AM
Forest Avenue and Walton Street	April 29, 2015	7:15 – 8:15 AM
Stevens Avenue and Pleasant Avenue	April 29, 2015	7:15 – 8:15 AM
Walton Street and McAuley School Drives	March 10, 2016	7:00 – 8:00 AM

Intersection Description (PM Peak Hour)	Count Date	Peak Hour
Stevens Avenue and Walton Street	April 28, 2015	4:30 – 5:30PM
Forest Avenue and Walton Street	April 28, 2015	4:15 – 5:15 PM
Stevens Avenue and Pleasant Avenue	April 29, 2015	4:30 – 5:30 PM
Walton Street and McAuley School Drives	March 11, 2016	2:15 – 3:15 PM

The signalized intersections counts were conducted during the last week of April 2015, which was UNE's last full week of regular classes and when both McAuley High School and Portland City Schools were back from April break. For this reason, the counts are expected to be representative of peak volumes for the study area given all of the schools in the immediate area. The counts conducted in March 2016 at the McAuley school drives were factored to peak school conditions (first week of May) using the MaineDOT Group I urban factor.

The resulting trip assignments are shown in Figure 2. Based upon the trip assignments, the study area for capacity purposes only extends through the site drive intersections. Generally, a project will not have any measurable/noticeable impact off-site on traffic operations unless it generates in excess of 25 trips in a lane per hour. Based upon the trip assignments, the entire residential development, when fully occupied is expected to generate a maximum of 18 lane-hour trips. This minimal level of traffic should have no significant or noticeable impact on traffic operations off-site. Based upon the trip assignments, the study area would only include Walton Street and Stevens Avenue in the immediate vicinity of the site and the site drive intersections. Based upon discussion with the City of Portland staff, the study area was extended to include the signalized Stevens Avenue intersections of both Walton Street and Pleasant Avenue as well as the signalized intersection of Walton Street and Forest Avenue.

Existing Traffic Volumes

Existing average annual daily traffic (AADT) data for the area was obtained from "Traffic Volume Counts, 2014, 2009 and 2006 Annual Reports", published by MaineDOT. This daily traffic data is summarized in the following table:

	Average Annual Daily Traffic				
Location	2002	2005	2007	2010	2013
Stevens Avenue, north of Walton Street	---	11,470	10,370	11,170	10,980
Stevens Avenue, south of Walton Street	12,650	12,950	11,030	12,510	11,680
Stevens Avenue, south of Forest Avenue	10,160	10,810	9,570	10,360	10,050
Walton Street, west of Forest Avenue	3,540	3,740	3,340	2,800	3,120
Forest Avenue, north of Walton Street	22,100	22,100	20,830	---	21,830
Forest Avenue, south of Walton Street	22,080	22,110	20,450	---	21,710

As can be seen above, traffic volumes have been declining on Stevens Avenue over the most recent short-term 2010 to 2013 period. They also declined over the longer term 2002 to 2013 period. The traffic count data for Walton Street shows a longer term decrease but a short-term increase from 2010 to 2013. Based upon the above count data, associated growth rates and discussion with City of Portland staff, a 1 % annual traffic growth rate was selected to project the 2015 volumes to 2021 base conditions, which is expected to be conservative given the historically declining volumes. The 2015 traffic counts were adjusted to 2016 conditions using this growth rate. The resulting 2016 volumes, expected to be representative of existing conditions are shown in Figure 3.

In addition, other developments that have been approved but not yet constructed, or are pending approval, also need to be considered in the future traffic analysis. Only one other development project was identified by City staff that is expected to impact traffic volumes in this area, the expansion of Park Danforth. The trips to be generated by this other development project were obtained from the Traffic Impact Study prepared by Gorrill-Palmer Consulting Engineers and dated October 2014. The projected 2021 no-build volumes, allowing for 1 % annual traffic growth and for the Park Danforth project to be fully occupied, are shown in Figure 4. The projected 2021 Build volumes, with the 605 Stevens Avenue and Motherhouse project also fully occupied, are shown in Figure 5.

Capacity Analysis

Traffic operations are evaluated in terms of level of service (LOS). Level of service is a qualitative measure that describes operations by letter designation. The levels range from A - very little delay to F - extreme delays. Level of service "D" is generally considered acceptable in urban locations while LOS "E" is generally considered the capacity of a facility and the minimum tolerable level. The level of service for signalized intersections is based upon average control delay per vehicle, as defined in the following tables excerpted from the 2010 "Highway Capacity Manual":

Signalized Intersection Level of Service

LOS	Control Delay per Vehicle
A	< = 10.0 seconds
B	> 10.0 and <= 20.0
C	> 20.0 and <= 35.0
D	> 35.0 and <= 55.0
E	> 55.0 and <= 80.0
F	> 80.0

The level of service for unsignalized intersections is based upon average control delay per vehicle for each minor, opposed movement, as defined below:

Unsignalized Intersection Level of Service

LOS	Delay Range
A	< = 10.0 seconds
B	> 10.0 and <= 15.0
C	> 15.0 and <= 25.0
D	> 25.0 and <= 35.0
E	> 35.0 and <= 50.0
F	> 50.0

Signalized Intersection Analysis

Synchro 7 was used to analyze the signalized study intersections under existing 2016 conditions and projected 2021 conditions. The analysis was performed using traffic timings observed in the field under peak hour conditions. The results for the signalized study area intersections are included in the appendix and are summarized in the following tables with the LOS followed by the associated delay in seconds:

Intersection of Stevens Avenue and Walton Street
AM Peak Hour Levels of Service

Approach/Movement	2016 Existing	2021 No-Build	2021 Build
Westbound Walton Street Lefts	B (19.0)	B (19.7)	C (20.0)
Westbound Walton Street Rights	B (17.2)	B (17.7)	B (18.0)
Westbound Walton Street Overall	B (18.0)	B (18.6)	B (19.0)
Northbound Stevens Avenue Rights	A (9.4)	A (9.4)	A (9.5)
Northbound Stevens Avenue Throughs	B (16.6)	B (17.3)	B (17.6)
Northbound Stevens Avenue Overall	B (15.2)	B (15.8)	B (16.1)
Southbound Stevens Avenue Lefts	A (6.6)	A (6.8)	A (7.0)
Southbound Stevens Avenue Throughs	A (7.5)	A (7.8)	A (7.9)
Southbound Stevens Avenue Overall	A (7.4)	A (7.7)	A (7.8)
Overall Intersection	**B (13.0)**	**B (13.5)**	**B (13.7)**

Intersection of Stevens Avenue and Walton Street
PM Peak Hour Levels of Service

Approach/Movement	2016 Existing	2021 No-Build	2021 Build
Westbound Walton Street	B (19.3)	C (20.3)	C (21.8)
Northbound Stevens Avenue Rights	A (7.2)	A (7.2)	A (7.1)
Northbound Stevens Avenue Throughs	B (11.6)	B (11.9)	B (11.5)
Northbound Stevens Avenue Overall	B (10.8)	B (11.0)	B (10.7)
Southbound Stevens Avenue Lefts	A (4.7)	A (4.9)	A (4.9)
Southbound Stevens Avenue Throughs	A (4.9)	A (5.2)	A (5.1)
Southbound Stevens Avenue Overall	A (4.9)	A (5.2)	A (5.1)
Overall Intersection	**A (9.3)**	**A (9.6)**	**A (9.7)**

As can be seen above, the Walton Street and Stevens Avenue intersection operates at LOS "B" overall in the AM peak hour and at LOS "A" overall in the PM peak hour with all movements at LOS "C" or better. The intersection will remain at these levels under projected 2021 full build volumes. Based upon these levels of service, there are no capacity concerns at this intersection. The proposed senior housing facility will have an insignificant impact on this intersection, as evidenced by the minimal increase (0.2 seconds) in delay, as would be expected given the minimal peak hour volumes to be generated by the overall project.

Intersection of Walton Street and Forest Avenue
AM Peak Hour Levels of Service

Approach/Movement	2016 Existing	2021 No-Build	2021 Build
Eastbound Walton Street Lefts/Throughs	C (27.1)	C (28.7)	C (29.5)
Eastbound Walton Street Rights	C (24.2)	C (25.3)	C (25.4)
Eastbound Walton Street Overall	C (26.2)	C (27.6)	C (28.1)
Westbound Walton Street Lefts/Throughs	D (36.5)	D (40.0)	D (40.7)
Westbound Walton Street Rights	C (24.6)	C (25.8)	C (25.8)
Westbound Walton Street Overall	C (32.9)	D (35.7)	D (36.2)
Northbound Forest Avenue Lefts	C (25.1)	C (27.8)	C (30.9)
Northbound Forest Avenue Throughs/Rights	B (16.9)	B (16.5)	B (16.7)
Northbound Forest Avenue Overall	B (18.1)	B (18.1)	B (18.8)
Southbound Forest Avenue Lefts	B (10.1)	A (10.0)	B (10.1)
Southbound Forest Avenue Throughs/Rights	C (29.3)	C (29.1)	C (29.9)
Southbound Forest Avenue Overall	C (27.7)	C (27.4)	C (28.2)
Overall Intersection	**C (25.3)**	**C (25.9)**	**C (26.6)**

Intersection of Walton Street and Forest Avenue
PM Peak Hour Levels of Service

Approach/Movement	2016 Existing	2021 No-Build	2021 Build
Eastbound Walton Street Lefts/Throughs	C (22.8)	C (24.7)	C (25.1)
Eastbound Walton Street Rights	C (21.3)	C (22.1)	C (22.2)
Eastbound Walton Street Overall	C (22.8)	C (23.7)	C (24.1)
Westbound Walton Street Lefts/Throughs	C (24.1)	C (28.1)	C (29.1)
Westbound Walton Street Rights	C (21.5)	C (22.3)	C (22.3)
Westbound Walton Street Overall	C (24.1)	C (25.6)	C (26.3)
Northbound Forest Avenue Lefts	A (7.8)	A (8.1)	A (8.4)
Northbound Forest Avenue Throughs/Rights	B (18.2)	B (19.8)	B (20.0)
Northbound Forest Stevens Avenue Overall	B (17.7)	B (19.2)	B (19.4)
Southbound Forest Avenue Lefts	B (10.4)	B (11.7)	B (11.9)
Southbound Forest Avenue Throughs/Rights	B (13.2)	B (13.9)	B (14.2)
Southbound Forest Avenue Overall	B (12.9)	B (13.6)	B (13.9)
Overall Intersection	**B (17.4)**	**B (18.6)**	**B (18.9)**

As can be seen above, the Walton Street and Forest Avenue intersection currently operates at LOS "C" overall in the AM peak hour and at LOS "B" overall in the PM peak hour, with all movements at an acceptable LOS "D" or better. The intersection will continue to operate at these levels of service under projected full build 2021 volumes. Again, the senior housing development will have minimal impact on this intersection as shown by the negligible increase in delays.

Intersection of Stevens Avenue and Pleasant Avenue
AM Peak Hour Levels of Service

Approach/Movement	2016 Existing	2021 No-Build	2021 Build
Eastbound Pleasant Avenue	C (29.8)	C (26.2)	C (26.2)
Westbound Pleasant Avenue	C (22.0)	C (21.0)	C (21.0)
Northbound Stevens Avenue	A (5.2)	A (6.3)	A (6.4)
Southbound Stevens Avenue	A (8.5)	B (11.0)	B (11.3)
Overall Intersection	**B (11.7)**	**B (12.6)**	**B (12.7)**

Intersection of Stevens Avenue and Pleasant Avenue
PM Peak Hour Levels of Service

Approach/Movement	2016 Existing	2021 No-Build	2021 Build
Eastbound Pleasant Avenue	B (18.8)	B (18.8)	B (18.8)
Westbound Pleasant Avenue	B (17.8)	B (17.7)	B (17.8)
Northbound Stevens Avenue	A (7.6)	A (8.3)	A (8.3)
Southbound Stevens Avenue	A (8.7)	A (9.6)	A (9.5)
Overall Intersection	**A (10.0)**	**B (10.6)**	**B (10.6)**

As can be seen above, the Pleasant Avenue and Stevens Avenue intersection operates at LOS "B" overall in the AM peak hour and PM peak hours with all movements at LOS "C" or better, again with no capacity concerns. Under projected 2021 volumes, the intersection will continue to operate at LOS "B" during both peak hours. Again, the senior residential housing will have no significant or measurable impact on operations at this intersection as shown by the insignificant 0.1 second increase in delay. This again would be expected given the very small increase in volumes attributed to the development at this intersection during both peak hour periods.

Unsignalized Site Drives

Level of service was also calculated for the unsignalized site drives under full build 2021 volumes using Synchro to assure acceptable drive operations. The results are shown below:

Intersection of McAuley Entrance/Site Drive and Walton Street
2021 Build Peak Hour Levels of Service

Approach/Movement	AM Peak	PM Peak
Westbound Walton Street Lefts into Drive	A (2.1)	A (1.7)
Northbound McAuley/Site Drive Overall	B (11.2)	B (10.8)

Intersection of McAuley Exit Drive and Walton Street
2021 Build Peak Hour Levels of Service

Approach/Movement	AM Peak	PM Peak
Northbound McAuley Exit Drive	B (10.7)	B (10.8)
Overall Intersection	**A (1.2)**	**A (1.8)**

Intersection of Northerly Exit Drive and Stevens Avenue
2021 Build Peak Hour Levels of Service

Approach/Movement	AM Peak	PM Peak
Westbound Site Drive Rights	B (11.9)	B (12.7)

As seen in the preceding tables, there are no capacity concerns at any of the drives under full build volumes. All site drive movements will operate at LOS "B" or better during both the AM and PM peak hours, demonstrating that both Walton Street and Stevens Avenue have plenty of capacity to accept the new trips.

Accident Review

The Maine Department of Transportation uses two criteria to determine high crash locations (HCLs). The first is the critical rate factor (CRF), which is a measure of the accident rate. A CRF greater than one indicates a location which has a higher than expected accident rate. The expected rate is calculated as a statewide average of similar facilities.

The second criterion, which must also be met, is based upon the number of accidents that occur at a particular location. Eight or more accidents must occur over the three-year study period for the location to be considered a high crash location. The CRF and number of accidents are summarized by location for the most recent three-year period 2012 to 2014 below:

Stevens Avenue Location Description	# of Acc.	CRF
Intersection of Pleasant Avenue	4	0.24
Between Pleasant Avenue and Brentwood Street	2	0.66
Intersection of Brentwood Street	5	1.03
Between Brentwood Street and Clinton Street	1	0.42
Intersection of Clinton Street	4	0.86
Between Clinton Street and Hartley Street	1	0.25
Between Hartley Street and Percival Street	2	0.55
Intersection of Crosby Street	2	0.41
Between Crosby Street and New Street	2	0.54
Intersection of New Street	1	0.22
Between New Street and Walton Street	4	0.37
Intersection of Walton Street	4	0.24
Intersection of St. Joseph Street	3	0.65
Between St. Joseph Street and Elmwood	7	1.40
Intersection of Elmwood	1	0.22
Between Elmwood and Waverly Street	1	0.25
Intersection of Waverly Street	6	1.30
Between Poland Street and Arbor Street	3	0.58
Intersection of Arbor Street	2	0.47
Between Arbor Street and Non-Intersection of Stevens Avenue	5	0.84
Intersection of Forest Avenue and Bishop Street	31	0.80

Walton Street Location Description	# of Acc.	CRF
Intersection of Dingley Court	0	0.00
Intersection of Morgan Court	0	0.00
Intersection of Pershing Street	0	0.00
Intersection of Forest Avenue	**34**	**1.15**

As can be seen in the above accident tables, there is one high crash location within the study area, the intersection of Walton Street and Forest Avenue. Additionally, the Stevens Avenue link from St. Joseph's Street to Elmwood Street is approaching the high crash criteria with seven (7) accidents. Individual accident reports were obtained and collision diagrams were prepared to determine if there are any accident patterns or trends evident that may indicate a correctable safety deficiency. The diagrams are included in the appendix and are evaluated below:

Intersection of Walton Street and Forest Avenue

The signalized intersection of Walton Street and Forest Avenue has a CRF of 1.15 with 34 reported accidents. Nine accidents occurred in 2012, twelve in 2013 and thirteen in 2014. Twenty-five of the collisions were rear ends on Forest Avenue, typical of signalized intersections and indicative of a pattern. There was one sideswipe type accident on Walton Street. There were five angle collisions between Forest Avenue and Walton Street vehicles, primarily involving left-turn movements. There were two motor vehicle-bicycle collisions. Lastly, a tractor trailer knocked down a traffic pole turning right. The only pattern of collisions is the rear-ends on the Forest Avenue approaches, which can sometimes be attributed to improper signal timing. A review of the phase change intervals, or clearances, by Maine Traffic Resources did not identify any apparent timing deficiencies. If this pattern of rear-end accidents continues, at a greater than expected rate, then it is recommended that the City of Portland reevaluate the signal timing.

Stevens Avenue between St. Joseph's Street and Elmwood Street

There were 7 accidents reported along this link over the three-year study period; four in 2012 and three in 2013. Five of the seven accidents were rear-end collisions, occurring when vehicles stopped in traffic or for pedestrians. One was a single vehicle accident that went off the road and struck a pole. The remaining accident was a sideswipe as a vehicle exited a parking space. There are no trends or patterns evident that would indicate a correctable safety deficiency along this segment of Stevens Avenue.

Driveway Sight Distance

Typically, sight distances are one of the most important safety aspects to consider in a traffic impact study. Maine Traffic Resources recommends a minimum of 250' of intersection sight distance for the posted 25 mph speed limit on Walton Street. The speed limit is posted at 30 mph on Stevens Avenue in the vicinity of the site so a greater 300' distance is recommended. The City ordinance standards require lesser sight distances of 200' for 25 mph roadways and 250' for 30 mph locations. The sight distances from the proposed exit drives were estimated in the field and are summarized as follows:

		Available Sight Distance		
Intersection	Required	To Left	To Right	Adequate
Walton Street Site Drive	250'	>350'	>350'	Yes
Stevens Avenue Exit Drive	300'	>400'*	400'*	Yes*

* see following discussion

As can be seen above, available sight distances exceed the recommended minimums as well as Portland's requirements. However, it is noted that sight distance from the Stevens Avenue exit, although adequate at the time of the field visit, has the potential to be blocked by cars parked along Stevens Avenue. For this reason it is helpful that the drive will be limited to right-turns out only. Given this limitation, we are only concerned with sight distance to the left. It is recommended that a small no parking zone be located south of the exit drive to assure adequate sight distance for vehicles exiting this drive. It should be noted that the City is considering relocating the existing crosswalk south of this drive, which along with a hydrant, already creates a small no-parking zone to the south. With the removal of this existing crosswalk it will be important to re-establish a "no parking" zone.

It is also important that the intersection sight distances be maintained into the future. No plantings or signage should be located in the sight triangles that could obscure sight distances from the access drives in the future.

SUMMARY

The proposed senior residential development, including the Motherhouse apartments and the five new residential buildings, is expected to generate 97 one-way trips during their AM peak hour and 87 their weekday PM peak hour. During the peak hour of the adjacent street system, the more critical peak hour, the development when fully occupied is expected to generate 50 AM peak hour trips and 62 PM peak hour trips. This level of traffic typically does not have any significant impact on off-site traffic operations, based upon the trip assignments. Given that trip generation will be under 100 trips, a Traffic Movement Permit will not be required for this senior housing development.

The capacity analysis did not identify any capacity constraints within the expanded study area during either the AM or PM peak hours under 2021 build volumes, which included three signalized intersections. The overall project will not have any significant impact on operations at these signalized study area intersections, as shown by the analysis, and as would be expected given the limited number of new lane-hour trips generated by the senior residential development.

In terms of safety, there is one high crash location within the vicinity of 605 Stevens Avenue, the intersection of Walton Street and Forest Avenue. A review of the collision diagram for this intersection shows that there is a pattern of rear-end collisions occurring on the Forest Avenue approaches, which can sometimes be caused by improper signal timing. A review by Maine Traffic Resources did not identify any particular issues with the existing phase change intervals. If rear-end collisions continue at a higher than expected rate in the future then the City of Portland should reevaluate the signal timing. The segment of Stevens Avenue which extends from St. Joseph's Street to Elmwood Street is approaching the high crash criteria. However, a collision diagram prepared for this segment did not identify any accident patterns or correctable deficiencies. Sight distances from the access drive intersections on Stevens Avenue and Walton Street will be more than adequate, exceeding the recommended minimums, with the recommended provision of a small no parking area south of the drive on Stevens Avenue.

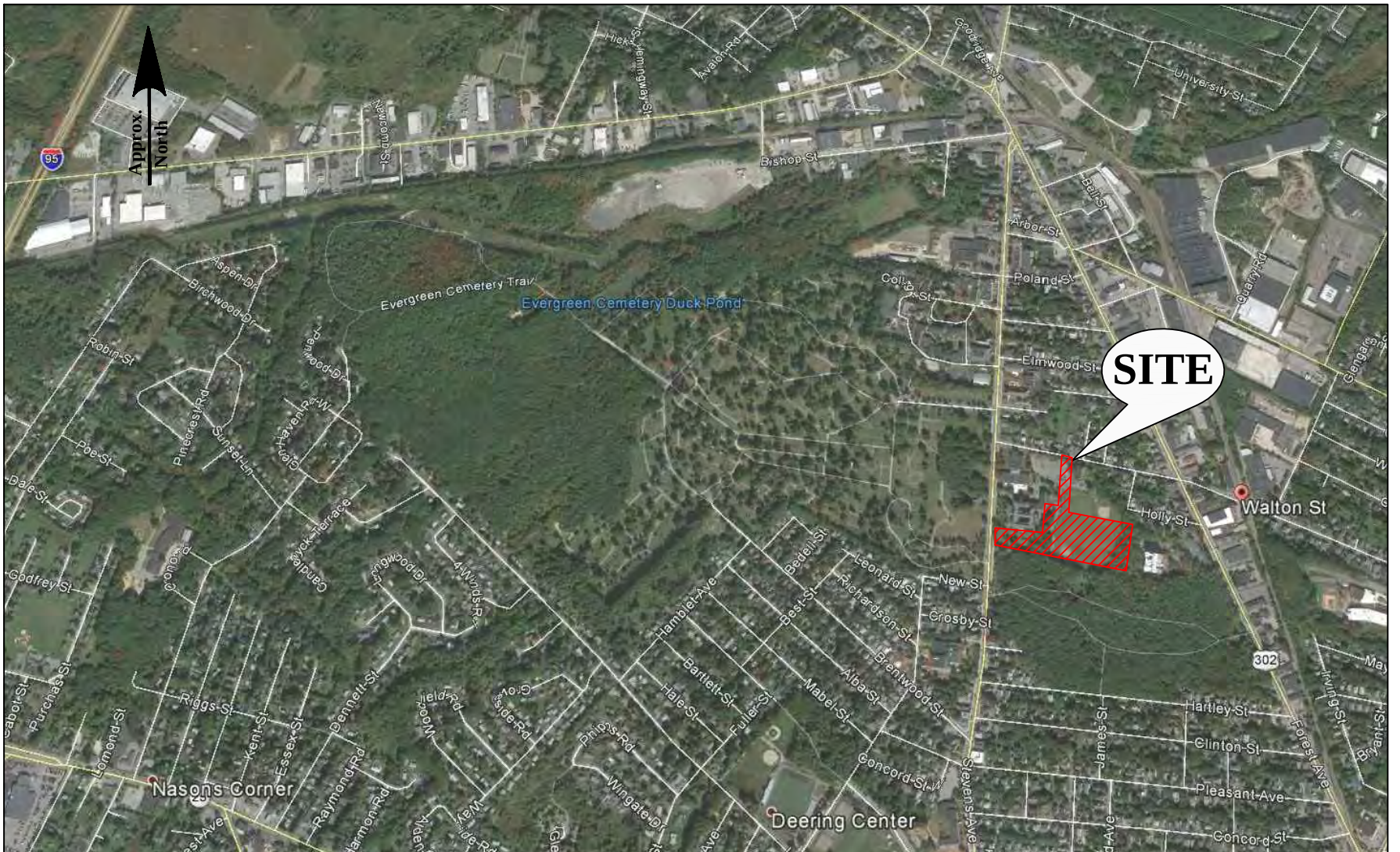


Figure 1

Site Location Map
605 Stevens Avenue Project
Portland, Maine

Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

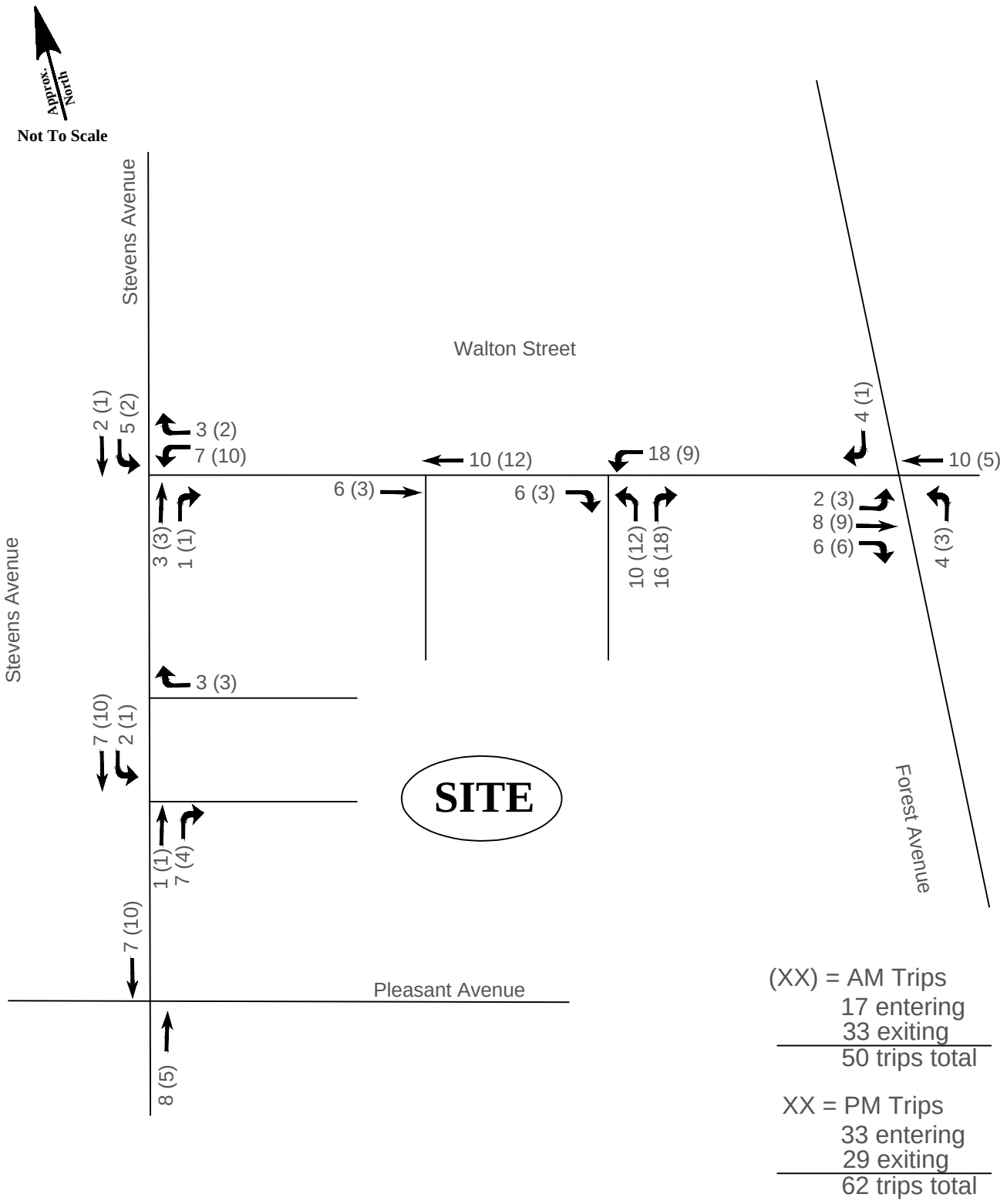


Figure 2

Peak Hour Trip Assignments

605 Stevens Avenue Project

Portland, Maine

Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

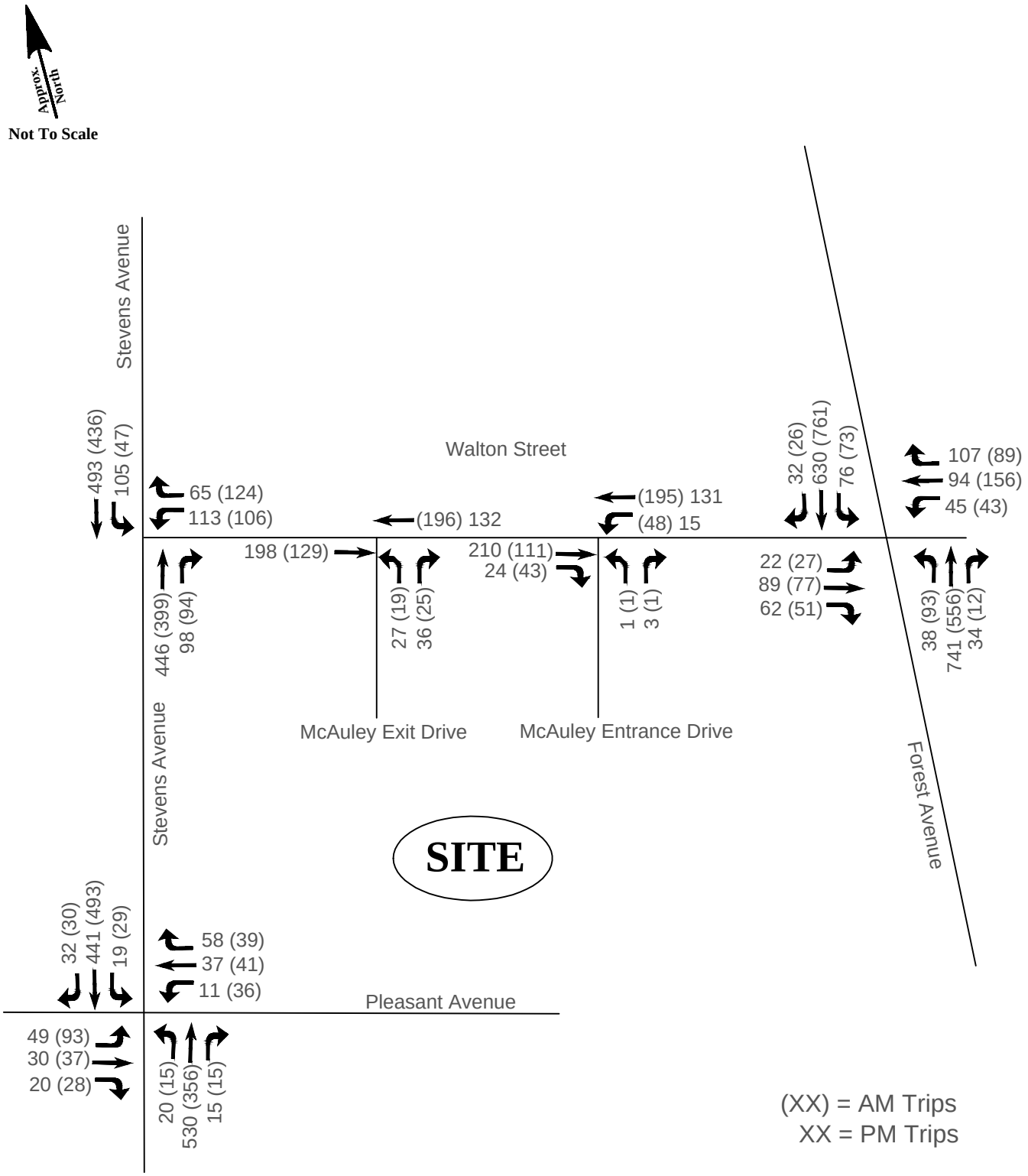


Figure 3

2016 Existing PM Peak Hour Volumes

605 Stevens Avenue Project

Portland, Maine

Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

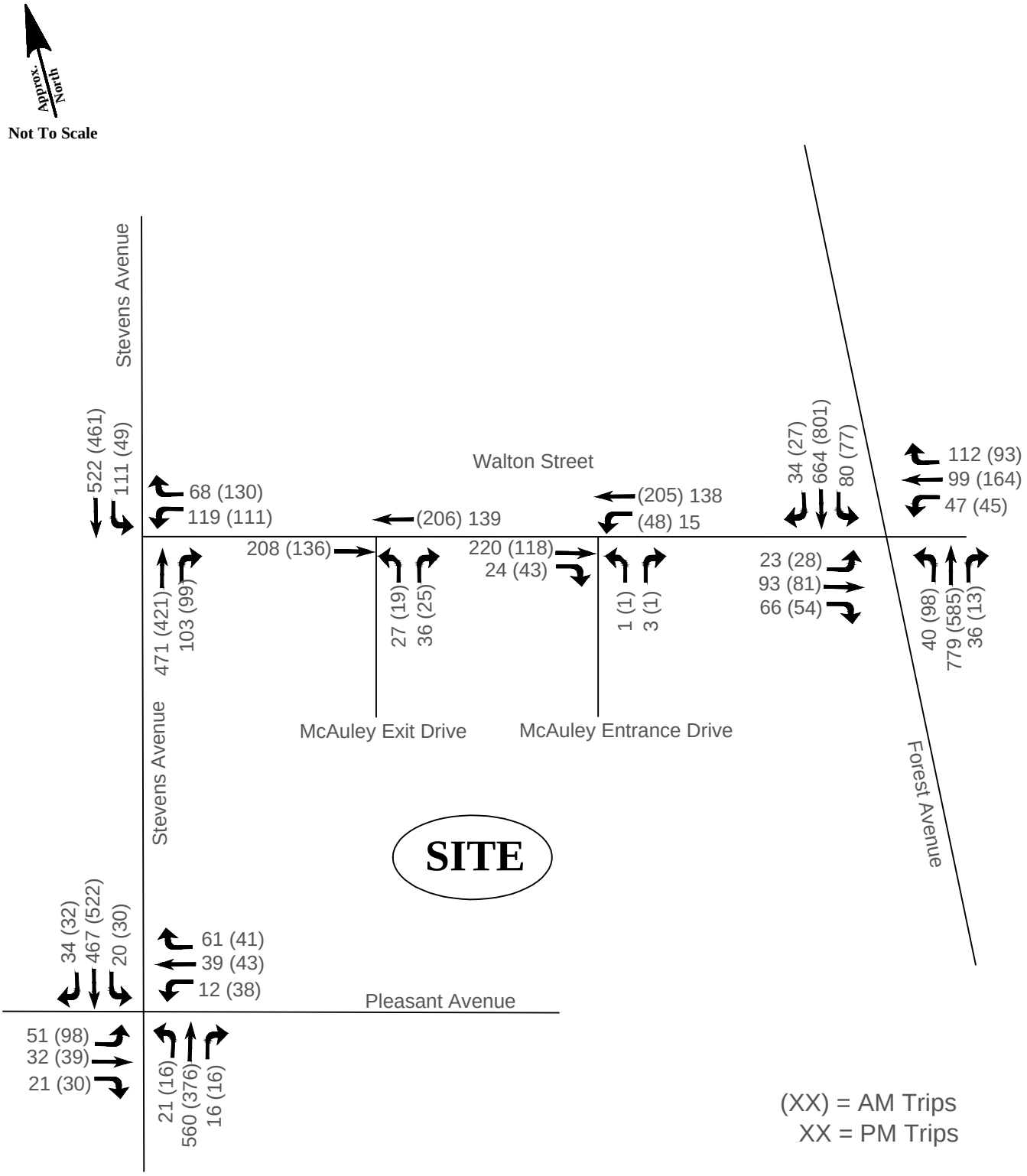


Figure 4

2021 No-Build Peak Hour Volumes

605 Stevens Avenue Project

Portland, Maine

Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

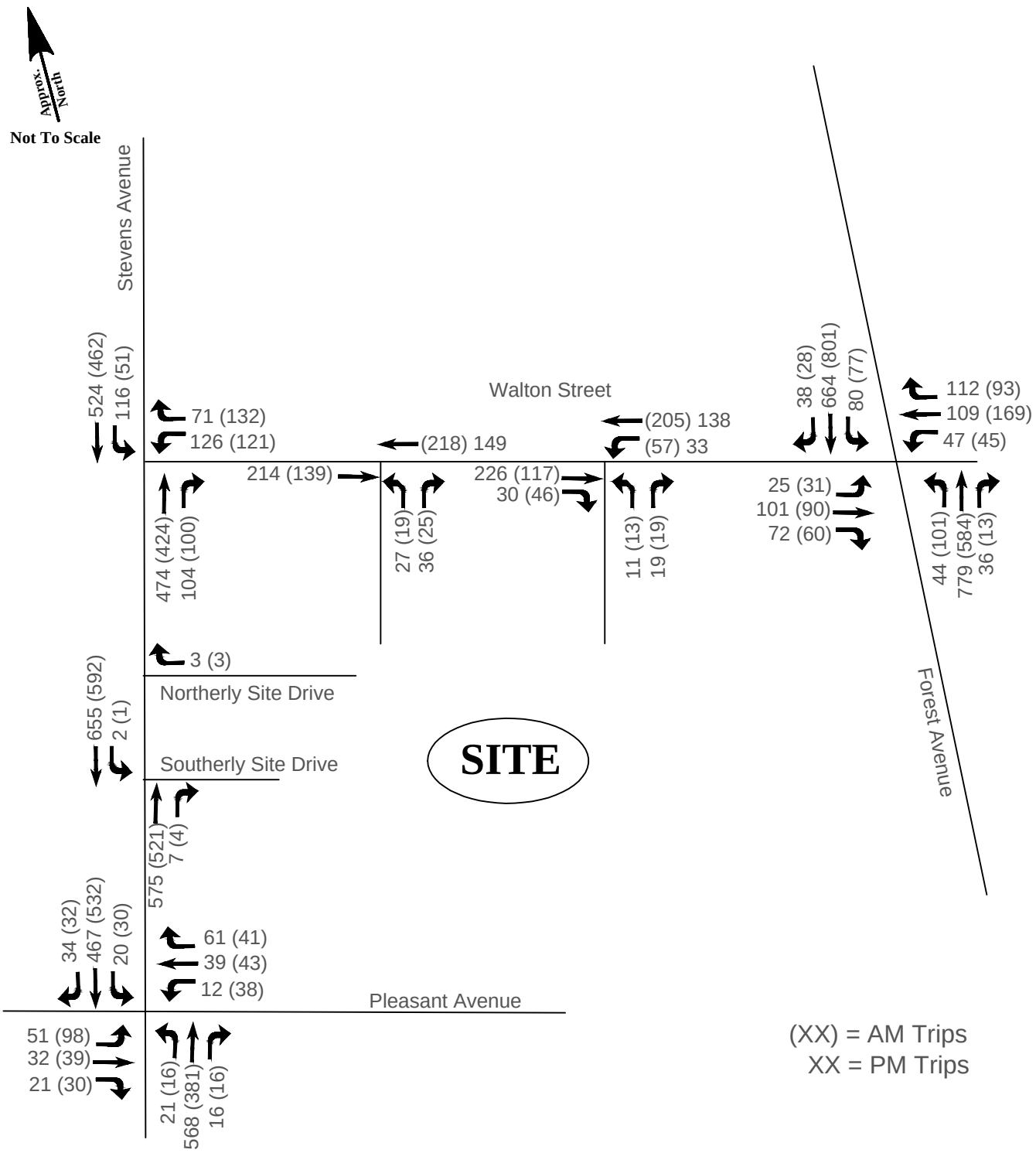


Figure 5

2021 Build Peak Hour Volumes

605 Stevens Avenue Project

Portland, Maine

Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

APPENDIX

Turning Movement Counts

Capacity Analyses

Accident Data

Collision Diagrams

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Pleasant and Stevens Avenues
City: Portland
Counter: DMF
Weather: Cloudy

File Name : PortlandStevensPleasantPM
Site Code : 00001113
Start Date : 4/29/2015
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Stevens Avenue From North					Pleasant Ave From East					Stevens Ave From South					Pleasant Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
03:00 PM	7	94	9	3	113	4	7	2	12	25	0	80	1	7	88	2	7	8	9	26	252
03:15 PM	5	92	5	3	105	10	6	3	4	23	1	92	3	1	97	5	11	8	7	31	256
03:30 PM	5	100	9	6	120	6	12	2	6	26	4	89	1	4	98	4	11	11	1	27	271
03:45 PM	3	103	3	5	114	8	6	6	5	25	7	87	3	0	97	5	3	9	3	20	256
Total	20	389	26	17	452	28	31	13	27	99	12	348	8	12	380	16	32	36	20	104	1035
04:00 PM	4	91	2	15	112	10	8	2	13	33	1	91	7	2	101	5	6	6	4	21	267
04:15 PM	5	113	8	3	129	15	6	5	8	34	3	102	4	1	110	7	9	12	2	30	303
04:30 PM	7	97	2	6	112	12	5	2	10	29	3	132	3	1	139	4	13	10	9	36	316
04:45 PM	4	104	5	1	114	11	7	2	6	26	6	123	5	1	135	2	2	9	6	19	294
Total	20	405	17	25	467	48	26	11	37	122	13	448	19	5	485	18	30	37	21	106	1180
05:00 PM	7	116	5	3	131	18	9	4	14	45	4	126	5	2	137	9	8	17	4	38	351
05:15 PM	14	120	7	8	149	16	16	3	5	40	2	144	7	1	154	5	7	13	1	26	369
05:30 PM	8	99	2	6	115	7	10	5	4	26	5	101	4	3	113	5	6	11	3	25	279
05:45 PM	4	83	6	3	96	10	12	5	7	34	4	90	3	3	100	4	9	8	10	31	261
Total	33	418	20	20	491	51	47	17	30	145	15	461	19	9	504	23	30	49	18	120	1260
Grand Total	73	1212	63	62	1410	127	104	41	94	366	40	1257	46	26	1369	57	92	122	59	330	3475
Apprch %	5.2	86.0	4.5	4.4		34.7	28.4	11.2	25.7		2.9	91.8	3.4	1.9		17.3	27.9	37.0	17.9		
Total %	2.1	34.9	1.8	1.8	40.6	3.7	3.0	1.2	2.7	10.5	1.2	36.2	1.3	0.7	39.4	1.6	2.6	3.5	1.7	9.5	

	Stevens Avenue From North					Pleasant Ave From East					Stevens Ave From South					Pleasant Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	32	437	19	18	506	57	37	11	35	140	15	525	20	5	565	20	30	49	20	119	1330
Percent	6.3	86.4	3.8	3.6		40.7	26.4	7.9	25.0		2.7	92.9	3.5	0.9		16.8	25.2	41.2	16.8		
05:15 Volume	14	120	7	8	149	16	16	3	5	40	2	144	7	1	154	5	7	13	1	26	369
Peak Factor																					0.901
High Int.	05:15 PM					05:00 PM					05:15 PM					05:00 PM					
Volume	14	120	7	8	149	18	9	4	14	45	2	144	7	1	154	9	8	17	4	38	
Peak Factor					0.849					0.778					0.917					0.783	

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Stevens Avenue and Pleasant Avenue
City: Portland
Counter: DMF
Weather: Sun/Clouds/Shower

File Name : PortlandStevensPleasantAM
Site Code : 00001112
Start Date : 4/29/2015
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Stevens Ave From North					Pleasant Ave From East					Stevens Ave From South					Pleasant Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	4	71	4	5	84	4	2	6	4	16	2	44	1	1	48	3	7	11	5	26	174
07:15 AM	5	114	7	3	129	8	4	9	11	32	4	100	5	3	112	8	5	34	7	54	327
07:30 AM	8	130	8	1	147	11	14	8	5	38	5	95	1	3	104	8	13	33	4	58	347
07:45 AM	9	147	5	3	164	13	16	10	10	49	3	85	4	7	99	9	10	14	21	54	366
Total	26	462	24	12	524	36	36	33	30	135	14	324	11	14	363	28	35	92	37	192	1214
08:00 AM	8	97	9	1	115	7	7	9	2	25	3	72	5	2	82	3	9	11	17	40	262
08:15 AM	7	80	7	2	96	6	3	4	3	16	2	65	5	1	73	8	4	12	3	27	212
08:30 AM	9	77	5	8	99	7	5	12	11	35	2	66	3	2	73	9	7	8	12	36	243
08:45 AM	2	97	7	3	109	13	5	9	2	29	3	67	2	1	73	10	7	14	15	46	257
Total	26	351	28	14	419	33	20	34	18	105	10	270	15	6	301	30	27	45	47	149	974
Grand Total	52	813	52	26	943	69	56	67	48	240	24	594	26	20	664	58	62	137	84	341	2188
Apprch %	5.5	86.2	5.5	2.8		28.8	23.3	27.9	20.0		3.6	89.5	3.9	3.0		17.0	18.2	40.2	24.6		
Total %	2.4	37.2	2.4	1.2	43.1	3.2	2.6	3.1	2.2	11.0	1.1	27.1	1.2	0.9	30.3	2.7	2.8	6.3	3.8	15.6	

	Stevens Ave From North					Pleasant Ave From East					Stevens Ave From South					Pleasant Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	30	488	29	8	555	39	41	36	28	144	15	352	15	15	397	28	37	92	49	206	1302
Percent	5.4	87.9	5.2	1.4		27.1	28.5	25.0	19.4		3.8	88.7	3.8	3.8		13.6	18.0	44.7	23.8		
07:45 Volume	9	147	5	3	164	13	16	10	10	49	3	85	4	7	99	9	10	14	21	54	366
Peak Factor																					0.889
High Int.	07:45 AM					07:45 AM					07:15 AM					07:30 AM					
Volume	9	147	5	3	164	13	16	10	10	49	4	100	5	3	112	8	13	33	4	58	
Peak Factor					0.846					0.735					0.886					0.888	

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Stevens Avenue and Walton Street
City: Portland
Counter: DWM
Weather: Sun/Clouds

File Name : PortlandStevensWaltonPM
Site Code : 00022667
Start Date : 4/28/2015
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Stevens Avenue From North					Walton Street From East					Stevens Avenue From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
03:00 PM	0	88	11	1	100	10	0	24	6	40	21	94	0	0	115	0	0	0	0	0	255
03:15 PM	0	81	12	0	93	11	0	18	4	33	22	105	0	2	129	0	0	0	0	0	255
03:30 PM	0	114	22	0	136	10	0	19	3	32	15	97	0	0	112	0	0	0	0	0	280
03:45 PM	0	86	20	2	108	5	0	12	4	21	28	110	0	0	138	0	0	0	0	0	267
Total	0	369	65	3	437	36	0	73	17	126	86	406	0	2	494	0	0	0	0	0	1057
04:00 PM	0	97	24	0	121	18	0	24	2	44	30	112	0	0	142	0	0	0	0	0	307
04:15 PM	0	95	11	0	106	13	0	20	14	47	21	101	0	0	122	0	0	0	0	0	275
04:30 PM	0	131	28	3	162	13	0	30	4	47	29	109	0	0	138	0	0	0	0	0	347
04:45 PM	0	108	22	0	130	17	0	21	4	42	24	127	0	0	151	0	0	0	0	0	323
Total	0	431	85	3	519	61	0	95	24	180	104	449	0	0	553	0	0	0	0	0	1252
05:00 PM	0	134	33	3	170	15	0	33	6	54	15	112	0	0	127	0	0	0	0	0	351
05:15 PM	0	116	21	1	138	19	0	28	1	48	29	94	0	0	123	0	0	0	0	0	309
05:30 PM	0	87	14	1	102	14	0	40	2	56	23	115	0	0	138	0	0	0	0	0	296
05:45 PM	0	108	11	2	121	11	0	25	1	37	24	96	0	0	120	0	0	0	0	0	278
Total	0	445	79	7	531	59	0	126	10	195	91	417	0	0	508	0	0	0	0	0	1234
Grand Total	0	1245	229	13	1487	156	0	294	51	501	281	1272	0	2	1555	0	0	0	0	0	3543
Apprch %	0.0	83.7	15.4	0.9		31.1	0.0	58.7	10.2		18.1	81.8	0.0	0.1		0.0	0.0	0.0	0.0		
Total %	0.0	35.1	6.5	0.4	42.0	4.4	0.0	8.3	1.4	14.1	7.9	35.9	0.0	0.1	43.9	0.0	0.0	0.0	0.0	0.0	

	Stevens Avenue From North					Walton Street From East					Stevens Avenue From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	0	489	104	7	600	64	0	112	15	191	97	442	0	0	539	0	0	0	0	0	1330
Percent	0.0	81.5	17.3	1.2		33.5	0.0	58.6	7.9		18.0	82.0	0.0	0.0		0.0	0.0	0.0	0.0		
05:00 Volume	0	134	33	3	170	15	0	33	6	54	15	112	0	0	127	0	0	0	0	0	351
Peak Factor																					0.947
High Int.	05:00 PM					05:00 PM					04:45 PM					2:45:00 PM					
Volume	0	134	33	3	170	15	0	33	6	54	24	127	0	0	151						
Peak Factor					0.882					0.884					0.892						

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Stevens Avenue and Walton Street
City: Portland
Counter: DWM
Weather: Sun/Clouds

File Name : PortlandStevensWaltonAM
Site Code : 00011334
Start Date : 4/28/2015
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Stevens Avenue From North					Walton Street From East					Stevens Avenue From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	83	5	0	88	12	0	16	0	28	13	60	0	0	73	0	0	0	0	0	189
07:15 AM	0	96	22	0	118	26	0	23	1	50	31	87	0	0	118	0	0	0	0	0	286
07:30 AM	0	123	6	0	129	40	0	31	3	74	31	121	0	0	152	0	0	0	0	0	355
07:45 AM	0	123	11	0	134	39	0	39	8	86	12	111	0	3	126	0	0	0	0	0	346
Total	0	425	44	0	469	117	0	109	12	238	87	379	0	3	469	0	0	0	0	0	1176
08:00 AM	0	90	8	0	98	18	0	12	1	31	19	76	0	1	96	0	0	0	0	0	225
08:15 AM	0	85	9	0	94	8	0	14	2	24	15	73	0	0	88	0	0	0	0	0	206
08:30 AM	0	89	11	0	100	27	0	7	8	42	19	83	0	0	102	0	0	0	0	0	244
08:45 AM	0	106	8	1	115	19	0	14	5	38	16	83	0	0	99	0	0	0	0	0	252
Total	0	370	36	1	407	72	0	47	16	135	69	315	0	1	385	0	0	0	0	0	927
Grand Total	0	795	80	1	876	189	0	156	28	373	156	694	0	4	854	0	0	0	0	0	2103
Apprch %	0.0	90.8	9.1	0.1		50.7	0.0	41.8	7.5		18.3	81.3	0.0	0.5		0.0	0.0	0.0	0.0		
Total %	0.0	37.8	3.8	0.0	41.7	9.0	0.0	7.4	1.3	17.7	7.4	33.0	0.0	0.2	40.6	0.0	0.0	0.0	0.0	0.0	

	Stevens Avenue From North					Walton Street From East					Stevens Avenue From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	0	432	47	0	479	123	0	105	13	241	93	395	0	4	492	0	0	0	0	0	1212
Percent	0.0	90.2	9.8	0.0		51.0	0.0	43.6	5.4		18.9	80.3	0.0	0.8		0.0	0.0	0.0	0.0		
07:30 Volume	0	123	6	0	129	40	0	31	3	74	31	121	0	0	152	0	0	0	0	0	355
Peak Factor																					0.854
High Int.	07:45 AM					07:45 AM					07:30 AM					6:45:00 AM					
Volume	0	123	11	0	134	39	0	39	8	86	31	121	0	0	152						
Peak Factor					0.894					0.701					0.809						

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Forest Avenue and Walton Street
City: Portland
Counter: DMF
Weather: Clouds/Sun

File Name : PortlandForestWaltonPM
Site Code : 00001111
Start Date : 4/28/2015
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Forest Avenue From North					Walton Street From East					Forest Avenue From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
03:00 PM	0	150	6	0	156	31	21	11	2	65	7	200	8	1	216	15	20	6	0	41	478
03:15 PM	3	163	10	1	177	19	18	7	4	48	12	191	7	1	211	13	17	1	2	33	469
03:30 PM	6	197	7	1	211	20	13	11	7	51	4	194	6	2	206	12	9	2	5	28	496
03:45 PM	1	169	13	0	183	15	17	10	5	47	4	194	4	1	203	17	17	6	4	44	477
Total	10	679	36	2	727	85	69	39	18	211	27	779	25	5	836	57	63	15	11	146	1920
04:00 PM	6	143	21	1	171	26	23	11	4	64	5	191	10	0	206	13	22	8	2	45	486
04:15 PM	9	146	11	1	167	28	24	8	2	62	10	193	8	0	211	6	24	3	1	34	474
04:30 PM	9	165	19	0	193	25	18	16	1	60	6	178	13	0	197	20	21	13	1	55	505
04:45 PM	3	159	20	0	182	21	21	8	2	52	11	188	8	0	207	14	21	3	2	40	481
Total	27	613	71	2	713	100	86	43	9	238	32	750	39	0	821	53	88	27	6	174	1946
05:00 PM	11	154	25	3	193	32	30	13	3	78	7	175	9	0	191	21	22	3	4	50	512
05:15 PM	9	171	22	1	203	16	25	10	2	53	8	148	6	0	162	17	21	8	3	49	467
05:30 PM	7	152	10	0	169	19	17	6	2	44	8	176	8	2	194	18	21	4	3	46	453
05:45 PM	4	159	6	1	170	13	21	6	0	40	11	165	7	0	183	9	23	3	2	37	430
Total	31	636	63	5	735	80	93	35	7	215	34	664	30	2	730	65	87	18	12	182	1862
Grand Total	68	1928	170	9	2175	265	248	117	34	664	93	2193	94	7	2387	175	238	60	29	502	5728
Apprch %	3.1	88.6	7.8	0.4		39.9	37.3	17.6	5.1		3.9	91.9	3.9	0.3		34.9	47.4	12.0	5.8		
Total %	1.2	33.7	3.0	0.2	38.0	4.6	4.3	2.0	0.6	11.6	1.6	38.3	1.6	0.1	41.7	3.1	4.2	1.0	0.5	8.8	

	Forest Avenue From North					Walton Street From East					Forest Avenue From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	32	624	75	4	735	106	93	45	8	252	34	734	38	0	806	61	88	22	8	179	1972
Percent	4.4	84.9	10.2	0.5		42.1	36.9	17.9	3.2		4.2	91.1	4.7	0.0		34.1	49.2	12.3	4.5		
05:00 Volume	11	154	25	3	193	32	30	13	3	78	7	175	9	0	191	21	22	3	4	50	512
Peak Factor																					0.963
High Int.	04:30 PM					05:00 PM					04:15 PM					04:30 PM					
Volume	9	165	19	0	193	32	30	13	3	78	10	193	8	0	211	20	21	13	1	55	
Peak Factor					0.952					0.808					0.955					0.814	

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Forest Avenue and Walton Street
City: Portland
Counter: DWM
Weather: Clouds/Shower/Sun

File Name : PortlandForestWaltonAM
Site Code : 00007768
Start Date : 4/29/2015
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Forest Avenue From North					Walton Street From East					Forest Avenue From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	5	163	10	0	178	11	18	5	2	36	3	101	8	1	113	5	17	3	1	26	353
07:15 AM	9	193	12	4	218	22	40	6	1	69	0	139	18	0	157	9	19	6	1	35	479
07:30 AM	11	177	22	0	210	34	52	11	1	98	4	136	38	0	178	14	21	10	1	46	532
07:45 AM	4	206	23	0	233	24	41	18	1	84	3	151	26	0	180	17	17	7	2	43	540
Total	29	739	67	4	839	91	151	40	5	287	10	527	90	1	628	45	74	26	5	150	1904
08:00 AM	2	177	15	0	194	8	22	8	0	38	5	124	10	0	139	10	19	4	1	34	405
08:15 AM	5	193	12	0	210	15	15	8	0	38	1	102	9	0	112	7	13	3	4	27	387
08:30 AM	2	198	12	0	212	15	16	9	4	44	6	111	19	0	136	6	21	5	0	32	424
08:45 AM	3	167	15	0	185	16	9	8	0	33	6	80	8	0	94	4	16	4	2	26	338
Total	12	735	54	0	801	54	62	33	4	153	18	417	46	0	481	27	69	16	7	119	1554
Grand Total	41	1474	121	4	1640	145	213	73	9	440	28	944	136	1	1109	72	143	42	12	269	3458
Apprch %	2.5	89.9	7.4	0.2		33.0	48.4	16.6	2.0		2.5	85.1	12.3	0.1		26.8	53.2	15.6	4.5		
Total %	1.2	42.6	3.5	0.1	47.4	4.2	6.2	2.1	0.3	12.7	0.8	27.3	3.9	0.0	32.1	2.1	4.1	1.2	0.3	7.8	

	Forest Avenue From North					Walton Street From East					Forest Avenue From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	26	753	72	4	855	88	155	43	3	289	12	550	92	0	654	50	76	27	5	158	1956
Percent	3.0	88.1	8.4	0.5		30.4	53.6	14.9	1.0		1.8	84.1	14.1	0.0		31.6	48.1	17.1	3.2		
07:45 Volume	4	206	23	0	233	24	41	18	1	84	3	151	26	0	180	17	17	7	2	43	540
Peak Factor																					0.906
High Int.	07:45 AM					07:30 AM					07:45 AM					07:30 AM					
Volume	4	206	23	0	233	34	52	11	1	98	3	151	26	0	180	14	21	10	1	46	
Peak Factor					0.917					0.737					0.908					0.859	

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Title: Walton Street McAuley Drive AM
Town: Portland, Maine
Counter: DWM
Weather: Cloudy

File Name : PortlandMcAuleyEntranceAM
Site Code : 00334433
Start Date : 3/10/2016
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Walton Street From North					Walton Street From East					McAuley Entrance Driveway From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45 AM	0	0	0	0	0	0	16	2	0	18	0	0	0	0	0	3	17	0	0	20	38
Total	0	0	0	0	0	0	16	2	0	18	0	0	0	0	0	3	17	0	0	20	38
07:00 AM	0	0	0	0	0	0	18	10	0	28	0	0	1	1	2	12	25	0	0	37	67
07:15 AM	0	0	0	0	0	0	46	15	0	61	1	0	0	1	2	12	19	0	0	31	94
07:30 AM	0	0	0	0	0	0	73	15	0	88	0	0	0	2	2	15	24	0	2	41	131
07:45 AM	0	0	0	0	0	0	51	8	0	59	0	0	0	0	0	4	39	0	0	43	102
Total	0	0	0	0	0	0	188	48	0	236	1	0	1	4	6	43	107	0	2	152	394
Grand Total	0	0	0	0	0	0	204	50	0	254	1	0	1	4	6	46	124	0	2	172	432
Apprch %	0.0	0.0	0.0	0.0		0.0	80.3	19.7	0.0		16.7	0.0	16.7	66.7		26.7	72.1	0.0	1.2		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	47.2	11.6	0.0	58.8	0.2	0.0	0.2	0.9	1.4	10.6	28.7	0.0	0.5	39.8	

	Walton Street From North					Walton Street From East					McAuley Entrance Driveway From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:45 AM to 07:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	0	0	0	0	0	0	188	48	0	236	1	0	1	4	6	43	107	0	2	152	394
Percent	0.0	0.0	0.0	0.0		0.0	79.7	20.3	0.0		16.7	0.0	16.7	66.7		28.3	70.4	0.0	1.3		
07:30 Volume	0	0	0	0	0	0	73	15	0	88	0	0	0	2	2	15	24	0	2	41	131
Peak Factor																					0.752
High Int.	6:30:00 AM					07:30 AM					07:00 AM					07:45 AM					
Volume	0	0	0	0	0	0	73	15	0	88	0	0	1	1	2	4	39	0	0	43	
Peak Factor										0.670					0.750					0.884	

194 46 1 1 43 111

Gr. I = .92 / .89 = 1.034

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Title : Walton Street/McAuley Drives PM
Town: Portland, Maine
Counter: NLS
Weather: Sunny

File Name : PortlandMcAuley DrivesPM
Site Code : 00000001
Start Date : 3/11/2016
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	From North					Walton Street From East					McAuley Drive From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
01:45 PM	0	0	0	0	0	0	19	1	0	20	3	0	3	0	6	2	27	0	0	29	55
Total	0	0	0	0	0	0	19	1	0	20	3	0	3	0	6	2	27	0	0	29	55
02:00 PM	0	0	0	0	0	0	17	2	0	19	1	0	0	1	2	5	27	0	0	32	53
02:15 PM	0	0	0	0	0	0	36	4	0	40	13	0	8	2	23	10	37	0	0	47	110
02:30 PM	0	0	0	0	0	0	31	5	1	37	11	0	9	0	20	4	51	0	0	55	112
02:45 PM	0	0	0	0	0	0	36	4	0	40	9	0	7	0	16	5	48	0	0	53	109
Total	0	0	0	0	0	0	120	15	1	136	34	0	24	3	61	24	163	0	0	187	384
03:00 PM	0	0	0	0	0	0	24	2	0	26	6	0	4	0	10	5	36	0	0	41	77
Grand Total	0	0	0	0	0	0	163	18	1	182	43	0	31	3	77	31	226	0	0	257	516
Apprch %	0.0	0.0	0.0	0.0		0.0	89.6	9.9	0.5		55.8	0.0	40.3	3.9		12.1	87.9	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	31.6	3.5	0.2	35.3	8.3	0.0	6.0	0.6	14.9	6.0	43.8	0.0	0.0	49.8	

	From North					Walton Street From East					McAuley Drive From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 01:45 PM to 03:00 PM - Peak 1 of 1																					
Intersection	02:15 PM																				
Volume	0	0	0	0	0	0	127	15	1	143	39	0	28	2	69	24	172	0	0	196	408
Percent	0.0	0.0	0.0	0.0		0.0	88.8	10.5	0.7		56.5	0.0	40.6	2.9		12.2	87.8	0.0	0.0		
02:30 Volume	0	0	0	0	0	0	31	5	1	37	11	0	9	0	20	4	51	0	0	55	112
Peak Factor																					0.911
High Int.	1:30:00 PM					02:15 PM					02:15 PM					02:30 PM					
Volume	0	0	0	0	0	0	36	4	0	40	13	0	8	2	23	4	51	0	0	55	
Peak Factor										0.894					0.750					0.891	
							131	15			39		28			24	176				

Gr. T = .92/.89 = 1.034

Maine Traffic Resources
25 Vine Street
Gardiner, ME 04345
mainetrafficresources.com

Title: Walton Street McAuley Drive AM
Town: Portland, Maine
Counter: NLS
Weather: Cloudy

File Name : PortlandMcAuleyExitAM
Site Code : 00000001
Start Date : 3/10/2016
Page No : 1

Groups Printed- Passenger Vehicles - Light Trucks - Heavy Trucks

	Walton Street From North					Walton Street From East					McAuley Exit Driveway From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45 AM	0	0	0	0	0	0	16	0	0	16	0	0	2	0	2	0	20	0	1	21	39
Total	0	0	0	0	0	0	16	0	0	16	0	0	2	0	2	0	20	0	1	21	39
07:00 AM	0	0	0	0	0	0	19	0	0	19	5	0	2	0	7	0	32	0	1	33	59
07:15 AM	0	0	0	0	0	0	42	0	0	42	5	0	9	0	14	0	26	0	1	27	83
07:30 AM	0	0	0	0	0	0	78	0	0	78	10	0	7	4	21	0	29	0	0	29	128
07:45 AM	0	0	0	0	0	0	51	0	0	51	5	0	1	0	6	0	38	0	1	39	96
Total	0	0	0	0	0	0	190	0	0	190	25	0	19	4	48	0	125	0	3	128	366
Grand Total	0	0	0	0	0	0	206	0	0	206	25	0	21	4	50	0	145	0	4	149	405
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		50.0	0.0	42.0	8.0		0.0	97.3	0.0	2.7		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	50.9	0.0	0.0	50.9	6.2	0.0	5.2	1.0	12.3	0.0	35.8	0.0	1.0	36.8	

	Walton Street From North					Walton Street From East					McAuley Exit Driveway From South					Walton Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:45 AM to 07:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	0	0	0	0	0	0	190	0	0	190	25	0	19	4	48	0	125	0	3	128	366
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		52.1	0.0	39.6	8.3		0.0	97.7	0.0	2.3		
07:30 Volume	0	0	0	0	0	0	78	0	0	78	10	0	7	4	21	0	29	0	0	29	128
Peak Factor																					0.715
High Int.	6:30:00 AM					07:30 AM					07:30 AM					07:45 AM					
Volume	0	0	0	0	0	0	78	0	0	78	10	0	7	4	21	0	38	0	1	39	
Peak Factor										0.609					0.571					0.821	

196 25 19 129

Gr. I = .92 / .89 = 1.034

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	106	124	399	94	47	436
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	40		35	90	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.97		0.97	1.00	
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1599	1642	1599	1770	1626
Flt Permitted	0.950				0.279	
Satd. Flow (perm)	1775	1553	1642	1545	519	1626
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		177		54		
Link Speed (mph)	30		30			30
Link Distance (ft)	1000		1000			1000
Travel Time (s)	22.7		22.7			22.7
Confl. Peds. (#/hr)	3	3		4	2	
Confl. Bikes (#/hr)		1		6		
Peak Hour Factor	0.70	0.70	0.80	0.80	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			4			4
Adj. Flow (vph)	151	177	499	118	53	490
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	177	499	118	53	490
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.19	1.00	1.00	1.19
Turning Speed (mph)	15	9		9	15	
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	10.0	22.0
Total Split (s)	22.0	22.0	43.0	43.0	10.0	53.0
Total Split (%)	29.3%	29.3%	57.3%	57.3%	13.3%	70.7%
Maximum Green (s)	16.0	16.0	37.0	37.0	4.0	47.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	106	124	399	94	47	436
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1787	1556	1642	1548	1769	1626
Flt Permitted	0.95	1.00	1.00	1.00	0.28	1.00
Satd. Flow (perm)	1787	1556	1642	1548	520	1626
Peak-hour factor, PHF	0.70	0.70	0.80	0.80	0.89	0.89
Adj. Flow (vph)	151	177	499	118	53	490
RTOR Reduction (vph)	0	142	0	31	0	0
Lane Group Flow (vph)	151	35	499	87	53	490
Confl. Peds. (#/hr)	3	3		4	2	
Confl. Bikes (#/hr)		1		6		
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			4			4
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Actuated Green, G (s)	10.4	10.4	21.7	21.7	29.6	29.6
Effective Green, g (s)	10.4	10.4	21.7	21.7	29.6	29.6
Actuated g/C Ratio	0.20	0.20	0.42	0.42	0.57	0.57
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	357	311	685	646	342	926
v/s Ratio Prot	c0.08		c0.30		0.01	c0.30
v/s Ratio Perm		0.02		0.06	0.08	
v/c Ratio	0.42	0.11	0.73	0.13	0.15	0.53
Uniform Delay, d1	18.2	17.0	12.7	9.4	6.4	6.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.2	3.9	0.1	0.2	0.5
Delay (s)	19.0	17.2	16.6	9.4	6.6	7.5
Level of Service	B	B	B	A	A	A
Approach Delay (s)	18.0		15.2			7.4
Approach LOS	B		B			A

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

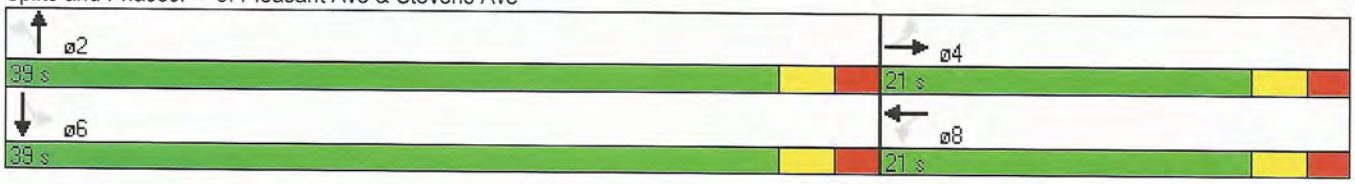
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	37	28	36	41	39	15	352	15	29	488	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.98			1.00			1.00	
Frt		0.976			0.955			0.995			0.993	
Flt Protected		0.972			0.985			0.998			0.997	
Satd. Flow (prot)	0	1768	0	0	1756	0	0	1797	0	0	1606	0
Flt Permitted		0.739			0.859			0.973			0.967	
Satd. Flow (perm)	0	1331	0	0	1524	0	0	1752	0	0	1557	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			42			6			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1219			1121			280			1491	
Travel Time (s)		27.7			25.5			6.4			33.9	
Confl. Peds. (#/hr)	12		12	12		12	8		8	6		6
Confl. Bikes (#/hr)			8			8			8			8
Peak Hour Factor	0.88	0.88	0.88	0.73	0.73	0.73	0.88	0.88	0.88	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	4%	4%	4%	3%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Parking (#/hr)											4	
Adj. Flow (vph)	105	42	32	49	56	53	17	400	17	35	581	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	158	0	0	434	0	0	652	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.18	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	21.0	21.0	0.0	21.0	21.0	0.0	39.0	39.0	0.0	39.0	39.0	0.0
Total Split (%)	35.0%	35.0%	0.0%	35.0%	35.0%	0.0%	65.0%	65.0%	0.0%	65.0%	65.0%	0.0%
Maximum Green (s)	16.5	16.5		16.5	16.5		34.5	34.5		34.5	34.5	
Yellow Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.5			11.3			38.6			38.6	
Actuated g/C Ratio		0.21			0.20			0.69			0.69	
v/c Ratio		0.62			0.46			0.36			0.61	
Control Delay		27.5			18.5			6.5			10.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.5			18.5			6.5			10.4	
LOS		C			B			A			B	
Approach Delay		27.5			18.5			6.5			10.4	
Approach LOS		C			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 55.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 12.3 Intersection LOS: B
Intersection Capacity Utilization 62.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Pleasant Ave & Stevens Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	37	28	36	41	39	15	352	15	29	488	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.98			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.98			0.95			0.99			0.99	
Flt Protected		0.97			0.98			1.00			1.00	
Satd. Flow (prot)		1750			1744			1796			1605	
Flt Permitted		0.74			0.86			0.97			0.97	
Satd. Flow (perm)		1331			1522			1752			1556	
Peak-hour factor, PHF	0.88	0.88	0.88	0.73	0.73	0.73	0.88	0.88	0.88	0.84	0.84	0.84
Adj. Flow (vph)	105	42	32	49	56	53	17	400	17	35	581	36
RTOR Reduction (vph)	0	15	0	0	34	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	164	0	0	124	0	0	432	0	0	649	0
Confl. Peds. (#/hr)	12		12	12		12	8		8	6		6
Confl. Bikes (#/hr)			8			8			8			8
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	4%	4%	4%	3%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Parking (#/hr)											4	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		10.2			10.2			37.7			37.7	
Effective Green, g (s)		10.2			10.2			37.7			37.7	
Actuated g/C Ratio		0.18			0.18			0.66			0.66	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		239			273			1161			1031	
v/s Ratio Prot												
v/s Ratio Perm		c0.12			0.08			0.25			c0.42	
v/c Ratio		0.69			0.45			0.37			0.63	
Uniform Delay, d1		21.9			20.9			4.3			5.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		8.0			1.2			0.9			2.9	
Delay (s)		29.8			22.0			5.2			8.5	
Level of Service		C			C			A			A	
Approach Delay (s)		29.8			22.0			5.2			8.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	56.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	77	51	43	156	89	93	556	12	73	761	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		40	0		100	140		0	140		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		1.00	0.97		1.00			1.00	
Frt			0.850			0.850		0.997			0.995	
Flt Protected		0.987			0.989		0.950			0.950		
Satd. Flow (prot)	0	1857	1599	0	1842	1583	1736	1821	0	1787	1855	0
Flt Permitted		0.746			0.893		0.100			0.260		
Satd. Flow (perm)	0	1402	1553	0	1662	1538	183	1821	0	489	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60			117		2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			686			1198			517	
Travel Time (s)		19.3			15.6			27.2			11.8	
Confl. Peds. (#/hr)	2		2	2		2				2		2
Confl. Bikes (#/hr)			2			2			2			2
Peak Hour Factor	0.85	0.85	0.85	0.73	0.73	0.73	0.90	0.90	0.90	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Adj. Flow (vph)	32	91	60	59	214	122	103	618	13	80	836	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	60	0	273	122	103	631	0	80	865	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	10.0	22.0		10.0	22.0	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	10.0	52.0	0.0	11.0	53.0	0.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	11.1%	57.8%	0.0%	12.2%	58.9%	0.0%
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	21.0	4.0	46.0		5.0	47.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	6.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	None		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		17.5	17.5		17.5	17.5	42.9	40.0		44.3	40.7	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.55	0.51		0.57	0.52	
v/c Ratio		0.39	0.15		0.74	0.28	0.56	0.68		0.22	0.90	
Control Delay		33.4	8.9		43.9	8.5	21.4	19.8		7.8	31.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		33.4	8.9		43.9	8.5	21.4	19.8		7.8	31.8	
LOS		C	A		D	A	C	B		A	C	
Approach Delay		25.4			33.0			20.1			29.8	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 78.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 83.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 11: Walton Street & Forest Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	77	51	43	156	89	93	556	12	73	761	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1856	1554		1841	1539	1736	1820		1787	1855	
Flt Permitted		0.75	1.00		0.89	1.00	0.10	1.00		0.26	1.00	
Satd. Flow (perm)		1402	1554		1662	1539	183	1820		489	1855	
Peak-hour factor, PHF	0.85	0.85	0.85	0.73	0.73	0.73	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	32	91	60	59	214	122	103	618	13	80	836	29
RTOR Reduction (vph)	0	0	47	0	0	91	0	1	0	0	1	0
Lane Group Flow (vph)	0	123	13	0	273	31	103	630	0	80	864	0
Confl. Peds. (#/hr)	2		2	2		2				2		2
Confl. Bikes (#/hr)			2			2			2			2
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		17.5	17.5		17.5	17.5	42.9	40.0		44.3	40.7	
Effective Green, g (s)		17.5	17.5		17.5	17.5	42.9	40.0		44.3	40.7	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.54	0.51		0.56	0.51	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		310	344		368	340	156	920		333	954	
v/s Ratio Prot							c0.02	0.35		0.01	c0.47	
v/s Ratio Perm		0.09	0.01		c0.16	0.02	0.33			0.12		
v/c Ratio		0.40	0.04		0.74	0.09	0.66	0.68		0.24	0.91	
Uniform Delay, d1		26.3	24.2		28.7	24.5	15.0	14.8		9.8	17.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8	0.0		7.8	0.1	10.0	2.1		0.4	11.8	
Delay (s)		27.1	24.2		36.5	24.6	25.1	16.9		10.1	29.3	
Level of Service		C	C		D	C	C	B		B	C	
Approach Delay (s)		26.2			32.9			18.1			27.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	111	130	421	99	49	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	40		35	90	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.97		0.97	1.00	
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1599	1642	1599	1770	1626
Flt Permitted	0.950				0.264	
Satd. Flow (perm)	1775	1553	1642	1545	491	1626
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		186		54		
Link Speed (mph)	30		30			30
Link Distance (ft)	1000		1000			1000
Travel Time (s)	22.7		22.7			22.7
Confl. Peds. (#/hr)	3	3		4	2	
Confl. Bikes (#/hr)		1		6		
Peak Hour Factor	0.70	0.70	0.80	0.80	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			4			4
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	159	186	526	124	55	518
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	186	526	124	55	518
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.19	1.00	1.00	1.19
Turning Speed (mph)	15	9		9	15	
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	10.0	22.0
Total Split (s)	22.0	22.0	43.0	43.0	10.0	53.0
Total Split (%)	29.3%	29.3%	57.3%	57.3%	13.3%	70.7%
Maximum Green (s)	16.0	16.0	37.0	37.0	4.0	47.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	10.8	10.8	23.0	23.0	27.8	27.8
Actuated g/C Ratio	0.21	0.21	0.44	0.44	0.53	0.53
v/c Ratio	0.43	0.40	0.73	0.17	0.15	0.60
Control Delay	26.4	7.4	19.7	6.9	6.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	7.4	19.7	6.9	6.0	10.8
LOS	C	A	B	A	A	B
Approach Delay	16.2		17.2			10.3
Approach LOS	B		B			B

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 52.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 14.5 — Intersection LOS: B
Intersection Capacity Utilization 47.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Walton St & Stevens Ave

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	111	130	421	99	49	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1787	1556	1642	1548	1769	1626
Flt Permitted	0.95	1.00	1.00	1.00	0.26	1.00
Satd. Flow (perm)	1787	1556	1642	1548	491	1626
Peak-hour factor, PHF	0.70	0.70	0.80	0.80	0.89	0.89
Adj. Flow (vph)	159	186	526	124	55	518
RTOR Reduction (vph)	0	149	0	31	0	0
Lane Group Flow (vph)	159	37	526	93	55	518
Confl. Peds. (#/hr)	3	3		4	2	
Confl. Bikes (#/hr)		1		6		
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			4			4
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Actuated Green, G (s)	10.8	10.8	23.0	23.0	30.9	30.9
Effective Green, g (s)	10.8	10.8	23.0	23.0	30.9	30.9
Actuated g/C Ratio	0.20	0.20	0.43	0.43	0.58	0.58
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	359	313	703	663	328	936
v/s Ratio Prot	c0.09		c0.32		0.01	c0.32
v/s Ratio Perm		0.02		0.06	0.09	
v/c Ratio	0.44	0.12	0.75	0.14	0.17	0.55
Uniform Delay, d1	18.8	17.6	12.9	9.3	6.6	7.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.2	4.4	0.1	0.2	0.7
Delay (s)	19.7	17.7	17.3	9.4	6.8	7.8
Level of Service	B	B	B	A	A	A
Approach Delay (s)	18.6		15.8			7.7
Approach LOS	B		B			A

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	39	30	38	43	41	16	376	16	30	522	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.98			1.00			1.00	
Frt		0.976			0.955			0.995			0.993	
Flt Protected		0.971			0.985			0.998			0.997	
Satd. Flow (prot)	0	1766	0	0	1756	0	0	1797	0	0	1606	0
Flt Permitted		0.728			0.864			0.971			0.966	
Satd. Flow (perm)	0	1311	0	0	1533	0	0	1748	0	0	1555	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			42			6			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1219			1121			280			1491	
Travel Time (s)		27.7			25.5			6.4			33.9	
Confl. Peds. (#/hr)	12		12	12		12	8		8	6		6
Confl. Bikes (#/hr)			8			8			8			8
Peak Hour Factor	0.88	0.88	0.88	0.73	0.73	0.73	0.88	0.88	0.88	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	4%	4%	4%	3%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Parking (#/hr)											4	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	111	44	34	52	59	56	18	427	18	36	621	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	167	0	0	463	0	0	695	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.18	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	21.0	21.0	0.0	21.0	21.0	0.0	39.0	39.0	0.0	39.0	39.0	0.0
Total Split (%)	35.0%	35.0%	0.0%	35.0%	35.0%	0.0%	65.0%	65.0%	0.0%	65.0%	65.0%	0.0%
Maximum Green (s)	16.5	16.5		16.5	16.5		34.5	34.5		34.5	34.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.2			12.2			37.4			37.4	
Actuated g/C Ratio		0.21			0.21			0.64			0.64	
v/c Ratio		0.66			0.47			0.41			0.70	
Control Delay		29.6			18.5			7.3			13.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.6			18.5			7.3			13.3	
LOS		C			B			A			B	
Approach Delay		29.6			18.5			7.3			13.3	
Approach LOS		C			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 58.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 14.1 — Intersection LOS: B
Intersection Capacity Utilization 64.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 9: Pleasant Ave & Stevens Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	39	30	38	43	41	16	376	16	30	522	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.98			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.98			0.95			0.99			0.99	
Flt Protected		0.97			0.98			1.00			1.00	
Satd. Flow (prot)		1749			1745			1796			1605	
Flt Permitted		0.73			0.86			0.97			0.97	
Satd. Flow (perm)		1312			1532			1747			1554	
Peak-hour factor, PHF	0.88	0.88	0.88	0.73	0.73	0.73	0.88	0.88	0.88	0.84	0.84	0.84
Adj. Flow (vph)	111	44	34	52	59	56	18	427	18	36	621	38
RTOR Reduction (vph)	0	14	0	0	33	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	175	0	0	134	0	0	461	0	0	692	0
Confl. Peds. (#/hr)	12		12	12		12	8		8	6		6
Confl. Bikes (#/hr)			8			8			8			8
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	4%	4%	4%	3%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Parking (#/hr)											4	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		12.2			12.2			37.4			37.4	
Effective Green, g (s)		12.2			12.2			37.4			37.4	
Actuated g/C Ratio		0.21			0.21			0.64			0.64	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		273			319			1115			992	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.09			0.26			c0.45	
v/c Ratio		0.64			0.42			0.41			0.70	
Uniform Delay, d1		21.2			20.1			5.2			6.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.0			0.9			1.1			4.1	
Delay (s)		26.2			21.0			6.3			11.0	
Level of Service		C			C			A			B	
Approach Delay (s)		26.2			21.0			6.3			11.0	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	81	54	45	164	93	98	585	13	77	801	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		40	0		100	140		0	140		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		1.00	0.97		1.00			1.00	
Frt			0.850			0.850		0.997			0.995	
Flt Protected		0.987			0.989		0.950			0.950		
Satd. Flow (prot)	0	1857	1599	0	1842	1583	1736	1821	0	1787	1855	0
Flt Permitted		0.706			0.894		0.091			0.245		
Satd. Flow (perm)	0	1327	1553	0	1664	1538	166	1821	0	461	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			64			116		2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			686			1198			517	
Travel Time (s)		19.3			15.6			27.2			11.8	
Confl. Peds. (#/hr)	2		2	2		2				2		2
Confl. Bikes (#/hr)			2			2			2			2
Peak Hour Factor	0.85	0.85	0.85	0.73	0.73	0.73	0.90	0.90	0.90	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	33	95	64	62	225	127	109	650	14	85	880	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	64	0	287	127	109	664	0	85	910	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	10.0	22.0		10.0	22.0	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	10.0	52.0	0.0	11.0	53.0	0.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	11.1%	57.8%	0.0%	12.2%	58.9%	0.0%
Maximum Green (s)	21.5	21.5	21.5	21.5	21.5	21.5	4.5	46.5		5.5	47.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5	5.5	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	None		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		18.4	18.4		18.4	18.4	47.1	43.8		48.6	44.5	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.58	0.54		0.59	0.54	
v/c Ratio		0.43	0.16		0.76	0.29	0.59	0.68		0.23	0.90	
Control Delay		34.2	8.6		45.8	9.0	24.4	19.6		7.7	32.0	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		34.2	8.6		45.8	9.0	24.4	19.6		7.7	32.0	
LOS		C	A		D	A	C	B		A	C	
Approach Delay		25.6			34.5			20.3			30.0	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 81.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 27.3 Intersection LOS: C
Intersection Capacity Utilization 85.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 11: Walton Street & Forest Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	81	54	45	164	93	98	585	13	77	801	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5		5.5	5.5	5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1856	1554		1841	1538	1736	1820		1787	1855	
Flt Permitted		0.71	1.00		0.89	1.00	0.09	1.00		0.25	1.00	
Satd. Flow (perm)		1328	1554		1664	1538	167	1820		461	1855	
Peak-hour factor, PHF	0.85	0.85	0.85	0.73	0.73	0.73	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	33	95	64	62	225	127	109	650	14	85	880	30
RTOR Reduction (vph)	0	0	50	0	0	90	0	1	0	0	1	0
Lane Group Flow (vph)	0	128	14	0	287	37	109	663	0	85	909	0
Confl. Peds. (#/hr)	2		2	2		2				2		2
Confl. Bikes (#/hr)			2			2			2			2
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		18.4	18.4		18.4	18.4	47.1	43.8		48.7	44.6	
Effective Green, g (s)		18.4	18.4		18.4	18.4	47.1	43.8		48.7	44.6	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.57	0.53		0.59	0.54	
Clearance Time (s)		5.5	5.5		5.5	5.5	5.5	5.5		5.5	5.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		295	345		370	342	158	963		337	999	
v/s Ratio Prot							c0.03	0.36		0.01	c0.49	
v/s Ratio Perm		0.10	0.01		c0.17	0.02	0.37			0.14		
v/c Ratio		0.43	0.04		0.78	0.11	0.69	0.69		0.25	0.91	
Uniform Delay, d1		27.7	25.3		30.3	25.7	16.0	14.4		9.6	17.3	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0	0.0		9.8	0.1	11.9	2.1		0.4	11.8	
Delay (s)		28.7	25.3		40.0	25.8	27.8	16.5		10.0	29.1	
Level of Service		C	C		D	C	C	B		A	C	
Approach Delay (s)		27.6			35.7			18.1			27.4	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	3	521	0	0	583
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1627	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1627	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	235		200			540
Travel Time (s)	5.3		4.5			12.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	3	566	0	0	634
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	566	0	0	634
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 40.7% ICU Level of Service A
Analysis Period (min) 15

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	3	521	0	0	583
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3	566	0	0	634
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						540
pX, platoon unblocked	0.86					
vC, conflicting volume	1200	566			566	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1150	566			566	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	189	525			1006	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	3	566	634
Volume Left	0	0	0
Volume Right	3	0	0
cSH	525	1700	1700
Volume to Capacity	0.01	0.33	0.37
Queue Length 95th (ft)	0	0	0
Control Delay (s)	11.9	0.0	0.0
Lane LOS	B		
Approach Delay (s)	11.9	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	121	132	424	100	51	462
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	40		35	90	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.97		0.97	1.00	
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1599	1642	1599	1770	1626
Flt Permitted	0.950				0.261	
Satd. Flow (perm)	1775	1553	1642	1545	486	1626
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		173		54		
Link Speed (mph)	30		30			30
Link Distance (ft)	1000		1000			1000
Travel Time (s)	22.7		22.7			22.7
Confl. Peds. (#/hr)	3	3		4	2	
Confl. Bikes (#/hr)		1		6		
Peak Hour Factor	0.70	0.70	0.80	0.80	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			4			4
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	173	189	530	125	57	519
Shared Lane Traffic (%)						
Lane Group Flow (vph)	173	189	530	125	57	519
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.19	1.00	1.00	1.19
Turning Speed (mph)	15	9		9	15	
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	10.0	22.0
Total Split (s)	22.0	22.0	43.0	43.0	10.0	53.0
Total Split (%)	29.3%	29.3%	57.3%	57.3%	13.3%	70.7%
Maximum Green (s)	16.0	16.0	37.0	37.0	4.0	47.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	11.1	11.1	23.3	23.3	28.2	28.2
Actuated g/C Ratio	0.21	0.21	0.44	0.44	0.53	0.53
v/c Ratio	0.46	0.41	0.73	0.18	0.15	0.60
Control Delay	26.9	8.8	19.9	7.0	6.2	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	8.8	19.9	7.0	6.2	11.0
LOS	C	A	B	A	A	B
Approach Delay	17.4		17.5			10.5
Approach LOS	B		B			B

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 53
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 14.9 Intersection LOS: B
Intersection Capacity Utilization 48.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Walton St & Stevens Ave

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	121	132	424	100	51	462
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1787	1556	1642	1548	1769	1626
Flt Permitted	0.95	1.00	1.00	1.00	0.26	1.00
Satd. Flow (perm)	1787	1556	1642	1548	486	1626
Peak-hour factor, PHF	0.70	0.70	0.80	0.80	0.89	0.89
Adj. Flow (vph)	173	189	530	125	57	519
RTOR Reduction (vph)	0	138	0	31	0	0
Lane Group Flow (vph)	173	51	530	94	57	519
Confl. Peds. (#/hr)	3	3		4	2	
Confl. Bikes (#/hr)		1		6		
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			4			4
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Actuated Green, G (s)	11.1	11.1	23.3	23.3	31.2	31.2
Effective Green, g (s)	11.1	11.1	23.3	23.3	31.2	31.2
Actuated g/C Ratio	0.20	0.20	0.43	0.43	0.57	0.57
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	365	318	705	664	324	934
v/s Ratio Prot	c0.10		c0.32		0.01	c0.32
v/s Ratio Perm		0.03		0.06	0.09	
v/c Ratio	0.47	0.16	0.75	0.14	0.18	0.56
Uniform Delay, d1	19.0	17.8	13.1	9.4	6.7	7.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.2	4.5	0.1	0.3	0.7
Delay (s)	20.0	18.0	17.6	9.5	7.0	7.9
Level of Service	C	B	B	A	A	A
Approach Delay (s)	19.0		16.1			7.8
Approach LOS	B		B			A

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	139	0	0	218	19	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.923	
Flt Protected					0.979	
Satd. Flow (prot)	1881	0	0	1881	1717	0
Flt Permitted					0.979	
Satd. Flow (perm)	1881	0	0	1881	1717	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			295	139	
Travel Time (s)	6.8			6.7	3.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.80	0.92	0.70	0.70	0.70	0.70
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	174	0	0	311	27	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	0	0	311	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 21.5% ICU Level of Service A
Analysis Period (min) 15

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	139	0	0	218	19	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.92	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	174	0	0	311	27	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	300			1245		
pX, platoon unblocked						
vC, conflicting volume			174		485	174
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			174		485	174
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		95	96
cM capacity (veh/h)			1409		545	875

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	174	311	63
Volume Left	0	0	27
Volume Right	0	0	36
cSH	1700	1700	693
Volume to Capacity	0.10	0.18	0.09
Queue Length 95th (ft)	0	0	7
Control Delay (s)	0.0	0.0	10.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.7
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		

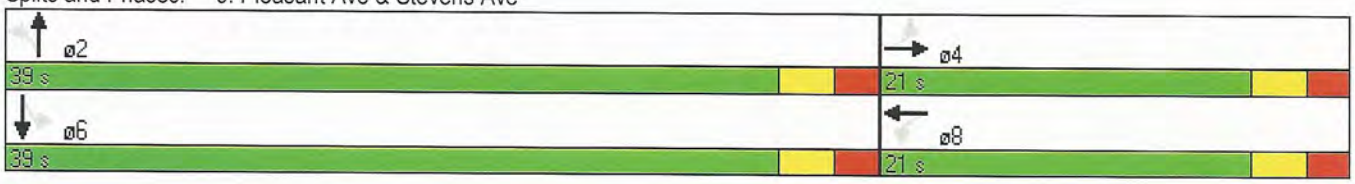
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	39	30	38	43	41	16	381	16	30	532	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.98			1.00			1.00	
Frt		0.976			0.955			0.995			0.993	
Flt Protected		0.971			0.985			0.998			0.997	
Satd. Flow (prot)	0	1766	0	0	1756	0	0	1797	0	0	1606	0
Flt Permitted		0.728			0.864			0.971			0.966	
Satd. Flow (perm)	0	1311	0	0	1533	0	0	1748	0	0	1555	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			42			6			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1219			1121			280			1491	
Travel Time (s)		27.7			25.5			6.4			33.9	
Confl. Peds. (#/hr)	12		12	12		12	8		8	6		6
Confl. Bikes (#/hr)			8			8			8			8
Peak Hour Factor	0.88	0.88	0.88	0.73	0.73	0.73	0.88	0.88	0.88	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	4%	4%	4%	3%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Parking (#/hr)											4	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	111	44	34	52	59	56	18	433	18	36	633	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	167	0	0	469	0	0	707	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.18	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	21.0	21.0	0.0	21.0	21.0	0.0	39.0	39.0	0.0	39.0	39.0	0.0
Total Split (%)	35.0%	35.0%	0.0%	35.0%	35.0%	0.0%	65.0%	65.0%	0.0%	65.0%	65.0%	0.0%
Maximum Green (s)	16.5	16.5		16.5	16.5		34.5	34.5		34.5	34.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.2			12.2			37.4			37.4	
Actuated g/C Ratio		0.21			0.21			0.64			0.64	
v/c Ratio		0.66			0.47			0.42			0.71	
Control Delay		29.6			18.5			7.4			13.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.6			18.5			7.4			13.8	
LOS		C			B			A			B	
Approach Delay		29.6			18.5			7.4			13.8	
Approach LOS		C			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 58.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 65.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 9: Pleasant Ave & Stevens Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	39	30	38	43	41	16	381	16	30	532	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.98			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.98			0.95			0.99			0.99	
Flt Protected		0.97			0.98			1.00			1.00	
Satd. Flow (prot)		1749			1745			1796			1606	
Flt Permitted		0.73			0.86			0.97			0.97	
Satd. Flow (perm)		1312			1532			1747			1555	
Peak-hour factor, PHF	0.88	0.88	0.88	0.73	0.73	0.73	0.88	0.88	0.88	0.84	0.84	0.84
Adj. Flow (vph)	111	44	34	52	59	56	18	433	18	36	633	38
RTOR Reduction (vph)	0	14	0	0	33	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	175	0	0	134	0	0	467	0	0	704	0
Confl. Peds. (#/hr)	12		12	12		12	8		8	6		6
Confl. Bikes (#/hr)			8			8			8			8
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	4%	4%	4%	3%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Parking (#/hr)											4	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		12.2			12.2			37.4			37.4	
Effective Green, g (s)		12.2			12.2			37.4			37.4	
Actuated g/C Ratio		0.21			0.21			0.64			0.64	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		273			319			1115			992	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.09			0.27			c0.45	
v/c Ratio		0.64			0.42			0.42			0.71	
Uniform Delay, d1		21.2			20.1			5.2			7.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.0			0.9			1.2			4.3	
Delay (s)		26.2			21.0			6.4			11.3	
Level of Service		C			C			A			B	
Approach Delay (s)		26.2			21.0			6.4			11.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	90	60	45	169	93	101	584	13	77	801	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		40	0		100	140		0	140		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		1.00	0.97		1.00			1.00	
Frt			0.850			0.850		0.997			0.995	
Flt Protected		0.987			0.990		0.950			0.950		
Satd. Flow (prot)	0	1857	1599	0	1844	1583	1736	1821	0	1787	1855	0
Flt Permitted		0.681			0.893		0.091			0.244		
Satd. Flow (perm)	0	1280	1553	0	1662	1538	166	1821	0	459	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68			114		2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			686			1198			517	
Travel Time (s)		19.3			15.6			27.2			11.8	
Confl. Peds. (#/hr)	2		2	2		2				2		2
Confl. Bikes (#/hr)			2			2			2			2
Peak Hour Factor	0.85	0.85	0.85	0.73	0.73	0.73	0.90	0.90	0.90	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	106	71	62	232	127	112	649	14	85	880	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	71	0	294	127	112	663	0	85	911	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	10.0	22.0		10.0	22.0	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	10.0	52.0	0.0	11.0	53.0	0.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	11.1%	57.8%	0.0%	12.2%	58.9%	0.0%
Maximum Green (s)	21.5	21.5	21.5	21.5	21.5	21.5	4.5	46.5		5.5	47.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5	5.5	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	None		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		18.8	18.8		18.8	18.8	47.3	44.0		48.8	44.7	
Actuated g/C Ratio		0.23	0.23		0.23	0.23	0.57	0.53		0.59	0.54	
v/c Ratio		0.49	0.17		0.78	0.29	0.61	0.68		0.23	0.90	
Control Delay		35.8	9.1		46.6	9.2	25.9	19.7		7.8	32.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		35.8	9.1		46.6	9.2	25.9	19.7		7.8	32.5	
LOS		D	A		D	A	C	B		A	C	
Approach Delay		26.9			35.3			20.6			30.4	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 82.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 27.8 — Intersection LOS: C
Intersection Capacity Utilization 86.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 11: Walton Street & Forest Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	90	60	45	169	93	101	584	13	77	801	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5		5.5	5.5	5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1856	1554		1842	1538	1736	1820		1787	1855	
Flt Permitted		0.68	1.00		0.89	1.00	0.09	1.00		0.24	1.00	
Satd. Flow (perm)		1280	1554		1662	1538	166	1820		460	1855	
Peak-hour factor, PHF	0.85	0.85	0.85	0.73	0.73	0.73	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	36	106	71	62	232	127	112	649	14	85	880	31
RTOR Reduction (vph)	0	0	53	0	0	88	0	1	0	0	1	0
Lane Group Flow (vph)	0	142	18	0	294	39	112	662	0	85	910	0
Confl. Peds. (#/hr)	2		2	2		2				2		2
Confl. Bikes (#/hr)			2			2			2			2
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		18.8	18.8		18.8	18.8	47.3	44.0		48.9	44.8	
Effective Green, g (s)		18.8	18.8		18.8	18.8	47.3	44.0		48.9	44.8	
Actuated g/C Ratio		0.23	0.23		0.23	0.23	0.57	0.53		0.59	0.54	
Clearance Time (s)		5.5	5.5		5.5	5.5	5.5	5.5		5.5	5.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		289	350		375	347	156	960		335	996	
v/s Ratio Prot							c0.03	0.36		0.01	c0.49	
v/s Ratio Perm		0.11	0.01		c0.18	0.03	0.38			0.14		
v/c Ratio		0.49	0.05		0.78	0.11	0.72	0.69		0.25	0.91	
Uniform Delay, d1		28.1	25.3		30.4	25.7	16.3	14.6		9.7	17.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3	0.1		10.3	0.1	14.6	2.1		0.4	12.4	
Delay (s)		29.5	25.4		40.7	25.8	30.9	16.7		10.1	29.9	
Level of Service		C	C		D	C	C	B		B	C	
Approach Delay (s)		28.1			36.2			18.8			28.2	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	26.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	83.4	Sum of lost time (s)	11.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	118	46	57	205	13	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.962				0.921	
Flt Protected				0.989	0.980	
Satd. Flow (prot)	1810	0	0	1860	1715	0
Flt Permitted				0.989	0.980	
Satd. Flow (perm)	1810	0	0	1860	1715	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	100			850	152	
Travel Time (s)	2.3			19.3	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.70	0.70	0.70	0.70
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	131	51	81	293	19	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	182	0	0	374	46	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 36.3% ICU Level of Service A
Analysis Period (min) 15

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	118	46	57	205	13	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	131	51	81	293	19	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	695			850		
pX, platoon unblocked					0.94	
vC, conflicting volume			182		612	157
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			182		553	157
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		96	97
cM capacity (veh/h)			1399		439	894

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	182	374	46
Volume Left	0	81	19
Volume Right	51	0	27
cSH	1700	1399	629
Volume to Capacity	0.11	0.06	0.07
Queue Length 95th (ft)	0	5	6
Control Delay (s)	0.0	2.1	11.2
Lane LOS		A	B
Approach Delay (s)	0.0	2.1	11.2
Approach LOS			B

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

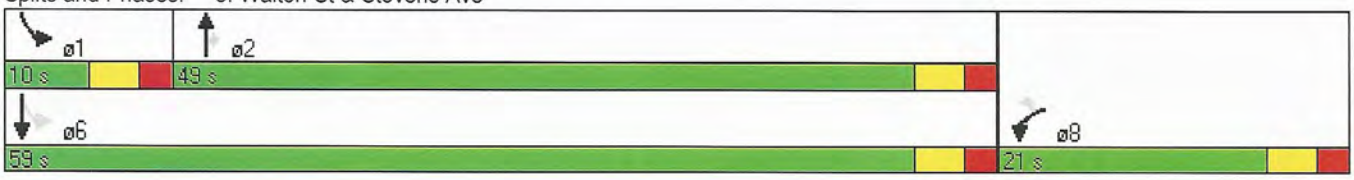
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	113	65	446	98	105	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	40		35	90	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.95		0.95	1.00	
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1599	1652	1599	1805	1668
Flt Permitted	0.950				0.308	
Satd. Flow (perm)	1756	1522	1652	1527	582	1668
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		74		53		
Link Speed (mph)	30		30			30
Link Distance (ft)	300		540			690
Travel Time (s)	6.8		12.3			15.7
Confl. Peds. (#/hr)	7	7		7	7	
Confl. Bikes (#/hr)		6		12		
Peak Hour Factor	0.88	0.88	0.89	0.89	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			3			3
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	128	74	501	110	119	560
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	74	501	110	119	560
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.18	1.00	1.00	1.18
Turning Speed (mph)	15	9		9	15	
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	9.0	21.0
Total Split (s)	21.0	21.0	49.0	49.0	10.0	59.0
Total Split (%)	26.3%	26.3%	61.3%	61.3%	12.5%	73.8%
Maximum Green (s)	16.0	16.0	44.0	44.0	5.0	54.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	11.1	11.1	26.0	26.0	29.3	32.9
Actuated g/C Ratio	0.24	0.24	0.56	0.56	0.63	0.70
v/c Ratio	0.30	0.18	0.55	0.13	0.22	0.48
Control Delay	23.3	7.8	14.0	5.7	5.1	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	7.8	14.0	5.7	5.1	7.0
LOS	C	A	B	A	A	A
Approach Delay	17.6		12.5			6.7
Approach LOS	B		B			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 46.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 49.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Walton St & Stevens Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	113	65	446	98	105	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1787	1526	1652	1536	1803	1668
Flt Permitted	0.95	1.00	1.00	1.00	0.31	1.00
Satd. Flow (perm)	1787	1526	1652	1536	584	1668
Peak-hour factor, PHF	0.88	0.88	0.89	0.89	0.88	0.88
Adj. Flow (vph)	128	74	501	110	119	560
RTOR Reduction (vph)	0	63	0	28	0	0
Lane Group Flow (vph)	128	11	501	82	119	560
Confl. Peds. (#/hr)	7	7		7	7	
Confl. Bikes (#/hr)		6		12		
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			3			3
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Actuated Green, G (s)	6.9	6.9	22.3	22.3	30.8	30.8
Effective Green, g (s)	6.9	6.9	22.3	22.3	30.8	30.8
Actuated g/C Ratio	0.14	0.14	0.47	0.47	0.65	0.65
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	258	221	772	718	467	1077
v/s Ratio Prot	c0.07		c0.30		0.02	c0.34
v/s Ratio Perm		0.01		0.05	0.15	
v/c Ratio	0.50	0.05	0.65	0.11	0.25	0.52
Uniform Delay, d1	18.8	17.6	9.7	7.1	4.4	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.1	1.9	0.1	0.3	0.4
Delay (s)	20.3	17.7	11.6	7.2	4.7	4.9
Level of Service	C	B	B	A	A	A
Approach Delay (s)	19.3		10.8			4.9
Approach LOS	B		B			A

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	47.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

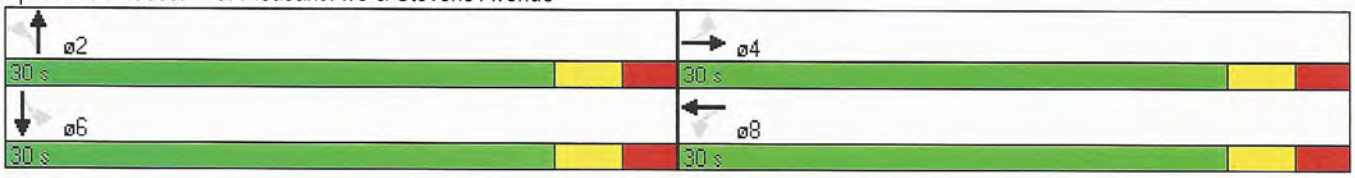
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	30	20	11	37	58	20	530	15	19	441	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.95			1.00			1.00	
Frt		0.972			0.926			0.997			0.991	
Flt Protected		0.976			0.995			0.998			0.998	
Satd. Flow (prot)	0	1764	0	0	1671	0	0	1870	0	0	1632	0
Flt Permitted		0.843			0.953			0.974			0.969	
Satd. Flow (perm)	0	1512	0	0	1595	0	0	1825	0	0	1584	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			75			3			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1219			1121			280			1491	
Travel Time (s)		27.7			25.5			6.4			33.9	
Confl. Peds. (#/hr)	10		10	20		20	4		4	10		10
Confl. Bikes (#/hr)			19			30			5			17
Peak Hour Factor	0.78	0.78	0.78	0.77	0.77	0.77	0.91	0.91	0.91	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											4	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	63	38	26	14	48	75	22	582	16	23	525	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	0	0	137	0	0	620	0	0	586	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.18	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		21.5	21.5		21.5	21.5	
Total Split (s)	30.0	30.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	24.5	24.5		24.5	24.5		24.5	24.5		24.5	24.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.5			8.5			29.0			29.0	
Actuated g/C Ratio		0.19			0.19			0.64			0.64	
v/c Ratio		0.41			0.38			0.53			0.58	
Control Delay		17.1			11.4			8.9			10.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.1			11.4			8.9			10.5	
LOS		B			B			A			B	
Approach Delay		17.1			11.4			8.9			10.5	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 45.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 10.5 Intersection LOS: B
Intersection Capacity Utilization 58.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Pleasant Ave & Stevens Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	30	20	11	37	58	20	530	15	19	441	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.98			0.94			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.97			0.93			1.00			0.99	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1746			1636			1870			1633	
Flt Permitted		0.84			0.95			0.97			0.97	
Satd. Flow (perm)		1509			1567			1824			1585	
Peak-hour factor, PHF	0.78	0.78	0.78	0.77	0.77	0.77	0.91	0.91	0.91	0.84	0.84	0.84
Adj. Flow (vph)	63	38	26	14	48	75	22	582	16	23	525	38
RTOR Reduction (vph)	0	22	0	0	63	0	0	1	0	0	3	0
Lane Group Flow (vph)	0	105	0	0	74	0	0	619	0	0	583	0
Confl. Peds. (#/hr)	10		10	20		20	4		4	10		10
Confl. Bikes (#/hr)			19			30			5			17
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Parking (#/hr)											4	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.4			7.4			27.9			27.9	
Effective Green, g (s)		7.4			7.4			27.9			27.9	
Actuated g/C Ratio		0.16			0.16			0.60			0.60	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		241			250			1099			955	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.05			0.34			c0.37	
v/c Ratio		0.44			0.30			0.56			0.61	
Uniform Delay, d1		17.6			17.2			5.5			5.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.3			0.7			2.1			2.9	
Delay (s)		18.8			17.8			7.6			8.7	
Level of Service		B			B			A			A	
Approach Delay (s)		18.8			17.8			7.6			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	11.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

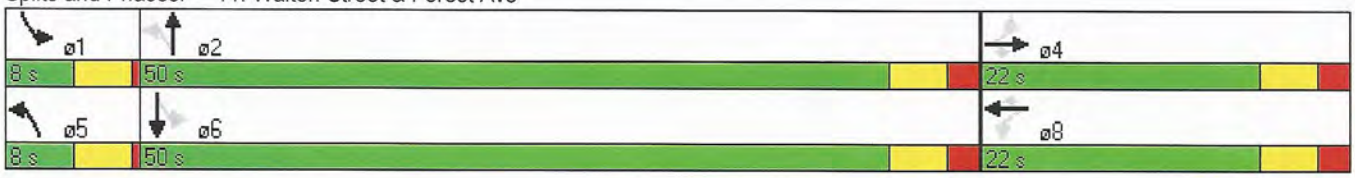
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	89	62	45	94	107	38	741	34	76	630	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		40	0		100	140		0	140		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.96		1.00	0.97					1.00	
Frt			0.850			0.850		0.993			0.993	
Flt Protected		0.990			0.984		0.950			0.950		
Satd. Flow (prot)	0	1881	1615	0	1851	1599	1787	1868	0	1752	1814	0
Flt Permitted		0.902			0.840		0.257			0.148		
Satd. Flow (perm)	0	1711	1553	0	1576	1546	483	1868	0	273	1814	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			77			134		5			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			686			1198			517	
Travel Time (s)		19.3			15.6			27.2			11.8	
Confl. Peds. (#/hr)	4		4	4		4				4		4
Confl. Bikes (#/hr)			5			2						4
Peak Hour Factor	0.81	0.81	0.81	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	27	110	77	56	118	134	40	780	36	80	663	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	137	77	0	174	134	40	816	0	80	697	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	21.5	21.5	21.5	21.5	21.5	21.5	8.0	21.5		8.0	21.5	
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	8.0	50.0	0.0	8.0	50.0	0.0
Total Split (%)	27.5%	27.5%	27.5%	27.5%	27.5%	27.5%	10.0%	62.5%	0.0%	10.0%	62.5%	0.0%
Maximum Green (s)	16.5	16.5	16.5	16.5	16.5	16.5	4.0	44.5		4.0	44.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5	4.0	4.0	5.5	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	None		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		12.4	12.4		12.4	12.4	37.8	33.3		38.7	35.0	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.59	0.52		0.61	0.55	
v/c Ratio		0.41	0.21		0.56	0.33	0.11	0.83		0.30	0.70	
Control Delay		30.4	8.7		34.7	8.1	4.9	22.3		7.3	15.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		30.4	8.7		34.7	8.1	4.9	22.3		7.3	15.7	
LOS		C	A		C	A	A	C		A	B	
Approach Delay		22.6			23.2			21.5			14.8	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 63.7
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 19.4 Intersection LOS: B
Intersection Capacity Utilization 71.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 11: Walton Street & Forest Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	89	62	45	94	107	38	741	34	76	630	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5		5.5	5.5	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1879	1555		1847	1548	1787	1869		1752	1814	
Flt Permitted		0.90	1.00		0.84	1.00	0.26	1.00		0.15	1.00	
Satd. Flow (perm)		1711	1555		1577	1548	484	1869		273	1814	
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	27	110	77	56	118	134	40	780	36	80	663	34
RTOR Reduction (vph)	0	0	62	0	0	108	0	2	0	0	2	0
Lane Group Flow (vph)	0	137	15	0	174	26	40	814	0	80	695	0
Confl. Peds. (#/hr)	4		4	4		4				4		4
Confl. Bikes (#/hr)			5			2						4
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		12.4	12.4		12.4	12.4	36.1	34.1		37.9	35.0	
Effective Green, g (s)		12.4	12.4		12.4	12.4	36.1	34.1		37.9	35.0	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.56	0.53		0.59	0.54	
Clearance Time (s)		5.5	5.5		5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		329	299		304	298	312	990		227	986	
v/s Ratio Prot							0.00	c0.44		c0.02	0.38	
v/s Ratio Perm		0.08	0.01		c0.11	0.02	0.07			0.19		
v/c Ratio		0.42	0.05		0.57	0.09	0.13	0.82		0.35	0.70	
Uniform Delay, d1		22.8	21.2		23.6	21.3	7.6	12.6		9.4	10.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9	0.1		2.6	0.1	0.2	5.6		0.9	2.3	
Delay (s)		23.7	21.3		26.2	21.5	7.8	18.2		10.4	13.2	
Level of Service		C	C		C	C	A	B		B	B	
Approach Delay (s)		22.8			24.1			17.7			12.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

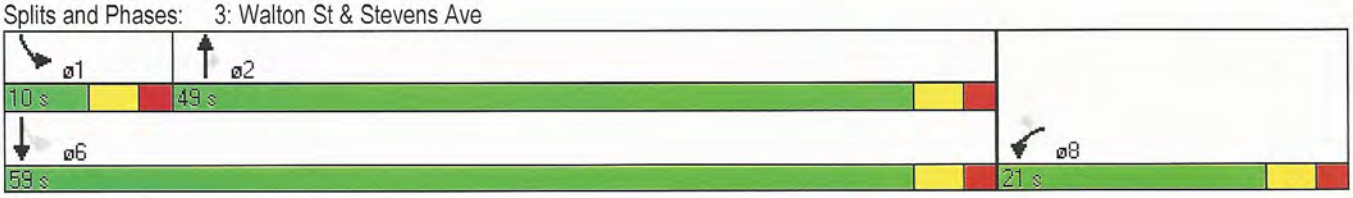
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	119	68	471	103	111	522
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	40		35	90	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.95		0.95	1.00	
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1599	1652	1599	1805	1668
Flt Permitted	0.950				0.295	
Satd. Flow (perm)	1756	1522	1652	1527	558	1668
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		77		53		
Link Speed (mph)	30		30			30
Link Distance (ft)	300		540			690
Travel Time (s)	6.8		12.3			15.7
Confl. Peds. (#/hr)	7	7		7	7	
Confl. Bikes (#/hr)		6		12		
Peak Hour Factor	0.88	0.88	0.89	0.89	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			3			3
Adj. Flow (vph)	135	77	529	116	126	593
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	77	529	116	126	593
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.18	1.00	1.00	1.18
Turning Speed (mph)	15	9		9	15	
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	9.0	21.0
Total Split (s)	21.0	21.0	49.0	49.0	10.0	59.0
Total Split (%)	26.3%	26.3%	61.3%	61.3%	12.5%	73.8%
Maximum Green (s)	16.0	16.0	44.0	44.0	5.0	54.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	11.6	11.6	27.8	27.8	31.0	34.8
Actuated g/C Ratio	0.24	0.24	0.57	0.57	0.63	0.71
v/c Ratio	0.32	0.18	0.56	0.13	0.23	0.50
Control Delay	24.6	8.0	14.3	5.8	5.3	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	8.0	14.3	5.8	5.3	7.3
LOS	C	A	B	A	A	A
Approach Delay	18.6		12.7			7.0
Approach LOS	B		B			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 49
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 51.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Walton St & Stevens Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	119	68	471	103	111	522
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1787	1526	1652	1535	1803	1668
Flt Permitted	0.95	1.00	1.00	1.00	0.29	1.00
Satd. Flow (perm)	1787	1526	1652	1535	560	1668
Peak-hour factor, PHF	0.88	0.88	0.89	0.89	0.88	0.88
Adj. Flow (vph)	135	77	529	116	126	593
RTOR Reduction (vph)	0	66	0	27	0	0
Lane Group Flow (vph)	135	11	529	89	126	593
Confl. Peds. (#/hr)	7	7		7	7	
Confl. Bikes (#/hr)		6		12		
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			3			3
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Actuated Green, G (s)	7.3	7.3	24.1	24.1	32.6	32.6
Effective Green, g (s)	7.3	7.3	24.1	24.1	32.6	32.6
Actuated g/C Ratio	0.15	0.15	0.48	0.48	0.65	0.65
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	223	798	741	453	1090
v/s Ratio Prot	c0.08		c0.32		0.02	c0.36
v/s Ratio Perm		0.01		0.06	0.16	
v/c Ratio	0.52	0.05	0.66	0.12	0.28	0.54
Uniform Delay, d1	19.7	18.3	9.8	7.1	4.6	4.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.1	2.1	0.1	0.3	0.6
Delay (s)	21.4	18.4	11.9	7.2	4.9	5.2
Level of Service	C	B	B	A	A	A
Approach Delay (s)	20.3		11.0			5.2
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	49.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

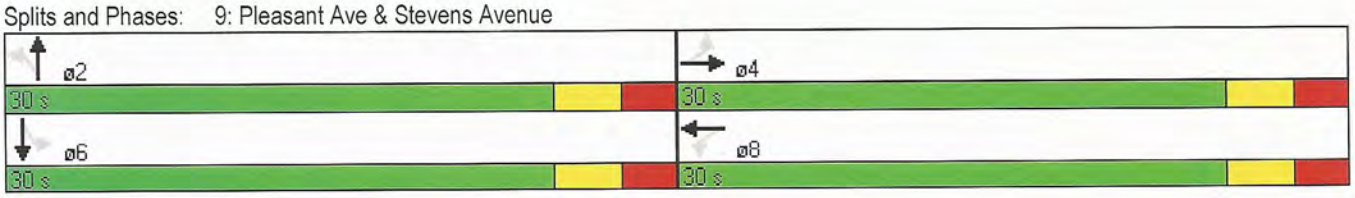
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	32	21	12	39	61	21	560	16	20	467	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.95			1.00			1.00	
Frt		0.973			0.927			0.996			0.991	
Flt Protected		0.976			0.995			0.998			0.998	
Satd. Flow (prot)	0	1766	0	0	1674	0	0	1868	0	0	1632	0
Flt Permitted		0.844			0.951			0.972			0.967	
Satd. Flow (perm)	0	1516	0	0	1594	0	0	1819	0	0	1581	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			79			3			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1219			1121			280			1491	
Travel Time (s)		27.7			25.5			6.4			33.9	
Confl. Peds. (#/hr)	10		10	20		20	4		4	10		10
Confl. Bikes (#/hr)			19			30			5			17
Peak Hour Factor	0.78	0.78	0.78	0.77	0.77	0.77	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Parking (#/hr)											4	
Adj. Flow (vph)	65	41	27	16	51	79	23	615	18	24	556	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	146	0	0	656	0	0	620	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.18	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		21.5	21.5		21.5	21.5	
Total Split (s)	30.0	30.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	24.5	24.5		24.5	24.5		24.5	24.5		24.5	24.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.7			8.7			28.8			28.8	
Actuated g/C Ratio		0.19			0.19			0.64			0.64	
v/c Ratio		0.42			0.39			0.57			0.61	
Control Delay		17.2			11.4			9.8			12.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.2			11.4			9.8			12.0	
LOS		B			B			A			B	
Approach Delay		17.2			11.4			9.8			12.0	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 45.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.4 Intersection LOS: B
Intersection Capacity Utilization 60.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Pleasant Ave & Stevens Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	32	21	12	39	61	21	560	16	20	467	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.98			0.94			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.97			0.93			1.00			0.99	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1748			1639			1869			1633	
Flt Permitted		0.84			0.95			0.97			0.97	
Satd. Flow (perm)		1512			1567			1820			1583	
Peak-hour factor, PHF	0.78	0.78	0.78	0.77	0.77	0.77	0.91	0.91	0.91	0.84	0.84	0.84
Adj. Flow (vph)	65	41	27	16	51	79	23	615	18	24	556	40
RTOR Reduction (vph)	0	22	0	0	66	0	0	1	0	0	3	0
Lane Group Flow (vph)	0	111	0	0	80	0	0	655	0	0	617	0
Confl. Peds. (#/hr)	10		10	20		20	4		4	10		10
Confl. Bikes (#/hr)			19			30			5			17
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Parking (#/hr)											4	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.6			7.6			27.7			27.7	
Effective Green, g (s)		7.6			7.6			27.7			27.7	
Actuated g/C Ratio		0.16			0.16			0.60			0.60	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		248			257			1089			947	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.05			0.36			c0.39	
v/c Ratio		0.45			0.31			0.60			0.65	
Uniform Delay, d1		17.5			17.0			5.8			6.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.3			0.7			2.5			3.5	
Delay (s)		18.8			17.7			8.3			9.6	
Level of Service		B			B			A			A	
Approach Delay (s)		18.8			17.7			8.3			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	11.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

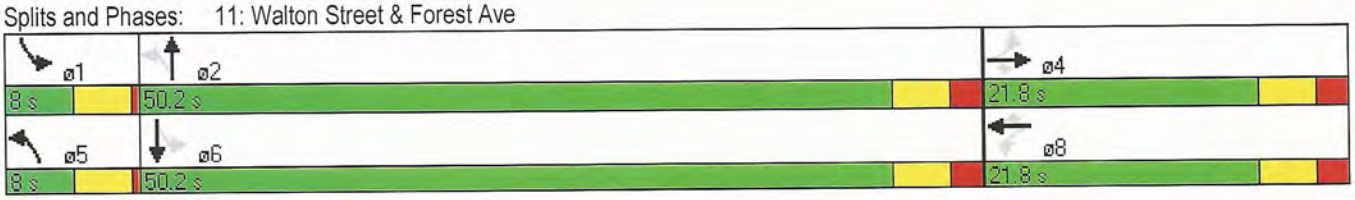
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	93	66	47	99	112	40	779	36	80	664	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		40	0		100	140		0	140		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.96		1.00	0.97					1.00	
Frt			0.850			0.850		0.993			0.993	
Flt Protected		0.990			0.984		0.950			0.950		
Satd. Flow (prot)	0	1881	1615	0	1851	1599	1787	1868	0	1752	1814	0
Flt Permitted		0.900			0.838		0.234			0.126		
Satd. Flow (perm)	0	1708	1552	0	1572	1546	440	1868	0	232	1814	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81			140		5			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			686			1198			517	
Travel Time (s)		19.3			15.6			27.2			11.8	
Confl. Peds. (#/hr)	4		4	4		4				4		4
Confl. Bikes (#/hr)			5			2						4
Peak Hour Factor	0.81	0.81	0.81	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Adj. Flow (vph)	28	115	81	59	124	140	42	820	38	84	699	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	81	0	183	140	42	858	0	84	735	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	21.5	21.5	21.5	21.5	21.5	21.5	8.0	21.5		8.0	21.5	
Total Split (s)	21.8	21.8	21.8	21.8	21.8	21.8	8.0	50.2	0.0	8.0	50.2	0.0
Total Split (%)	27.3%	27.3%	27.3%	27.3%	27.3%	27.3%	10.0%	62.8%	0.0%	10.0%	62.8%	0.0%
Maximum Green (s)	16.3	16.3	16.3	16.3	16.3	16.3	4.0	44.7		4.0	44.7	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5	4.0	4.0	5.5	4.0
Lead/Lag							Lead	Lag		Lead	Lag	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	None		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		12.8	12.8		12.8	12.8	39.7	35.2		40.6	36.9	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.60	0.53		0.62	0.56	
v/c Ratio		0.43	0.22		0.60	0.34	0.12	0.86		0.34	0.72	
Control Delay		31.4	8.7		36.6	8.1	5.0	24.0		8.3	16.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		31.4	8.7		36.6	8.1	5.0	24.0		8.3	16.4	
LOS		C	A		D	A	A	C		A	B	
Approach Delay		23.2			24.3			23.1			15.6	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 65.8
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 74.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 11: Walton Street & Forest Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	93	66	47	99	112	40	779	36	80	664	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5		5.5	5.5	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1879	1554		1847	1548	1787	1869		1752	1814	
Flt Permitted		0.90	1.00		0.84	1.00	0.23	1.00		0.13	1.00	
Satd. Flow (perm)		1708	1554		1573	1548	441	1869		233	1814	
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	115	81	59	124	140	42	820	38	84	699	36
RTOR Reduction (vph)	0	0	65	0	0	113	0	2	0	0	2	0
Lane Group Flow (vph)	0	143	16	0	183	27	42	856	0	84	733	0
Confl. Peds. (#/hr)	4		4	4		4				4		4
Confl. Bikes (#/hr)			5			2						4
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		12.8	12.8		12.8	12.8	38.0	36.0		39.8	36.9	
Effective Green, g (s)		12.8	12.8		12.8	12.8	38.0	36.0		39.8	36.9	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.57	0.54		0.60	0.55	
Clearance Time (s)		5.5	5.5		5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		328	298		302	297	292	1009		205	1004	
v/s Ratio Prot							0.00	c0.46		c0.02	0.40	
v/s Ratio Perm		0.08	0.01		c0.12	0.02	0.08			0.23		
v/c Ratio		0.44	0.05		0.61	0.09	0.14	0.85		0.41	0.73	
Uniform Delay, d1		23.8	22.0		24.6	22.2	7.9	13.0		10.4	11.2	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9	0.1		3.4	0.1	0.2	6.7		1.3	2.7	
Delay (s)		24.7	22.1		28.1	22.3	8.1	19.8		11.7	13.9	
Level of Service		C	C		C	C	A	B		B	B	
Approach Delay (s)		23.7			25.6			19.2			13.6	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	66.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	3	575	0	0	650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1627	0	1881	0	0	1881
Flt Permitted						
Satd. Flow (perm)	1627	0	1881	0	0	1881
Link Speed (mph)	30		30			30
Link Distance (ft)	294		230			200
Travel Time (s)	6.7		5.2			4.5
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	3	653	0	0	739
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	653	0	0	739
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 44.2% ICU Level of Service A
Analysis Period (min) 15

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	3	575	0	0	650
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	3	653	0	0	739
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						740
pX, platoon unblocked	0.86					
vC, conflicting volume	1392	653			653	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1374	653			653	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	138	469			938	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	3	653	739
Volume Left	0	0	0
Volume Right	3	0	0
cSH	469	1700	1700
Volume to Capacity	0.01	0.38	0.43
Queue Length 95th (ft)	1	0	0
Control Delay (s)	12.7	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

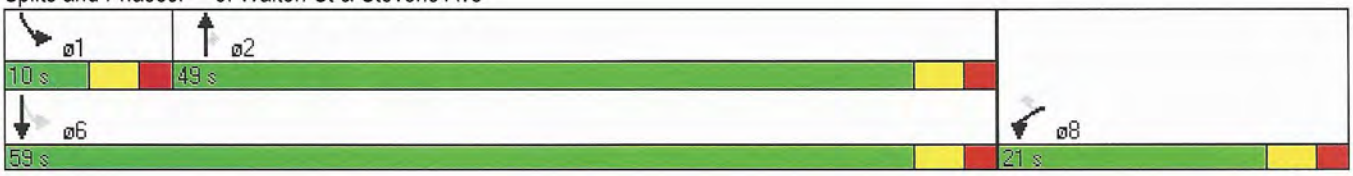
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	126	71	474	104	116	524
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	40		35	90	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.95		0.95	1.00	
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1599	1652	1599	1805	1668
Flt Permitted	0.950				0.300	
Satd. Flow (perm)	1756	1522	1652	1527	567	1668
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		81		53		
Link Speed (mph)	30		30			30
Link Distance (ft)	300		480			690
Travel Time (s)	6.8		10.9			15.7
Confl. Peds. (#/hr)	7	7		7	7	
Confl. Bikes (#/hr)		6		12		
Peak Hour Factor	0.88	0.88	0.89	0.89	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			3			3
Adj. Flow (vph)	143	81	533	117	132	595
Shared Lane Traffic (%)						
Lane Group Flow (vph)	143	81	533	117	132	595
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.18	1.00	1.00	1.18
Turning Speed (mph)	15	9		9	15	
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	9.0	21.0
Total Split (s)	21.0	21.0	49.0	49.0	10.0	59.0
Total Split (%)	26.3%	26.3%	61.3%	61.3%	12.5%	73.8%
Maximum Green (s)	16.0	16.0	44.0	44.0	5.0	54.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	11.2	11.2	28.8	28.8	33.1	35.9
Actuated g/C Ratio	0.22	0.22	0.57	0.57	0.65	0.71
v/c Ratio	0.36	0.20	0.57	0.13	0.25	0.50
Control Delay	25.4	8.1	14.4	5.9	5.5	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	8.1	14.4	5.9	5.5	7.5
LOS	C	A	B	A	A	A
Approach Delay	19.2		12.9			7.1
Approach LOS	B		B			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 50.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 52.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Walton St & Stevens Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	126	71	474	104	116	524
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1787	1525	1652	1535	1803	1668
Flt Permitted	0.95	1.00	1.00	1.00	0.30	1.00
Satd. Flow (perm)	1787	1525	1652	1535	570	1668
Peak-hour factor, PHF	0.88	0.88	0.89	0.89	0.88	0.88
Adj. Flow (vph)	143	81	533	117	132	595
RTOR Reduction (vph)	0	69	0	27	0	0
Lane Group Flow (vph)	143	12	533	90	132	595
Confl. Peds. (#/hr)	7	7		7	7	
Confl. Bikes (#/hr)		6		12		
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	2	0	0	2
Parking (#/hr)			3			3
Turn Type		Perm		Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Actuated Green, G (s)	7.6	7.6	26.0	26.0	34.6	34.6
Effective Green, g (s)	7.6	7.6	26.0	26.0	34.6	34.6
Actuated g/C Ratio	0.15	0.15	0.50	0.50	0.66	0.66
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	260	222	823	765	463	1106
v/s Ratio Prot	c0.08		c0.32		0.02	c0.36
v/s Ratio Perm		0.01		0.06	0.17	
v/c Ratio	0.55	0.05	0.65	0.12	0.29	0.54
Uniform Delay, d1	20.7	19.2	9.7	7.0	4.6	4.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	0.1	1.8	0.1	0.3	0.5
Delay (s)	23.2	19.3	11.5	7.1	4.9	5.1
Level of Service	C	B	B	A	A	A
Approach Delay (s)	21.8		10.7			5.1
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

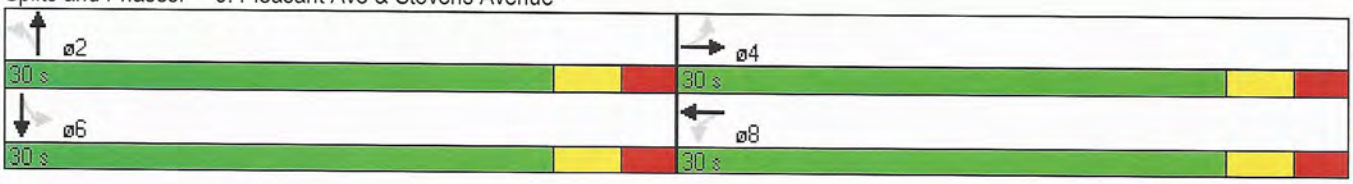
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	32	21	12	39	61	21	568	16	20	467	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.95			1.00			1.00	
Frt		0.973			0.927			0.996			0.991	
Flt Protected		0.976			0.995			0.998			0.998	
Satd. Flow (prot)	0	1766	0	0	1674	0	0	1868	0	0	1632	0
Flt Permitted		0.845			0.951			0.973			0.967	
Satd. Flow (perm)	0	1518	0	0	1594	0	0	1821	0	0	1581	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			79			3			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1219			1121			280			1261	
Travel Time (s)		27.7			25.5			6.4			28.7	
Confl. Peds. (#/hr)	10		10	20		20	4		4	10		10
Confl. Bikes (#/hr)			19			30			5			17
Peak Hour Factor	0.78	0.78	0.78	0.77	0.77	0.77	0.91	0.91	0.91	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Parking (#/hr)											4	
Adj. Flow (vph)	65	41	27	16	51	79	23	624	18	24	556	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	146	0	0	665	0	0	620	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.18	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		21.5	21.5		21.5	21.5	
Total Split (s)	30.0	30.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	24.5	24.5		24.5	24.5		24.5	24.5		24.5	24.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.6			8.6			28.8			28.8	
Actuated g/C Ratio		0.19			0.19			0.64			0.64	
v/c Ratio		0.43			0.40			0.57			0.61	
Control Delay		17.3			11.5			9.9			11.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.3			11.5			9.9			11.9	
LOS		B			B			A			B	
Approach Delay		17.3			11.5			9.9			11.9	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 45.1
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 61.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Pleasant Ave & Stevens Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	32	21	12	39	61	21	568	16	20	467	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.98			0.94			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.97			0.93			1.00			0.99	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1748			1639			1869			1633	
Flt Permitted		0.84			0.95			0.97			0.97	
Satd. Flow (perm)		1513			1567			1821			1582	
Peak-hour factor, PHF	0.78	0.78	0.78	0.77	0.77	0.77	0.91	0.91	0.91	0.84	0.84	0.84
Adj. Flow (vph)	65	41	27	16	51	79	23	624	18	24	556	40
RTOR Reduction (vph)	0	22	0	0	66	0	0	1	0	0	3	0
Lane Group Flow (vph)	0	111	0	0	80	0	0	664	0	0	617	0
Confl. Peds. (#/hr)	10		10	20		20	4		4	10		10
Confl. Bikes (#/hr)			19			30			5			17
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Parking (#/hr)											4	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.5			7.5			27.7			27.7	
Effective Green, g (s)		7.5			7.5			27.7			27.7	
Actuated g/C Ratio		0.16			0.16			0.60			0.60	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		246			254			1092			949	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.05			0.36			c0.39	
v/c Ratio		0.45			0.31			0.61			0.65	
Uniform Delay, d1		17.5			17.1			5.8			6.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.3			0.7			2.5			3.5	
Delay (s)		18.8			17.8			8.3			9.5	
Level of Service		B			B			A			A	
Approach Delay (s)		18.8			17.8			8.3			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	46.2	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
11: Walton Street & Forest Ave

3/12/2016

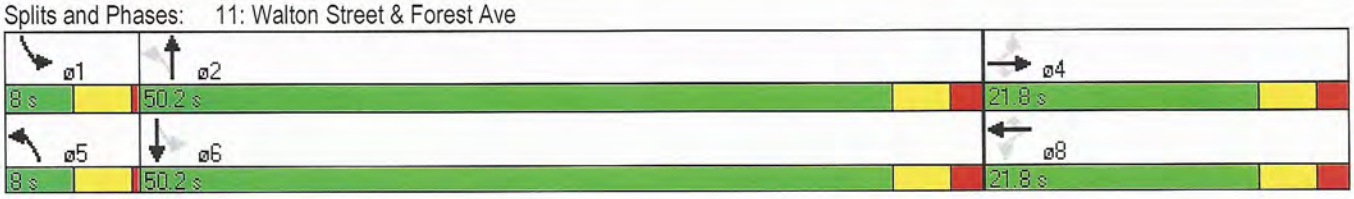
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	101	72	47	109	112	44	779	36	80	664	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		40	0		100	140		0	140		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.96		1.00	0.97					1.00	
Frt			0.850			0.850		0.993			0.992	
Flt Protected		0.990			0.985		0.950			0.950		
Satd. Flow (prot)	0	1881	1615	0	1853	1599	1787	1868	0	1752	1812	0
Flt Permitted		0.894			0.842		0.230			0.126		
Satd. Flow (perm)	0	1696	1552	0	1580	1546	433	1868	0	232	1812	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			140		5			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			686			1198			517	
Travel Time (s)		19.3			15.6			27.2			11.8	
Confl. Peds. (#/hr)	4		4	4		4				4		4
Confl. Bikes (#/hr)			5			2						4
Peak Hour Factor	0.81	0.81	0.81	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Adj. Flow (vph)	31	125	89	59	136	140	46	820	38	84	699	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	89	0	195	140	46	858	0	84	739	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	21.5	21.5	21.5	21.5	21.5	21.5	8.0	21.5		8.0	21.5	
Total Split (s)	21.8	21.8	21.8	21.8	21.8	21.8	8.0	50.2	0.0	8.0	50.2	0.0
Total Split (%)	27.3%	27.3%	27.3%	27.3%	27.3%	27.3%	10.0%	62.8%	0.0%	10.0%	62.8%	0.0%
Maximum Green (s)	16.3	16.3	16.3	16.3	16.3	16.3	4.0	44.7		4.0	44.7	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5	4.0	4.0	5.5	4.0
Lead/Lag							Lead	Lag		Lead	Lag	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	None		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		13.1	13.1		13.1	13.1	40.0	35.4		40.8	37.1	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.60	0.53		0.62	0.56	
v/c Ratio		0.47	0.24		0.62	0.34	0.13	0.86		0.35	0.73	
Control Delay		32.2	9.4		37.5	8.1	5.1	24.2		8.4	16.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		32.2	9.4		37.5	8.1	5.1	24.2		8.4	16.7	
LOS		C	A		D	A	A	C		A	B	
Approach Delay		23.9			25.2			23.2			15.8	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 66.3
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 21.0 Intersection LOS: C
Intersection Capacity Utilization 75.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 11: Walton Street & Forest Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	101	72	47	109	112	44	779	36	80	664	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5		5.5	5.5	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1879	1554		1849	1548	1787	1869		1752	1812	
Flt Permitted		0.89	1.00		0.84	1.00	0.23	1.00		0.13	1.00	
Satd. Flow (perm)		1697	1554		1580	1548	433	1869		232	1812	
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	125	89	59	136	140	46	820	38	84	699	40
RTOR Reduction (vph)	0	0	68	0	0	113	0	2	0	0	3	0
Lane Group Flow (vph)	0	156	21	0	195	27	46	856	0	84	736	0
Confl. Peds. (#/hr)	4		4	4		4				4		4
Confl. Bikes (#/hr)			5			2						4
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		13.1	13.1		13.1	13.1	38.3	36.3		40.1	37.2	
Effective Green, g (s)		13.1	13.1		13.1	13.1	38.3	36.3		40.1	37.2	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.57	0.54		0.60	0.55	
Clearance Time (s)		5.5	5.5		5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		330	302		308	301	287	1008		204	1002	
v/s Ratio Prot							0.00	c0.46		c0.02	0.41	
v/s Ratio Perm		0.09	0.01		c0.12	0.02	0.09			0.23		
v/c Ratio		0.47	0.07		0.63	0.09	0.16	0.85		0.41	0.73	
Uniform Delay, d1		24.0	22.1		24.9	22.2	8.1	13.2		10.6	11.3	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.1	0.1		4.2	0.1	0.3	6.8		1.4	2.8	
Delay (s)		25.1	22.2		29.1	22.3	8.4	20.0		11.9	14.2	
Level of Service		C	C		C	C	A	B		B	B	
Approach Delay (s)		24.1			26.3			19.4			13.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	67.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	226	30	33	138	11	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984				0.916	
Flt Protected				0.990	0.982	
Satd. Flow (prot)	1833	0	0	1862	1692	0
Flt Permitted				0.990	0.982	
Satd. Flow (perm)	1833	0	0	1862	1692	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	100			850	222	
Travel Time (s)	2.3			19.3	5.0	
Peak Hour Factor	0.92	0.92	0.89	0.89	0.75	0.75
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Adj. Flow (vph)	246	33	37	155	15	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	0	0	192	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 36.1% ICU Level of Service A
Analysis Period (min) 15

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	226	30	33	138	11	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.89	0.89	0.75	0.75
Hourly flow rate (vph)	246	33	37	155	15	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	695			850		
pX, platoon unblocked						
vC, conflicting volume			278		491	262
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			278		491	262
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		97	97
cM capacity (veh/h)			1290		523	779

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	278	192	40
Volume Left	0	37	15
Volume Right	33	0	25
cSH	1700	1290	660
Volume to Capacity	0.16	0.03	0.06
Queue Length 95th (ft)	0	2	5
Control Delay (s)	0.0	1.7	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	1.7	10.8
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	214	0	0	149	27	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.923	
Flt Protected					0.979	
Satd. Flow (prot)	1881	0	0	1881	1700	0
Flt Permitted					0.979	
Satd. Flow (perm)	1881	0	0	1881	1700	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			235	234	
Travel Time (s)	6.8			5.3	5.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.75	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	240	0	0	167	36	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	0	0	167	84	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 21.6% ICU Level of Service A
Analysis Period (min) 15

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	214	0	0	149	27	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.75	0.75
Hourly flow rate (vph)	240	0	0	167	36	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	300			1245		
pX, platoon unblocked						
vC, conflicting volume			240		408	240
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			240		408	240
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	94
cM capacity (veh/h)			1332		601	801

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	240	167	84
Volume Left	0	0	36
Volume Right	0	0	48
cSH	1700	1700	701
Volume to Capacity	0.14	0.10	0.12
Queue Length 95th (ft)	0	0	10
Control Delay (s)	0.0	0.0	10.8
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☐ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Stevens_Walton

REPORT PARAMETERS

Year 2012, Start Month 1 through Year 2014 End Month: 12

Route: **3200987**	Start Node: **12842** End Node: **16860**	Start Offset: **0** End Offset: **0**	☐ **Exclude First Node** ☐ **Exclude Last Node**
Route: **0560678**	Start Node: **13190** End Node: **16870**	Start Offset: **0** End Offset: **0**	☑ **Exclude First Node** ☐ **Exclude Last Node**
Route: **3209381**	Start Node: **16870** End Node: **66108**	Start Offset: **0** End Offset: **0**	☑ **Exclude First Node** ☑ **Exclude Last Node**

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Nodes															
Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF	
12842	3200987 - 0.29	Int of PLEASANT AV STEVENS AV	9	4	0	0	0	1	3	25.0	4.589	0.29	1.20	0.00	0.24
												Statewide Crash Rate:	0.67		
13166	3200987 - 0.33	Int of BRENTWOOD ST STEVENS AV	2	5	0	0	0	1	4	20.0	4.406	0.38	0.37	1.03	—
												Statewide Crash Rate:	0.14		
12848	3200987 - 0.36	Int of CLINTON ST, STEVENS AV	2	4	0	0	0	1	3	25.0	4.140	0.32	0.37	0.00	0.86
												Statewide Crash Rate:	0.14		
13185	3200987 - 0.41	Int of HARTLEY ST STEVENS AV	2	0	0	0	0	0	0	0.0	4.229	0.00	0.37	0.00	
												Statewide Crash Rate:	0.14		
13183	3200987 - 0.46	Int of PERCIVAL ST STEVENS AV	2	0	0	0	0	0	0	0.0	4.218	0.00	0.37	0.00	
												Statewide Crash Rate:	0.14		
13182	3200987 - 0.49	Int of CROSBY ST STEVENS AV	2	2	0	0	2	0	0	100.0	4.335	0.15	0.37	0.00	0.41
												Statewide Crash Rate:	0.14		
13181	3200987 - 0.54	Int of NEW ST, STEVENS AV	2	1	0	0	0	0	1	0.0	4.433	0.08	0.37	0.00	0.22
												Statewide Crash Rate:	0.14		
13190	3200987 - 0.75	Int of STEVENS AV, WALTON ST	9	4	0	0	0	0	4	0.0	4.754	0.28	1.19	0.00	0.24
												Statewide Crash Rate:	0.67		
10883	3200987 - 0.87	Int of DINGLEY CT, WALTON ST	2	0	0	0	0	0	0	0.0	1.115	0.00	0.52	0.00	
												Statewide Crash Rate:	0.14		
12106	3200987 - 0.90	Int of MORGAN CT, WALTON ST	2	0	0	0	0	0	0	0.0	1.182	0.00	0.51	0.00	
												Statewide Crash Rate:	0.14		
13189	3200987 - 0.95	Int of PERSHING ST, WALTON ST	2	0	0	0	0	0	0	0.0	1.217	0.00	0.51	0.00	
												Statewide Crash Rate:	0.14		
16860	3200987 - 1.01	Int of FOREST AV WALTON ST	9	34	0	1	2	12	19	44.1	9.401	1.21	1.05	1.15	—
												Statewide Crash Rate:	0.67		
13192	0560678 - 0.05	Int of ST JOSEPH ST, STEVENS AV	2	3	0	0	0	0	3	0.0	4.094	0.24	0.37	0.00	0.65
												Statewide Crash Rate:	0.14		
13194	0560678 - 0.13	Int of ELMWOOD STEVENS AV	2	1	0	0	0	1	0	100.0	4.103	0.08	0.37	0.00	0.22
												Statewide Crash Rate:	0.14		
P13196	0560678 - 0.19	Int of STEVENS AV WAVERLY ST	2	6	0	0	0	1	5	16.7	4.111	0.49	0.37	1.30	—
												Statewide Crash Rate:	0.14		
A13198	0560678 - 0.21	Int of COLLEGE ST STEVENS AV	2	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00	
												Statewide Crash Rate:	0.14		
13199	0560678 - 0.26	Int of POLAND ST STEVENS AV	2	0	0	0	0	0	0	0.0	3.854	0.00	0.38	0.00	
												Statewide Crash Rate:	0.14		
13200	0560678 - 0.35	Int of ARBOR ST STEVENS AV	2	2	0	0	0	1	1	50.0	3.807	0.18	0.38	0.00	0.47
												Statewide Crash Rate:	0.14		
66108	0560678 - 0.46	Non Int STEVENS AV	2	0	0	0	0	0	0	0.0	3.745	0.00	0.38	0.00	
												Statewide Crash Rate:	0.14		
16870	0560678 - 0.49	Int of BISHOP ST FOREST AV STEVENS AV	9	31	0	0	0	9	22	29.0	13.007	0.79	0.99	0.00	0.80
												Statewide Crash Rate:	0.67		
Study Years:	3.00	**NODE TOTALS:**		97	0	1	4	27	65	33.0	84.740	0.38	0.43	0.89	

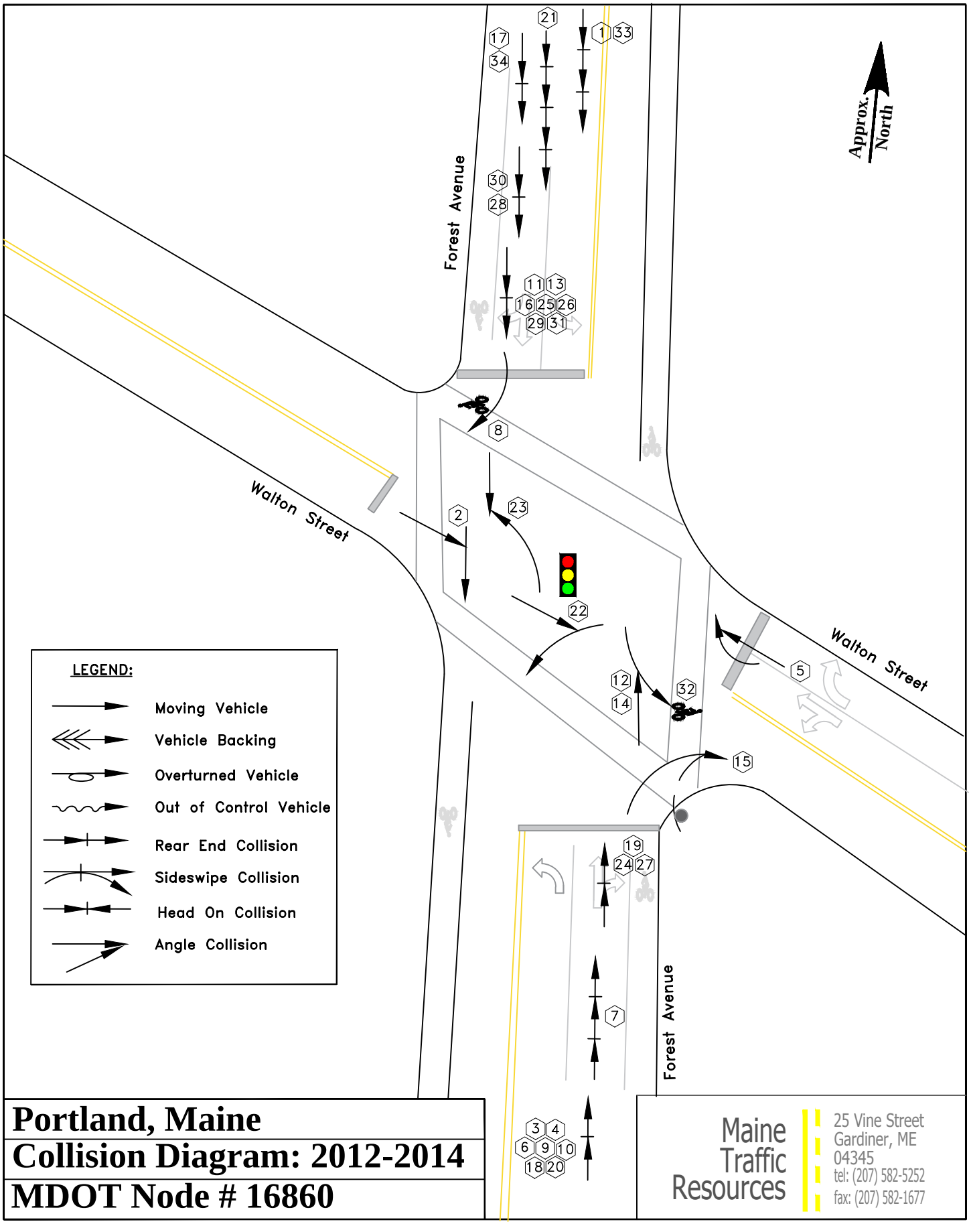
Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF	
12842	13166	3116026	0 - 0.04	3200987 - 0.29	0.04	2	2	0	0	0	0	2	0.0	0.00165	405.09	611.51	0.00	0.66
Int of PLEASANT AV STEVENS AV				RD INV 3200987											Statewide Crash Rate: 197.53			
12848	13166	3123926	0 - 0.03	3200987 - 0.33	0.03	2	1	0	0	0	0	1	0.0	0.00120	277.47	661.87	0.00	0.42
Int of CLINTON ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 197.53			
12848	13185	3122189	0 - 0.05	3200987 - 0.36	0.05	2	1	0	0	0	0	1	0.0	0.00204	163.40	578.62	0.00	0.28
Int of CLINTON ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 197.53			
13183	13185	3119201	0 - 0.05	3200987 - 0.41	0.05	2	2	0	0	1	0	1	50.0	0.00209	318.65	574.85	0.00	0.55
Int of PERCIVAL ST STEVENS AV				RD INV 3200987											Statewide Crash Rate: 197.53			
13182	13183	3130460	0 - 0.03	3200987 - 0.46	0.03	2	0	0	0	0	0	0	0.0	0.00127	0.00	652.95	0.00	
Int of CROSBY ST STEVENS AV				RD INV 3200987											Statewide Crash Rate: 197.53			
13181	13182	3123618	0 - 0.05	3200987 - 0.49	0.05	2	2	0	0	0	0	2	0.0	0.00214	311.05	571.27	0.00	0.54
Int of NEW ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 197.53			
13181	13190	187848	0 - 0.21	3200987 - 0.54	0.21	2	4	0	0	0	3	1	75.0	0.00914	145.87	397.93	0.00	0.37
Int of NEW ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 197.53			
10883	13190	184603	0 - 0.12	3200987 - 0.75	0.12	2	0	0	0	0	0	0	0.0	0.00128	0.00	1017.58	0.00	
Int of DINGLEY CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.10			
10883	12106	184602	0 - 0.03	3200987 - 0.87	0.03	2	0	0	0	0	0	0	0.0	0.00034	0.00	1398.78	0.00	
Int of DINGLEY CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.10			
12106	13189	186354	0 - 0.05	3200987 - 0.90	0.05	2	0	0	0	0	0	0	0.0	0.00060	0.00	1232.96	0.00	
Int of MORGAN CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.10			
13189	16860	187858	0 - 0.06	3200987 - 0.95	0.06	2	0	0	0	0	0	0	0.0	0.00070	0.00	1187.19	0.00	
Int of PERSHING ST, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.10			
13190	13192	187859	0 - 0.05	0560678 - 0	0.05	2	0	0	0	0	0	0	0.0	0.00205	0.00	578.18	0.00	
Int of STEVENS AV, WALTON ST				RD INV 05 60678											Statewide Crash Rate: 197.53			
13192	13194	3118519	0 - 0.08	0560678 - 0.05	0.08	2	7	0	0	0	3	4	42.9	0.00326	716.67	512.67	1.40	—
Int of ST JOSEPH ST, STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 197.53			
13194	13196	3118901	0 - 0.06	0560678 - 0.13	0.06	2	1	0	0	0	1	0	100.0	0.00242	137.76	553.58	0.00	0.25
Int of ELMWOOD STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 197.53			
13196	13198	3118816	0 - 0.02	0560678 - 0.19	0.02	2	0	0	0	0	0	0	0.0	0.00079	0.00	729.60	0.00	
Int of STEVENS AV WAVERLY ST				RD INV 05 60678											Statewide Crash Rate: 197.53			
13198	13199	3130135	0 - 0.05	0560678 - 0.21	0.05	2	0	0	0	0	0	0	0.0	0.00192	0.00	587.80	0.00	
Int of COLLEGE ST STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 197.53			
13199	13200	3123933	0 - 0.09	0560678 - 0.26	0.09	2	3	0	0	0	1	2	33.3	0.00343	291.86	505.99	0.00	0.58
Int of POLAND ST STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 197.53			
13200	66108	3129804	0 - 0.11	0560678 - 0.35	0.11	2	5	0	0	0	0	5	0.0	0.00412	404.55	482.73	0.00	0.84
Int of ARBOR ST STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 197.53			
66108	16870	3129805	0 - 0.03	0560678 - 0.46	0.03	2	0	0	0	0	0	0	0.0	0.00056	0.00	782.74	0.00	
Non Int STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 197.53			
16870	66108	3139995	0 - 0.03	3209381 - 0	0.03	2	0	0	0	0	0	0	0.0	0.00056	0.00	782.74	0.00	
Int of BISHOP ST FOREST AV STEVENS AV				RD INV 3209381											Statewide Crash Rate: 197.53			

Crash Summary I

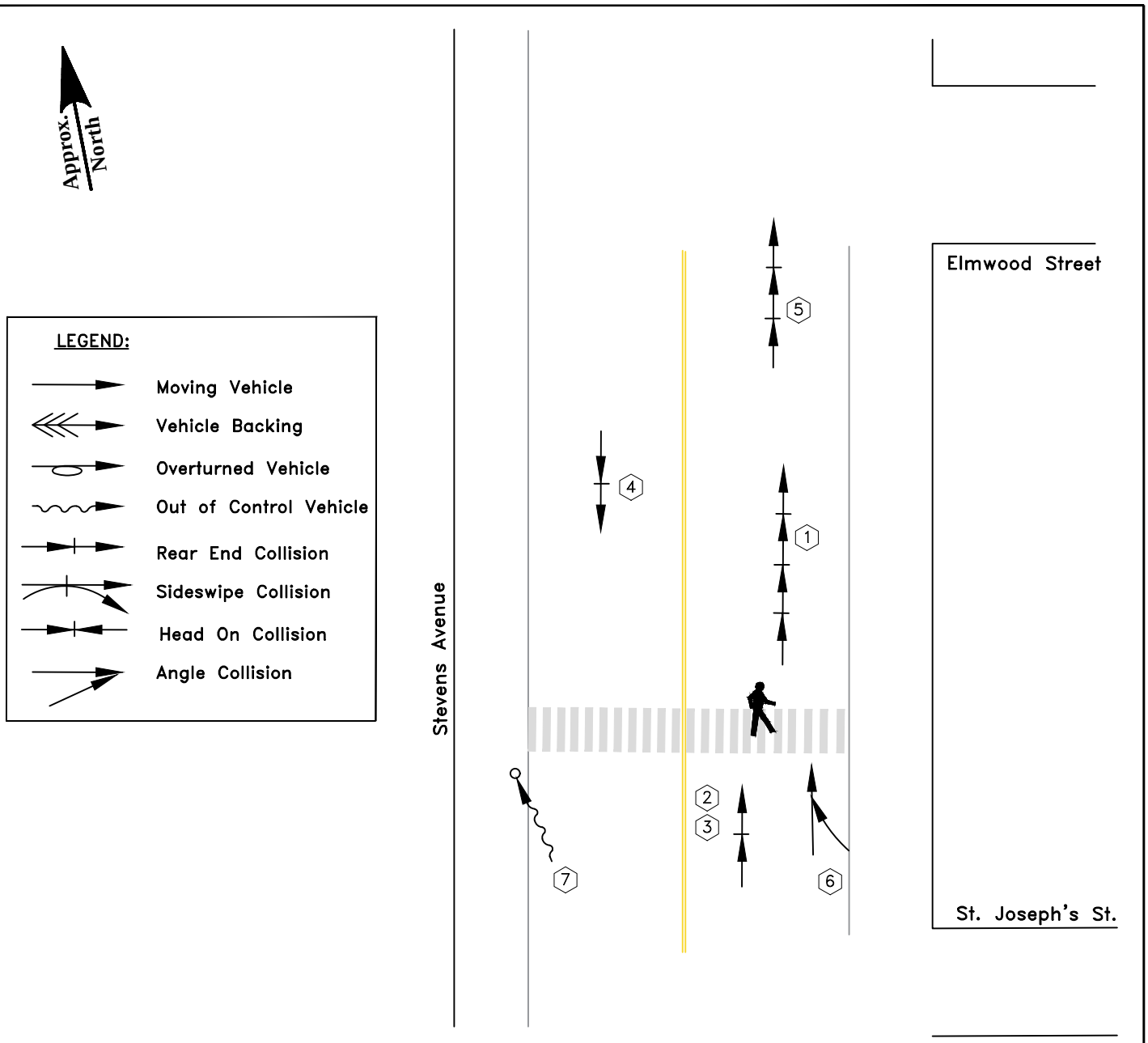
Sections																	
Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
Study Years: 3.00				Section Totals:	1.24	28	0	0	1	8	19	32.1	0.04155	224.65	310.28	0.72
				Grand Totals:	1.24	125	0	1	5	35	84	32.8	0.04155	1002.92	434.80	2.31


Approx. North
Forest Avenue
Walton Street
Walton Street
Forest Avenue
LEGEND:
Moving Vehicle
Vehicle Backing
Overturned Vehicle
Out of Control Vehicle
Rear End Collision
Sideswipe Collision
Head On Collision
Angle Collision
Portland, Maine
Collision Diagram: 2012-2014
MDOT Node # 16860
Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

#	DATE	TIME	CONTRIBUTING FACTOR	MDOT REPORT #
1	02/02/12	16:49	REAR END – EMOTIONAL DISTRACTION	12–00309
2	04/29/12	15:45	DISTRACTED BY CELL PHONE	12–000994
3	06/05/12	17:23	REAR END – DISTRACTED DRIVER	12–1352
4	06/18/12	15:22	REAR END – DISTRACTED BY CELL PHONE	12–1460
5	08/03/12	16:12	SIDESWIPE – WIDE TURNING TRUCK	12–001909
6	09/11/12	16:49	REAR END – DRIVER CLAIMED FAULTY BRAKES	12–2260
7	10/09/12	11:40	REAR END – FOLLOWED TOO CLOSELY	12–002537
8	12/07/12	15:18	COLLISION W/ BICYCLE – FAILED TO YIELD R.O.W	12–003118
9	12/22/12	14:40	REAR END – FOLLOWED TOO CLOSELY	12–003267
10	02/25/13	14:28	REAR END – FOLLOWED TOO CLOSELY	13–000700
11	03/19/13	08:28	REAR END – DRIVING TOO FAST FOR SNOWY CONDITIONS	13–000949
12	04/02/13	12:35	FAILED TO YIELD R.O.W	13–001078
13	05/09/13	15:55	REAR END – FOLLOWED TOO CLOSELY	13–1378
14	06/19/13	21:18	ANGLE COLLISION – UNABLE TO DETERMINE CAUSE	13–1748
15	07/19/13	02:06	TRAILER OF LARGE TRUCK UPROOTED TRAFFIC POLE	13–002049
16	07/19/13	05:45	REAR END – SUDDEN STOP – MISPLACED TEMP SIGNS	13–002050
17	07/25/13	11:59	REAR END – FOLLOWING TOO CLOSELY	13–2096
18	08/05/13	16:13	REAR END – DISTRACTED DRIVER	13–2202
19	08/20/13	17:45	REAR END – SUDDEN STOP	13–002355
20	10/03/13	11:21	REAR END – SUDDEN STOP	13–002815
21	11/16/13	12:13	REAR END – DISTRACTED DRIVER	13–3258
22	01/31/14	15:11	FAILED TO YIELD R.O.W	14–000371
23	02/09/14	14:24	FAILED TO YIELD R.O.W	14–000481
24	02/11/14	16:20	REAR END – FOLLOWED TOO CLOSELY	14–000520
25	02/17/14	09:54	REAR END – GLARE OF SUN IN EYES	14–000614
26	05/27/14	09:27	REAR END – COLLISION WITH SCHOOL BUS	14–001567
27	06/27/14	17:27	REAR END – FOLLOWED TOO CLOSELY	14–001861
28	07/26/14	13;14	REAR END – BRAKING MALFUNCTION	14–002178
29	08/15/14	23:05	REAR END	14–002393
30	08/19/14	15:44	REAR END – FOLLOWED TOO CLOSELY	14–002437
31	08/21/14	13:55	REAR END – FOLLOWED TOO CLOSELY	14–002454
32	08/25/14	17:01	COLLISION W/BICYCLE – WAVED ON BY OTHER VEHICLE	14–002508
33	08/29/14	15:28	REAR END – FOLLOWED TOO CLOSELY	14–002555
34	09/17/14	07:48	REAR END – FOLLOWED TOO CLOSELY	14–002753

Portland, Maine
Collision Diagram: 2012-2014
MDOT Node # 16860

Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677



#	DATE	TIME	CONTRIBUTING FACTOR	MDOT REPORT #
1	04/24/12	16:27	REAR END – STOPPED IN TRAFFIC	12–000958
2	08/30/12	11:39	REAR END – STOPPED FOR PEDESTRIAN – DISTRACTED	12–002143
3	09/17/12	12:10	REAR END – STOPPED FOR PEDESTRIAN IN CROSSWALK	12–002324
4	09/20/12	17:13	REAR END – IN TRAFFIC – DRIVER INATTENTION	12–002366
5	04/11/13	12:36	REAR END – STOPPED IN TRAFFIC – DRIVER INATTENTION	13–001152
6	05/21/13	15:00	SIDESWIPE – FAILURE TO YIELD LEAVING PARKING SPACE	13–001472
7	06/29/13	09:18	WENT OFF ROAD ATTEMPTING TO PASS TURNING VEHICLE	13–001850

Portland, Maine
Collision Diagram: 2012-2014
MDOT Link # 13192 - 13194

Maine Traffic Resources
25 Vine Street
Gardiner, ME
04345
tel: (207) 582-5252
fax: (207) 582-1677

605 STEVENS AVENUE

605 Stevens Ave. | Portland, Maine

MAP / BLOCK / LOT
135-X033, 136-E006001
143-F004, 144-B001

Consultants:

PROJECT MANAGER:

LICHT ENVIRONMENTAL DESIGN, LLC
35 Fran Circle
Gray, ME 04039
(207) 749-4924

LANDSCAPE ARCHITECT:

CARROLL ASSOCIATES
217 Commercial St. Suite 200
Portland, ME 04101
(207) 772-1552

CIVIL ENGINEER:

STANTEC
778 Main Street, Suite 8
South Portland, ME 04106
(207) 775-1121

ARCHITECT:

ARCHETYPE ARCHITECTS
48 Union Wharf
Portland, ME 04101
(207) 772-6022

SURVEYOR:

TITCOMB ASSOCIATES
133 Gray Road
Falmouth, ME 04105
(207) 797-9199

Master Development Plan

Owner / Applicant:

SEA COAST AT BAXTER WOODS ASSOCIATES, LLC
&
MOTHERHOUSE ASSOCIATES LP

100 COMMERCIAL STREET, SUITE 414
PORTLAND, ME 04101
207.772.7673
rlicht@securespeed.net

Index of Drawings:

G1	TITLE / COVER SHEET
C-1	BOUNDARY SURVEY
C-2	SUBDIVISION PLAT
L-1	NEIGHBORHOOD CONTEXT MAP
L-2	CONCEPTUAL SITE PLAN
L-3	CIRCULATION DIAGRAM
L-4	PHASING DIAGRAM
C-3	CONCEPT STORMWATER AND UTILITIES PLAN
A2.1	EXTERIOR ELEVATIONS
A2.2	EXTERIOR ELEVATIONS
A2.3	EXTERIOR ELEVATIONS

Plan 2

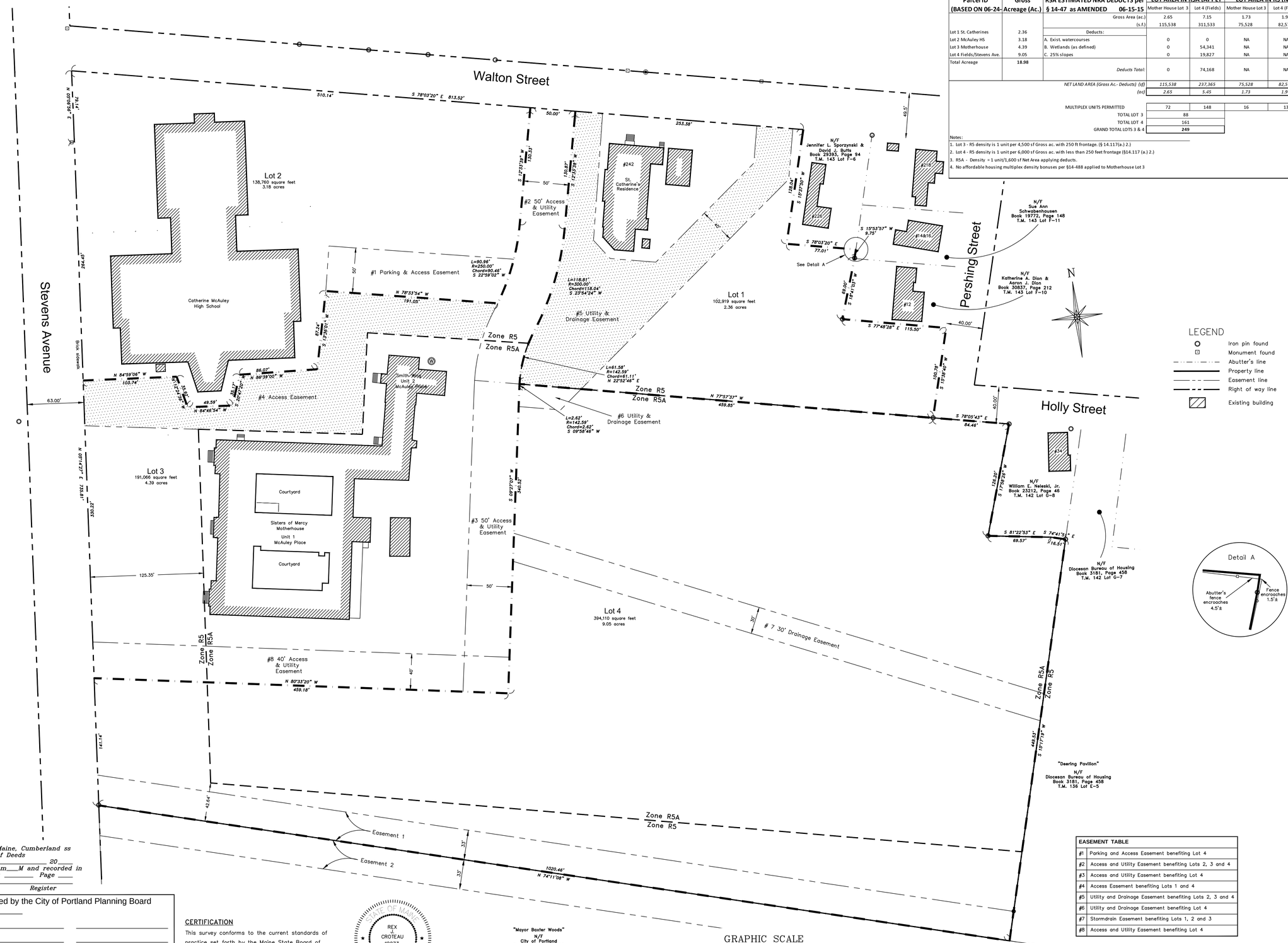
605 Stevens Avenue, Portland - Residential Density Computations **Lots 3 & 4**

Parcel ID (BASED ON 06-24-06-15)	Gross Acreage (Ac.)	R5A ESTIMATED NRA DEDUCTS per § 14-47 as AMENDED	LOT AREA IN R5A (APPLY) Mother House Lot 3	LOT AREA IN R5A (APPLY) Lot 4 (Fields)	LOT AREA IN R5 (NO) Mother House Lot 3	LOT AREA IN R5 (NO) Lot 4 (Fields)
		Gross Area (ac.)	2.65	7.15	1.73	1.90
		(s.f.)	115,538	311,533	75,528	82,577
Lot 1 St. Catherines	2.36	Deducts:				
Lot 2 McAuley HS	3.18	A. Exist. watercourses	0	0	NA	NA
Lot 3 Motherhouse	4.39	B. Wetlands (as defined)	0	54,341	NA	NA
Lot 4 Fields/Stevens Ave.	9.05	C. 25% slopes	0	19,827	NA	NA
Total Acreage	18.98	*Deducts Total:*	0	74,168	NA	NA
		NET LAND AREA (Gross Ac.- Deducts) (sf)	*115,538*	*237,365*	*75,528*	*82,577*
		(ac)	*2.65*	*5.45*	*1.73*	*1.90*
		MULTIPLEX UNITS PERMITTED	72	148	16	13
		TOTAL LOT 3	88			
		TOTAL LOT 4	161			
		GRAND TOTAL LOTS 3 & 4	**249**			

Notes:

1. Lot 3 - R5 density is 1 unit per 4,500 sf Gross ac. with 250 ft frontage. (§ 14.117(a.) 2.)
2. Lot 4 - R5 density is 1 unit per 6,000 sf Gross ac. with less than 250 feet frontage (§14.117 (a.) 2.)
3. R5A - Density = 1 unit/1,600 sf Net Area applying deducts.
4. No affordable housing multiplex density bonuses per §14-488 applied to Motherhouse Lot 3

LOCUS PLAN NOT TO SCALE



LEGEND

- Iron pin found
- Monument found
- Abutter's line
- Property line
- Easement line
- Right of way line
- Existing building

SITE DATA TABLE

STANDARD	REQUIRED R5	REQUIRED R5A
MIN. LOT AREA		
A. MULTIFAMILY	9,000 SF	2 AC
B. CONGREGATE CARE	N/A	2 AC
C. ELEM - SECONDARY SCHOOL	30,000 SF	N/A
MIN. FRONTAGE (FT)	50	50
MIN. YD. DIMENSIONS (FT.)		
A. FRONT YD.	20	25
B. REAR YD.	20	25
C. SIDE YD.	14	16
MAX. LOT COVERAGE	40%	30%
MIN. LOT WIDTH (FT.)	90	60

NOTES

1) Book and Page references are to the Cumberland County Registry of Deeds.

2) Bearings are referenced to Grid North. See Plan Reference 1.

3) This plan has been prepared and approved in accordance with the City of Portland Land Use Code, Article IV Subdivisions as a four (4)–lot subdivision. Development of Lots 1–4 shall be subject to Site Plan Review and approval by the Planning Board pursuant to Article V Site Plan Review standards. A sectional recording plat for individual or master planned development shall be prepared and approved for individual lot or section development in accordance with Article IV, § 14–495(h) requirements prior to construction on any lots.

4) No development shall occur within the 33–foot right of way easement located on the southerly property line (the Baxter Easement). Said easement shall forever remain natural, however allowing for tree and vegetation maintenance by a licensed arborist, creation and maintenance of trails for use by the public or other activities consistent with permitted uses within the adjacent Mayor Baxter Woods property.

REFERENCES

1) Site Plan done by SYTDesign Consultants, December 2000 and May 2001, not recorded.

2) Standard Boundary Survey of "Mayor Baxter Woods" by Public Works Department of the City of Portland, Maine, dated April 2001, not recorded.

3) Plan of Land Attached to the Last Will and Testament of Annie E. Ewing by E.C. Jordan, dated April 25, 1892, recorded in Plan Book 10, Page 131.

4) Plan of Topography in Portland, Maine for Mercy Hospital by E.C. Jordan, dated March 21, 1968, not recorded.

5) Plan of Maple Grove, Portland, not signed, recorded October 20, 1868 in Plan Book 2, Page 52.

6) Plan of Property made for St. Joseph's Convent and Hospital Corp. by H.I. & E.C. Jordan, dated June 28, 1977, not recorded.

7) Standard Boundary Survey made for Amy Mulkerin by Titcomb Associates, dated July 14, 1987, not recorded.

8) Standard Boundary Survey, Property of St. Joseph's Convent and Hospital, made for SYTDesign Consultants by Titcomb Associates, dated November 4, 2002.

9) Plan of Property and Existing Conditions, Catherine McAuley High School & St. Joseph's Convent made for Land Use Consultants by Land Use Consultants dated September 26, 2066.

EASEMENTS and ENCUMBRANCES

1) Property is subject to a right of way 33 feet wide as shown, reserved in deed of James P. Baxter to the Roman Catholic Bishop of Portland dated March 10, 1908 and recorded in Book 821, Page 59.

2) Property benefits from a right of way 33 feet wide adjoining the southerly sideline as shown, described in deed of James P. Baxter to the Roman Catholic Bishop of Portland dated March 10, 1908 and recorded in Book 821, Page 59.

3) No record evidence of an easement for utility poles on the property was found.

OWNERS OF RECORD

Tax Assessment Map 136, Lot E–6
St. Joseph's Convent and Hospital
Book 486, Page 322
Book 494, Page 178
Book 496, Page 71
Book 479, Page 327
Book 563, Page 275
Book 698, Page 426
Book 698, Page 427
Book 821, Page 57
Book 1649, Page 160
Book 1652, Page 357
Book 4067, Page 310

EASEMENT TABLE	
#1	Parking and Access Easement benefiting Lot 4
#2	Access and Utility Easement benefiting Lots 2, 3 and 4
#3	Access and Utility Easement benefiting Lot 4
#4	Access Easement benefiting Lots 1 and 4
#5	Utility and Drainage Easement benefiting Lots 2, 3 and 4
#6	Utility and Drainage Easement benefiting Lot 4
#7	Stormdrain Easement benefiting Lots 1, 2 and 3
#8	Access and Utility Easement benefiting Lot 4

TOTAL AREA

826,755 sq. ft./18.98 acres

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

State of Maine, Cumberland ss
Registry of Deeds
Received _____ 20____
at __h__m__M and recorded in
Plan Book _____ Page ____
Attest:_____
Register

Approved by the City of Portland Planning Board
dated _____

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

OVERALL SUBDIVISION PLAN

605 Stevens Avenue

Stevens Avenue & Walton Street — Portland, Maine

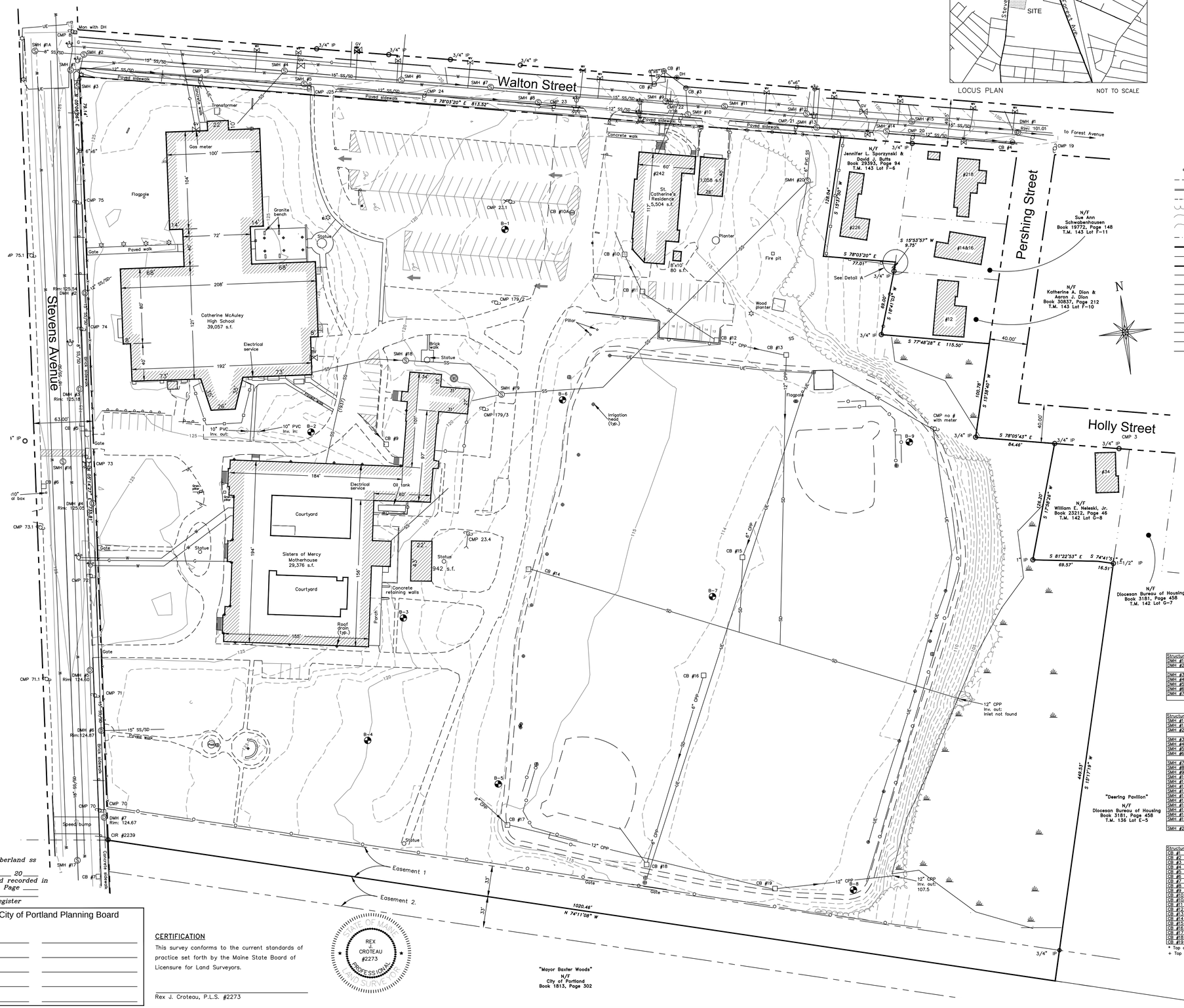
MADE FOR

Sea Coast at Baxter Woods Associates, LLC

966 Riverside Street — Portland, Maine

JOB# 202096.1	DATE: June 24, 2015	SCALE: 1" = 50'	
BOOK# 525, 578	Titcomb Associates		
202096–2006.dwg	133 Gray Road, Falmouth, Maine 04105		
FILE# 8538	(207)797-9199 www.titcombsurvey.com		

Sheet C2



LEGEND

- Iron pin found
- Monument found
- Catch basins
- Sewer manhole
- Drain manhole
- Gas valve
- Water shutoff
- Irrigation valve
- Electrical fixture
- Fire hydrant
- Utility pole
- Light pole
- Bollard
- Water valve
- Guy wire
- Ground light
- Sign
- Edge of pavement
- Curb (granite)
- Edge of gravel
- Tree line
- 1' contour
- 5' contour
- Abutter's line
- Property line
- Easement line
- Right of way line
- SD — Underground storm drain
- SS — Underground sewer
- W — Underground water
- OE — Overhead utility wires
- G — Underground gas
- T — Underground telephone
- Stockade fence
- Chain link fence
- X — Wrought iron fence
- Wetland
- Boring
- Existing building

Structure	Rim	Inv. In	Pipe	Inv. Out	Pipe
DMH #1	130.01				
DMH #2	125.54	117.8	12" C.I.	116.5	15" VCP
		116.4	18" VCP		
DMH #3	125.18	118.7	8" VCP	118.8	8" VCP
DMH #4	125.05	117.2	15" VCP	117.2	15" VCP
DMH #5	124.60	122.0	STANDING WATER		
DMH #6	124.87	118.2	15" VCP	118.3	15" VCP
DMH #7	124.67	119.8	TOP OF 12" VCP		THRU
				118.4	15" CPP

Structure	Rim	Inv. In	Pipe	Inv. Out	Pipe
SMH #1	125.64	117.1	8" VCP	117.0	8" VCP
SMH #1A	UNABLE TO OPEN				
SMH #2	125.88	116.0	8" VCP	115.5	8" VCP
		115.6	8" VCP		
SMH #3	126.11	115.7	15" VCP	115.7	15" VCP
SMH #4	122.50				
SMH #5	121.55				
SMH #6	120.75	112.3	12" VCP	112.3	15" VCP
		112.3	15" VCP		
SMH #7	119.43	111.0	15" VCP	111.0	15" VCP
SMH #8	118.04				
SMH #9	115.42				
SMH #10	114.34	107.0	12" VCP	107.0	12" VCP
SMH #11	113.42	105.0	UNK.	105.0	UNK.
SMH #12	109.44				
SMH #13	108.46				
SMH #14	104.60				
SMH #15	103.83				
SMH #16	125.40			117.3	18" VCP
SMH #17	124.64				
SMH #18	120.25	113.6	8" PVC	113.6	8" PVC
SMH #19	118.78	110.5	8" PVC	110.5	8" PVC
		110.5	8" PVC		
SMH #20	110.71	103.8	6" PVC	103.9	6" PVC

Structure	Rim	Inv. In	Pipe	Inv. Out	Pipe
CB #1	114.39	111.1	12" PVC	111.0	12" PVC
CB #2	115.07	113.0	12" *1	111.6	12" PVC
CB #3	114.09	109.4	12" PVC	109.2	12" PVC
CB #4	98.63	95.4	UNK.+	94.6	8" PVC
CB #5	124.61			117.6	UNK.+
CB #6	124.48			121.9	UNK.+
CB #7	124.03			121.1	UNK.+
CB #8	123.66			120.7	8" PVC
CB #9	120.78	119.0*	4" C.I.		
CB #10	114.85	111.2	8" PVC	111.0	12" PVC
CB #10A	117.52	113.1	WATER	112.6	BOX
CB #11	115.74	No pipes visible			
CB #12	114.72			110.7	12" CPP
CB #13	113.17	110.3	12" CPP	110.1	12" CPP
CB #14	115.99			112.0	12" CPP
CB #15	113.67	112.8	8" CPP	112.8	8" CPP
CB #16	113.62			112.8	8" CPP
CB #17	114.40	110.8	6" CPP	110.0	12" CPP
CB #18	113.78			112.9	6" PVC
CB #19	113.56	108.2	12" CPP	108.1	12" CPP

* Top of pipe – Inverted elbow
\+ Top of square pipe, size unknown

NOTES

1) Book and Page references are to the Cumberland County Registry of Deeds.

2) Bearings are referenced to Grid North. See Plan Reference 1.

3) Project Benchmark: Granite monument at southeast corner of intersection of Hartley Street and Stevens Avenue. Elevation: 118.25 City of Portland datum.

4) All utility locations shown on this plan are approximate, based on location of visible features and information provided by others. Dig Safe and/or the appropriate utilities should be contacted prior to any construction.

5) Sewer inverts were provided by the City of Portland Department of Engineering. Field verification should be made before design work is undertaken.

6) Wetlands delineated and located by Mark Hampton Associates, May, 2015.

7) Property lies within Zone X based on FIRM Community #230051 Panel #0007 C, dated December 8, 1998. It does not lie within a special flood hazard area.

8) Borings and the accompanying Preliminary Geotetechnical Report by Summit Geoengineering, 12/29–30, 2014.

REFERENCES

1) Site Plan done by SYTDesign Consultants, December 2000 and May 2001, not recorded.

2) Standard Boundary Survey of "Mayor Baxter Woods" by Public Works Department of the City of Portland, Maine, dated April 2001, not recorded.

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Book 563, Page 275
Book 698, Page 426
Book 698, Page 427
Book 821, Page 57
Book 1649, Page 160
Book 1652, Page 357
Book 4067, Page 310

AREA

826,755 sq. ft./18.98 acres

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

State of Maine, Cumberland ss
Registry of Deeds
Received _____ 20____
at __h__m__M and recorded in
Plan Book _____ Page ____
Attest:_____
Register

Approved by the City of Portland Planning Board
dated _____

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

STANDARD BOUNDARY SURVEY & EXISTING CONDITIONS PLAN

605 Stevens Avenue

Stevens Avenue & Walton Street — Portland, Maine

MADE FOR

Sea Coast at Baxter Woods Associates, LLC

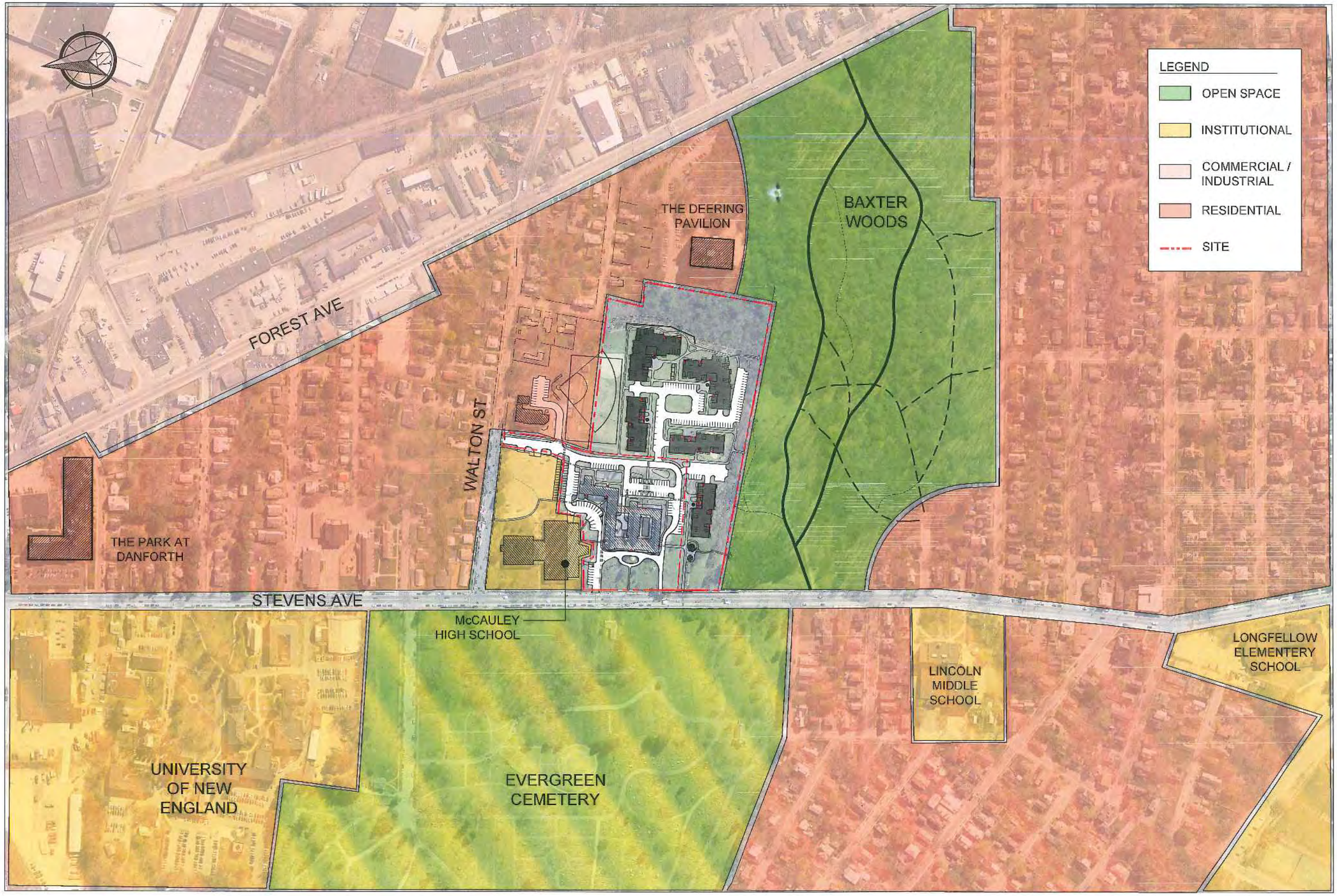
100 Commercial Street, Suite 414 — Portland, Maine

JOB# 202096.1	DATE: June 24, 2015	SCALE: 1" = 50'
BOOK# 525, 578		
202096–2006.dwg		
FILE# 8538		

Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

Sheet C1

Plan 4



APPLICANT:

SEA COAST AT BAXTER WOODS ASSOCIATES, LLC
&
MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET SUITE 414
PORTLAND, ME 04101
207.772.7673

Project:

605 Stevens Ave.

MASTER DEVELOPMENT PLAN
NEIGHBORHOOD CONTEXT MAP

Revisions	Date	Description

Drawn By: EK / VP | Approved By: PC | Scale:

SCALE: 1" = 150'

150' 75' 0' 150' 300' 600'

Phase:
PERMITTING

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 203
PORTLAND, MAINE 04101
207.772.1592 V. F. 207.772.5712

Date:
FEBRUARY 16, 2016

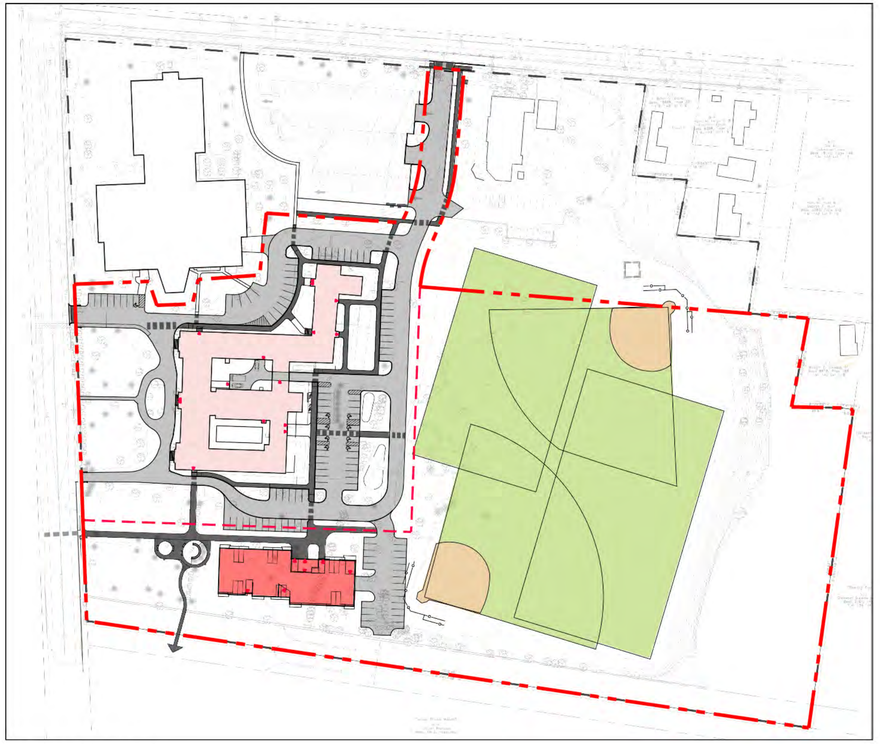
Sheet No:
L-1

PHASE I

MOTHERHOUSE RENOVATION
ALL FIELDS REMAIN INTACT

PHASE III

BUILDINGS #2 & 3 CONSTRUCTED (70 DU)
LOWER FIELDS LOST, UPPER FIELDS REMAIN,
(SOCCER RECONFIGURED)



PHASE II

FIRST NEW BUILDING CONSTRUCTED (21 DU)
ALL FIELDS REMAIN INTACT

PHASE IV

BUILDINGS #4 & 5 CONSTRUCTED (70 DU)
NEW FIELDS CONSTRUCTED

APPLICANT:

SEA COAST AT
BAXTER WOODS
ASSOCIATES, LLC

MOTHERHOUSE
ASSOCIATES LP
100 COMMERCIAL STREET
SUITE 414
PORTLAND, ME 04101
207.772.7673

Project:
605 Stevens Ave.
CONCEPTUAL PHASING PLAN

Revisions	Date	Description

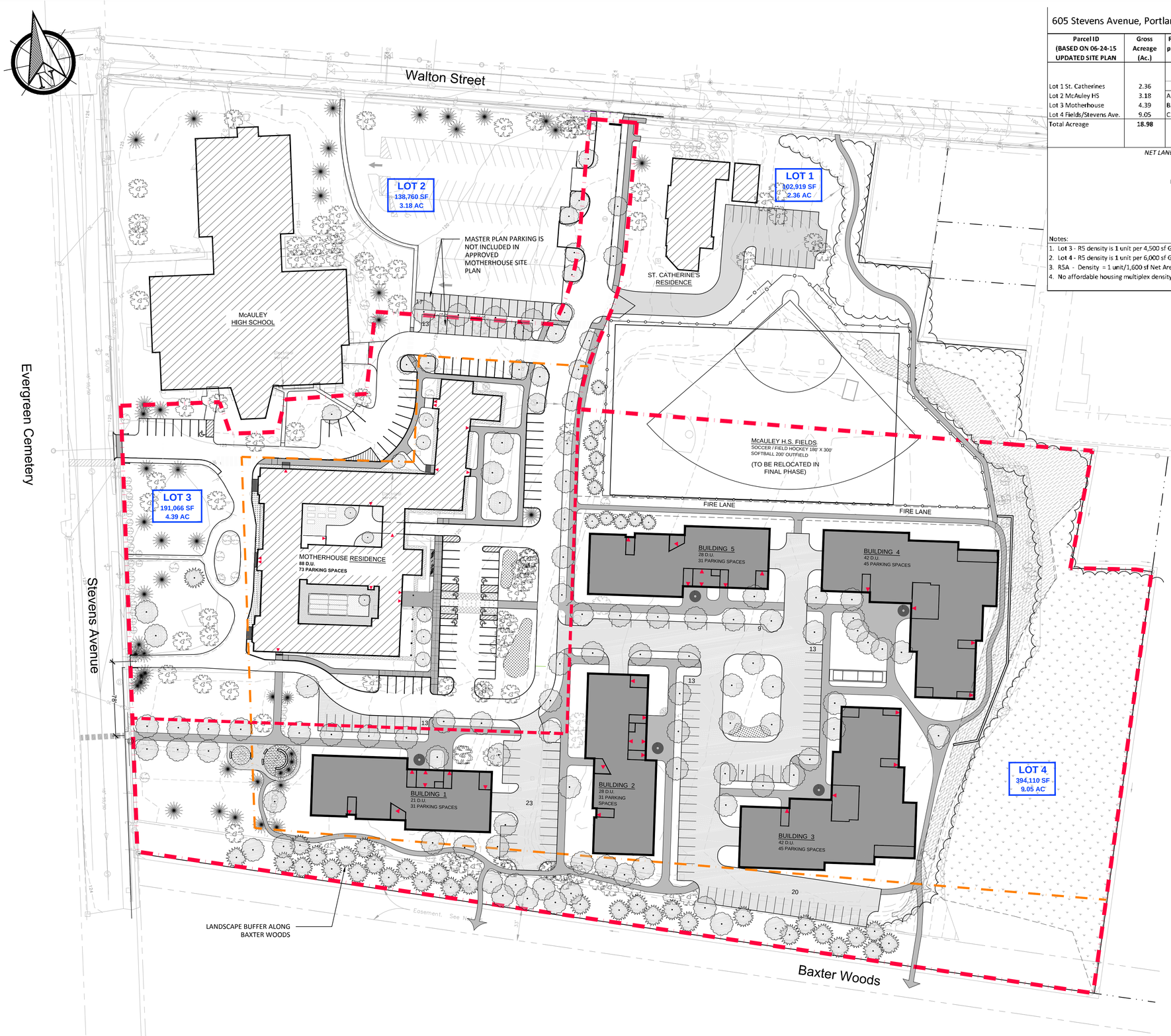
Drawn By: EK / MP
Approved By: PC
Scale: SCALE: 1"= 100'
100' 50' 0' 100' 200' 400'

Phase:
PERMITTING

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

Date:
FEBRUARY 16, 2016

Sheet No:
L-4



605 Stevens Avenue, Portland - Residential Density Computations **Lots 3 & 4** **V10** 06-23-15 LED

Parcel ID (BASED ON 06-24-15 UPDATED SITE PLAN	Gross Acreage (Ac.)	R5A ESTIMATED NRA DEDUCTS per § 14-47 as AMENDED 06-15-15	LOT AREA IN R5A (APPLY DEDUCTS) Mother House Lot 3	Lot 4 (Fields)	LOT AREA IN R5 (NO DEDUCTS) Mother House Lot 3	Lot 4 (Fields)
		Gross Area (ac.)	2.65	7.15	1.73	1.90
		(s.f.)	115,538	311,533	75,528	82,577
Lot 1 St. Catherines	2.36	Deducts:				
Lot 2 McAuley HS	3.18	A. Exist. watercourses	0	0	NA	NA
Lot 3 Motherhouse	4.39	B. Wetlands (as defined)	0	54,341	NA	NA
Lot 4 Fields/Stevens Ave.	9.05	C. 25% slopes	0	19,827	NA	NA
Total Acreage	**18.98**	*Deducts Total:*	0	74,168	NA	NA
		NET LAND AREA (Gross Ac.- Deducts) (sf)	*115,538*	*237,365*	*75,528*	*82,577*
		(ac)	*2.65*	*5.45*	*1.73*	*1.90*
		MULTIPLEX UNITS PERMITTED	72	148	**16**	13
		TOTAL LOT 3	88			
		TOTAL LOT 4	161			
		GRAND TOTAL LOTS 3 & 4	**249**			

Notes:
1. Lot 3 - R5 density is 1 unit per 4,500 sf Gross ac. with 250 ft frontage. (§ 14.117(a.) 2.)
2. Lot 4 - R5 density is 1 unit per 6,000 sf Gross ac. with less than 250 feet frontage (§14.117 (a.) 2.)
3. R5A - Density = 1 unit/1,600 sf Net Area applying deducts.
4. No affordable housing multiplex density bonuses per §14-488 applied to Motherhouse Lot 3

PARKING DATA TABLE

	PROPOSED D.U.	PROPOSED PARKING SURFACE	COVERED	SURFACE	PARKING / D.U.
LOT 4	161	139	183	322	2 .0
LOT 3	88	73	0	73	0.83

SITE DATA TABLE

SPATIAL STANDARDS	REQUIRED R-5	REQUIRED R-5A	PROPOSED LOT 4	PROPOSED LOT 3
MINIMUM LOT SIZE	9,000 SF	2 ACRES	9.03 AC	4.35 AC
MINIMUM FRONTAGE	50 FT.	50 FT.	140.85 FT.	380 FT.
FRONT YARD SETBACK	20 FT.	25 FT.	+185 FT.	130.4 FT.
SIDE YARD SETBACK (5 STORIES)	14 FT.	16 FT.	16 FT.	36.4 FT.
REAR YARD SETBACK	20 FT.	25 FT.	76 FT.	80 FT.
MAXIMUM STRUCTURE HEIGHT	35 FT.	55 FT.	55 FT.	58 FT. (EXISTING)
MAXIMUM LOT COVERAGE	40%	30%	19%	30,677 SF (16%)
MINIMUM LOT WIDTH	90 FT.	60 FT.	+140 FT.	304 FT.
MIN. OPEN SPACE (SF/DU)	300 SF / D.U.	49,800 SF	R5 62,456 SF R5A 122,595 SF TOTAL 185,051 SF	R5 39,221 SF R5A 28,332 SF TOTAL 67,553 SF

LEGEND

- PROPERTY LINE
- ZONE BOUNDARY
- LOT LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- EXISTING TREES
- PROPOSED TREES
- PROPOSED BIT CONC (ROADWAY)
- PROPOSED BIT CONC (SIDEWALK)
- FUTURE PARKING
- EDGE OF PAVING
- CURB
- CROSSWALK STRIPING
- POLE LIGHT
- EXISTING WETLAND
- STEEP SLOPES >25%
- PURPOSED RAIN GARDEN
- BUILDING ACCESS POINT
- EXISTING FENCE

APPLICANT:

SEA COAST AT BAXTER WOODS ASSOCIATES, LLC
&
MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET SUITE 414
PORTLAND, ME 04101
207.772.7673

Project:

605 Stevens Ave.

MASTER DEVELOPMENT PLAN
CONCEPTUAL SITE PLAN

Revisions	Date:	Description
1	3.8.2016	PLANNING BOARD SUBMISSION
2	3.16.2016	PLANNING BOARD SUBMISSION

Drawn By: EK / MP
Approved By: PC
Scale: SCALE: 1"= 50'

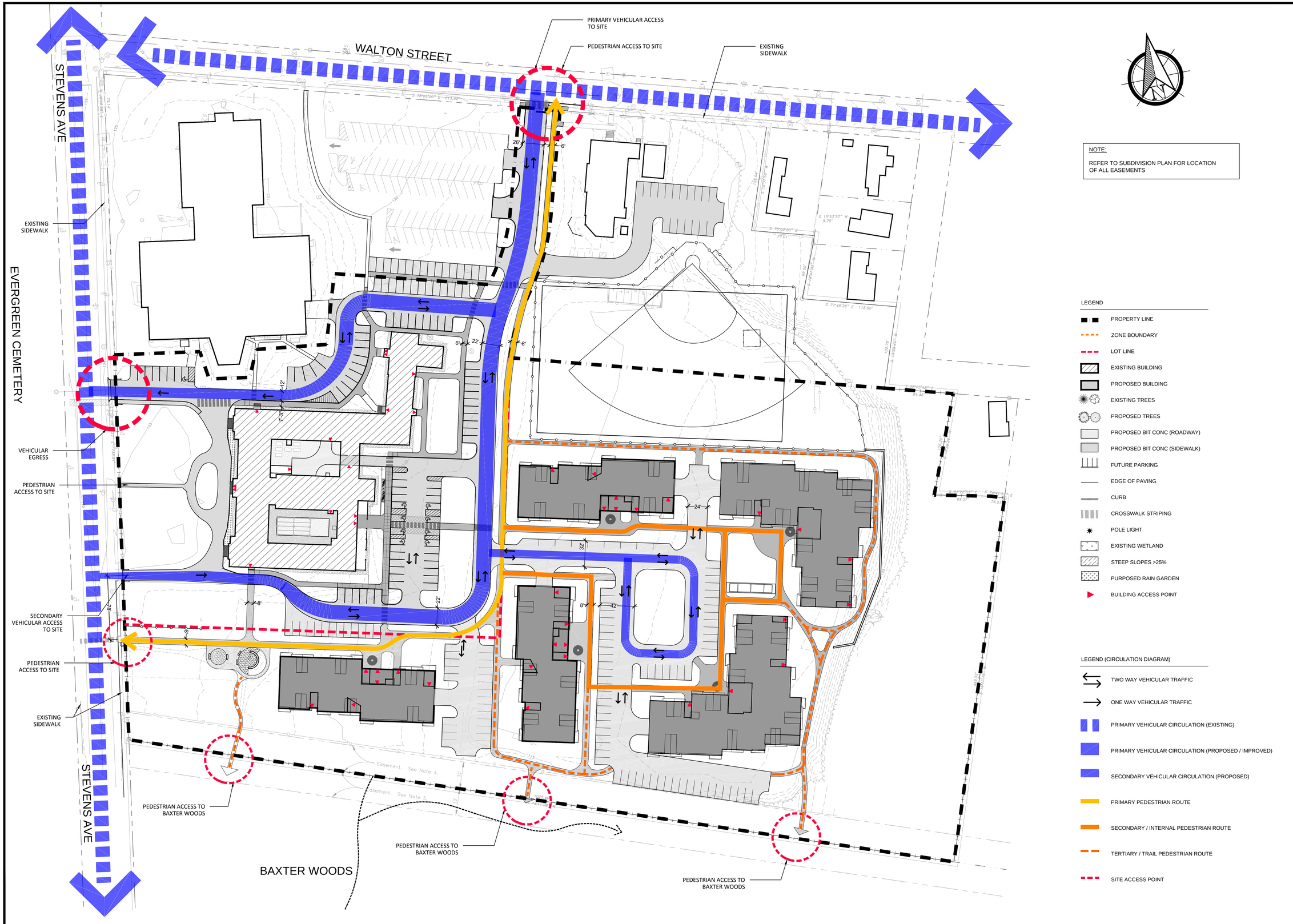
50' 25' 0' 50' 100' 200'

Phase:
PERMITTING

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

Date:
FEBRUARY 16, 2016

Sheet No:
L-2.0



APPLICANT:

SEA COAST AT BAXTER WOODS ASSOCIATES, LLC
&
MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET SUITE 414
PORTLAND, ME 04101
207.772.7673

Project: **605 Stevens Ave.**
MASTER DEVELOPMENT PLAN
CIRCULATION PLAN

Revisions	Date	Description

Scale: SCALE: 1"= 50'
200' 100' 50' 0' 25' 50'

Approved By: PC

Drawn By: EK / MP

Phase: PERMITTING

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

Date: FEBRUARY 16, 2016

Sheet No: L-3

KEY	BUILDING	DU	# OF PARKING SPACES COVERED / SURFACE = TOTAL	LOT #	PHASE
	MOTHERHOUSE	88	0 / 73 = 73	3	1
	1	21	31 / 13 = 44	4	2
	2	28	31 / 23 = 54	4	3
	3	42	45 / 39 = 84	4	3
	4	42	45 / 39 = 84	4	4
	5	28	31 / 25 = 56	4	4

NOTES:

1. LOCATION OF PARKING IS SUBJECT TO CHANGE
2. MASTER PLAN PARKING IS NOT INCLUDED IN APPROVED MOTHERHOUSE SITE PLAN

APPLICANT:

SEA COAST AT BAXTER WOODS ASSOCIATES, LLC
&
MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET SUITE 414
PORTLAND, ME 04101
207.772.7673

Project:

605 Stevens Ave.

MASTER DEVELOPMENT PLAN
PARKING DIAGRAM

Revisions	Date	Description
1	3.8.2016	PLANNING BOARD SUBMISSION
2	3.16.2016	PLANNING BOARD SUBMISSION

Scale: SCALE: 1"= 50'

200' 100' 50' 0' 25' 50'

Approved By: PC

Drawn By: EK / MP

Phase:
PERMITTING

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

Date:
FEBRUARY 16, 2016

Sheet No:
L-3.1

605 Stevens Avenue, Portland - Residential Density Computations **Lots 3 & 4** **V10** 06-23-15 LED

Parcel ID (BASED ON 06-24-15 UPDATED SITE PLAN	Gross Acreage (Ac.)	R5A ESTIMATED NRA DEDUCTS per § 14-47 as AMENDED 06-15-15	LOT AREA IN R5A (APPLY DEDUCTS) Mother House Lot 3	Lot 4 (Fields)	LOT AREA IN R5 (NO DEDUCTS) Mother House Lot 3	Lot 4 (Fields)
		Gross Area (ac.)	2.65	7.15	1.73	1.90
		(s.f.)	115,538	311,533	75,528	82,577
Lot 1 St. Catherines	2.36	Deducts:				
Lot 2 McAuley HS	3.18	A. Exist. watercourses	0	0	NA	NA
Lot 3 Motherhouse	4.39	B. Wetlands (as defined)	0	54,341	NA	NA
Lot 4 Fields/Stevens Ave.	9.05	C. 25% slopes	0	19,827	NA	NA
Total Acreage	18.98	*Deducts Total:*	0	74,168	NA	NA
		NET LAND AREA (Gross Ac.- Deducts) (sf)	*115,538*	*237,365*	*75,528*	*82,577*
		(ac)	*2.65*	*5.45*	*1.73*	*1.90*
		MULTIPLEX UNITS PERMITTED	72	148	16	13
		TOTAL LOT 3	88			
		TOTAL LOT 4	161			
		GRAND TOTAL LOTS 3 & 4	**249**			

Notes:
1. Lot 3 - R5 density is 1 unit per 4,500 sf Gross ac. with 250 ft frontage. (§ 14.117(a.) 2.)
2. Lot 4 - R5 density is 1 unit per 6,000 sf Gross ac. with less than 250 feet frontage (§14.117 (a.) 2.)
3. R5A - Density = 1 unit/1,600 sf Net Area applying deducts.
4. No affordable housing multiplex density bonuses per §14-488 applied to Motherhouse Lot 3

PARKING DATA TABLE

	PROPOSED D.U.	PROPOSED PARKING SURFACE	COVERED	SURFACE	PARKING / D.U.
LOT 4	161	139	183	322	2 .0
LOT 3	88	73	0	73	0.83

SITE DATA TABLE

SPATIAL STANDARDS	REQUIRED R-5	REQUIRED R-5A	PROPOSED LOT 4	PROPOSED LOT 3
MINIMUM LOT SIZE	9,000 SF	2 ACRES	9.03 AC	4.35 AC
MINIMUM FRONTAGE	50 FT.	50 FT.	140.85 FT.	380 FT.
FRONT YARD SETBACK	20 FT.	25 FT.	+185 FT.	130.4 FT.
SIDE YARD SETBACK (5 STORIES)	14 FT.	16 FT.	16 FT.	36.4 FT.
REAR YARD SETBACK	20 FT.	25 FT.	76 FT.	80 FT.
MAXIMUM STRUCTURE HEIGHT	35 FT.	55 FT.	55 FT.	58 FT. (EXISTING)
MAXIMUM LOT COVERAGE	40%	30%	19%	30,677 SF (16%)
MINIMUM LOT WIDTH	90 FT.	60 FT.	+140 FT.	304 FT.
MIN. OPEN SPACE (SF/DU)	300 SF / D.U.	49,800 SF	R5 62,456 SF R5A 122,595 SF TOTAL 185,051 SF	R5 39,221 SF R5A 28,332 SF TOTAL 67,553 SF

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- BUILDING ACCESS POINT
- EXISTING FENCE

APPLICANT:

SEA COAST AT BAXTER WOODS ASSOCIATES, LLC
&
MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET SUITE 414
PORTLAND, ME 04101
207.772.7673

Project:

605 Stevens Ave.

MASTER DEVELOPMENT PLAN
OPEN SPACE CALCULATIONS

Revisions	Date	Description
1	3.8.2016	PLANNING BOARD SUBMISSION
2	3.16.2016	PLANNING BOARD SUBMISSION

Drawn By: EK / MP
Approved By: PC
Scale: SCALE: 1"= 50'

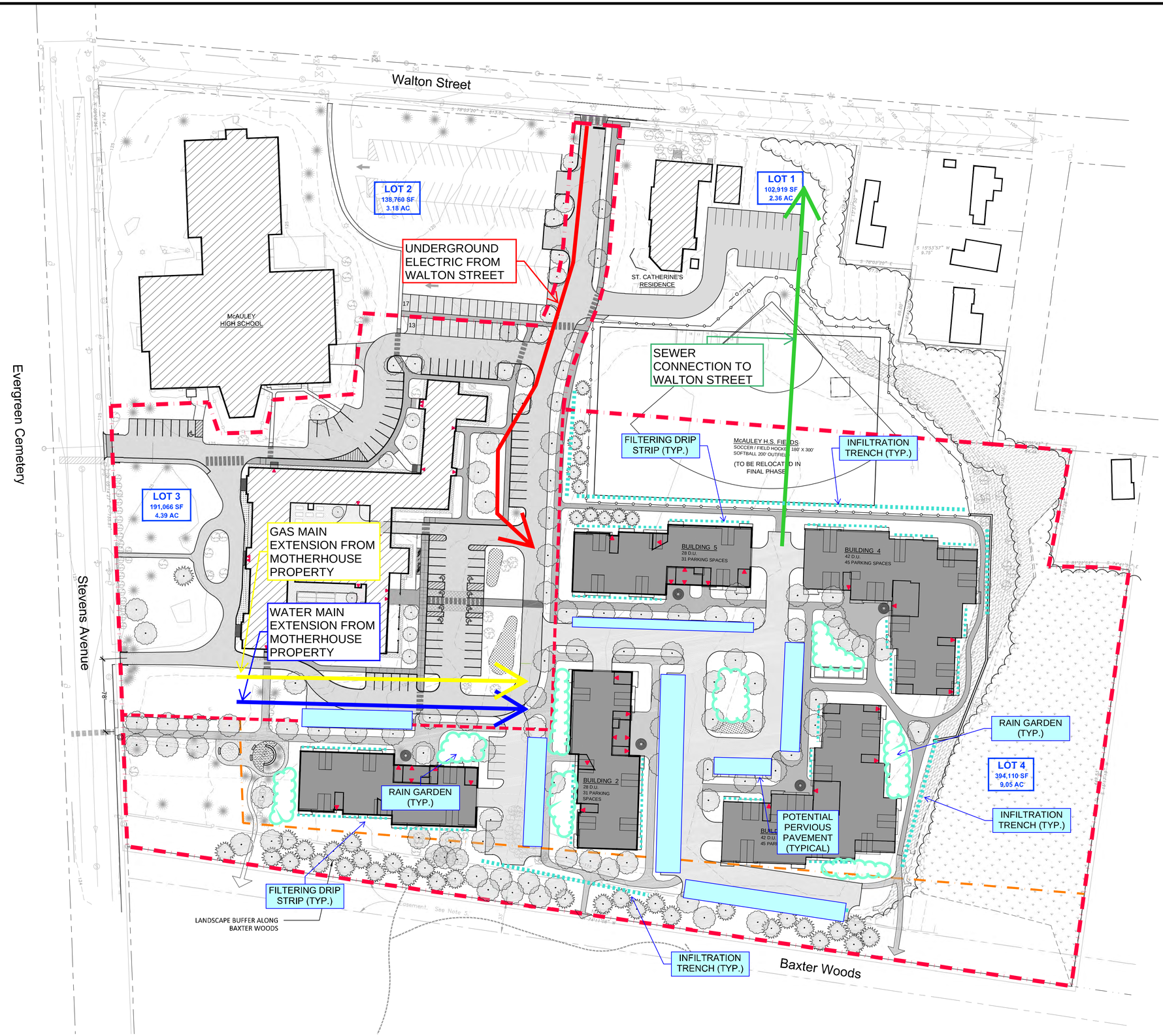
50' 25' 0' 50' 100' 200'

Phase:
PERMITTING

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

Date:
FEBRUARY 16, 2016

Sheet No:
L-2.1



LEGEND

- PROPERTY LINE
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- EXISTING BUILDING
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- EXISTING TREES
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- EXISTING WETLAND
- STEEP SLOPES >25%
- PURPOSED RAIN GARDEN
- BUILDING ACCESS POINT

PROPOSED DWELLING UNITS:	PROPOSED PARKING:
161	139 SURFACE SPACES 183 COVERED SPACES 322 TOTAL SPACES
PARKING RATIO 2.0 PS/DU	

R-5A / RESIDENTIAL ZONE (MULTIPLEX): LOT 4

SPATIAL STANDARDS	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT SIZE	2 ACRES	9.03 AC	9.03 AC
MINIMUM LOT AREA / D.U.	1,600 SF	N/A	1,600 SF
MINIMUM FRONTAGE	50 FT.	140.85 FT.	140.85 FT.
FRONT YARD SETBACK	25 FT.	N/A	+185 FT.
SIDE YARD SETBACK (5 STORIES)	16 FT.	N/A	16 FT.
REAR YARD SETBACK	25 FT.	N/A	64 FT.
MAXIMUM STRUCTURE HEIGHT	55 FT.	N/A	55 FT.
MAXIMUM LOT COVERAGE	30%	N/A	19%
MINIMUM LOT WIDTH	60 FT.	+140 FT.	+140 FT.
MIN. BLDG. STBK. FROM EXTERNAL SUBDIV. PROP. LINES	35 FT.	N/A	64 FT.
MIN. RECREATION OPEN SPACE	200 SF / D.U.	N/A	MIN. 32,200 SF
PARKING	2 / UNIT (322)	N/A	2 / UNIT (322)

NOTE:

DENSITY FOR LOT #3 SEE MOTHERHOUSE SITE PLAN APPLICATION

APPLICANT:

SEA COAST AT BAXTER WOODS ASSOCIATES, LLC
&
MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET SUITE 414
PORTLAND, ME 04101
207.772.7673

Project: **605 Stevens Ave.**
MASTER DEVELOPMENT PLAN
CONCEPTUAL SITE PLAN

Revisions	Date	Description

Drawn By: EK / MP
Approved By: PC
Scale: SCALE: 1"= 50'
50' 25' 0' 50' 100' 200'

Phase: PERMITTING

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

Date: FEBRUARY 16, 2016

Sheet No: CONCEPT STORMWATER AND UTILITY PLAN

Plan 11

1 SOUTH ELEVATION
1/8" = 1'-0"
0 2'-0" 4'-0" 8'-0" 16'-0"

2 NORTH ELEVATION
1/8" = 1'-0"
0 2'-6" 5'-0" 10'-0" 20'-0"

605 STEVENS AVENUE

PORTLAND, MAINE

16 FEB. 2016

A2.1

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

1 LEFT ELEVATION - 4 STORY BUILDING
1/8" = 1'-0"

3 RIGHT ELEVATION - BASE BUILDING
1/8" = 1'-0"

2 RIGHT ELEVATION - 4 STORY BUILDING
1/8" = 1'-0"

4 LEFT ELEVATION - BASE BUILDING
1/8" = 1'-0"

605 STEVENS AVENUE

PORTLAND, MAINE

16 FEB. 2016

A2.2

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

1 ENTRANCE ELEVATION - 4 STORY BUILDING
1/8" = 1'-0"

2 REAR ELEVATION - 4 STORY BUILDING
1/8" = 1'-0"

605 STEVENS AVENUE

PORTLAND, MAINE

16 FEB. 2016

A2.3

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

ARCHETYPE
architects

Plan 12

ARCHETYPE
architects

EXISTING VIEWS

VIEW FROM WALTON STREET ENTRANCE

VIEW FROM STEVENS AVENUE

INTERIOR CAMPUS VIEW

PROPOSED VIEWS - Summer

PROPOSED VIEWS - Winter

Prepared for:
City of Portland
Master Development Plan Review

March 10, 2016

605 STEVENS AVENUE

PERSPECTIVE VIEWS

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS

PLANNING BOARD REPORT
PORTLAND, MAINE

Zoning Map Amendment from B-2 and R-5 to Community Business B-2b

Map Amendment for Forest Avenue in the vicinity of Baxter Boulevard, Preble Street Extension and the northerly side of Forest Avenue, and at the intersection of Forest Avenue, Baxter Boulevard and Bedford Street.

City of Portland Applicant

Submitted to: Portland Planning Board: Public Hearing Date: March 22, 2016	Prepared by: Stuart O'Brien, Planning Division Director and Barbara Barhydt, Development Review Services Manager Date: March 18, 2016

I. INTRODUCTION

On February 1, 2016, Councilor Ray moved to have the Planning Board consider a zoning map amendment from the current Community Business B-2 zone and the Residential R-5 zone to the Community Business B-2b zone. The City Council voted unanimously to refer this item to the Planning Board and for the Board to make a recommendation to the Council by April 1, 2016 (Council Order included as Attachment 1). The City Council is asking the Board to consider whether the B-2b, which promotes a more urban form and prohibits drive-throughs, is a more appropriate zone for this area.

There are no pending development review applications for the properties in this area; however, interest in potential redevelopment has been brought to the attention of the City. Concurrently, several of the buildings had been identified as potentially eligible for designation following a historic preservation analysis recently commissioned by Greater Portland Landmarks entitled *Forest Avenue and Stevens Avenue: Historic Context*. The Historic Preservation Board review and recommendations are included below in Section II.

In addition, the Transforming Forest Avenue report as discussed under the comprehensive plan analysis below, contemplates revisions to the zoning along the corridor to encourage possibilities for the future of land development around Forest Avenue to facilitate opportunities for transit supportive development.

Public notice of the public hearing appeared in the Portland Press Herald on March 7 and 14th and 105 notices were sent by mail and by e-mail to property owners and interested citizens. The neighborhood meeting was held on March 10, 2016 and the packet is included as Attachment 4. There is one piece of written comment that was submitted at the neighborhood meeting. Public comment has also been submitted by Mary Costigan and Sandra Guay.

II. EXISTING CONDITIONS & SITE SELECTION

A. Existing Conditions

The section of Forest Avenue between Baxter Boulevard and Preble Street extension contains a range of uses. The development in this block faces Forest Avenue with parking in the rear, which can be seen from Preble Street Extension. There is one curb cut that serves the parking areas off Preble with all other access points off Forest Avenue. The city's zoning map lists the accessways as Bank and Fenwick Roads. The businesses along Forest Avenue include: office buildings, retail uses, a bar, personal service businesses, and 70 residential units above first floor commercial at 331-337 Forest Avenue.

Pedros Field is a public park and ballfield, which is located at the intersection of Preble Street extension and Baxter Boulevard. This portion of the block is not including within the proposed zone change.

The B-2 zone is located across Forest Avenue from the proposed area for rezoning. The uses include the Oakhurst Dairy and a multiple tenant retail building on the corner of Forest and Bedford (owned by Oakhurst Dairy). An aerial of the area obtained from Google is included as Figure 1. In general, office uses facing Baxter Boulevard are located across from this block, as is an entrance drive to the Hannaford plaza. A residential neighborhood is located on the opposite side of the Preble Street extension and the university credit union is located at the corner of Preble and Forest.

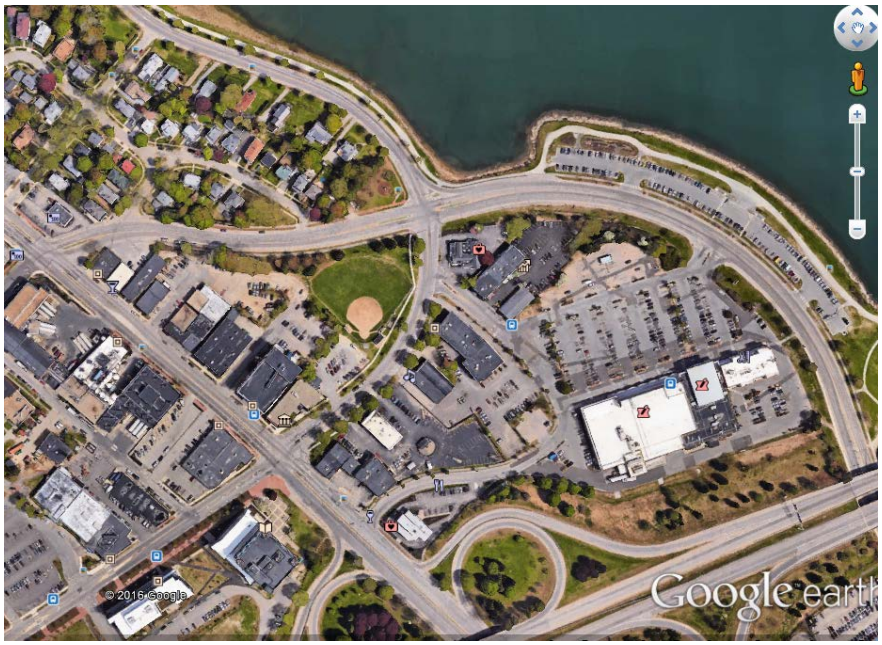


Figure 1: Aerial

On City maps, the block being considered for rezoning shows Fenwick Road and Bank Road, which appear to be former public streets. Fenwick Road was discontinued in 1991 with a public easement retained for the city sewer line; however, a street sign still is located on the corner. A portion of Bank Road was discontinued in 1991 and a section leading to Preble Street was accepted in 1920. It appears that this portion remains a public street. The status of the streets, as shown below (Figure 2), is based upon the City's records at the Department of Public Works. This is preliminary information that may be revised once a survey of the area is completed.

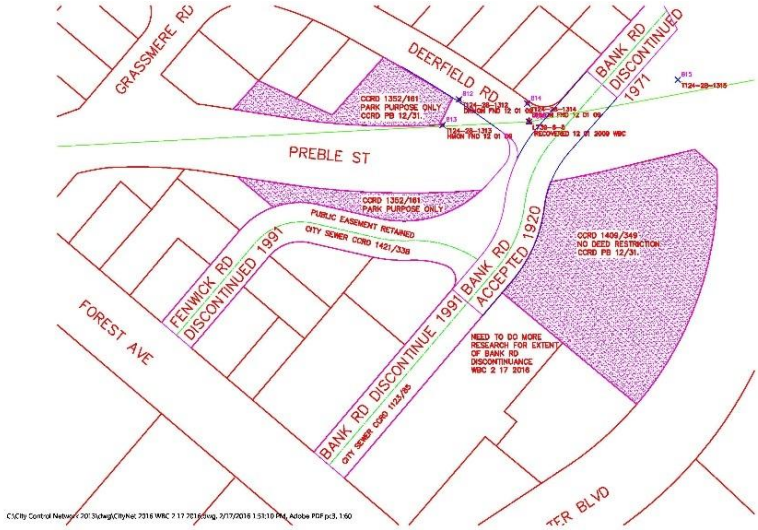


Figure 2: Street Status

B. <u>Historic Preservation Board's Review of Potential Designation of Buildings</u>

On February 3rd, the Historic Preservation Board held a public hearing on the question of eligibility of three Forest Avenue buildings for local landmark designation. The 3 buildings in question are 351-355, 369 and 371-371 Forest Avenue. The request for determination of eligibility was prompted by a letter from legal counsel for CVS indicating CVS' intent to demolish 5 contiguous structures near the intersection of Preble Street Extension. Consistent with the City's demolition permit review process, the letter of intent was reviewed by historic preservation staff to determine whether any or all of the subject structures were eligible for listing in the National Register of Historic Places and/or local historic designation. In this case, the buildings at 355 Forest and 369 Forest had been determined eligible for National Register listing by the Maine Historic Preservation Commission in 2011. As well, all three buildings had been included in a Forest Avenue Historic Resources survey conducted last summer. Accordingly, the question of eligibility was forwarded to the Historic Preservation Board for consideration. Following a lengthy public hearing, the Historic Preservation Board found that 355, 369 and 371-373 Forest meet the designation criteria for individual landmark designation under Portland's Historic Preservation ordinance. The determination of eligibility is expected to be followed by formal designation deliberations. As the buildings are proposed for designation as individual landmarks, the HP Board's recommendation would be forwarded directly to the City Council, as provided in the historic preservation ordinance. No date has yet been set for formal deliberations on the designation. The public hearing report to the Historic Preservation Board regarding the determination of eligibility and attachments A and B are included as <u>Attachment 2</u> of this report.

III. BACKGROUND AND EXISTING ZONING

The current zoning in the block bounded by Baxter Boulevard, Preble Street Extension and Forest Avenue includes Community Business B-2, Residential R-5 and Recreation and Open Space (ROS) (refer to Figure 3). There is a mix of commercial and residential uses in this area including office buildings, retail uses, a bar, personal service businesses, and 70 residential units above first floor commercial at 331-337 Forest Avenue. Pedros Field is a public ballfield located within the block and is zoned Recreation and Open Space (ROS). This portion of the block is not part of the proposed zoning map amendment.

Figure 3: Existing Zoning

The Community Business Zone extends across Forest Avenue to incorporate the Oakhurst dairy and the retail building on the corner. The B-2 zone also extends up Bedford Street and includes a portion of the USM campus. Commercial uses were located in this area at one time, but the area is now owned and occupied by the University of Southern Maine. The USM overlay zone extends over these properties.

The B-2 zone is also located between Baxter Boulevard and I-295 where this is a mix of office and retail uses fronting on Baxter Boulevard. The Hannaford Shopping Center is situated to the rear of the Baxter Boulevard and Forest Avenue lots with frontage on the Preble Street extension. The Community Business B-2b zone runs along either side of Forest Avenue from the intersection of Preble and Forest Avenue through Woodford's Corner.

A portion of the block being studied includes the Residential R-5 Zone, which run along the Preble Street extension. The residential neighborhoods that flank either side of Forest Avenue are generally zone Residential R-5, with the exception of the multifamily complexes at the intersection of Dartmouth Street and Baxter Boulevard, which are zoned the R-6 zone. Per the Planning Board's suggestion, the commercial properties on the corner of Forest Avenue and Bedford Street and Baxter Boulevard as shown on the map insert were included in the notice.

The Forest Avenue Corridor between Preble Street Extension and through Woodford's Corner was zoned as Community Business B-2b in 1999. At that time, there was a comprehensive review of the B-2 zone and the B-2b zone was created. Previously, the entire corridor had been zoned B-2. The B-2b zone was considered for section of the corridor from the Preble Street Extension to I-295. A conversion to B-2b would have made Oakhurst Dairy and the auto related uses in this area non-conforming. Thus, the area between I-295 and the Preble Street extension remained within the B-2 zone due to the type and scale of uses in this area at that time.

The B-2b zone was created in 1999 as a result of the Nason's Corner/Outer Brighton Avenue Study, completed the previous year, which sought to increase the compatibility between commercial districts and residential neighborhoods. As described in Planning Board Report #50-99 dated October 18, 1999, the B-2b was instituted as a new zone "designed to preserve the more compact urban development of Portland". At the same time amendments were made to the B-2 to allow residential uses and to make major and minor offices uses conditional, allow dairies and bakeries as permitted uses if in existence before 1999, and limit new bakeries in the B-2b to no more than 7,000 s.f.

The 1999 changes also resulted in the creation of a conditional use designation for all drive-throughs in the B2, as opposed to merely for restaurants uses. Drive-throughs in the newly created B-2b were only allowed if accessory to a permitted principal use. Additional conditional use standards were added for drive-throughs relating to location, noise, screening, pedestrian access and hours. Finally, it should be noted that at this time auto uses became conditional uses in the B-2 and these auto uses were prohibited in the B-2b except for pre-existing minor auto uses which were proposed to become conditional uses. These amendments to the code were adopted on November 15, 1999.

Additional changes were adopted in early 2000, the map amendment proposed intended to create a B-2b zone along a portion of Forest Avenue. In addition, mong other text changes as described in in the March 24, 2000 City Council Agenda Request the proposed B-2b text amendments for off peninsula locations would:

> "allow new structures to be placed no further back than the average depth of the front yards of adjoining buildings. Currently, B-2b requires structures to meet a ten (10) foot build-to line and this would remain for on-peninsula locations. The proposed off-peninsula B-2b front yard setback is the same standard as found in the B-2 zone."

These changes were adopted on April 24, 2000.

In 2005, the Council adopted the the B-2C zone which essentially mirrored the B-2 but excluded establishments that served liquor for a portion of Forest Avenue.

In 2010, changes were adopted increasing density of B-2 and B-2b zones on-peninsula to current levels, adding housing to the zones purpose statements and clarifying some language. As reflected in the Planning Report #02-10, dated January 22, 2010, the most significant change was establishing a lot area per dwelling unit of 435 s.f., which was equivalent to the R-7 density. At the time Avesta was proposing a project in the vicinity of 701 Congress St, which due to lot configuration could not meet the maximum front yard requirement, although the report states this was believed to not be a common occurrence, to encourage infill development on these "rear yards" the current footnote allowing relief for lots with less than 40 feet of frontage and depth of more than 100 feet and/or 20 feet of front yard and a remaining frontage of less than 40 feet was added.

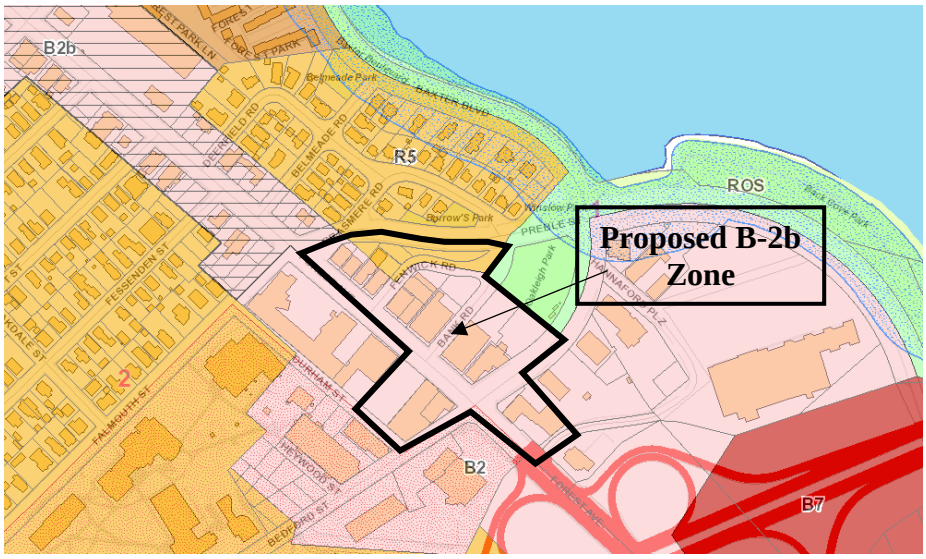
Changes were made in 2011 to clarify language concerning the proximity of drive-thrus to residential zones and to add language about wind energy facilities in 2013.

In July of 2014, the council adopted changes to the B-2, B-2b and B-2c resulting greater allowance of multi-family housing in all B-2 derivative zones with the previously existing qualification that multi-family was only allowed when abutting higher density residential zones (R-4 and up). A stronger prohibition on front yard parking was included for the same reasons. A table was added to simplify the dimensional requirements which also made significant changes to the zones dimensional requirements. These changes included reducing the maximum front yard setback to 10 feet, reducing street frontage, reducing lot area for projects off peninsula with active street frontages to 435 s.f.. Lastly, a new section, 14-188, was added under the premise that rather than mandating ground floor commercial uses active street frontage requirements would better accomplish the goals of vibrant street life and accordingly, a density bonus of 435 s.f. was added.

Finally, in November of 2014 drive-throughs were eliminated as an allowed use in the B-2b as incompatible with the purpose of the B-2b such as providing neighborhood and community retail built close to the street and written for area which a pedestrian scale and character and inconsistent with the Transforming Forest Avenue Study. A technical change to step backs was also made.

IV. PROPOSED MAP AMENDMENT

The proposed zoning map amendment is to rezone the B-2 zone and the R-5 zone to B-2b, as shown in the insert. Per the Planning Board's suggestion at the workshop, the area to be considered for rezoning was expanded to include the commercial building and parking at the corner of Bedford and Forest and the commercial building at the corner of Baxter Boulevard and Forest Avenue (to Hannaford Plaza lane. Please note that the property at the corner of Bedford and Forest is owned by Oakhurst Properties LLC (CBL 114A – F 3,7 and 8).



V. ZONING COMPARISON

A. Purpose Statements

The R-5 zone is a medium density residential area that is characterized by single family and low-intensity multi-family development. The B-2 Zone is intended to provide areas for a mix of commercial and residential uses, which have a greater intensity than the business uses permitted in the neighborhood business zone. The types of uses articulated in the purpose statement of the B-2 zone include " grocery stores, shops and services located in major shopping centers and along arterial streets." The vision is that these uses would be readily accessible by all means of transportation (automobile, pedestrians and bicyclists). Generally, the B-2 zone is found along Portland's major transportation corridors with residential neighborhoods adjacent to the zone. Thus the intent of the zone states that development should relate to the surrounding neighborhoods by design, orientation, and circulation patterns. Both the B-2 and B-2b provide for moderate to high density housing development.

The B-2b is part of the B-2 zone and varies in some ways from the zone. The purpose statement highlights that the development should be close to the street and have a more compact urban development pattern. It is recommended for locations "on-peninsula or in areas off-peninsula where a neighborhood compatible commercial district is established which exhibits a pedestrian scale and character." The purpose statements of the R-5 zone and the B-2, B-2b and B-2c are listed in Table 1 below.

Zone	Purpose
Residential R-5	To provide appropriate areas of the city for medium-density residential development characterized by single-family and low-intensity multifamily dwellings on individual lots; to ensure the stability of established medium-density neighborhoods by controlling residential conversions; and to provide for planned residential unit development on substantially sized parcels. Such PRUD

	development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.
Community Business B-2	1. To provide appropriate locations for the development and operation of community centers offering a mixture of commercial uses, housing and services serving the adjoining neighborhoods and the larger community. 2. The variety, sites and intensity of the permitted commercial uses in the B-2 zone are intended to be greater than those permitted in the B-1 neighborhood business zone. 3. The B-2 zone will provide a broad range of goods and services and general businesses with a mixture of large and small buildings such as grocery stores, shops and services located in major shopping centers and along arterial streets. Such establishments should be readily accessible by automobile, by pedestrians and by bicycle. Development in the B-2 zone should relate to the surrounding neighborhoods by design, orientation, and circulation patterns. 4. The B-2 and B-2b will provide locations for moderate to high density housing in urban neighborhoods along arterials.
Community Business B-2b	The B-2b zone is intended to provide neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The B-2b zone is appropriate in areas where a more compact urban development pattern exists such as on-peninsula or in areas off-peninsula where a neighborhood compatible commercial district is established which exhibits a pedestrian scale and character. Such locations may include the peninsula and other arterials and intersections with an existing urban or neighborhood oriented building pattern.

B. Permitted and Conditional Uses

Following is a chart of the permitted uses for the R-5, B-2 and B-2b zones. Again, the R-5 zone is a moderate density residential zone, thus the permitted uses include single and two family homes, handicapped family units, planned residential unit developments and multiplexes. The permitted residential uses in the B-2 and B-2b zone allow for many of the same residential uses, but the zones also permits higher density housing, such as multifamily development, combined living/working spaces, and lodging houses.

In the R-5 zone most institutional uses, except for government or municipal uses, are listed as a conditional use. In the B-2 zones, institutional uses, including schools, universities, clinics, long-term or intermediate care facilities and others are listed as permitted uses.

The R-5 zone does not permit business uses. The B-2 and B-2b zones share most of the same permitted and conditional uses. A significant difference is that drive-throughs are not listed as permitted or conditional uses in the B-2b zone, which is a recent change that was adopted on November 17, 2014. Drive-throughs are listed as a permitted use in the B-2 and as a conditional use in the B-2 zone when the site is adjacent to a residential zone. Another differentiation between the two zones is that the B-2b establishes a size limit of 7,000 sf for commercial kitchens (must include a retail component or tasting room) and bakeries in order to encourage smaller scale establishments oriented to pedestrians. The proposed map amendment as suggested by the Planning Board includes the land at the corner of Bedford and Forest, which is owned by Oakhurst Properties. While the current use is a mixed use retail building, a map amendment to B-2b could limit the dairies ability to expand.

Table 2: Permitted and Conditional Uses

Permitted Uses				
Residential		R-5	B-2	B-2b
	Single-family and two-family dwellings	•	•	•
	Multi-family dwellings		•	•
	Handicapped family units	•	•	•
	Single-family single- or multiple-component manufactured housing	•		
	Combined living/working spaces		•	•
	Lodging houses		•	•
	PRUDs	•		
	Multiplex development	•		
Institutional		R-5	B-2	B-2b
	Schools		•	•
	Clinics		•	•
	Places of assembly		•	•
	Long term, extended and intermediate care facilities		•	•
	Governmental buildings and uses/municipal uses	•	•	•
	College, university or trade schools		•	•
	Nursery schools, kindergartens			
	Day care facilities		•	•
Business		R-5	B-2	B-2b
	General, business, & professional offices		•	•
	Personal services		•	•
	Business services			
	Offices of building tradespeople		•	•
	Retail establishments		•	•
	Restaurants (close at 11)		•	•
	Drinking establishments (not allowed in B-2c)		•	•
	Billiard parlors		•	•
	Mortuaries or funeral homes		•	•
	Miscellaneous repair services, excluding motor vehicle repair		•	•
	Communication studios or broadcast and receiving facilities		•	•
	Health clubs and gymnasiums		•	•
	Veterinary hospitals (excluding outside kennels)		•	•
	Theaters		•	•
	Hotels of less than 150 rooms		•	•
	Dairies and bakeries in existence as of Nov 15, 1999		•	•
	Bakeries after 1999, must have a retail component and bakeries in the B-2b shall be no greater than 7,000 sf in size		•	•
	Drive-throughs associated with a permitted use in the B-2 zone provided that such do not include drive-throughs on any lot adjacent to any residential use or zone. ..“adjacent to” shall include uses across a street if within 100 feet of the subject lot boundary;		•	
	Registered medical marijuana dispensaries		•	•
	Commercial kitchens provided it includes retail sales or tasting room. Commercial kitchens shall be no greater than 7,000 sf in B-2b		•	•
Other		R-5	B-2	B-2b
	Accessory uses	•	•	•
	Municipal uses	•		

	Parks	•		
	Home occupation	•	•	•
	Studios for artists and craftspeople – not to exceed 4000 sf studio space		•	•
	Special needs independent living units	•	•	•
	Bed and breakfasts		•	•
	Hostels		•	•
	Wind energy systems	•	•	•
	Utility substations		•	•
Conditional Uses				
Residential		R-5	B-2	B-2b
	Sheltered care group homes	•		
	Additional accessory dwelling units	•		
	Alteration of non-residential structure to 3+ dwelling units	•		
	Use space existing as of 9-3-08 to accommodate additional dwelling units	•		
	Conversion of multi-family structure to lodging house	•		
Institutional		R-5	B-2	B-2b
	Schools	•		
	Long-term and extended care facilities	•		
	Intermediate care facility	•		
	Places of assembly	•		
	Hospitals	•		
	Nursery schools and kindergartens			
	Day care facilities	•		
	College, university, trade schools	•		
Business		R-5	B-2	B-2b
	Major and minor auto service stations		•	
	Major and minor auto service stations if in existence as of 1999			•
	Car washes		•	•
	Drive-throughs adjacent to residential uses or zones		•	
	Automobile dealerships		•	•
Other		R-5	B-2	B-2b
	Utility substations	•		
	Professional offices			
	Chancellery			
	Off-street parking	•		
	Temporary wind anemometer towers	•	•	•
	Wind energy systems	•	•	
	Printing and publishing establishments		•	•
	Wholesale distribution establishments		•	
	Research and development and related production establishments		•	•

C. Dimensional Standards

The dimensional standards for the R-5 zone focus on the residential form for a moderate density area. The B-2 and B-2b zone are similar in their lists of permitted and conditional uses, as well as their dimensional standards. A comparison of the dimensional standards is contained in Table 3. Dimensional Standards.

Table 3. Dimensional Standards

Standard	R-5[1]	B-2	B-2b
Minimum Lot area per dwelling unit	3,000 sf, except 3,600- 4,800 sf for special needs independent	none	none
Street Frontage	50 feet	20 ft	20 ft
Minimum Lot Width	60 feet, except 90 for multiplex	none	none
Minimum Front Yard	20, except average depth if less than 20		
Maximum Front Yard	N/A	10 ft, Bd may grant waiver for irregular lots with less than 40 ft of frontage (Building Additions do not have to meet this section)	10 ft, Bd may grant waiver for irregular lots with less than 40 ft of frontage (Building Additions do not have to meet this section)
Minimum Rear Yard	20 feet	10 ft, accessory structures, 5 ft	10 ft, accessory structures, 5 ft
Minimum Side Yard	8-15 feet, depending on building height and location	None, accessory structures, 5 ft	None, accessory structures, 5 ft
Minimum Side Yard on Side St		None	None
Structure Height	35 feet	45 ft, 50 ft if 1st floor commercial is whole or partially commercial use	45 ft, 50 ft if 1st floor commercial is whole or partially commercial use
Structure Stepbacks		Portions of a structure above 35 feet shall be no closer than 5 feet from the side property line and no closer than 15 feet from the rear property line when such property line abuts a residential zone.	Portions of a structure above 35 feet shall be no closer than 5 feet from the side property line and no closer than 15 feet from the rear property line when such property line abuts a residential zone.
Maximum Lot Coverage (building coverage)	40%		
Maximum Impervious Surface	N/A	Residential uses – none All permitted uses - 80%	Residential uses – none All permitted uses - 90%
Minimum Lot Area per Dwelling Unit		a. Off-peninsula locations, as defined in section 14-47: 1,500 SF, except as provided for in (b) below. b. On-peninsula locations (as per 14-47) and projects with active street frontages, as defined in section 14-188, below: 435 SF	a. Off-peninsula locations, as defined in section 14-47: 1,500 SF, except as provided for in (b) below. b. On-peninsula locations (as per 14-47) and projects with active street frontages, as defined in section 14-188, below: 435 SF.

[1] Additional restrictions on the number of dwelling units apply to the PRUD standards and separate requirements for small residential lot development may apply

The history of the B-2 zone outlines the text amendments that have occurred over time, which have brought the B-2 zone in alignment with the more urban based parameters of the B-2b zone. Currently, both B-2 and B-2b have a maximum front yard setback of 10 feet (does not apply to building additions), which was not the case before the B-2 update in 2014. Prior to that update, only the B-2b zone had a maximum front yard setback requirement. In both the B-2 and B-2b zones. there is a provision that allows the Planning Board to grant waivers of the maximum front yard setback for irregular lots with less than 40 feet of frontage. In such cases, no maximum setback is required, but where setbacks exceed 10 feet than a continuous, attractive, and pedestrian-scaled edge treatment shall be constructed along the street.

There is no maximum impervious surface ratio for residential uses, but for all other permitted uses the maximum coverage is 80% in the B-2 zone and it is 90% in B-2b. There is also a distinction between the allowable residential density for both B-2 and B-2b, which is tied to whether a site is on-peninsula or off-peninsula. The density is 1,500 sf per unit off-peninsula, unless the project has active street frontage as defined. The density is 435 sf per unit on-peninsula or for those projects with active street frontage. The B-2 zone is predominantly located off-peninsula and the B-2b is on-peninsula and along a portion of the Forest Avenue corridor.

VI. SITE PLAN STANDARDS AND DESIGN STANDARDS

Under the site plan standards of the Site Plan Ordinance (Section 14-526) there are zoning related design standards under subsection (d). The general provision states:

> *a. Development of certain types and/or proposed in certain zones, as specified below, are subject to design standards in addition to the provisions of Section 14-526 (a) in order to ensure designs that contribute to and enhance the goals and policies for specific districts of the City. The City of Portland Design Standards is listed in the City of Portland Design Manual, which is included by reference. If the development is located in a historic district or associated with a historic landmark, City of Portland Historic Preservation standards shall supersede:*

Subparagraph iii relates to the B-1 and B-2 zones as follows:

> *(iii) B1, B1-b, B2, B2-b Zones: Development in the B1, B1-b, B2 and B2-b business zones shall provide an established street wall with entrances and public portions of the building oriented to and directly accessible from the public sidewalk and shall be designed and scaled to be compatible with surrounding residential and commercial development as demonstrated by compliance with all applicable design standards listed in the Design Manual.*

The standard does state that development in the B-2 zones shall provide a street wall with entrances and public portions of the building oriented to the street and other provisions, as demonstrated by compliance with all applicable design standards listed in the Design Manual.

The Design Manual contains the design standards, which are presented in the chart below.
The design standards for the urban street wall and building entrances are not required for projects within B-2; however, the standards cross reference the design guidelines and encourages development in the B-2 zone to meet both of these standards. The B-1 and B-2 Design guidelines are contained in Appendix 2 of the Design Manual, which are intended to illustrate how development may meet the

the specific standards. The guidelines are shown below the design standards. The sections pertaining to urban street wall and entrances are highlighted.

Portland Design Manual		
Design Standards	**Applicability of Design Standards –**	
	B-2	**B-2b**
***Urban Street Wall*:** …buildings shall be located to create and preserve an urban street wall.		Required
***Mixed Uses*:** …buildings shall be multi-storied with mixed uses. (B-1-only)		
Building Entrances: …building entrances shall be oriented toward, located adjacent to, and directly accessible from a sidewalk in a public right-of-way.		Required
Windows: … windows shall be required along the street frontage of a building. Windows shall be transparent (with a visible transmittance (VT) of 0.7 or greater) and installed at a height to allow views into the building by passerby.	Required	Required
Façade Character: ….active and public portions of buildings (e.g. doors, windows, entries, retail displays) ***shall be oriented to and, where possible, be located adjacent to the public sidewalk*** to create an active presence along the sidewalk. (1) Where building facades situated along a public way have no interactive use or function, such facades shall be designed to provide sufficient architectural and graphic amenities to provide visual interest along the street and relate the building, and its use to passerby.	Required	Required
Building Design: … commercial buildings shall be designed to be compatible with their residential and commercial neighbors. In the B-1 and B-1b zones building scale, roof pitch, and fenestration shall be designed to complement surrounding residential structures.	Required	Required
Building materials: Façade materials of buildings located in the B-1, B-1b B-2, and B-2b zones shall be compatible with those materials of surrounding residential and commercial uses.	Required	Required
Building Scale; In the B-1 and B-1b zones building scale must relate and be compatible with surrounding residential structures.		
Landscaping and buffers: In the B-1, B-1b, B-2 and B-2b zones buildings and associated parking areas must be screened to buffer abutting properties. A densely planted landscape buffer and/or fencing will be required to protect neighboring properties from the impacts associated with the development, including lighting, parking, traffic, noise, odor, smoke, or other incompatible uses. Where buildings are setback from the street, a landscaped area must be planted along the front yard street line.	Required	Required
Guidelines		
Please refer to Appendix 2 of this manual, the B-1, B-1b, B-2, B-2b		

Design Guidelines, for applicable design guidelines for the B-1 and B-2 zones. In addition, the following design guidelines shall also apply.		
1. Buildings located in the B-2 zone are specifically ***encouraged*** to adhere to the design guidelines contained in the B-1, B-1b, B-2, B-2b Design Guidelines (Appendix 2) of this section concerning the creation and preservation of an ***urban street wall***.		
2. In the B-1b and B-2 zones, buildings are specifically *encouraged* to adhere to the guidelines contained in the B-1, B1b, B-2, B-2b Design Guidelines (Appendix 2) of this section concerning *building entrances*.		

Appendix 2 Guidelines
Development in the B-1, B-1b, B-2, B-2b shall meet the following guidelines in order to meet the Site Plan Standards
1. Building Location and Form
Buildings shall be located near the street so as to create an urban street wall. An urban street wall is created by a pattern of buildings which line the street in a consistent manner, thereby establishing a desirable spatial relationship between the building in the commercial district and the major object. Location is one of several related factors defining the street environment.
Building Form, including height, bulk, and massing, contribute to the development of a street wall. The desired condition is to have the building frame and enclose the street, which is achieved by providing building height that is proportionate to the width of the adjoining major street. A ratio of building height to street width of one-to-two creates a strong "room-like" street, while a one to-three ratio provides good street definition and proportion. Shorter buildings of one story facing broad streets will not achieve the desired relationship.
In the B-2b zone, buildings adjacent to streets should approach 1:2 height to street width, with a minimum of 1:3. For a fifty-foot street right-of-way, therefore, a minimum height of 15' is required, with 25'height preferred. An eighty-foot right-of-way requires about 27' to achieve the 1:3 proportion with 40'-height preferred. Obviously, buildings located as close as possible to the street right-of way will provide better definition and proportion than buildings set further back.
2. Building Function
An urban street and business district requires a substantial intensity and variety of uses. It is beneficial to have mixed uses within portions of buildings situated near the street. For example, a retail first floor might have office or residential on the second or third floors. This provides both the scale of building height desired, as well as the economic vitality of the business district.
3. Orientation of Buildings and their Entrances to the Street
Major building entries shall be designed and located to provide the primary building access oriented to the public street and sidewalk. Doorways should be prominent and obvious in appearance, so as to attract the users toward the entry. Major entry features should primarily address the street, with entry courts, display windows, signage, lights, walkways, and vestibules, as appropriate. Major entries should be adjacent to, or very close to, the street and public sidewalk.
4. Windows
Windows shall be located in all building facades visible from the public way, especially on

building facades along the major public street. Retail uses with store fronts are the most desirable feature for locations adjacent to the public sidewalk; and active, transparent (minimum visible transmittance (VT) of .7 or greater), and interesting windows contribute the maximum value. Limitations on transparency, such as dark or reflective glass, or interior coverings, should be avoided. Where uses (such as office) are not conducive to transparent viewing from the public way, windows can still convey a sense of activity and presence along the street. Even these more private windows can convey occupancy and habitation when lighted from within, as during evening hours, even if the interior is screened from view.
5. Building Character, Detail, Scale, and Graphic Qualities
Building design will include various architectural and graphic amenities to provide a strong presence along a street and relate a building to its community. *Awnings, canopies, and flags* may be utilized to highlight entryways and to further identify the activity and identity of a use. *Facade lighting* may be used to highlight entryways or to provide visual interest along an otherwise blank facade Building scale, roof pitch, architectural detail, and fenestration shall be designed to complement and be compatible with surrounding residential and commercial buildings.
6. Signage and Building Entrances
Building entrances and building signage in the B-1, B-1b, and B-2b zones will be designed and constructed at the pedestrian scale.
7. Development Relationship to Street
Building facades and site amenities shall form a cohesive wall of enclosure along a street. Where buildings are not located at the street line, site amenities, including masonry walls, fences, and landscaping, shall be placed along the street to provide a sense of enclosure or definition.
8. Parking Lots
Parking Lots shall be screened from view of the public way. Landscaping or fencing shall be used to screen parking lots from public ways and residential neighbors. Where parking is located within the front yard (or side yard of a corner lot), a landscaped buffer or fence shall be placed along the street line to distinguish the private space from the public space and to help define the street wall.
Parking lots shall be screened from neighboring properties. A densely planted landscape buffer or fencing shall be installed to protect neighboring properties from the impacts associated with the parking lot and the use it serves.

VII. COMPREHENSIVE PLAN AND ZONING ANALYSIS

The Planning Board will be asked to make a determination of whether the proposed map amendment is consistent with the Comprehensive Plan and make a recommendation to the City Council. A full analysis will be prepared for a public hearing. The Comprehensive Plan includes policies that support commercial nodes near residential areas and seeks to limit business expansion into residential zones. In addition, the housing element of the Comprehensive Plan includes many policies to support increasing the diversity and density of housing in the city and support a variety of neighborhood businesses and services to be located in proximity of residential areas. The B-2 and B-2b zone provides greater flexibility for housing development and a diverse mix of uses.

More recently, Portland conducted a corridor study of Forest Avenue from Park Avenue through Woodfords Corner. Transforming Forest Avenue was adopted by the City Council on June 4, 2012 and it included

recommendations for land use, transportation, and streetscape alternatives based upon a community process and best practices for transit supportive development. The report Transforming Forest Avenue is available on the City's web site: http://www.portlandmaine.gov/documentcenter/view/3388

Transforming Forest Avenue considered land use options for the corridor, including use based zoning, form based code and transit supportive development (TSD). Feedback from the community process indicated satisfaction with the current zoning with enhancements, adjustments and incentives considered to promote TSD principles. Encouraging vibrant and diverse land uses is an important principle of TSD development in order to provide multiple destinations in close proximity within an area. The report notes that while B-2 and B-2b currently support mixed uses, many of those uses have not located along the corridor. It is suggested that other incentives may be needed to encourage the type and density of uses envisioned, such as expedite reviews, financial incentives or other options. The report also points out that the transitions between the commercial and residential areas may require attention in order to achieve adequate buffers without limiting commercial activity. The development pattern should "provide for vibrant loci or activity at a pedestrian scale." Architectural quality, high quality parking, and public spaces are other land use components that are identified as components for creating a high quality transit corridor.

Compact development that increases the concentration of uses and structures in the built environment is identified as a strategy to support TSD. While the B-2 and B-2b zones have similar uses and dimensional standards, the design guidelines between the two zones do differ. The design standards for the B-2b zone are more urban and pedestrian oriented. For example, in B-2b the building entrances shall be oriented toward or directly accessible from a public sidewalk, transparent windows are required along street frontages, and street frontages should create an active presence along the sidewalk. The standards and accompanying guidelines are included as Attachment 3.

The Board will want to advise the staff on the extent of the area to be considered for rezoning. The Board can choose to expand the area for advertising and then refine the boundaries at the public hearing. Once the boundaries of a proposed map amendment are advertised, the boundaries cannot be expanded beyond the advertised area.

VIII. STAFF RECOMMENDATION

The staff suggests a positive recommendation on the proposed map amendment with the possible exception of excluding the property held by Oakhurst Properties LLC at the corner of Bedford and Forest Avenue.

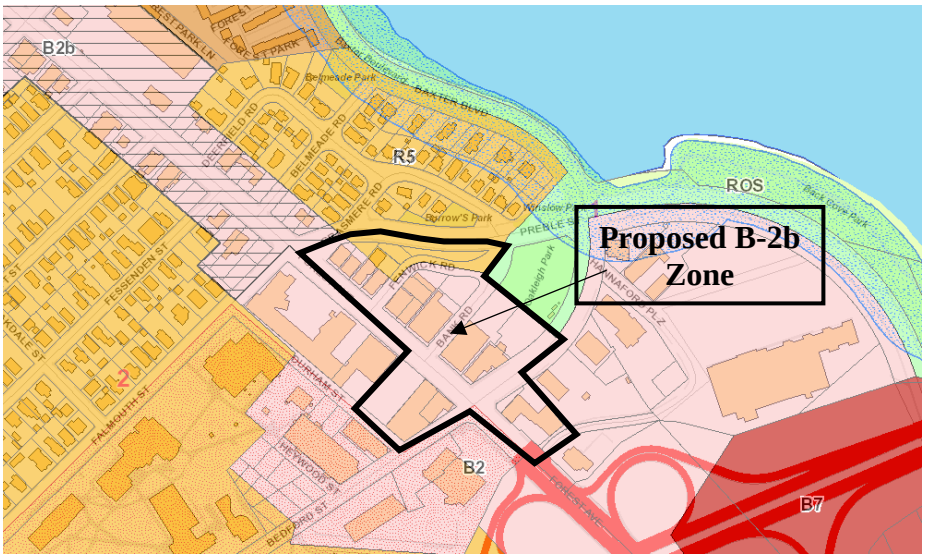
IX. PROPOSED MOTION

On the basis of plans and materials submitted by the City of Portland, the policies of the Residential R-5 Zone, the Community Business B-2 Zone and the Community Business B-2b zone, Portland's Comprehensive Plan, public comment, the information provided in public hearing on March 22, 2-16 for the Council's referral to the Planning Board to consider rezoning a portion of the Forest Avenue Corridor, and/or other findings as follows:

1. Map Amendment

The Planning Board finds that the proposed rezoning of the R-5 and B-2 zones to B-2 b as shown on the map below **[is or is not]** consistent with the Comprehensive Plan for the City of Portland; and

Therefore, the Planning Board **[<u>recommends</u> or <u>does not recommend</u>]** to the City Council approval of the zoning map amendment.



X. ATTACHMENTS

1. Council Order #157
2. Historic Preservation Memo and attachments
3. B-2 and B-2b Design Guidelines
4. Neighborhood Packet – March 10, 2016
5. Public Comment

Order 157-15/16
Motion to Waive the Second Reading: 9-0 on 2/1/2015
Motion (as amended by a vote of 9-0 on 2/1/2016) to refer Order 157 to the Planning Board and to report back to the City Council prior to the Planning Board reviewing a site plan application in the Forest Avenue corridor but in any event no later than April 1: 9-0 on 2/1/2016
Effective 2/11/2016

ETHAN K. STRIMLING (MAYOR)
BELINDA S. RAY (1)
SPENCER R. THIBODEAU (2)
EDWARD J. SUSLOVIC (3)
JUSTIN COSTA (4)

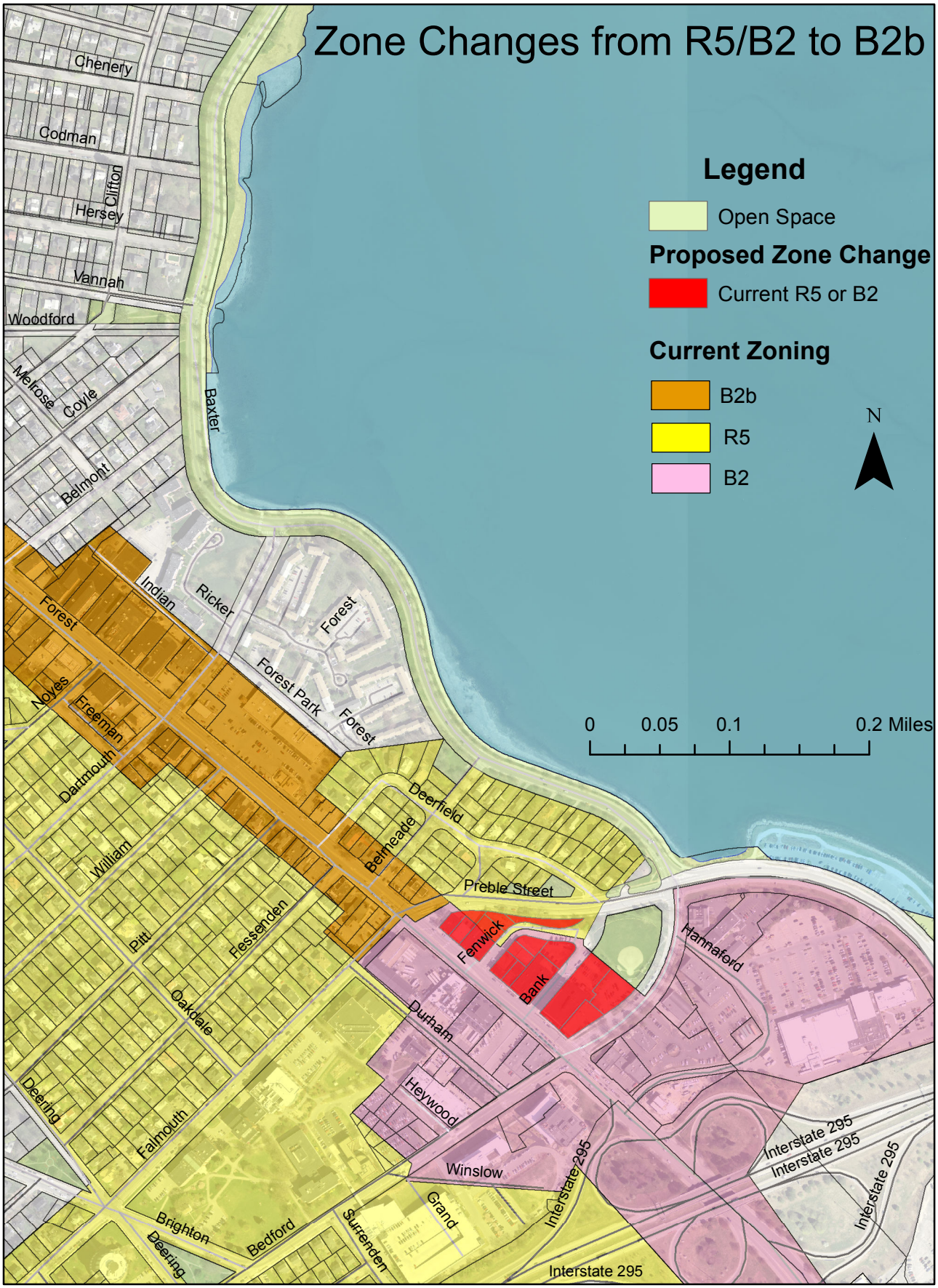
CITY OF PORTLAND
IN THE CITY COUNCIL

DAVID H. BRENERMAN (5)
JILL C. DUSON (A/L)
JON HINCK (A/L)
NICHOLAS M. MAVODONES, JR (A/L)

AMENDMENT TO ZONING MAP
RE: SOUTH OF PREBLE STREET EXTENSION, EAST OF FOREST AVENUE AND NORTH OF BAXTER BOULEVARD CHANGE TO B-2B ZONE

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

That the Zoning Map of the City of Portland, dated December 2000, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49, be and hereby is amended by adopting the following map change amendment and specifically rezoning the B2 Zone and the R5 Zone in the area shown in red in the figure attached hereto to B-2b.


Zone Changes from R5/B2 to B2b
Legend
Open Space
Proposed Zone Change
Current R5 or B2
Current Zoning
B2b
R5
B2
N
0
0.05
0.1
0.2 Miles
Chenery
Codman
Clifton
Hersey
Vannah
Woodford
Melrose
Coyle
Belmont
Baxter
Indian
Ricker
Forest
Forest Park
Forest
Forest
Noyes
Freeman
Dartmouth
William
Pitt
Hessenden
Oakdale
Deering
Falmouth
Brighton
Deering
Bedford
Surrenden
Grand
Winslow
Heywood
Durham
Fenwick
Bank
Preble Street
Deerfield
Belmeade
Hannaford
Interstate 295
Interstate 295
Interstate 295
Interstate 295

HISTORIC PRESERVATION BOARD
CITY OF PORTLAND, MAINE

PUBLIC HEARING
351-355, 369 and 371-373 FOREST AVENUE

TO: Chair Benson and Members of the Historic Preservation Board

FROM: Deborah Andrews, Historic Preservation Program Manager

DATE: January 27, 2016

RE: February 3, 2016 **PUBLIC HEARING - Determination of Eligibility For Local Landmark Designation**

Addresses: 351-355 Forest Avenue
369 Forest Avenue
371-373 Forest Avenue

Introduction

Following a preliminary workshop on January 13th, the Historic Preservation Board will hold a public hearing on the question of eligibility of three Forest Avenue buildings for local landmark designation. The three buildings in question are 351-355 Forest Avenue (which currently houses Palmer Springs), 369 Forest Avenue (Creative Trails) and 371-373 Forest Avenue (Forest Gardens and David Munster's TV Repair and Service). The request for determination of eligibility for historic designation was prompted by a demolition proposal submitted by legal counsel for CVS. CVS proposes to demolish 5 contiguous buildings on the east side of Forest Avenue near the intersection of Preble Street extension in conjunction with its plans to build a new pharmacy on the site. Consistent with the City's demolition permit review process, the demolition request was reviewed by historic preservation staff to determine whether or not the subject structures may be eligible for local and/or National Register historic designation. Staff elected to forward the matter to the Historic Preservation Board based on available documentation regarding the subject structures and previous findings from the Maine Historic Preservation Commission as to their eligibility for listing in the National Register of Historic Places.

On Wednesday, following a staff presentation and public hearing, the Board will vote on the eligibility of each structure based on the historic preservation ordinance's designation criteria, which address both the question of significance and integrity (Sec. 14-610 and Sec. 14-611).

Included in this report is information on each of the subject structures, including current and historic photos, an architectural description, a brief history of use and a description of the building's relationship to the history and evolution of Forest Avenue, particularly during the first decades of the twentieth century when each of the subject structures was built. The report also identifies the specific designation criteria under Sec. 14-610 (Minimum criteria for designation) that are applicable for each building. Finally, an assessment of each building's level of integrity is provided, as required under Sec. 14-611 (Integrity of Landmarks and Historic Districts). See **ATTACHMENT A**.

Also attached to this report is a historic context statement that describes the history and evolution of Forest Avenue and the development history of structures built along the corridor. See **ATTACHMENT B**. The context statement is important in understanding the role and relative significance of the buildings in question.

This report will also clarify the requirements for designation as a local "landmark" and provide examples of other individually-designated historic structures throughout the city.

In preparation for the public hearing, Sandra Guay, counsel for CVS's developer TMC New England, LLC and Mary Costigan, counsel for the owners of 351-355 and 369 Forest Avenue submitted letters for the Board's consideration—see **ATTACHMENTS D and E**. Ms. Guay has also forwarded with her letter structural evaluation reports for the structures located at 351-355 and 369 Forest. These reports are submitted pursuant to Sec. 14-611 of the ordinance which requires that a historic structure meeting one or more of the minimum criteria for designation "must also have sufficient integrity of location, design, condition,materials and workmanship to make it worthy of preservation or restoration." Structural Engineer Bruce MacLeod, P.E. plans to attend the public hearing to present his findings as to the condition of the buildings.

Background

In a letter dated November 20, 2015, Sandra Guay, counsel for CVS and its developer TMC New England LLC., informed historic preservation staff of the company's intent to demolish five structures on the east side of Forest Avenue, near the intersection of Preble Street Extension. Buildings proposed for removal include 351-355, 365, 369, 371-373 and 375 Forest Avenue—see **ATTACHMENT G1, Figure 1** for aerial view of affected structures. Demolition is proposed in conjunction with CVS' plan to construct a new CVS pharmacy on the five contiguous parcels occupied by the buildings. Ms. Guay's formal letter of intent followed a preliminary meeting between the applicant's representatives and Planning staff, during which the applicant team was informed of the City's demolition approval requirements, which include sign-off by the Historic Preservation office. Consistent with historic preservation ordinance requirements, the demolition request was reviewed by historic

preservation staff to determine whether or not the subject structures may be eligible for local and/or National Register historic designation.

In this case, the subject buildings were evaluated for their historic and/or architectural significance, at least on a preliminary basis, in two recent architectural surveys focusing on Forest Avenue. Based on the results of these surveys and staff's own preliminary assessment of the affected structures, staff elected to forward the question of local designation eligibility to the Historic Preservation Board.

Note that two of the five buildings identified in Ms. Guay's letter were previously determined by staff to be clearly *ineligible* for historic designation. These are the buildings at 365 and 375 Forest Avenue. This finding was communicated to Ms. Guay in a 12/7/15 letter from Planning & Urban Development Department Director Jeff Levine. See **ATTACHMENT G2.**

Available Documentation and Assessments from Architectural Surveys

The buildings along Forest Avenue, specifically the section between the I-295 interchange and Woodford's Corner, have been evaluated for their historic and/or architectural significance in two recent architectural surveys.

MDOT survey. In 2011, in conjunction with MDOT's plans for public infrastructure improvements along Forest Avenue, MDOT commissioned an architectural survey of the project area. This survey was mandated by Section 106 of the National Historic Preservation Act, which requires that any project receiving federal funding or licensing should "take into account the effect of the undertaking on any district, site, building, structure or object listed in or eligible for the National Register of Historic Places." MDOT retained architectural historian Martha Burke to conduct a reconnaissance-level survey of the project area and to produce a report on the findings. A copy of survey forms for properties within the applicable area of Forest are enclosed as **ATTACHMENT G5**. A copy of MDOT's report to the Maine Historic Preservation Commission is enclosed as **ATTACHMENT G4.** Finally, a copy of the Maine Historic Preservation Commission's response to MDOT is enclosed as **ATTACHMENT G6.**

The final step in the Sec. 106 review process is for staff of the Maine Historic Preservation Commission (MHPC) to review the findings of MDOT and its consultant and make its own final determination of National Register eligibility for the buildings within the project area. At the bottom of the second page of each survey form, the Commission adds its finding as to eligibility. In this instance, Deputy Historic Preservation Officer Kirk Mohney conducted the final review and his findings appear at the end of each form. Mr. Mohney summarizes MHPC's position as to the status of historic resources within the survey area in an October 3, 2011 letter to MDOT—**ATTACHMENT G6.**

Note that the survey conducted by MDOT was a reconnaissance-level survey, meaning that the survey was based primarily on visual observation and the experience/expertise of the reviewer to identify buildings of potential historic and/or architectural merit. The reviewer also considers the degree of alteration that might affect the building's eligibility for the National Register. No detailed research is conducted on the historic context of the buildings or area in question. Obviously, more detailed research and documentation would be required to pursue formal listing in the National Register.

MDOT concluded in its Architectural Survey Report that "there are no eligible individual or historic districts within the survey area". Note that the Maine Historic Preservation Commission did not agree with the conclusion of MDOT's report. MHPC identified nine (9) buildings as eligible for the National Register "based on the information in the survey, as well as staff knowledge about the historic function and architectural significance of the buildings in the survey – particularly those related to early twentieth century automobile dealerships." MHPC identified another seven (7) buildings that warranted further research to make a final determination.

In his letter to MDOT, Mr. Mohney identifies the buildings at 355 Forest (built for the Gilson Auto Company; known today as the Palmer Spring Company Building) and 369 Forest (built for the State Motor Car Company) as being eligible for listing in the National Register.

Note that MHPC's consideration was limited to the question of eligibility for the National Register of Historic Places, either individual listing or listing as part of a contiguous district. No consideration was given to potential designation at the local level, the criteria for which may differ.

<u>Greater Portland Landmarks Survey.</u> In June, Greater Portland Landmarks Executive Director Hilary Bassett contacted the Planning Department regarding GPL's intention to conduct an architectural survey of Forest Avenue and Stevens Avenue and to conduct general research on the development of these two corridors. As Ms. Bassett noted, Landmarks had been encouraged by members of the Council to be proactive in identifying historic buildings and areas of the City that warrant further study and had secured a private donation to conduct the survey. It was hoped that the information resulting from the survey would inform future planning/revitalization efforts on these two key off-peninsula transportation corridors. For Forest Avenue in particular, the survey work could supplement the City-initiated "Transforming Forest Avenue" plan for public infrastructure improvements. The Planning Department expressed support for the initiative and Historic Preservation Staff consulted on the project.

Landmarks' work included two components: preparation of a "historic context" report documenting the development history of Forest Avenue and Stevens Avenue, and an architectural survey of historic structures along the two corridors. Architectural historian and preservation consultant Scott Hanson was hired to prepare the historic context report and graduate student interns completed the survey. Following the more general survey, approximately 15 buildings from each street were selected for further documentation. As a Landmarks representative explained at the January 13th workshop, the 15 buildings selected for additional documentation were chosen because they represented the range of building types in the study area, *not* because they were determined to be the only or most significant buildings within the study area.

Note that Landmarks' report does not include specific recommendations regarding which buildings should be considered for local and/or National Register designation, nor does it recommend an appropriate type of designation--for example, individual landmark designation, designation as part of a contiguous historic district, or designation as part of a theme-based multiple property designation.

At the January 13th workshop, Hilary Bassett and Julie Larry of Greater Portland Landmarks made a presentation on the survey, describing its purpose of the survey, the methodology used, survey results and the survey's relationship to the previous MDOT survey.

Assessing Eligibility for Historic Designation – Ordinance Criteria

In considering the question of eligibility for designation, the Board is guided by the criteria outlined in Division 3 of the ordinance, specifically Sec. 14-610 "minimum criteria for designation" and Sec. 14-611 "integrity of landmarks and historic districts". See **ATTACHMENT G3** for applicable ordinance excerpts. Under these criteria, the Board must consider not only the historic and/or architectural significance of the structure or potential district, but also its integrity. Under the integrity criterion, the Board needs to consider whether the building exhibits "sufficient integrity of location, design, condition, materials and workmanship to make it worthy of preservation or restoration". Under the requirements of the ordinance, both the designation criteria under Sec. 14-610 and the integrity criterion under Sec. 14-611 must be shown to be met.

Landmark Designation

At the preliminary workshop session, there was some discussion as to whether it was preferable to designate the structures in question, if any or all are determined to meet the designation criteria, as individual landmarks, as contributing structures within a historic district, or, as part of a "multiple property designation" in which individual structures that may or may not be contiguous are designated as representative examples of a significant cultural, historic, architectural or related theme. Although there has been some preliminary discussion

of the concept of a Multiple Properties Designation, and although the City may wish to pursue such a designation process vehicle in the future, Historic Preservation and Planning staff are confident that the classifications provided in the ordinance as currently written are adequate and appropriate to designate the buildings in question. Staff recommends that the buildings be considered for individual landmark designation in this instance.

The designation classification "landmark", as it has been applied in Portland and many other communities with a historic preservation ordinance, refers to individual historic buildings that are found to meet the ordinance's designation criteria. Not every designated landmark in Portland rises to the level of significance that the term "landmark" usually connotes—buildings such as Portland City Hall, Portland Observatory and First Parish Church. Local landmark designation has also been conferred to individual historic buildings, usually located outside of contiguous historic districts, that are significant within their specific context, be it a geographic, architectural, historic or thematic context. As an example, the Italianate residential building at 147 Congress Street was recently designated a local landmark by the City Council based on its significance within the context of Munjoy Hill's development, as one of the few buildings to have survived the Great Fire of 1866. The Tracy-Causer Building at 505-507 Fore Street, a mid-19th century commercial block that was part of Portland's Irish neighborhood known as Gorham's Corner is another example. The Abraham Levey commercial block at 78-88 Middle Street, located at the Middle Street gateway to the India Street neighborhood, was also individually designated as a landmark structure. These buildings are not "landmarks" per se, but architecturally and/or historically significant nonetheless, especially in their given context. In short, although "landmark" is the legal term used within the preservation field for an individually designated historic structure, perhaps a more descriptive term would be just that: individually designated historic structure.

Assessment of Integrity

In applying the historic preservation ordinance's integrity standard (Sec. 14-611), Board members are encouraged to consult the attached excerpt from a National Register Bulletin "How to Evaluate the Integrity of a Property" (**ATTACHMENT C**). As the bulletin explains, "integrity is the ability of a property to convey its significance" and describes seven specific aspects of integrity that need to be considered in evaluating whether a structure or site meets this test.

Note that the bulletin addresses all aspects of integrity except for condition, as building condition is not a consideration in National Register designations. Here, the Board should be guided by definitions included in Portland's ordinance that address the question of condition. For example, the definition of a "noncontributing structure", although applicable only for buildings within a historic district, provides the following guidance as regards consideration of condition: "A classification applied to a …structure…that 1)…2)… or 3) where the location, design, setting, materials workmanship and association have been so altered <u>or have so</u>

deteriorated that the overall integrity of the…structure…has been irretrievably lost".
The Board should review the structural reports prepared for CVS' developer (see **ATTACHMENT D)** in considering whether the buildings "have so deteriorated that the overall integrity of the structure has been irretrievably lost." The Board should also consider whether the information provided is sufficient to answer this question.

Note that the Board may determine that only a portion of an existing building is eligible for landmark designation based on the question of integrity and limit its finding accordingly. For example, 351-355 Forest Avenue, now identified as a single property, is actually comprised of two original 1920's-era buildings plus several subsequent building additions that have created one connected complex. In staff's view, and in MHPC's finding of NR eligibility, only the original Gilson Auto Co. building at 355 Forest is eligible for landmark designation.

Implications of a Determination of Eligibility

If one or more of the three structures identified for Board consideration are determined to meet the criteria for designation, demolition would be possible only if the applicant can meet the test of economic hardship—see Sec. 14-632: Properties eligible for listing on National Register or for local Designation". Determinations of Economic Hardship are made by the Zoning Board of Appeals. Upon determination of eligibility, the structure shall also be subject to the ordinance's minimum maintenance provisions until a final decision by the Council on designation becomes effective. If the Board elects to pursue designation, the designation process as prescribed in the historic preservation ordinance would commence.

Subject Structures – Building Descriptions, Staff Assessment of Eligibility for Landmark Designation

ATTACHMENT A provides information on each of the subject structures, including current and historic photos, an architectural description, a brief history of use/occupants and a description of the building's relationship to the history and evolution of Forest Avenue. Following each description, staff identifies the specific designation criteria (see Sec. 14-610) that are applicable for the given building. Finally, staff provides an assessment of each building's level of integrity, as required under Sec. 14-611 (Integrity of Landmarks and Historic Districts).

Note: In each of the building descriptions, reference is made to the structure's place in the evolution of Forest Avenue as one of the city's most significant off-peninsula transportation corridors. To appreciate the significance of each of the subject structures, it is necessary to understand the history and development of Forest Avenue. **ATTACHMENT B** is a summary of that history, largely excerpted from a report prepared by architectural historian Scott Hanson entitled *Forest Avenue and Stevens Avenue, Portland Maine: Historic Context.*

Motions for Consideration

On the basis of information and supporting documentation included in the staff report for the February 3, 2016 public hearing, the Board finds that:

1. a) 355 Forest Avenue, excluding the building additions shown in ATTACHMENT 1, Figures 1 and 2) **meets/does not meet** the minimum criteria for designation in Sec. 14-610 of the historic preservation ordinance, **specifically Criteria 1, 4 and 6.;**
b) 355 Forest Avenue, excluding the building additions shown in ATTACHMENT 1, Figures 1 and 2) **meets/does not meet** the integrity standard for designation in Sec. 14-611 of the historic preservation ordinance;

c) On the basis of the above findings, the Board finds that 355 Forest Avenue, excluding the building additions shown in ATTACHMENT 1, is **eligible/ineligible** for landmark designation under the provisions of Article IX (Historic Preservation) of the Land Use Code.

2. a) 369 Forest Avenue **meets/does not meet** the minimum criteria for designation in Sec. 14-610 of the historic preservation ordinance, **specifically Criteria 1, 4 and 6.;**

b) 369 Forest Avenue **meets/does not meet** the integrity standard for designation in Sec. 14-611 of the historic preservation ordinance;

c) On the basis of the above findings, the Board finds that 369 Forest Avenue is **eligible/ineligible** for landmark designation under the provisions of Article IX (Historic Preservation) of the Land Use Code.

3. a) 371-373 Forest Avenue **meets/does not meet** the minimum criteria for designation in Sec. 14-610 of the historic preservation ordinance, **specifically Criteria 1 and 6;**

b) 371-371 Forest Avenue **meets/does not meet** the integrity standard for designation in Sec. 14-611 of the historic preservation ordinance;

c) On the basis of the above findings, the Board finds that 369 Forest Avenue is **eligible/ineligible** for landmark designation under the provisions of Article IX (Historic Preservation) of the Land Use Code.

ATTACHMENTS

A. Descriptions and Analysis of Eligibility for Landmark Designation of 351-355 Forest, 369 Forest and 371-373 Forest

B. Historic Context Statement - *Forest Avenue: Its Early Development & Transportation History (*excerpted from *Forest Avenue and Stevens Avenue, Portland Maine by Scott Hanson)*

C. Excerpt from National Register Bulletin, "How to Evaluate the Integrity of a Property"

D. January 27, 2016 letter with attachments from Sandra Guay on behalf of TMC New England, LLC, including structural reports for 351, 355, and 369 Forest Avenue prepared by MacLeod Structural Engineers.

E. January 27, 2016 letter with attachments from Mary Costigan on behalf of Palmer Spring Co., owner of 351-355 Forest, and D & J Weeks Properties, owner of 369 Forest

F. Compilation of written public comment to date, in chronological order

G. ATTACHMENTS from 1/13/16 Workshop

1. 11/20/15 letter from Sandra Guay, representing CVS, with attachments
2. 12/7/15 letter to Ms. Guay from Jeff Levine, Director of Planning & Urban Development
3. Applicable ordinance provisions
4. MDOT survey report
5. MDOT survey forms with MHPC notation
6. 10/3/2011 memorandum from MHPC to MDOT
7. *Forest Avenue and Stevens Avenue: Portland Maine Historic Context*, Report and Survey Findings

H. January 28, 2016 Letter from Michael Kaplan, owner of 371-373 Forest Avenue *Received after preparation and scanning of report*

Attachment A

351-355 FOREST AVENUE

351-355 Forest Avenue, now identified as a single property, is actually comprised of two 1920's-era buildings plus several subsequent building additions that have created one connected building complex. The structure at 351 Forest, although built during the same period as 355 Forest, is not a noteworthy example of its type, is not an auto-related structure and most of its original character-defining architectural features have been removed or altered. Similarly, later building additions (see plan) have no historic or architectural significance. For purposes of designation, staff recommends that only the Gilson Auto Company Building at 355 Forest be considered for landmark designation.

See following page for description and analysis of 355 Forest Avenue.

Fig. 1

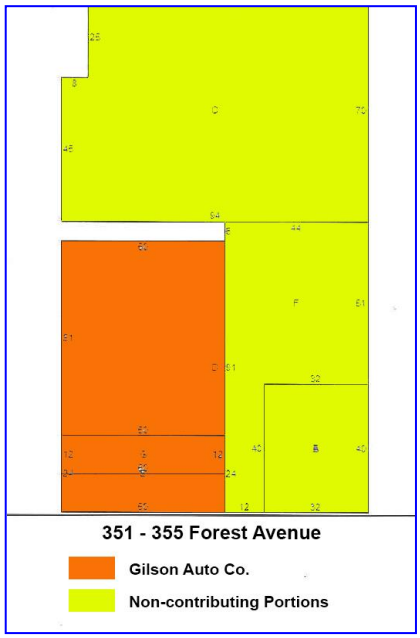
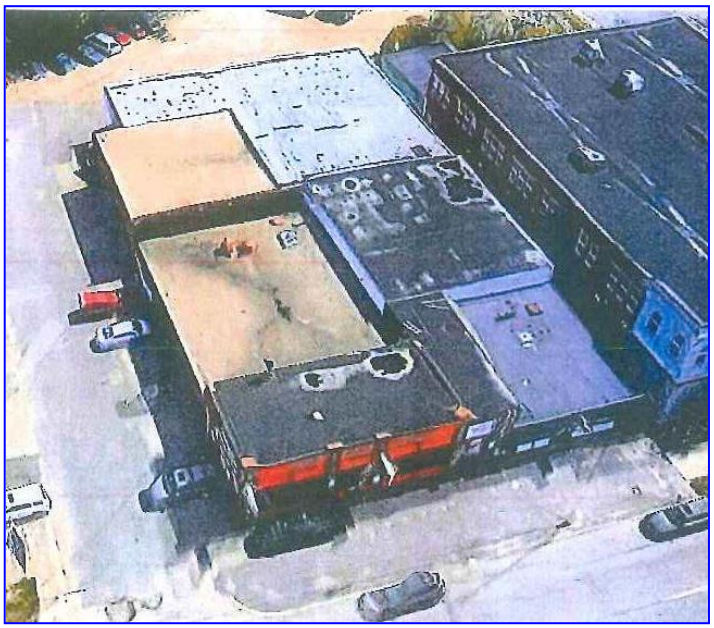


Fig. 2



351 Forest

355 FOREST AVENUE

Historic Name: Gilson Auto Company Building
Construction Dates: 1922, rear addition 1981
Style: Vernacular & Art Deco/Moderne

Originally occupied by the L. C. Gilson Automobile Company, the building at 355 Forest Avenue was built as an auto showroom in February 1922. Gilson had already established an automobile dealership at 881-891 Congress Street by 1906, selling cars from Ford, Reo and Stanley in what the Portland's Board of Trade Journal called, "one of the largest, most modern [garages] in New England." By 1924, the Congress Street block had been converted into apartments and the Gilson Automobile Company had relocated to 355 Forest Avenue.
Since its construction, the building has always been utilized for automobile sales or servicing purposes. It was occupied by Brewster Tire Stores Inc. in 1927. In 1929, Forest City Tire Company shared the building with Firestone Tire Stores Incorporated, which continued as the property's sole occupant in 1930-31.

The building is best known as Palmer Spring Company building, given the company's presence at this address since 1932. Palmer Spring Company was established in 1849 and is thought to be the oldest spring company in the United States. Joseph Benjamin Palmer founded the company in Boston after bringing his trade from England and served as its first blacksmith. The company's Conestoga wagon logo is a reminder of the vehicles originally serviced by Palmer Spring Company.

Building Description
Typical of early auto showroom structures, the building is one story, has three wide bays and a flat roof. Ornamentation is provided through the use of contrasting brick on the façade piers and Art-Deco-inspired architectural details. In addition to the front showroom facing Forest Avenue, the building has included a connected multi-bay garage at the rear since its construction. Over time, in response to a growing business several additions have been added and a connector was built to adjoin the once-separate commercial structure at 351.

National Register Eligibility: 355 Forest was determined to be eligible for National Register by Maine Historic Preservation Commission in 2011.

Applicable Designation Criteria under Sec. 14-610:

Criterion 1: Its value as a significant example of the cultural, historic, architectural, archaeological or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States.

The building is a significant example of the impact of the automobile on Portland's suburban development along Forest Avenue in the early 20th century and on commercial architecture specifically designed for this new product type.

Criterion 4: Its exemplification of a significant architectural type, style or design distinguished by innovation, rarity, uniqueness or overall quality of design, detail, materials and craftsmanship.

The building is a noteworthy example of an early auto showroom/service structure, a building type introduced with advent of automobile sales.

Criterion 6: Its representation of a significant cultural, historic, architectural, archeological or related theme expressed through distinctive areas, sites, structures or objects that may or may not be contiguous.

The building is one in a cluster of auto-related structures constructed in the early 20th century that formed Portland's "Auto Row". Additionally, the building is part of a larger group of specific building types that were introduced with the advent of the automobile: auto showrooms, gas stations, commercial and residential garages, etc. Just as automobiles changed the landscape of the city, so too did the structures that were purpose-built to serve them.

Integrity Criterion under Sec. 14-610

Comparing historic and current views of the building, it is clear that the Gilson Auto Company (Palmer Springs) Building still retains its essential character-defining physical features. The building remains relatively unaltered and the alterations are readily reversible. As such, the building continues to convey its significance.

With respect to the question of condition, which is included as a relevant factor in determining integrity, the Board is encouraged to review the structural report prepared by MacLeod Structural Engineers, PA.

369 FOREST AVENUE

Historic Name: Franklin Service and Sales Company Building
Construction Date: 1922-1923
Style: Classical Revival

Originally occupied by Franklin Service and Sales Company of Portland, the one-story building at 369 Forest Avenue was built between1922 and 1926 as the location of the Portland distributor of Franklin Motor Cars. It is one of several early automobile related businesses on the length of Forest Avenue that would become known as Portland's Auto Row.

Franklin Motor Cars were designed by Herbert H. Franklin and manufactured in Syracuse, New York between 1902 and 1934 by the Franklin Automobile Company. Franklin Motor Cars were a luxury brand of cars and 150,000 autos were sold in the company's thirty years of existence. Like many of its luxury brand competitors, the Franklin Automobile Company fell victim to the Great Depression. The Franklin Service and Sales Company of Portland was owned by Percy Frost of Fessenden Street. The Forest Avenue location closed in 1934 when manufacturing of the Franklin Motor Cars ceased.

After the closure of Franklin Service and Sales Company of Portland the building was occupied by State Motor Company, a used car dealership in the 1940s. In the 1950s and 1960s the building was occupied by Arthur F Briggs' Commercial Refrigerator and Stove Equipment store. In the late 20th century it was occupied by Portland Tinware and is currently occupied by Creative Trails

Building Description

The brick structure is composed of a one-story front section, formerly the car showroom, and a one-story rear section, formerly the service area, that extends toward the rear of the lot bounded by Preble Street Extension. Both sections of the building share a contiguous

flat roof.

Character defining details of its architectural style (Classical Revival) include the classical door surround, the keystone and brick arch above the transom window, the projecting cornice, and the recessed brickworks panels and concrete accents. Character

defining details of its building type are the location of a sales area in the front portion of the building with large display windows and a pedestrian entrance along the primary street façade, as well as a rear service facility. The front section is three bays wide, with a central entrance at sidewalk level flanked by large tripartite display windows. The multi-pane transom windows above each display window have been covered over or removed. A brick pier with recessed panels and concrete accents separates each bay of the front elevation. The rear section of the building rests on a high foundation. Windows on the rear section are located on all three elevations, although some windows on the north and east elevations have been filled. The showroom windows on the east and west elevations of the front building have also been filled. A former garage door on the rear section of the building but visible from Forest Avenue has also been filled.

National Register Eligibility

369 Forest was determined to be eligible for National Register by Maine Historic Preservation Commission in 2011.

Applicable Designation Criteria under Sec. 14-610:

Criterion 1: Its value as a significant example of the cultural, historic, architectural, archaeological or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States.

The building is a significant example of the impact of the automobile on Portland's suburban development along Forest Avenue in the early 20th century and on commercial architecture specifically designed for this new product type.

Criterior 4: Its exemplification of a significant architectural type, style or design distinguished by innovation, rarity, uniqueness or overall quality of design, detail, materials and craftsmanship.

The building is a noteworthy example of an early auto showroom/service structure, a building type introduced with advent of automobile sales.

Criterion 6: Its representation of a significant cultural, historic, architectural, archeological or related theme expressed through distinctive areas, sites, structures or objects that may or may not be contiguous.

The building is one in a cluster of auto-related structures built in the early 20th century that formed Portland's "Auto Row". Additionally, the building is part of a larger group of specific building types that were introduced with the advent of the automobile: auto showrooms, gas stations, commercial and residential garages, etc. Just as automobiles changed the landscape of the city, so too did the structures that were purpose-built to serve them.

Integrity Criterion under Sec. 14-611

Although the building has undergone exterior changes, it retains the key character-defining details of its style and building type. The pattern of the fenestration remains largely intact and although some replacement is evident the original openings are apparent, the changes are readily reversible and the modifications do not limit the ability of the building to convey its significance.

With respect to the question of condition, which is included as a relevant factor in determining integrity, the Board is encouraged to review the structural report prepared by MacLeod Structural Engineers, PA.

371-373 FOREST AVENUE

Building Name: The Boulevard Apartment Building
Construction Date: 1922-1923
Style: Classical Revival and Art Deco styles

Originally known as the Boulevard Apartments, the building at 371-373 Forest Avenue was built 1922-1923 as a mixed-use building with two commercial bays on the first floor and four residential units above. It is a unique example on this portion of Forest Avenue of the transition from single use buildings, either residential or commercial, to a more urban development style of a mixed use, multistory building with a commercial use at the street level and residences above. Upper floor occupants in the early and mid-20th century were generally single working men and women, employed in nearby businesses.

The commercial spaces below the apartments were initially vacant, as the building was likely built on speculation. Early tenants in the building reveal that both of the ground floor commercial spaces were tied directly to Forest Avenue's emerging role as Portland's "Auto Row". 373 Forest Avenue was first occupied by Mohawk Tire Sales of Portland. 371 Forest Avenue was first occupied by Forest City Auto Top Company. The company moved to 373 Forest Avenue in the late 1920s. That company was succeeded in the 1950s by Vigue's Auto Top Company, which remained at 373 Forest Avenue into the mid-1970s.

Forest Gardens Restaurant opened at 371 Forest Avenue in 1936. Forest Gardens Restaurant, later Forest Garden Lunch and The Garden, had a succession of owners and eventually became the current Forest Gardens establishment. Since its establishment, Forest Gardens has played a significant role in the social history of the surrounding

Oakdale neighborhood and larger community, including a long association with local sports teams, faculty and students of USM, and alumni of Deering High and Portland High.

Building Description

The two-story brick structure has three bays, a flat roof with a projecting overhang and a deep cornice band, a pair of second story bay windows, and elaborate brick patterns on each pier. Typical of urban multi-use buildings, the commercial storefront has been altered from its original appearance, but the upper story retains its original window

openings and bay patterns, although the 2/1 sash window units themselves have been replaced. The building reflects several building styles. The projecting bays with their recessed wood paneling and the deep cornice at the level of the apartments relates to the prevailing residential style of the period, Classical Revival. The lower commercial level's simplified Art Deco style relates to the style and details of the nearby automobile showrooms and service stations. Although its large storefront windows are gone, the Art Deco character of the masonry detailing remains. Like many of the neighboring automobile showroom buildings, each bay of the building front is divided by wide brick piers that are articulated by flush geometric brickwork on the upper and lower level.

National Register Eligibility

371-373 Forest was not identified by the Maine Historic Preservation Commission as eligible for listing in the National Register during its assessment of the Forest Avenue corridor in 2011. According to MHPC staff, the Commission's consideration of eligibility in 2011 was limited to architectural significance and readily apparent association with Forest Avenue's history as Auto Row. The Commission did not have information about the building's history of use in making its preliminary determination.

Applicable Designation Criteria

Criterion 1: Its value as a significant example of the cultural, historic, architectural, archaeological or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States.

In evaluating whether 371-373 Forest meets this criterion, it is appropriate that the Board consider the role the building has played in the social and cultural history of the Oakdale neighborhood and the larger Portland community since the opening of Forest Gardens 1936. Also, as a mixed use building, 371-373 illustrates the period of transition of this portion of Forest Avenue from a largely residential corridor to an increasingly commercial, specifically auto-related commercial corridor.

Criterion 6: Its representation of a significant cultural, historic, architectural, archeological or related theme expressed through distinctive areas, sites, structures or objects that may or may not be contiguous.

Along with the purpose-built auto showrooms in its immediate vicinity, this mixed-use building was part of the cluster of buildings occupied by commercial tenants that provided automobile-related goods and services during the early 20th century

Integrity Criterion under Sec. 14-611

Although the ground floor commercial bays have been altered considerably, the upper floor remains largely intact from the building's original construction. Storefront alterations on historic commercial structures are typical and do not preclude meeting the ordinance's integrity standard if the building is still able to convey its significance. The original mixed use nature of the building is still clear and the alterations to the storefront bays are reversible.

No structural report has been provided for this building.

Attachment B

Forest Avenue: Its Early Development & Transportation History

January 2016

Woodford's Corner in the 1940s

This document is largely excerpted from the historic context statement prepared for *Forest Avenue and Stevens Avenue, Portland, Maine* prepared by Scott T. Hanson of Sutherland Conservation and Consulting in August of 2015. Additional details can be found in that report. Copies of *Forest Avenue and Stevens Avenue, Portland, Maine* are available from the City of Portland and Greater Portland Landmarks.

Introduction

Forest Avenue is one of Portland's oldest and most important transportation corridors. It serves as a vital connector between the peninsula and the suburban neighborhoods of Deering as well as adjacent communities to the west. A significant number of historic buildings remain along Forest Avenue that represents the social, cultural, economic, commercial and residential history of Portland's suburban development. Forest Avenue retains a number of automobile showrooms and auto-related businesses built in the early 20th century in a concentrated area between Baxter Boulevard and Belmont Street that served as Portland's Automobile Row.

Early Development along Forest Avenue

With the settlement of inland areas away from Portland's coast in the mid-eighteenth century came early roads connecting the peninsula town to these sparsely settled towns. Among the earliest roads was Forest Avenue. The route of present day Forest Avenue was completed in 1805 when a new bridge was constructed over a portion of Back Cove connecting Deering to the Parkside neighborhood. Forest Avenue was the primary road to the lakes and mountains and on to northern New Hampshire and Vermont. Over time, homes, farms, and shops were constructed along the road, generally developing from the peninsula outward. As inland settlement increased, this became a major route for farmers bringing produce to market in Portland.

Dense development occurred in the late 18th century where early roads intersected, particularly at Woodford's and Morrill's corners. These intersections were natural locations for the development of commercial establishments as well as taverns to serve stage coach travelers.

Railroad & Horse Car Suburban Development

Following the stage coach, railroads established suburban railroad stations at these major road crossings. The first railroad traversed Woodford's Corner in 1847 and a depot was built just to the north of the current intersection. Away from these commercial centers, residential development along Forest Avenue consisted of sizable estates for wealthy businessmen who commuted by private carriage from Deering to downtown Portland.

In 1864 a horse car line extended from the peninsula to Forest Avenue. The affordability of the new transportation method as well as demand for housing following the Great Fire of 1866 spurred suburban development for the middle class, especially near the growing business and neighborhood centers at Woodford's and Morrill's corners. The large estates nearest the corners were the first to be subdivided for this new residential development. "Separate from the city, these new subdivisions were designed as residential landscapes, combining open space, fresh air, and greenery of the country with an efficient arrangement of houses."[1] One of the first subdivisions was Dr. Eliphet Clark's plat in 1866 along Pleasant Avenue between Forest and Stevens Avenues. Other subdivisions were Warren Sparrow's along Arlington Street, Arlington Place, and Clifton Street in the 1870s and the Oakdale subdivision in 1881.

[1] Ames, David L. and McClelland, Linda Flint. Historic Residential Suburbs: Guidelines for the Evaluation and Documentation for the National Register of Historic Places, US Department of the Interior, National Park Service, 2002.

Street Car Suburban Development

The horse car lines were electrified in 1895, extending the transportation lines outward and expanding the availability of land for residential development. Following national trends, the suburban development in Deering attracted a wide range of people from the working to the upper middle class, with a large portion of the new residents being middle class. Suburban residential developments from this era include the Coyle Park development in 1899 and the Boulevard Park subdivision along Deerfield Road in the early 20th century. The houses built in all of these subdivisions reflected the architectural styles of the periods in which they were developed. While the earlier 19th century subdivisions featured primarily Italianate and Queen Ann style houses, the later ones were built in the Colonial Revival, Classical Revival, and Arts and Crafts styles.

At Woodford's the village center at the corner was substantially altered by the construction of the Odd Fellows Hall in 1897. The four story building with its clock tower was urban in scale and character. For a few years before the annexation of Deering by Portland, the Deering city offices were located in the new block. Additional commercial, social, and civic development built near the corner includes the new fire station on Deering Avenue in 1907, the Woodford's Club in 1913, and Albion Chapman's three story brick "flat iron" building of 1916 in the angle between Deering and Forest Avenues. Woodford's Corner continued to serve as an important neighborhood center for goods and services through the middle part of the twentieth century.

The Automobile and Its Impact on Development along Forest Avenue

In the first decade of the 20th century, the impact of the auto was minimal along Forest Avenue. Most residents of the area could work and shop in the area or they could quickly and affordably travel into the downtown via street cars. As the number of residents living along Forest Avenue increased due to the affordability of commuting into Portland, new residential forms appeared along the street to accommodate a diversity of housing needs. New residential buildings on Forest Avenue tended to be multi-family homes after 1900. Several two-family homes, a few triple decker apartment houses, and a couple of mixed use buildings constructed in the early part of the century remain. Mixed use buildings generally had a commercial use at the street level and residential apartments above.

The introduction of the personal automobile had an enormous impact on suburban development along Forest Avenue, reflecting a larger trend in the city, state and nation. In 1901 there were only 27 automobiles in Portland[2] and they were primarily toys for the wealthy businessmen. Nationwide and in Portland automobile ownership increased exponentially between 1910 and 1930. In 1915 the national average was one car for every forty-three citizens. By 1923, fifty percent of American households owned an automobile. The rise in auto ownership negatively impacted the ridership on the area's street cars, but it also created new businesses to fuel, service, and detail automobiles and generated new building types.

In the residential neighborhoods on either side of Forest Avenue, the impact of the automobile is represented by the small single car garage. Initially carriage barns were converted for use as garages, but in the 1920s one-story, single bay garages were often constructed to the side and rear of homes to accommodate vehicle storage. Several examples remain on streets like Deerfield Road, Belmont Street, Coyle Street, and Longfellow Street.

[2] Barnes, Albert F. Greater Portland Celebration 350. Portland, Maine 1984, 128.

Portland's Auto Row

Another new building type, the automobile showroom was generated by the success of the auto industry. Automobile companies built model showrooms that were emulated in small cities and towns across the country. In Portland, auto sales and services were initially incorporated into existing businesses and located in the downtown. As demand increased, Portland's auto dealer's emulated national developments and moved their showrooms outward along Forest Avenue, creating a concentrated area of dealerships known as an automobile row. Dealers congregated their dealerships along Forest Avenue between Baxter Boulevard and Bedford Street between 1915 and 1930 in an area occupied by large estates in the late 19th century.

These new car dealership buildings had a large footprint with significant enclosed interior space for displaying and servicing autos. Primarily one or two story buildings built of masonry construction with wood or steel truss roofs, these dealerships were among the first architectural building types developed in response to the automobile. The automobile showroom was located at the street where large plate glass windows gave ample view to passers-by of the autos for sale inside. The rear of the building was the service facilities, often with access from alleys or side streets. The buildings were designed in a variety of styles, with most of the architectural ornamentation concentrated on the showrooms.

In 1910 there were six automobile dealerships in Portland, all on the peninsula.[3] The first auto showroom on Forest Avenue was built in 1915 with three more built in the following two years. By 1924 there were seventeen buildings devoted to auto sales and service on Forest Avenue. These include tire and battery stores as well as another new building type, the filling station. Portland's auto row expanded west to Belmont Street several years later with the subdivision of the Ricker estate for four new auto dealerships and the Ricker Park apartments.

In 1910 there were three hundred companies producing automobiles in the United States. In Portland, many of the manufacturer names we recognize today, Ford, Chevrolet, Oldsmobile, and Chrysler were joined by lesser known manufacturers like Grant, Franklin, Peerless, and Hudson. Many of the smaller manufacturers succumbed to fierce competition or were consolidated into larger companies in the mid 1920s. Some manufacturers that survived until the late 1920s closed during the Great Depression.

The last great estate along Forest Avenue was redeveloped in the 1940s when the Forest Park development was built along Baxter Boulevard to house World War II shipyard workers. On the Forest Avenue portion of the development parcel a Howard Johnson's and A& P Grocery store were constructed.

Post World War II and the Impact of Interstate and Arterial Highways

Following national trends, Portland's suburban development after World War II was concentrated in bedroom communities further from the downtown than the earlier street car suburbs. The development of interstate and arterial highways, like I-295 and the Maine Turnpike following the Federal Aid Highway Act of 1956 fueled suburban development away from the historic core of the city. Many of the residents in these suburban communities still worked and shopped in Portland and Forest Avenue became a primary commuter arterial. The trolley system was abandoned before the war and although it was replaced by bus service, most of the suburbanites traveled by car. Automobile traffic through Morrill's and Woodford's Corners increased

[3] Barry, William David and Anderson, Patricia McGraw. *Deering*. Portland, Maine, 2010, 50.

dramatically in the 1950s and changes were made to accommodate the increased traffic. These changes decreased pedestrian access and safety and the resulting reduction in pedestrian activity made it challenging to sustain the scale and type of businesses that had historically been located in the neighborhood.

Eventually the increasing number of people living beyond the traditional urban and suburban core triggered commercial development of modern shopping centers further out. The Pine Tree Shopping Center was built off Brighton Avenue in 1959. Other modern shopping centers were built at Westgate in Libbytown, Northgate in North Deering, and near Riverside in Westbrook. Additional commercial development sprang up around the Exit 8 interchange of the Main Turnpike. This development impacted the auto dealerships along Forest Avenue as new larger car dealerships with large lots were built near the turnpike exit. Howard Johnson's built a new hotel and restaurant on Riverside near Exit 8 and demolished their 1940s building on Forest Avenue. A new modern shopping plaza, Forest Avenue Plaza, with a large front parking lot was built on the site of the former Howard Johnson's and the A&P grocery. Valle's Steakhouse built a new restaurant on Brighton Avenue near Exit 8, demolished their 1940s building at Woodford's Street and Forest Avenue, and built a new sandwich shop at that corner in 1964, in a building now occupied by the Woodford Food and Beverage.

Since the mid 20th century, Forest Avenue has increasingly become a street lined with commercial properties. Forest Avenue's residential history has nearly disappeared in the section between I-295 and Woodford's Corner. Only four homes and one mixed use building with apartments remain on Forest Avenue between I-295 and Coyle Street. All of the homes have been converted to commercial uses. Seven residential buildings remain between Coyle Street and Woodford's Corner, and all are located on the east side of the street.

The historic buildings that remain to represent Forest Avenue's social, cultural, residential, and commercial history are significant to an understanding of the development of Portland's off-peninsula suburbs in the 19th and early 20th centuries. The remaining buildings represent a range of styles and building types that are representative of a broad period in the historical development of Forest Avenue. Forest Avenue is also significant as the location of Portland's Automobile Row. The remaining automobile showrooms and auto-related businesses built in the early 20th century in a concentrated area between Baxter Boulevard and Belmont Street are representative of Forest Avenue's significance as a transportation corridor. The automobile dealerships, filling stations, and automotive related commercial buildings are also significant as examples of the commercial impact of the automobile industry in early 20th century Portland.

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of and comfort within existing and proposed pedestrian seating areas and other adverse impacts upon the surrounding area;

h. Setbacks from existing structures: The location and design of proposed structures shall not create a detrimental impact on the structural integrity or the safety of adjacent structures or the occupants thereof;

i. Building tops: Buildings or structures which exceed one hundred fifty (150) feet in height shall be designed so as to provide a distinctive top to the building which visually conveys a sense of interest and vertical termination to the building, as described and illustrated in the *Downtown Urban Design Guidelines* (Appendix 1);

GUIDELINES.

Please refer to Appendix 1 of this manual, the Downtown Urban Design Guidelines, for applicable guidelines relating to how development in the B3 Downtown Business Zone may adequately comply with the above listed standards.

(c) B-5 AND B5-B URBAN COMMERCIAL BUSINESS ZONES:

(1) **STANDARDS.** Development located in the B-5 and B-5b zones shall meet the following additional standards:

a. Shared infrastructure: Shared circulation, parking, and transportation infrastructure shall be provided to the extent practicable, with utilization of joint curb cuts, walkways, service alleys, bus pull-out areas, and related infrastructure shared with abutting lots and roadways. Easements for access for abutting properties and shared internal access points at property lines shall be provided where possible to facilitate present or future sharing of access and infrastructure.

b. Buildings and uses shall be located close to the street where practicable. Corner lots shall fill into the corner and shall provide an architectural presence and focus to mark the corner.

c. Buildings shall be oriented toward the street and shall include prominent facades with windows and entrances oriented toward the street. Uses that include public access to a building or commercial/office uses in mixed-use developments shall be oriented toward major streets whenever possible.

d. Parking lots shall be located to the maximum extent practicable toward the rear of the property and shall be located along property lines where joint use or combined parking areas with abutting properties are proposed or anticipated.

(d) B-1 AND B-1B NEIGHBORHOOD BUSINESS AND B-2 AND B-2B COMMERCIAL BUSINESS ZONES:

(1) **STANDARDS.** Development located in the B-1, B-1b, B-2, and B-2b zones shall meet the

Attachment 3

following additional standards.

a. Urban Street Wall: In the B-1, B-1b, and B-2b zone it shall be required that buildings shall be located to create and preserve an urban street wall.

b. Mixed Uses: In B-1b zone buildings shall be multi-storied with mixed uses.

c. Building Entrances: In the B-1 and B-2b zone building entrances shall be oriented toward, located adjacent to, and directly accessible from, a sidewalk in a public right-of-way.

d. Windows: In the B-1, B-1b, B-2, and B-2b zones windows shall be required along the street frontage of a building. Windows shall be transparent (with a visible transmittance (VT) of .7 or greater) and installed at a height to allow views into the building by passersby.

e. Facade Character: In the B-1, B-1b, B-2, B-2b zones, active and public portions of buildings (e.g. doors, windows, entries, retail displays) shall be oriented to and, where possible, be located adjacent to the public sidewalk to create an active presence along the sidewalk.

1. Where building facades situated along a public way have no interactive use or function, such facades shall be designed to provide sufficient architectural and graphic amenities to provide visual interest along the street and relate the building, and its use, to passersby.

f. Building Design: B-1, B-1b, B-2, and B-2b commercial buildings shall be designed to be compatible with their residential and commercial neighbors. In the B-1 and B-1b zones building scale, roof pitch, and fenestration shall be designed to complement surrounding residential structures.

g. Building Materials: Facade materials of buildings located in the B-1, B-1b, B-2, and B-2b zones shall be compatible with those materials of surrounding residential and commercial uses.

h. Building Scale: In the B-1 and B-1b zones building scale must relate and be compatible with surrounding residential structures.

i. Landscaping and buffers: In the B-1, B- 1b, B-2 and B-2b zones buildings and associated parking areas must be screened to buffer abutting properties. A densely planted landscape buffer and/or fencing will be required to protect neighboring properties from the impacts associated with the development, including lighting, parking, traffic, noise, odor, smoke, or other incompatible uses. Where buildings are setback from the street, a landscaped area must be planted along the front yard street line.

GUIDELINES.

Please refer to Appendix 2 of this manual, The B-1, B-1b, B-2, B-2b Design Guidelines, for applicable design guidelines for the B-1 and B-2 zones. In addition, the following design guidelines shall also apply:

1) Buildings located in the B-2 zone are specifically encouraged to adhere to the design guidelines contained in *the B-1, B-1b, B-2, B-2b Design Guidelines* (Appendix 2) of this section concerning the creation and preservation of an urban street wall.

2) In the B-1b and B-2 zones, buildings are specifically encouraged to adhere to the guidelines contained in *the B-1, B-1b, B-2, B-2b Design Guidelines* (Appendix 2) of this section concerning building entrances.

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Appendix 2

City of Portland
Technical Standards and Design Guidelines

Development in the B-1, B-1b, B-2, B-2b shall meet the following guidelines in order to meet the Site Plan Standards

1. Building Location and Form

Buildings shall be located near the street so as to create an urban street wall.
An urban street wall is created by a pattern of buildings which line the street in a consistent manner, thereby establishing a desirable spatial relationship between the building in the commercial district and the major object. Location is one of several related factors defining the street environment.

Building Form, including height, bulk, and massing, contribute to the development of a street wall.
The desired condition is to have the building frame and enclose the street, which is achieved by providing building height that is proportionate to the width of the adjoining major street. A ratio of building height to street width of one-to-two creates a strong "room-like" street, while a one-to-three ratio provides good street definition and proportion. Shorter buildings of one story facing broad streets will not achieve the desired relationship.

In the B-2b zone, buildings adjacent to streets should approach 1:2 height to street width, with a minimum of 1:3.
For a fifty-foot street right-of-way, therefore, a minimum height of 15' is required, with 25' height preferred. An eighty-foot right-of-way requires about 27' to achieve the 1:3 proportion., with 40'-height preferred. Obviously, buildings located as close as possible to the street right-of-way will provide better definition and proportion than buildings set further back.

2. Building Function

An urban street and business district requires a substantial intensity and variety of uses.
It is beneficial to have mixed uses within portions of buildings situated near the street. For example, a retail first floor might have office or residential on the second or third floors. This provides both the scale of building height desired, as well as the economic vitality of the business district.

3. Orientation of Buildings and their Entrances to the Street

Major building entries shall be designed and located to provide the primary building access oriented to the public street and sidewalk.
Doorways should be prominent and obvious in appearance, so as to attract the users toward the entry. Major entry features should primarily address the street, with entry courts, display windows, signage, lights, walkways, and vestibules, as appropriate. Major entries should be adjacent to, or very close to, the street and public sidewalk.

4. Windows

Windows shall be located in all building facades visible from the public way, especially on building facades along the major public street.
Retail uses with store fronts are the most desirable feature for locations adjacent to the public sidewalk; and active, transparent (minimum visible transmittance (VT) of .7 or greater), and interesting windows contribute the maximum value. Limitations on transparency, such as dark or reflective glass, or interior coverings, should be avoided. Where uses (such as office) are not conducive to transparent viewing from the public way, windows can still convey a sense of activity and presence along the street. Even these more private windows can convey occupancy and habitation when lighted from within, as during evening hours, even if the interior is screened from view.

5. Building Character, Detail, Scale, and Graphic Qualities

Building design will include various architectural and graphic amenities to provide a strong presence along a street and relate a building to its community.
Awnings, canopies, and flags may be utilized to highlight entryways and to further identify the activity and identity of a use.
Facade lighting may be used to highlight entryways or to provide visual interest along an otherwise blank facade
Building scale, roof pitch, architectural detail, and fenestration shall be designed to complement and be compatible with surrounding residential and commercial buildings.

6. Signage and Building Entrances

Building entrances and building signage in the B-1, B-1b, and B-2b zones will be designed and constructed at the pedestrian scale.
*We may need to revise the Sign Ordinance for allowed height and dimension of signs.

7. Development Relationship to Street

Building facades and site amenities shall form a cohesive wall of enclosure along a street.
Where buildings are not located at the street line, site amenities, including masonry walls, fences, and landscaping, shall be placed along the street to provide a sense of enclosure or definition.

8. Parking Lots

Parking Lots shall be screened from view of the public way.
Landscaping or fencing shall be used to screen parking lots from public ways and residential neighbors. Where parking is located within the front yard (or side yard of a corner lot), a landscaped buffer or fence shall be placed along the street line to distinguish the private space from the public space and to help define the street wall.

Parking lots shall be screened from neighboring properties.
A densely planted landscape buffer or fencing shall be installed to protect neighboring properties from the impacts associated with the parking lot and the use it serves.

Crosswalks shall be provided within parking lots and across entrance driveways, directing pedestrians to building entrances.

Street trees shall be planted along property street frontage 25ft. on center.

9. Transit Connections

Development proposed along established transit corridors must design uninterrupted access from the proposed development to the transit stop.
An easement to place a transit shelter may be requested for development located along a transit corridor.

Neighborhood Meeting Certification

I, Barbara Barhydt, Portland's Development Review Services Manager, hereby certify that a neighborhood meeting was held on March 10 at the Merrill Rehearsal Hall at 6:30 p.m. The location of the meeting was changed on the day of the meeting (Expo could not be used due to a Red Claws Game). On March 10, 2016, news flashes were posted on the City's web site, notices was resent to the interested citizen, and calls made to participants who attended the workshop. A staff person was stationed at the Expo to redirect interested parties to the Merrill Auditorium Rehearsal Hall from 6:00 p.m. to 6:45 p.m.

I also certify that on March 1, 2016, 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 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,

Barbara Barhydt

March 17, 2016

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes
4. Written comment submitted at the meeting
5. Copy of Power Point Presentation

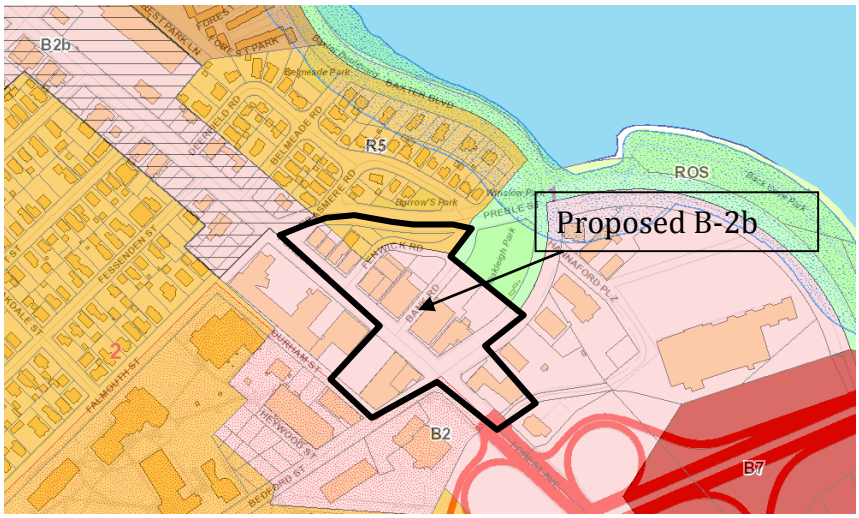
Portland, Maine — Yes. Life's good here.

Planning & Urban Development Department

March 1, 2016

Dear Neighbor,

Please join us for a neighborhood meeting to discuss the City of Portland's proposal to rezone an area along Forest Avenue from Community Business B-2 and Residential R-5 to the Community Business B-2b zone. The proposed zone change is in the vicinity of the block bounded by Forest Avenue, Preble Street Extension and Baxter Boulevard and includes commercial parcels at the intersection of Forest Avenue, Baxter Boulevard and Bedford Street, as shown on the map.



Meeting Location:	**Portland Exposition Building, Rehearsal Hall** **239 Park Avenue, Portland, ME 04102**
Meeting Date:	**Thursday, March 10, 2016**
Meeting Time:	**6:30 p.m.**

The City Code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone change) 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 Barbara Barhydt, Development Review Services Manager at the Portland Planning Division at 874-8699 or at bab@portlandmaine.gov

Note: Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for Level III development subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary 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 874-8719 or send written correspondence to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street, Portland, ME 04101 or by e-mail to bab@portlandmaine.gov

Forest Avenue, B-2 and R-5 to B-2b Rezoning
Neighborhood Meeting Sign In Sheet
March 10, 2016

NAME	ADDRESS	E-MAIL
Julie Larry	93 High St.	jlarry@portlandlandmarks.org
Mary Costigan	100 Middle Street	mcostigan@bernsteinshur.com
David Weeks	355 Forest Ave.	DWeeks41@maine.RR.com
Sandra Guay	234 Main St, Bidel	sfg@woodledlaw.com
Nick Kowalmann	140 Clark St	NKeU487@Gmail.com
Carrie Watman	6 Grasmere	CARRIE.WATMAN@GMAIL.COM
Will Watman	"	W.WATMAN@GMAIL.COM
Michael KAPLAN	49 OCEAN AVE PORT 04103	KAPLANCOMPANY@MSN.COM
MIKE CAREY	10 OAKDALE PORTLAND 04103	MIKEBCAREY@GMAIL.COM

6:00PM - submitted

March 10, 2016

Dear City of Portland,

The area on Forest Ave near the Palmer Spring Company has very old trees. Surrounding the parking lot is Red Maple, Beech. At the corner near the Forest Ave, Zoned R5, Residential, and a main street is ancient Red Maple that has so much water under it that it has sprouted 20 or more branches from the trunk of the tree. Would you please do an Environmental Review by your agency in charge or contact Ron Mongeon, Enforcement, Maine Department of Environmental Protection - (207) 287-7740. Or contact Environmental Assessment (water resources) Don Witherill (207) 215-9751. Ground water protection is also necessary so you should contact John Hopeck (207) 215-4463.

I am objecting to a Zoning Change. No further development should take place to protect the water resources according to the Water Act of the Federal Government and the City of Portland Code of Ordinances, and the State of Maine Environmental Laws.

Sincerely,

Cheryl A Joseph

Boston College, B.A. Biology

Portland, Maine

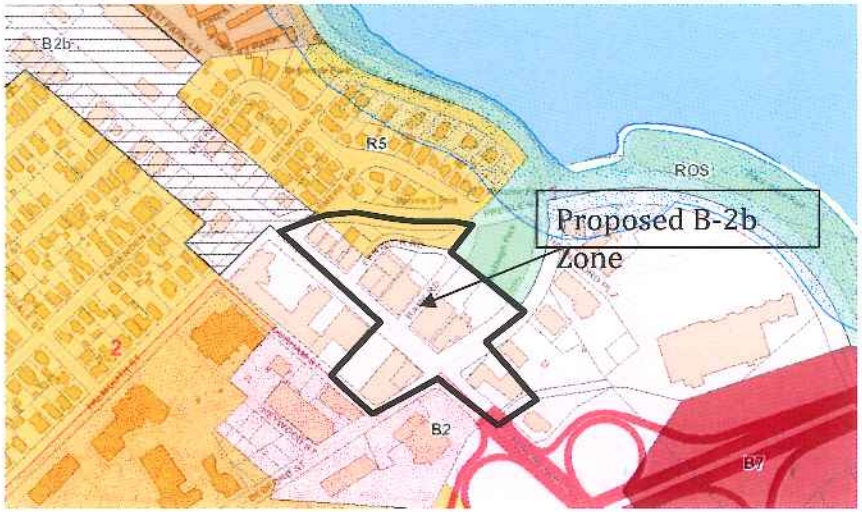
Yes. Life's good here.

Planning & Urban Development Department

Neighborhood Meeting:
Proposed Zoning Map Change from B2 to B2b between Preble St Extension and I-295 along Forest Avenue

City of Portland, Applicant

March 10, 2016



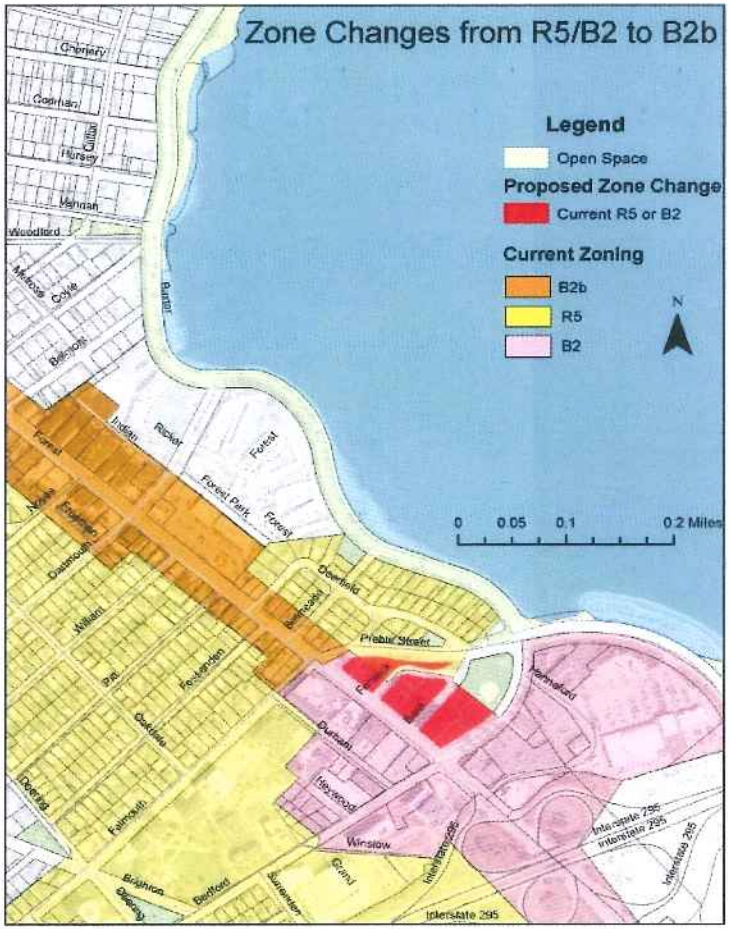
Agenda

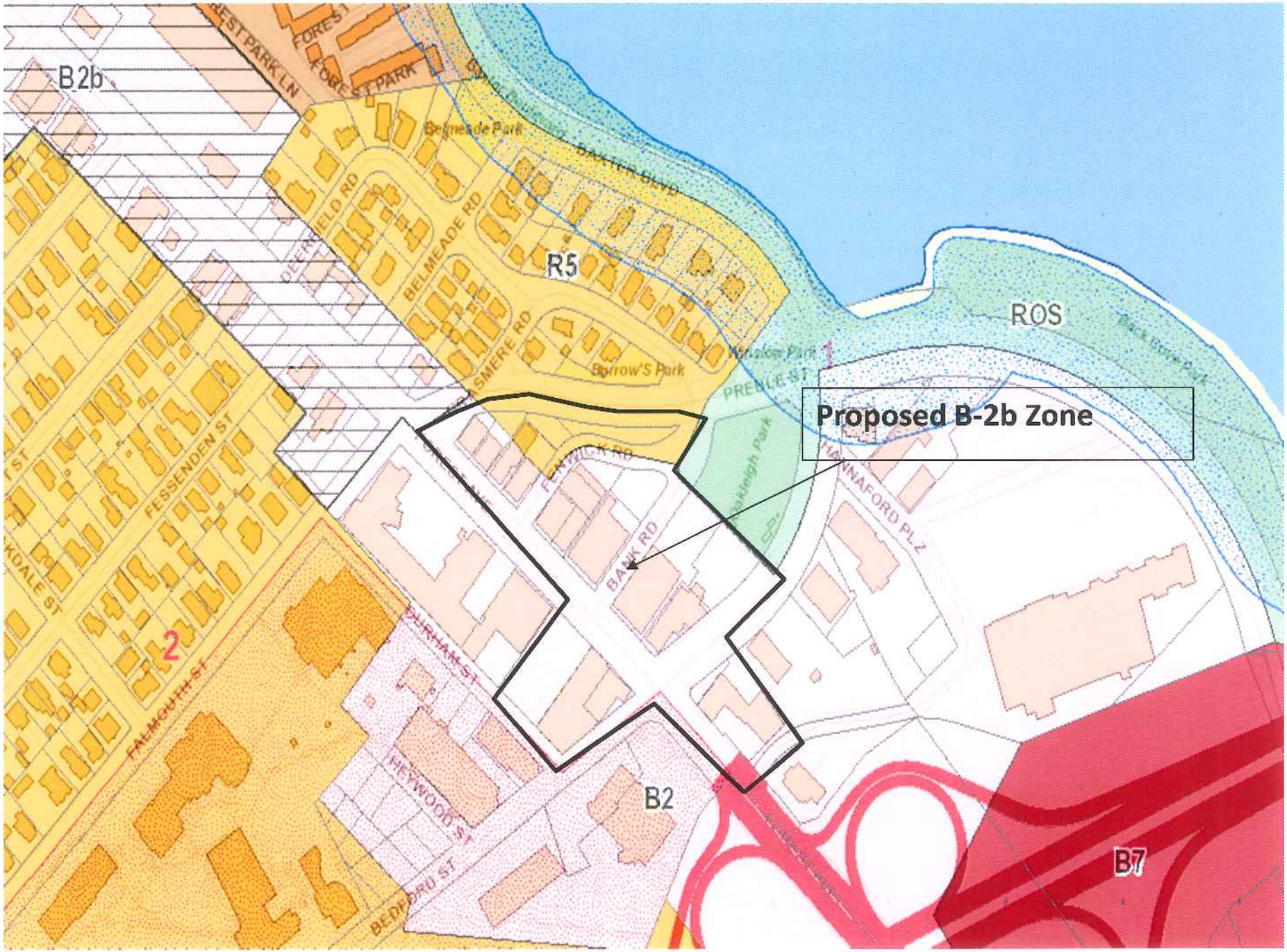
1. Introduction Councilor Belinda Ray, District One
2. Description of Proposal
3. Public Comment and Questions
4. Next Steps

Google earth

Background

- At the CC Meeting on Feb. 1, 2016, Councilor Ray moved to have the Planning Board consider a zoning map amendment from the current Community Business B-2 zone and the Residential R-5 zone to the Community Business B-2b zone (red properties to right).
- CC voted unanimously to refer this item to the PB and requested PB to report back by April 1, 2016.
- On Feb. 23rd PB held workshop on the item and decided to move forward with a hearing on the rezoning for a larger area (following slide).
- PB Hearing scheduled for Mar. 22, 2016




B2b
R5
ROS
B2
B7
Proposed B-2b Zone
BELMEADE RD
DEERFIELD RD
SMERE RD
Belmeade Park
Barrow'S Park
PRENTISS ST
FENWICK RD
BANK RD
HAVINAFORD PL
FESSENDEN ST
FALMOUTH ST
DURHAM ST
HEYWOOD ST
BEDFORD ST
FOREST PARK LN
FOREST PARK
BAXTER BLVD
Park Drive Park

Zone	Purpose
Residential R-5	To provide appropriate areas of the city for medium-density residential development characterized by single-family and low-intensity multifamily dwellings on individual lots; to ensure the stability of established medium-density neighborhoods by controlling residential conversions; and to provide for planned residential unit development on substantially sized parcels. Such PRUD development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.
Community Business B-2	1. To provide appropriate locations for the development and operation of community centers offering a mixture of commercial uses, housing and services serving the adjoining neighborhoods and the larger community. 2. The variety, sites and intensity of the permitted commercial uses in the B-2 zone are intended to be greater than those permitted in the B-1 neighborhood business zone. 3. The B-2 zone will provide a broad range of goods and services and general businesses with a mixture of large and small buildings such as grocery stores, shops and services located in major shopping centers and along arterial streets. Such establishments should be readily accessible by automobile, by pedestrians and by bicycle. Development in the B-2 zone should relate to the surrounding neighborhoods by design, orientation, and circulation patterns. 4. The B-2 and B-2b will provide locations for moderate to high density housing in urban neighborhoods along arterials.
Community Business B-2b	The B-2b zone is intended to provide neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The B-2b zone is appropriate in areas where a more compact urban development pattern exists such as on-peninsula or in areas off-peninsula where a neighborhood compatible commercial district is established which exhibits a pedestrian scale and character. Such locations may include the peninsula and other arterials and intersections with an existing urban or neighborhood oriented building pattern.

Standard	R-5	B-2	B-2b
Minimum Lot area per dwelling unit	3,000 sf, except 3,600- 4,800 sf for special needs independent	none	none
Street Frontage	50 feet	20 ft	20 ft
Minimum Lot Width	60 feet, except 90 for multiplex	none	none
Minimum Front Yard	20, except average depth if less than 20		
Maximum Front Yard	N/A	10 ft, Bd may grant waiver for irregular lots with less than 40 ft of frontage	10 ft, Bd may grant waiver for irregular lots with less than 40 ft of frontage
Minimum Rear Yard	20 feet	10 ft, accessory structures, 5 ft	10 ft, accessory structures, 5 ft
Minimum Side Yard	8-15 feet, depending on building height and location	None, accessory structures, 5 ft	None, accessory structures, 5 ft
Minimum Side Yard on Side St		None	None
Structure Height	35 feet	45 ft, 50 ft if 1st floor commercial is whole or partially commercial use	45 ft, 50 ft if 1st floor commercial is whole or partially commercial use
Structure Stepbacks		Portions of a structure above 35 feet shall be no closer than 5 feet from the side property line and no closer than 15 feet from the rear property line when such property line abuts a residential zone.	Portions of a structure above 35 feet shall be no closer than 5 feet from the side property line and no closer than 15 feet from the rear property line when such property line abuts a residential zone.
Maximum Lot Coverage (building coverage)	40%		
Maximum Impervious Surface	N/A	Residential uses – 0% All permitted uses - 80%	Residential uses – 0% All permitted uses - 90%
Minimum Lot Area per Dwelling Unit		a. Off-peninsula locations, as defined in section 14-47: 1,500 SF, except as provided for in (b) below. b. On-peninsula locations (as per 14-47) and projects with active street frontages, as defined in section 14-188, below: 435 SF	a. Off-peninsula locations, as defined in section 14-47: 1,500 SF, except as provided for in (b) below. b. On-peninsula locations (as per 14-47) and projects with active street frontages, as defined in section 14-188, below: 435 SF.

Transforming Forest Avenue Study
Approved June 4, 2012

- Transforming Forest Avenue considered land use options for the corridor, including use based zoning, form based code and transit supportive development (TSD).
- Encouraging vibrant and diverse land uses is an important principle of TSD development in order to provide multiple destinations in close proximity within an area
- The development pattern should "provide for vibrant loci or activity at a pedestrian scale."
- Architectural quality, high quality parking, and public spaces are other land use components that are identified as components for creating a high quality transit corridor.
- While the B-2 and B-2b zones have similar uses and dimensional standards, the design guidelines between the two zones do differ. The design standards for the B-2b zone are more urban and pedestrian oriented.

WOODMAN EDMANDS DANYLIK AUSTIN
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PETER L. EDMANDS
(Retired)

March 17, 2016

Jeff Levine, Planning & Urban Development Director
City of Portland
389 Congress St, Fourth Floor
Portland, ME 04101

Re: Proposed Zoning Amendment/Forest Avenue

Dear Mr. Levine:

On February 1, 2016, the City Council asked the Planning Board to review and provide its recommendation on a possible zoning amendment. This amendment would reclassify the City blocks south of Preble Street Extension, east of Forest Avenue, and north of Baxter Boulevard from either B-2 or R-5 to B-2b. In addition, the Council asked the Planning Board to separately consider revisions to the language of the B-2 and/or B-2b zone ordinances and design manual. It of course is no coincidence that these proposed zoning changes came only after the City became aware of a proposed CVS Pharmacy development in this area that had been in the works for approximately five years, and of the desire by the current owners of the existing structures to sell their properties for this development.

On February 23, 2016, the Planning Board held a workshop on this issue, and on March 10, 2016, it held a neighborhood meeting. A public hearing has been scheduled for March 22, 2016.

The purpose of this letter is to provide an explanation of why a rezoning from B-2 to B-2b in this instance would be neither appropriate, nor in the best interests of the City.

I. <u>B2 versus B-2b/Uses</u>

While the "purpose statements" for the B-2 and B-2b appear to describe a more commercial zone for the B-2 and a less intensive commercial zone for the B-2b in reality,

the differences between the B-2 and B-2b zones are few. The B-2 allows for certain dairies and bakeries; the B-2b allows for only small bakeries. The B-2 allows for wind energy systems; the B-2b does not. Significantly, the B-2 allows for research and development and related production establishments, drive-throughs that are accessory to a principal use, and major and minor auto service stations in existence as of 1999; none of these last three uses are permitted in the B-2b.

With respect to drive-throughs, there are several drive-throughs in the vicinity of the area under consideration for rezoning, including the credit union located on the Forest Avenue side of the Hannaford shopping center. Drive-throughs are not an antithesis to urban design. In particular, pharmacy drive-thoughs, with their low queuing and low volume speakers (HIPPA required), have little impact in an area that is already subject to high traffic volume. Permitting a drive-through in this section of Forest Avenue, which is closely connected to Route 295, a university commuter campus, and the Hannaford shopping center, will have no impact on the dynamics of automobile traffic. What a pharmacy drive-through does however provide is more convenient and easier access to medications by that section of the local population that is elderly, disabled, ill, contagious, or with small children in the car. It is fine to say that everyone should park and walk a couple of blocks – but, this is simply not the reality for many. The option of a pharmacy drive-through in this area would serve individuals who must now drive a distance in order to be able to obtain mediations without having to exit their vehicles and enter a store to do so. The original decision to allow for drive-throughs in this limited commercial area, which is physically detached from the established residential neighborhoods, was not by accident or mistake. It is simply the right place for a drive-through to be located.

I. <u>B2 versus B-2b/Design and Technical Standards</u>

There appears to be only one differing dimensional standard between the B-2 and B-2b – maximum impervious lot coverage is 80 percent in the B-2 and 90 percent in the B-2b. As most all of the property within the proposed rezone area (with the exception of the City's ballpark), is already greater than 90 percent impervious, this distinction is irrelevant.

Further, the distinctions, if any, between the City's Design Manual ("Manual") and its Technical Standards and Design Guidelines ("Guidelines") for these two zones is less than clear. While the Manual calls for an "urban street wall" only in the B-2b; the Guidelines require an urban street wall in both the B-2 and the B-2b. The Manual requires building entrances in the B-2b zone to be oriented toward, and accessible from the sidewalk; again, the Guidelines require this in both the B-2 and the B-2b. As the Guidelines appear to

be the stricter of the two, presumably the Guidelines would control. If this is so, there is virtually no design difference between structures in either zone.

III. Physical Location of Zoning Boundaries

As is very well illustrated in a map attached to the staff memo prepared for the February 23, 2016 Planning Board workshop (attached again to this letter for reference), the B-2 section of Forest Avenue under consideration for rezoning is physically separated from the existing B-2b zone by Preble Street Extension and Falmouth Street. The decision to separate the two zones in this fashion was surely not by accident or oversight. The pink zone on the map (B-2) is comprised of existing commercial development that is denser and larger than commercial development on the northerly side of Preble Street; it is more connected to the University; and, it is more closely associated with the Route 295 connector. As noted, unlike the B-2b, the B-2 allows for research and development and related production establishments, such as can be found at the University or Oakhurst Dairy. This is the only area located near either the school or the dairy that allows for this use – again presenting a reason why the present zoning was well planned and not merely an oversight. The pink zone also allows for auto service stations in existence as of 1999, such as the existing Palmer Springs business. It is somewhat ironic that the City is considering saving structures that represent the auto industry, while at the same time moving toward eliminating that use.

In addition to its permitted uses, the parcels comprising the area under consideration for rezoning are accessed not only from Forest Avenue but also have access from, and in some cases abut, Preble Street and Bedford Street. This is unlike the B-2b zone north of Preble Street, where the parcels fronting on Forest Avenue abut densely developed largely single family residential lots. In this way, the subject area is once again distinctly different, and easily distinguishable, from the B-2b zone itself.

III. The R-5 Zone

The *Transforming Forrest Avenue* study, adopted by the City Council in 2012, designates the subject area as "Central Forest Avenue." The study calls for this section of Forest Avenue to be "the heart of commercial, civic, and other activity." The R-5 zone here, appears to be a remnant of the residential zone that existed prior to the development of the Preble Street Extension. Today however, and particularly in light of the *Transforming Forrest Avenue* study, this property is not suited for low-density residential use, but rather should be zoned for a denser commercial or mixed use development. Maintaining a low-intensity, single lot residential zone in an area that is separated from all other such zones,

and is in the heart of a potential commercial development area, makes little sense. This area should be rezoned to the abutting B-2 zone.

III. Language Amendments

As noted above, in addition to asking the Planning Board to consider a possible rezoning, the Council has asked the Board to think about amendments to the design standards for the B-2 and B-2b zones. As it appears that there is presently so little differentiation in design standards between these two zones, and as neither zone appears to require or show preference for the type of multi-use/multi-level development that the City seems to be envisioning, this ordinance language revision approach seems to make more sense than a zone change in this instance. Again, this zone change would eliminate any research and development facilities, make the existing Palmer Springs non-conforming, and disallow all drive-thoughs, all without any apparent overriding benefit to the City.

Zoning is best when part of an overall plan, and is not simply reactionary. It is clear that in this instance, the request from Council that the Planning Board consider and provide its recommendation of a rezoning in the blocks south of Preble Street Extension, east of Forest Avenue, and north of Baxter Boulevard from B-2 to B-2b, is a reaction to one development proposal. While that proposal design has yet to see the light of day, it is clear that the rezoning of this single block to a B-2b zone will not prevent the possibility of a single-use, single level, development in this location.

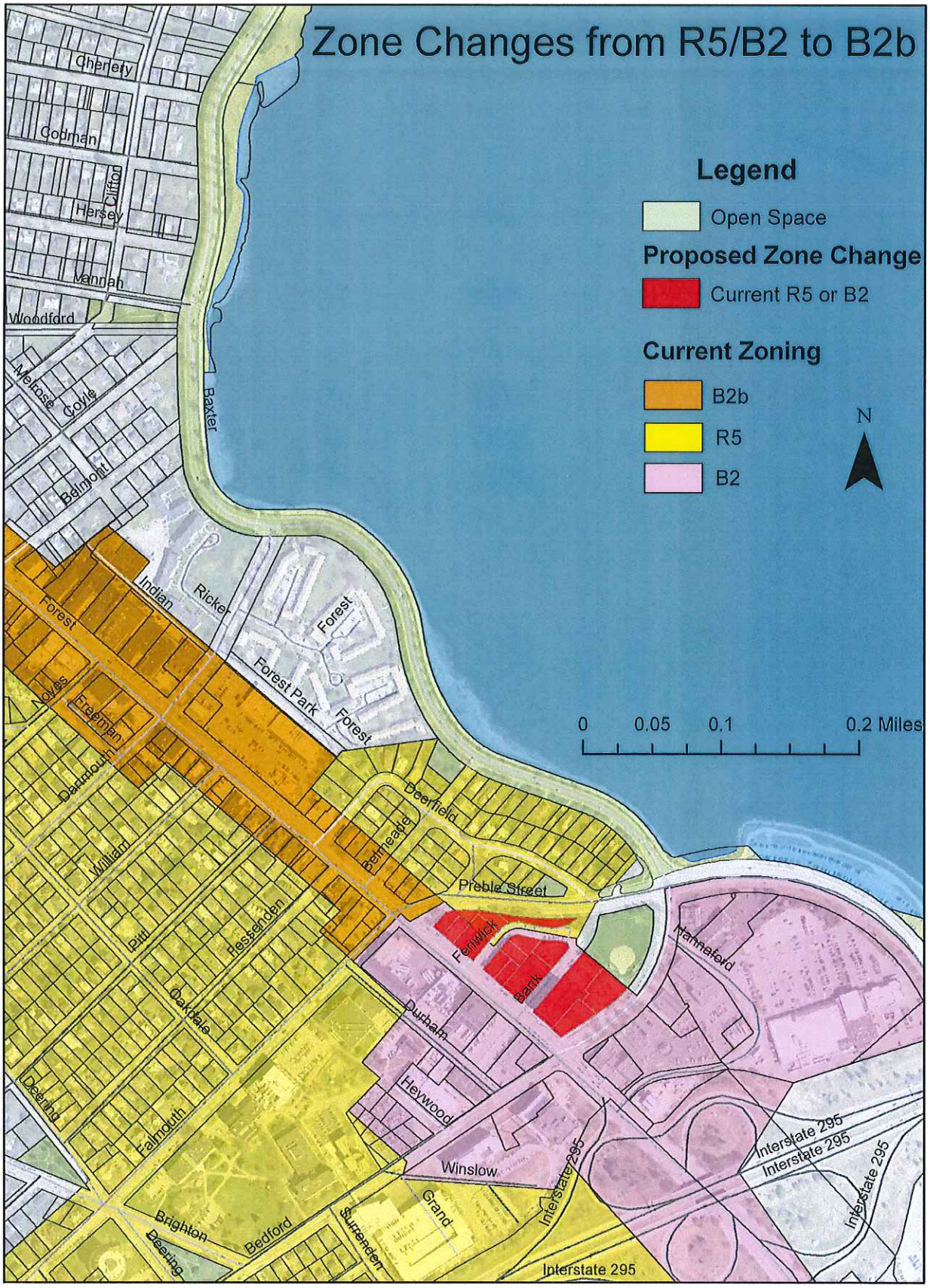
Thank you for your attention to this matter. I am confident that the Planning Board will provide its usual level of scrutiny and deliberation to this zone amendment recommendation to the City Council.

Very Truly Yours,

SANDRA L. GUAY

SLG/lb
Copies to:

Mark Bettenhausen, T.M. Crowley & Associates
Mary Costigan, Esquire, Bernstein, Shur, Sawyer & Nelson, P. A .
Michael Kaplan, Kaplan 447 LLC


Zone Changes from R5/B2 to B2b
Legend
Open Space
Proposed Zone Change
Current R5 or B2
Current Zoning
B2b
R5
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N
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Cherlety
Godman
Clifton
Hersey
Vannah
Woodford
Melrose
Coyle
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Belmont
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Ricker
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Noves
Freeman
Dartmouth
William
Pitt
Hessenden
Oakdale
Deering
Falmouth
Brighton
Bedford
Deering
Surrenden
Grand
Winslow
Heywood
Durham
Fenwick
Bark
Belmeade
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Preble Street
Hannaford
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March 18, 2016

Portland Planning Board
389 Congress Street
Portland, Maine 04101

RE: Proposed Rezoning on Forest Avenue

Dear Board Members:

I am writing on behalf of Palmer Spring Co., the owner of 351-355 Forest Avenue and D & J Weeks Properties, the owner of 365 and 369 Forest Avenue. Shortly after these properties were under contract for sale to an entity that plans to have a drive-through associated with the use of the property, a proposal to rezone the properties from B-2 to B-2b was forwarded to the Planning Board. For the reasons set forth below, we respectfully request that the Planning Board recommend to the City Council that these properties not be rezoned B-2b.

B-2 v. B-2b Permitted Uses and Dimensional Standards

The differences between the B-2 and B-2b zones are so limited they can easily be listed below:

1. Bakeries and commercial kitchens are permitted uses in both zones, however in the B-2b can be no greater than 7,000 sq. ft.

2. Drive-throughs are not permitted in the B-2b zone, but are allowed in the B-2 zone as a permitted use if it is not located adjacent to a residential use or zone and as a conditional use if located adjacent to a residential use or zone.

3. All major and minor auto service stations are permitted in the B-2 zone, but only those major or minor auto service stations in existence as of November 15, 1999 are permitted in the B-2b zone.

4. In the B-2, structures can be up to 65 feet in height if located on lots greater than 5 acres provided that they meet certain setback requirements.

5. Maximum imperious coverage for all uses other than residential uses is 80% in the B-2 and 90% in the B-2b

All of the remaining standards set forth in the Land Use Code are identical for both the B-2 and B-2b zones, including front yard parking requirements.

Design Standards

Section 14-526(d)(9)(a)(iii) provides:

Development in the B1, B1-b, B2 and B2-b business zones shall provide an established street wall with entrances and public portions of the building oriented to and directly accessible from the public sidewalk and shall be designed and scaled to be compatible with surrounding residential and commercial development as demonstrated by compliance with all applicable design standards listed in the Design Manual.

Within the Design Manual, the following relevant standards and guidelines apply to the B-2 and B-2b:

1. Design Standards:
    - In the B-2b zone, buildings are required to be located to create and preserve an urban street wall.
    - In the B-2 zone, the building entrances shall be oriented toward, located adjacent to and directly accessible from, a sidewalk in a public right-of-way.
    - In both the B-2 and B-2b zones, transparent, pedestrian-level windows shall be required along the street frontage.
    - In both the B-2 and B-2b zones, active and public portions of buildings shall be oriented to and, where possible, located adjacent to the public sidewalk.

2. Design Guidelines:
    - The manual states that buildings in the B-2 are specifically encouraged to adhere to the guidelines contained in Appendix 2 concerning urban street walls and building entrances.
    - Appendix 2 states that "Development in the B-1, B-1b, B-2, B-2b shall meet the following guidelines in order to meet Site Plan Standards:"
        - "Buildings shall be located near the street so as to create an urban street wall."
        - "Major building entries shall be designed and located to provide the primary building access oriented to the public street and sidewalk.

It is unclear how the inconsistencies in the ordinance, manual and the appendix would be resolved, but it is apparent that changes over time have brought the two zones very close in line in terms of design. In any event, the mostly identical uses and dimensional standards, taken with the close to identical design standards, leave a very narrow area of distinction between the B-2 and B-2b zones. Although limited, those differences are very significant to Palmer Spring and D&J Weeks and would be detrimental to the sale of the property and Palmer Spring's ability to relocate the business.

The most notable distinction between the two zones is the prohibition on drive-throughs in the B-2. A drive-through in this location, close to the 295 interchange simply makes sense and can be designed in a manner that would have little impact on traffic and the surrounding uses. The current demarcation between the B-2 and B-2b drawn at Preble Street is a natural division; one that leaves Palmer Spring, Hannaford, and Oakhurst on one side, serving as an area of service to those traveling on the highway and of transition to the more pedestrian-oriented B-2b further down Forest Avenue. The Planning Board and Council visited the issue of drive-throughs in the B-2b just over a year ago. It is notable that neither the Board nor the Council determined at that time that drive-throughs should be prohibited in the area now being reviewed for rezoning.

In addition to the drive-through prohibition, the limitation on auto service stations in the B-2b would be very problematic for Palmer Spring. The only service stations permitted in the B-2b zone are those that were in existence as of November 15, 1999, so essentially only Palmer Spring. A recent decision by the Historic Preservation Board that the Palmer Spring building is eligible to be listed as a local landmark, together with a rezone to B-2b, would likely make it impossible for Palmer Spring to ever sell the property.

For these reasons, we are hopeful that the Planning Board will recommend to the Council that the Palmer Spring and surrounding properties should not be rezoned from B-2 to B-2b. The current regulatory structure for the B-2, coupled with the Site Plan review process will ensure that any development on this site meets the City's vision for the transitional area from the highway to the pedestrian-oriented B-2b zone.

Finally, we would like to suggest that the Planning Board take this opportunity to recommend to the Council that the boundary between the R-5 and the B-2 be moved to the other side of Preble Street. As you can see in the attached, the line between the two zones is currently in the middle of the properties that face Forest Avenue. Cleaning up the map will give additional flexibility for development of those Forest Avenue properties.

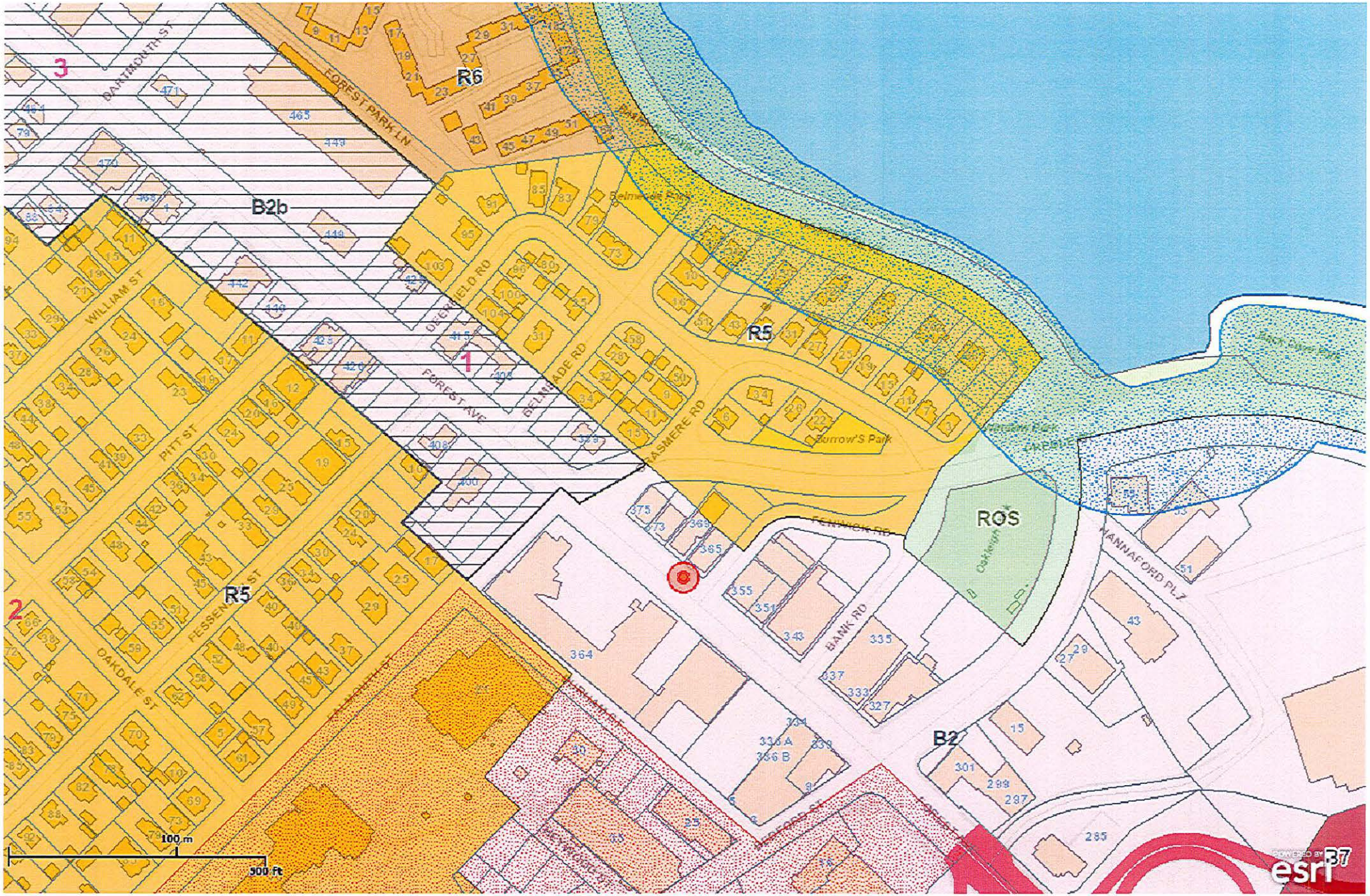
Thank you for your time and consideration. Please let me know if we can provide further information.

Sincerely,

Mary E. Costigan

cc: David Weeks

My Map



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PLANNING BOARD REPORT
PORTLAND, MAINE

169 Newbury Street Residential Development
169 Newbury Street
Subdivision & Conditional Use Review
2016-021
Luminato Condominium, LLC

Submitted to: Portland Planning Board Date: March 18, 2016 Public Hearing Date: March 22, 2016	Prepared by: Caitlin Cameron, Urban Designer CBLs: 028-I009001 and 028-I010001 Project #: 2016-021

I. INTRODUCTION

Luminato Condominium, LLC has requested a final subdivision and conditional use review for a seven-story residential development at 169 Newbury Street, in between Newbury and Federal streets and facing Franklin Street at the edge of the India Street neighborhood. The proposed 40,200 SF development includes structured parking on the lower two floors and 26 market rate condominiums, a fitness area, and roof access on the 5 floors above. The proposal also has two affordable rental residential units in the existing 3-family residential structure at 42 Hampshire Street. The project includes a parking structure has 26 spaces, one surface parking space to be accessed by the neighboring property, sidewalk and landscaping improvements, and stormwater treatment facilities in the form of a green roof. The green roof qualifies the project for a height bonus of a seventh floor. The site is currently occupied by two residential buildings and a garage.

This development is in the process of a staff level site plan approval for compliance with the standards of the India Street Form Based Code. The Planning Board is only reviewing the subdivision and compliance with Division 30 (inclusionary zoning).

A total of 110 notices were sent to property owners within 500 feet of the site and a legal ad ran in the *Portland Press Herald* on March 14 and March 15, 2016.

Applicant: S.P. Chip Newell, Luminato Condominium, LLC
Consultants: Thomas S. Greer, P.E., Pinkham & Greer, Civil Engineers; Northeast Civil Solutions; Archetype Architects; Tom Federle, Federle Law

II. REQUIRED REVIEWS

Waiver Requests	***Applicable Standards***
Driveway width – to allow driveway 18 feet on Federal Street to enter 18' access easement across 100 Federal Street *Supported by Traffic Engineer*	Technical Manual, *Section 1.7.2.3.* Minimum driveway width (two-way): Any site with driveway access to a street shall have a minimum width of 20 feet for two-way ingress and egress, with a preferred width of 24 feet.
Street trees – project includes 14 street trees, less than required *Supported by City Arborist*	Site Plan Standard, *Section 14-526(b)2.b(iii)* and Technical Manual, *Section 4.6.1.* All multi-family development shall provide one street tree per unit. Waiver permitted where site constraints prevent it, with applicant contributing proportionate amount to Tree Fund. *26 units = 26 street trees required. Contribution for 12 trees at $200 per tree suggested.*

Review	***Applicable Standards***
Site Plan Level II (staff level review/approval)	*Section 14-526*, including IS-FBC Building Design Standards
Subdivision	*Section 14-497*

III. PROJECT DATA

Existing Zoning	IS-FBC
Existing Use	Residential
Proposed Use	Residential
Proposed Development Program	26 condominium units (16 1-bedroom, 7 2-bedroom, 3 3-bedroom) + 2 off-site Workforce Housing units in 42 Hampshire Street
Parcel Size	10,270 SF

	Existing	*Proposed*	*Net Change*
Building Footprint	3,686 SF	6,736 SF	3,050 SF
Building Floor Area	9,510 SF	40,200 SF	30,690 SF
Impervious Surface Area	64,836 SF	5,135 SF (50%)	1,236 SF
Parking Spaces (on-site)	2	26 structured, 1 surface	25
Bicycle Parking Spaces	none	36 (26 interior)	36
Estimated Cost of Project	$8,000,000		

Figure 1

IV. BACKGROUND & EXISTING CONDITIONS

169 Newbury Street lies at the "corner" of Newbury and Franklin streets – currently Franklin Street does not connect to either Newbury or Federal Street as it once did. All northbound Franklin Street traffic will pass this prominent building. Because the future design and development of Franklin Street is uncertain, the applicant worked with City staff to determine the appropriate level of site and sidewalk improvements to be made. For example, a sidewalk connection will be added from Newbury Street to Franklin Street but not from Federal Street

to Franklin Street which has a steep slope and would require steps. There remains a large landscaped buffer between the Franklin Street sidewalk and the property line – this will be improved with landscaping, retention of existing street trees, planting of new street trees, and a pedestrian door added on the Franklin façade of the building.

The site is actually a collection of several distinct lots, all of which are held under common ownership *(Plan 2)*. The site is zoned India Street Form-based Code Zone with an Urban Transitional (UT) subdistrict, but borders Urban Neighborhood (UN) streets with a smaller vernacular built fabric of Hampshire Street. The site is not in the India Street Historic District. The blocks along Franklin Street in the India Street neighborhood, such as the applicant's site, serves as an important transition between the fine-grained residential fabric of the historic and small-scale UN streets and the fast-moving, wide arterial of Franklin Street.

V. PROPOSED DEVELOPMENT

The applicant proposes to reconfigure several existing lots in order to create a single contiguous lot for purposes of this development *(Plan 2)*. The development would consist of a seven-story building with approximately 135 feet of frontage on Franklin Street and 66 feet of frontage on Newbury Street. Structured parking would occupy the first two floors, with pedestrian access from Franklin Street. 26 residential apartments would occupy the upper five floors, with principal access from Newbury Street and secondary access from Franklin Street. Vehicular parking for 26 cars would be provided in a two-level structure situated behind the proposed building, with lower level access from NewburyStreet and upper level access from Federal Street. Because of grade changes, the structured parking area will read as the ground floor on Newbury Street with six floors of residential above.

New brick sidewalks, curb cuts, and street trees are proposed on Newbury, Franklin, and Federal streets. The site lighting shall be provided by existing street lights and additional lighting is added by the building lighting (*Attachment 12)*. The landscape plan (*Attachment 7)* also includes low landscaping and Greenscreen along the building face on the Franklin Street frontage (at the request of the City Arborist) most of which will be within the public right-of-way, and additional landscaping between the building and neighboring properties as well as a fence to screen the transformer pad. Stormwater treatment is proposed as a green roof on the 6th and 7th floors (*Attachments Plan 21, Plan 22, Plan 23)*.

Figure 2

VI. PUBLIC COMMENT

During the preliminary review, staff fielded a telephone call from a neighbor who raised concerns about the proposed height and view impacts of the proposal. No written comments have been submitted.

The applicant hosted a neighborhood meeting on February 17, 2016 in conformance with the subdivision ordinance. There were eleven attendees. The meeting minutes show that neighbors raised questions about project timeline and process, who would have access to the parking, size and price of units, type of construction, and coordination with Franklin Street Plan *(Attachment N).*

VII. RIGHT, TITLE, & INTEREST

The applicant's submittal includes deeds as evidence of right, title, and interest. As noted above, the applicant has proposed to reconfigure four lots to create a development site on what will be one newly defined parcel which will also include the existing building at 42 Hampshire Street. Corporation Counsel and the Zoning Administrator reviewed the plan for the new division of lots *(Plan 2)* and have not identified concerns. The neighboring property is relocating porches away from the new property line so as to not create a non-conforming condition with the new lot lines.

The applicant proposes to use a portion of the 100 Federal Street driveway as an access point to the garage for 169 Newbury Street. 100 Federal Street is a three-family residential building and therefore is exempt from providing off-street parking under the IS-FBC zone. At least one parking space will be retained on-site and an additional access and parking easement is proposed from 169 Newbury Street to 100 Federal Street. These easements shall be recorded and appear on the Subdivision Plat.

VIII. FINANCIAL & TECHNICAL CAPACITY

The estimated cost of the development is approximately $8 million. The applicant has submitted a letter from Camden National Bank indicating that their intent to consider financing for the project. The applicant has also provided documents attesting to the technical capacity of Pinkham & Greer Civil Engineers *(Attachment D)*.

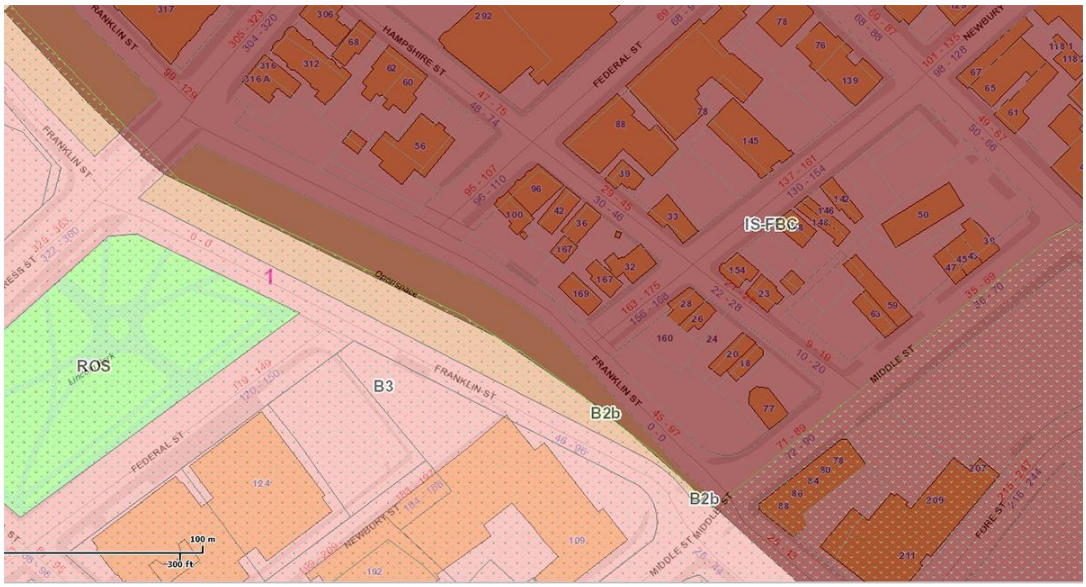

Figure 3

IX. ZONING & LEVEL II SITE PLAN

The project is in the India Street Form-based Code zone and faces two Urban Transitional subdistrict streets (Newbury and Franklin Street). The total project area is under 50,000 square feet and is therefore subject to Level

II Site Plan review which is an staff level review and approval. Site Plan review includes review of zoning, design, and site design such as landscape, traffic, stormwater, and parking. There is also Housing Replacement for this project – 5 existing units will be demolished and replaced by the proposed project. The project is currently in review and Level II Site Plan approval is included as a Subdivision condition of approval.

X. SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS *(Section 14-496)*

The applicant has provided a subdivision plat for review by the city's surveyor. Finalizing this plat per *Section 14-496* has been included as a condition of approval. In addition, the project includes condominium units. As such, condominium documents have also been included as a condition of approval.

In the submittal, the applicant proposes the following easements and licenses:

- Temporary construction easement from the City of Portland to Luminato Condominium, LLC;
- License from the City of Portland to Luminato Condominium, LLC for building footings on Newbury Street and Franklin Street rights-of-way;
- License from the City of Portland to Luminato Condominium, LLC for roof overhang on Newbury Street right-of-way;
- Access and parking easement from 169 Newbury Street to 100 Federal Street;
- Access easement 100 Federal Street to 169 Newbury Street;

In their final submittal, the applicant has also indicated that construction easements will be necessary from the City of Portland. These easements should also be noted on the construction management plans. Final construction management plans shall be required as part of Site Plan Level II.

All of these easements have been suggested as conditions of approval.

XI. SUBDIVISION REVIEW

(14-497(a). Review Criteria)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff comments are below and in *Attachments 1-3*.

1. Water, Air Pollution

The project is not anticipated to result in undue air or water pollution (*Attachment 1).*

2 & 3. Adequacy of Water Supply

The plans show water service from a main in Newbury Street to a new 3-inch domestic pipe and a 6" fire protection pipe. The applicant has provided evidence of capacity from the Portland Water District with conditions *(Attachment G)*.

4. Soil Erosion

No unreasonable soil erosion or reduction in the capacity of the land to hold water is anticipated (*Attachment 1)*. Site Plan (*Attachment Plan 3*) and Erosion Control Plan (*Attachment Plan 6*) provide information about stabilizing the slope during and after construction.

5. Impacts on Existing or Proposed Highways and Public Roads

The applicant has provided a traffic and transportation analysis *(Attachment F)*. Tom Errico, the city's consulting traffic engineer, has reviewed the study and provided comments *(Attachment 3)*, which states the project is not expected to cause unreasonable highway or public road congestion or unsafe conditions.

6. Sanitary Sewer/Stormwater Disposal
A 6-inch sewer line are proposed to service the building and would outlet to Newbury Street. No grease trap is proposed – no commercial uses are proposed as part of the building. The applicant has submitted a wastewater capacity application to the Department of Public Works with an approval letter granted 2/17/16 *(Attachment H)*.

The applicant has provided stormwater management and utility plans as well as information for the green roof. Both David Senus, the city's consulting civil engineer, and David Margolis-Pineo, of the city's Department of Public Services, have provided comment that this subdivision criteria is met and will review these plans further as part of the Site Plan review *(Attachments 1 and 2)*.

7. Solid Waste
The applicant has proposed a trash and recycling room adjacent to the residential entrance and has indicated in the condominium documents that residents are responsible for engaging a waste management contractor to provide waste removal service. The project is not anticipated to cause an unreasonable burden on the ability of the city to dispose of solid waste (*Attachment F)*.

8. Scenic Beauty
This proposal is not deemed to have an adverse impact on the scenic beauty of the area. The project is not within a historic district or within 100' of a historic landmark.

9. Comprehensive Plan
India Street Sustainable Neighborhood Plan
This newly adopted neighborhood plan includes the following goals and principles which are met by this proposal:
Goal – Vitality – the project adds 26 new units bringing more people to the neighborhood
Goal – Diversity of building types and residents – The project targets a different demographic for the neighborhood.
Principle 7: Guided Growth – the project provides dense residential development on Franklin Street corridor, one of the areas identified as potential growth and infill development sites.
Principle 8: Form of Development – High residential density, maintaining the pedestrian-scale blocks, continuous sidewalks, and street-oriented buildings – these concepts are all included in the project.
Principle 13: Responsive to Climate Change – this will be the first project in the neighborhood to have a green roof and aggressively address stormwater runoff.

Incentives for Affordable Housing and ***Housing – Sustaining Portland's Future***
The city believes that it is in the public interest to promote an adequate supply of affordable housing for its residents. The proposed project is required under the newly adopted Division 30, Section 14-487, Ensuring Workforce Housing to provide at least 10% workforce housing units. As described below and in (*Attachment 4)*, the project successfully incorporates two rental units on the same lot, but in an existing building on the same lot. In addition to the required affordable housing being provided, the project targets the unit size and price towards first-time home-buyers. The housing stock is placed in a multi-modal neighborhood with good connections to several neighborhoods, offices, and services.

10. Financial and Technical Capacity
As noted above, the applicant has provided evidence of financial and technical capacity (*Attachment D*).

11. Wetland/Water Body Impacts
Project is not located within a watershed of any pond or lake or within 250 feet of any wetland, great pond or river.

12. Groundwater Impacts
There are no anticipated impacts to groundwater supplies (*Attachment 1)*.

13. Flood-Prone Area
Per the FEMA flood maps, the site is not located in a flood zone *(Attachment M)*.

14. Wetland/Water Body Impacts
No potential wetlands within the proposed subdivision (*Figure 3*).

15. Wetland/Water Body Impacts
No river, stream or brook within or abutting the proposed subdivision (*Figure 3*).

(14-497(c) Conformity with Code) *Any proposed subdivision shall be in conformity with all relevant provisions of this Code.* Project has not completed Level II Site Plan approval at the time of this public hearing to determine conformity with all relevant provisions of the Code. Staff proposes a condition of approval that the project shall receive Level II Site Plan Approval.

XII. INCLUSIONARY ZONING CONDITIONAL USE

Housing Planner Tyler Norod reviewed the Conditional Use for Affordable Housing application at 169 Newbury 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 169 Newbury Street proposes the creation of 26 condominium units. Based on the total number of units the project will be required to provide at least two (2) workforce units.

The project has proposed to provide off-site workforce rental units to meet the requirements of this ordinance. The proponent has entered into an agreement with Community Housing of Maine (CHOM) to provide two (2) two-bedroom workforce units for rent at 42 Hampshire Street. The units will be rented to households earning up to 100% of the area median income (AMI) as required for workforce rental units. The units will be restricted for a term of 99 years and will be managed by CHOM. The workforce housing units will be renovated according to the standards outlined in the recently adopted inclusionary zoning implementation regulations.

By providing two (2) two-bedroom units off-site with a management plan with CHOM acceptable to the City, the project has met the minimum requirements set forth in Section 14-487.

Please refer to the memo from the Housing Planner for the complete analysis (*Attachment 4*).

XIII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the planning board approve the Subdivision and Conditional Use for the proposed residential development at 169 Newbury Street.

XIV. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on March 22, 2016 for application 2016-021 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the planning board hearing:

1. The planning board **finds/does not find**, based upon the consulting transportation engineer's review, that future non-compliance with the *Technical Manual* may result from strict

compliance with the *Technical Manual* standard *(Section 1.7.2.3)* which requires a minimum driveway width (two-way): Any site with driveway access to a street shall have a minimum width of 20 feet for two-way ingress and egress, with a preferred width of 24 feet., that substantial justice and the public interest are secured with the proposed variation in this standard, and that the variation is consistent with the intent of the ordinance. The planning board **waives/does not waive** the *Technical Manual* standard *(Section 1.7.2.3)* to allow the driveway and access easement width as shown on the plans.

2. The planning board **finds/does not find** that the applicant has demonstrated that site constraints prevent the planting of all required street trees in the right-of-way. The planning board **waives/does not waive** the site plan standard (*Section 14-526 (b) (iii)* requiring one street tree per unit for multi-family development and concludes that the applicant shall contribute $2,400 to Portland's tree fund.

C. SUBDIVISION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on March 22, 2016 for application 2016-021 relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the planning board finds that the plan **is/is not** in conformance with the subdivision standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval, which must be met prior to the signing of the plat:

1. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority;
2. Prior to Certificate of Occupancy, the applicant shall provide condominium documents for review and approval by Corporation Counsel;
3. Should Federal Street be connected to Franklin Street in the future, the current and future owners of 169 Newbury Street agrees to work with the City to bring the curb cut on Federal Street into compliance with the City of Portland Technical Manual;
4. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the construction stormwater management plan and sediment and erosion control plan based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system and green roof as described in Attachment I of this report, shall be approved by Corporation Counsel and the Department of Public Works, and submitted and signed prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works;
5. The applicant shall obtain Level II Site Plan approval; and
6. The applicant shall provide drafts of all necessary easements, including but not limited to:
    a. Temporary construction easement from the City of Portland to Luminato Condominium, LLC;

b. License from the City of Portland to Luminato Condominium, LLC for building footings on Newbury Street and Franklin Street rights-of-way;

c. License from the City of Portland to Luminato Condominium, LLC for roof overhang on Newbury Street right-of-way;

d. Access and parking easement from 169 Newbury Street to 100 Federal Street;

e. Access easement 100 Federal Street to 169 Newbury Street;

for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, with evidence of executed easements to be submitted prior to the issuance of a building permit.

D. INCLUSIONARY ZONING 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 March 22, 2016 for application 2016-021 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 that the Conditional Use **is/is not** in conformance with the standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval:

a. Provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) before a Building Permit may be issued.
b. The AHA will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 42 Hampshire Street property's deed with the Cumberland County Registry of Deeds before a Certificated of Occupancy may be issued.

XV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Civil Engineer review (memo from David Senus, 3/18/16)
2. City Engineer review (memo from David Margolis-Pinneo, 3/18/16)
3. Traffic Engineer review (memo from Thomas Errico, 3/18/16)
4. Housing Planner review (memo from Tyler Norod, 3/10/16)

APPLICANT'S SUBMITTALS

A. Level III Subdivision application
B. Project Description
C. Evidence of Right, Title, and Interest
D. Financial and Technical Capacity
E. Proposed Easements
F. Project Information: Traffic Studies, Significant Natural Features, Solid Waste
G. Water Capacity Letter
H. Wastewater Capacity Letter
I. Stormwater Management Report
J. Green Roof Specifications
K. Requested Waivers
L. Soils Map
M. Flood Insurance Map

N. Neighborhood Meeting Minutes

PLANS

Plan 1. Cover Sheet
Plan 2. Subdivision Plan
Plan 3. Site Plan
Plan 4. Existing Conditions and Demolition Plan
Plan 5. Grading and Utilities Plan
Plan 6. Erosion Control Plan, Notes and Details
Plan 7. Landscape Plan Notes and Details
Plan 8. Parking Layout & Details
Plan 9. Site Details1
Plan 10. Site Details 2
Plan 11. Boundary Survey
Plan 12. Lighting and Photometric Plan
Plan 13. Lighting Specifications
Plan 14. Cover Page
Plan 15. Floor Plan A1.0 Lobby & Lower Level Parking
Plan 16. Floor Plan A1.1 1st Floor
Plan 17. Floor Plan A1.2 2nd Floor
Plan 18. Floor Plan A1.3 3rd Floor
Plan 19. Floor Plan A1.4 4th Floor
Plan 20. Floor Plan A1.5 5th Floor
Plan 21. Floor Plan A1.6 6th Floor
Plan 22. Floor Plan A1.7 Roof Plan
Plan 23. Green Roof/Pervious Surface Area Calculations

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. 1

MEMORANDUM

TO: Caitlin Cameron, Urban Designer
FROM: David Senus, PE
DATE: March 18, 2016
RE: 169 Newbury Street
Subdivision Standards Associated with Environmental Protection & Preservation

---

Woodard & Curran has reviewed the Subdivision application for the 26 unit condominium building proposed at 169 Newbury Street for compliance with the City's Subdivision standards associated with environmental protection and preservation, specifically *Land Use code Sec. 14-497. General requirements. Items 1, 4, 6 and 12*. A separate review is occurring for compliance with Level II Site Plan standards, review comments for which are being reviewed with and addressed by the Applicant.

Comments

Land Use code Sec. 14-497. General requirements.

1. Will not result in undue water or air pollution. In making this determination it shall at least consider the elevation of land above sea level and its relation to the flood plains, the nature of soils and subsoils and their ability to adequately support waste disposal; the slope of the land and its effect on effluents; the availability of streams for disposal of effluents; the conformity to the applicable state and local health and water resources regulations;

Applicant meets this standard.

4. Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;

Applicant meets this standard.

6. Will provide for adequate sanitary waste and storm water disposal and will not cause an unreasonable burden on municipal services if they are utilized;

Applicant meets this standard.

12. Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater;

Applicant meets this standard.

Att. 2

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

Final Review Comments for 169 Newbury St - Luminato

David Margolis-Pineo <dmp@portlandmaine.gov> Fri, Mar 18, 2016 at 12:58 PM
To: David Senus <dsenus@woodardcurran.com>, Tom Errico <thomas.errico.@tylin.com>, Barbara Barhydt <bab@portlandmaine.gov>, Caitlin Cameron <ccameron@portlandmaine.gov>

February 17, 2016

March 18, 2016

Memo To: Caitlin Cameron

Barbara Barhydt

From: David Margolis-Pineo

Re: 169 Newbury St – Luminato Condominiums

The Department of Public Services has the following review comments on the above proposed project.

1. The Subdivision Recording Plat must be stamped and signed by Registered Professional Land Surveyor.

This item will be addressed with Planning Board approval.

2. All requested easements must be recorded before issuance of a building permit.

All easements and licenses will be in place prior to the issuance of the building permit.

3. A temporary construction easement will be required from the City to construct this project due to the encroachment of Franklin St.

See Three above.

4. It is understood that all roof and site drainage will be directed to proposed catchbasin #2 in Newbury St. or to the ground and not the sanitary sewer system. Please confirm that this is the case. Please note that N-12 is not permitted within the street right of way. Please consult Chapter Two of the City's Technical Manual for acceptable pipe material options.

All site drainage will be conveyed to Hampshire St and N-12 will not be used.

5. The applicant is showing a brick driveway apron within the street right of way on Newbury St.

This is a deviation of the City's material policy which calls for an asphalt apron. This department is supportive of a waiver request however the applicant will need Council approval and signoff on maintenance agreement of the drive apron within the road right of way.

Drive aprons have been changed to asphalt.

6. The applicant is requesting to install a hard canopy projecting approximately three feet into the street right of way over the sidewalk on Newbury St. This department is supportive of an easement to allow this permanent canopy with the understanding that the minimum clearance from the sidewalk to the underside of the canopy be raised from the proposed 8'-2" to 8'-6".

See Three above.

7. An oil/grit separator will be required within the parking garage on both levels. Modifying the proposed catchbasin to include a three foot sump and down turned 90 degree bend to allow for one foot of oil capture is acceptable. Please show detail and indicate oil/grit locations on plans. Please keep the sanitary lateral connections downstream of the oil/grit separators and change the designation of the line from SD leading to the City's sanitary sewer.

This issue has been addressed.

8. Since the sewer systems are separated, a backflow preventer on the sanitary lateral is not required by the city. If the applicant wishes to install one, please place the backflow preventer on the applicant's property.

Issued resolved. The backflow preventer has be eliminated.

9. License required for proposed stairs projecting into the Franklin St right of way. See item three above.

10. This Department is not supportive of the applicant's proposed driveway cut off Federal St encroaching into the Franklin St right of way.

11. This Department is supportive on waiving the 35' driveway to corner requirement since both Federal and Newbury Streets are dead-end.

We have no further comments at this time.

--
David Margolisâ€žPineo
Deputy City Engineer
Department of Public Services
55 Portland St.
Portland, ME 04101
Office 207â€ž874â€ž8850
Fax 207â€ž874â€ž8852
Cell 207â€ž400â€ž6695
dmp@portlandmaine.gov

Att. 3

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

Luminato, 169 Newbury Street - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Fri, Mar 18, 2016 at 10:31 AM
To: Caitlin Cameron <ccameron@portlandmaine.gov>
Cc: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Jeff Tarling <JST@portlandmaine.gov>

Hi Caitlin – The following is a status update from my preliminary review and represents my final traffic comments.

- The applicant should provide vehicle turning templates for parking spaces to document accessibility.

Status: The applicant has provided turning templates for the parking spaces and the information notes that parking maneuvers can occur within the site. I have no further comment, but my assumption for approval is that backing maneuvers are not required onto Newbury Street and Federal Street.

- The parking area layout requires several waivers including aisle width, parking space dimensions, and the number of compact parking spaces. The applicant should provide detailed documentation on justification for waiving City standards. All parking spaces and aisle widths should be dimensioned.

Status: Supporting documentation on waivers from the City's Technical standards have not been provided.

- Driveway width dimensions shall be noted. Additionally, sight distance from the garage driveways shall be noted (see comment below regarding Franklin Street connections).

Status: Driveway dimensions have been provided and I find conditions to be acceptable. I support waivers for driveway width given low traffic generation and driveway locations. Sight distance measurements have not been provided.

- Turnaround requirements at both Newbury Street and Federal Street shall be coordinated with DPW.

Status: DPW finds conditions to be acceptable given that it is an existing condition and future Franklin Street changes will eliminate the dead-end conditions.

- The applicant should illustrate how the proposed project and the 18-foot driving easement will accommodate existing vehicle parking requirements for the property for which the easement is located. Additionally, the driveway width at the Federal Street curb should be noted.

Status: The plans note that the driveway width on Federal Street will be 23-feet wide and meets City standards. The plans also note that a portion of this driveway and parking lot is located in the public right-of-way. Further, the plans note that the parking lot is to be repaved. I would suggest that the parking lot have delineated parking stalls for the Federal Street apartment building and that the 18-foot travel lane be delineated so that vehicles do not encroach or block access. The applicant should also provide documentation that parking requirements for the apartment building are met.

- The Franklin Street Study recommendations note a full street connection of Federal Street with Franklin Street and a restricted right in/out connection at Newbury Street. I need to continue to review the implication of these future conditions as it relates to traffic/driveway operations.

Status: I find the driveway on Newbury Street to be acceptable and support a waiver for corner clearance distance given the proposed future right-in/out restriction at Franklin Street. The Federal Street shared driveway location does not meet City corner clearance requirements under a Federal Street connection to Franklin Street. Federal Street will likely have high traffic volumes when connected to Franklin Street, and therefore the driveway location concerns me. I would suggest that any changes to the driveway under this application not increase the non-compliant distance, and if possible increase corner clearance. Additionally, when the lot on Federal Street with the shared driveway is redeveloped, the driveway should be located to meet the corner clearance standard.

Additional Comments

- **Based upon my review of site characteristics the proposed project is not expected to cause unreasonable highway or public road congestion or unsafe conditions with respect to impacts to the public street system.**

- **The driveway apron on Newbury Street shall be designed so that a maximum 2% cross-slope is constructed for pedestrians walking along Newbury Street.**

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL T.Y. Lin International

12 Northbrook Drive

Falmouth, ME 04105

207.781.4721 (main)

207.347.4354 (direct)

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Planning & Urban Development Department

To: Caitlin Cameron, Urban Designer, Planning & Urban Development Department

From: Tyler Norod, Housing Planner, Housing & Community Development Division

Date: March 10, 2016

Subject: Luminato Condominium, LLC: 167 Newbury Street & 42 Hampshire Street – Inclusionary Zoning Conditional Use

---

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 167 Newbury Street proposes the creation of 26 condominium units. Based on the total number of units the project will be required to provide at least two (2) workforce units.

In addition, the ordinance requires that every 400 square feet in a market rate unit count as a bedroom if the actual number of bedrooms in the unit is lower. The project consists of the following bedroom count: sixteen (16) one-bedroom units each of which is under 800 square feet; seven (7) two-bedroom units, four (4) of which are less than 1200 square feet and three (3) of which are less than 1600 square feet counting as three-bedroom units; and three (3) three-bedroom units each of which is between 1600 and 2000 square feet counting as four-bedroom units. Thus, the total bedroom count of the project according to the ordinance is 45 (16+17+12 = 45) resulting in a minimum requirement of four (4) bedrooms provided by the project.

The project has proposed to provide off-site workforce rental units to meet the requirements of this ordinance. The proponent has entered into an agreement with Community Housing of Maine (CHOM) to provide two (2) two-bedroom workforce units for rent at 42 Hampshire Street. The units will be rented to households earning up to 100% of the area median income (AMI) as required for workforce rental units. The units will be restricted for a term of 99 years and will be managed by CHOM. The workforce housing units will be renovated according to the standards outlined in the recently adopted inclusionary zoning implementation regulations.

By providing two (2) two-bedroom units off-site with a management plan with CHOM acceptable to the City, 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 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 42 Hampshire Street property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued. It should be noted that this project filed its

application prior to the Board's recent approval of the Inclusionary Zoning Implementation Regulations on February 23, 2016. Staff has been working with the Applicant to establish clear expectations for what the AHA will entail. It is expected that the AHA will align closely with the draft regulations reviewed and approved by the Board.

Sincerely,

Tyler Norod
Housing Planner

Att. A

PROJECT NAME: Luminato Condominiums

PROPOSED DEVELOPMENT ADDRESS:

169 Newbury Street

PROJECT DESCRIPTION:

This project is the construction of 26 new residential units, and the renovation of 3 existing units.

CHART/BLOCK/LOT: 028 / I9 & I10

PRELIMINARY PLAN _____ (date)
FINAL PLAN _____ (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: S.P. Chip Newell Business Name, if applicable: Luminato Condominium, LLC Address: 118 Congress St. Unit 401 City/State : Portland, ME Zip Code: 04101	**Applicant Contact Information** E-mail: chip@newheightgroup.com Home #: Work #: (207) 633-4328 Cell #: Fax#:
Owner – (if different from Applicant) Name: Address: City/State : Zip Code:	**Owner Contact Information** E-mail: Home #: Work #: Cell #: Fax#:
Agent/ Representative Thomas S. Greer, P.E. Name: Pinkham & Greer, Civil Engineers Address: 28 Vannah Ave. City/State : Portland, ME Zip Code: 04103	**Agent/Representative Contact information** E-mail: tgreer@pinkhamandgreer.com Home #: Work #: (207) 781-5252 Cell #: Fax#: (207) 781-4245
Billing Information Name: S.P. Chip Newell Address: Luminato Condominium, LLC 118 Congress St. Unit 401 City/State : Portland, ME Zip Code: 04101	**Billing Information** E-mail: chip@newheightgroup.com Home #: Work #: (207) 633-4328 Cell #: Fax#:

Engineer Pinkham & Greer, Civil Engineers Name: Thomas S. Greer, P.E. Address: 28 Vannah Ave. City/State : Portland, ME Zip Code: 04103	**Engineer Contact Information** E-mail: tgreer@pinkhamandgreer.com Home #: Work #: (207) 781-5242 Cell #: Fax#: (207) 781-4245
Surveyor Name: Northeast Civil Solutions Address: 153 US Route 1 City/State : Scarborough, ME Zip Code: 04074	**Surveyor Contact Information** E-mail: Home #: Work #: (207) 883-1000 Cell #: Fax#: (207) 883-1001
Architect Archetype Architects Name: David Lloyd Address: 48 Union Wharf City/State : Portland, ME Zip Code: 04101	**Architect Contact Information** E-mail: lloyd@archetypepa.com Home #: Work #: (207) 772-6022 Cell #: Fax#: (207) 772-4056
Attorney FEDERLE LAW Name: Tom Federle Address: 254 Commercial St. City/State : Portland, ME Zip Code: 04101	**Attorney Contact Information** E-mail: tom@federlelawmaine.com Home #: Work #: (207) 899-0155 Cell #: Fax#:

APPLICATION FEES:

Check all reviews that apply. (Payment may be made by Credit Card, Cash or Check payable to the City of Portland.)

Level II Development (check applicable reviews)	**Other Reviews (check applicable reviews)**
___ Less than 10,000 sq. ft. ($400) ___ After-the-fact Review ($1,000 plus applicable application fee) _____ The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($40.00 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 ($1,000) ___ Stormwater Quality ($250) ___ Site Location ($3,000, 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

APPLICATION SUBMISSION:

1. All site plans and written application materials must be submitted electronically on a CD or thumb drive with each plan submitted as separate files, with individual file which can be found on the **Electronic Plan and Document Submittal** page of the City's website at http://me-portland.civicplus.com/764/Electronic-Plan-and-Document-Submittal

2. **In addition, one (1) paper set of the plans (full size), one (1) paper set of plans (11 x 17), paper copy of written materials, and the application fee must be submitted to the Building Inspections Office to start the review process.**

The application must be complete, including but not limited to the contact information, project data, application checklists, wastewater capacity, plan for fire department review, and applicant signature. The submissions shall include one (1) paper packet with folded plans containing the following materials:

1. **One (1) full size site plans** that must be **folded.**
2. One (1) copy of all written materials or as follows, unless otherwise noted:
   a. Application form that is completed and signed.
   b. Cover letter stating the nature of the project.
   c. All Written Submittals (Sec. 14-527 (c), including evidence of right, title and interest.
3. A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet.
4. Plans and maps based upon the boundary survey and containing the information found in the attached sample plan checklist.
5. One (1) set of plans reduced to 11 x 17.

Please refer to the application checklist (attached) for a detailed list of submission requirements.

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 Level II 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:
Thomas B [illegible]	1/26/16

PROJECT DATA

The following information is required where applicable, in order to complete the application.

Total Area of Site	10,270 sq. ft.
Proposed Total Disturbed Area of the Site	8,600 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)	5,217 sq. ft.
Impervious Area (Total Proposed)	7,757 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	3,686 sq. ft.
Building Footprint (Total Proposed)	6,457 sq. ft.
Building Floor Area (Total Existing)	9,510 sq. ft.
Building Floor Area (Total Proposed)	40,200 sq. ft.
Zoning	
Existing	IS-FBC
Proposed, if applicable	N/A
Land Use	
Existing	Residential
Proposed	Residential
Residential, If applicable	
# of Residential Units (Total Existing)	7
# of Residential Units (Total Proposed)	26 new, 3 existing
# of Lots (Total Proposed)	1
# of Affordable Housing Units (Total Proposed)	2
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	0
# of One-Bedroom Units (Total Proposed)	16
# of Two-Bedroom Units (Total Proposed)	7
# of Three-Bedroom Units (Total Proposed)	3
Parking Spaces	
# of Parking Spaces (Total Existing)	2
# of Parking Spaces (Total Proposed)	28
# of Handicapped Spaces (Total Proposed)	2
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	10 Exterior, 26 Interior
Estimated Cost of Project	$8,000,000.00

PRELIMINARY PLAN (Optional) - Level II 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;	
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);	
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 II Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
x		1	* Completed Application form
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
		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.
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, including description of project, hydrology and impervious area.
		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
		1	A code summary referencing NFPA 1 and all Fire Department technical standards
		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
		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;
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;
			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;
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;

- Continued on next page -

x		Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;
x		Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;
x		Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;
N/A		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
N/A		A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance;
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.

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

File: 15178

Att. B

January 22, 2016

Ms. Barbara Barhydt, Planning Department
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

RE: SITE PLAN AND SUBDIVSION PLAN APPLICATION
169 NEWBURY STREET, LUMINATO CONDOMINIUMS

Dear Barbara,

Enclosed is the application for a 26 unit building on Newbury Street. The site also includes an existing 3 unit building on Hampshire Street. This project is being developed by Luminato Condominium, LLC managed by Chip Newell.

Project Description

Luminato Condominiums is proposed as a new six-story building in the India Street neighborhood of Portland at the corner of Newbury Street and Franklin Street. The building will include parking on the ground floor level and one basement level, with a fitness room on the Newbury/Franklin corner and five levels of condominium units above. The proposed residences will be designed primarily for young urban residents, many of whom we expect to be first time home buyers. The larger units on the upper floors will be marketed to urban professionals and Baby Boomers/Empty Nesters desiring a city home. The unit designs focus on meeting the desires of these buyers by offering floor plans that match their varied lifestyles in a manner as space-efficient as possible.

The building's location in the increasingly vibrant India Street neighborhood will provide easy access to the neighborhood amenities, the arts and cultural experiences of Portland, and proximity to parks and recreation that city condo dwellers seek.

The 27 parking spaces on the basement and ground floor levels will not be included in the purchase price of the units (there may be an exception for the penthouse units) so that purchasers will be aware of the "true" cost of urban parking and decide if it is necessary for their lifestyle. This will materially lower

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the price of the smaller units, making them affordable to a wider group of wage earners. All buyers will have the option of purchasing a parking space.

The parking floors are designed to include space for owner storage units, bicycles, at least one per unit, ski/paddleboard storage, and trash/recycling.

The five residential floors will include 26 units. Sixteen of the units will be one bedroom units ranging from approximately 500 to 740 square feet with prices starting in the $200,000s. High ceilings and large windows will add a sense of volume and spaciousness. Four units will have two bedrooms or one bedroom plus a den and be priced in the $400,000s, and the six largest units will have two or three bedrooms plus, in certain units, dens.

The site, approximately 10,000 square feet in size, currently contains two vacant three-story residential buildings that will be demolished.

The site also includes 42 Hampshire Street, an occupied three-story residential building. This building will be upgraded and continue its rental residential use; at least two of those units will be rented under the requirements of Portland's new Inclusive Zoning ordinance.

The project will have a green roof, providing stormwater treatment and allowing extra height in the structure.

Please accept our application as complete. We look forward to meeting with the Board and Staff as we move through the approval process.

Sincerely,

PINKHAM & GREER

Thomas S. Greer, P.E.

Enclosures

cc: Tom Federle, Chip Newell, David Lloyd, File

TSG/rjs

Att. C

QUITCLAIM DEED WITH COVENANT

REBECO, LLC, a Maine limited liability company with a principal place of business at 254 Commercial Street, Portland Maine 04101, for consideration paid, grants to **LUMINATO CONDOMINIUM, LLC**, a Maine Limited Liability Company, whose mailing address is Unit 401, 118 Congress Street, Portland Maine 04101, with QUITCLAIM COVENANTS, a certain lot or parcel of land with the buildings thereon situated in the City of Portland, County of Cumberland and State of Maine, and more particularly described as follows:

SEE SCHEDULE A ATTACHED HERETO

MAINE REAL ESTATE TAX PAID

IN WITNESS WHEREOF, Ophir Barone, Manager of **REBECO, LLC**, has caused this instrument to be signed and sealed on the 29 day of December, 2015.

Witness

REBECO, LLC
By: Ophir Barone
Its: Manager

STATE OF MA
COUNTY OF NORFOLK

December 29, 2015

Then personally appeared the above-named Ophir Barone in his capacity as Manager of **REBECO, LLC,** and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of **REBECO, LLC.**

Before me,

Notary Public/Attorney-at-Law

DARIO A. GALVAO
Notary Public
Commonwealth of Massachusetts
My Commission Expires
October 22, 2021

SCHEDULE A

167 and 169 Newbury Street

A certain lot or parcel of land located on the northwesterly side of Newbury Street, in the City of Portland, County of Cumberland, State of Maine, as shown on the Reconfigured Boundary Survey prepared for ReBeCo, LLC, last revised December 28, 2015 by Northeast Civil Solutions to be recorded in the Cumberland County Registry of Deeds (the "Plan"), being more particularly bounded and described as follows:

BEGINNING at a #5 rebar w/cap stamped "NCS, INC PLS 1314" on the northwesterly right-of-way line of Newbury Street at the southerly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 26365, Page 256;

THENCE S 52°21'06" W along the northwesterly right-of-way line of Newbury Street, 66.75' through a #5 rebar w/cap stamped "NCS, INC PLS 1314" to another #5 rebar w/cap stamped "NCS, INC PLS 1314". Last said rebar being on the northeasterly line of land N/F of City of Portland;

THENCE N 48°22'59" W along the northeasterly line of said City of Portland, 85.22' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being the southerly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 28560, Page 326;

THENCE N 37°40'29" E along the southeasterly line of said ReBeCo, LLC 28560/326, 32.28' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being the southerly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 27521, Page 102;

THENCE N 36°31'41" E along the southeasterly line of said ReBeCo, LLC 27521/102, 32.61' through a #5 rebar w/cap stamped "NCS, INC PLS 1314" to another #5 rebar w/cap stamped "NCS, INC PLS 1314". Last said rebar being on the southwesterly line of land N/F of Darcy Thomas as recorded in said Registry of Deeds at Book 15240, Page 299;

THENCE S 50°57'35" E along the southwesterly line of said Thomas, 57.19' to a #5 rebar w/cap stamped "NCS, INC PLS 1314. Said rebar being the westerly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 26365; Page 256;

THENCE S 46°16'56" E along the southwesterly line of said ReBeCo, LLC 26365/256, 45.66' to the POINT OF BEGINNING.

The above described parcel contains 6,216 s.f. more or less.

Meaning and intending to describe the same land as conveyed from the estate of Eugene N. Caiazzo to ReBeCo, LLC dated January 5, 2010 and recorded in said Registry of Deeds at Book 27536, Page 290.

The basis of bearing for the above described parcel is Grid North.

42 Hampshire Street

A certain lot or parcel of land located on the southwesterly side of Hampshire Street, in the City of Portland, County of Cumberland, State of Maine, as shown on the Reconfigured Boundary Survey prepared for ReBeCo, LLC, last revised December 28, 2015 by Northeast Civil Solutions to be recorded in the Cumberland County Registry of Deeds (the "Plan"), being more particularly bounded and described as follows:

BEGINNING at a #5 rebar w/cap stamped "NCS, INC PLS 1314" on the southwesterly right-of-way line of Hampshire Street at the easterly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 28427, Page 320;

THENCE S 50°57'35" E along the southwesterly right-of-way line of Hampshire Street, 30.00' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being the northerly corner of land N/F of Darcy Thomas as recorded in said Registry of Deeds at Book 15240, Page 299;

THENCE S 39°01'12" W along the northwesterly line of said Thomas, 45.00' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being the westerly corner of said Thomas;

THENCE S 50°57'35" E along the southwesterly line of said Thomas, 2.81' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being the northerly corner of land described above;

THENCE S 36°31'41" W along the northwesterly line of said ReBeCo, LLC 27536/290, 32.61' through a #5 rebar w/cap stamped "NCS, INC PLS 1314" to another #5 rebar w/cap stamped "NCS, INC PLS 1314". Last said rebar being the easterly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 28560, Page 326;

THENCE N 49°08'41" W along the northeasterly line of said ReBeCo, LLC 28560/326, 42.66' to a #5 rebar w/cap stamped "NCS, INC PLS 1314;

THENCE N 45°12'04" E along the southeasterly line of said ReBeCo, LLC 28560/326, 22.24' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being the southwesterly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 28427, Page 320;

THENCE N 86°42'25" E along the southerly line of said ReBeCo, LLC 28427/320, 8.51' to a point. Said point being the southeasterly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 28427, Page 320;

THENCE N 38°41'34" E along the southeasterly line of said ReBeCo, LLC, 48.39' to the POINT OF BEGINNING.

The above described parcel contains 2,594 s.f. more or less.

Meaning and intending to describe a portion of the land as conveyed from Hampshire 42

Properties, LLC to ReBeCo, LLC dated December 18, 2009 and recorded in said Registry of Deeds at Book 27427, Page 320, along with a triangle of land that is a portion of land as conveyed from Mary A. Kibbee Trustee of Taro Realty Trust to ReBeCo, LLC dated December 22, 2010 and recorded in said Registry of Deeds at Book 28427, Page 320.

The basis of bearing for the above described parcel is Grid North.

Received
Recorded Register of Deeds
Dec 31,2015 12:52:09P
Cumberland County
Nancy A. Lane

PURCHASE AND SALE AGREEMENT

For mutual valuable consideration both given and received, the undersigned parties have reached certain agreements and understandings relating to the purchase and sale of certain real estate and desire to memorialize their agreements and understandings in a single legally binding agreement and hereby do so as follows, to wit:

1. PARTIES. This 30th day of December 2015 (the "Effective Date"), **M&D Federal, LLC**, a Maine limited liability company ("Seller") hereby agrees to SELL and **Luminato Condominium, LLC**, a Maine limited liability company ("Buyer") agrees to BUY, upon the terms hereinafter set forth, certain real estate described herein.

2. DESCRIPTION. This Purchase and Sale Agreement (the "Agreement") shall include a portion of the real estate of Seller located at 100 Federal Street in Portland Maine along with an access easement all as more particularly described in the attached Exhibit A (the "Premises"). The Premises consists of a portion of the real estate owned by Seller by virtue of a deed received from ReBeCo, LLC on even date and recorded in the Cumberland County Registry of Deeds at Book _____, Page _____.

3. BUILDINGS, STRUCTURES, IMPROVEMENTS, FIXTURES; LEASES. Included in the sale as a part of said Premises are all the buildings, structures, and improvements now thereon, including without limitation any fences, trees, shrubs, plants.

4. TITLE DEED. The Premises are to be conveyed by a good and sufficient quitclaim deed with covenant and all personal property by warranty bills of sale running to the BUYER, and said deed shall convey a good and clear record and insurable fee simple title thereto, free from all encumbrances and encroachments except

(a) Provisions of existing building and zoning laws;

(b) Such taxes for the then current year as are not due and payable on the date of the delivery of such deed;

(c) Any liens for municipal betterments assessed after the date of this Agreement; and

(d) Easements, restrictions and reservations of record provided same do not prohibit or interfere with Buyer's intended use and development of the Premises.

5. PURCHASE PRICE. The Purchase Price is $1. Additionally, BUYER, at no expense to SELLER, shall permit and replace the existing porch and decks on 100 Federal Street as set forth in paragraph 7 below.

6. CLOSING IN ESCROW. The Closing of the transaction is to occur no later than December 31, 2015 at the office of BUYER's attorney unless otherwise agreed upon in writing. The Closing shall be held in escrow until completion of the work of BUYER set forth in paragraph 7 below. Upon completion of the work, or such earlier date agreed upon in writing by

SELLER and BUYER, the deed shall be released from escrow and recorded in the Cumberland County Registry of Deeds (the "Release From Escrow Date").

7. PORCH/DECK REPLACEMENT. As part of the consideration of this Agreement, BUYER shall, at no expense to SELLER, obtain all necessary permits from the City of Portland authorizing BUYER to remove and replace the existing porch and decks on 100 Federal Street, and BUYER shall remove and replace the same, consistent with the plans for the porch and deck replacement attached hereto as Exhibit B. BUYER shall perform this work in a workmanlike manner and shall do so at the least disruption practicable to SELLER's, and its tenants', quiet use and enjoyment of the Premises. BUYER hereby indemnifies SELLER from any liability associated with the work to be performed by BUYER as set forth in this paragraph and shall obtain liability insurance for this work, naming SELLER as an additional insured, in an amount sufficient to protect SELLER from any liability associated with this work.

8. POSSESSION AND CONDITION OF PREMISES. Full possession of said Premises, free of all debris, except as herein provided, is to be delivered on the Release From Escrow Date, said Premises to be then (a) in the same condition as they now are, reasonable use and wear thereof excepted, and (b) in compliance with the provisions of this Agreement. The BUYER shall be entitled to inspect said premises prior to the Release From Escrow Date.

9. BUYER'S DEFAULT; DAMAGES. If the BUYER shall fail to fulfill the BUYER's agreements herein, SELLER shall have all rights and remedies available at law or in equity, including without limitation, the right to specific performance.

10. SELLER'S DEFAULT; DAMAGES. In the event that SELLER fails to perform his obligations under this Agreement, BUYER shall have all rights and remedies available at law and equity, including , without limitation, the right to specific performance.

11. CONSTRUCTION OF AGREEMENT. This Agreement, which may be executed in multiple counterparts, is to be construed as a Maine contract, sets forth the entire contract between the parties, is binding upon and inures to the benefit of the parties hereto and their respective heirs, devisees, executors, administrators, successors and assigns, and may be cancelled, modified or amended only as provided herein or by a written instrument executed by both the SELLER and the BUYER. If two or more persons are named herein as BUYER their obligations hereunder shall be joint and several. The captions and marginal notes are used only as a matter of convenience and are not to be considered a part of this agreement or to be used in determining the intent of the parties to it.

12. ASSIGNMENT: The rights of BUYER under this Agreement shall be assignable to another entity under the control of BUYER and shall otherwise not be assignable without the prior written consent of SELLER which consent may be withheld by SELLER at SELLER's sole discretion

13. PRIOR AGREEMENTS: This Agreement supersedes all prior written or any oral agreements between the parties with respect to the transaction contemplated herein.

14. MEDIATION. BUYER and SELLER agree to submit any dispute arising out of, or relating to, this Agreement to non-binding mediation, as a precondition to any litigation relating to, or arising out of, this Agreement.

NOTICE: This is a legal document that creates binding obligations. If not understood, consult an attorney.

SELLER:

M&D Federal, LLC

By: _____

BUYER:

LUMINATO CONDOMINIUM, LLC

By: _____

SCHEDULE A

A certain lot or parcel of land located on the southeasterly side of Federal Street but not adjacent thereto, in the City of Portland, County of Cumberland, State of Maine, as shown on the Reconfigured Boundary Survey prepared for ReBeCo, LLC, last revised December 28, 2015 by Northeast Civil Solutions to be recorded in the Cumberland County Registry of Deeds (the "Plan"), being more particularly bounded and described as follows:

BEGINNING at a #5 rebar w/cap stamped "NCS, INC PLS 1314" on the southeasterly right-of-way line of Federal Street at the westerly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 28560, Page 326;

THENCE S 51°37'54" E along the southwesterly line of said ReBeCo, LLC 45.51' to a point, being the TRUE POINT OF BEGINNING;

THENCE N 52°54'11" E along the southeasterly line of the remaining land of said ReBeCo, LLC, 29.61' to an angle point;

THENCE N 45°12'04" E along the southeasterly line of the remaining land of said ReBeCo, LLC, 2.00' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being the westerly corner of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 27521, Page 102;

THENCE S 49°08'41" E along the southwesterly line of said ReBeCo, LLC (Book 27521, Page 102), 42.66' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being on the northwesterly line of land N/F of ReBeCo, LLC as recorded in said Registry of Deeds at Book 27536, Page 290;

THENCE S 37°40'29" W along the northwesterly line of said ReBeCo, LLC (Book 27536, Page 290), 32.28' to a #5 rebar w/cap stamped "NCS, INC PLS 1314". Said rebar being on the northeasterly line of land N/F of City of Portland;

THENCE N 46°58'57" W along the northeasterly line of said City of Portland, 43.00' to a #5 rebar w/cap stamped "NCS, INC PLS 1314";

THENCE N 51°37'54" W continuing along the northeasterly line of said City of Portland, 7.82' to the TRUE POINT OF BEGINNING.

The above described parcel contains 1,460 s.f. more or less.

Meaning and intending to describe a portion of the land as conveyed from ReBeCo, LLC to M&D Federal, LLC dated December 30, 2015 and recorded in said Registry of Deeds at Book __ _____, Page _____.

The basis of bearing for the above described parcel is Grid North.

ACCESS EASEMENT DEED

KNOW ALL BY THESE PRESENTS THAT, M&D FEDERAL, LLC a Maine limited liability company, having a place of business in Portland, Maine ("Grantor"), for consideration paid, grants to LUMINATO CONDOMINIUM, LLC, a Maine limited liability company having a place of business in Portland, Maine, it successors and assigns ("Grantee"), a perpetual access easement appurtenant to Grantee's land in Portland, Maine consisting of consolidated parcels more particularly described in 1) the Deed from Grantor to Grantee dated December 30, 2015| and recorded at the Cumberland County Registry of Deeds in Book _____, Page ___ and 2) the Deed from ReBeCo, LLC to Grantee dated December 30, 2015 and recorded in the Cumberland County Registry of Deeds in Book _____, Page (together the "Benefitted Land"), burdening that certain portion of Grantor's land portrayed as "Access Easement Area" on the plan attached hereto as Exhibit A (the "Access Easement Area"), said Access Easement Area being a portion of Grantor's land at 100 Federal Street, Portland, Maine more particularly described in the Deed from Rebeco, LLC to Grantor dated December 30, 2015, and to be recorded in said Registry prior hereto. Grantor and Grantee acknowledge and agree that the location of the Access Easement Area as shown on Exhibit A is subject to relocation if required by the City of Portland in connection with Grantee's future use and development of the Benefitted Land, in which case Grantor and Grantee will enter into an amendment to this Easement Deed to describe the relocated Access Easement Area.

Subject to the restrictions set forth below, said right of way and easement, as currently maintained or as may be improved by the Grantee, shall be for all purposes now or hereafter customary of a road or way, including the right to pass and repass, in common with others, by foot or by vehicle, (including emergency and rescue vehicles) to and from the Benefitted Land to Federal Street, Portland, Maine, together with the right to install, maintain, repair and replace underground utilities only within the Access Easement Area, and the right to make such other improvements to the Access Easement Area as the City of Portland may require for purposes of providing vehicular and pedestrian access in connection with Grantee's future use and development of the Benefitted Land. Grantor reserves the right to relocate the underground utilities at Grantor's sole cost and expense provided such relocation will not materially interfere with Grantee's use and enjoyment of the Benefitted Property and Grantor provides Grantee detailed plans with respect to such relocated utilities prior to such relocation. Together with the right to construct, repair, improve and maintain said right of way and easement for such purposes and to construct, repair, and maintain thereunder such wires, cables, lines, pipes, poles, braces, supporting, retaining, and stabilizing structures, and paving and striping as may be useful in connection with the foregoing, the preceding enumeration being descriptive and not in limitation of the Grantee's rights for the purposes herein mentioned, subject to the limitations set forth below. Except for the underground utilities and those required by the City of Portland, the Grantee, its successors and assigns, shall have no right to erect or construct a building, structure, fence, lampposts, or curbing of any kind or nature, or any other permanent structure in the Access Easement Area.

Reserving to the Grantors, its successors and assigns, the use and enjoyment of the Access Easement Area for all such purposes as will not unreasonably interfere with the perpetual use thereof by the Grantee, its successors and assigns, for the purposes herein mentioned.

All rights described above in this Easement Deed are only for the benefit of the Benefitted Land, and such rights may not be transferred to benefit land other than the Benefitted Land.

Grantor and Grantee have the right to enforce the easements, covenants and agreements contained herein by proceedings at law or in equity. Grantor and Grantee agree that if either party brings an action against the other party to enforce the terms hereof or to declare rights hereunder the prevailing party shall be entitled to recover from the other party reasonable attorney's fees and costs incurred therein.

Notwithstanding anything to the contrary set forth herein, the above-described easement is conveyed subject to, and the Grantee, by its acceptance of this Easement Deed, for itself and its successors and assigns, covenants and agrees that above-described easement, shall be subject to the following restrictions, covenants and requirements, which restrictions, covenants and requirements shall run with the land and shall be binding upon the owner of the Benefited Property:

1. Any utilities installed after the date hereof by or for the benefit of Grantee shall be for the sole benefit of the Benefitted Property, unless otherwise agreed in writing by Grantor.

2. Grantee shall not park or permit the parking of vehicles or storage of any kind within the Access Easement Area.

3. Grantee shall restore the surface of the Access Easement Area wherever disturbed by Grantee, in the exercise of its rights hereunder, as closely as reasonably practicable to the condition of such surface before being disturbed, including the restoration of any landscaping and trees.

4. Grantee shall enter upon the Access Easement Area and shall exercise its rights hereunder at its sole risk and expense. Grantee hereby releases Grantor, its successors and assigns from, and agrees to indemnify, defend (with counsel acceptable to Grantor) and hold Grantor, and its successors and assigns harmless from and against any and all losses, costs, claims, expenses and liabilities suffered by Grantor, its successors or assigns, on account of any injury to persons or damage to property (i) arising out of the exercise by Grantee of its rights hereunder; or (ii) caused by Grantee, or any agents, employees, invitees or contractors of Grantee while Grantee, or any agents, employees, invitees or contractors of Grantee, are on the Access Easement Area pursuant to, or are exercising the rights granted by, this easement; or (iii) on account of any breach by Grantee of the agreements, covenants, and warrantees of Grantee set forth herein.

5. As a condition to the exercise by Grantee of its rights hereunder, Grantee shall obtain and keep in force general liability insurance with respect to the Access Easement Area and activities related thereto in such amounts as Grantor shall reasonably request from time to time, which insurance shall name Grantor, its mortgagee, and their respective successors and assigns, as additional insured and which shall provide for not less than 20 days notice to Grantor, its successors and assigns, prior to any termination, expiration or modification of such coverage. Grantees shall deliver evidence of such insurance to Grantor upon request.

6. Grantee shall keep the Access Easement Area free of any mechanics lien arising out of or relating to any work done in connection with or relating to Grantee's use of the easement. If any mechanics lien is filed as a result of any work done by or for the benefit of Grantee, and such lien is not released within 10 days after written demand by Grantor, Grantor shall have the right, but not the obligation, to pay the claim giving rise to such lien, and any other amounts necessary to cause such lien to be released, whereupon Grantee shall reimburse Grantor upon demand.

This Agreement contains the entire agreement between Grantor and Grantee, and there are no other terms, conditions, promises, undertakings, statements or representations, express or implied, concerning the items contemplated by this Agreement.

This Agreement shall be governed by and interpreted under the laws of the State of Maine.

[signatures appear on following page]

IN WITNESS WHEREOF, the said Grantor and Grantee have through their authorized agents caused this instrument to be signed this 30th day of December, 2015.

M&D FEDERAL, LLC

Witness

By: Marah Marks, its Manager

LUMINATO CONDOMINIUM, LLC

Witness

By: _____, its Manager

STATE OF MAINE
CUMBERLAND, SS.

December 30, 2015

Personally appeared the above-named, Marah Marks, manager of M+D Federal, LLC, and acknowledged the foregoing instrument to be ~~his~~/her free act and deed and the free act and deed of such limited liability company.

Before me,

~~Notary Public~~/Attorney at Law

Drew H. Anderson
Printed Name

S:\M\MDFE01\Easements with Luminato LLC\Easement - M&D to Luminato for access.3.doc

Att. D

Camden NATIONAL BANK

MARK V. STASIUM
SENIOR VICE PRESIDENT
Direct Dial: 207.699.3392
mstasium@camdennational.com

January 4, 2016

City of Portland Planning Department
389 Congress Street, 4th Floor
Portland, ME 04101

RE: Luminato Condominium, LLC

To Whom It May Concern:

I am writing to you on behalf of Camden National Bank to recommend S.P. "Chip" Newell of Luminato Condominium, LLC and his proposed 26-unit condominium development, Luminato Condominiums. Our understanding is that the total project cost for this development will be $8,000,000+/-.

Camden National Bank provided the financing for the recently completed 118 on Munjoy Hill project located at 118 Congress Street, a highly successful project developed by Mr. Newell. The developer managed his debt obligation on this project in a fully satisfactory manner, and as a result, we have a high degree of interest in participating in future projects with Mr. Newell.

Upon completion of the city's approval process for this project, it is the bank's desire, subject to the developer's submission of a formal loan request and the bank's satisfactory due diligence on the project, to underwrite the loan request and participate in the project.

While this is in no way a commitment to lend, the Bank is willing to underwrite this project as we believe the developer has the technical, financial, and management capacity to complete this project on time and on budget.

Please do not hesitate to contact me if you have any further questions or would like to discuss in greater detail.

Sincerely,

Mark V. Stasium
Senior Vice President

EQUAL HOUSING LENDER

PINKHAM & GREER
CIVIL ENGINEERS

Pinkham & Greer Civil Engineers provides civil engineering services to private and public sector clients. The principals in the firm, Thomas S. Greer PE and Stephen E. Stearns PE have experience with a wide variety of projects. We provided direct attention to each project and client.

Our experience includes projects for school districts, architects, private developers, commercial, and industrial clients. We work as part of a multi disciplinary team at the direction of our client.

Most projects involve some type of permitting. We are very experienced in packaging applications for Towns, the Department of Environmental Protection, and the Army Corp of Engineers. We utilize our network of consultants to meet all the technical requirements of the standards. This includes surveyors, wetland scientists, architects, and Geophysical consultants.

We work to make our clients successful and thereby making our firms successful. Our repeat client list is testimony to our efforts.

THOMAS S. GREER, P.E.
Principal

Mr. Greer has over 38 years of experience in consulting engineering. This includes construction inspection, civil engineering design, and project management, as well as company management as a Principal of Pinkham & Greer; each experience building on the previous to form a well-rounded background in civil engineering and business management.

Mr. Greer's principal responsibilities within the company include management of civil engineering projects such as site designs and permit applications, and the financial management of the firm. Civil engineering projects include subdivision and land planning, stormwater management plans, site designs for commercial and institutional clients, and utility design for sewer and water projects.

The responsibility of corporate management adds to Mr. Greer's direct, hands-on experience when addressing each client's individual business concerns; developing solutions sensitive to the issues important to the client, such as financing, in addition to the technical engineering issues.

Mr. Greer has chaired the American Society of Civil Engineering subcommittee reviewing the stormwater management manual prepared by the Maine Department of Environmental Protection and was a member of the Technical Advisory Committee in developing the DEP Stormwater Management Program. He has also assisted the DEP with training programs for Non Point Source Stormwater through the Non Point Source Technical Advisory Committee.

EDUCATION

University of Maine, Orono, Maine
Bachelor of Science, Civil Engineering, 1976

REGISTRATION AND LICENSES

Professional Engineer licensed in Maine, Massachusetts, Connecticut, and New Hampshire

ACCESS EASEMENT DEED

KNOW ALL BY THESE PRESENTS THAT, M&D FEDERAL, LLC a Maine limited liability company, having a place of business in Portland, Maine ("Grantor"), for consideration paid, grants to LUMINATO CONDOMINIUM, LLC, a Maine limited liability company having a place of business in Portland, Maine, it successors and assigns ("Grantee"), a perpetual access easement appurtenant to Grantee's land in Portland, Maine consisting of consolidated parcels more particularly described in 1) the Deed from Grantor to Grantee dated December 30, 2015| and recorded at the Cumberland County Registry of Deeds in Book _____, Page ___ and 2) the Deed from ReBeCo, LLC to Grantee dated December 30, 2015 and recorded in the Cumberland County Registry of Deeds in Book _____, Page (together the "Benefitted Land"), burdening that certain portion of Grantor's land portrayed as "Access Easement Area" on the plan attached hereto as Exhibit A (the "Access Easement Area"), said Access Easement Area being a portion of Grantor's land at 100 Federal Street, Portland, Maine more particularly described in the Deed from Rebeco, LLC to Grantor dated December 30, 2015, and to be recorded in said Registry prior hereto. Grantor and Grantee acknowledge and agree that the location of the Access Easement Area as shown on Exhibit A is subject to relocation if required by the City of Portland in connection with Grantee's future use and development of the Benefitted Land, in which case Grantor and Grantee will enter into an amendment to this Easement Deed to describe the relocated Access Easement Area.

Subject to the restrictions set forth below, said right of way and easement, as currently maintained or as may be improved by the Grantee, shall be for all purposes now or hereafter customary of a road or way, including the right to pass and repass, in common with others, by foot or by vehicle, (including emergency and rescue vehicles) to and from the Benefitted Land to Federal Street, Portland, Maine, together with the right to install, maintain, repair and replace underground utilities only within the Access Easement Area, and the right to make such other improvements to the Access Easement Area as the City of Portland may require for purposes of providing vehicular and pedestrian access in connection with Grantee's future use and development of the Benefitted Land. Grantor reserves the right to relocate the underground utilities at Grantor's sole cost and expense provided such relocation will not materially interfere with Grantee's use and enjoyment of the Benefitted Property and Grantor provides Grantee detailed plans with respect to such relocated utilities prior to such relocation. Together with the right to construct, repair, improve and maintain said right of way and easement for such purposes and to construct, repair, and maintain thereunder such wires, cables, lines, pipes, poles, braces, supporting, retaining, and stabilizing structures, and paving and striping as may be useful in connection with the foregoing, the preceding enumeration being descriptive and not in limitation of the Grantee's rights for the purposes herein mentioned, subject to the limitations set forth below. Except for the underground utilities and those required by the City of Portland, the Grantee, its successors and assigns, shall have no right to erect or construct a building, structure, fence, lampposts, or curbing of any kind or nature, or any other permanent structure in the Access Easement Area.

Reserving to the Grantors, its successors and assigns, the use and enjoyment of the Access Easement Area for all such purposes as will not unreasonably interfere with the perpetual use thereof by the Grantee, its successors and assigns, for the purposes herein mentioned.

All rights described above in this Easement Deed are only for the benefit of the Benefitted Land, and such rights may not be transferred to benefit land other than the Benefitted Land.

Grantor and Grantee have the right to enforce the easements, covenants and agreements contained herein by proceedings at law or in equity. Grantor and Grantee agree that if either party brings an action against the other party to enforce the terms hereof or to declare rights hereunder the prevailing party shall be entitled to recover from the other party reasonable attorney's fees and costs incurred therein.

Notwithstanding anything to the contrary set forth herein, the above-described easement is conveyed subject to, and the Grantee, by its acceptance of this Easement Deed, for itself and its successors and assigns, covenants and agrees that above-described easement, shall be subject to the following restrictions, covenants and requirements, which restrictions, covenants and requirements shall run with the land and shall be binding upon the owner of the Benefited Property:

1. Any utilities installed after the date hereof by or for the benefit of Grantee shall be for the sole benefit of the Benefitted Property, unless otherwise agreed in writing by Grantor.

2. Grantee shall not park or permit the parking of vehicles or storage of any kind within the Access Easement Area.

3. Grantee shall restore the surface of the Access Easement Area wherever disturbed by Grantee, in the exercise of its rights hereunder, as closely as reasonably practicable to the condition of such surface before being disturbed, including the restoration of any landscaping and trees.

4. Grantee shall enter upon the Access Easement Area and shall exercise its rights hereunder at its sole risk and expense. Grantee hereby releases Grantor, its successors and assigns from, and agrees to indemnify, defend (with counsel acceptable to Grantor) and hold Grantor, and its successors and assigns harmless from and against any and all losses, costs, claims, expenses and liabilities suffered by Grantor, its successors or assigns, on account of any injury to persons or damage to property (i) arising out of the exercise by Grantee of its rights hereunder; or (ii) caused by Grantee, or any agents, employees, invitees or contractors of Grantee while Grantee, or any agents, employees, invitees or contractors of Grantee, are on the Access Easement Area pursuant to, or are exercising the rights granted by, this easement; or (iii) on account of any breach by Grantee of the agreements, covenants, and warrantees of Grantee set forth herein.

5. As a condition to the exercise by Grantee of its rights hereunder, Grantee shall obtain and keep in force general liability insurance with respect to the Access Easement Area and activities related thereto in such amounts as Grantor shall reasonably request from time to time, which insurance shall name Grantor, its mortgagee, and their respective successors and assigns, as additional insured and which shall provide for not less than 20 days notice to Grantor, its successors and assigns, prior to any termination, expiration or modification of such coverage. Grantees shall deliver evidence of such insurance to Grantor upon request.

6. Grantee shall keep the Access Easement Area free of any mechanics lien arising out of or relating to any work done in connection with or relating to Grantee's use of the easement. If any mechanics lien is filed as a result of any work done by or for the benefit of Grantee, and such lien is not released within 10 days after written demand by Grantor, Grantor shall have the right, but not the obligation, to pay the claim giving rise to such lien, and any other amounts necessary to cause such lien to be released, whereupon Grantee shall reimburse Grantor upon demand.

This Agreement contains the entire agreement between Grantor and Grantee, and there are no other terms, conditions, promises, undertakings, statements or representations, express or implied, concerning the items contemplated by this Agreement.

This Agreement shall be governed by and interpreted under the laws of the State of Maine.

[signatures appear on following page]

IN WITNESS WHEREOF, the said Grantor and Grantee have through their authorized agents caused this instrument to be signed this 30th day of December, 2015.

M&D FEDERAL, LLC

Witness

By: Marah Marks, its Manager

LUMINATO CONDOMINIUM, LLC

Witness

By: _____, its Manager

STATE OF MAINE
CUMBERLAND, SS.

December 30, 2015

Personally appeared the above-named, Marah Marks, manager of M+D Federal, LLC, and acknowledged the foregoing instrument to be ~~his~~/her free act and deed and the free act and deed of such limited liability company.

Before me,

~~Notary Public~~/Attorney at Law

Drew H. Anderson
Printed Name

S:\M\MDFE01\Easements with Luminato LLC\Easement - M&D to Luminato for access.3.doc

Att. F

Luminato Condominiums
169 Newbury Street
File: 15178

Summary of Easements

This project benefits from an access easement from Federal Street over the land of M&D Federal, LLC. See Attached Deed.

The project is self-contained on the existing lot. It will require access to the City Street for standard utility connections, reconstruction of the sidewalk, and temporary construction access along Franklin Street arterial.

There will be an easement for 100 Federal Street to access one parking space.

There will be an easement for the canopy roof and foundation footings form the City of Portland to Luminato Condominiums LLC along Newbury Street and Franklin Street Arterial.

Financial & Technical Ability

Attached is a letter from Camden National Bank concerning financial ability to complete the project. The owner has extensive project experience in developing, including 118 Congress Street. The following consultants are participating in the process providing technical support.

FEDERLE LAW
254 Commercial St.
Portland, ME 04101

Archetype Architects
48 Union Wharf
Portland, ME 04101

Northeast Civil Solutions
153 US Route 1
Scarborough, ME 04074

Pinkham & Greer, Civil Engineers
28 Vannah Avenue
Portland, ME 04103

Luminato Condominiums
169 Newbury Street
File: 15178

Traffic & Transportation Analysis

This project will have a mix of 16 one bedroom units, 4 two bedroom, units, and 6 three bedroom units. We expect that many of the residents will walk, bike, or take public transportation. Based on that, we anticipate a 5 trip per day rate from the project, or 130 average daily trips. The peak PM and AM trips are anticipated to be10% of the total, or 13 peak hour trips. These will be split evenly between the Newbury Street entrance and the Federal Street entrance.

This increase in vehicle traffic is extremely small and will have minimal impact on the neighboring road network.

This site has direct access to sidewalks in the neighborhood. This provides excellent pedestrian access to the area. The project provides for indoor bike storage and exterior bike storage. We anticipate that this will be a major component of transportation for the building occupants based on the anticipated demographics.

Natural Features

This site is fully developed in the existing condition. There are no wetlands, floodplains, or significant wildlife habitats on site.

Stormwater

This site currently has 5,217 sq. ft. of impervious surface. The proposed site will have 7,757 sq. ft. of impervious surface and 3,275 sq. ft. of green roof. The resultant impervious area is 4,482. This is a net reduction in impervious area. Stormwater treatment or control beyond the green roof is not required.

There will be no net increase in stormwater from this site.

Solid Waste

The construction waste will be recycled and disposed of at the EcoMaine facility on Riverside Street.

The domestic solid waste will be collected and stored in a room on the lower floor. A private waste hauler will be used for removal. The removal schedule will be based on the generation rate. Based on 4.5#/day per person, we estimate 42 tons per year of solid waste will be generated.

Att. G

Portland Water District

From Sebago Lake To Casco Bay

January 29, 2016

Pinkham & Greer
28 Vannah Avenue
Portland, ME 04103

Attn: Thomas Greer
Re: 167-169 Newbury Street - Portland
Ability to Serve with PWD Water

Dear Mr. Greer:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on January 7, 2016. Based on the information provided, we can confirm that the District will be able to serve the proposed project containing 26 housing units with a sprinkler system as further described in this letter.

Conditions of Service

The following conditions of service apply:

- It is the District's understanding that 167 and 169 Newbury Street in Portland will be redeveloped into 26 residential units. You have also indicated that a sprinkler system is proposed at this location. New fire and domestic services may be installed from the water main in Newbury Street.

- The existing buildings are currently served with ¾-inch domestic water services; these services are undersized for the proposed use; therefore they must be terminated by shutting the corporation valves and cutting the pipes from the water main.

- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.

Existing Site Service

According to District records, the project site does currently have existing water service. Two 3/4-inch diameter copper water service lines, located as shown on the attached water service cards, provide water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of these services.

225 Douglass Street P.O. Box 3553 Portland, Maine 04104-3553
Phone: 207.774.5961 Fax: 207.523.5440 Web: www.pwd.org

Water System Characteristics

According to District records, there is an 8-inch diameter cast iron water main on the southeast side of Newbury Street and a public fire hydrant located 120 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 93 psi on June 22, 2015.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Glissen Havu, E.I.
Design Engineer

Att. H

Caitlin Cameron - Wastewater Capacity Application Approval for 169 Newbury St - Luminato Condominiums LLC

From: David Margolis-Pineo
To: Chip Newell
Date: 2/17/2016 3:25 PM
Subject: Wastewater Capacity Application Approval for 169 Newbury St - Luminato Condominiums LLC
CC: Barbara Barhydt; Benjamin Pearson; Caitlin Cameron; Helen Donaldson; ...

February 17, 2016

RE: Capacity to Handle Wastewater Flows from 169 Newbury Street – Luminato Condominium LLC

Dear Mr. Newell:

The Department of Public Works, which includes the Water Resource Division has reviewed and determined that the downstream sewers from 169 Newbury Street has the capacity to convey the estimated 3,960 gpd of proposed wastewater which will be generated from this facility.

As you may be aware, any addition of wastewater flows in this drainage area will have an impact on CSO discharge volumes at the end of India Street, however since you are proposing to direct any roof drainage to the City's stormwater system, it is felt that overflow volumes will be offset by this action. Thank you.

If the City can be of further assistance, please call me at 874-8850 or 400-6695.

Sincerely,
CITY OF PORTLAND

David Margolis-Pineo

David Margolis-Pineo
Deputy City Engineer

Anticipated Wastewater Flows from Residential Condominiums:
15 – One Bedroom Units @ 120 gpd/unit = 1,800 gpd
Nine – Two Bedroom Units @ 180 gpd/unit = 1,620
Two – Three Bedroom Units @ 270 gpd/unit = 540
Total = 3,960 gpd

Jeffrey Levine, 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
Nell Donaldson, Department of Planning and Urban Development, City of Portland

Caitlin Cameron, Department of Planning and Urban Development, City of Portland
Shukria Wiar, Planner, Department of Planning and Urban Development, City of Portland
Jean Fraser, Planner, Department of Planning and Urban Development, City of Portland
Rick Knowland, Planner, Department of Planning and Urban Development, City of Portland
Nancy Gallinaro, Water Resources Manager
Benjamin N. Pearson, Industrial Pretreatment Coordinator, City of Portland
Rachel Smith, Assistance Industrial Pretreatment Coordinator, City of Portland
John Emerson, Wastewater Coordinator, City of Portland
Scott Firmin, Director of Wastewater, Portland Water District
Tom Greer – Pinkham & Greer Civil Engineers

Att. I

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

For Luminato Condominium, LLC

IN CONSIDERATION OF the site plan and subdivision approval granted by the Planning Board of the City of Portland to the proposed Luminato Condominium shown on the Subdivision Plat (Exhibit A) recorded in Cumberland Registry of Deeds in Plan Book _____, Page _ submitted by Pinkham & Greer Consulting Engineers, and associated Grading and Utility Plan (Exhibit B) prepared by Pinkham & Greer Consulting Engineers, 28 Vannah Avenue, Portland, Maine 14103, dated _____ _____and pursuant to a condition thereof, Luminato Condominium, LLC, a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of Unit 401, 118 Congress Street, Portland, Maine 04101, 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 Green Roof, underdrained soil filter, catch basins, and drain pipes, (hereinafter collectively referred to as the "stormwater system"), as shown on the C 1.4- Grading and Utility Plan in Exhibit B and in strict compliance with the approved Inspection and Maintenance of Stormwater Management Facilities prepared for the Owner by Pinkham & Greer Consulting Engineers (copy attached in Exhibit C) and Chapter 32 of the Portland City Code.

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

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

lien on the property.

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

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

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

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

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

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

Dated at Portland, Maine this _____ day of _____, 2016.

_____
(name of company)

_____
(representative of owner, name and title)

STATE OF MAINE
CUMBERLAND, ss.

Date: _ _ _ _ _ _ _ _ _ _

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

Before me,

_____
Notary Public/Attorney at Law

Print name:

Exhibit A: Subdivision Plat as recorded

Exhibit B: Approved Grading and Utilities Plan

Exhibit C: Approved Stormwater Maintenance and Inspection Agreement

EXHIBIT C

INSPECTION AND MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES

POST CONSTRUCTION MONITORING:

The Condominium Association is required to hire a qualified post construction stormwater inspector to inspect the stormwater system on an annual basis. This includes the inspection of the Green Roof and all other components of the Stormwater system, in accordance with Section 32-38 of the City's Ordinance.

Based on the inspection, the Owners shall take corrective action on any systems requiring maintenance. A record of all inspections and corrective action must be kept.

Reporting: On or before June 30th of every year the qualified inspector shall file a report with DPS, of the City, noting the system's condition and any maintenance or corrective action that has been taken.

Green Roof:

The Green Roof is designed to temporarily store runoff and release it at a controlled rate. The Green Roof is designed to infiltrate stormwater and attenuate peak flow from the project.

The Green Roof should be inspected annually. Stormwater functions of the Green Roof are dependent on the maintenance of the health of the plantings in the Green Roof. Care for the plantings and its soil, re-plantings, or other corrective action should be taken immediately upon identification of problems.

Inspections should be documented on forms similar to those provided. The date and initials of the inspector should be recorded as well as a description of conditions and any repair effort.

Att. J

A R C H E T Y P E

February 23, 2016

Caitlin Cameron, LEED AP, Associate AIA
Urban Designer | Planning & Urban Development Department
City of Portland, Maine
389 Congress Street
4th Floor Portland, ME 04101

Caitlin,

Per the below statement we are meeting the requirements for a green roof on Luminato.

GREEN ROOF means a roof of a building that is partially or completely covered with vegetation and designed to meet the Maine Stormwater Best Management Practices Manual standard and recommendations. A green roof installation must serve the purpose of reducing storm water runoff through retention or slowing and consist of an assembly that at a minimum includes a root repellent system, a drainage system, a filtering layer, a growing medium and plants, and shall be installed on a waterproof membrane. The vegetated area of a green roof may be considered pervious for zoning impervious calculations."

I have attached specifications for the green roof at Luminato. We are working with Apex Green Roofs and the attachments are proprietary to that company. These specifications, to the best of our knowledge meet or exceed the standards.

Respectfully Submitted,

David Lloyd
Maine Licensed Architect #936
Architect/President, Archetype

48 Union Wharf, Portland, Maine 04101 (207) 772–6022• Fax (207) 772–4056

VEGETATED ROOF COVERING

PART 1 GENERAL

1.01 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals required and install a extensive vegetated roof covering complete as shown on the Drawings and as specified herein.

B. Section Includes:

1. Moisture retention/ protection fabric
2. Drainage layer
3. Separation fabric.
4. Growing media and vegetation
5. Border units
6. Drainage access chambers
7. Accessories and components as necessary for a complete installation of the vegetated roof covering.

1.02 RELATED WORK

A. Vegetation for roof covering shall be as shown on the Drawings.

B. Roofing system under vegetated roof covering.

1.03 SUBMITTALS

A. Submit detailed information on system provider's technical literature for proposed materials and installation methods.

B. Statement of existing conditions that must be achieved and provided to begin installation of the vegetated roof covering system.

C. Statement of method for protecting the surface from wind disturbances until the foliage layer is established.

D. Shop Drawings: Submit Shop Drawings showing:

1. Details of installation with conditions at terminations, transitions, and penetrations;

2. Fabrication details or System Provider's information for drain access chambers.

   a. System Provider shall coordinate with Roofing Membrane Provider the details for roof drains, scuppers and overflows, including accurate dimensions and geometric configurations. Verify that standard drain access chambers, deck drains and scuppers conform to System Provider's written recommendations.

E. Samples: Submit samples as follows:

1. 4 by 4-in square of moisture retention/ protection fabric, synthetic sheet components, including fabrics, sheet drains, reinforcing materials, and wind protection materials.

2. 1 pound sample of growth media as delivered for each 100 cubic yards for verification.

F. Plant list: Identify species, size, and source for each type of plant. Indicate growing and planting method, planting density, and quantity conditions for care during the establishment period and provide source for all plant materials. All plants shall be non-invasive.

G. Certifications:

1. System Provider's statement indicating that:

a. Proposed use is appropriate for each product, material and component.

b. System Provider has reviewed and approved the details for the associated Roofing Membrane system, including deck drains, flashings, penetrations, and coping.

c. System Installer is approved by System Provider.

d. Proposed system is eligible for the specified warranty required of the System Provider.

2. The System Installer has documented at least 200,000 sq ft of successful un-irrigated green roof installations of similar design that are at least five years of age.

3. Certified laboratory results showing compliance of the soil growing media with the specifications. Test shall be conducted by an independent laboratory with the experience and capability to conduct the tests indicated: Agricultural Analytical Services Laboratory, Penn State University.

4. The System Provider shall submit warranty documentation that will describe Single-Source Responsibility for installation and services for the vegetated roof covering system components and vegetation. The submittal shall be a comprehensive 'single source' warranty to the Owner that includes both the waterproofing and the vegetated cover system as described herein.

H. Closeout Submittals:

1. Warranty.

2. Proposed maintenance program for establishment and long term annual maintenance program for Owner use.

1.04 REFERENCES

A. ASTM International (ASTM)

1. ASTM D3786 - Standard Test Method for Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method

2. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity

3. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
4. ASTM D4716 - Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head
5. ASTM D4833 - Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
6. ASTM D5199 - Standard Test Method for Measuring the Nominal Thickness of Geosynthetics
7. ASTM D5261 - Standard Test Method for Measuring Mass per Unit Area of Geotextiles
8. ASTM E2114 - Standard Terminology for Sustainability Relative to the Performance of Buildings
9. ASTM E2399 - Standard Test Method for Maximum Media Density for Dead Load Analysis of Green Roof Systems
10. ASTM E2400 - Standard Guide for Selection, Installation, and Maintenance of Plants for Green Roof Systems
11. ASTM E 2396 – 05: Standard Test Method for Saturated Water Permeability of Granular Drainage Media [Falling-Head Method] for Green Roof Systems
12. ASTM E 2397 – 05: Standard Practice for Determination of Dead Loads and Live Loads associated with Green Roof Systems
13. ASTM E 2398 – 05: Standard Test Method for Water Capture and Media Retention of Geocomposite Drain Layers for Green Roof Systems
14. The Landscape and Landscape Development Research Society, E.V. FLL, January 2002 edition: Guideline for the Planning, Execution and Upkeep of Green-Roof Sites

B. Agricultural Analytical Services Laboratory
Penn State University
Tower Road
University Park, PA 16802
814-863-0841

C. American Society of Agronomy

1. MSA - Methods of Soil Analysis

D. Recommended Chemical Soil Testing Procedures, North Central Region Publication #221 (RCSTP)

E. Test Methods for the Examination of Composting and Compost (TMECC)

1.05 DEFINITIONS

A. Definitions pertaining to sustainable development: As defined in ASTM E2114.

B. Drain Access Chamber: Open-ended box or cylinder that covers drains and/or scuppers. The chamber must be designed to admit water freely at the base. It must also have a removable lid to prevent debris from entering the chamber.

C. Growth Media Layer: An engineered soil-like material designed to retain moisture, manage plant nutrients, and support vigorous growth of the foliage.

D. EFVM (Electric Field Vector Mapping): A leak location technique that relies on the electrical conductivity of the cover material (moist media) and electrical insulating properties of the waterproofing membrane. The compatibility of EFVM with a specific waterproofing system must be established in advance by the EFVM service provider.

E. Manning formula for conveyance (ft^3/s): $K = (1.49 \times A \times R^{(2/3)})/n$; A=area ($ft^2$), R=hydraulic radius (ft), n=Manning's roughness coefficient (dimensionless).

F. System Installer: Entity approved by System Provider to install vegetated roof covering system.

G. System Provider: Entity that provides and certifies all materials required for installation of the vegetated roof covering system and offers long-term support and warranty protections for the completed green roof assembly.

G. Roofing Membrane Provider: Entity that provides all materials required for installation of the waterproofing or roofing system below the vegetated roof covering.

1.06 SYSTEM DESCRIPTION

A. Design Requirements:

1. The vegetated cover for semi-intensive green roof system shall be a multi- layer system, consisting of a 2 ½ inch growth media layer installed over a layers of protection fabric, drainage sheet, & separation fabric designed to promote drainage and distribute moisture.

2. The weight of this system at Maximum Water Capacity as per ASTM E2399 and with rainfall runoff occurring, shall be less than or equal to 15 pounds per square foot.

3. The system dead load, measured according to ASTM D2397, when added to the weight of the roofing membrane system, shall not exceed the maximum allowable dead load for the roof.

B. Performance Requirements

1. The vegetated roof covering system shall support a perennial vegetated ground cover and provide efficient drainage of moisture that is in excess of that required for the vigorous growth of the installed vegetation. It shall also protect roof waterproofing materials from damage caused by exposure to ultraviolet radiation, physical abuse and rapid temperature fluctuations.

2. The wet dead weight of this system shall not exceed 15 pounds per square foot(ASTM E-2397).

3. The system will continue to perform as designed for the duration of the warranty period, without a requirement to amend or refresh the media.

1.07 QUALITY ASSURANCE

A. Single-Source Responsibility: Installation of the vegetated roof covering system components and vegetation, shall be coordinated by a single-source System Provider that shall be required to offer a comprehensive 'single source' warranty to the Owner that includes both the

waterproofing and the vegetated cover system. The System Provider shall coordinate warranty documentation and services.

1. Moisture retention/ protection fabric
2. Drainage sheet
3. Separation fabric.
4. Growing media and vegetation
5. Border units
6. Drainage access chambers

B. Roofing Inspection:

1. The System Provider shall furnish a quality control specialist to observe critical aspects of the installation and testing of the work.

C. Pre-Construction Meeting: After award of Contract and prior to the commencement of the Work of this Section, schedule and conduct meeting to discuss the Work of this Section and to coordinate with related Work.

1. Notify all attendees at least two weeks prior to the conference.

2. Require attendance of parties directly affecting Work of this Section, including, but not limited to:

a. Owner,
b. Contractor,
c. Engineer,
d. System Provider,
e. System Installer,
f. Roofing Membrane Provider,
g. Roofing Membrane Installer, and
h. Mechanical and Plumbing Installers.

1.08 SEQUENCING AND SCHEDULING

A. Coordinate the Work with installation of associated roofing, waterproofing, flashings, and roof accessories specified under other sections as the Work of this Section proceeds.

B. Sequence the Work with attention to preventing deterioration of installed roofing by minimizing the use of newly constructed roof deck for storage, walking surface, and equipment.

1.09 WARRANTY

A. Green Roof System Components: Provide a warranty signed by System Provider against failure of components in vegetated roof covering system, including vegetation. Warranty shall include repair of flaws which impair the functioning of the green roof system, provided the flaws originate from errors in design, material defects, improper assembly, incompatibility between components, or deterioration. Failure of components shall include:

1. Loss or dislocation of media due to wind scour (during the establishment period).

2. Persistent ponding of water after rainfalls.

3. Anaerobic conditions developed in the media due to inadequate drainage.

4. Cracking or deterioration of drain access chambers and border units, clogging of roof drains or scuppers.

B. Green Roof System Vegetation: Provide a warranty signed by System Provider and Installer against failure of vegetation in vegetated roof covering system, including but not limited to failure of the plants to thrive due to compression or decomposition of the media. Warranty shall provide for the following:

1. Supplement or replacement of potted plant materials after 24 months if the surface coverage rate is less than 80 percent.

2. Emendation of media, if required to provide a viable growing medium for the vegetation.

C. Warranties shall include cost of labor and materials to inspect, repair, remove, and replace components in vegetated roof covering system without financial limit.

1. Warranties shall include removing and replacing vegetated roof covering to access and repair waterproofing/roofing below vegetated roof covering.
2. Warranties shall run concurrently with roofing system and shall be a single-source warranty.

D. Warranty Period:

1. Green Roof System Components: 20 years.

2. Green Roof System Vegetation: 2 years, with option for another 18 years with maintenance agreement with certified green roof installer.

1.10 MAINTENANCE

A. System Installer and Provider shall execute with Owner a 2-year establishment period maintenance contract for plantings from time of provisional acceptance.

B. Maintenance up to provisional acceptance and after the time of provisional acceptance shall include cultivation, weeding, disease and insect pest control. Procedures shall be consistent with good horticultural practices necessary to ensure vigorous, healthy growth of plant material.

1. Provide hand weeding, watering, and organic fertilization media supplement and replacement as required to maintain the health and vigor of the plants.

2. Clean up: During course of maintenance, excess and waste materials shall be promptly removed at end of each workday.

C. Maintenance schedule of activities:

1. Schedule: Shall include a minimum of 4 maintenance working visits per year with a total of 8 visits during the two year establishment period.

2. Provide Owner with long term written annual maintenance program prior to provisional acceptance. Consideration will be given to system components including growing media plantings, watering, weeding, and fertilization at a minimum.

D. Maintenance reports:

1. Provide reports to Owner summarizing activities, observations, necessary corrections, and recommended changes to maintenance routine, if any.

PART 2 PRODUCTS

2.01 GREEN ROOF SYSTEM COMPONENTS

A. MOISTURE PROTECTION and DRAINAGE COMPONENT

1. Protection Mat SSM 45 by ZinCo USA: High-quality fiber mat made of polypropylene, with fleece backing.

   Color: black
   Thickness: ca. 0.15 in (ca. 3.8 mm)
   Weight: ca. 0.11 lb/sq ft (ca. 543 g/m²)
   CBR Puncture (according to ASTM D6241): ca. 1050 lbs (ca. 4673 N)
   Grab Tensile Strength (according to ASTM D4632): ca. 380 lbs (ca. 1691 N)
   Elongation (according to ASTM D4632): 50 %
   Water Flow Rate (according to ASTM D4491): ca. 50 gpm/ft² (ca. 2037 l/min/m²)
   Dimensions: EDP No. 21204500 ca. 7.50 ft x 150.00 ft (ca. 2.30 m x 46.00 m)

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)

2 Separation Fabric/ Filter Fabric: Thermally strengthened filter sheet of polypropylene. ZinCo Filter Sheet SF

   Color: black
   Thickness: ca. 0.04 in (ca. 1.14 mm)
   Weight: ca. 0.02 lb/sq ft (ca. 109 g/m²)
   CBR Puncture (according to ASTM D6241)**:** ca. 220 lbs (ca. 979 N)
   Grab Tensile Strength (according to ASTM D4632)**:** ca. 80 lbs (ca. 356 N)
   Elongation (according to ASTM D4632)**:** 50 %
   Water Flow Rate (according to ASTM D4491)**:** ca. 160 gpm/ft² (ca. 6519 l/min/m²)

B. GROWING MEDIA LAYER

1. Stancils light-weight growth media.

Parameters Guiding Values * Guiding Values (metric) *

Proportion of silting components: ≤ 15 mass %

Volume weight apparent density
max. water capacity: 56 lb/cu ft
Total pore volume: approx. 50 Vol. %
Max. water capacity: approx. 40 Vol. %

Water permeability, mod K_f: 0.024–2.40 in/min 0.001–0.10 cm/s

pH-Value: 6.50–8.00

Salt content (water extract): ≤ 2.50 g/l
Organic content: ≤ 65 g/l

a. Non-capillary Pore Space Ratio at Field Capacity, 0.333 bar (TMECC 03.01, A) ≥ 10% (vol)

b. Moisture Content at Field Capacity (TMECC 03.01, A) ≥ 15% (vol)

c. Non-Capillary Pore Space Ratio at Maximum Water Capacity≥ 6% (**ASTM-E2399**)

d. Maximum Water Capacity ≥ 40% (vol) (**ASTM-E2399-05**)

e. Density at Maximum Water Capacity ≤ 85 lb/ft^3 (**ASTM-E2399-05**)

f. Water Permeability ≥ 0.05 in/min (**ASTM-E2399-05**)

g. Alkalinity, Ca CO_3 equivalents (MSA) ≤ 2.5%

h. Total Organic Matter (TOM), by loss on ignition ≤ 3-8% (dry wt.) (MSA)

i. pH (RCSTP) 6.5-8.0

j. Soluble Salts (DTPA saturated media extraction) (RCSTP) ≤ 6 mmhos/cm

k. Organic Supplements (compost, peat moss, etc.) ≤ 1 mg CO_2/g TOM/d combined respiration rate (TMECC 05.08, B)

l. Cation exchange capacity (MSA) ≥ 10 meq/100g

m. Grain-size distribution of the mineral fraction (ASTM-D422)

(1)	Clay fraction (2 micron)	≤ 3%
(2)	Pct. Passing US#200 sieve (i.e., silt fraction)	5-15%
(3)	Pct. Passing US#60 sieve	10-25%
(4)	Pct. Passing US#18 sieve	20 - 50%

(5) Pct. Passing 1/8-inch sieve 55 - 95%

(6) Pct. Passing 3/8-inch sieve 90 -100%

n. Chemical Analysis

(1) Nitrogen, NO_3 (RCSP) 25-100 ppm

(2) Phosphorus, P_2O_5 (RCSP) 20-200 ppm

(3) Potassium, K_2O (RCSP) ≥ 150 ppm

(4) Other macro- and micro-nutrients shall be incorporated in the formulation in initial proportions suitable for support the specified planting.

2. Thoroughly blend at a batch facility. Moisten, as required, to prevent separation and excessive 'dusting' during installation.

C. WIND PROTECTION

1. Woven coconut coir fibers. Opening to be 0.75" x 0.5", weight to be 600 g/SM.

D. BORDER UNITS

1. To allow free flow across edges, these units should be installed on top of strips of sheet drain.

A. Edge Elements

(1) These are used to separate gravel margins from the green roof proper. Edge elements shall be Permaloc or equal aluminum perforated cantilever (i.e., 'L-shaped') border units conforming to the following dimensions:

Height: ≥ 0.25 inch higher than the top of the growth media layer

Base Length: greater of 6 inches, or 1.5 times the height of the element

B. Stone

(1) Pea Stone for walkway and river rock ballast stone for borders.

E. DRAIN ACCESS CHAMBERS

1.. These are designed to enclose roof drains and scuppers. They prevent intrusion of media and protect the drains from clogging by wind-blown paper, leaves, etc. Drain access chambers are typically 12 inches square (or 12 inches in diameter).

2.02 VEGETATION

A. Plants: Provide plants in accordance with ASTM E2400 and as follows:

1. Provide vegetation that minimizes or eliminates irrigation requirements after establishment as approved by Engineer and Owner.

2. Plant materials shall be as shown Green Roof Plan. Substitutions shall be indigenous plant species. However, substitutions providing a plant community that can provide a dense groundcover capable of withstanding climatic conditions, holding the growth medium in place, minimize weed potential, and provide desirable aromatic characteristics is the primary goal.

3. The plant list shall be as shown on plan and include a minimum of 5 species with a record of success in similar installations and conditions.

4. Plants selected for the green roof shall be generally low-growing groundcovers and perennials, with an occasional ornamental grass (maximum height 48”) for semi-intensive installations as approved by Engineer and Owner.

5. Water for irrigation and plant establishment purposes shall be potable.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions under which roofing will be applied, with System Installer and Roofing Membrane Installer present, for compliance with requirements

1. Correct any deficiencies to the satisfaction of the System Installer.

2. Do not proceed with installation until unsatisfactory conditions have been corrected.

3. For the record, prepare a written report, endorsed by the Roofing Applicator and the Vegetated Roof System Installer, listing conditions as appropriate that may be detrimental to the performance of the work. Proceed only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Prepare Surface:

1. Clean surface of the Roofing Membrane as recommended by Roofing Membrane Provider/Installer and by System Provider.

B. Protect Roofing Membrane:

1. Until the protection fabric course is installed, traffic over the working area shall be strictly controlled and limited to essential personnel only.

2. Protect heavily traveled areas, including but not limited to corridors for transporting media to the working areas, as recommended by the Roofing Membrane Provider.

3. Protect lay down areas using ½-inch plywood or particle board over 1-inch sheets of expanded polystyrene (EPS), or similar sheathing material.

C. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.

3.03 INSTALLATION

A. Install vegetated roof covering system according to System Provider's written instructions, applicable regulations, approved shop drawings, and as specified.

B. Install moisture retention/ protection fabric:

1. Layout moisture retention/ protection fabric on top of the completed waterproofing system by overlapping adjoining sheets by a minimum of 6-inches. Allow slack to accommodate contraction during cold weather.

C. Install Drainage layer:

1. Assemble the internal drainage conduit according to the layout provided by the System Provider.

2 Cover the assembled conduit using separation fabric.

3. The conduit shall be completely concealed below the top of the granular drainage aggregate when properly installed.

D. Install drain access chambers and border units:

1. Assemble border units directly on top of the drainage panel. Cover the edge elements and sheet drain with separation fabric to prevent intrusion of media.

2. Layout drain access boxes. Wrap drain access chambers with separation fabric to prevent intrusion of media.

3. Immediately place granular aggregate to stabilize the border units and separation fabric.

E. Install walkways:

1. Install a second layer of drainage panel at areas to receive walkways.

2. Locate as shown in the drawings.

3. Edge the walkways with separation fabric.

F. Install growing media

1. Place the growing media onto the roof in a manner that will not suddenly increase the load to the roof. It shall be immediately spread to the specified thickness, plus 10 percent, after moderate compaction. Unless otherwise approved, compaction shall be using a 4-ft wide lawn roller with a total load of not less than 100 lbs per linear foot and not more than 200 lbs.

2. Upon completion of compaction, install tackifier emulsion at a rate approved by System Provider. Furnish and schedule a minimum of 2 applications at different times to secure finished grades of growing media.

3. Upon completion of compaction, thoroughly soak with water using a hand sprayer or sprinkler in a manner as approved by the System Provider.

G. Install vegetation:

1. Plant installation shall occur April 30 through June 1, and August 15 through October 30, unless otherwise approved by the System Provider.
2. Plants shall be well established according to the System Provider's recommendations.
3. Thoroughly soak the growing media prior to commencing planting.
4. Install plants into the growing media to their full depth and press firmly around each installed plant. At the end of each day, soak those areas that have been newly planted.
5. Install watering practices and wind protection measures immediately upon completion of each planting area and as recommended by the System Provider.
6. Enfield: Install plants at a density of 2.2 plants per square foot from 72 cell trays.
7. Springfield: Install plants at a density of 3 plants per square foot from 36 cell trays.

3.04 2-YEAR MAINTENANCE SERVICE

The green roof installer shall offer a two-year maintenance service. This service will include:

A. Hand weeding and/or chemical weeding and fertilization, as required to maintain the health and vigor of the plants.

B. The installer shall guarantee an 80 percent cover rate at the end of 24 months. As necessary, plants shall be replanted to achieve this requirement.

END OF SECTION

Submittals Transmittals

A. **Technical Literature**
B. **Statement of Conditions prior to Install**
C. **Statement of Method for protection from Wind**
D. **Shop Drawings**
E. **Samples**
F. **Plant List**
G. **Certifications**
H. **Closeout Submittals**

A. Technical Literature

1.1

Protection Mat SSM 45 by ZinCo USA: High-quality fiber mat made of polypropylene, with fleece backing. Water and nutrient storage mat.
Color: black
Thickness: ca. 0.15 in (ca. 3.8 mm)
Weight: ca. 0.11 lb/sq ft (ca. 543 g/m²)
CBR Puncture (according to ASTM D6241): ca. 1050 lbs (ca. 4673 N)
Grab Tensile Strength (according to ASTM D4632): ca. 380 lbs (ca. 1691 N)
Elongation (according to ASTM D4632): 50 %
Water Flow Rate (according to ASTM D4491): ca. 50 gpm/ft² (ca. 2037 l/min/m²)
Dimensions: EDP No. 21204500 ca. 7.50 ft x 150.00 ft (ca. 2.30 m x 46.00 m)

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

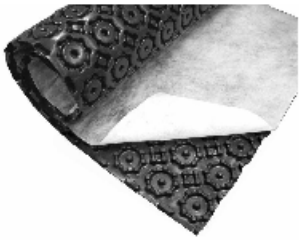
1.2

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

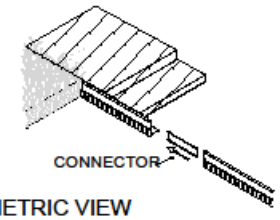
geoedge™

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

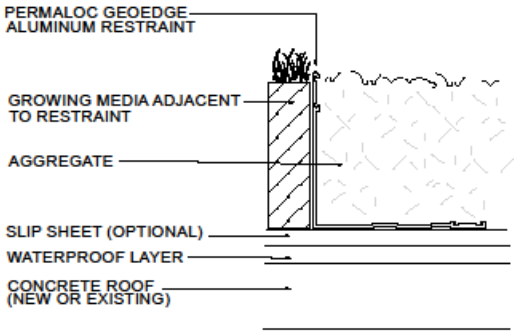


ISOMETRIC VIEW
NTS

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

Salt content (water extract): □ 2.50 g/l
Organic content: □ 65 g/l
a. Non-capillary Pore Space Ratio at Field Capacity,
0.333 bar (TMECC 03.01, A) □ 10% (vol)
b. Moisture Content at Field Capacity
(TMECC 03.01, A) □ 15% (vol)
c. Non-Capillary Pore Space Ratio at Maximum Water Capacity□ 6% (ASTME2399)
d. Maximum Water Capacity □ 40% (vol) (ASTM-E2399-05)
e. Density at Maximum Water Capacity □ 68.74 lb/ft3, not to exceed 15 1b./SF at design depth.
f. Water Permeability □ 0.05 in/min (ASTM-E2399-05)
g. Alkalinity, Ca CO3 equivalents (MSA) □ 2.5%
h. Total Organic Matter (TOM), by loss on ignition □ 3-9% (dry wt.) (MSA)
i. pH (RCSTP) 6.5-8.0
j. Soluble Salts (DTPA saturated media extraction) (RCSTP) □ 6 mmhos/cm
k. Organic Supplements (compost, peat moss, etc.) □ 1 mg CO2/g TOM/d combined respiration rate (TMECC 05.08, B)
l. Cation exchange capacity (MSA) □ 10 meq/100g
m. Grain-size distribution of the mineral fraction (ASTM-D422)
1) Clay fraction (2 micron) □□ 3%
2) Pct. Passing US#200 sieve (i.e., silt fraction) 5-15%
3) Pct. Passing US#60 sieve 10-25%
4) Pct. Passing US#18 sieve 20 - 50%
5) Pct. Passing 1/8-inch sieve 55 - 95%
6) Pct. Passing 3/8-inch sieve 90 -100%
n. Chemical Analysis
1) Nitrogen, NO3 (RCSP) 25-100 ppm
2) Phosphorus, P2O5 (RCSP) 20-200 ppm
3) Potassium, K2O (RCSP) □ 150 ppm

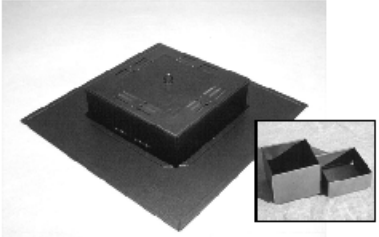
4.0

Inspection Chamber KS 8: Designed to enclose roof drains and prevent intrusion of media or other debris.
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)

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

Subject to technical alterations and printing errors; First edition: 01/07
Authorized by ZinCo GmbH

EXHIBIT “M”

Apex Green Roofs and SKANSKA USA BUILDING INC. for Green Roof

DATE:

MATERIAL STATUS LOG – ATTACHMENT NO. 1

SUBCONTRACTOR: **Apex Green Roofs**

Location: **Bid Package No. and Description:**									
Item	**Manufacturer/Supplier**	**Purchase Order**		**Shop drawing release date**	**Fabrication date**		**Delivery Date**		
		Number	**Date**		**Start**	**Complete**	**Schedul**	**Promised**	**Actual**
(1.1)	**Zinco – Protection Mat**						**June**		
(1.2)	**Zinco – Drainage layer**						**June**		
(2.0)	**Permaloc – Edging**						**June**		
(3.0)	**Stancill – Roof Media**						**June**		
(4.0)	**Zinco – Inspection Chamber**								

EXHIBIT “M”

Apex Green Roofs and SKANSKA USA BUILDING INC. for Green Roof

SUBMITTAL SCHEDULE – ATTACHMENT NO. 2

SUBCONTRACTOR: **Apex Green Roofs**

LOCATION:									
Submittal no.	**Spec Section**	**Spec Paragraph**	**Description of Item**	**Shop Drawing**	**Brochure**	**Sample**	**Date Item will be Submitted**	**Date Approval is Req’d By**	**Remarks**
1.1			**Protection fabric**	**SKA-018**		**SSM-45**			
1.2			**Drainage**	**SKA-018**		**XD-20**			
2.0			**Aluminum Edge**	**SKA-018**		**GeoEdge Permaloc**			
3.0			**Growth Media**	**SKA-018**		**Stancill**			
4.0			**Inspection Chamber**	**SKA-021**		**KS 8**			

B.
For a vegetated roof to be successfully installed existing conditions must be as follows:

EFVM Testing to be performed by the roofer with a representative of Apex Green Roofs present as well as a representative from Sika Sarnafil. Testing is to be completed within two weeks of Apex's mobilization for construction.
The general contractor must confirm in writing to Apex Green Roofs Inc. that no trades or personnel will be permitted on the roof from the time of EFVM test to commencement of green roof construction.
Roof surface is to be clean, swept of all construction debris.

C.
Wind Protection:
Immediately after plant installation Apex Green Roofs will install a liquid applied tackifier to protect against wind scour.
An additional application will be applied in the fall maintenance visit as needed.

D. Shop Drawings:

E. Samples:
1. 4 by 4-in square of moisture retention/ protection fabric, synthetic sheet components, including fabrics, sheet drains, reinforcing materials, and wind protection materials.
2. 1 pound sample of growth media as delivered for each 100 cubic yards for verification. With mixture analysis per 2.1.B.1.

F. Plant list: The plant list shall be as shown on plan and include a minimum of 7 species with a record of success in similar installations and conditions. Max. concentration of 300 plugs of one species.

Phedimus
Delosperma
Sedum album
Sedum acre
S kamschaticum "Weihenstephaner's gold"
S sichotense
S rupestre "angelina"
S reflexum "blue spruce"
S pachyclados
S sichotense
S sexangulare
S spurium roseum
S spurium fuldaglut
S spurium var album
S spurium "John Creech"
S spurium "voodoo"

G. Certifications –
System provider indicates that each product, material and component will be used in accordance to each items appropriate use. Details in association with Roofing Membrane system, deck drain, flashings, penetrations and coping have been reviewed and approved. System installer

is approved by Sika Sarnafil. Proposed system is eligible for a single-source warranty through the waterproofing manufacturer Sika Sarnafil

Certified laboratory results show compliance of the soil growing media with the specifications. Tests have been performed by Penn State University Agricultural Analytical Services Laboratory. See attached document 3.0

Warranty documentation describing Single Source Responsibility for installation and services for the vegetated roof will be provided and attached.

I. Closeout Submittals – Warranty & Maintenance –
   See attached warranty

Sedum Master Inc.
746645 Township Rd. #4
Princeton, ON, N0J 1V0
T: 519-458-4061
F: 519-458-8883

Sedum Master SMRM5 Blankets

Size: 3.28' x 3.28' (L x W) or 6.56' x 3.28 (L x W)
(Soil thickness approximately 2cm to 2.5cm)

Material: **SMRM5** is a geometric patterned core, blanket designed to reinforce soil for green roof vegetation. It consists of a matrix of tangled monofilaments. The monofilaments are heat welded at the junctions to form a resilient structure that utilizes a removable Non Woven Spun bound Polyester.

Weight Vegetated: **Approximately** 6-7 lbs./sq. ft. fully saturated

Features & Benefits:

- Excellent for flexibility and compressibility.
- Fire Resistant - Class A fire rated product for roofing.
- Easy to handle.
- Easy to cut for installation around roof vents and equipment.
- Non-biodegradable fibers.
- Non-woven root penetrating backing.
- Fast installation reducing labour cost.

Soil Media: Organic and inorganic Sedum Master pre-engineered growing medium enables fast root penetration from SMRM5 blankets to the substrate below. Blanket substrate is for production only

Drainage: Combination of fibrous material and porous growing media provides drainage to avoid root rot.

Sedum Master Inc.
746645 Township Rd. #4
Princeton, ON, N0J 1V0
T: 519-458-4061
F: 519-458-8883

Plants: The sedum species in our vegetative blankets varies from one to another, therefore exact percentages or varieties cannot be determined.
Listed below are our most common species and are subject to change (custom grown are also welcome).

- Sedum Acre
- Sedum Album
- Sedum Ellacombianum
- Sedum Sexangulare
- Sedum Reflexum
- Sedum Spurium Dragons Blood
- Sedum Pulchellum
- Moss

Irrigation System: Not typically needed, however, we recommend that it be possible to water during an extended drought.

Growing Lead Time: For a 75% - 85% blanket coverage, an 18 - 20 month lead time is required for all custom grown orders.

Sedum Mat Care: Upon receipt of your Sedum Master Vegetative Blankets unpack immediately to avoid plant spoilage.

Installation:

- Removing the backing is optional. With backing removed, root to soil contact is increased and the blanket performance will be increased.
- Sedum Master recommends that newly installed plants be watered thoroughly and continually until well established.
- A long term maintenance plan is advisable.

Sedum Master Inc.
746645 Township Rd. #4
Princeton, ON, N0J 1V0
T: 519-458-4061
F: 519-458-8883

Sedum Master SMUL6 Blankets

Size: 3.28' x 3.28' (L x W) or 6.56' x 3.28' (L x W)
(soil thickness approximately 2cm – 2.5cm)

Material: **SMUL6** is a geometric patterned core blanket designed to reinforce soil for green roof vegetation. It consists of a matrix of tangled monofilaments. The monofilaments are heat welded at the junctions to form a resilient structure that utilizes a removable Non Woven Spun bound Polyester filter fabric.

Weight Vegetated: **Approximately** 1.75 -2.25 lbs./sq. ft. fully saturated.

Features & Benefits:

- Excellent for flexibility and compressibility.
- Fire Resistant - Class A fire rated product for roofing.
- Ultra lightweight & easy to handle.
- Easy to cut for installation around roof vents and equipment.
- Non-biodegradable fibers.
- Non-woven root penetrating backing.
- Fast installation reducing labour cost.

Soil Media: Organic and inorganic Sedum Master pre-engineered growing medium enables fast root penetration to the substrate below the SMUL6 blankets. Blanket substrate is for production only.

	Dry Density	Moisture Content	Air Space	Water Retention	Coarse Fiber > 10 mesh	Medium Fiber 10 - 18 mesh	Fine Fiber 18-50 mesh	Extra Fine < 50 mesh
	g/l	%		x dry weight	%			
Average	79.9	53.9	15.1	9.9	23	21.7	39.3	16.2

Sedum Master Inc.
746645 Township Rd. #4
Princeton, ON, N0J 1V0
T: 519-458-4061
F: 519-458-8883

Drainage: Combination of fibrous material and porous growing media provides ample drainage.

Irrigation System: Not typically needed, however, we recommend that it be possible to water during an extended drought.

Growing Lead Time: For a 75% - 85% blanket coverage, an 18 - 20 month lead time is required for all custom grown orders.

Sedum Mat Care: Upon receipt of your Sedum Master Vegetative Blankets unpack immediately to avoid plant spoilage.

Installation: Sedum Master recommends that newly installed plants be watered thoroughly upon installation and continued until established.

Plants: In our vegetative blankets we use Mix 1 and Mix 2 varieties. Due to seed availability and germination however, not all the species may be present. Blankets will vary.

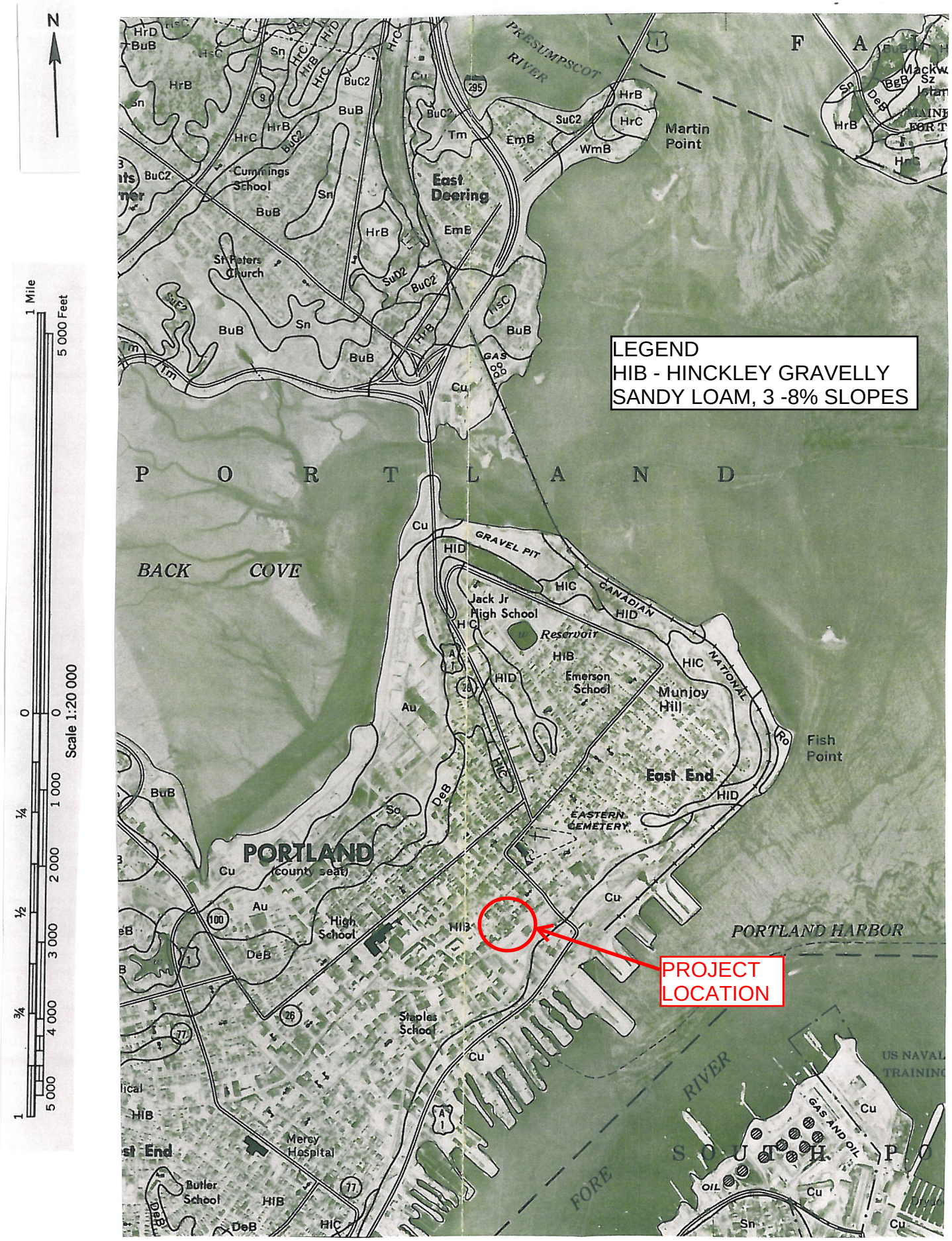
Luminato Condominiums
169 Newbury Street
File: 15178

Waivers:

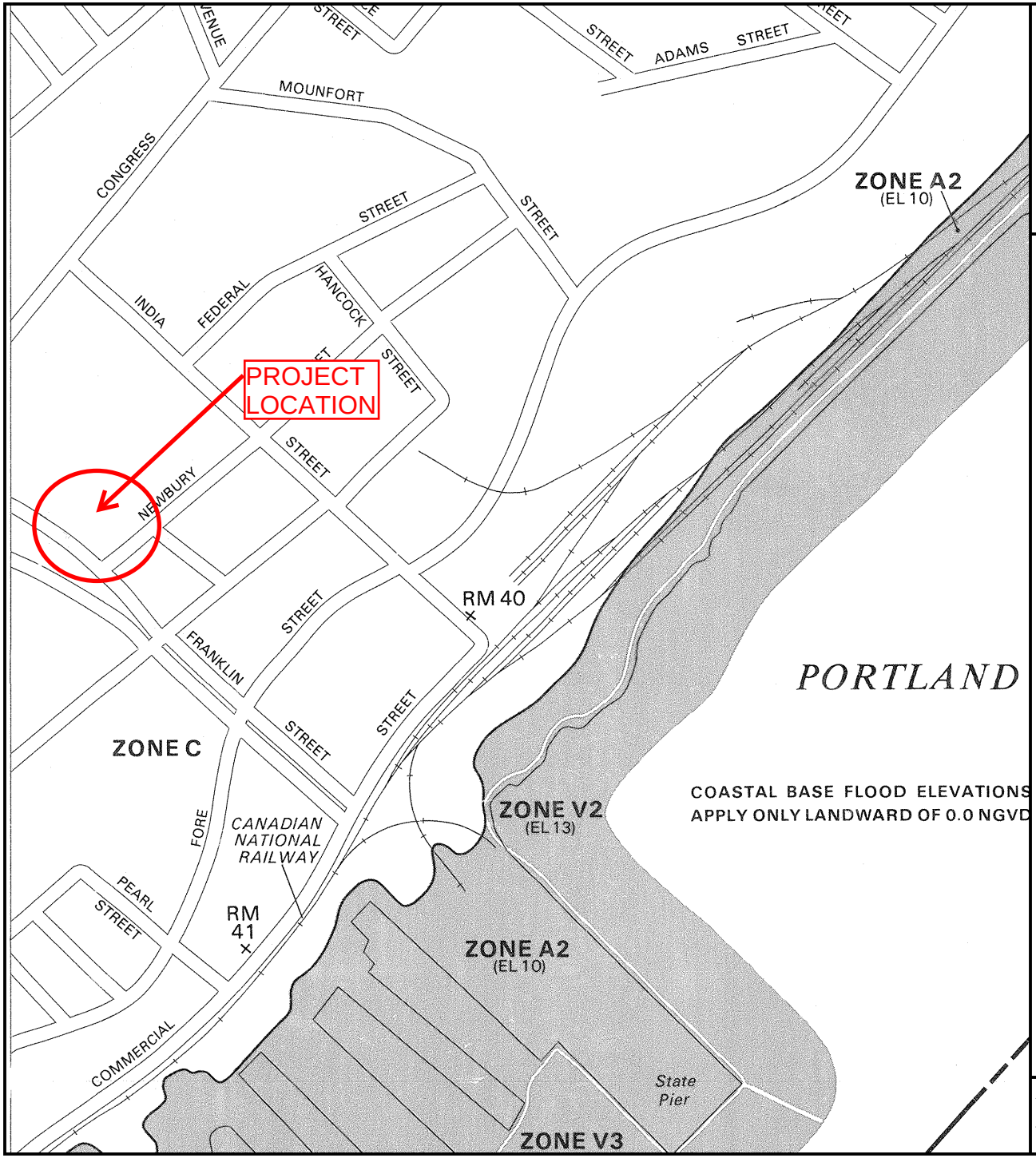
We request a waiver from the size of parking spaces. We will provide spaces of 8’-9” x 18’-0”, 8’-6” x 18’-0” and 8’-3” x 18’-0”.

We also request a waiver of the Street Trees. A payment to the Street Tree Fund will be made.

Att. L


N
1 Mile
5 000 Feet
Scale 1:20 000
LEGEND
HIB - HINCKLEY GRAVELLY SANDY LOAM, 3 -8% SLOPES
PRESUMPSCOT RIVER
Martin Point
East Deering
Cummings School
St Peters Church
P O R T L A N D
BACK COVE
GRAVEL PIT
CANADIAN NATIONAL
Jack Jr High School
Reservoir
Emerson School
Munjoy Hill
Fish Point
East End
EASTERN CEMETERY
PORTLAND
(county seat)
High School
Staples School
Mercy Hospital
Butler School
PORTLAND HARBOR
PROJECT LOCATION
FORE RIVER
US NAVAL TRAINING
GAS AND OIL
OIL

Att. M



APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 14 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0014 B

EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

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

Att. N

FEDERLE LAW

Neighborhood Meeting Invitation

February 4, 2016

Dear Neighbor:

On behalf of Luminato Condominium, LLC, I am writing to invite you to join a neighborhood meeting to discuss an application for subdivision review relating to a plan for redevelopment of properties located at167 Newbury Street, 169 Newbury Street, 42 Hampshire Street and 100 Federal Street. Luminato has applied for subdivision approval and site plan approval to construct a 26 unit condominium. In addition to the condominium units which will be priced starting in the $200,000's, Luminato intends to provide affordable apartment units consistent with Portland's Inclusionary Zoning Ordinance by placing affordability covenants restricting dwelling units in an existing, renovated building which will be owned and managed by Community Housing of Maine.

The meeting information is as follows:

Meeting location: **1st Floor, 42 Hampshire Street**

Meeting date: **February 17, 2016**

Meeting time: **5:30 pm to 6:45 pm**

The City land use ordinance requires that property owners within 500 feet of the proposed development and residents on an "interested party" 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 Department.

If you have any questions, please call me at 207.899.0155.

Regards,

Thomas B. Federle

Thomas B. Federle

254 Commercial St., Ste. F, Portland, ME 04101 | www.federlelawmaine.com | O 207.899.0155

Luminato Condominum

NEIGHBORHOOD MEETING

February 17, 2016

Sign-in Sheet

Name	Address
1. Johanne Eible	146 Newbury St Unit B Portland, ME 04101
2. Bill Stauffer	145 Newbury St. Portland
3. Brit Vitalius	306 Congress
4. Bob LeBlanc	5 Gmeady Portland
5. Scott Lohmann	84 Middle Portland
6. Elise Loschiavo	306 Congress
7. Emily mcconnell	
8. Jaime Parker	73 Atlantic
9. DANE NICHOLD & SHELBY JOHNSON	60 WILSON #3 04101
10. Arlin Smith	88 Middle St.
11. Phil Notis	139 Newbury Street Portland ME 04101
12.	
13.	
14.	
15.	
16.	
17.	
18.	

Luminato Condominium
Neighborhood Meeting Certification

Luminato Condominium held a Neighborhood Meeting on 2/17/16 in the 1st floor unit of 42 Hampshire Street, Portland. The meeting began at 5:30 p.m., as advertised, and lasted until 6:30 p.m. Members of the public were asked to sign in, and a copy of the sign in sheet is attached hereto.

Meeting Minutes

Chip Newell, Principal of the NewHeight Group, opened the meeting by introducing himself and Susan Morris, his wife and partner in the NewHeight Group, and new developer partners in this project, Erin Cooperrider and Tom Federle. Chip also introduced the Architect, David Lloyd, and then asked Tom Federle to give an overview of the site and the project.

Using an enlarged aerial photograph overlaid with markings showing a future building footprint, potential job site fencing, construction trailer, and gated openings, Tom identified the site, the two buildings to be demolished, and the one building that would remain as a part of the project. Tom said that Luminato would be a new construction building containing a mixture of one-, two-, and three-bedroom condominium units in five stories, above a two-story parking pedestal. Tom pointed out the two entrances to the garage, one from Federal Street, and one from Newbury Street, and discussed the construction period fencing, delivery pattern, and parking provisions. Tom then turned the presentation over to David Lloyd, to describe the building in more detail.

David noted that this design in more compact, dense and tall than a previously approved plan for this site. A smaller footprint is being used, more existing units are being retained, and more new units are being developed. David showed full size boards with renderings and floor plans and described the design. After David presented, the development team opened the meeting up to questions and comments from attendees.

The following Q and A followed:

1. *At what stage of the development process is Luminato?* We indicated that we had applied for Site Plan Approval under the Form Based Code and applied for Subdivision and Inclusionary Zoning approval and that the City was reviewing our application. We indicated that we had a tentative date of March 22, 2016 before the Planning Board.
2. *If all goes to plan, what is your timeline?* We indicated that we hoped to commence construction by early summer 2016 and to be substantially complete one year later.

3. *Can people in the neighborhood rent parking spaces in the proposed parking garage under the units?* We answered that the parking spaces were being made available only to unit owners.
4. *What are the sizes of the units?* We answered that they range from 503 SF to 1771 SF.
5. *How does the plan for Luminato fit in with the Franklin Street plan?* We discussed how we are orienting all of the units towards Franklin and hope to bring active pedestrian life to this block above restaurant row and the gateway hub into the Old Port and Downtown at Franklin and Middle. We indicated that we were still working on design features to best embrace Franklin.
6. *When will you start selling units?* We indicated that we will likely list units for sale in April but that by word of mouth that we were already talking to potential buyers.
7. *What are the prices?* We indicated that pricing was still being finalized but that one bedroom units would begin in the very low $200,000's and three bedroom units would likely begin in the $800,000's.
8. *How will the building be heated and cooled?* We are using high efficiency heat pumps for heating and cooling.
9. *What type of construction is being used?* We are building a 5 story wood-framed structure on top of a steel and concrete garage pedestal.
10. *Is owner*-occupancy required? We answered that there are lender requirements regarding the % of owner-occupants of units but that moreover we really want owner-occupants and are trying to discourage investor-buyers. We are developing a reservation form and process that attempts to identify the intentions of potential purchasers.

After the Q & A period, attendees were welcomed to stay and look at plans and ask individual questions of various team members if they'd like. Most attendees remained for a while longer and by 6:30 the meeting was adjourned. One nearby neighbor expressed concern that the building is too tall for the neighborhood. This was the only person to express criticism. Several other attendees expressed enthusiasm and support for the project.

Plan 1

LUMINATO CONDOMINIUMS

169 NEWBURY STREET
PORTLAND, MAINE

OWNER

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, SUITE 401
PORTLAND, MAINE

ARCHITECT

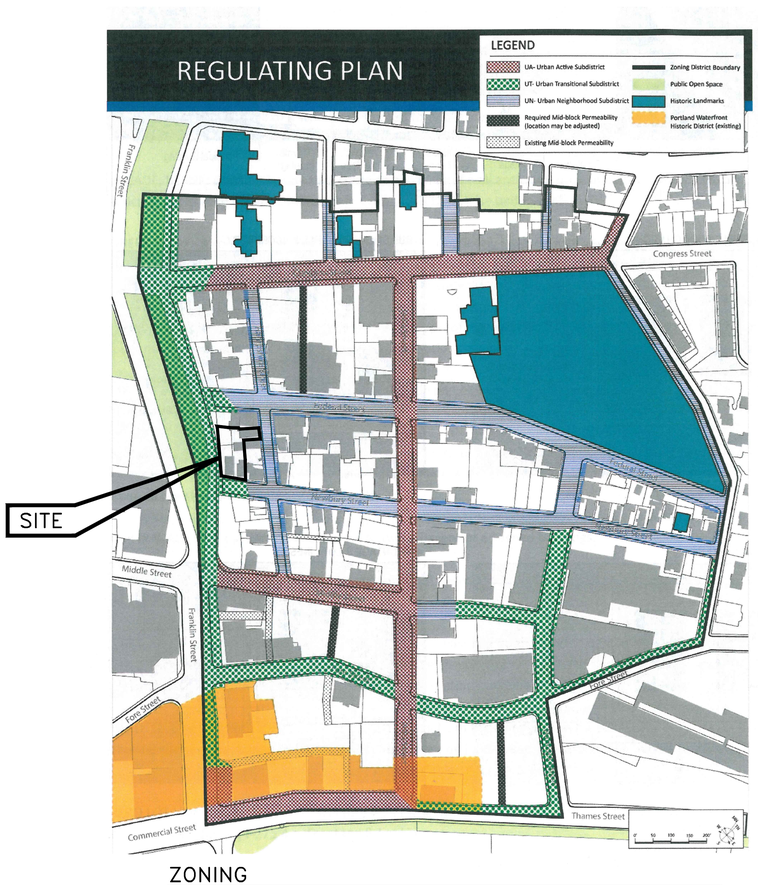
ARCHETYPE ARCHITECTS
48 UNION WHARF
PORTLAND, MAINE

CIVIL ENGINEER

PINKHAM & GREER CIVIL ENGINEERS
28 VANNAH AVENUE
PORTLAND, MAINE

SURVEYOR

NORTHEAST CIVIL SOLUTIONS
153 US ROUTE 1
SCARBOROUGH, MAINE



ZONING

TAX MAP 28 / BLOCK I / LOTS 4, 6, 9 & 10

SUBDIVISION AND SITE PLAN APPROVAL
JANUARY 22, 2016

15178

CITY OF PORTLAND SITE PLAN AND 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 CONDITIONS OF APPROVAL

1. THAT THE APPLICANT AND ALL ASSIGNS SHALL COMPLY WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORM WATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS. THE DEVELOPER/CONTRACTOR/ SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE CONSTRUCTION STORMWATER MANAGEMENT PLAN AND SEDIMENT & EROSION CONTROL PLAN BASED ON CITY STANDARDS AND STATE GUIDELINES. A MAINTENANCE AGREEMENT FOR THE STORMWATER DRAINAGE SYSTEM AS DESCRIBED IN ATTACHMENT OF THIS REPORT, SHALL BE APPROVED BY CORPORATION COUNSEL AND DEPARTMENT OF PUBLIC SERVICES, AND SUBMITTED AND SIGNED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY WITH A COPY TO THE DEPARTMENT OF PUBLIC SERVICES.

ZONE INFORMATION

IS-FBC INDIA STREET FORM-BASED CODE,
ABUTTING ZONES:
UT - URBAN TRANSITIONAL SUBDISTRICT
UN - URBAN NEIGHBORHOOD SUBDIVISION

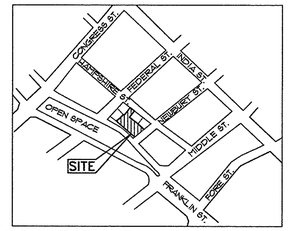
PERMITTED USE: MULTI-FAMILY DWELLING

PARKING INFORMATION

OFF STREET PARKING	27 SPACES
BIKE RACKS	EXTERIOR: 8 INTERIOR: 1 RACK PER UNIT

IMPERVIOUS INFORMATION

EXISTING IMPERVIOUS	5,211 SQ. FT.
PROPOSED IMPERVIOUS GREEN ROOF	8,860 SQ. FT. 3,125 SQ. FT.
NET IMPERVIOUS	5,135 SQ. FT.



LOCATION PLAN SCALE: 1"=400'±

SNOW CLEARANCE NOTES

1. SNOW MAY BE STORED WITHIN THE TEMPORARY SNOW STORAGE AREAS ONLY.
2. ANY SNOW THAT CAN NOT BE STORED ON SITE SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE WITHIN 24 TO 48 HOURS FOLLOWING A SNOW STORM.
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 CONDOMINIUM ASSOCIATION IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- BUILDING
- CURB
- CONTOURS
- REBAR FOUND
- IRON PIPE FOUND
- CHAINLINK FENCE
- GUARDRAIL
- GRANITE SLABS ON SLOPE
- TREE

PROPOSED

- ACCESS EASEMENT
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING OVERHEAD DOOR
- ROOF OVERHANG EASEMENT
- FOOTING EASEMENT
- SNOW STORAGE AREA

SURVEY GENERAL NOTES AND PLAN REFERENCES

1. THE BASIS OF BEARING FOR THIS SURVEY IS GRID NORTH STATE PLANE 2 ZONE 1802 WEST.
2. DEED AND PLAN BOOK REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
3. RECORD OWNERSHIP OF THE PARCELS SURVEYED CAN BE FOUND IN THE FOLLOWING DEEDS.
   a. (28-1-12) DEED FROM HOLLY AND ISAAC MORRISON TO REBECO, LLC. DATED SEPTEMBER 22. 2008 AND RECORDED IN DEED BOOK 26365, PAGE 256.
   b. (28-1-9 & 10) DEED FROM THE ESTATE OF EUGENE N. CAIAZZO TO REBECO, LLC. DATED JANUARY 5. 2010 AND RECORDED IN DEED BOOK 27536. PAGE 290.
   c. (28-1-4) DEED FROM BROAD REACH INVESTMENTS. LLC, TO REBECO, LLC., DATED FEBRUARY 24, 2011 AND RECORDED IN DEED BOOK 28560, PAGE 326.
   d. (28-1-6) DEED FROM HAMPSHIRE 42, LLC., TO REBECO, LLC., DATED DECEMBER 19, 2009 AND RECORDED IN DEED BOOK 27521. PAGE 102.
   e. (28-1-5) DEED FROM TARO REALTY TRUST TO REBECO, LLC., DATED DECEMBER 22, 2010 AND RECORDED IN DEED BOOK 28427, PAGE 320.
4. REFERENCE IS MADE TO THE FOLLOWING PLANS:
   a. HAMPSHIRE STREET RECONSTRUCTION BY THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT SHEET NUMBER 3 OF 16, DATED NOVEMBER 16, 2001.
   b. PLAN OF REVALUATION IN PORTLAND, DATED JANUARY 2, 1882 AND RECORDED IN PLAN BOOK 5, PAGE 28.
   c. VARIOUS PLANS PROVIDED BY THE CITY OF PORTLAND.
   d. PLAN OF C.W. DENSMORE HOMESTEAD, DATED OCTOBER 1909 AND RECORDED IN PLAN BOOK 11, PAGE 16.
5. THE PARCELS SURVEYED CAN BE IDENTIFIED ON THE CITY OF PORTLAND TAX ASSESSOR'S MAP 28. BLOCK 1. PARCELS 4-6, 9, 10 AND 12
6. THE PARCEL SURVEYED IS LOCATED IN THE URBAN TRANSITIONAL ZONE OF THE FORM BASED CODE.
7. THE WIDTH AND LAYOUT OF STREETS IS AS FOLLOWS
   a. HAMPSHIRE STREET IS 40' AND FROM MISCELLANEOUS CITY PLANS.
   b. NEWBURY STREET IS 50' AND FROM MISCELLANEOUS CITY PLANS.
   c. FEDERAL STREET IS 66' AND FROM MISCELLANEOUS CITY PLANS.
8. ELEVATIONS ARE BASED ON CITY DATUM. SEE PLAN FOR TBM DESCRIPTION.
9. THE UTILITIES SHOWN ON THIS PLAN WERE FROM FIELD OBSERVATION ONLY. THERE MAY BE OTHER UTILITIES EXISTING THAT ARE NOT SHOWN. CONTACT DIG-SAFE (888)DIG-SAFE PRIOR TO ANY EXCAVATION WORK.
10. THE LOTS ACQUIRED BY THE CITY OF PORTLAND WERE FOR THE CREATION OF THE FRANKLIN ARTERIAL.
11. THE PURPOSE OF THIS PLAN REVISION IN JANUARY 2016 IS THE CONSOLIDATION OF SOME OF THE LOTS INTO THE NEW OWNERSHIP OF LUMINATO CONDOMINIUM, LLC. NO RESEARCH OR OTHER SURVEY WORK WAS PERFORMED.

WAIVERS

1. ALLOW THE DEVELOPER TO PAY INTO THE STREET TREE FUND IN LUI OF PLANTING 26 STREET TREES.

GENERAL NOTES

1. OWNER: LUMINATO CONDOMINIUM, LLC, 118 CONGRESS STREET, PORTLAND MAINE 04101. DEEDS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS BK. 32835, PG. 23, DATE SEPT. 19, 2011.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVENUE, PORTLAND, MAINE, 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC & BOUNDARY: NORTHEAST CIVIL SOLUTIONS, 153 US ROUTE ONE, SCARBOROUGH, MAINE, 04074.
5. UNDERLYING SOILS MAPPING TAKEN FROM SOIL CONSERVATION STUDY OF CUMBERLAND COUNTY AND CLASSIFIED HINCKLEY (HIB). THE SURFACE OF THE SITE IS CURRENT URBAN LAND.
6. TAX MAP REFERENCE: MAP 28 / BLOCK 1 / LOT 4, 6, 9 & 10.
7. TOTAL PARCEL = 0.24 acres
8. UNITS TO BE SERVICED BY PUBLIC WATER, SEWER, AND GAS FROM NEWBURY STREET. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C1.4, GRADING AND UTILITIES PLAN.
9. POWER, TELEPHONE AND CABLE SERVICES ARE TO BE UNDERGROUND FROM NEWBURY STREET. THESE SERVICES ARE SHOWN ON SHEET C1.4, GRADING AND UTILITIES PLAN.
10. CALL DIG-SAFE PRIOR TO COMMENCING WORK. 1-800-DIG-SAFE.
11. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
12. PROPOSED PARKING SPACES: 27 INDOOR SPACES.
13. THE SUBJECT PARCEL SHOWN AS LUMINATO CONDOMINIUMS IS SUBJECT TO A CITY OF PORTLAND LEVEL II SITE PLAN AND SUBDIVISION PERMIT.
14. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR LUMINATO CONDOMINIUMS 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. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION.
17. 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.

Plan 2

EASEMENTS & LICENSES

1. PROPOSED EASEMENT: 18' WIDE ACCESS EASEMENT FROM LOT 28-1-4 TO LUMINATO CONDOMINIUM, LLC.
2. PROPOSED EASEMENT: PARKING AND ACCESS EASEMENT FROM LUMINATO CONDOMINIUM, LLC TO LOT 28-1-4.
3. PROPOSED TEMPORARY EASEMENT: CONSTRUCTION EASEMENT FROM CITY OF PORTLAND TO LUMINATO CONDOMINIUM, LLC.
4. LICENSE: FROM THE CITY OF PORTLAND TO LUMINATO CONDOMINIUM, LLC FOR BUILDING FOOTINGS.
5. LICENSE: FROM THE CITY OF PORTLAND TO LUMINATO CONDOMINIUM, LLC FOR ROOF OVERHANG.

FOOTING EASEMENT

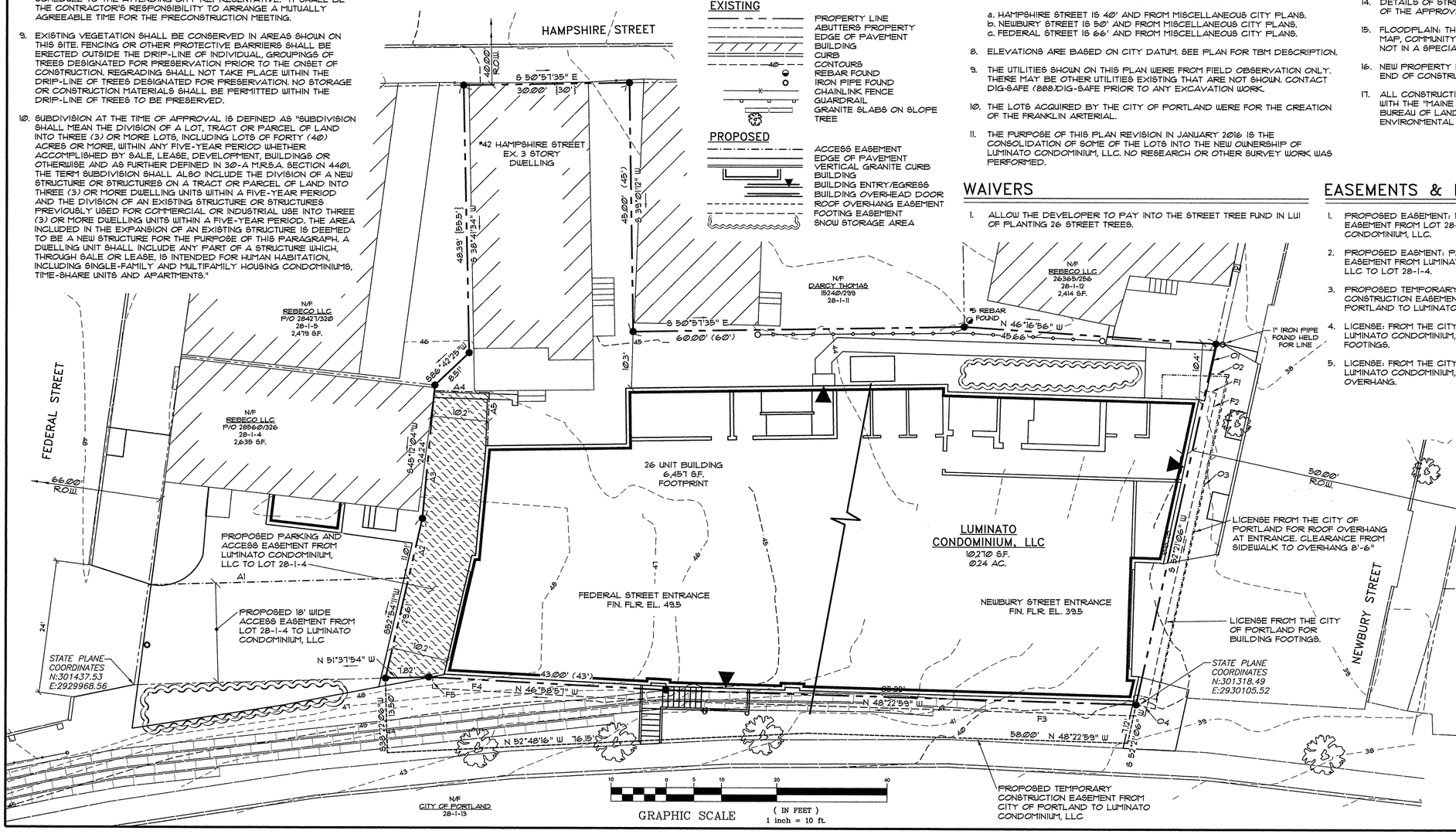
LINE	BEARING	DISTANCE
F1	N 31°38'54" W	2.00'
F2	N 52°21'06" E	24.39'
F3	S 48°22'59" E	86.30'
F4	S 46°58'57" E	42.25'
F5	S 43°01'03" W	2.00'

ACCESS EASEMENT

LINE	BEARING	DISTANCE
A1	N 51°37'54" W	47.12'
A2	S 52°54'11" W	29.61'
A3	S 45°12'04" W	23.24'
A4	N 48°22'59" W	9.93'
A5	N 41°37'01" E	9.66'

OVERHANG EASEMENT

LINE	BEARING	DISTANCE
O1	N 52°21'06" E	5.50'
O2	N 48°22'59" W	3.56'
O3	N 52°21'06" E	61.90'
O4	S 37°51'20" E	3.50'



THIS PROJECT INCLUDES THE EXISTING 3-UNIT BUILDING AT #42 HAMPSHIRE STREET AND THE PROPOSED 26-UNIT BUILDING AT 169 NEWBURY STREET.

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: 207.781.4245

STATE OF MAINE THOMAS S. GREER No. 6206 PROFESSIONAL ENGINEER

3/18/16

REV.	DATE	DESCRIPTION
2	3/18/16	REV'D PER STAFF REVIEW COMMENTS
1	3/8/16	REV'D PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

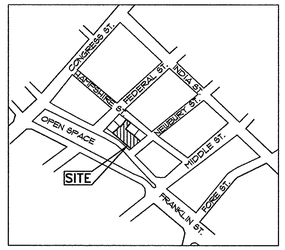
SUBDIVISION RECORDING PLAT

C1.1

MAP/LOT 28 / 1 / 4, 6, 9 & 10

CITY OF PORTLAND
SITE PLAN AND 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."



LOCATION PLAN

SCALE: 1"=400'±

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- BUILDING
- CURB
- TREE
- POLE MOUNTED TRANSFORMER
- UTILITY POLE W/ GUY WIRE
- LIGHT POLE
- AREA LIGHT ON POLE
- SIGN
- GUARDRAIL
- GRANITE SLABS ON SLOPE
- CRUSHED STONE
- CONCRETE PAD
- BENCHMARK

PROPOSED

- EASEMENT
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING OVERHEAD DOOR
- UTILITY POLE W/ GUY WIRE
- POLE MOUNTED AREA LIGHT
- PRIVACY FENCE
- BOLLARD
- FULL DEPTH BITUMINOUS PVMT
- BITUMINOUS OVERLAY
- BRICK PAVERS
- CONCRETE PAD
- CONCRETE PAVERS

PROJECT SITE DRAWINGS

	COVER SHEET
C1.1	SUBDIVISION RECORDING PLAT
C1.2	SITE PLAN
C1.3	EXISTING CONDITIONS AND DEMOLITION PLAN
C1.4	GRADING AND UTILITIES PLAN
C1.5	EROSION CONTROL PLAN, NOTES AND DETAILS
C1.6	LANDSCAPE PLAN, NOTES AND DETAILS
C1.7	PARKING LAYOUT & DETAILS
C2.1	DETAILS
C2.2	DETAILS
	RECONFIGURED BOUNDARY SURVEY

ZONE INFORMATION

IS-FBC INDIA STREET FORM-BASED CODE, ABUTTING ZONES:
UT - URBAN TRANSITIONAL SUBDISTRICT
UN - URBAN NEIGHBORHOOD SUBDIVISION

PERMITTED USE: MULTI-FAMILY DWELLING

PARKING INFORMATION

OFF STREET PARKING 27 SPACES

BIKE RACKS EXTERIOR: 8
INTERIOR: 1 RACK PER UNIT

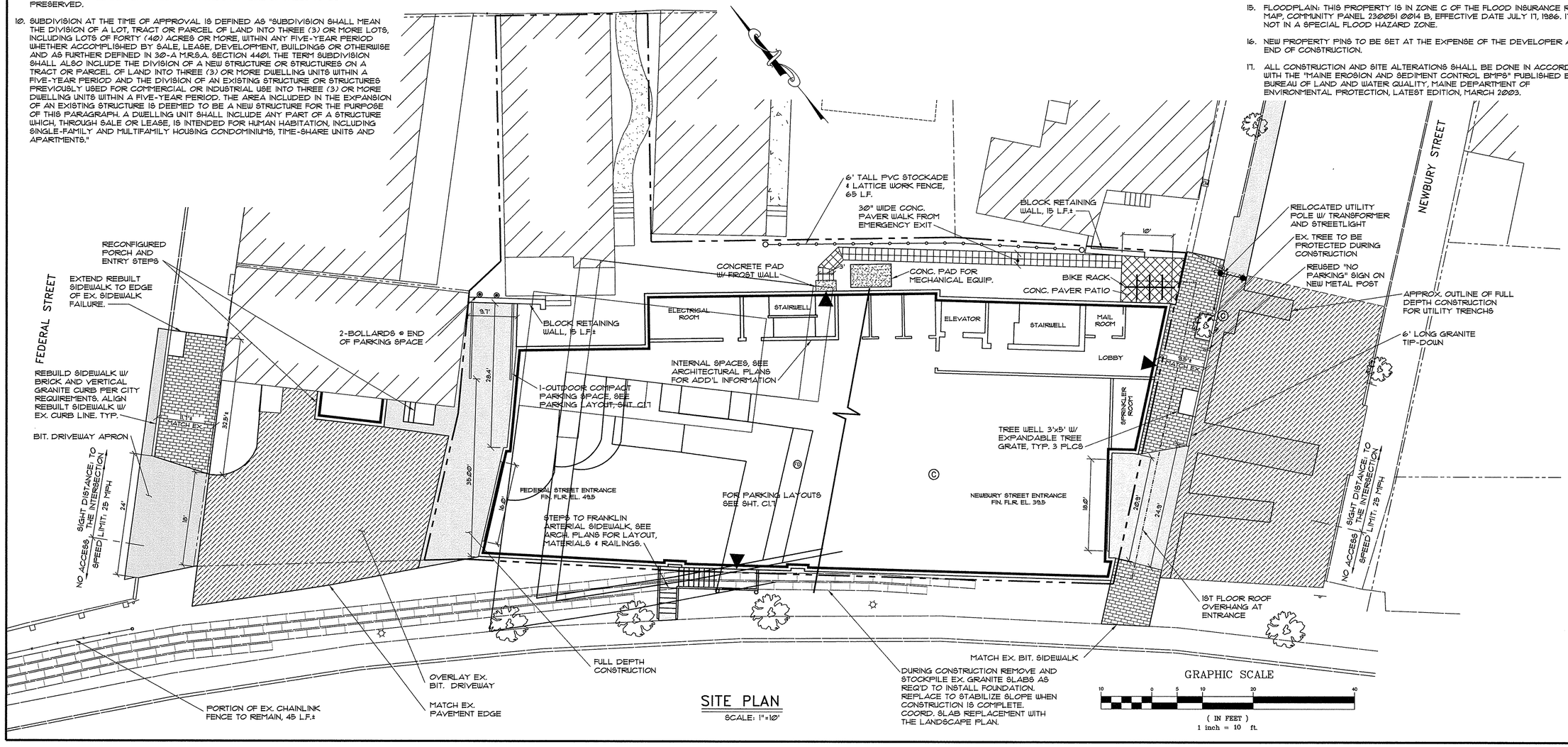
WAIVERS

1. ALLOW PARKING SPACE SIZES: 8'-6"x18-0" AND 8'-6"x15' SPACES.
2. ALLOW THE DEVELOPER TO PAY INTO THE STREET TREE FUND IN LUI OF PLANTING 26 STREET TREES.

GENERAL NOTES

1. OWNER: LUMINATO CONDOMINIUM, LLC, 118 CONGRESS STREET, PORTLAND MAINE 04101. DEEDS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS BK. 32835, PG. 23, DATE SEPT. 19, 2011.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVENUE, PORTLAND, MAINE, 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC & BOUNDARY: NORTHEAST CIVIL SOLUTIONS, 153 US ROUTE ONE, SCARBOROUGH, MAINE, 04074.
5. UNDERLYING SOILS MAPPING TAKEN FROM SOIL CONSERVATION STUDY OF CUMBERLAND COUNTY AND CLASSIFIED HINCKLEY (HIB). THE SURFACE OF THE SITE IS CURRENT URBAN LAND.
6. TAX MAP REFERENCE: MAP 28 / BLOCK 1 / LOT 4, 6, 9 & 10.
7. TOTAL PARCEL = 0.24 acres
8. UNITS TO BE SERVICED BY PUBLIC WATER, SEWER, AND GAS FROM NEWBURY STREET. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C1.4, GRADING AND UTILITIES PLAN.
9. POWER, TELEPHONE AND CABLE SERVICES ARE TO BE UNDERGROUND FROM NEWBURY STREET. THESE SERVICES ARE SHOWN ON SHEET C1.4, GRADING AND UTILITIES PLAN.
10. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 1-800-DIG-SAFE.
11. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
12. PROPOSED PARKING SPACES: 27 INDOOR SPACES.
13. THE SUBJECT PARCEL SHOWN AS LUMINATO CONDOMINIUMS IS SUBJECT TO A CITY OF PORTLAND LEVEL II SITE PLAN AND SUBDIVISION PERMIT.
14. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR LUMINATO CONDOMINIUMS 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. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION.
17. 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.

Plan 3



SITE PLAN

SCALE: 1"=10'

PINKHAM & GREER CIVIL ENGINEERS
28 VANNAH AVE, PORTLAND, ME. 04103
TEL: 207.781.5242 FAX: 207.781.4245

STATE OF MAINE THOMAS S. GREER No. 4206 LICENSED PROFESSIONAL ENGINEER

3/18/16

REV.	DATE	DESCRIPTION
2	3/18/16	REV'D PER STAFF REVIEW COMMENTS
1	3/8/16	REV'D PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

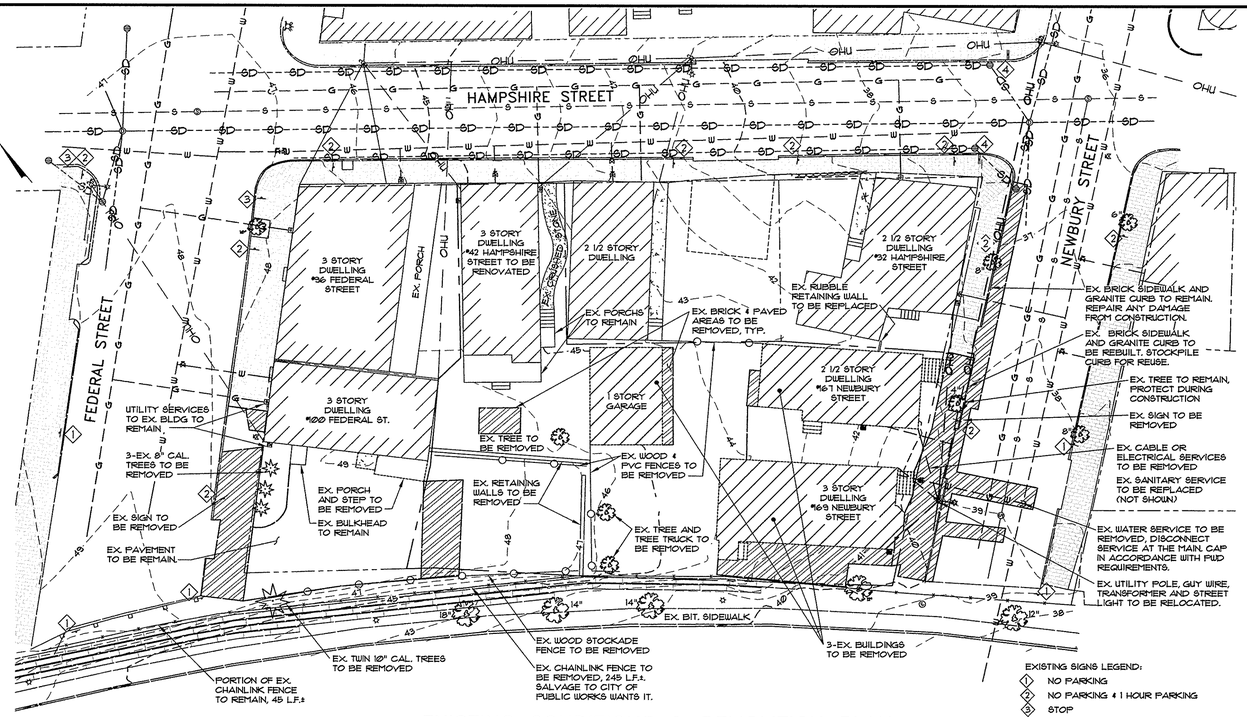
LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

SITE PLAN

C1.2

MAP/LOT 28 / 1 / 4, 6, 9 & 10

Plan 4



EXISTING CONDITIONS & DEMOLITION PLAN

SCALE: 1"=20'

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- GAS LINE
- SANITARY SEWER
- STORMDRAIN
- OVERHEAD UTILITY
- WATER LINE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- ELECTRIC MANHOLE
- ELECTRIC METER
- GAS METER
- HYDRANT
- WATER VALVE
- GAS VALVE
- POLE MOUNTED TRANSFORMER
- UTILITY POLE W/ GUY WIRE
- LIGHT POLE
- AREA LIGHT ON POLE
- SIGN & SIGN IDENTIFICATION
- GUARDRAIL
- CHAINLINK FENCE
- STOCKADE FENCE
- GRANITE SLABS ON SLOPE
- TREE
- CRUSHED STONE
- CONCRETE PAD
- IMPERVIOUS TO BE REMOVED
- BENCHMARK

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PINKHAM & GREER
CIVIL ENGINEERS
28 WINWARD AVE. PORTLAND, ME. 04103
TEL. 207.797.5242 FAX. 207.797.4295

STATE OF MAINE
THOMAS S. GREER
No. 4206
LICENSED
PROFESSIONAL ENGINEER

3/8/16

REV.	DATE	DESCRIPTION
1	3/8/16	REV'D PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

EXISTING CONDITIONS
AND DEMOLITION PLAN

C1.3

MAP/LOT 28/1/4, 6, 9 & 10

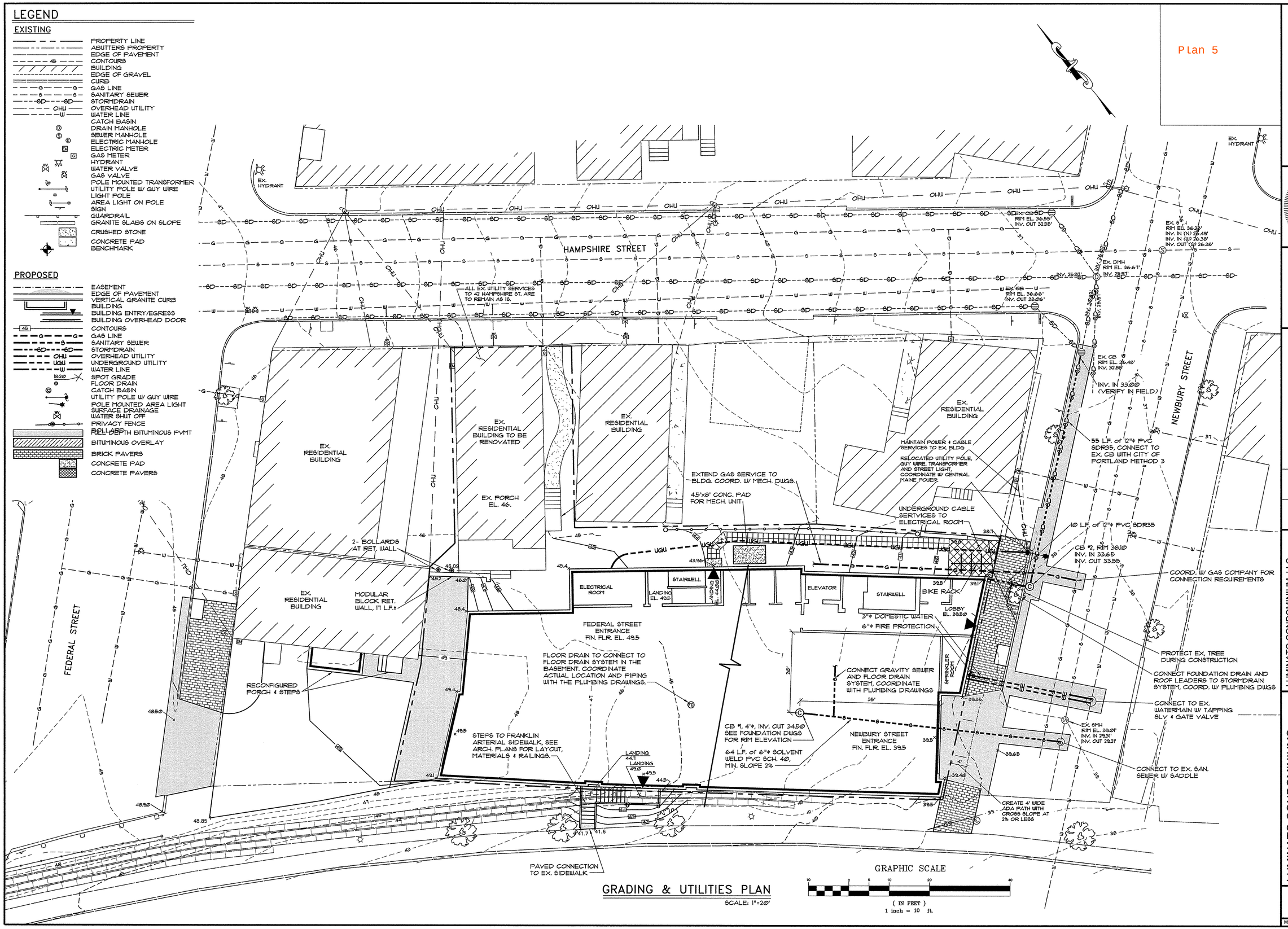
LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- GAS LINE
- SANITARY SEWER
- STORMDRAIN
- OVERHEAD UTILITY
- WATER LINE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- ELECTRIC MANHOLE
- ELECTRIC METER
- GAS METER
- HYDRANT
- WATER VALVE
- GAS VALVE
- POLE MOUNTED TRANSFORMER
- UTILITY POLE W/ GUY WIRE
- LIGHT POLE
- AREA LIGHT ON POLE
- SIGN
- GUARDRAIL
- GRANITE SLABS ON SLOPE
- CRUSHED STONE
- CONCRETE PAD
- BENCHMARK

PROPOSED

- EASEMENT
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- BUILDING
- BUILDING ENTRY/EGRESS
- BUILDING OVERHEAD DOOR
- CONTOURS
- GAS LINE
- SANITARY SEWER
- STORMDRAIN
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- WATER LINE
- SPOT GRADE
- FLOOR DRAIN
- CATCH BASIN
- UTILITY POLE W/ GUY WIRE
- POLE MOUNTED AREA LIGHT
- SURFACE DRAINAGE
- WATER SHUT OFF
- PRIVACY FENCE
- FULL DEPTH BITUMINOUS PVMT
- BITUMINOUS OVERLAY
- BRICK PAVERS
- CONCRETE PAD
- CONCRETE PAVERS



GRADING & UTILITIES PLAN

SCALE: 1"=20'

PINKHAM & GREER
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STATE OF MAINE
THOMAS GREER
No. 4206
LICENSED
PROFESSIONAL ENGINEER

3/18/16

REV.	DATE	DESCRIPTION
2	3/18/16	REV'D PER STAFF REVIEW COMMENTS
1	3/8/16	REV'D PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

GRADING AND UTILITIES PLAN

C1.4

MAP/LOT 28 / 1 / 4, 6, 9 & 10

EROSION CONTROL NOTES

GENERAL:

THE DRAWINGS DEPICT THE REQUIRED SOIL EROSION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SITE IN SUCH A MANNER THAT:

1. SOIL EROSION IS KEPT TO A MINIMUM.
2. NO SEDIMENT LEAVES THE CONSTRUCTION SITE PROPER.
3. ALL POSSIBLE MEASURES ARE EMPLOYED TO PREVENT SEDIMENT FROM ENTERING DRAINAGE COURSES AND WETLANDS EVEN BEYOND THE DETAILS SHOWN ON THIS PLAN IF NECESSARY.

1. 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 WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATERBODIES, OR WETLAND AS A RESULT OF THIS PROJECT.
3. LOAM AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER DISTURBANCE, BUT NO LONGER THAN 7 DAYS. LOAM AND SEED ANY DISTURBED AREA WITHIN 75' OF WETLANDS OR WATERBODEIS WITHIN 48 HOURS OR PRIOR TO AND STORM EVENT. USE WINTER SEED RATES AND SPECIFICATIONS IF APPROPRIATE.
4. INSPECT SOIL EROSION MEASURES WEEKLY AND AFTER SIGNIFICANT STORM EVENTS. MAKE ALL NECESSARY REPAIRS TO FACILITIES AS SOON AS POSSIBLE, BUT NO LONGER THAN 2 DAYS. CLEAN AND RESET SILT FENCES AND STONE CHECK DAMS WHICH ACCUMULATE SEDIMENT AND DEBRIS.
5. PROTECT AND STABILIZE ALL AREAS NOT SCHEDULED FOR EROSION PREVENTION OR STABILIZATION BUT THAT SHOW SIGNS OF EROSION. NOTIFY OWNER OF ANY SIGNIFICANT EROSION PROBLEM.
6. APPLY MULCH TO BARE SOILS WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS, WITHIN 48 HOURS IF WITHIN 75' OF WETLAND OR WATERBODY, PRIOR TO ANY RAIN EVENT, OR PRIOR TO ANY WORK SHUTDOWN LASTING MORE THAN ONE DAY.
7. TEMPORARILY SEED WITHIN 7 DAYS ANY AREA WHICH WILL BE LEFT DISTURBED AND UNWORKED FOR MORE THAN 14 DAYS WITH THE TEMPORARY SEED MIX LISTED BELOW. IF AREA IS WITHIN 75' OF A WETLAND OR WATERBODY, SEED WITHIN 48 HOURS. PERMANENTLY SEED ANY AREA WHICH CAN BE LOAMED AS SOON AS POSSIBLE WITH THE PERMANENT SEED MIX LISTED BELOW. DO NOT USE PERMANENT SEED MIX AFTER SEPTEMBER 15.
8. MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. DURING THE GROWING SEASON (APRIL 15 - SEPT. 30) USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
   - -THE BASE OF GRASSED WATERWAYS
   - -SLOPES STEEPER THAN 15%
   - -WITHIN 100 ft. OF STREAMS AND WETLANDS

   BETWEEN OCT. 1 AND APRIL 14 USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
   - -SIDE SLOPES OF GRASSED WATERWAYS
   - -SLOPES STEEPER THAN 8%
9. FOLLOW SILT FENCE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION OF SILT FENCE. SECURE ENTIRE BOTTOM OF FENCE EITHER BY BURYING BOTTOM OF FENCE IN A TRENCH OR BERMING WITH SOIL OR CHIPPED GRUBBINGS. REFER TO SILT FENCE DETAILS.
10. PLACE AND GRADE LOAM IN A REASONABLY UNIFORM MANNER. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEED BED IS PREPARED. REMOVE FROM SURFACE ALL STONES LARGER THAN 2" AND ALL OTHER UNSUITABLE MATERIAL. LIME AND FERTILIZER SHOULD BE MIXED INTO SOIL PRIOR TO ROLLING EXCEPT IF INCLUDED IN HYDROSEED MIXTURE. PERMANENT STABLILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 90% CATCH.
11. ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED BY INSTALLING AND MAINTAINING SILT SACKS DURING CONSTRUCTION.

SUGGESTED SEQUENCE OF CONSTRUCTION TO CONTROL EROSION

THIS SEQUENCE OF CONSTRUCTION IS A GENERAL GUIDE TO THE CONTRACTOR. ACTUAL CONSTRUCTION PRACTICES WILL DICTATE VARIATIONS IN THE ORDER OF MAJOR EVENTS.

1. INSTALL PERIMETER SILT FENCE.
2. CLEAR AND GRUB WORK AREAS. TEMPORARILY SEED AREAS NOT TO BE WORKED ON WITHIN 14 DAYS.
3. BEGIN EARTHWORK FOR BUILDING FOUNDATION.
4. STABILIZE AREAS DRAINING TO STORMDRAIN SYSTEM.
5. INSTALL NEW STRUCTURES AND CONNECT STORMDRAIN SYSTEM TO EXISTING SYSTEM.
6. BEGIN BUILDING CONSTRUCTION.
7. FINE GRADE STREET SIDEWALKS AND ROUGH GRADE REMAINDER OF SITE.
8. RESEED OR TEMPORARILY SEED ANY AREA WHICH WILL BE LEFT UNDISTURBED FOR MORE THAN 14 DAYS.
9. COMPLETE FINE GRADING AND INSTALLATION OF SIDEWALKS, REAR WALK AND STREET PAVEMENT REPAIRS
10. CLEAN STORMDRAIN SYSTEM OF CONSTRUCTION SEDIMENTATION.
11. FINE GRADE, LOAM, SEED AND FERTILIZE REMAINDER OF SITE.
12. REMOVE TEMPORARY SOIL EROSION MEASURES.

TOPSOIL:

1. SUITABLE TOPSOIL SALVAGED FROM SITE OR SCREENED, LOOSE AND FRIABLE SANDY LOAM OR LOAM AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE CLASSIFICATION SYSTEM, FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS, ROOTS, WEEDS, RHIZOMES OR OTHER UNDESIREABLE FOREIGN MATTER AS DETERMINED BY THE INSPECTING AUTHORITY. CONTRACTOR SHALL SUBMIT REPORTS OF LOAM TEST RESULTS PERFORMED BY AN INDEPENDENT TESTING LABORATORY FOR TOPSOIL FROM DIFFERENT SOURCES PRIOR TO PLACING. THE COST OF TESTING SHALL BE INCIDENTAL TO THE COST OF TOPSOIL. TOPSOIL SHALL MEET THE FOLLOWING SPECIFICATIONS:
2. MATERIAL

   SAND - 0.08 IN. TO 0.002 IN. DIAMETER (% BY VOLUME) . . . . . . 45 - 75
   SILT - 0.002 IN. TO 0.00008 IN. DIAMETER (% BY VOLUME) . . . 20 - 40
   CLAY - LESS THAN 0.00008 IN. DIAMETER (% BY VOLUME) . . . . 5 - 15

   ORGANICS (SHALL MEET THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION 717.09 PEAT HUMUS) (% BY VOLUME) . 10 - 20

   NUTRIENTS:
   CALCIUM (CA) (% SATURATION) . . . . 60 - 80
   MAGNESIUM (MG) (% SATURATION) . . . . 10 - 25
   POTASSIUM (K) (% SATURATION) . . . . 2.1 - 3.0
   PHOSPHORUS (P) (POUNDS/ACRE) . . . . . . 10 - 40
   PH . . . . 6.0 - 6.5

   PERMEABILITY (INCHES PER HOUR) . . . . . 3 - 10

   MAXIMUM STONE SIZE (INCHES) 3/4

SEEDING:

USE PERMANENT SEED MIXES AND RATES BETWEEN 5/15 AND 9/30. USE TEMPORARY SEED MIXES FOR PERIODS LESS THAN 12 MONTHS. IF USING TEMPORARY SEED MIXES AND RATES BETWEEN 10/1 AND 5/14, RE-SEED WITH PERMANENT SEED MIX AFTER 5/15.

PERMANENT SEED:

MDOT 717.03(a) METHOD NUMBER 3

TEMPORARY SEED:

OATS	80.00 LBS/ACRE	4/01 - 5/14
ANNUAL RYEGRASS	40.00 LBS/ACRE	
SUDANGRASS	40.00 LBS/ACRE	5/15 - 8/14
ANNUAL RYEGRASS	80.00 LBS/ACRE	5/15 - 9/14
WINTER RYE	112.00 LBS/ACRE	9/15 - 9/30
WINTER RYE (W/ MULCH COVER)	112.00 LBS/ACRE	10/01 - 3/31

LIME AND FERTILIZER:

APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 POUNDS PER 1000 SQUARE FEET). APPLY FERTILIZER (10-20-20) AT A RATE OF 800 POUNDS PER ACRE (18.4 POUNDS PER 1000 SQUARE FEET).

MULCH:

STRAW OR HAY (ANCHORED)	70 - 90 LBS	PROTECTED AREAS
STRAW OR HAY (ANCHORED)	185 - 275 LBS	WINDY AREAS
SHREDDED OR CHOPPED	185 - 275 LBS	
JUTE MESH	AS REQUIRED	MODERATE TO HIGH VELOCITY AREAS & STEEP SLOPES
EXCELSIOR MAT	AS REQUIRED	

MULCH ANCHORING

PEG AND TWINE	LIQUID ASPHALT
MULCH NETTING	WOOD CELLULOSE FIBER
ASPHALT EMULSION	CHEMICAL TACK

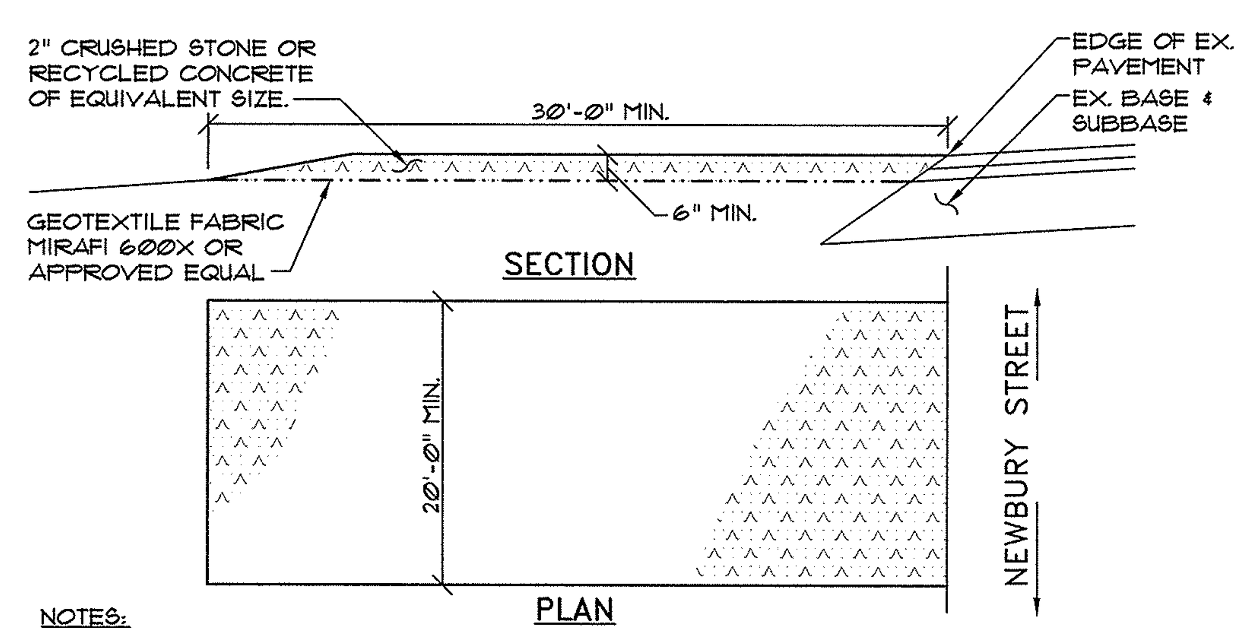
WINTER CONSTRUCTION:

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIP RAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT; VEGETATION, MULCHING, EROSION CONTROL MATS, RIP RAP OR GRAVEL BASE ON A ROAD. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.
THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS.
CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES
   STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER-WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F. (3 TONS/ACRE) OR WITH A FOUR INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND WILL BE REESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.
2. SEDIMENT BARRIERS
   DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF EROSION CONTROL MIX SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.
3. MULCHING
   ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LBS./1,000 S.F. 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. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE INCH DEPTH OR LESS PRIOR TO APPLICATION.
   AFTER EACH DAY OF FINAL GRADING, THE AREA WILL 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 MULCHED WITH STRAW OR HAY AT A RATE OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

   BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL TACK, OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH THEN COVER IS SUFFICIENT.
   AFTER NOVEMBER 1, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.
4. MULCHING ON SLOPES AND DITCHES
   SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS.
   MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1,000 S.F. ON ALL SLOPES GREATER THAN 8%.
   MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAT 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
   EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPE GREATER THAN 8%.
   EROSION CONTROL MIX CAN BE USED AS A SUBSTITUTE FOR EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.
5. SEEDING
   BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL 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.
   AFTER NOVEMBER 1 IF THE EXPOSED AREA HAS BEEN LOAMED AND FINAL GRADED 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 AND FABRIC NETTING ANCHORED WITH STAPLES.
   IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND BE SEEDED AT AN APPLICATION RATE OF 5 LBS/1000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL 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 AREAS DISTURBED IN THE WINTER SHALL BE VEGETATED IN THE SPRING.
6. TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION
   WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE OR EROSION CONTROL MIX LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.
7. INSPECTION AND MONITORING
   MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGED AND/OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

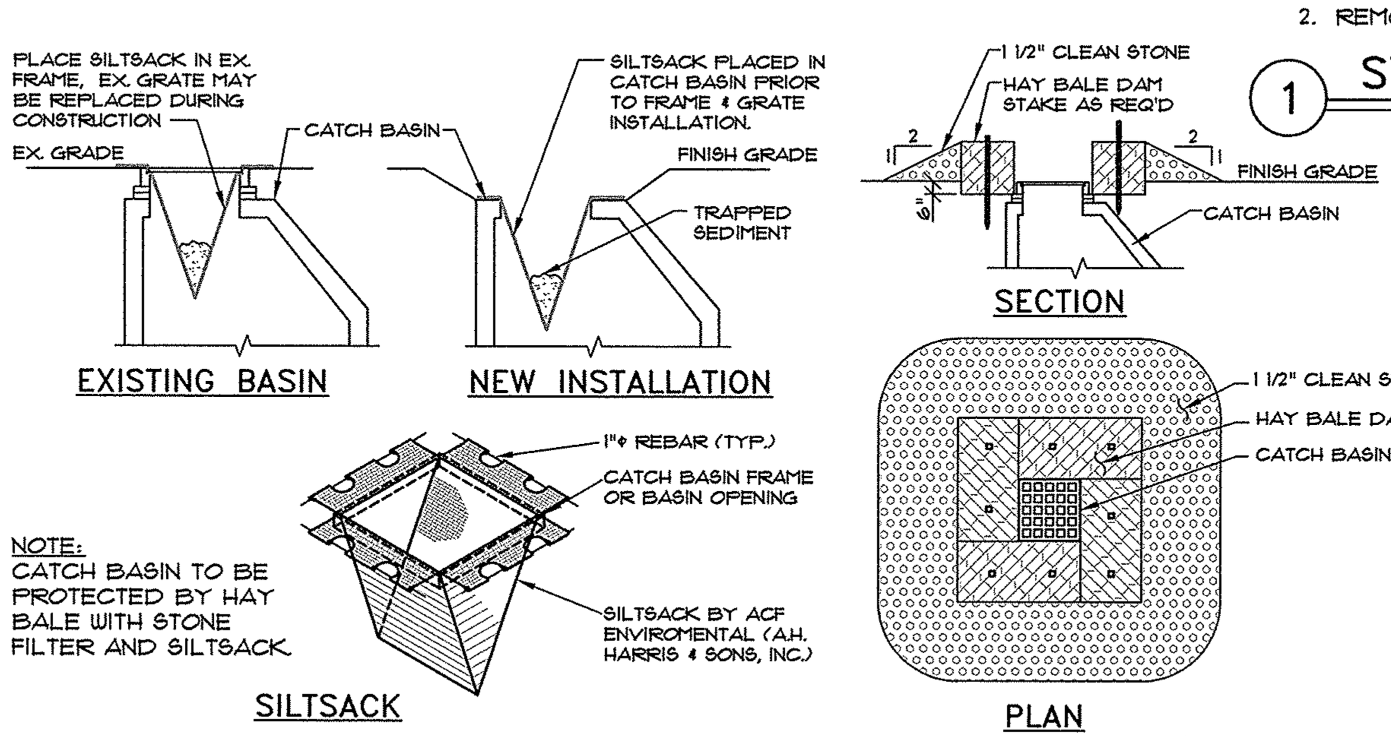
Plan 6



NOTES:
1. MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.
2. REMOVE STABILIZED CONSTRUCTION ENTRANCE AFTER EXCAVATION OS COMPLETE.

(1) STABILIZED CONSTRUCTION ENTRANCE DETAIL

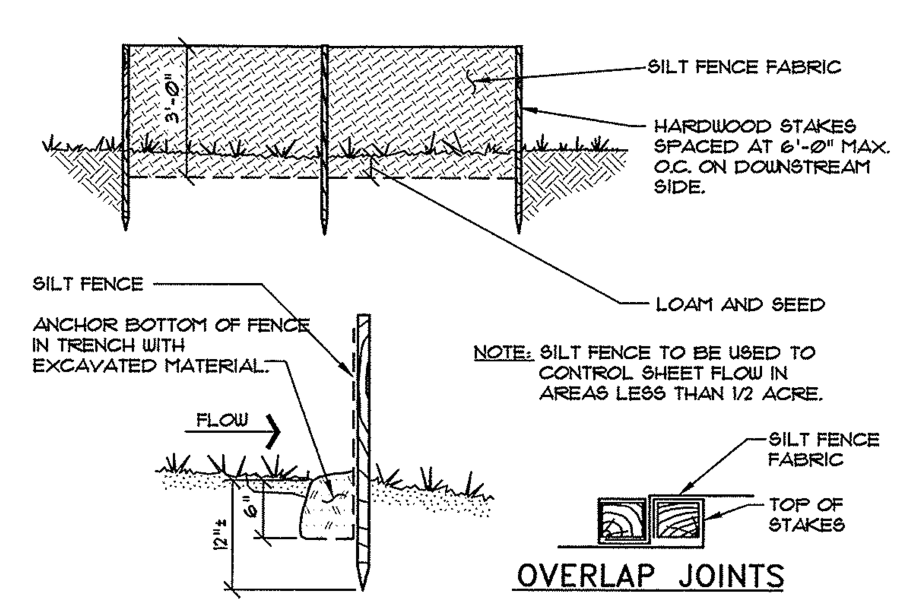
NOT TO SCALE



NOTE:
CATCH BASIN TO BE PROTECTED BY HAY BALE WITH STONE FILTER AND SILTSACK.

(3) CATCH BASIN PROTECTION

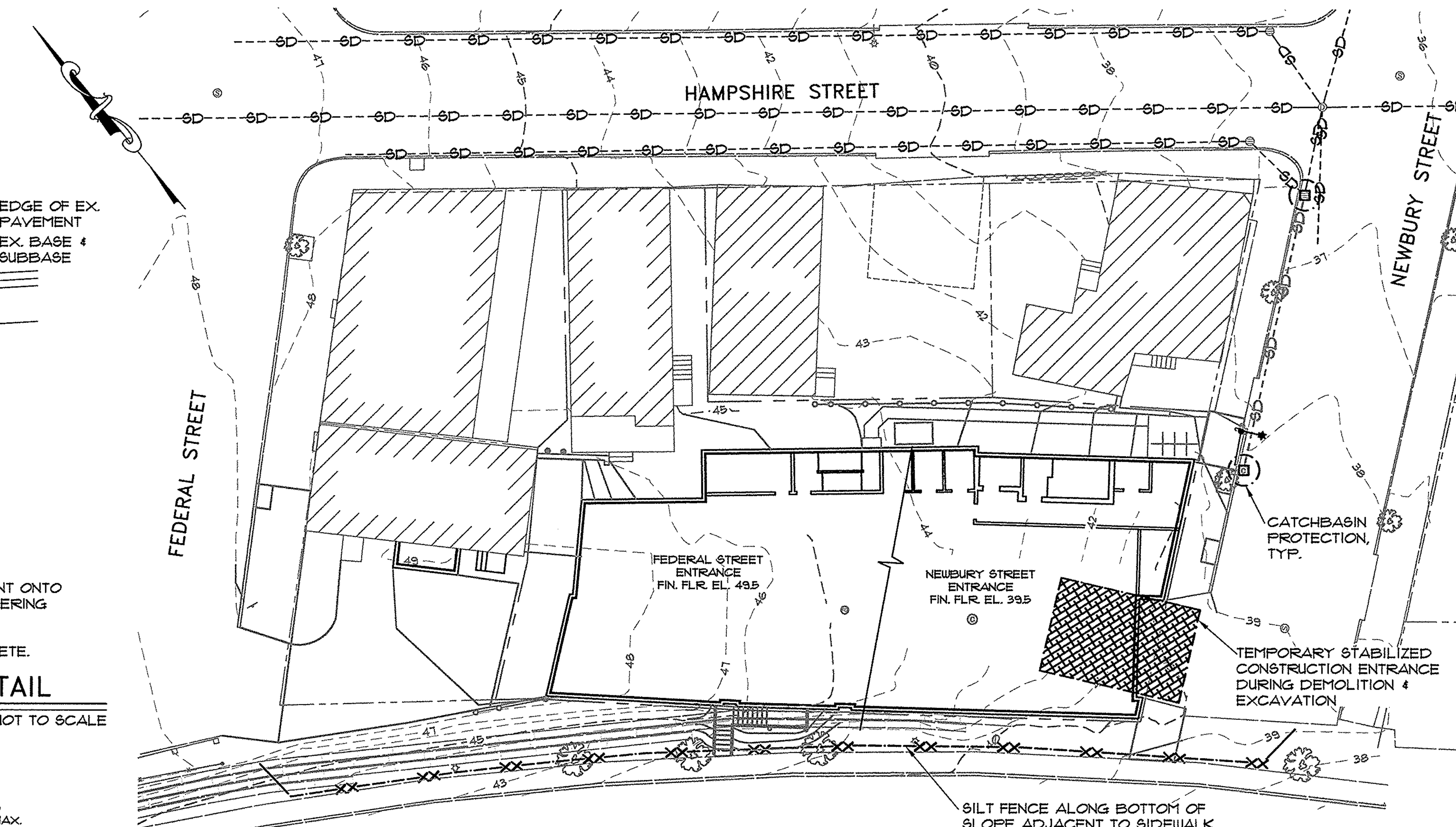
NOT TO SCALE



NOTE: SILT FENCE TO BE USED TO CONTROL SHEET FLOW IN AREAS LESS THAN 1/2 ACRE.

(2) SILT FENCE DETAIL

NOT TO SCALE



NOTE: RIGHT-OF-WAYS SHALL BE KEPT CLEAN FROM DUST, TRACKED SOIL OR MUD AND CONSTRUCTION DEBRIS AND SWEPT AS NECESSARY OR AS REQUESTED BY THE CITY OF PORTLAND TO MINIMIZE DUST AND SEDIMENT ORIGINATING FROM THE SITE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

EROSION CONTROL PLAN

SCALE: 1"=20'

EROSION CONTROL LEGEND

(◻)	CATCH BASIN PROTECTION WITH HAYBALES AND SILTSACK
—·—XX—	SILT FENCE
▨	STABILIZED ENTRANCE

FOR PLAN LEGEND SEE SHEET C1.4

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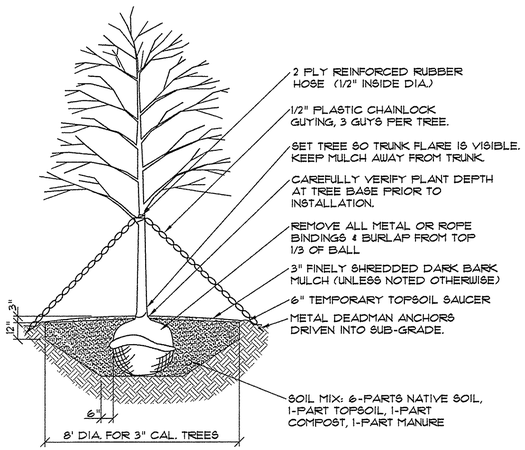
LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

EROSION CONTROL PLAN, NOTES AND DETAILS

C1.5

MAP/LOT 28 / I / 4, 6, 9 & 10

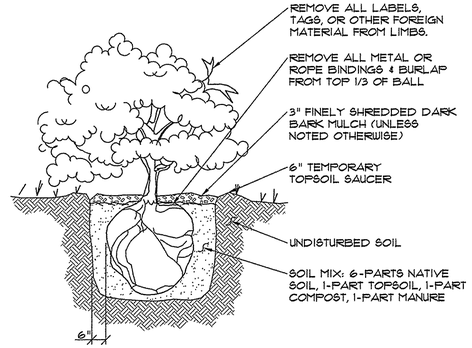
Plan 7



NOTES:
1. PRUNE ALL DEAD AND BROKEN BRANCHES. RETAIN NATURAL SHAPE, NEVER CUT LEADER.
2. IN LEDGE CONDITIONS, BLASTING SHALL BE 10' DIA AND 4' BELOW TREE HOLE BOTTOM GRADE.

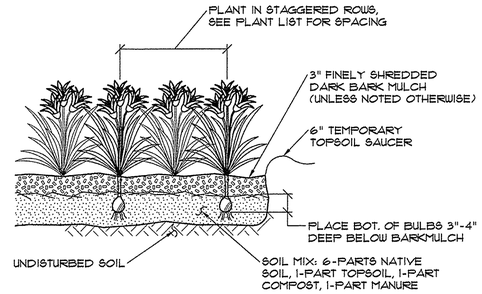
4 DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



3 SHRUB PLANTING DETAIL

NOT TO SCALE



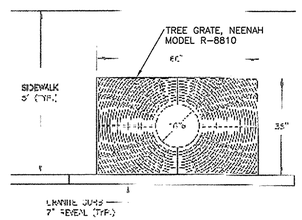
2 DAYLILY PLANTING DETAIL

NOT TO SCALE

NOTES:
16"ø EXPANDABLE TREE OPENING. 0.25" SLOT OPENINGS.

SIDEWALK MATERIAL PER CITY SIDEWALK POLICY.

WHEN THE GRATE IS INSTALLED IN A CONCRETE SIDEWALK, A NOTCH MUST BE INSTALLED ALONG THE EDGE TO HOLD THE GRATE. WHEN INSTALLED IN A BRICK SIDEWALK IT REQUIRES A FRAME TO BE INSTALLED TO HOLD THE GRATE IN PLACE.



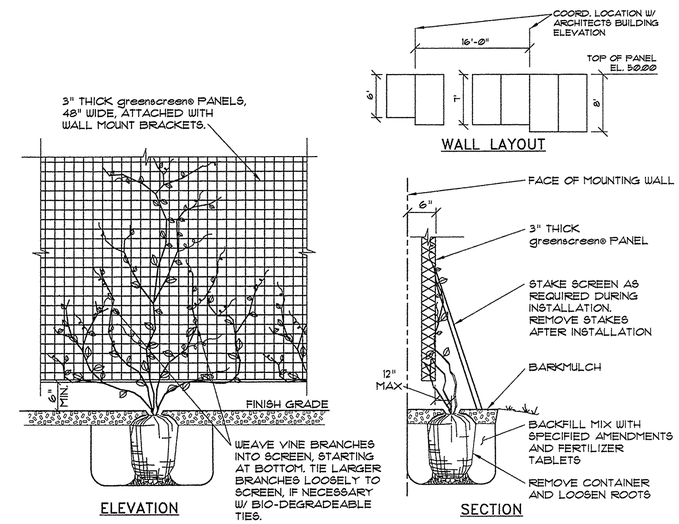
5 EXPANDABLE TREE GRATE (IV-4A)

NOT TO SCALE

PLANT LIST

(A) SYMBOL
(12) QUANTITY

KEY	COMMON NAME/BOTANICAL NAME	SIZE	ROOT	QUANTITY	NOTES
TREES & SHRUBS					
A	RED MAPLE (acer rubrum)	2 1/2" cal.	B&B	7	
B	HONEY LOCUST (g. triacanthos 'inermis')	2 1/2" cal.	B&B	3	
C	ARBOR VITAE (thuja occidentalis 'nigra')	6' tall	B&B	3	
D	BOTTLEBRUSH (fothergilla gardenii)	#3	CONT.	5	
E	SHASTA VIBURNUM (v. plicatum tomentosum 'shasta')	4-5' tall	B&B	15	3 CANES
F	CORNELLIAN CHERRY (c. mas)	5-6' tall	B&B	1	3 TRUNK
PERENNIALS & VINES					
AA	BARREN STRAWBERRY (waldsteinia ternata)	--	--	80	
BB	DAYLILY (hemerocallis 'stella d'oro')	--	CONT.	46	
EE	ASTILBE (astilbe x chinensis 'milk & honey')	--	PTD	66	
FF	CLEMATIS VERIETIES :SWEET AUTUMN: (paniculata)	--	PTD	8	WHITE BLOM
GG	HONEYSUCKLE VINE (lonicera x heckrottii 'goldflame')	--	PTD	8	



1 greenscreen® VINE PLANTING DETAIL

NOT TO SCALE

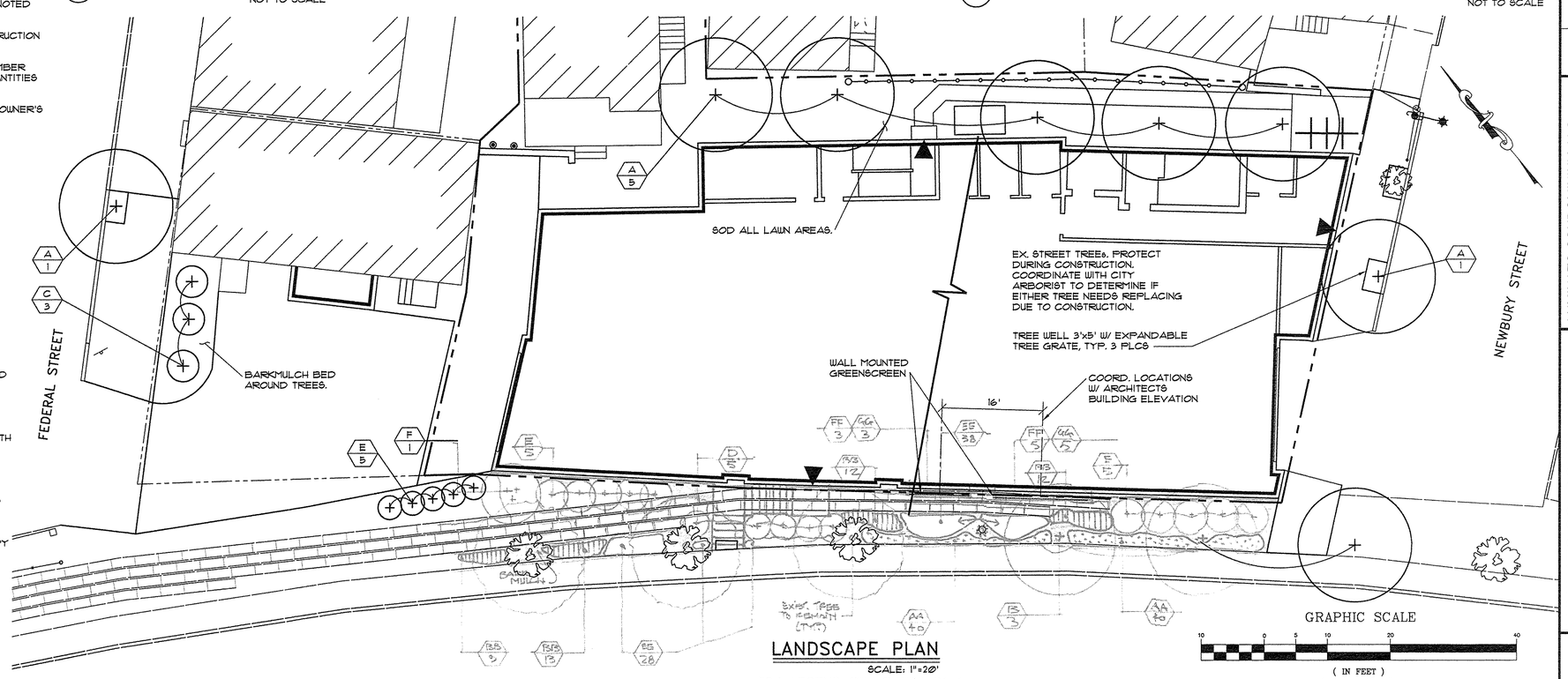
LANDSCAPE NOTES

GENERAL:

1. SAVE EXISTING TREES AS SHOWN. DO NOT CUT OR CLEAR ANY VEGETATION BEYOND THE IMPACT LIMIT LINE.
2. ALL PLANT MATERIALS INSTALLED ARE TO MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
3. ALL PROPOSED PLANT LOCATIONS SHALL BE AS SHOWN ON PLANS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING AND WILL NOTIFY OWNER'S REPRESENTATIVE IN THE EVENT OF CONFLICTS.
4. PLANT LOCATIONS ARE TO BE SCALED FROM THELANDSCAPE PLAN UNLESS NOTED OTHERWISE.
5. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
6. FINAL QUANTITY FOR EACH PLANT TYPE IS NOTED IN THE PLANT LIST. THIS NUMBER SHALL TAKE PRECEDENCE IN THE CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE LIST AND ON THE PLAN.
7. ANY PROPOSED SUBSTITUTIONS MUST BE APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
8. ALL DISTURBED AREAS TO BE LOAMED AND SEEDED.

MAINTENANCE:

1. LAWNS: SHALL BE WATERED, FERTILIZED AND MOWN ON A REGULAR BASIS ACCORDING TO SEASON AND RAINFALL, TO PRODUCE A STRONG TURF OF 80% MIN. COVERAGE WITHIN THE FIRST YEAR, FREE FROM SIZABLE THIN OR BARE SPOTS. REGRADING AND RESEEDING WILL BE PERFORMED ON BARE SPOTS UNTIL COVERAGE IS COMPLETE.
2. TREES & SHRUBS: THE ESTABLISHMENT PERIOD SHALL BE TWO CALENDAR YEARS FROM THE DATE OF FINAL ACCEPTANCE. DURING THE ESTABLISHMENT PERIOD THE OWNER OR OWNER'S CONTRACTOR SHALL WATER, CULTIVATE AND PRUNE AS REQUIRED TO MAINTAIN A HEALTHY GROWING CONDITION.
3. AT THE END OF THE ESTABLISHMENT PERIOD AND UPON SUBSEQUENT ANNUAL INSPECTIONS, PLANTS WHICH HAVE DIED OR FAILED TO THRIVE SHALL BE REPLACED WITH EQUIVALENT SIZE AND SPECIES. AFTER THE CONTRACTOR'S GUARANTEE PERIOD HAS ENDED, IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN AND REPLACE PLANTINGS.
4. TREES, SHRUBS AND LAWNS WHICH ARE NOT IRRIGATED WITH AN AUTOMATIC SPRINKLER OR DRIP SYSTEM SHALL BE THOROUGHLY WATERED ON A REGULAR BASIS DURING PERIODS OF BELOW AVERAGE RAINFALL. SOIL SHOULD BE SAMPLED AT A DEPTH OF 12" AND IF DRY, WATER TO DEPTH OF 24".
5. MULCH IS TO BE MAINTAINED AT A DEPTH TO COMPLETELY COVER THE SOIL AND TO PRESERVE MOISTURE AND MINIMIZE WEEDS.
6. TREES, SHRUBS AND LAWNS SHALL BE FERTILIZED ANNUALLY AND TREATED WITH INSECTICIDES AND/OR FUNGICIDES AS REQUIRED FOR CONTINUED HEALTHY GROWTH.
7. SUCKERS, WEEDS, AND DEAD WOOD SHALL BE REMOVED ON A SEASONAL BASIS, AND SHRUBS SHALL BE PRUNED TWICE A YEAR ACCORDING TO THE REQUIREMENTS OF EACH SPECIES (I.E. SOME SPECIES SHOULD NOT BE PRUNED AT ALL). SHRUBS SHALL NOT BE PRUNED INTO INDIVIDUALS BUT ALLOWED TO GROW INTO A MASS.
8. WHERE TREES ARE LOCATED NEAR SIDEWALKS OR PARKING LOTS, THE CANOPY SHALL BE LIMBED UP TO PROMOTE SAFE CLEARANCE TO 8' ABOVE GRADE.
9. LAWN AREAS SHALL BE MOWN AS OFTEN AS NECESSARY TO KEEP LAWNS TO A 2 1/2 - 3" HEIGHT, AND AERATED ON A SEASONAL BASIS.
10. BEDS AND LAWN EDGES SHALL BE REGULARLY TRIMMED AND EDGED.
11. PERENNIAL AND ANNUAL BEDS SHALL BE DESIGNED, PLANTED AND MAINTAINED FOR SEASONAL COLOR AND INTEREST. ANNUALS MAY BE INCORPORATED TO A MAXIMUM LIMIT OF 25% OF THE BED AREA OF MAINTAINED BEDS FROM MAY 15 THROUGH NOVEMBER 15. PERENNIAL BEDS SHALL BE WATERED AS REQUIRED FOR HEALTHY PLANT GROWTH, AND WEEDED AND DEADHEADED ON A MONTHLY BASIS.



LANDSCAPE PLAN

SCALE: 1"=20'

FOR LEGEND SEE SHEET C1.4

PINKHAM & GREER
CIVIL ENGINEERS
28 WARREN AVE, PORTLAND, ME. 04103
TEL: 207.781.3242 FAX: 207.781.4245

STATE OF MAINE
THOMAS S. GREER
No. 4206
LICENSED
PROFESSIONAL ENGINEER

3/17/16

REV.	DATE	DESCRIPTION
2	3/17/16	ADDED SCREEN
1	3/8/16	REVD PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

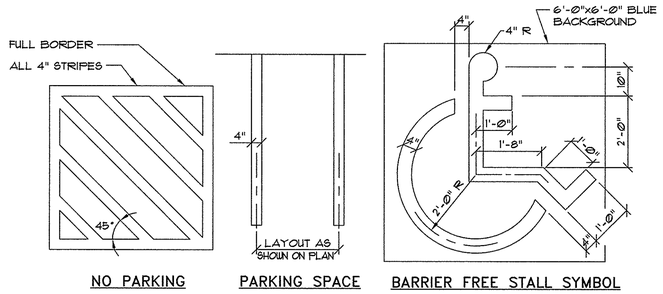
SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

LANDSCAPE
PLAN, NOTES AND DETAILS

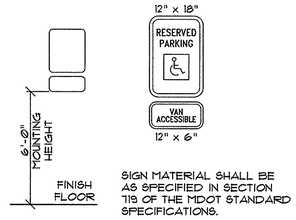
C1.6

MAP/LOT 28 / I / 4, 6, 9 & 10



2 STRIPING DETAILS

NOT TO SCALE



SIGN MATERIAL SHALL BE AS SPECIFIED IN SECTION 719 OF THE MDOT STANDARD SPECIFICATIONS.

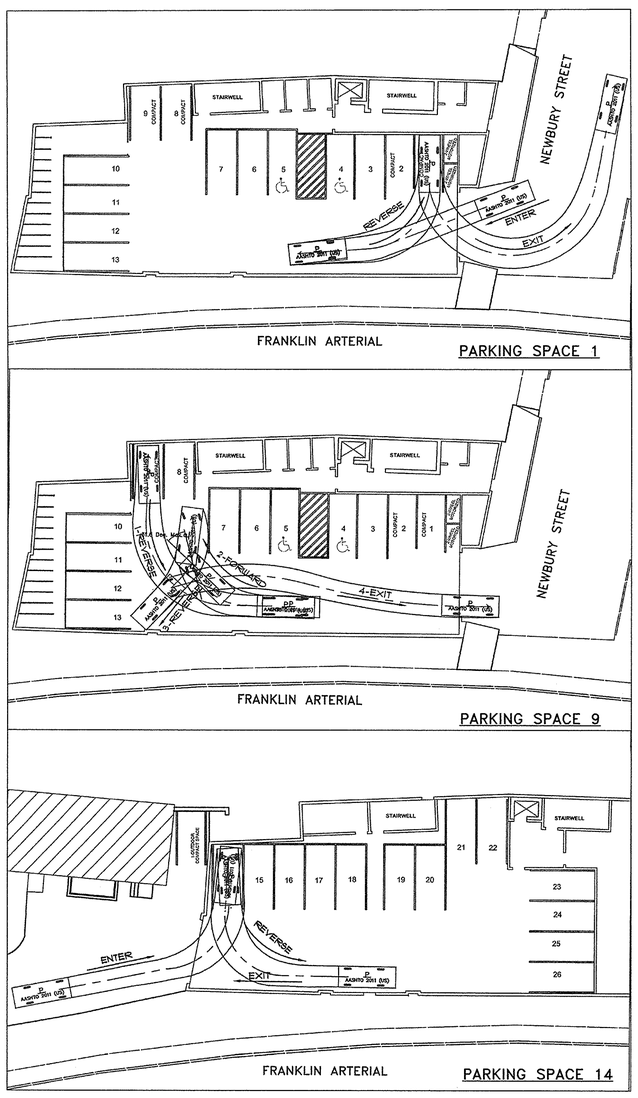
1 WALL SIGN DETAILS

NOT TO SCALE

PARKING SPACES

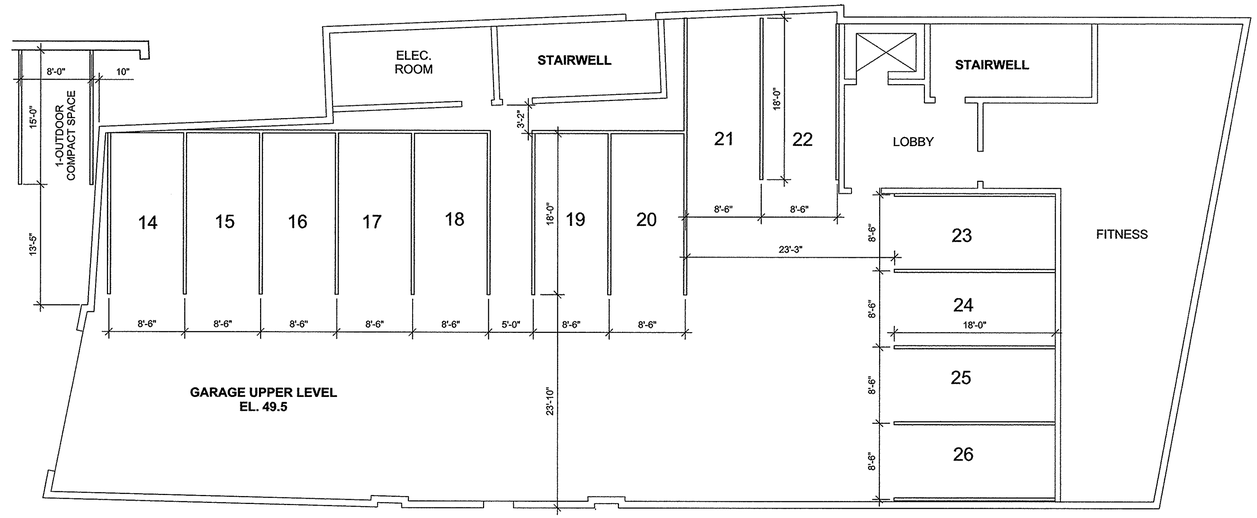
16 - 8'-6"x18'-0"
4 - 8'-0"x18'-0"
2 - 8'-6"x15'-0" COMPACT SPACES
2 - 8'-0"x15'-0" COMPACT SPACES
2 - 8'-0"x18'-0" ACCESSIBLE SPACE W/ ACCESS AISLE

Plan 8



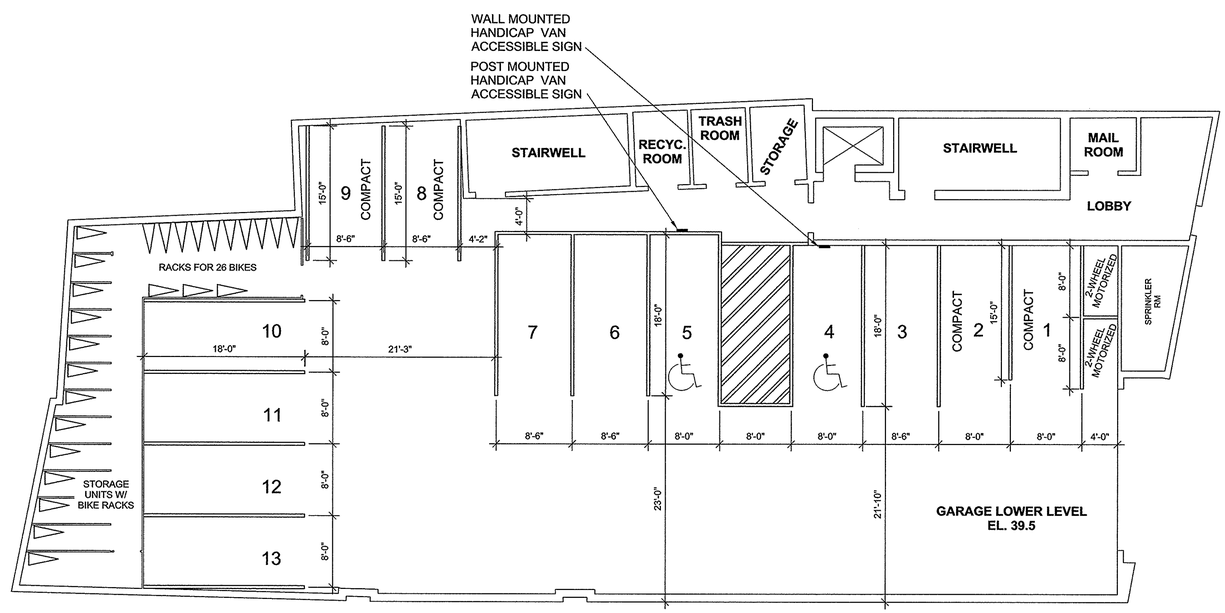
SAMPLE PARKING MOVEMENTS

SCALE: 1"=20'



1st FLOOR PARKING–FEDERAL STREET ENTRANCE

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



BASEMENT PARKING–NEWBURY STREET ENTRANCE

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

PINKHAM & GREER CIVIL ENGINEERS
28 WMWM AVE, PORTLAND, ME 04103
TEL: 207.797.8216 FAX: 207.797.4245

STATE OF MAINE
THOMAS GREER No. 4206
LICENSED PROFESSIONAL ENGINEER
3/8/16

REV.	DATE	DESCRIPTION
1	3/8/16	REV'D PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

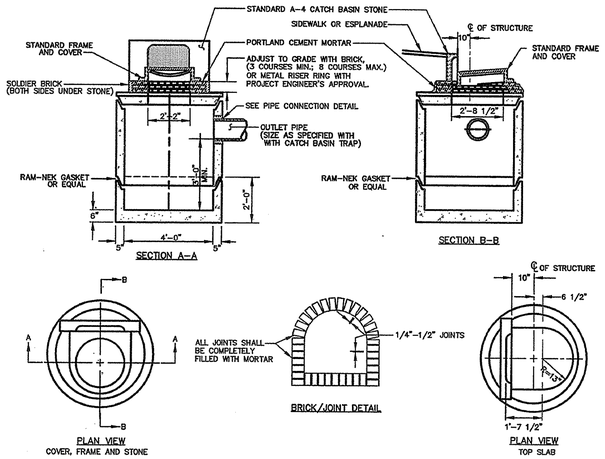
SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TG

LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

PARKING LAYOUT & DETAILS

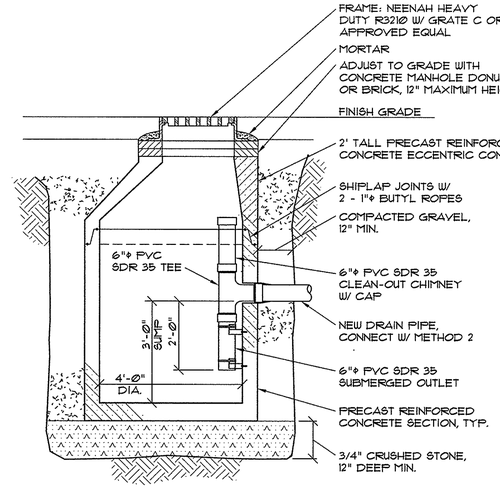
C1.7

MAP/LOT 28/11/4, 6, 9 & 10



5 CATCHBASIN #2 SECTION (II-2)

NOT TO SCALE



4 CATCHBASIN #1 SECTION

NOT TO SCALE

UNDERGROUND UTILITIES WARNING TAPE

IDENTIFICATION TAPE TO BE INSTALLED ABOVE ALL NEW UNDERGROUND UTILITIES AND ABOVE ANY EXISTING UTILITIES THAT MAY BE EXPOSED BY THIS CONSTRUCTION.

DETECTABLE UNDERGROUND MARKING TAPE TO BE PERMANENT, BRIGHT-COLORED, CONTINUOUS-PRINTED PLASTICIZED ALUMINUM TAPE, INTENDED FOR DIRECT-BURIAL SERVICE NOT LESS THAN 3" WIDE x 5 MILS THICK. PROVIDE TAPE WITH BLACK PRINTING IDENTIFYING THE UTILITY. DETECTABLE WARNING TAPE REQUIRED OVER ALL WATER, SEWER, DRAINAGE, OR GAS UTILITIES. TAPE TO BE TERRA TAPE BY REEF INDUSTRIES, INC., www.reefindustries.com, OR EQUAL.

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

1 UNDERGROUND UTILITIES WARNING TAPE

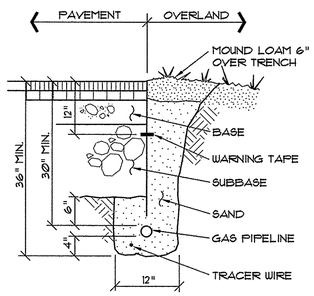
Plan 9

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
4. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
5. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
6. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVED EQUAL.
7. SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
8. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
9. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP. SEE FIGURE II-09.

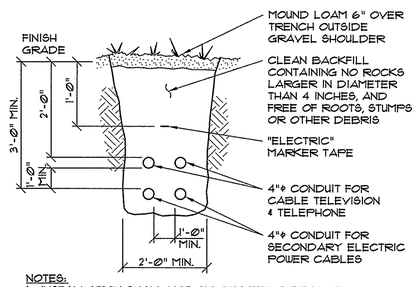
2 GENERAL NOTES FOR MANHOLES AND CATCH BASINS (II-4)

NOT TO SCALE



8 GAS PIPING TRENCH SECTION

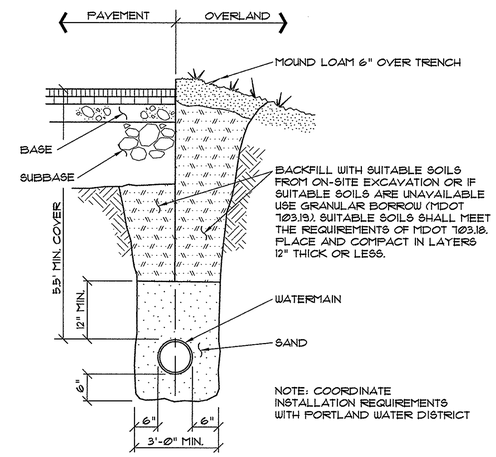
NOT TO SCALE



NOTES:
1. INSTALLATION SHALL NOT ALLOW INTER-TWINING OF CABLES.
2. DIRECT BURY ELECTRICAL CABLES MAY BE USED IF ALLOWED BY CENTRAL MAINE POWER.
3. CONFIRM CONDUIT SIZES WITH INDIVIDUAL UTILITY COMPANIES PRIOR TO INTALLATION.
4. COORDINATE FINAL LAYOUT WITH INDIVIDUAL UTILITY COMPANIES.

7 CABLE TRENCH SECTION

NOT TO SCALE

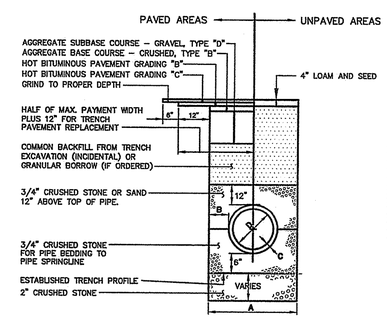


6 TYPICAL WATER MAIN SECTION

NOT TO SCALE

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

ANY ALTERNATE TRENCHING OR PAVMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES..



NOTES:
1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION **B** SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION **B** SHALL BE AT LEAST 9".
4. DIMENSION **A** IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION **A** SHALL BE BASED ON PIPE DIAMETER **D**, AS SET FORTH IN THE FOLLOWING TABLE.

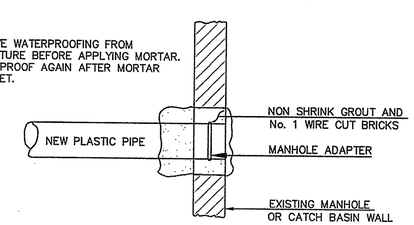
PIPE DIAMETER, D (INCHES)	MAX. TRENCH WIDTH, A (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
15	5.0
18	5.0
21	5.0
24	6.0
27	6.0
30	6.0
36	6.0
42	7.0
48	7.0

3 TYPICAL PIPE TRENCH INSTALLATION (11-12)

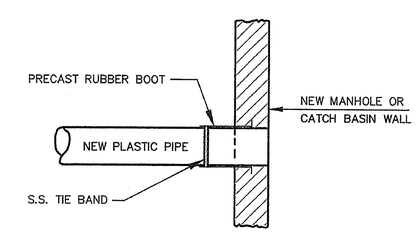
NOT TO SCALE

NOTE: EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY SAW CUT THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.

NOTE:
REMOVE WATERPROOFING FROM STRUCTURE BEFORE APPLYING MORTAR. WATERPROOF AGAIN AFTER MORTAR HAS SET.



METHOD 3 - NEW PIPE INTO EXISTING STRUCTURE



METHOD 2 - NEW CONSTRUCTION

10 PLASTIC PIPE CONNECTION METHODS (II-13 & II-14)

NOT TO SCALE

PINKHAM & GREER
CIVIL ENGINEERS
28 HAMMAR AVE. PORTLAND, ME. 04103
TEL 207.781.5242 FAX 207.781.4240

STATE OF MAINE THOMAS GREER No. 4206 LICENSED PROFESSIONAL ENGINEER 3/18/16

REV.	DATE	DESCRIPTION
1	3/8/16	REV'D PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

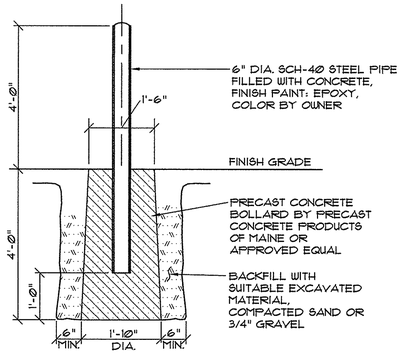
SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

SITE DETAILS

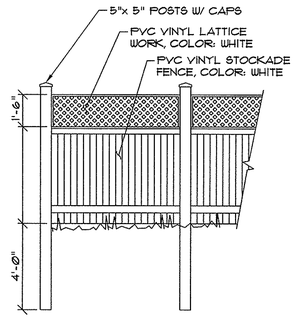
C2.1

MAP/LOT 28/1/4, 6, 9 & 10



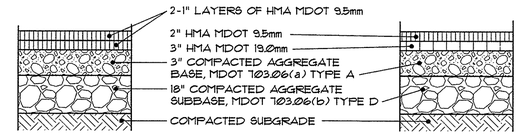
6 STEEL BOLLARD DETAIL

NOT TO SCALE



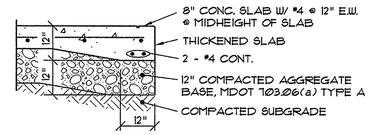
5 FENCE DETAIL

NOT TO SCALE

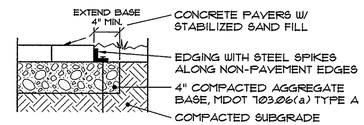


NEW PAVEMENT

PAVEMENT REPAIR AT TRENCHES



CONCRETE EQUIPMENT PADS



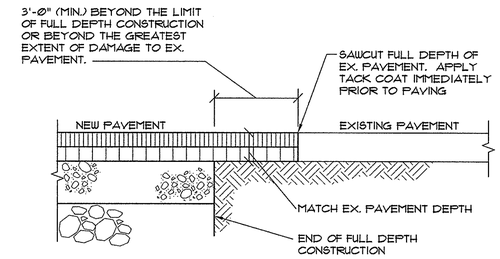
CONCRETE PAVERS

NOTES:

1. HMA = HOT MIX ASPHALT. MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
2. ALL COURSE THICKNESS AFTER FINAL COMPACTION.

4 BITUMINOUS PAVEMENT SECTIONS

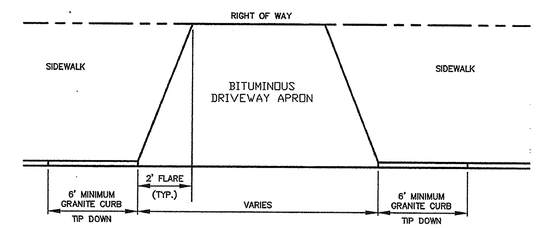
NOT TO SCALE



1 PAVEMENT CUTTING & MATCHING SECTION

NOT TO SCALE

NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R.O.W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.



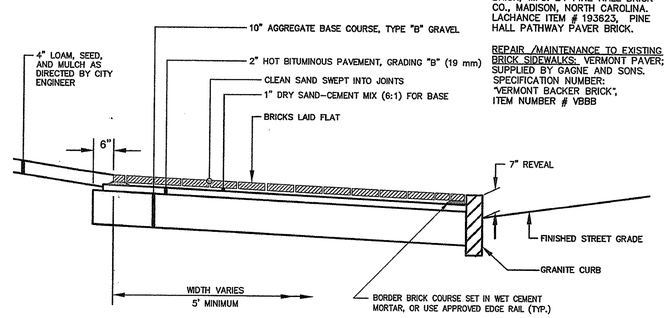
2 DRIVEWAY APRON LAYOUT (I-9)

NOT TO SCALE

BRICKS TO BE USED:

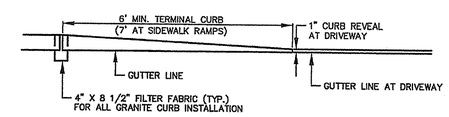
NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: "VERMONT BACKER BRICK", ITEM NUMBER # VBBB

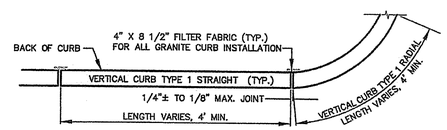


4 BRICK SIDEWALK WITH BITUMINOUS BASE (I-10)

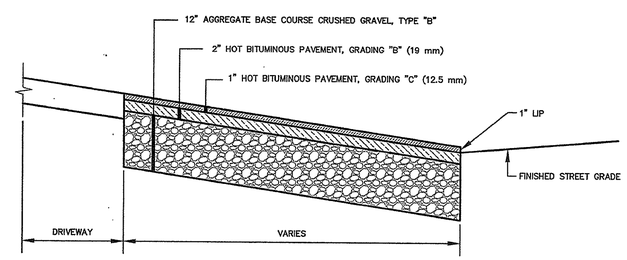
NOT TO SCALE



TERMINAL CURB PROFILE

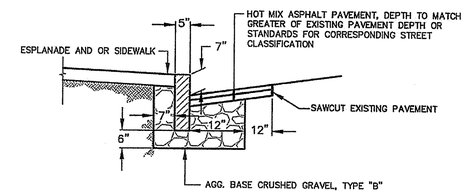


VERTICAL GRANITE CURB PLAN VIEW



5 BITUMINOUS DRIVEWAY APRON (I-13)

NOT TO SCALE



VERTICAL GRANITE CURB CROSS SECTION

3 VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREET (I-17)

NOT TO SCALE

Plan 10

PINKHAM & GREER CIVIL ENGINEERS
28 WANNAY AVE., PORTLAND, ME. 04103
TEL: 207/781.5242 FAX: 207/781.4243

STATE OF MAINE THOMAS S. GREER No. 4206 LICENSED PROFESSIONAL ENGINEER
3/8/16

REV.	DATE	DESCRIPTION
1	3/8/16	REV'D PER STAFF REVIEW COMMENTS

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, UNIT 401
PORTLAND, MAINE

SCALE: AS SHOWN
DATE: JANUARY 22, 2016
PROJECT: 15178
DRN BY: JDC
DESG BY: TSG
CHK BY: TSG

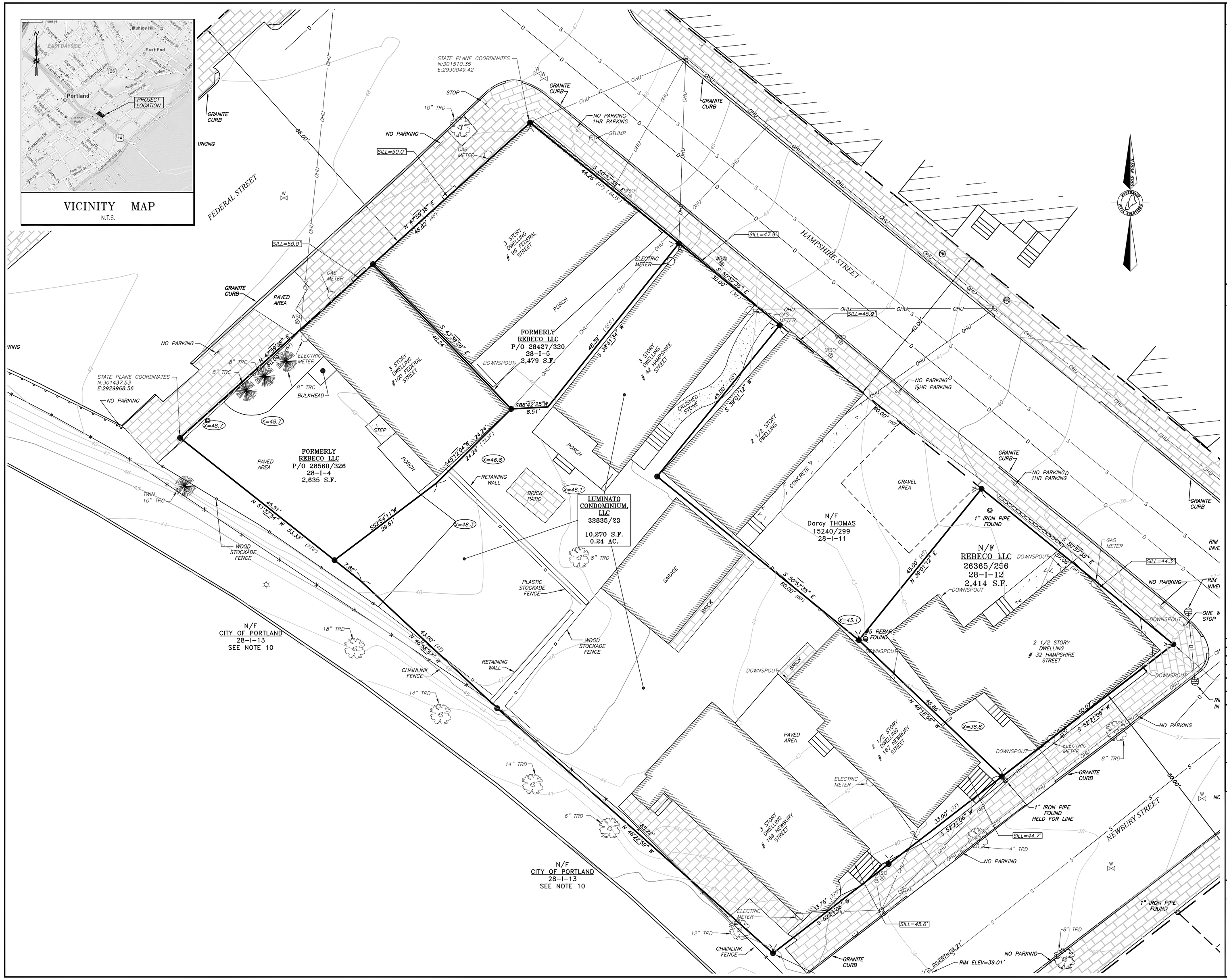
LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

SITE DETAILS

C2.2

MAP/LOT 28/I/4, 6, 9 & 10

VICINITY MAP
N.T.S.



LEGEND

●	#5 REBAR WITH PLASTIC CAP STAMPED (NOT SET) "NCS, INC. PLS 1314" SET ON __/__/____
	FOUND IRON PIPE (SIZE AS NOTED)
	FOUND CAPPED IRON ROD
	UTILITY POLE WITH LIGHT
	GUY WIRE ANCHOR
	ROUND CATCH BASIN
	DRAINAGE MANHOLE
WSO	WATER SHUTOFF VALVE
	BOUNDARY LINE
	EDGE OF PAVEMENT
	RIGHT-OF-WAY LINE
	ABUTTER LINE
OHU	OVERHEAD UTILITY
N/F	NOW OR FORMERLY OWNED BY
1234/567	DEED BOOK AND PAGE (CCRD)
12-3-45	TAX MAP-BLOCK-LOT
(123.45')	RECORD DISTANCE REFERENCED IN DEEDS
(123.45')	RECORD DISTANCE REFERENCED ON PLAN 4.d.

NOTES

1. THE BASIS OF BEARING FOR THIS SURVEY IS GRID NORTH STATE PLANE 2 ZONE 1802 WEST.
2. DEED AND PLAN BOOK REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS
3. RECORD OWNERSHIP OF THE PARCELS SURVEYED CAN BE FOUND IN THE FOLLOWING DEEDS.
   a. (28-I-12) DEED FROM HOLLY AND ISAAC MORRISON TO REBECO, LLC. DATED SEPTEMBER 22, 2008 AND RECORDED IN DEED BOOK 26365, PAGE 256.
   b. (28-I-9 & 10) DEED FROM THE ESTATE OF EUGENE N. CIAIZZO TO REBECO, LLC., DATED JANUARY 5, 2010 AND RECORDED IN DEED BOOK 27536, PAGE 290.
   c. (28-I-4) DEED FROM BROAD REACH INVESTMENTS, LLC., TO REBECO, LLC., DATED FEBRUARY 24, 2011 AND RECORDED IN DEED BOOK 28560, PAGE 326.
   d. (28-I-6) DEED FROM HAMPSHIRE 42, LLC., TO REBECO, LLC., DATED DECEMBER 18, 2009 AND RECORDED IN DEED BOOK 27521, PAGE 102.
   e. (28-I-5) DEED FROM TARO REALTY TRUST TO REBECO, LLC., DATED DECEMBER 22, 2010 AND RECORDED IN DEED BOOK 28427, PAGE 320.
4. REFERENCE IS MADE TO THE FOLLOWING PLANS:
   a. HAMPSHIRE STREET RECONSTRUCTION BY THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT SHEET NUMBER 3 OF 16, DATED NOVEMBER 16, 2001.
   b. PLAN OF REVALUATION IN PORTLAND, DATED JANUARY 2, 1882 AND RECORDED IN PLAN BOOK 5, PAGE 28.
   c. VARIOUS PLANS PROVIDED BY THE CITY OF PORTLAND.
   d. PLAN OF C.W.DENSMORE HOMESTEAD, DATED OCTOBER 1909 AND RECORDED IN PLAN BOOK 11, PAGE 16.
5. THE PARCELS SURVEYED CAN BE IDENTIFIED ON THE CITY OF PORTLAND TAX ASSESSOR'S MAP 28, BLOCK I, PARCELS 4-6, 9, 10 AND 12
6. THE PARCEL SURVEYED IS LOCATED IN THE URBAN TRANSITIONAL ZONE OF THE FORM BASED CODE.
7. THE WIDTH AND LAYOUT OF STREETS IS AS FOLLOWS
   a. HAMPSHIRE STREET IS 40' AND FROM MISCELLANEOUS CITY PLANS.
   b. NEWBURY STREET IS 50' AND FROM MISCELLANEOUS CITY PLANS.
   c. FEDERAL STREET IS 66' AND FROM MISCELLANEOUS CITY PLANS.
8. ELEVATIONS ARE BASED ON CITY DATUM. SEE PLAN FOR TBM DESCRIPTION.
9. THE UTILITIES SHOWN ON THIS PLAN WERE FROM FIELD OBSERVATION ONLY. THERE MAY BE OTHER UTILITIES EXISTING THAT ARE NOT SHOWN. CONTACT DIG-SAFE (888)DIG-SAFE PRIOR TO ANY EXCAVATION WORK.
10. THE LOTS ACQUIRED BY THE CITY OF PORTLAND WERE FOR THE CREATION OF THE FRANKLIN ARTERIAL.
11. THE PURPOSE OF THIS PLAN REVISION IN JANUARY, 2016 IS THE CONSOLIDATION OF SOME OF THE LOTS INTO THE NEW OWNERSHIP OF LUMINATO CONDOMINIUM, LLC. NO RESEARCH OR OTHER SURVEY WORK WAS PERFORMED.

Revision:	By:	Date:	Change:
2	JAP	1/12/2016	CONSOLIDATE LOTS (SEE NOTE 11)
1	MJB	12/28/2015	RECONFIGURED BOUNDARY

PROJECT: 32662.02	DRAWING NAME: 32662 RECONFIGURED BOUNDARY LINES.DWG
DATE: MAY 5, 2011	SCALE: 1"=10'
FIELDED BY: ADA, JAP, JM	DRAWN BY: ADA, MODIFIED MJB

Drawing Name and Location:

RECONFIGURED BOUNDARY SURVEY
HAMPSHIRE, NEWBURY AND FEDERAL STREETS, PORTLAND, MAINE

Owner:

LUMINATO CONDOMINIUM LLC c/o CHIP NEWELL
118 CONGRESS STREET, UNIT 401, PORTLAND, MAINE 04101

Prepared For:

LUMINATO CONDOMINIUM LLC c/o CHIP NEWELL
118 CONGRESS STREET, UNIT 401, PORTLAND, MAINE 04101

SURVEYING ENGINEERING LAND PLANNING
Northeast Civil Solutions
INCORPORATED
153 US ROUTE 1, SCARBOROUGH, MAINE 04074
tel 207.883.1000 800.882.2227
fax 207.883.1001
e-mail info@northeastcivilsolutions.com

0 10' 20' 40'

STAMP AND SIGNATURE

M. JOHANN BUISMAN
MAINE P.L.S. No. 1314

1-12-2016
DATE

IF THIS PLAN DOES NOT CONTAIN AN EMBOSSED SEAL, IT IS NOT AN ORIGINAL AND MAY BE VOID.

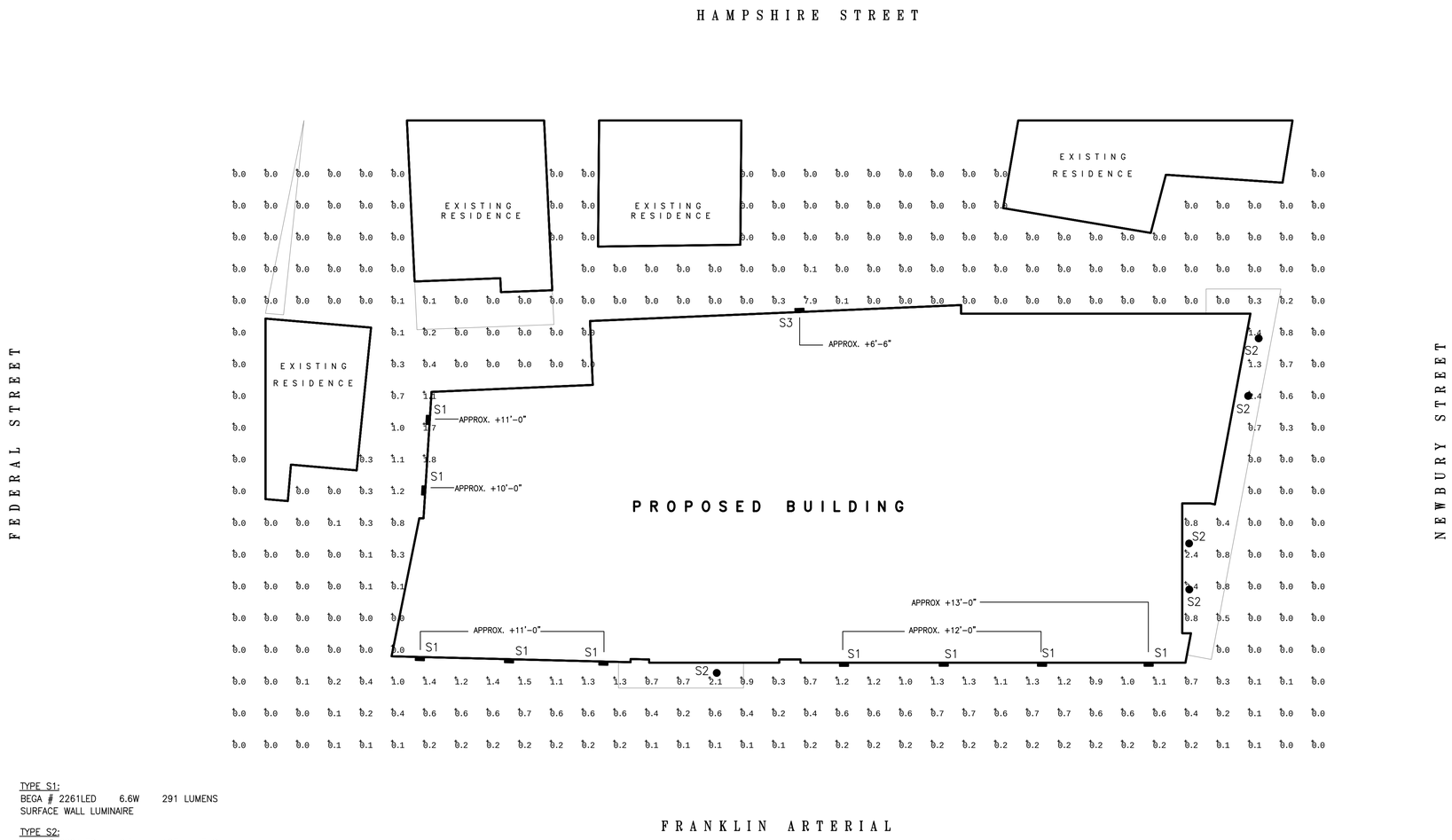
STATE OF MAINE M. JOHANN BUISMAN 1314 PROFESSIONAL LAND SURVEYOR

EMBOSSED SEAL ABOVE

E:\Land Projects\32000\32662 Arcadis\dwg\32662.dwg

Plan 11

Plan 12



TYPE S1:
BEGA # 2261LED 6.6W 291 LUMENS
SURFACE WALL LUMINAIRE

TYPE S2:
BEGA # 6604LED 6.5W 127 LUMENS
RECESSED DOWNLIGHT LUMINAIRE

TYPE S3:
BEGA # 6516LED.537 26W 910 LUMENS
SURFACE WALL LUMINAIRE

ILLUMINANCE VALUES INDICATED AT GRADE IN FOOTCANDLES
EXACT MOUNTING HEIGHTS OF WALL MOUNTED LUMINAIRES ARE AS INDICATED ON ARCHITECTURAL ELEVATIONS

SCALE: 1" = 10'-0"

SITE LIGHTING PLAN | 1

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

STATE OF MAINE
LAWRENCE E. BARTLETT
No. 7928
LICENSED
PROFESSIONAL ENGINEER
3/18/16

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
942 WASHINGTON STREET, BATH, ME 04530
TEL (207) 443-5447 FAX (207) 443-5560

date drawn:	03/18/16
date issued:	
drawn by:	LEB
scale:	AS NOTED

project: LUMINATO CONDOMINIUMS
169 NEWBURY STREET PORTLAND, MAINE

drawing title: LIGHTING CALCULATION PLAN

project no. 15-0044
revisions:

E1
sheet number

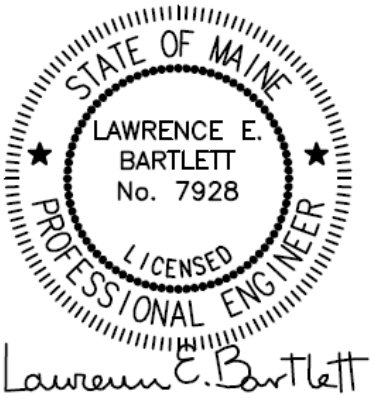
LUMINATO CONDOMINIUMS
169 NEWBURY STREET, PORTLAND, MAINE

PROPOSED LIGHTING FIXTURES

March 18, 2016

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
942 WASHINGTON STREET BATH, MAINE 04530
TEL (207) 443-5447 FAX (207) 443-5560
e-mail: bartlettdesigninc@comcast.net

The proposed building lighting includes only small, residential-scale LED luminaires with limited light output. Luminaires include wall mounted fixtures as well as recessed downlights at canopies. Lighting levels in excess of 0.2 footcandles at grade only occur within 15 feet of the building



LED wall luminaires with directed light

LUMINATO CONDOMINIUMS
LIGHTING FIXTURE **TYPE S1**

Housing: One piece die-cast aluminum for direct attachment to 3 1/2" or 4" octagonal wiring box. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: One piece die-cast aluminum cover frame secured by two (2) captive, stainless steel set screws threaded into stainless steel inserts. Matte safety glass. Fully gasketed for weather tight operation using a molded 'U' channel silicone rubber gasket.

Electrical: 6.6W LED luminaire, 9 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order. Optionally available with 2700K color temperature, consult factory.

Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

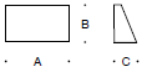
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP64

Weight: 1.5 lbs.

Luminaire Lumens: 291

Tested in accordance with LM-79-08



		Lamp	A	B	C
2261LED	ADA	6.6W LED	6⅞	3¾	2⅜

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com
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Recessed ceiling downlights with symmetrical ligth distribution · narrow beam

LUMINATO CONDOMINIUMS
LIGHTING FIXTURE **TYPE S2**

Housing: Constructed of die-cast and extruded aluminum. Housing is provided with mounting clamps that provide a vibration proof installation. Rough-in housing constructed of glavanized steel with through wiring box. Rough-in housing included. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: Tempered clear glass, retained by a one piece, die-cast aluminum step baffle frame that is treaded into luminaire housing. Internal reflector made from pure, anodized aluminum. Fully gasketed for weather tight operation using a molded silicone rubber gasket.

Electrical: 6.5W LED luminaire, 9 total system watts, -30°C start temperature. EldoLED 0-10V dimmable driver mounted to the junction box of the ceiling pan for easy maintenance. The LED driver provides smooth and flicker free dimming down to 0.1% and is compatible with both sink and current source controllers. Optional Dali dimmable driver available, consult factory for details. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order..

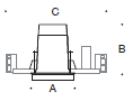
Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 1.6 lbs.

Luminaire Lumens: 127
Tested in accordance with LM-79-08



	Lamp	β	A	B	C
6604 LED	6.5W LED	26°	4 3/4	7 1/4	18

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Wall luminaires with double-sided light output

LUMINATO CONDOMINIUMS
LIGHTING FIXTURE **TYPE S3**

Housing: Extruded and die cast aluminum. Mounts directly to a BEGA 537 box (provided). Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: Tempered clear glass, the bottom and top diffuser are flush to the die casting to prevent water accumulation. Fully gasketed for weather tight operation using a 'U' channel molded silicone rubber gasket.

Electrical: 26W LED luminaire, 28.2 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

Notes: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

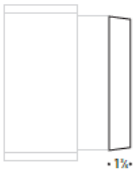
CSA certified to U.S. and Canadian standards for wet locations.
Protection class IP65

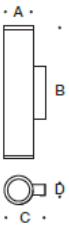
Weight: 7.5 lbs

Luminaire Lumens: 910
Tested in accordance with LM-79-08

Mounting options:

547 Surface-mount wiring box





These luminaires mount over a custom BEGA recessed box. This box can be shipped ahead of the luminaire.

Narrow beam in both directions

	Lamp	β	A	B	C	D	Wiring box*
6516LED.537*	26W LED	14°	4¾	19⅝	6⅜	1⅝	**537**

β = Beam angle *Small opening wiring box included.

Plan 14

LUMINATO CONDOMINIUMS

169 NEWBURY STREET
PORTLAND, MAINE

OWNER

LUMINATO CONDOMINIUM, LLC
118 CONGRESS STREET, SUITE 401
PORTLAND, MAINE

ARCHITECT

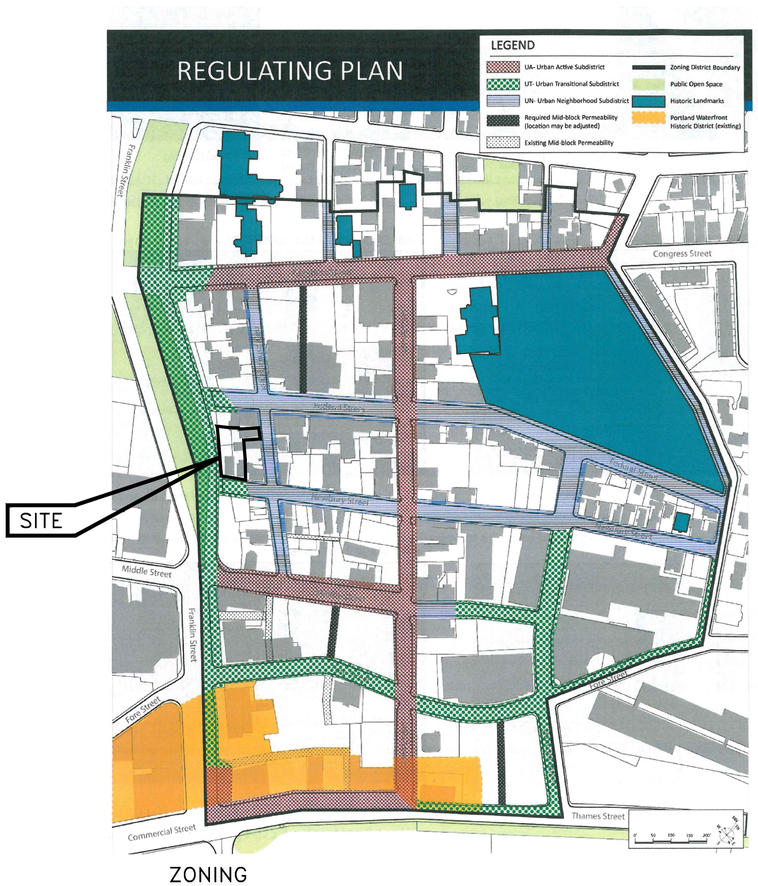
ARCHETYPE ARCHITECTS
48 UNION WHARF
PORTLAND, MAINE

CIVIL ENGINEER

PINKHAM & GREER CIVIL ENGINEERS
28 VANNAH AVENUE
PORTLAND, MAINE

SURVEYOR

NORTHEAST CIVIL SOLUTIONS
153 US ROUTE 1
SCARBOROUGH, MAINE



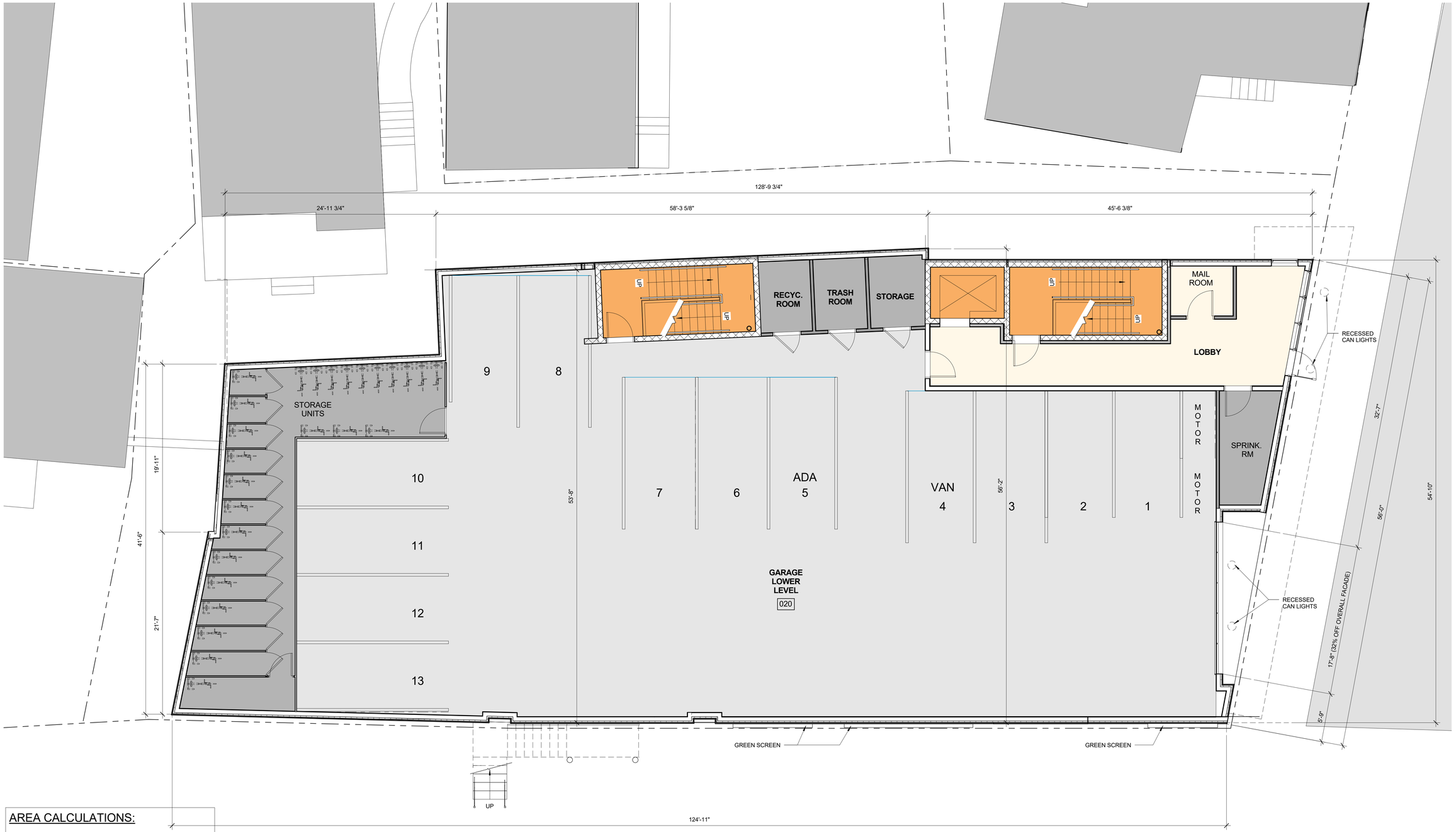
ZONING

SCALE: 1"=200'±

TAX MAP 28 / BLOCK I / LOTS 4, 6, 9 & 10

SUBDIVISION AND SITE PLAN APPROVAL
MARCH 8, 2016

15178



AREA CALCULATIONS:

BASEMENT:	6,544 GSF
1ST FLOOR:	6,611 GSF
2ND FLOOR:	6,736 GSF
3RD FLOOR:	6,736 GSF
4TH FLOOR:	6,082 GSF
5TH FLOOR:	5,975 GSF
6TH FLOOR:	3,734 GSF
ROOF:	551 GSF +
	42,969 GSF

1 LOBBY & LOWER LEVEL PARKING
3/16" = 1'-0"
0 2'-0" 4'-0" 8'-0" 16'-0"

LUMINATO

Newbury Street Portland, Maine

MARCH 8, 2016

A1.0

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

1 1ST FLOOR
3/16" = 1'-0"

LUMINATO

Newbury Street Portland, Maine

MARCH 8, 2016

A1.1

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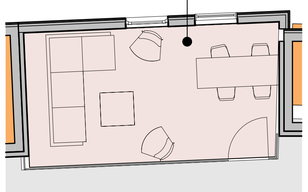
48 Union Wharf Portland, Maine 04101

Plan 17



2 | 3RD FLOOR - COMMON ROOM
3/16" = 1'-0"

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

0 2'-0" 4'-0" 8'-0" 16'-0"

LUMINATO

Newbury Street Portland, Maine

MARCH 8, 2016

A1.2

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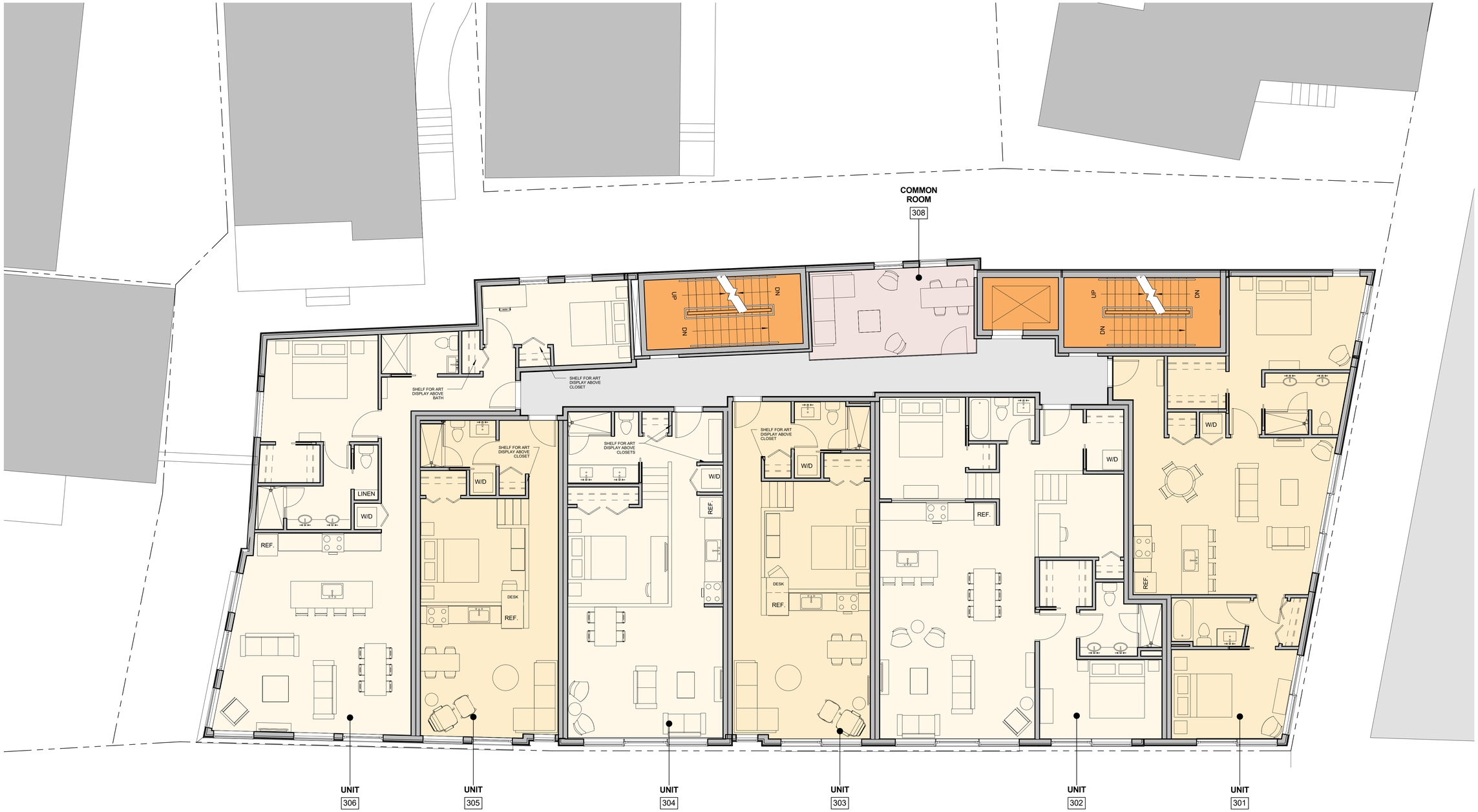
48 Union Wharf Portland, Maine 04101



1 3RD FLOOR
3/16" = 1'-0"
0 2'-0" 4'-0" 8'-0" 16'-0"

LUMINATO

Newbury Street Portland, Maine

MAR 18, 2016

A1.3

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48 Union Wharf Portland, Maine 04101

Plan 19

1 | 4TH FLOOR
3/16" = 1'-0"

LUMINATO

Newbury Street Portland, Maine

MARCH 8, 2016

A1.4

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

1 5TH FLOOR
3/16" = 1'-0"
0' 2'-0" 4'-0" 8'-0" 16'-0"

LUMINATO

Newbury Street Portland, Maine

MARCH 8, 2016

A1.5

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

Plan 21

1 | 6TH FLOOR
3/16" = 1'-0"

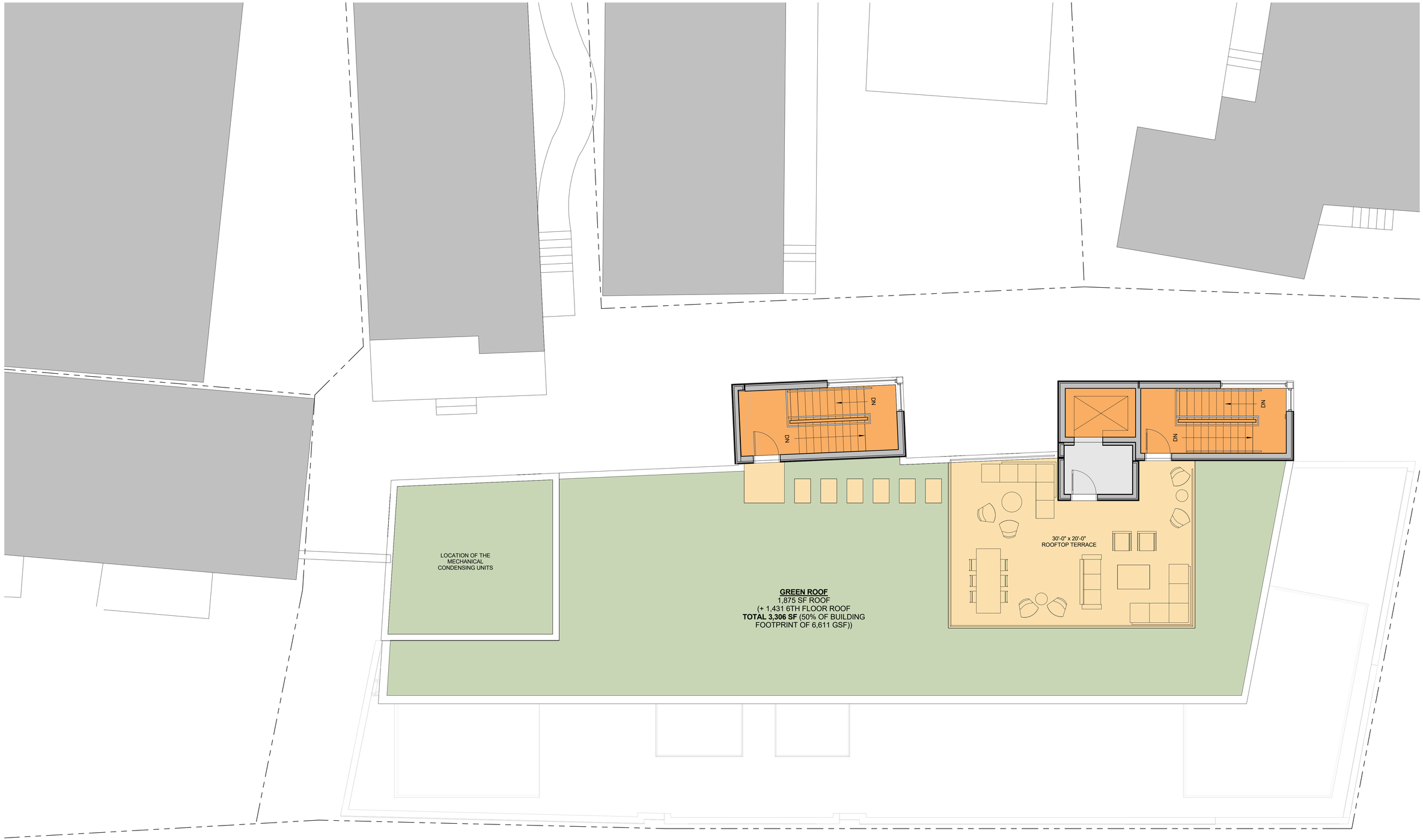
LUMINATO

Newbury Street Portland, Maine

MARCH 8, 2016

A1.6

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101



1 ROOFTOP TERRACE
3/16" = 1'-0"

LUMINATO

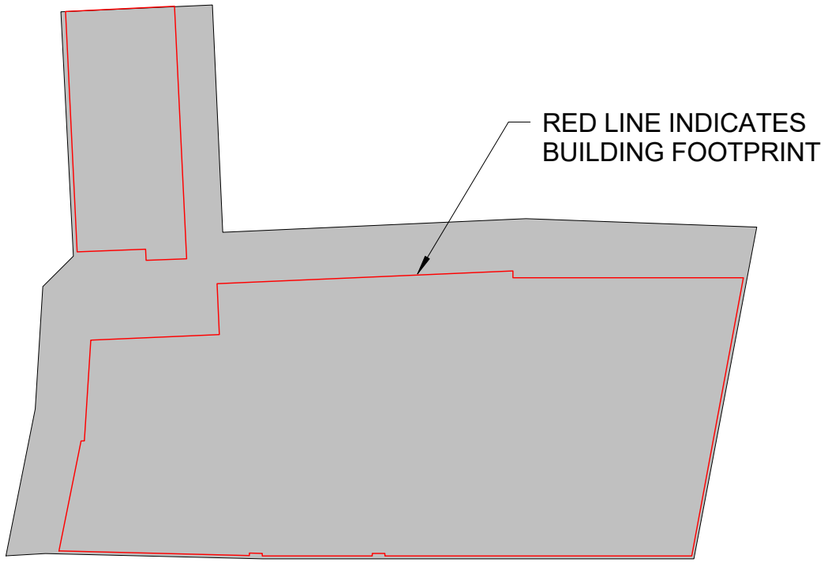
Newbury Street Portland, Maine

MARCH 8, 2016

A1.7

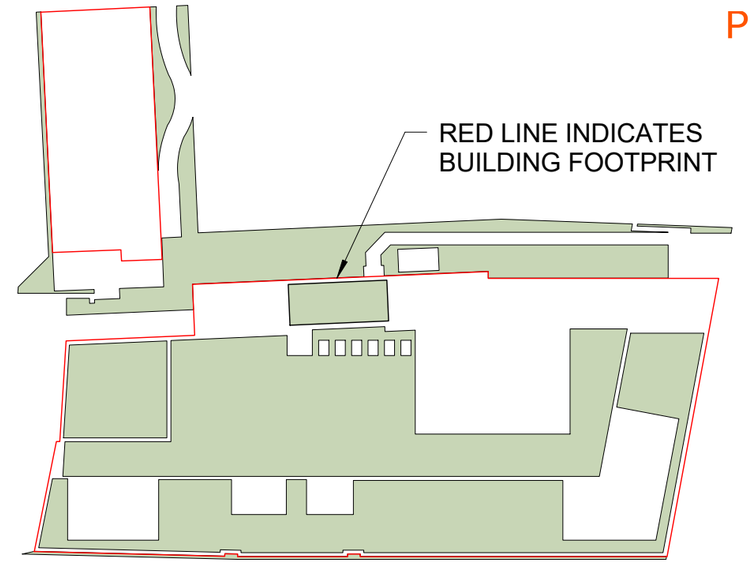
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

Plan 23



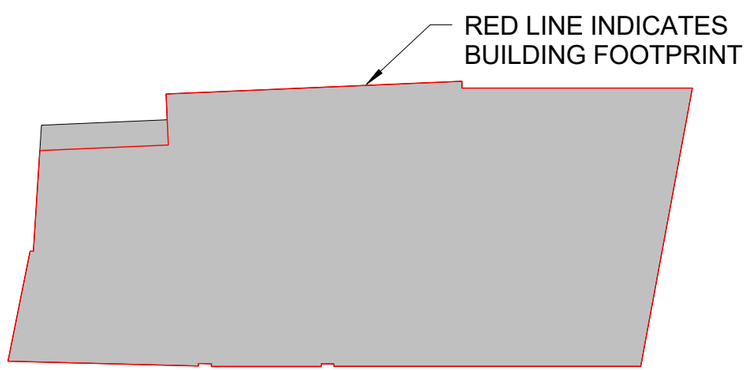
10,270 SF

1 LOT AREA
1" = 30'-0"



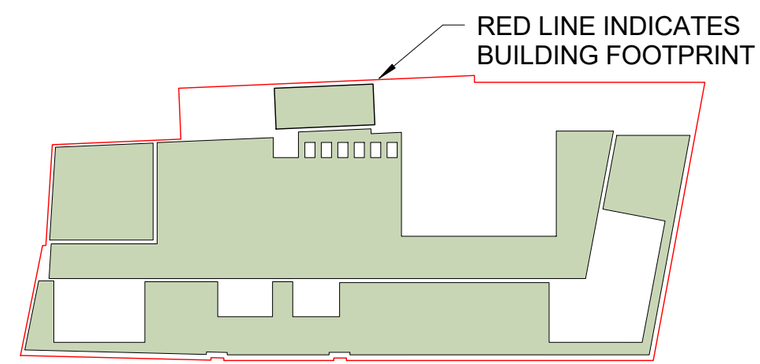
5,135 SF

2 PERVIOUS AREA
1" = 30'-0"



6,736 SF

3 COMBINED ROOF AREA
1" = 30'-0"



3,874 SF

4 GREEN ROOF AREA
1" = 30'-0"

LUMINATO

Newbury Street Portland, Maine

MARCH 11, 2016

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

PLANNING BOARD REPORT
PORTLAND, MAINE

Cheverus High School
235 Ocean Avenue
Conditional Use and Level I Site Plan
2016-029 and 2016-030
Cheverus High School, Applicant

Submitted to: Portland Planning Board: Public Hearing Date: March 22, 2016	Prepared by: Shukria Wiar, Planner Date: March 18, 2016

I. INTRODUCTION

Cheverus High School has requested Level I site plan and conditional use review and approval to convert a single family home to office spaces for the school at 235 Ocean Avenue. The site is zoned Residential R-3. Cheverus High School is proposing to relocate department administrative offices from the main campus to the property. No changes are proposed to the exterior of the structures or to the site. The proposed institutional use and associated works will be reviewed by the Planning Board as a Conditional Use in the R-3 zone for conformance with the Land Use Code Section 14-88 (R-3 Conditional Uses) and 14-474 (Conditional Uses).

Applicant Name	Cheverus High School
Agent Representative	Mark Lee of Harriman Architects

II. REQUIRED REVIEWS

Applicant's Proposal	*Applicable Standards*
House to Administrative Offices	Level I Site Plan
Institutional Use	Level III Conditional Use in the R-3 zone (§14-88)

III. SUMMARY OF FINDINGS:

Total Land Area of Main Campus: 1,045,440 s.f. (24 +/- acres)
Zone: R-3 Residential
Existing Use: Single-family House
Proposed Use: Secondary School
Lot Size: 13, 249 square foot
Building Area: 1,794 square foot

IV. SITE DESCRIPTION:

Cheverus High School is located at 267 Ocean Avenue on a 24 acres site. The campus includes two school buildings known as the Residence Building (also called Loyola Hall), built in 1967, and the Classroom building, built in 1952. There are currently five (5) parking areas dispersed

through the campus with parking for 313 cars. The site also includes a football/soccer field with a track at the southeasterly end of the site, a separate soccer/lacrosse field at the northern end of the site, a baseball field at the southerly end of the site, and a softball field near the center of the property.

Cheverus High School was approached by the prior land owner to determine the school's interest in purchasing the property. The school did not actively seek to acquire the parcel for the purpose of expanding the campus. At the end of last year, Cheverus High School purchased the single family house at 235 Ocean Street. The property is located at the corner of Ocean Avenue and Pya Road, abutting school's campus and one residential property at 18 Pya Road. The remaining residential lot three sides abut Ocean Avenue, Pya Road, and the Cheverus Campus. The property is not internal to the neighborhood, but at the neighborhood edge along Ocean Avenue. The site has a 1,794 square footage house and a two car garage.

V. PROPOSED DEVELOPMENT

The applicant proposes to utilize the single-family home as office space for about six to seven employees. According to the applicant, storage spaces in the buildings on the main campus have been converted to office spaces. These spaces do not have windows nor adequate ventilations to be used as offices. The converted storage spaces are being utilized out of necessity. The applicant has submitted photographs of the current locations of offices spaces and how the house will be used for the proposed offices, please refer to Attachment C. The applicant has prepared an assessment of the existing buildings on the campus and has determined that "the layout of the floor plan does not allow for an addition to the existing facilities without blocking or disrupting educational spaces, offices, necessary components of egress, existing site utilities, parking, parent or bus drop-off locations, playfields or violating current shore land zone setback requirements".

Currently portions of the driveway and the garage of this residential property is encroaching Cheverus High School's land, as seen on the survey, Attachment Plan1. The school is not proposing any changes to the exterior of the residence including building footprint, driveway, landscaping, or exterior building features. Employees relocated to the building would continue to park in lots on the adjacent main campus. The existing driveway would act as parking for department guests.

VI. BACKGROUND OF PLANNING BOARD REVIEW AND APPROVALS:

The following provides a summary of Planning Board reviews of the Cheverus campus from 1987 to today.

1989 Planning Board Review
In 1989, Cheverus sought approval for a major expansion of their athletic facilities. The proposal included the following:

- Football/soccer field
- Track and field areas
- One baseball game field
- One baseball practice field
- Bleachers

This proposal represented a significant change to the Baxter Boulevard side of the campus. The expansion plans were approved by the Planning Board on January 24, 1989. According to the Planning Board report, the proposal generated considerable public interest.

1997 Planning Board Review
In 1997**,** Cheverus requested a modification to the 1989 approval. The modifications received conditional and site plan approval by the Planning Board on June 10, 1997 and included the following:

- Allowed varsity football games
- Expand the football bleacher seating capacity
- Provide a permanent scoreboard and public address system
- Allow non-Cheverus events to take place at their athletic facilities and to charge admission
- Construct concession/bathroom facilities near the athletic facility

2000 Planning Board Review
In 2000, in order to address a projected growth in the student population from 395 students to up to 700 students, Cheverus requested approval of a variety of campus improvements, referred to as the Cheverus Campus Master Plan. Cheverus received conditional use and site plan approval on August 8, 2000 for the following:

- New gymnasium and cafeteria addition
- Expanded parking, primarily on Ocean Avenue side of the property
- New soccer field on Ocean Avenue side on the site of the former Roaks Greenhouse
- Miscellaneous improvements from the 1997 approval that were never built, therefore their approval had lapsed. These include a concession stand, bleachers and press box.

2003 Planning Board Review
In 2003**,** Cheverus requested re-approval of the proposed gymnasium/cafeteria building because the 2000 site plan approval had lapsed. Conditional use and site plan approval was granted by the Planning Board on October 14, 2003.

2005 Planning Board Review
In 2005, Cheverus returned to the Planning Board to request an amendment to their 1989 conditional use approval to allow for greater flexibility in their use of the baseball field. Use of the field had been limited to regular games only in the 1989 approval. Cheverus wanted to use the field for both games and practices. Approval was granted by the Planning Board on April 12, 2005.

2008 Exemption from Site Plan Review
In April, 2008 Cheverus submitted an application for exemption from site plan review for baseball backstop and fencing improvements. The proposal was to extend the existing baseball field chain link fence to connect to the existing dugouts on each side of home plate and adding fencing behind the dugout and running parallel to the third base line. These improvements were triggered by concern from abutters over the potential for property damage or injury from foul-tipped baseballs leaving the facility. An exemption from site plan review was granted in April, 2008.

2008 Planning Board Review
In September, 2008 Cheverus submitted an application to request to add 60 parking spaces and one concrete pad for placement of a prefabricated equipment storage container to their property. The proposal included softball dugouts, two concrete pads for movable storage containers and an electronic scoreboard. Approval was granted by the Planning Board on September 5, 2008.

VII. STAFF REVIEW

This project is subject to conditional use and site plan review. Staff review includes the following subsections:

1. ZONING, RIGHT TITLE AND INTEREST, AND NEIGHBORHOOD MEETING

A. Zoning

CONDITIONAL USE REVIEW

Because this project is considered an institutional expansion in the R-3 zone, it is subject to the conditional use standards of Sections 14-88 and 14-474. The applicant has submitted an analysis of how the proposal meets the R3 Conditional Use Standards (Attachment A and D) as follows:

Sec. 14-88. Conditional uses

The following uses shall be permitted only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) and any special provisions, standards or requirements specified below:

> (c) *Institutional:* Any of the following conditional uses provided that, notwithstanding section 14-474(a) (conditional uses) of this article or any other provision of this Code, the Planning Board shall be substituted for the board of appeals as the reviewing authority:
> 1. Elementary, middle, and secondary school;
> 2. a. Long-term and extended care facilities;
> b. Intermediate care facility for thirteen (13) or more persons…
>
> Such uses shall be subject to the following conditions and standards in addition to the provisions of section 14-474:
>
> > a. In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas; and

Staff Comments: The property is located on a lot other than the location of the principal use and the applicant was requested to demonstrate why this relatively small area of institutional use could not be accommodated within existing institutional buildings.

The application (Attachment A) stated that the uses would comprise office rooms to include administrative / admissions offices for 6-7 staff with occasional meetings. The submitted letter outlines why the proposed use(s) cannot be reasonably accommodated within existing school buildings that are in institutional use because the Schools' administrative staff are currently overcrowded and that there are no immediately available spaces left within the existing school properties.

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

Staff Comments: There is a loss of a single family home, but the applicant proposes no exterior or interior changes because they want to retain the integrity of the house and remain consistent with the surrounding neighborhood. Cheverus also wants to keep the option open to revert the house back to residential use for a staff member.

c. In the case of a use or use expansion which constitutes a combination of the above-listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative; and

Staff Comments: The lot size for Cheverus' main campus is about 24 acres. The single family home's lot is 13,249 square feet. The minimum lot size in the R-3 zone for a school is two acres and for residential is 6,500 square feet. Therefor this standard is being met.

Sec. 14-474:
The following standards 14-474 apply to all conditional uses:

2. *Standards. The Board shall, after review of required materials, authorize issuance of a conditional use permit, upon a showing that the proposed use, at the size and intensity contemplated at the proposed location, will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zoning district. The Board shall find that this standard is satisfied if it finds that:*

a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

Staff comment: According to the applicant, the employees that will have office spaces in the building will continue to use the parking spaces on the main campus. There are no plans to change the existing driveway and it will be used to supply two parking spaces for guests to the departments. The applicant states that the employees will "receive on average a cumulative total of two guests per day for a period of 90 minutes each".

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and

Staff comment: The proposal would not create harmful conditions.

c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

Staff comment: The design and operation of the proposed use is anticipated to have similar effects/impacts as for surrounding uses.

Section 14-474 (d) states:

(d) Conditions on conditional use permits. The board of appeals may impose such reasonable conditions upon the premises benefited by a conditional use as may be necessary to prevent or minimize adverse effects therefrom upon other property in the neighborhood. Such conditions shall be expressly set forth in the resolution authorizing the conditional use permit and in the permit. Violation of such conditions shall be a violation of this article.

Staff Comment: Planning staff recommends a condition of approval that the building should not be altered to a prevent conversion back to a residential unit. This would minimize potential adverse effects on residences along Pya Road.

B. Right, Title or Interest:

The applicant submitted a warranty deed for the property (see Attachment B).

C. Neighborhood Meeting:

This proposal is subject to Level I site plan and conditional use review (for an institutional use in the R-3 zone). Section 14-32 (c) of the City Code requires only applicants for Level III site plan review or subdivisions of five or more units or lots to host a neighborhood meeting. Because this proposal includes converting the single family house for office space as a Level I site plan and it is exempt from this requirement. The applicant voluntarily held a neighborhood meeting, however, on Tuesday, March 15, 2016 to share the proposal with neighbors prior to the public hearing (see neighborhood meeting minutes- Attachment E).

2. SITE PLAN REVIEW

The proposed parking additions and athletic improvements have been reviewed by staff for conformance with the applicable review standards of the Level I Site Alternation site plan ordinance. Section 14-524 (a) (2)(d)ii states that Level I Site alteration plans shall only be subject to the following site plan standards, as applicable, as contained in section 14-526:

1. **Transportation Standards**

   According to the applicant, the employees that will have office spaces in the building will continue to use the parking spaces on the main campus. There are no plans to change the existing driveway and will be used to supply two parking spaces for guests to the departments. The applicant states that the employees will "receive on average a cumulative total of two guests per day for a period of 90 minutes each".

2. **Environmental Quality Standards**

   The applicant is not proposing any exterior and interior changes to the site; therefore no landscaping improvements are planned. Since the site is developed and no work is proposed on site, water quality, stormwater management and erosion control standards are not applicable.

3. **Public Infrastructure And Community Safety Standards**

   Since property is developed, there are existing utilities at the site.

4. **Site Design Standards**

   No new exterior lighting is proposed. There will be no sign on the property that will indicate that Cheverus High School offices are housed there.

VIII. 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 March 22, 2016 for application #2016-029 (Conditional Use), relevant to Portland's Conditional Use Standards and other regulations, and the testimony presented at the Planning Board hearing:

> The Planning Board finds that the proposed conditional use for an institutional use at 235 Ocean Avenue in the R-3 zone [**does/does not]** meet the standards of § 14-474 and the standards of §14-88 (c)(1) for the R-3 zone, subject to the following condition:

1. That the building shall not be altered to a prevent conversion back to a residential unit.

B. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in Planning Board Report for the public hearing on March 22, 2016 for application #2016-030 (Site Plan), 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.

ATTACHMENTS

APPLICANT'S SUBMITTAL

A. Application, dated 02.14.2016
B. Warranty Deed
C. Photos
D. Supplemental Information, dated March 12, 2016
E. Neighborhood Meeting

PLANS

Plan1 Boundary Survey
Plan2 Site Plan
Plan3 Site Overview Plan
Plan4 Floor Plans for Main Campus Buildings

Att. A

HARRIMAN

CHEVERUS HIGH SCHOOL
235 Ocean Avenue Conditional Use Application
Portland, ME
PROJECT #15619

February 4, 2016

Conditional Use Application Narrative

46 HARRIMAN DRIVE
AUBURN, ME 04210
207.784.5100

123 MIDDLE STREET
PORTLAND, ME 04101
207.775.0053

ONE PERIMETER ROAD
MANCHESTER, NH 03103
603.626.1242

www.harriman.com

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2 Appendix
- A. Property Photos
- B. Boundary Survey
- C. Property Deed
- D. Site Plan
- E. Initial Application Information

CHEVERUS HIGH SCHOOL
235 OCEAN AVENUE
CONDITIONAL USE PERMIT

INTRODUCTION

The 235 Ocean Avenue property is currently a single family residence in the R-3 Residential Use Zone (Section 14-86 City of Portland Land Use Code). The Lot size is 0.312 acres and abuts the Cheverus High School campus on the corner of Ocean Avenue and Pya Road. Cheverus is proposing to relocate administrative department offices from the main campus to the property. These offices (up to a maximum of 6 employees) are currently housed in spaces originally designed for storage or maintenance related functions. The relocation of these offices in the building will constitute an "institutional expansion" and require Conditional Use Approval. *Institutional Conditional Use in R-3: elementary, middle, secondary school (Portland Land Use Code Section 14-88).* Cheverus is not planning any changes to the exterior of the residence including building footprint, driveway, landscaping, or exterior building features. Employees relocated to the building would continue to park in lots on the adjacent main campus. The existing driveway would act as parking for department guests.

Lot Dimension

	235 Ocean Avenue Actual	City of Portland Requirement (14-90)
Minimum Lot Size	13,249 Sq ft	No minimum
Street Frontage	233 ft	50 ft
Front Yard Setback	31.28 ft	25 ft
Rear Yard Setback	26.35 ft	25 ft
Side Yard Setback	43.71 ft	20 ft
Max Lot Coverage	13%	35%

CONDITIONAL USE STANDARDS (14-474)

C.2.a *The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not significantly greater than would normally occur at surrounding uses or other allowable uses in the same zone.*

Traffic
The analysis below indicates a substantial reduction in the number of vehicle trips generated.

Current Residential use trip generation (Institute of Transportation Engineers-Single Family Detached Housing)
Weekday: 9.57 vehicle trips
Saturday: 10.08 vehicle trips
Sunday: 8.77 vehicle trips

Proposed use trip generation (Institute of Transportation Engineers-Office Building, Guests Only)

Weekday:	1.17	vehicle trips
Saturday:	1.01	vehicle trips
Sunday:	0.43	vehicle trips

Hours of Operation

The proposed use will operate between the hours of 8 am to 5 pm Monday through Friday. Weekend use would be minimal.

Expanse of Pavement

There are no planned changes to the existing expanse of pavement which includes a 21' wide by 76' long driveway and a 48 SF brick patio.

Required Parking

Per proposed Cheverus High School policy, the employees working at 235 Ocean Avenue will continue to park at the main campus parking as they do now. The existing driveway would be used for off-street guest parking only. Currently, the departments being considered for relocation to the property receive on average a cumulative total of 2 guests per day for a period of 90 minutes each.

Offices; professional and public buildings: 1 parking space per 400 SF [14-332 (j)] 1794 SF/400 SF=5 spaces.

C.2.b *The proposed use will not create unsanitary or City of Portland Land Use Code of Ordinances Chapter 14 Sec. 14-474 Rev.5-5-2014 14-649 harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.*

Noise

The proposed office use will be limited to interior use of the premise with ordinary office activity and noise generation during normal business hours of operation. No adverse or harmful noise conditions will be generated by the proposed conditional use.

Glare

There are no proposed changes to the lighting that exists at the property. It is anticipated that there will be limited or no evening activity. No adverse or harmful glare conditions will be generated by the proposed conditional use.

Dust

The proposed office use will be limited to interior use of the premise with ordinary office activity. No dust will be generated by the proposed conditional use.

Sewage Disposal
The current facility is connected to city water and sewer. The analysis below indicates a significant reduction in the estimated quantity of sewage.

Estimated current residential use (State of Maine Subsurface Wastewater Disposal Rules 10-144 Chapter 241)

270 gallons per day (GPD)

Proposed Office use

72 gallons per day (GPD)

Air emissions

The facility is heated by an oil fired furnace. There is a fireplace in the living room. The EPA estimates approximately 1 metric ton of CO_2 emissions for each 100 gallons of fuel burned. Utilizing the house as an office will burn less fuel than as a residence as it will not be occupied at night when the heating demands are greater. We estimate the residential use at approximately 1000 gallons of oil per year with 10 metric tons of CO_2. This is greater than the projected 900 gallons of oil per year with 9 metric tons of CO_2 if the property is converted to office use.

Odor

The proposed office use will be limited to interior use of the premise with ordinary office activity. No adverse or harmful odors will be generated by the proposed conditional use.

Lighting

There are no proposed changes to the lighting that exists at the property. It is anticipated that there will be limited or no evening activity. No adverse or harmful lighting conditions will be generated by the proposed conditional use.

Litter

The proposed office use will not create conditions that would produce litter. Trash will be stored within the building and removed on a routine basis by school maintenance staff.

C.2.c *The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.*

There are no proposed changes to the structure or grounds of the property. The landscaping including screen hedges, foundation plantings and mature trees will be maintained.

CONDITIONAL USE STANDARDS R-3 ZONE (14-88)

(c)a In the case of expansion of existing such uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas

Cheverus High School is efficiently utilizing its existing site and buildings as demonstrated below. The 70% site utilization is considerably high in the R-3 zone. The school has been sensitive to maintain appropriate buffers at abutting residential neighborhoods. In this spirit, the school is proposing to relocate department office uses that will be compatible in the context of the property at 235 Ocean Avenue and not impact or encroach into the adjacent residential areas. These administrative offices are interior functions with limited guest traffic.

There will be no physical encroachment into established residential area as there will be no changes to building footprint, driveway, landscaping, and exterior building features.

Site Utilization

The Cheverus main campus accommodates 590 students on 24 acres with the following utilization:

	Area (SF)	Area (Acres)
Main Campus Lot Size	1,048,700	24.07
Buildings	62,200	1.43
Athletic Fields	478,700	10.99
Parking and Drives	186,200	4.27
Stormwater Treatment	7,600	0.17

Coverage:	70%		
Stream Protection Zone:	75	Ft	Setback from High Water Line from Berry Bk
Shoreland Protection Zone:	250	Ft	Setback from High Water Line

Maine Department of Education Secondary School Site Size Guideline: 30 acres plus 1 acre for every 100 students.

Building Utilization

Photos submitted with the initial application demonstrate the need for space that cannot be accommodated in existing spaces. As with the site, Cheverus has a high building utilization. The need for spaces that directly serve students has necessitated finding available room to accommodate various administrative departments. This has led to the condition of converting storage and support spaces into offices. These spaces do not have access to natural light or ventilation. Upon relocation of these offices to 235 Ocean Avenue, the existing rooms will be reconverted back to storage, utility and support functions.

(c)b *The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter*

The use of 235 Ocean Avenue for office functions does not constitute a significant displacement or conversion of a residential use. This is a single residence on a property that is bordered on two sides by public streets and one side by the Cheverus main campus.

(c)c *In the case of a use or use expansion which constitutes a combination of the above listed uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative*

Not Applicable

(c)d *Article V (site plan) sections 14-522 and 14-523 notwithstanding, in the case of places of assembly the proposed use shall be subject to the requirements of article V (site plan) of this chapter*

Not Applicable

CHEVERUS

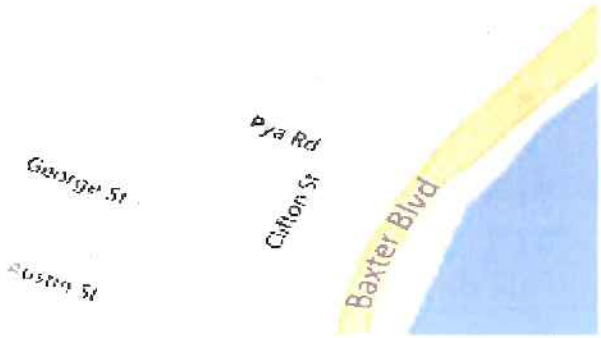
Academic Excellence in the Jesuit Tradition

Introduction: Cheverus High School is currently under contract with the owners of 235 Ocean Avenue in Portland with the sale pending approval of the School's Board of Trustees scheduled to close on November 30, 2015. Both the School and 235 Ocean Avenue are situated in an R-3 zone. A portion of the garage for the residence and the driveway (for which an easement has been granted) sits on School property adjacent to the south auxiliary parking entrance to the School.

Given the Planning Board's calendar for conditional use review, we are submitting a contingent (upon successful closing) application for two (2) possible future uses:

1) **Use 1:** As an "as is" single family residence that would be used to house in the future: a Jesuit (priest) President, a lay President and Family (if applicable) a lay Principal and Family (if applicable), or to rent to a single family and
2) **Use 2:** As an "as is" single family residence for office space for departments under space constraints on campus.

Location: at the corner of Pya Road and Ocean Avenue adjoining the south auxiliary entrance to the campus



Att. B

Return to:

Cheverus High School
235 Ocean Avenue
Portland, ME 04103

E-FILED
Date / Time: 12/23/15 / 1:05pm
Book: 32818
Page: 158
Initial: dK

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS: That we, **Terence P. MacDonald** and **Karen F. MacDonald**, husband and wife, of 235 Ocean Avenue , Portland, ME 04103, for consideration paid, grant to **Cheverus High School**, a Maine corporation whose mailing address is 267 Ocean Avenue , Portland, ME 04103, with WARRANTY COVENANTS:

SEE ATTACHED EXHIBIT A.

MEANING and INTENDING to describe and convey the same premises conveyed to the grantors herein by deed of James R. Cavallaro and Ilean R. Cavallaro dated 10/26/1988 and recorded in Book 8533, Page 86 at the Cumberland County Registry of Deeds.

Executed this 21st day of December, 2015.

Terence P. MacDonald

Karen F. MacDonald

State of Maine
County of Cumberland 12/21/2015

Then personally appeared before me the said Terence P. MacDonald and Karen F. MacDonald and acknowledged the foregoing to be their voluntary act and deed.

Notary Public/Attorney at Law
Commission expiration:

Guy W. Blanchard
Attorney at Law

gC

Att. C

CHEVERUS

Academic Excellence in the Jesuit Tradition

Features and statistics:

1 / 32

General Information			
SubType:	**Single Family**	Sqft Fin Abv Grd+/-:	**1,794**
Rooms:	**7**	Sqft Fin Blw Grd+/-:	**0**
Beds:	**3 Baths: 1/1**	Sqft Fin Total+/-:	**1,794**
Style:	**Bungalow**	Source of Sqft:	**Public Record**
Color:		Sqft Other Source:	
Year Built:	**1925**	Lot Size+/-:	**0.312 acres**
Surveyed:	**No**	Source of Lot Size:	**Public Record**
Road Frontage+/-:		Zoning:	**RES**
		Bank Owned REO:	

Water Information		Tax/Deed/Community Information	
Waterfront:	**No**	Book/Page/Deed:	**8533/86/**
Wtr Frontage Amt+/-:		Map/Block/Lot:	**140/G/91**
Waterfront Owned+/-:		Full Tax Amt/Yr:	**$4,278/2014**
Waterfront Shared+/-:		Tax ID:	**PTLD-000140-000000-G009001**

Interior Information

Room Type	Lvl	Dimensions	Room Features
Bedroom	**2**		**Closet**
Bedroom	**2**		**Closet**
Dining	**1**		**Dining Area**
Family	**1**		
Living	**1**		**Wood burning Fireplace**
Master Bedroom	**2**		**Closet**
Kitchen	**1**		**Eat In Kitchen, Pantry**

Appliances: **Dishwasher, Dryer, Microwave, Range-Electric, Refrigerator, Washer**

The interior layout of the residence is:

Living room for possible future use 1; reception area for possible future use 2.

Dining room for possible future use 1; office space for possible future use 2.

Den for possible future use 1; office space for possible future use 2.

Kitchen for possible future use 1; break area for possible future use 2.

Kitchen for possible future use 1; break area for possible future use 2.

Full bath for possible future use 1; full bath for possible future use 2.

CHEVERUS

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2nd floor bedrooms for possible future use 1; 2nd floor offices for possible future use 2.

CHEVERUS

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Exterior photos.
Back yard future use 1; social and meeting space for possible future use 2

Feature data and photos courtesy of Maine Listings website.

The following is support for possible future use 2 and illustrate current office conditions at Cheverus High School.

Campus Ministry Office shared by two people former storage room; windowless

Physical Plant Office shared by three people people former storage room; windowless; subterreaneon

Varsity Football Office shared by multiple people former storage room; windowless; subterranean.

CHEVERUS

Academic Excellence in the Jesuit Tradition

Admissions Assistant Office former auxiliary kitchen

Conclusions: After conversations with City Planning staff, we understand that **use 1** would not require any City approval as the use would continue as single family residence.

With respect to **use 2** we anticipate **no** exterior changes (change in building(s) footprint(s), landscaping, lighting, parking) to the residence other than required maintenance and upkeep (landscaping and exterior painting for example). Potential department use candidates would be Admissions and Institutional Advancement, and the President's Office. Employees would rearrange furniture as necessary, walk to work from the main campus, and utilize the existing driveway for department guest parking. We look forward to receiving a date for the Planning Board workshop **at your earliest convenience** calendar. Any questions may be addressed to:

Michael S. Komich, Business Manager (207)774-6238 ext. 29

CHEVERUS

Academic Excellence in the Jesuit Tradition

Conditional Site Review Application
Proposed future use of 235 Ocean Avenue Residence

Side view (portion of driveway & garage on campus land)

Front view (looking from Ocean Avenue)

Street view: driveway entrance on Ocean Ave.

Street view: Property line at Cheverus High School entrance drive

Street view: Corner of Ocean Ave. and Pia Road

Street view: Property line on Pia Road

Street view: Property line at Pia Road abutter

Att. D

HARRIMAN

March 12, 2016

Shukria Wiar, Planner shukriaw@portlandmaine.gov
Planning Division
City of Portland
389 Congress Street
Portland, ME 04101

Re: Cheverus High School Conditional Use Application
Portland, Maine
No. 15619
Conditional Use Application Supplemental Information - ***DRAFT***

Dear Shukria:

Thank you for the opportunity to meet with you and Rick Knowland on March 3, 2016 to discuss the Cheverus High School Conditional Use Application for the property at 235 Ocean Avenue. In light of our conversation, we are providing the following clarifying information for distribution to the Planning Board. The intent of this letter is to further expound on reasons we feel the proposed change of use does not constitute a significant physical encroachment or displacement into the adjacent neighborhood.

- Cheverus High School was approached by the prior land owner to determine the school's interest in purchasing the property. The school did not actively seek to acquire the parcel for the purpose of expanding the campus.
- The driveway and garage of the 235 Ocean Avenue property encroach onto the Cheverus High School's parcel as seen on the site survey prepared by Lewis and Wasina dated January 2, 2016.
- The 235 Ocean Avenue lot abuts only one residential property at 18 Pya Road. The remaining three sides abut Ocean Avenue, Pya Road, and the Cheverus Campus. The property is not internal to the neighborhood, but at the edge along Ocean Avenue.
- The property abuts the garage side yard of the residence at 18 Pya Road. There is a vegetated screening buffer between these two properties.
- No changes are proposed to the exterior of the structures or grounds at 235 Ocean Avenue. The property will be maintained in its current state. No signs are proposed. Any minor required interior modifications would be done in a manner that would not preclude converting the building back into a residence in the future.
- The reasons for moving administrative offices to the property are the lack of available area on the existing campus for an addition because of existing infrastructure and utilities, planned development conforming to the long term master plan, lack of available space in the existing facilities and the inadequacy of the current office locations within the current facilities.

46 HARRIMAN DRIVE
AUBURN, ME 04210
207.784.5100

123 MIDDLE STREET
PORTLAND, ME 04101
207.775.0053

ONE PERIMETER ROAD
MANCHESTER, NH 03103
603.626.1242

170 MILK STREET
BOSTON, MA 02109
617.426.5050

www.harriman.com

- The move is not being considered because of any anticipated increase in staff. It would address the current location of staff in spaces that do not have adequate environmental conditions-rooms originally designed as storage and utility spaces lacking windows and adequate ventilation.
- As seen on the enclosed colored Site Overview Plan C00.1, the layout of the floor plan does not allow for an addition to the existing facilities without blocking or disrupting educational spaces, offices, necessary components of egress, existing site utilities, parking, parent or bus drop-off locations, playfields or violating current shoreland zone setback requirements.
- The areas colored orange on the Site Overview Plan identify additions proposed in the Cheverus High School Master Plan that was developed and approved through the City of Portland Planning Board in 2000. These proposed additions carefully utilized the limited land available to accommodate a new cafeteria and kitchen and connecting corridor between the two buildings.
- We have provided existing floor plans that further illustrate the lack of any existing areas to accommodate the offices being considered for relocation.

I hope this provides helpful information to your department and the City of Portland Planning Board. We look forward to meeting with neighbors on March 15, 2016 and the Planning Board on March 22, 2016.

Sincerely,
Harriman

Mark D. Lee, AIA, LEED AP
Principal
mlee@harriman.com

ksfli

Enclosures: Colored Site Plan C01
Current Floor Plans

Cc w/encs: Michael Komich
Frank Crabtree

Att. E

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

235 Ocean Avenue conditional use application - neighborhood meeting tomorrow, March 15, 2016 @ 6pm

Michael Komich <komich@cheverus.org> Tue, Mar 15, 2016 at 7:06 PM
To: Shukria Wiar <SHUKRIAW@portlandmaine.gov>, Rick Knowland <rwk@portlandmaine.gov>
Cc: "Mark D. Lee" <mlee@harriman.com>, "Frank L.Crabtree" <fcrabtree@harriman.com>, Brian Lemay <lemay@cheverus.org>, "Fr. George Collins, SJ" <collins.george@cheverus.org>, John Mullen <mullen@cheverus.org>, Ron Joyce <joyce@cheverus.org>, Erin Tosi <tosi@cheverus.org>, Walter Pochebit <pochew@mmc.org>

Dear Shukria and Rick,

Our neighborhood meeting had one attendee. No issues of concern with our application were raised and therefore will be no supplement to our application based on the neighborhood meeting.

Attendance and phone call census of neighbors is attached.

We look forward to hearing about our agenda position for next week's public hearing.

Sincerely,

Michael S. Komich
Business Manager
CHEVERUS
Academic Excellence in the Jesuit Tradition
267 Ocean Avenue
Portland, ME 04103
(207) 774-6238 ext. 120
Fax: (207) 828-0207
komich@cheverus.org
www.cheverus.org
Coed, Grades 9-12
471 students

On Mon, Mar 14, 2016 at 2:42 PM, Michael Komich <komich@cheverus.org> wrote:
[Quoted text hidden]

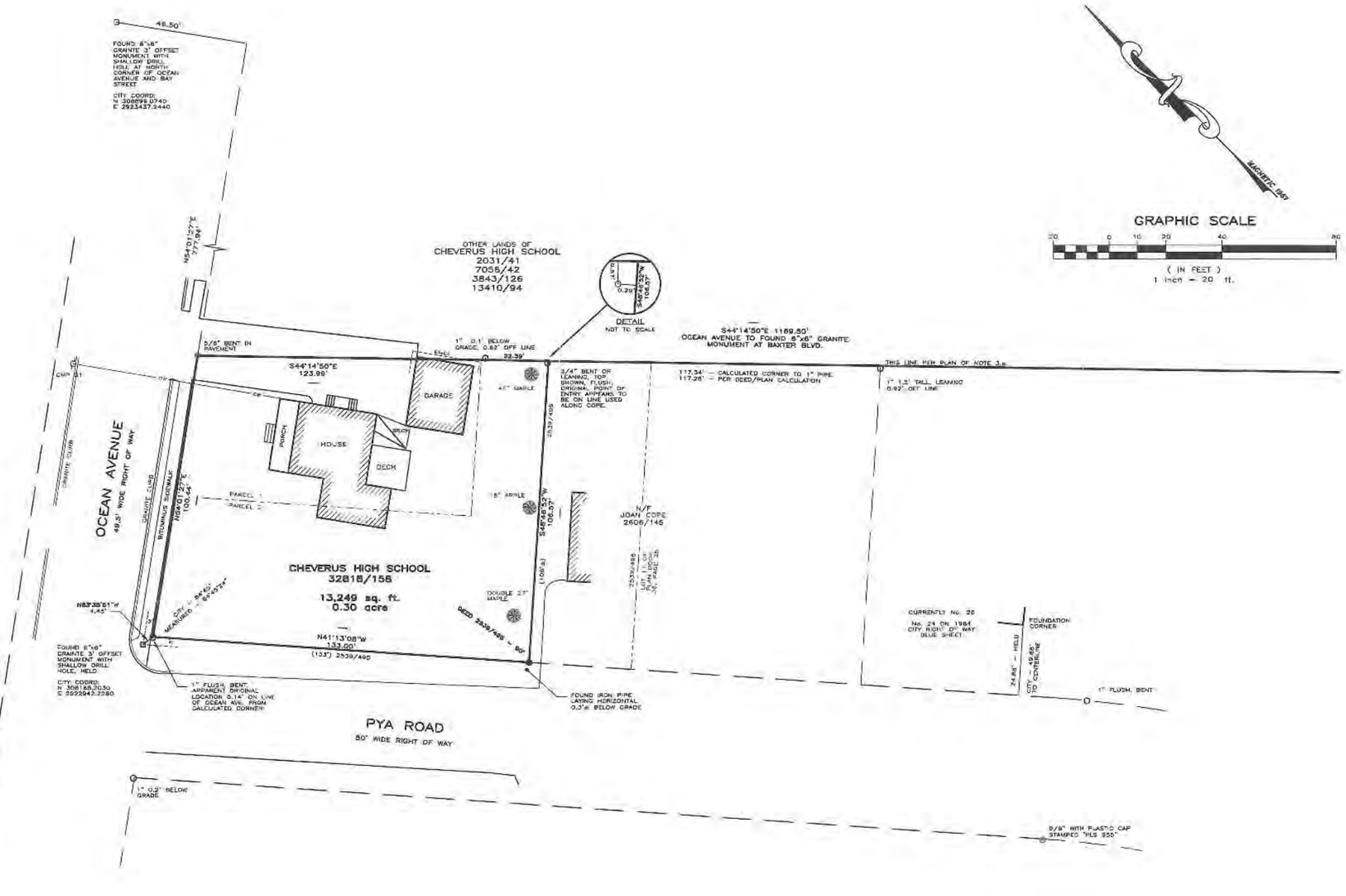
235 Ocean Ave conditional use CHS neighbor census.pdf
66K

CHEVERUS HIGH SCHOOL - NEIGHBORHOOD MEETING
ATTENDANCE LIST

MARCH 15, 2016

NAME	ADDRESS	PHONE NO.
Susan Ingram	260 Ocean Ave	
Phoned previously to Michael S. Kanich to have questions answered.		
Helen Chandler	93 Pya Road	
Susan Ward	Steckler Rd	

Plan 1



NOTES

1. THE BASIS OF BEARING IS MAGNETIC NORTH 1957 AS SHOWN ON THE PLAN OF NOTE 3.a.
2. RECORD OWNERSHIP OF THE PARCEL SURVEYED CAN BE FOUND IN THE DEED FROM TERENCE P. MACDONALD AND KAREN F. MACDONALD TO CHEVERUS HIGH SCHOOL DATED DECEMBER 21, 2015 AND RECORDED IN BOOK 32818, PAGE 158.
3. PLAN REFERENCES:
   a. STANDARD BOUNDARY SURVEY FOR CHEVERUS HIGH SCHOOL BY STEVENS, MORTON, ROSE & THOMPSON DATED FEBRUARY 6, 1987, PROJECT No.8534.1.
   b. TOPOGRAPHIC SURVEY PREPARED FOR CHEVERUS HIGH SCHOOL BY LEWIS & WASINA, INC. REVISED THROUGH APRIL 5, 2002.
   c. CITY OF PORTLAND "BLUE SHEETS" FOR OCEAN AVENUE DATED DECEMBER 15, 1973.
   d. CITY OF PORTLAND "BLUE SHEETS" FOR PYA ROAD DATED JANUARY 14, 1954.
   e. PLAN PREPARED FOR ST. IGNATIUS RESIDENCE OF THE SOCIETY OF JESUS BY H.I. & E.C. JORDAN DATED MAY 13, 1957 AND RECORDED IN PLAN BOOK 47, PAGE 42.
   f. PLOT PLAN FOR THOMAS S. HEY ET. ALS. RECORDED IN PLAN BOOK 36, PAGE 25.
4. THE PARCEL SURVEYED IS SHOWN ON THE CITY ASSESSOR'S MAP 140, BLOCK G AS LOT 9.
5. SEE DEED OF NOTE 2. FOR RESTRICTIONS.

LEGEND

●	SET 5/8 INCH REBAR WITH CAP STAMPED LEWIS & WASINA, INC. PLS 2114"
⊏	FOUND REBAR
⊟	FOUND MONUMENT
○	FOUND IRON PIPE (SIZE AS NOTED)
♀	UTILITY POLE
— — —	ABUTTER OR RIGHT-OF-WAY LINE
═══	BOUNDARY LINE
— — —	APPROX. DEED OR PARCEL LINE
N/F	NOW OR FORMERLY OWNED BY
2031/41	DEED RECORDED IN BOOK/PAGE
—OW—	OVERHEAD WIRES
( )	RECORD INFORMATION

REV.	BY	DATE	STATUS
2	BEL	1/9/2018	MINOR CHANGES, CITY COORDINATES
1	BEL	1/7/2018	SUBMITTED FOR CLIENT REVIEW

STATE OF MAINE

_____ COUNTY SS REGISTRY OF DEEDS

RECEIVED _____, 20____

AT ____ h ____ m ____ M. AND RECORDED IN

PLAN BOOK _____ PAGE _____

PLAN ATTEST _____ REGISTER

BRUCE E. LEWIS PLS 2114
LAND SURVEYOR
BRUCE E. LEWIS
2114
STATE OF MAINE
NOT VALID WITHOUT EMBOSS AND SIGNATURE

Lewis & Wasina, Inc.
PROFESSIONAL LAND SURVEYORS
11 Highmeadow Drive
Gorham, ME 04038
Tel (207) 892-0939 Fax (207) 892-0955
PO Box 515
Waterboro, ME 04087-0515
Tel (207) 329-1958 Fax (207) 247-4688

DRAWN BY: BEL
CHECKED BY: BEL
DATE: 1/2/2018
SCALE: 1"=20'
PROJECT NO. 98055
FILENAME 98055
SHEET 1 OF 1

BOUNDARY SURVEY

235 OCEAN AVENUE
ON
OCEAN AVENUE and PYA ROAD,
PORTLAND, CUMBERLAND COUNTY,
STATE OF MAINE

for record owner

CHEVERUS HIGH SCHOOL

267 Ocean Avenue
Portland, ME 04103

Plan 2

HARRIMAN

AUBURN PORTLAND MANCHESTER

CHEVERUS HIGH SCHOOL PROPERTY

235 OCEAN AVENUE
PORTLAND, MAINE

Harriman Project No.	15619

Key Plan

GRAPHIC SCALE

0 30 60 120

(IN FEET)

Issues and Revisions

Mark	Date	Description
	DATE	REVISION

PRELIMINARY
NOT FOR
CONSTRUCTION

PROGRESS SET
02-03-16

Drawing Scales

PA/PE: FLC

Drawn By: PLS

© 2016
Harriman Associates

SITE
OVERVIEW
PLAN

C00.1

HARRIMAN

AUBURN PORTLAND MANCHESTER

CHEVERUS HIGH SCHOOL PROPERTY

235 OCEAN AVENUE
PORTLAND, MAINE

Harriman Project No.	15619

Key Plan

GRAPHIC SCALE

0 30 60 120

(IN FEET)

Issues and Revisions

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Drawing Scales

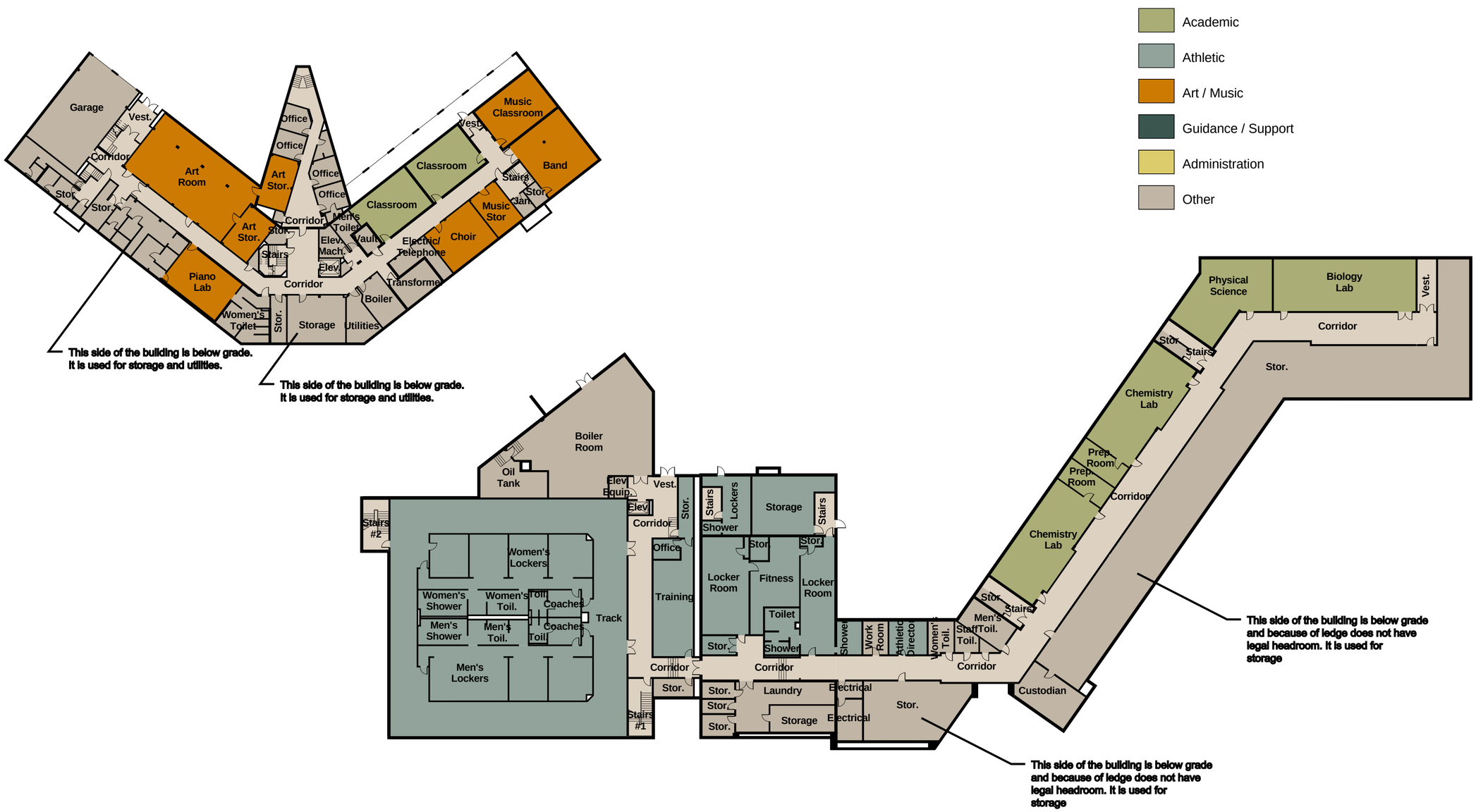
PA / PE: FLC

Drawn By: PLS

© 2016
Harriman Associates

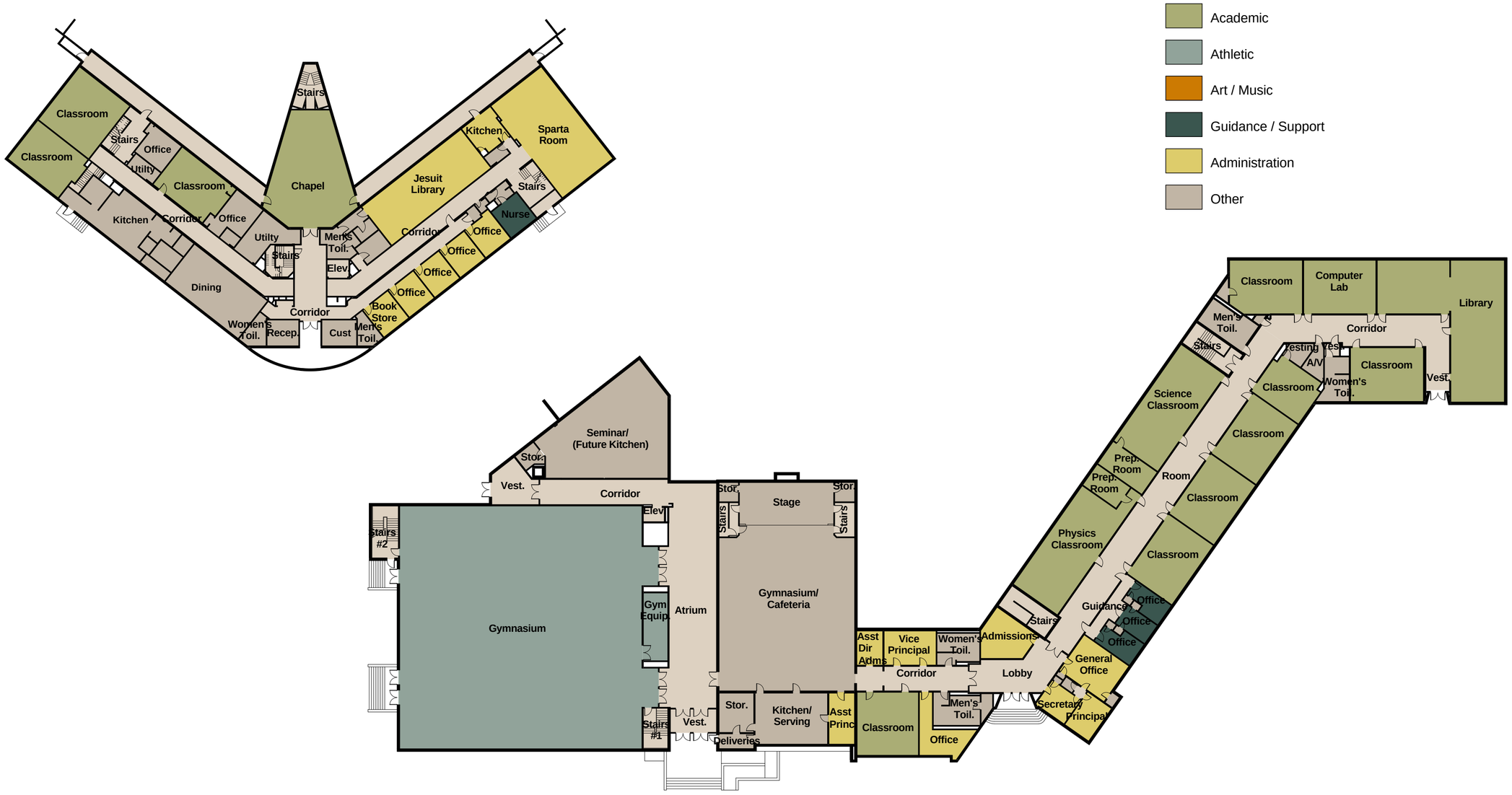
SITE
OVERVIEW
PLAN

C00.1



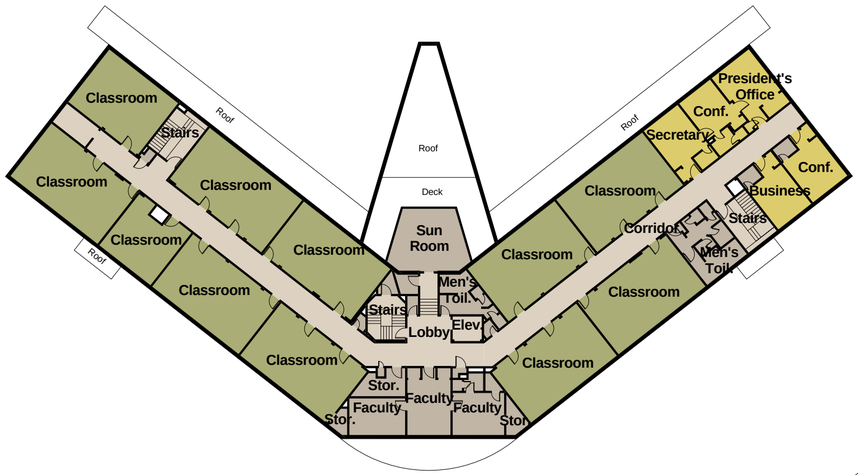
Cheverus High School
Existing Floor Plan
Basement Floor Level

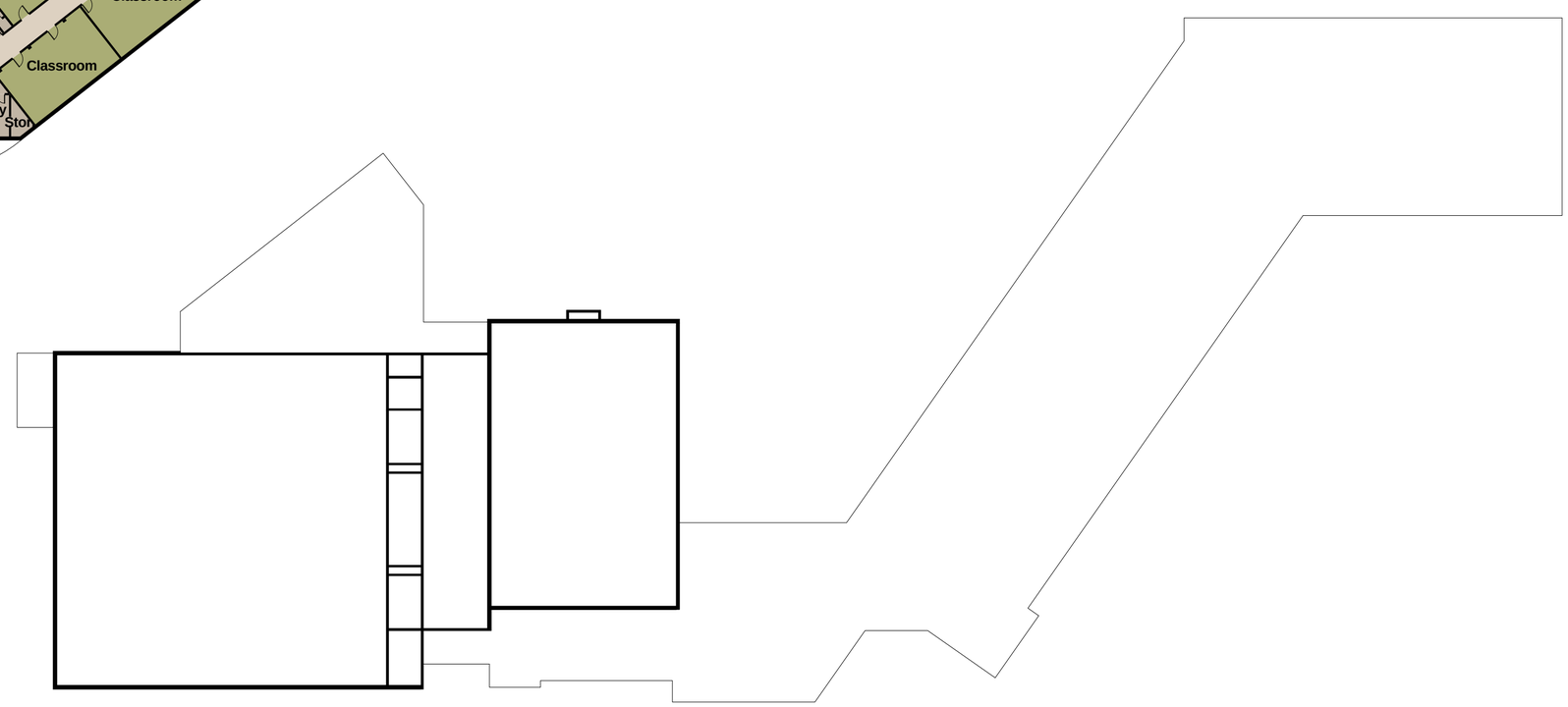
March 13, 2016



Cheverus High School
Existing Floor Plan
First Floor Level

March 13, 2016





Academic
Athletic
Art / Music
Guidance / Support
Administration
Other

Cheverus High School
Existing Floor Plan
Second Floor Level

March 13, 2016

PLANNING BOARD REPORT
PORTLAND, MAINE

4-unit Condominium Development
31 Fore Street

Level III Site Plan and Subdivision Review
Peninsula Property Development, Applicant

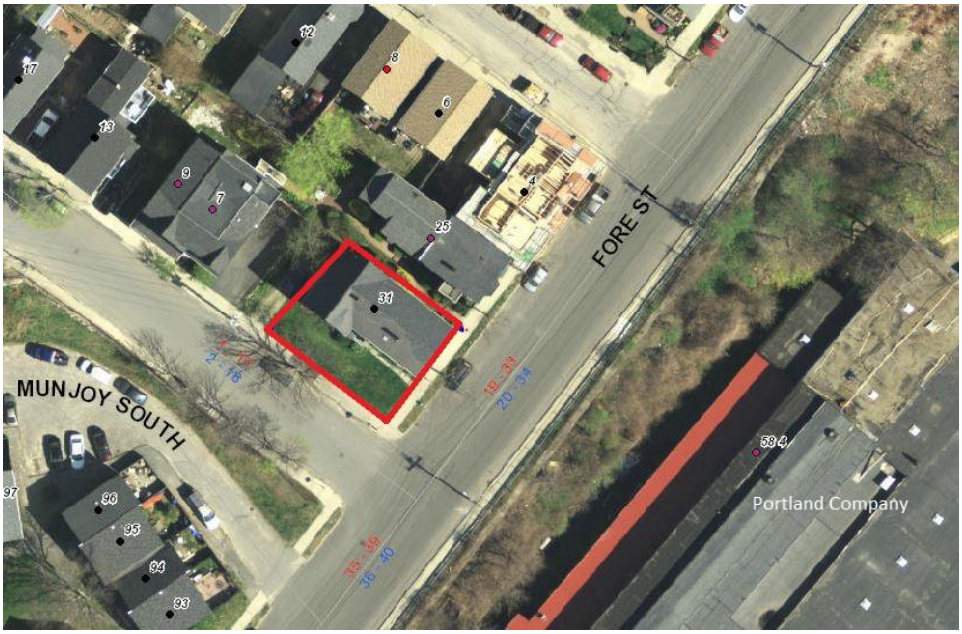
Submitted to: Portland Planning Board Date: March 18, 2016 Public Hearing Date: March 22, 2016	Prepared by: Jean Fraser, Planner CBL: 016 J026001 Project #: 2016-005

I. INTRODUCTION

Bob and Carrie LeBlanc are requesting the Planning Board consider a final Subdivision and Site Plan application for a new four-unit residential building at 31 Fore Street, at the corner of Fore Street and Waterville Street in the R-6 zone. The project was considered at a Planning Board Workshop on February 9, 2016.

The proposals comprise the demolition of the existing three-unit residential building and replacement with a new structure that includes a lower level for covered parking for 6 vehicles, stormwater treatment in a raingarden, and landscape and sidewalk improvements.

The proposal includes a mix of 1 one-bedroom, 1 two-bedroom, and 2 three-bedroom units, accessed by one set of stairs and an elevator and with entrances at both the lower (garage) level and the Fore Street (first floor) level.



A total of 115 notices were sent to property owners within 500 feet of the site and interested parties, and a legal ad was published in the *Portland Press Herald* on March 14 and 15, 2016. The project is not required to hold a Neighborhood Meeting.

Applicant: Bob and Carrie LeBlanc, Peninsula Property Development
Consultants: Will Savage, Acorn Engineering; Jason Pica, Port City Architecture; Owen Haskell, Surveyor; Tom Jewell, Attorney

Required Reviews and Waivers:

Review	***Applicable Standards***
Subdivision: Construction of new building with 4 residential dwelling units	*Section 14-497* for the division into 4 residential units.
Site Plan: Multifamily development	*Section 14-526* for the proposed multifamily residential development.

Waiver Requests to Planning Board	***Applicable Standards***
Distance of driveway from corner: The driveway is located 31.26 feet from the corner (Plan P4 and Att H) and a waiver is requested due to architectural constraints.	Technical Standard 1.7.1.7 requires *"access driveways to corner lots shall be located a minimum of 35 ft from the intersection of the projection of right-of-way lines to the center line of the driveway*". The Traffic Engineering and Dept of Public Works reviewers support a waiver of 3.74 feet based on an understanding that the driveway location is constrained by the architectural requirements (Atts 5 & 6).
Parking Drive Aisle: Waiver required for parking drive aisle that is approximately 25.75 ft wide to facilitate maneuvering within the garage (Att H).	Technical Standard 1.14 *Parking Lot and Parking Space Design* require a drive aisle of 24 feet width for 90 degree parking. The Traffic Engineering Reviewer supports this waiver (Att 6).
Street Trees: Four street trees are required and there is only room for three in the ROW.	Site Plan Standard and waiver *(Section 14-526(b)2.b(iii))*, requires one street tree per unit. The City Arborist supports the applicant planting a 4th small street tree just within the applicant's site on Waterville Street frontage (Att 7)

II. PROJECT DATA

SUBJECT	***DATA***		
Existing Zoning	R-6		
Existing Use	3 unit residential building		
Proposed Use	Residential (4 condominium units)		
Residential mix	2 three BR; 1 two BR; 1 one BR		
Parcel Size	4,068 sq ft		
	Existing	*Proposed*	*Net Change*
Impervious Surface Area	2070 sq ft	2942 sq ft	872 sq ft
Building Footprint	1590 sq ft	2457 sq ft	867 sq ft
Building Floor Area	3120 sq ft	7249 sq ft	4129 sq ft
Parking Spaces	2	6	4
Bicycle Parking Spaces	0	2 (inside) and 2 (outside in ROW)	2 (inside) and 2 (outside in ROW)
Estimated Cost of Project	$2 million		

III. EXISTING CONDITIONS

The site totals 4180 sq ft and slopes across two planes, with an approximate change in grade of 5 feet along the uphill side boundary and 9 feet between the highest (back east corner) and lowest (corner Fore and Waterville) points. The site is occupied by an existing 3 story with basement residential building of 1590 sq ft footprint dating from the1870s.

The site currently has an open aspect across Fore Street over the eastern end of 58 Fore Street (Portland Company). The area around the exsiting house is mostly lawn with shrubs along both boundaries; there is one street tree on Fore Street and one on Waterville Street, as can be seen in the photographs below.

from Waterville Street

from corner of Waterville and Fore Street

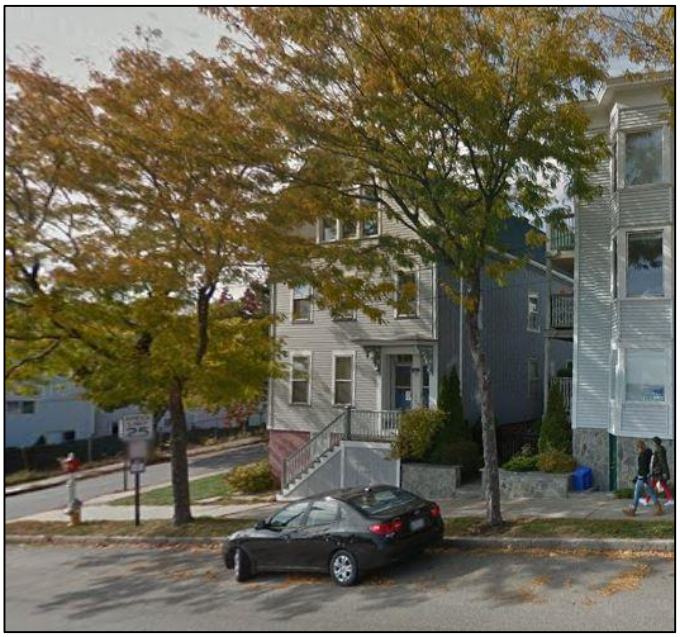
To the north on Waterville there is a relatively new (built 2005) residential builidng of 4 storys over a parking garage comprising 4 condo units.

Abutting the site to the east on Fore Street is a 3 story 3-unit condominium dating from the 1980s. This abutting building is currently 15 feet from the side of the existing building that is proposed to be demolished, separated by low planting.

Both of the abutting condo buildings have decks at all living levels that overlook the subject site.

To the west are the Munjoy South Townhouse apartments which are accessed from Fore Street.

The sidewalks along the frontage are concrete and in reasonable condition except where the existing large street tree has caused buckling. Brick is the specified sidewalk material for this area.

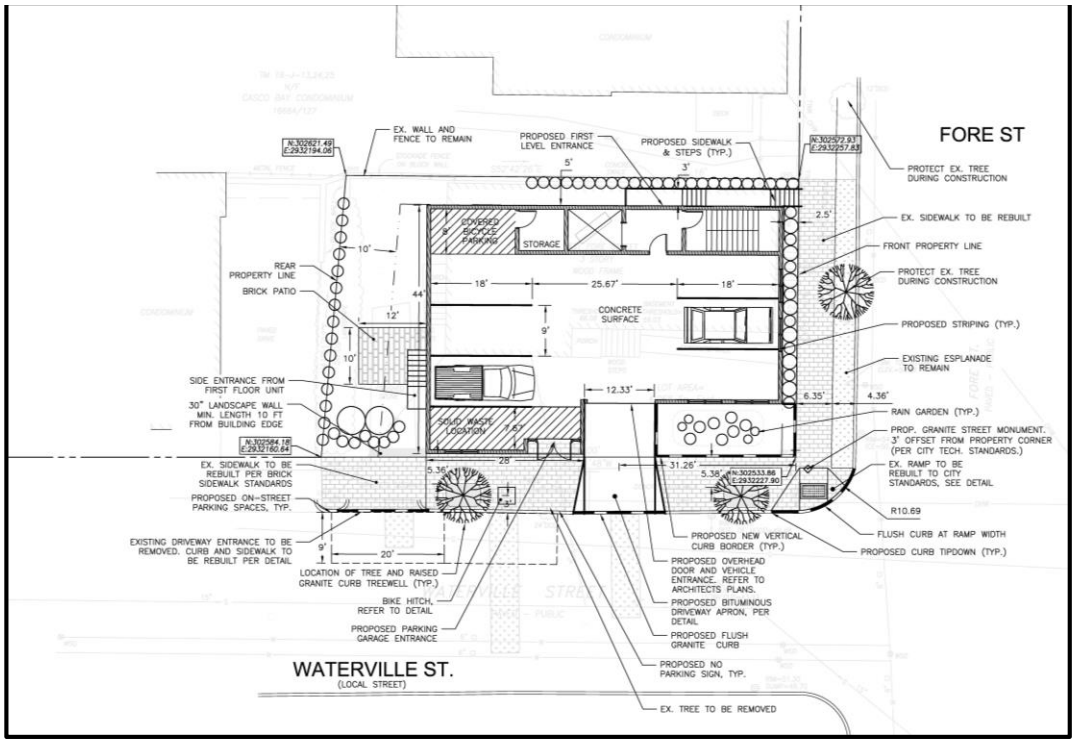


From Fore Street looking west

IV. PROPOSED DEVELOPMENT

The proposals comprise 4 residential condo units, 2 on the first floor and 1 each (3-bedroom) on the floors above (see site plan, elevations and floor plans in Plans P4., P9., and P10.). The ground floor (see plan below) is partially below ground and provides 6 parking spaces, with stair and elevator access to the floors above. The height of the building is just under 40.5 feet and there is a 5 foot stepback at 35 feet at the rear side, as required to meet the zoning dimensional requirements.

The footprint of the proposed building is about 870 sq ft larger than the existing building; it is approximately 3 feet closer to the abutting property on Waterville Street, it has been moved approximately 3 feet away from the side (uphill) property line.



Final Site Plan (Plan P4)

The building is proposed to have two entrances: one from Fore Street up steps and along the uphill side into a side door and lobby; and one from Waterville Street into a door next to the garage door. The design of these entrances has been revised so they are both large doors with a design treatment.

The entrance at the lowest (ground) level from Waterville Street has been identified by the applicant as the ADA accessible route, as it does not involve steps and leads to the elevator at the garage level.

Stormwater is routed into a raingarden where it is retained and treated before entering the Citys system.

There are three small decks at the southwest corner of the building, plus a small at-grade patio accessed via stairs from the first floor unit that does not have a deck. Landscape Plan (Plan P8) illustrates the proposed landscape improvements, including boundary planting, reconstruction of the sidewalk and existing tipdown in brick, and replacement of the existing street tree with 2 new street trees.

The proposed materials are primarily Nichiha Fiber Cement Shakes, Azak Trim on the upper levels, and masonry with cornerstone veneer stone on the lowest (garage) level (shown in elevations- Plan P10 and below).

V. PUBLIC COMMENT AND WORKSHOP DISCUSSION

The Planning Division received three public comments. PC1 is from Ms Preisser, a condo owner next door and the comments were made prior to the PB Workshop in February; no further comment has been received. The other comments are from Ms. Casale, a neighbor in Waterville Street, who is suggests that the existing street tree in Waterville Street should be retained by relocating the driveway. The issues related to this street tree are discussed below in section **XI 2**.

At the PB Workshop the Planning Board generally supported the project, and requested:

- Further explanation as to why the existing street tree on Waterville Street had to be removed;
- Clarification as to where the mechanical equipment would be located;
- That vinyl cladding products be avoided with some suggestions for other types of shakes;
- That the entrance on Fore Street be more prominent.

VI. RIGHT, TITLE, & INTEREST
The applicant has provided deeds as evidence of right, title, and interest (Attachment B).

VII. FINANCIAL & TECHNICAL CAPACITY
The applicant has submitted a letter from Gorham Savings Bank confirming financial capacity of the applicant (Att. C).

VIII. ZONING ASSESSMENT

The site is within the R-6 zone which covers most of the surrounding area except along the waterfront which is B6.

The proposals have been revised to include the stepback at 35 feet and now meet all of the dimensional standards of the R-6 zone. The stepback is required under the R-6 zoning where a building is located within 10 feet of the side boundary and 15 feet of the rear boundary.

The proposed building requires a 5 foot stepback on the side (uphill) because it is 5 feet from the property boundary. The applicant has incorporated this stepback as shown in the elevations/sections (Plan P10) and on the floor plans (Plan P9).

At the PB Workshop the applicant had shown a second set of stairs within the stepback area because proposals at that time required a second set of stairs under the IBC Building Code. The City's ordinance allows stairs and elevator towers to be above the required height in section 14-430, which states:

> Div 25. *Space and Bulk Regulations and Exceptions*):
> *14-430 (a) Roof structure. Roof structures for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, skylights, steeples, roof signs, flag poles, chimneys, smokestacks, radio or television masts, water tanks, or silos may be erected above the height limitation herein prescribed for buildings.*

The City's Zoning Administrator has confirmed that the interpretation of this ordinance provision would have allowed the second set of stairs to be located within the stepback (Attachment 9).

The applicant modified the surrounding grading (adding a retaining wall at the back along Waterville Street) which amended the grades and associated calculations (Attachment N. – grades 6 feet from building). These revised calculations confirmed that under IBC requirements the building did not need to have the second set of stairs; this is confirmed in an e-mail from the Building Code Inspector Jeanie Bourke (Attachment 8.).

Division 20 of the land use ordinance provides an exception for the off-street parking requirement for the first three units in the R-6 zone and a 1:1 requirement thereafter. The proposal for 4 units would require one parking space on site, and this is met by the provision of the 6 parking spaces in the garage

IX. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and **SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (**Section 14-496)
The applicant has submitted a draft subdivision plat (Plan P3), which is generally acceptable. The standard condition requiring the submission of a final (stamped) plat for final review has been included in the motions for the Board to consider.

The applicant has not provided drafts of the condominium documents and the submission for review and approval is included as a potential condition of approval.

X. SUBDIVISION REVIEW (14-497(a). Review Criteria)

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

1. Water, Air Pollution

The portion of the site to be developed is currently occupied by a lawn and surface parking. The proposals add 872 sq ft of additional impervious surface and the applicant proposes to detain and treat stormwater runoff with a raingarden located at the lowest point of the site at the corner of Waterville Street and Fore Street. David Senus, the city's consulting civil engineer, has reviewed this system and indicated his approval (Attachment 3.) No detrimental water or air quality impacts are anticipated.

2 & 3. Adequacy of Water Supply

The applicant has received a capacity letter from the Portland Water District (Attachment G).

4. Soil Erosion

No unreasonable soil erosion or reduction in the capacity of the land to hold water is anticipated.

5. Impacts on Existing or Proposed Highways and Public Roads

The proposal does not raise any concerns regarding the impacts to the existing street network (Attachment 6.).

6. Sanitary Sewer/Stormwater Disposal

The applicant has submitted a Final Stormwater Report and an Erosion Control Report in Attachments I and J. The proposals for the stormwater raingarden have been revised to address the Peer Engineer's earlier comments and the only issue is the location of the sewer back water valve which is proposed in the ROW (Attachment 3). A potential condition of approval addresses this minor concern.

The applicant has received the wastewater capacity letter (Attachment G).

7. Solid Waste

The proposed development includes an internal solid waste area as noted on the Site Plan (Plan P4.) and the owners will be responsible for bringing solid waste and recyclable to the curb side for collection (Attachment F).

8. Scenic Beauty

The proposals involve the removal of a mature Sweetgum street tree on Waterville Street and replacement with two new street trees. The City Arborist supports this proposal and neighbors have mixed views on its value. This is discussed in greater detail in Section **XI 2.** The utilities are proposed to be underground in compliance with subdivision requirements (Plan P5).

9. Comprehensive Plan

The plans meet multiple goals from the city's housing plan, including "encourag[ing] higher density housing for both rental and home ownership opportunities, particularly located near services, such as schools, businesses, institutions, employers, and public transportation."

10. Financial and Technical Capacity

As noted above, the applicant has submitted a letter from Gorham Savings Bank attesting to the applicant's financial capacity (Attachment C).

11. Wetland/Water Body Impacts

There are no anticipated impacts to wetlands or water bodies.

12. Groundwater Impacts

There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area

Per the city's existing flood maps, the site is not located in a flood zone.

XI. SITE PLAN REVIEW

The proposed development has 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

This small residential development is not a concern in terms of traffic except during construction, and the Traffic Engineering reviewer has requested a construction management plan for review and approval (Attachment 6). It should also be noted that the relocation of the driveway will necessitate changes in the parking regulations along the Waterville Street frontage, and the applicant is advised that this will require their support in the preparation of the City Council report materials.

b. Access and Circulation

The proposals include a relocated driveway which improves the separation from the adjacent Waterville Street property driveway but brings it to 31.26 feet from the corner of Fore/Waterville, which does not meet the 35 foot Technical Standard for corner clearance. The applicant has requested a waiver due to architectural constraints (Attachment H.) which has been supported by staff (Attachments 5 & 6). The existing driveway is proposed to be closed with a new sidewalk constructed across it (Plan P4.).

c. Pedestrian Circulation and ADA

The applicant has indicated that the garage will be the accessible route to meet ADA requirements, and has pointed out in Attachment P that the garage will be daylit and welcoming and the access will not be "inferior". This access and door have been redesigned to be as prominent as the entrance on Fore Street, which has raised a question regarding which is the main entrance and how the main entrance will be distinguished (see Att 4).

d. Public Transit Access

The proposed development is not located along a public transit route. As such, no provisions for transit access are required.

e. Parking

- Vehicle: The ordinance requirement for vehicle parking is one off-street space per unit, and in the R-6 zone parking for the first 3 units is not required. Six are being provided, which exceed the zoning requirements.
- Bicycle: The ordinance requirement is 2 spaces, which has been met by the proposal for two bike racks in the ROW near the driveway on Waterville street, and two within the garage. The rack in the ROW is acceptable subject to it meeting the City's Technical Standards and this is included in the proposed conditions of approval.

f. 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 site is largely grassed with some small plantings along the boundary with the abutting condo on Waterville Street, and dense shrub and ornamental planting on the boundary shared with the abutter on Fore Street (uphill). There is a large existing street tree in the esplanade along the Waterville frontage and a smaller but mature street tree in Fore Street.

The applicant has submitted a Landscape Plan (Plan P8.) which has added boundary treatment and details of the raingarden. The proposals remove the Sweetgum street tree in Waterville Street and replace it with two new street trees placed to accommodate the relocated driveway (Plan P4. and P8.)

A neighbor, Ms Casale, has sent photographs of the tree to be removed (PC3) and the applicant has submitted photographs as part of the explanation as to why it needs to be removed (Attachment H). The City Arborist has visited the site and further considered the issue and concludes (Attachment 7):

I have inspected the Sweetgum tree on Waterville Street. In review of the proposed plans for the project, given the building location and tree crown width, tree impact would be severe due to construction site work in both the root zone and the crown due to the proposed building wall which is much closer than existing.

The existing Honeylocust on Fore Street which is 15' east or uphill from the fire hydrant is in good condition and will require 'tree protection' during construction. This should include trunk protection and orange construction fencing around the tree rootzone area. (Condition) The next uphill tree is about 25 feet east of the existing tree and no other space along the Fore Street frontage is open for tree planting.

*There maybe room to include a smaller ornamental tree near the Waterville Street edge, recommending a tree that will provide basic greening and not compete with view corridor concerns. This could be a Magnolia, Dogwood or Sourwood tree for example. (*Attachment 7)

Staff recommend that the applicant's proposals to replace the existing street tree in Waterville Street are acceptable as shown on the submitted plans, and have suggested a condition of approval to protect the existing street tree on Fore Street as outlined by the City Arborist above.

c. *Water Quality/Storm Water Management/Erosion Control*
See above under Section VI B *Subdivision Review*.

3. Public Infrastructure and Community Safety Standards

a. *Consistency with Related Master Plans*
As noted above, the project is generally deemed consistent with related master plans.

b. *Public Safety and Fire Prevention*
Keith Gautreau, of the Fire Prevention Bureau, does not have any concerns and has noted that the second set of stairs is not required from a Fire Prevention Code viewpoint. (Att. 2).

c. *Availability and Capacity of Public Utilities*
See Attachment G and Plan P5; all utilities have been addressed adequately.

4. Site Design Standards

a. *Massing, Ventilation, and Wind Impact*
There are no anticipated impacts to ventilation or wind patterns.

b. *Shadows*
There are no anticipated impacts to publicly accessible open spaces.

c. *Snow and Ice Loading*
Three balconies are located at the back edge of the Fore Street sidewalk and there is the potential for ice and snow to fall onto the public sidewalk. These balconies are on the corner and their other side is over the raingarden, so the design should ensure that drainage and snow overflow from the balconies is directed to the raingarden side. A suggested condition of approval addresses this concern.

d. *View Corridors*
Waterville Street is not a protected view corridor.

e. *Historic Resources*
There are no historic districts or landmarks within 100 feet.

f. *Exterior Lighting*
The applicant has indicated in Attachment D that lighting is proposed to light the steps and side entrance from Fore Street. Details of the light fixtures and associated photometric information should be included in the revised designs for both entrances (as requested in relation to the design review below). A condition of approval has been suggested to require this information to ensure (given the proximity of neighbors on Fore Street) that the final proposals meet the standards and that there is no light trespass.

g. Noise and Vibration
The applicant has not submitted details of exterior heating, ventilation, and air conditioning equipment and staff suggest this should be the subject of a condition that allows for a final staff review. The Site Plan ordinance specifies that these should be at the interior of the site and away from abutting residential properties and also be screened from view from any public street and adjacent sites by structure walls, evergreen landscaping, fencing etc

h. Signage and Wayfinding
No signage or wayfinding is proposed at this time.

i. Zoning-Related Design Standards
1. R-6 Infill Development Design Principles and Standards
The applicant has submitted a narrative outlining how the proposed design addresses the R-6 design standards (Attachment L). Staff reviewed the applicant's final submitted plans and the final Design Review comments are in Attachment 4.

The applicant has addressed all of the previous design concerns except for the design of the entrances, where the comment is (Attachment 4):

> ***F-6 Main Entries:*** *The main entry is not adequately emphasized. A side entry requires indication at the street – improve the visibility of this main entrance with elements such as an extended canopy or porch toward the sidewalk. If the Waterville Street entry is to be considered the main entry, then additional emphasis should be created whether with a canopy, lighting, building signage or other method.*

The suggested condition of approval requests that the applicant confirm which entrance is the main entrance and revise this main entrance to meet the R6 Design standards as outlined in the Design Review comment.

2. Multi-family and Other Housing Types Design Standards
In addition, there are design standards that apply to all multifamily development including this proposal. These are more general standards that include design standards as well as several other standards as listed below with staff comments.

(i) ***TWO-FAMILY, SPECIAL NEEDS INDEPENDENT LIVING UNITS, MULTIPLE-FAMILY, LODGING HOUSES, BED AND BREAKFASTS, AND EMERGENCY SHELTERS:***

(1) ***STANDARDS.*** *Two-family, special needs independent living units, multiple-family, lodging houses, bed and breakfasts, and emergency shelters shall meet the following standards:*

a. Proposed structures and related site improvements shall meet the following standards:

1. *The exterior design of the proposed structures, including architectural style, facade materials, roof pitch, building form and height, window pattern and spacing, porches and entryways, cornerboard and trim details, and facade variation in projecting or recessed building elements, shall be designed to complement and enhance the nearest residential neighborhood. The design of exterior facades shall provide positive visual interest by incorporating appropriate architectural elements;*

2. *The proposed development shall respect the existing relationship of buildings to public streets. New development shall be integrated with the existing city fabric and streetscape including building placement, landscaping, lawn areas, porch and entrance areas, fencing, and other streetscape elements;*

Staff comment: The proposals have been evaluated in the context of the R-6 Design Standards (above) which cover the design elements mentioned in standards 1 and 2 in greater detail (7 pages of specific standards). Please refer to the Design Review comments in Attachment 4.

3. *Open space on the site for all two-family, special needs independent living unit, bed and breakfast and multiple-family development shall be integrated into the development site. Such open space in a special needs independent living unit or a multiple-family development shall be designed to complement and enhance the building form and development proposed on the site. Open space*

functions may include but are not limited to buffers and screening from streets and neighboring properties, yard space for residents, play areas, and planting strips along the perimeter of proposed buildings;

Staff comment: Three of the 4 new units will have balconies and the fourth unit has direct access to a patio to the rear of the building.

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas;*

Staff comment: This standard appears to be met.

5. *The scale and surface area of parking, driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets;*

Staff comment: The parking is located underneath the units and therefore is screened.

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the planning board approve the proposed 4-unit condominium development at 31 Fore Street.

XIII. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on March 22, 2016 for application 2016-005 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the planning board hearing:

1. *Distance from corner*
The planning board **finds/does not find**, based upon the consulting traffic engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard *(Section 1.14)* which requires that aisle width for right-angle parking be 24 feet per *Figure I-27*, that substantial justice and the public interest are secured with the variation in this standard, and that the variation is consistent with the intent of the ordinance. The planning board **waives/does not waive** the *Technical Manual* standard *(Section 1.14)* to allow a 27.75 foot wide aisle in the parking garage; and

2. *Parking Drive Aisle*
The planning board **finds/does not find**, based upon the consulting traffic engineer and DPW reviews, that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard 1.7.1.7 that requires "access driveways to corner lots shall be located a minimum of 35 ft from the intersection of the projection of right-of-way lines to the center line of the driveway", that substantial justice and the public interest are secured with the variation in this standard, and that the variation is consistent with the intent of the ordinance. The planning board **waives/does not waive** the *Technical Manual* standard *(Section 1.7.1.7)* to allow the access driveway to be 31.26 feet from the intersection based on an understanding that the driveway location is constrained by the architectural requirements.

3. *Street Trees*
The planning board **finds/does not find** that the applicant has demonstrated that site constraints prevent the planting of all required street trees in the right-of-way. The planning board **waives/does not waive** the site plan standard (*Section 14-526 (b) (iii)* requiring one street tree per unit for multi-family development and concludes that the applicant shall plant a fourth small "street tree" just within the applicant's site on Waterville Street frontage (species to be agreed with the City Arborist), and if it is determined (in agreement with the City Arborist) that this is not feasible, the applicant shall contribute $200 for one street tree to Portland's tree fund.

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 the public hearing on March 22, 2016 for application 2016005 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. The applicant shall finalize the subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority; and

2. The applicant shall finalize condominium documents for review and approval by Corporation Counsel, 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 March 22, 2016 for application 2016005 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:

i. That the applicant shall confirm which entrance is the main entrance and revise this main entrance to meet the R6 Design standards as outlined in the Design Review comments, and to meet the Site Lighting Standards of the Technical Manual, with the revised proposals submitted to the Planning Authority for review and approval prior to the issuance of a building permit; and

ii. That the applicant shall prepare a revised Construction Management Plan to address the comments of the Traffic Engineering reviewer Tom Errico dated 3.16.2016, for review and approval by the Planning Authority; and

iii. That the applicant shall submit plans and associated information the clarify the location and sound levels of all external heating, ventilation and other mechanical equipment and document that they meet the City's Site Plan, Zoning and Technical Standards, for review and approval by the Planning Authority; and

iv. That the applicant shall take all measures to protect the existing street tree on Fore Street as recommended in the City Arborist comments dated 3.16.2016; and

v. That in respect of the City's ROW the applicant shall:
   a. address the comments of the Department of Public Work David Margolis -Pineo dated 3.16.2016 and the comments of the Peer Engineer Dave Senus dated 3.17.2016;
   b. Ensure that the bicycle parking hitches in the ROW are designed to meet the Technical Standards; and
   c. Show that the design of the balconies will direct drainage and ice/snow so that it will not fall on the sidewalk.

vi. That the applicant shall submit a revised on-street parking layout that takes account of the relocated curb cut for review and approval by the Planning Authority prior to the issuance of a Certificate of Occupancy. It should be noted that any changes to on-street parking will require City Council action prior to the issuance of a Certificate of Occupancy, and the applicant would be required to assist in preparing council meeting materials.

ATTACHMENTS:

Attachments to the Report

1. Planner Prelim comments
2. Fire Department final comments
3. Peer Engineer Review final comments
4. Design Review final comments 3.11.2016
5. DPW final comments 3.2.2016
6. Traffic Engineering comments
7. City Arborist comments
8. Building Code Reviewer
9. Zoning Administrator determination re exemptions to height limits

Public comments

PC1 D Preisser 2.6.16
PC2 M Casale 2.9.16
PC3 M Casale March 2016

Applicant's Submittal

A. Final Cover Letter and Final Application updated 3.1.16
B. Right, Title and Interest
C. Financial Capability letter
D. Conformity with SP & Zoning Ordinance
E. Fire Department checklist
F. Solid Waste
G. Utility Capacity letters 3.1.16
H. Request for Waivers updated 3.1.16
I. Final Stormwater Report 3.1.16
J. Erosion Control Plan
K. Construction Management Plan as updated 3.1.2016
L. R-6 Narrative re R-6 Design Standards Jan 2016
M. ADA Narrative and Info Jan 2016
N. Average Grade analysis
O. Comment response letter 3.1.2016

Plans

P1. Cover Sheet, Notes and Survey (2 sheets)
P2. Survey
P3. Draft Recording Plat
P4. Site Plan
P5. Utility Layout plan
P6. Grading, Drainage and Erosion Control Plan
P7. Site, Utility and Drainage Details (5 sheets)
P8. Landscape Plan
P9. Floor Plans
P10. Elevations and sections (Amended elevation added 3.18.2016)
P11. Renderings

Att. 1

From: Jean Fraser
To: Will Savage
Date: 1/21/2016 4:18 PM
Subject: Prelim review comments 31 Fore St
Attachments: R6 Infill.doc

Hello Will

Please find below the preliminary comments, pending the receipt of additional information from your team as requested below. I do not yet have written review comments and have not been able to speak to the City Arborist regarding the street trees and landscaping, so the following comments are not comprehensive - but I am sending them now as they relate to fundamental aspects that may require some redesign.

At this stage I am not sure that the proposal meets the R6 ordinance requirements, so the timing of the PB workshop will depend on whether we can confirm compliance with the basic zoning standards as set out in 14-139, especially regarding the height and setbacks above 35 feet. The application asserts that requirements have been met but does not include information for us to document that is the case.

Preliminary Zoning comments:
A **zoning analysis** needs to be prepared to show (referring to dimensions and showing calculations) how the proposals meet the following requirements (and the plans need to show precise dimensions, grading and contours with spot heights and setback lines; accurate elevations):
Minimum Front Yard Setback for Principal and Accessory Structures: *5 ft, or the average depths of adjacent front yards*. (need to state how this has been met (based on the advice given to you by the Zoning Administrator)
Structure Stepbacks: *Portions of a structure above 35 ft shall be no closer than 10 ft from the side property line and no closer than 15 feet from the rear property line when such property line abuts a residential zone. Does not apply to side yards on side streets.* (show setback lines and show that building above 35 ft in height meets these setbacks- appears not to on the uphill side and maybe also at the rear. The standard relates to the scale and bulk of the building, so it would not matter whats inside that part of the building. All parts of the building need to meet these applicable setback line(s), which should be shown on the plan. Since there is another abutting building very near we would expect the setbacks to be met.)
Maximum Height: *Principal and attached accessory structure: 45 ft* (see note below)
Landscaped Open Space: *20%. This area shall not include parking areas or other impervious surfaces as defined in section 14-47.* (so the brick patio needs to be subtracted if impervious; please show calculations) (Plan needs to show all landscape including grass)
Height: this would be calculated by first establishing the average proposed grade at the base of the foundation/structural wall using information from the grading plan. At the moment that plan seems to indicate (using the 4 corner numbers) an average grade of around 60', while the roof is shown at 137' 4" on the elevation, giving an average height of 77'. It would be helpful if the plans and the elevation put dimensions in the same way (either as feet and inches, or as decimal feet). Also the proposed grades shown around the base of the building on the elevations are not realistic and do not match the plans - also the south west corner is shown as 2 different proposed grades on the elevations.
Elevations: As mentioned above these need to match the civil plans and show dimensions including for the garage door and for the height of the base level- this info is needed for the Design Review (see below)
(info only at this stage) **Draft Subdivision Plat:** the submitted draft needs revisions to meet the ordinance requirements and I will send review comments when available; revisions to the plat can be done at the final review stage, so this is a lower priority issue but I wanted to mention it.

Preliminary Engineering comments:
Grading information and contours are needed on the grading plan and need to be consistent as between plans/elevations;
Garage stormwater discharge (from cars) needs to be treated in some way- sumps? or could be directed outside of garage? This can be subject of further discussion.
Is patio impervious?
Show distance from access drive to corner (Fore/Waterville) and request waiver for this as it does not appear to meet Technical standards (section 1.7.1.7). (Reviewer is likely to grant the waiver)

Preliminary pedestrian access/ADA comments:
New housing construction must comply with the HUD Fair Housing and Maine Human Rights Act regarding ADA standards for accessible design. The architect should submit a narrative outlining how the proposals (including the access stairs from the sidewalk) meet these legal ADA requirements. We appreciate that the site is sloped and that a handicapped person living there who has a car would be able to access the elevator from the garage, but what about non car owners and visitors? By way of context, the City has been receiving complaints that new developments in Portland have been placing ADA pedestrian access at the rear or "back" doors rather than at the front and most convenient locations.
Also note that some bike parking needs to be outside for visitors.

Preliminary Design Comments:
There are actually two design review sections that apply- the **R6** Design Standards and the multi family design standards. I have excerpted the multifamily below (note particularly re open space), and attach the R6 Standards that I believe Barbara already sent you last week as a link.

The following comments are from a preliminary review of the proposal at 31 Fore Street under the R-6 Infill Development Design Principles & Standards:

Submittal requirements:
- material choices should be called out on the elevation
- a narrative should be provided that explains how the project fits into its context, major design decisions or considerations, and why you believe it meets the R6 design standards

Preliminary Design Comments:
Garage Level:
- Generally, there is concern about the level of articulation at the garage level of the building facing the streets. The points below are in regards to the articulation of these two facades:
- What is the material at the base of the building?
- There is a lack of articulation and visual interest - this would be improved by adding elements such as clerestory windows or increasing the landscaping.
- Consider carrying the shingle material further down the facade 6" to 12" rather than ending at the window line. This will slightly improve the composition and proportion.
- Is there a garage door? What is the material choice? Are there windows in the door?

Entrance:
- As per Standard C-1 Entrances, a side entrance is allowed but must be emphasized at the street. Improve the visibility of this main entrance with elements such as an extended canopy or porch toward the sidewalk, indication at the street with the pavers or posts/markers, lighting.

Materials:
- Why are there dark panels on the facade facing Fore Street? This requires more explanation.

The formal design review will be undertaken once we have received the additional information requested re design narrative, dimensions, materials and zoning/setbacks
It would help staff and the Board to understand how the proposals would fit into the context to have a 3-D rendering (photo-montage) from the corner of Fore/Waterville (so that the abutting buildings on both Fore and Waterville can be seen)- you don't need to send photos of nearby buildings.
Clearly the biggest issues- which need to be resolved first- are the setbacks at 35 feet and the overall height, as if these R6 zoning standards are not met then the proposals would need to be revised and re-submitted. In view of this, please do not count on any particular date for the PB workshop as my previous "aim for" date was based on the assumption that the proposals already clearly met zoning requirements. Having said that, I will do my best to move this review forward quickly once we have the information.

Please do not hesitate to contact me if you have any questions.

Jean

Extract re Multifamily Design Standards: (City of Portland Design Manual Adopted May 11, 2010)

(1) STANDARDS. Two-family, special needs independent living units, multiple-family, lodging houses, bed and breakfasts, and emergency shelters shall meet the following standards:

a. Proposed structures and related site improvements shall meet the following standards:

1. The exterior design of the proposed structures, including architectural style, facade materials, roof pitch, building form and height, window pattern and spacing, porches and entryways, cornerboard and trim details, and facade variation in projecting or recessed building elements, shall be designed to complement and enhance the nearest residential neighborhood. The design of exterior facades shall provide positive visual interest by incorporating appropriate architectural elements;
2. The proposed development shall respect the existing relationship of buildings to public streets. New development shall be integrated with the existing city fabric and streetscape including building placement, landscaping, lawn areas, porch and entrance areas, fencing, and other streetscape elements;

3. Open space on the site for all two-family, special needs independent living unit, bed and breakfast and multiple-family development shall be integrated into the development site. Such open space in a special needs independent living unit or a multiple-family development shall be designed to complement and enhance the building form and development proposed on the site. Open space functions may include but are not limited to buffers and screening from streets and neighboring properties, yard space for residents, play areas, and planting strips along the perimeter of proposed buildings;

4. The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas;

5. The scale and surface area of parking, driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets;

6. Two-family or multiple-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In no event shall any single-family dwelling in the R-5 or R-6 zone be converted in whole or in part to a lodging house.

Jean Fraser, Planner
City of Portland
874 8728

Att. 2

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2016-005

Date: 2/5/2016

Comments Submitted by: Keith Gautreau/Fire on 1/20/2016
Emergency access is real good to this site being on the corner of Fore and Waterville.

Comments Submitted by: Keith Gautreau/Fire on 1/20/2016
Hydrant located right infront of this building will be adequate water supply for this 4 unit light hazard building.

Comments Submitted by: Keith Gautreau/Fire on 2/5/2016
NFPA 101 2009 ed. Would allow a single means of egress in a sprinklered building up to 4 stories in height.

COMMITMENT & INTEGRITY
DRIVE RESULTS

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T 207.774.2112
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Att. 3

MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, PE
DATE: March 17, 2016
RE: 31 Fore Street, Final Level III Site Plan Application & Response to Comments

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Woodard & Curran has reviewed the response to comments and final Level III Site Plan Application submittal for the proposed 4-unit condominium development at 31 Fore Street in Portland, Maine. The project involves the demolition of an existing house structure and the construction of a 4-unit condominium building with ground level parking below the units.

Documents Reviewed by Woodard & Curran

- Cover Letter with additional appended materials for Final Level III Site Plan Application, dated March 1, 2016, prepared by Acorn Engineering, Inc. for Peninsula Property Development, LLC.
- Response to comments letter dated March 1, 2016, prepared by Acorn Engineering, Inc. for Peninsula Property Development, LLC.
- Engineering Plans, Sheets C-1, C-2, EX, C-10, L1, C-20, C-30, C-40, C41, C-42, C-43, C-44, REV dated March 1, 2016 & March 7, 2016, prepared by Acorn Engineering, Inc. for Peninsula Property Development, LLC.

Comments

1. The sewer back water valve is shown within the City Right-of-Way, which is not standard practice for the City of Portland. The location of this valve will need to be reviewed by the Department of Public Works. The valve is located within the driveway of the proposed building; however the detail for the valve riser does not appear to be designed to receive vehicle loads.
2. All other review comments from the Woodard & Curran memorandum dated January 25, 2016 have been adequately addressed.

Planning and Urban Development Department
Planning Division

Subject: R-6 Small Infill Design Review – 31 Fore Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Friday, March 11, 2016

A design review according to the *City of Portland Design Manual* Standards was performed for the proposed new construction of a multi-family dwelling at 31 Fore Street. The review was performed by Caitlin Cameron, Urban Designer, Jean Fraser, Planner, and Shukria Wiar, Planner, all within the Planning Division of the Department of Planning & Urban Development. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual).

Design Review Criteria:
The project was reviewed with the Alternative Design Review which has the following criteria:

A. Proposed design is consistent with all of the Principle Statements
B. The majority of the Standards within each Principle are met
C. The guiding principle for new construction under the alternative design review is to be compatible with the surrounding buildings in a two-block radius in terms of size, scale, materials, and siting, as well as the general character of the established neighborhood, thus Standards A-1 through A-3 shall be met.
D. The design plan is prepared by an architect registered in the State of Maine.

Design Review Comments *(red text denotes principles or standards that are not met)**:***

Principle A Overall Context –Met – see below.

- *A-1 Scale and Form:* The scale the project is larger than most buildings on this small street, but the height is three stories and does not overshadow the neighboring 2.5 or 3 story residential buildings. The form is defined by rectilinear masses in keeping with typical multifamily buildings in the neighborhood, the roof line is flat with expressed cornice lines. On Waterville Street, the building length is mitigated by breaking it into two masses.
- *A-2 Composition of Principal Facades:* The building overall takes its cues from the surrounding forms, materials, and façade composition but combines them in a contemporary way. The composition of the Fore Street façade is generally well balanced and provides much visual interest. As noted above, the overall composition of the facades meets the standard in terms of rhythm, size, orientation, and proportion of window and door openings except for the garage level which is lacking articulation.
- *A-3 Relationship to the Street:* The building placement is consistent with the spacing of the residential fabric on Fore and Waterville Streets. The ground floor is raised

consistent with residential development patterns. The street wall is maintained except right at the corner where the building is slightly setback but this pattern is consistent with the previous residential building on-site.

Principle B Massing – Met – The roof lines and building forms are a contemporary version of the traditional building character of the neighborhood; all other aspects of the building reflect the principle and the majority of the Standards are met by the proposed design.

- *B-1 Massing:* The proposed mass is wider on the street than the typical building context but the composition of the façade, the front yard setback, and the L-shaped massing mitigate the scale at the corner. The building placement and massing is similar to the existing residential building on-site.
- *B-2 Roof Forms:* The proposed roof form is flat – most multi-family buildings in the context have a flat roof with an overhang.
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear main roof form.
- *B-4 Roof Pitch:* The roof is flat which is found in the context.
- *B-5 Façade Articulation:* The project employs a canopy at the entry (but not at the façade) and balconies.
- *B-6 Garages:* The garage door is on the side façade, standard does not apply.

Principle C Orientation to the Street – Met– The project appropriately reflects the private/public relationship of residential buildings in this neighborhood except for the position and visibility of the main entrance.

- ***C-1 Entrances:*** It is not clear which of the two entries is considered the main entry – indicate which entry will be the main entry and then make that entry comply with the standards. *Emphasize and orient the main entrance to the street. The main entrance of the structure shall either face the street . . . or be located on the side and be accessed by a covered porch that extends to the front of the building, at the primary street frontage.*
- *C-2 Visual Privacy:* Not applicable
- *C-3 Transition Spaces:* The project uses a side entry, canopy, and a vestibule for transition space.

Principle D Proportion and Scale – Met – The proportion and scale of the building overall are harmonious and human-scaled.

- *D-1 Windows:* The majority of windows are rectangular with a vertical proportion.
- *D-2 Fenestration:* The project appears to meet the 12% fenestration requirement and appropriately scaled to the massing of the building.
- ***D-3 Porches:*** The balconies appear to meet the standard (though dimensions are not provided in the drawing). If the side entry is to be considered the main entry, then the porch much be designed to meet the standard C-1 above as well as the dimensional standards of D-3 (minimum area of 48 square feet, at least 6 feet deep).

Principle E Balance – Met – The building façade composition creates a sense of balance with good use of overall and local symmetry and articulation of façade materials.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.

- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation – Met – Based on the information given, the project employs visually interesting and well composed facades. Improvement could be made at the garage level.

- *F-1 Articulation:* The trim and window details and cornices create shadow lines. The shingle material and panel seams will also provide texture and visual interest. Balconies facing the streets also provide articulation with changes in plane and railing details. Windows were added to the garage level.
- *F-2 Window Types:* Two window types are used, are of the same "family," and have consistent detailing.
- *F-3 Visual Cohesion:* The visual cohesion of the façade is good.
- *F-4 Delineation between Floors:* The windows, balconies, and material changes delineate the floors.
- ***F-5 Porches, etc.:*** There is no issue with obscuring architectural features – if the side entry is the main entry then the entry needs to become more of an architectural feature, especially to make it visible from the street.
- ***F-6 Main Entries:*** The main entry is not adequately emphasized. A side entry requires indication at the street – improve the visibility of this main entrance with elements such as an extended canopy or porch toward the sidewalk. If the Waterville Street entry is to be considered the main entry, then additional emphasis should be created whether with a canopy, lighting, building signage or other method.
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; trim is provided at the windows; the panels and corner trim boards add texture to the façade; balconies provide planer offsets; the cornice is pronounced.

Principle G Materials – Met – The material choices reference traditional building materials.

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The main mass uses shingle and composite trim in reference to this context. Masonry is used at the base of the building.
- *G-2 Material and Façade Design:* The materials for the upper residential floors are appropriately placed. The basement level uses a masonry material, appropriate for the base of the building.
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* Two window types are used.
- *G-5 Patios and Plazas:* Not applicable.

Att. 5

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

31 Fore St - Final Review Comments

1 message

David Margolis-Pineo <dmp@portlandmaine.gov> Wed, Mar 16, 2016 at 3:58 PM
To: Jean Fraser <jf@portlandmaine.gov>, Barbara Barhydt <bab@portlandmaine.gov>

March 16, 2016

Memo To: Jean Fraser

Barbara Barhydt

From: David Margolis-Pineo

Re: Final Review Comments for 31 Fore St. – Proposed Four Unit Building

1. Add State Plane Coordinates for the property corners and three foot offset monument to be set.

Done

2. Show the monument to be set on the Site Plan in addition to the Subdivision Plat.

Done

3. The proposed 12'-4" wide driveway on Waterville St. has an approximate 31' separation from the street corner as measured from the center of the drive to the street right of way (corner) of Fore St. Code requires 35'. Please try to make up the additional four feet by reducing the drive cut to 12', reduce the aisle width from 25'-8" to 24' and incorporate compact parking spaces (8' X 15') in an innovative manner.

The applicant is request an approximate 3'-9" waiver of the required 35' driveway setback from the Fore St intersection. This Department is supportive of that waiver request.

4. The recording Plat is not stamped by a profession surveyor as required. Please submit stamped Plat.

5. Assure that a note is on the plan set stating: "All work within the street right of way shall meet City of Portland Technical Standards."

This Department has no further comments.

--

David Margolisâ€žPineo
Deputy City Engineer
Department of Public Services
55 Portland St.
Portland, ME 04101
Office 207â€ž874â€ž8850
Fax 207â€ž874â€ž8852
Cell 207â€ž400â€ž6695
dmp@portlandmaine.gov

Att. 6

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

31 Fore Street - Final Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com> Wed, Mar 16, 2016 at 4:17 PM
To: Jean Fraser <JF@portlandmaine.gov>
Cc: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Jeff Tarling <JST@portlandmaine.gov>

Jean – The following represents a status update of my preliminary review and represents my final comments.

- The proposed project does not meet City standards as it relates to corner clearance. City standards require 35 feet of clearance, and the project will be providing approximately 31 feet of clearance. Given that the project is providing a driveway on the lower volume street (not on Fore Street), providing increased separation with a nearby driveway, and site design factors, I find the driveway location to be acceptable and I support a waiver from City standards.

Status: I continue to support a waiver given site conditions.

- The aisle width for the parking lot is slightly wider than City standards. I support a waiver from City standards.

Status: I have no further comment.

- The applicant shall provide a construction management plan for review and approval.

Status: Additional detail on the construction plan is required, particularly as it relates to potential sidewalk closures and contractor parking. I suggest that this be a condition of approval with a plan being submitted for review and approval prior to issuance of any City permits.

- On-street parking regulations appear to require changes with the project and will require City Council action. This comment is intended to notify the applicant of this requirement and will need to support City staff in preparation of the City Council packet.

Status: I have no further comment.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL T.Y. Lin International

12 Northbrook Drive

Falmouth, ME 04105

207.781.4721 (main)

207.347.4354 (direct)

207.400.0719 (mobile)

207.781.4753 (fax)

thomas.errico@tylin.com

Visit us online at www.tylin.com

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"One Vision, One Company"

Please consider the environment before printing.

Att. 7

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Fore Street

1 message

Jeff Tarling <jst@portlandmaine.gov> Wed, Mar 16, 2016 at 4:54 PM
To: Jean Fraser <jf@portlandmaine.gov>

Jean -

I have inspected the Sweetgum tree on Waterville Street. In review of the proposed plans for the project, given the building location and tree crown width, tree impact would be severe due to
construction site work inj both the root zone and the crown due to the proposed building wall which is much closer then existing.

The existing Honeylocust on Fore Street which is 15' east or uphill from the fire hydrant is in good condition and will require 'tree protection' during construction. This should include trunk protection and orange construction fencing around the tree rootzone area. (Condition) The next uphill tree is about 25 feet east of the existing tree and no other space along the Fore Street frontage is open for tree planting.

Landscape Plan - I couldn't find the plan on E Plan !

There maybe room to include a smaller ornamental tree near the Waterville Street edge, recommending a tree that will provide basic greening and not compete with view corridor concerns. This could be a Magnolia, Dogwood or Sourwood tree for example.

Thanks

Jeff

--
Jeff Tarling
Portland Public Services â€ž City Arborist
55 Portland Street
Portland, ME. 04101
(207) 874.8820
jst@portlandmaine.gov

From: Jeff Tarling
To: Jean Fraser
CC: David Margolis-Pineo
Date: 2/4/2016 3:47 PM
Subject: 32 Fore Street

Jean -

In review of the proposed 31 Fore Street project offer the following recommendations:

Street trees - The two new street trees proposed for Waterville Street should be 'Autumn Gold' Ginkgo 2" caliper, planted in 4 x 7' tree cut outs in the walk. Exact tree locations should match the 'in-between' spaces for any on-street parking to help avoid door openings into the tree trunk.

The street tree along Fore Street should be protected during construction, any broken branches damaged should be pruned as part of the project.

Landscape area - The area North or uphill of the project between the existing residential unit should receive landscape treatment. This should be in the form of trees / shrubs and ground treatment options of 'lawn' or 'groundcover'. The same for the space between the building and the next door unit on Fore Street. Vegetated buffer similar to existing should be considered for the proposed project.

Rain Garden - Specific details on the rain garden are requested, if the project is to qualify for 'Stormwater' credits the project should follow Portland Water Resources 'rain garden' guidelines.

Thanks,

Jeff Tarling

Att. 8

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Re: 31 Fore Street - Average Grade

Jeanie Bourke <jmb@portlandmaine.gov> Mon, Mar 7, 2016 at 3:05 PM
To: William Savage <wsavage@acorn-engineering.com>
Cc: Olivia Dawson <odawson@acorn-engineering.com>, "robertleblanc1@me.com" <robertleblanc1@me.com>, "jason@portcityarch.com" <jason@portcityarch.com>, Jean Fraser <JF@portlandmaine.gov>

Hi Will,

Thank you for submitting the updated grade changes for review. Based on the new calculations that modify the grading around the building, either to the established property line or 6' perimeter distance, it appears the first level will not be considered a story above grade plane. As I understand, the building will be 3 stories above this level and could then be designed to comply with all of the requirements of a single exit building for an R-2 residential apartment occupancy.

Please be sure to submit this information along with the elevation drawings with the building permit application for review.

Let me know if I can be of further assistance.

Best,
Jeanie

Jeanie Bourke
Code Enforcement Officer/Plan Reviewer

City of Portland
Planning & Urban Development Dept./ Inspections Division
389 Congress St. Rm 315
Portland, ME 04101
jmb@portlandmaine.gov
(207)874-8715

On Mon, Mar 7, 2016 at 10:53 AM, William Savage <wsavage@acorn-engineering.com> wrote:

> Hi Jeanie,
>
> For the prior submissions the design team's average grade determination was used at the exterior of the building, we have now updated the calculations using the more conservative method as outlined below. When applied the average exceeded 6ft. As such we have revised the Grading Plans to once again establish the grade plane to within the maximum height of 6 ft. This was accomplished by some minor grade change (3") to the rain garden, rear property line corner and the addition of a 30" landscape wall at the uphill corner on Waterville. Overall the grade changes help blend the site into the existing grades. Please refer to the updated plan with calculations.
>
> I will send along the revised plans to Jean.

Att. 9

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

31 Fore Street - Section 14-430

1 message

Ann Machado <amachado@portlandmaine.gov> Wed, Mar 16, 2016 at 10:14 AM
To: Jean Fraser <jf@portlandmaine.gov>

Jean -

Section 14-430(a) of the Land Use Ordinance states the following:

Sec. 14-430. Height limits.
(a) *Roof Structure*. Roof structures for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, skylights, steeples, roof signs, flag poles, chimneys, smokestacks, radio or television masts, water tanks, or silos may be erected above the height limitation herein prescribed for buildings. Roof-mounted wind energy systems shall not be considered to be roof structures for the purposes of Article X, Alternative Energy.

In the R-6 Residential Zone, section 14-139 states that the maximum allowable height for principal structures is 45 feet. Section 14-430(a) allows enclosed structures that house stairs to exceed the 45 foot maximum height restriction. The area of the enclosed stair structure should be the minimum required to meet the building and life safety codes. It should not contain habitable space.

Section 14-139 also requires structure stepbacks for "portions of a structure above 35 feet". Using section 14-430(a), enclosed structures that house stairs do not have to meet the structure stepbacks and can be above 35 feet.

Ann Machado
Zoning Administrator
Permitting and Inspections Department
City of Portland
(207) 874-8709

Att. A

A C O R N
ENGINEERING, INC.

Jean Fraser -Planner
Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

March 1, 2016

Subject: Final Site Plan and Subdivision Application
Redevelopment of 31 Fore Street - Portland, Maine

Dear Jean Fraser,

On behalf of Peninsula Property Development, LLC, we are pleased to submit the accompanying package of submission materials related to the proposed 4-unit condominium development at 31 Fore Street. This submission package is intended to meet the City's Final Submission Requirements as outlined in the Level III Application procedures.

Accompanying this cover letter are the following materials:

- Final Site Plan Application
- *Comment Response Letter to City Comments*
- *Updated* Architectural Renderings
- Section 1: Title, Right and Interest
- Section 2: Technical and Financial Capacity
- Section 3: *Updated* Construction Management Plan
- Section 4: *Updated* Stormwater Management Plan
- Section 5: Erosion and Sedimentation Control Plan
- Section 6: *Updated* Utilities
- Section 7: Solid Waste Disposal
- Section 8: Fire Safety
- Section 9: Conformity with Applicable Zoning Requirements
- Section 10: *Updated* Request for Waivers
- Section 11: Summary of Written Easements
- Civil Plan Set, Dated 3/1/16
    - Existing Conditions Survey, Dated 2/16/16
    - Landscape Plan, Dated 3/1/16

Please find one (1) hard copy of the application materials including one set each of 11x17 and full size plans, along with a CD containing PDF files for all submitted materials. 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.

Portland, Maine | Yes. Life's good here.

Jeff Levine, AICP, Director
Planning & Urban Development Department

Electronic Signature and Fee Payment Confirmation

Notice: Your electronic signature is considered a legal signature per state law.

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. You are also signifying your intent on paying your fees by the opportunities below.

I, the undersigned, intend and acknowledge that no Site Plan or Historic Preservation Applications can be reviewed until payment of appropriate application fees are ***paid in full*** to the Inspections Office, City of Portland Maine by method noted below:

☐ Within 24-48 hours, once my complete application and corresponding paperwork has been electronically delivered, I intend to **call the Inspections Office** at 207-874-8703 and speak to an administrative representative and provide a credit/debit card over the phone.

☐ Within 24-48 hours, once my application and corresponding paperwork has been electronically delivered, I intend to **call the Inspections Office** at 207-874-8703 and speak to an administrative representative and provide a credit/debit card over the phone.

☒ I intend to deliver a payment method through the U.S. Postal Service mail once my application paperwork has been electronically delivered.

Applicant Signature: _____ Date: 1/5/15

I have provided digital copies and sent them on: _____ Date: 1/5/15

NOTE: All electronic paperwork must be delivered to buildinginspections@portlandmaine.gov or by physical means i.e. a thumb drive or CD to the Inspections Office, City Hall, 3rd Floor, Room 315.

389 Congress Street * Portland Maine 04101-3509 * Phone: (207) 874-8703 * Fax: (207) 874-8716
http://www.portlandmaine.gov/planning/buildinsp.asp * E-Mail: buildinginspections@portlandmaine.gov

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
(207) 874-8719

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

Updated: October 6, 2015

PROJECT NAME: 31 Fore Street Redevelopment

PROPOSED DEVELOPMENT ADDRESS:

31 Fore Street

PROJECT DESCRIPTION:

The urban infill development will include the removal of the existing building and construction of a 4-unit building with parking located below the building.

CHART/BLOCK/LOT: 16-J-26

PRELIMINARY PLAN 1/5/16 (date)
FINAL PLAN 3/1/16 (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Bob & Carrie LeBlanc Business Name, if applicable: Peninsula Property Development Address: 59 Moody Street City/State : Portland, Maine Zip Code: 04101	**Applicant Contact Information** Work # Home# Cell # (207) 776-0913 Fax# e-mail: robertleblanc1@me.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 Address: 158 Danforth Street City/State : Portland, Maine Zip Code: 04102	**Agent/Representative Contact information** Work # (207) 775-2655 Cell # (207) 317-1884 e-mail: wsavage@acorn-engineering.com
Billing Information Name: Peninsula Property Development Address: 59 Moody Street City/State : Portland, Maine Zip Code: 04101	**Billing Information** Work # Cell # (207) 776-0913 Fax# e-mail: robertleblanc1@me.com

Engineer	Engineer Contact Information
Name: Acorn Engineering, Inc Will Savage Address: 158 Danforth Street City/State : Portland, Maine Zip Code: 04102	Work # (207) 775-2655 Cell # (207) 317-1884 Fax# e-mail: wsavage@acorn-engineering.com
Surveyor	**Surveyor Contact Information**
Name: Owen Haskell Address: 390 U.S. Route 1 - Unit 10 City/State : Falmouth, Maine Zip Code: 04105	Work # (207) 774-0424 Cell # Fax# e-mail: ebrewer@owenhaskell.com
Architect	**Architect Contact Information**
Name: Port City Architecture Andrew Hyland Address: 65 Newbury Street City/State : Portland, Maine Zip Code: 04101	Work # (20) 761-9000 Cell # Fax# e-mail: andy@portcityarch.com
Attorney	**Attorney Contact Information**
Name: Tom Jewell Address: 477 Congress Street City/State : Portland, Maine Zip Code: 04101	Work # (207) 774-6665 Cell # Fax# e-mail: tjewell@jewellbulder.com

APPLICATION FEES:

Check all reviews that apply. (Payment may be made by Credit Card, Cash or Check payable to the City of Portland.)

Level III Development (check applicable reviews)

_X_ Less than 50,000 sq. ft. ($500.00)
___ 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 ($40.00 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.

Other Reviews (check applicable reviews)

___ Traffic Movement ($1,000)
_X_ Stormwater Quality ($250)
_X_ Subdivisions ($500 + $25/lot)
# of Lots ___ x $25/lot = _____
___ Site Location ($3,000, 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

APPLICATION SUBMISSION:

1. All site plans and written application materials must be submitted electronically on a CD or thumb drive with each plan and each document submitted as separate files. Naming conventions for the individual files can be found on the **Electronic Plan and Document Submittal** page of the City's website at http://me-portland.civicplus.com/764/Electronic-Plan-and-Document-Submittal

2. **In addition, one (1) paper set of the plans (full size), one (1) paper set of plans (11 x 17), paper copy of written materials, and the application fee must be submitted to the Building Inspections Office to start the review process.**

The application must be complete, including but not limited to the contact information, project data, application checklists, wastewater capacity, plan for fire department review, and applicant signature. The submissions shall include one (1) paper packet with folded plans containing the following materials:

1. **One (1) full size site plans** that must be **folded.**
2. One (1) copy of all written materials or as follows, unless otherwise noted:
   a. Application form that is completed and signed.
   b. Cover letter stating the nature of the project.
   c. All Written Submittals (Sec. 14-525 2. (c), including evidence of right, title and interest.
3. A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet.
4. Plans and maps based upon the boundary survey and containing the information found in the attached sample plan checklist.
5. One (1) set of plans reduced to 11 x 17.

Please refer to the application checklist (attached) for a detailed list of submission requirements.

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 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:
	1/5/16

Updated: October 6, 2015

PROJECT DATA

The following information is required where applicable, in order to complete the application.

Total Area of Site	4,068 sq. ft.
Proposed Total Disturbed Area of the Site	4,068 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)	2,070 sq. ft.
Impervious Area (Total Proposed)	2,942 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	1,590 sq. ft.
Building Footprint (Total Proposed)	2,457 sq. ft.
Building Floor Area (Total Existing)	3,120 sq. ft.
Building Floor Area (Total Proposed)	7,249 sq. ft.
Zoning	
Existing	R-6
Proposed, if applicable	
Land Use	
Existing	Multi-Family
Proposed	Multi-Family
Residential, If applicable	
# of Residential Units (Total Existing)	3-units
# of Residential Units (Total Proposed)	4-units
# of Lots (Total Proposed)	1 Lot
# of Affordable Housing Units (Total Proposed)	Market Rate
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	
# of One-Bedroom Units (Total Proposed)	One
# of Two-Bedroom Units (Total Proposed)	One
# of Three-Bedroom Units (Total Proposed)	Two
Parking Spaces	
# of Parking Spaces (Total Existing)	Two
# of Parking Spaces (Total Proposed)	Six
# of Handicapped Spaces (Total Proposed)	N/A
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	None
# of Bicycle Spaces (Total Proposed)	Four (Two Internal Two External)
Estimated Cost of Project	2.0 Million

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.
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;	
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;	
N/A		Location of all snow storage areas and/or a snow removal plan;	
N/A		A traffic control plan as detailed in Section 1 of the Technical Manual;	
X		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.

Att. B

Doc#: 46188 Bk:32563 Pg: 21

WARRANTY DEED
Statutory Short Form

KNOW ALL BY THESE PRESENTS That **I** Brian R. Burwell of Freeport, Cumberland County, State of Maine for consideration paid, grant **to** Peninsula Property Development LLC, a Maine Limited Liability Company whose mailing address is 71 West Street, Portland, ME 04102 a thirty percent interest (30%) and 31 Fore Street, LLC a Maine Limited Liability Company whose mailing address is 71 West Street, Portland, ME 04102, a seventy percent interest (70%) as Tenants in Common, with Warranty Covenants, the real property in the City of Portland, County of Cumberland and State of Maine, more particularly described as follows:

MAINE REAL ESTATE TAX PAID

A certain lot or parcel of land with the buildings thereon situated in Portland, County of Cumberland and State of Maine, bounded and described as follows: Beginning at the northerly corner of Fore and Waterville Streets and running thence northwesterly by the northerly bounds of Waterville Street eighty four (84) feet to land conveyed to Owen Gallagher by Patrick Gormley by deed dated September 7, 1866 and recorded in the Cumberland County Registry of Deeds in Book 347, Page 234; thence northeasterly by said land of Gallagher fifty three (53) feet to land formerly of John Sinclair; thence southeasterly by said land to Fore Street; thence southwesterly by said Fore Street to the point of beginning.

Reference is hereby made to a deed recorded in the Cumberland County Registry of Deeds at Book 4469, Page 177.

WITNESS my hand and seal this August 28, 2015.

Witness:

Witness to All

Brian R. Burwell

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. August 28, 2015

Personally appeared on the above date the above-named Brian R. Burwell, and acknowledged the foregoing to be his free act and deed.

Before me,

~~Notary Public~~/Attorney at Law
Print:

Received
Recorded Register of Deeds
Sep 02,2015 01:11:18P
Cumberland County
Nancy A. Lane

11. Summary of Written Easements

- Existing Easements – The Existing Conditions Plan developed by Owen Haskell, Inc. did not note the presence of any existing easements.

- Proposed Easements – No temporary or permanent easements are anticipated during or after construction. The development team is proposing to use the existing foundation wall during construction adjacent to uphill abutter to mitigate the need for a temporary construction easement. The structural engineer has developed a method to reinforce the existing foundation wall during construction of the proposed building foundation. Please refer to the construction management company.

Att. C

Gorham
SAVINGS BANK

December 28, 2015

City of Portland
Planning Division 4th Floor
389 Congress Street
Portland, Maine 04101

RE: Peninsula Property Development, Robert LeBlanc President

To Whom it May Concern:

Robert LeBlanc (Peninsula Property Development) has been a great customer of Gorham Savings Bank since October of 2012. To the best of our knowledge Peninsula Property Development has the adequate experience and financial ability to develop the proposed project located at 31 Fore Street, Portland, Maine.

Should you need further information or clarification, please contact me at (207) 221-8428.

Thank you.

Sincerely,

David N. Moravick
Vice President – Commercial Services

9. 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 development will increase the existing non-conforming separation between driveways to a conforming separation. In order to meet the front setback requirements, parking layout and lot coverage requirements places the driveway at approximately 32' from the intersection ROW lines. Based upon the level of development, it is not anticipated that the development will create any significant impacts on the surrounding street system.

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) Points of access and egress are located to the greatest extent practical from the intersection and adjacent driveway. It is not expected that a driveway serving 6 vehicles will create a conflict with existing turning movements or traffic flows.

      (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 for infrequent periods of tenants moving in/out of the building.

   c. Sidewalks.

      (i) Existing sidewalk are located along the project frontage on both Waterville and Fore Street.

(ii) The existing concrete sidewalks will be rebuilt with brick sidewalks in accordance with the City of Portland Technical Standard. The existing driveway curb cut will be removed and sidewalk/curb rebuilt.

(iii) Internal sidewalk will be provided to facilitate the movement of pedestrians to the City ROW.

3. Public Transit Access:

a. The development does not exceed twenty (20) or more residential dwelling units.

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 parking meets and exceeds the required 1 space per unit parking requirement on the peninsula.

(ii) A parking study is not required.

(iii) The amount of parking is appropriate for the two three bedroom units, one two-bedroom unit and one one-bedroom unit. The three-bedroom units will have preferred use of two parking spaces each.

(iv) The parking space and aisles meet the dimensional standards of Section 1 of the Technical Manual.

(v) The parking lot will be constructed of a permanent and durable surface consisting of concrete that is not subject to ponding or erosion.

b. Location and Required Number of Bicycle Parking Spaces:

(i) As shown on the site plan, secure covered storage for 2 bikes is being provided.

c. Motorcycles and Scooter Parking:

(i) The project does not provide designated motorcycle/scooter parking but opportunities exist within the garage to provide access and parking.

d. Snow Storage:

(i) Due to the proposed site development, in which the majority of the site will be covered by a building with a flat roof, very little snow removal will be required.

(ii) Snow storage shall not be located where it will adversely impact the functionality of the stormwater management system.

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 overhead power lines run through the existing 24" diameter deciduous tree canopy along Waterville Street. As such the tree canopy has been significantly altered through the years and appears more in the shape of a "Y". The tree will be removed as part of the building construction work. The existing landscaping between the project and adjacent condominiums at 7 Waterville Street will be protected during construction.

(ii) Not applicable.

(iii) Adequate measures to protect existing vegetation during construction will be provided.

(iv) The applicant will require a waiver from this standard and the replacement with 2 trees.

(v) Not applicable.

   b. Site Landscaping.

(i) Landscaped Buffers:

(a) There are no visible service or loading areas.

(b) The project has 84 ft. of frontage on Waterville and 49 ft on Fore Street. As such 18 shrubs shall be planted or preserved on the site.

(c) Not applicable.

(d) Not applicable.

(ii) Parking Lot Landscaping:

a) Not applicable. The parking is within a garage.

a) Not applicable. The parking is within a garage.

a) Not applicable. The parking is within a garage.

a) Not applicable. The parking is within a garage.

a) Not applicable. The parking is within a garage.

(iii) Street Trees:

(a) Two new street trees are proposed along Waterville Street. The existing 15" diameter tree will be protected during construction. Several raised planting beds are proposed adjacent to the building exterior along Fore Street. Due to vehicle site lines additional street trees are not proposed adjacent to the intersection.

(b) Not applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) Runoff from the site will continue to be directed to the City's storm drainage systems in the adjacent street. The project will not create ponding or flooding on adjacent lots.

(ii) All stormwater runoff is proposed to discharge to the City's storm drainage system. The project will not increase the rate of runoff nor adversely impact adjacent lots or the City street system.

(iii) The project will not increase the rate of runoff nor adversely impact adjacent lots or the City street system..

(iv) The project will not increase the rate of runoff nor adversely impact adjacent lots or the City street system..

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 both a public wastewater system and public drainage 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. No changes to emergency access conditions within the surrounding streets is proposed.

   c. Fire hydrants are located within the adjacent street system. The new building will have fire suppression.

3. Availability and Adequate Capacity of Public Utilities:

   a. Public utilities in the vicinity of the site have 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 on site electrical 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 Waterville 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 internal storage of trash and recyclables temporarily until waste containers can be transported to the street.

(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.
   b. HVAC venting is proposed to be directed to the building roof and directed away from public spaces.

2. Shadows:

   a. Not applicable.

3. Snow and Ice Loading:

   a. The proposed building will have flat roofs; therefore, accumulated snow and ice will not fall onto adjacent properties or public ways.

4. View Corridors:

   a. The project site is located outside the Downtown Vision View Corridor Protection Plan.

5. Historic Resources:

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

   b. The development is not located adjacent to designated landmark, historic district, or historic landscape district. *Please notify the us if the project is within 100 ft. of a historic 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 may be provided for the lighting typical of residential lights. Please let us know if a photometric plan is required for a project of this scale.

b. Architectural and Specialty Lighting

(i) No architectural or specialty lighting is proposed.

(ii) No up-lighting is proposed.

c. Street Lighting

(i) Existing street lights on Waterville and Fore Street will be protected during construction and will remain in use. No new street lights are proposed.

7. Noise and Vibration:

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.

PORTLAND FIRE DEPARTMENT
SITE REVIEW
FIRE DEPARTMENT CHECKLIST

A separate drawing[s] shall be provided as part of the site plan application for the Portland Fire Department's review.

1. Name, address, telephone number of applicant
2.
3. Name address, telephone number of architect

4. Proposed uses of any structures [NFPA and IBC classification]
5.
6. Square footage of all structures [total and per story]

7. Elevation of all structures

8. Proposed fire protection of all structures
   - ***As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)***

9. Hydrant locations

10. Water main[s] size and location

11. Access to all structures [min. 2 sides]

12. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.

Some structures may require Fire flows using annex H of NFPA 1

ACORN ENGINEERING, INC.

Assistant Chief Keith Gautreau
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

January 3, 2016

Subject: 31 Fore St. Site Review – Fire Department Checklist
Section 8 of Application

On behalf of Peninsula Property Development, LLC the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Peninsula Property Development, LLC
   Attn: Bob & Carrie LeBlanc
   59 Moody Street
   Portland, Maine 04101

2. Name address, telephone number of architect

   Port City Architecture
   Attn: Andrew Hyland
   65 Newbury Street
   Portland, Maine 04101

3. Proposed uses of any structures [NFPA and IBC classification]

   The Code Analysis will be provided under separate cover by Port City Architecture.

4. Square footage of all structures [total and per story]

Garage Floor	2,457	sf
1st Floor	2,457	sf
2nd Floor	2,457	sf
3rd Floor	2,457	sf
Total	**9,828**	**sf**

5. Elevation of all structures

   The average building height is 45 ft. See attached elevations for additional information.

6. 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 system design which will be performed prior the request for a building permit.

7. Hydrant locations

   An existing hydrant is located at the corner of Fore and Waterville Street. The hydrant is located approximately 10 ft. from the nearest building edge. Please refer to the Existing Conditions Plan for the exact location. Hydrant flow data from the Portland Water District will be forwarded to the City once obtained.

8. Water main size and location

   The development will be serviced by the existing water main within Waterville Street. A 2" fire service line will extend from the existing water main to the building fire suppression system. The building is expected to have an internal sprinkler risers and a Fire Department pump connection on the Waterville Street side of the building.

9. Access to all structures [min. 2 sides]

   Access to the structure is provided on Waterville and Fore 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 a public street. The following street widths are currently available:

- Waterville Street 32 ft.
- Fore Street 42 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 for 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.*

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 an exterior doors that will be within 50' of a Fire Department access route, namely Fore Street.

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

Response: A minimum of 9 ft. vertical clearance will be provided to the site.

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

Response: The elevator 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.

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

Please let me know if you have any additional questions or comments.

Sincerely,

A C O R N Engineering, Inc. • PO Box 3372 • Portland • Maine • 04104
Voice: 207-775-2655 • Fax: 207-358-7979 • www.acorn-engineering.com

William H. Savage, P.E.
Principal
Acorn Engineering, Inc.

7. Solid Waste Disposal

The four individual unit owners, or their property management company shall be responsible for relocating the solid waste and recyclable material to the street curb in accordance with City regulations. The proposed development includes an internal solid waste area as noted on the Site Plan (C-10).

The solid waste containers will be fully enclosed and screen from the public view.

6. Utilities

The proposed project will include installation of new utility services to the building. Presently the existing building is served by overhead electrical, telephone and cable. These overhead utilities will be rerouted underground as part of the project. Ability to serve letters have supplied to the respective 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. Reponses will be forwarded to the planner once received.

Central Maine Power
162 Canco Road, Portland, Maine 04103
1-800-750-4000

January 6, 2016

ACORN Engineering, Inc.
C/O Mr. William H. Savage, P.E.
PO Box 3372
Portland, Maine 04104

RE: Electric Service, 31 Fore Street, Portland

Dear Mr. Savage,

This letter is to advise you Central Maine Power has sufficient single 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 Work Request Order so we may start provide an actual cost if required.

If you have any questions please feel free to call me at 828-2882.

Sincerely,

Paul DuPerre
Energy Service Specialist

5 Davis Farm Rd
Portland, ME 04103
207- 797-1866 office
207- 797-1098 fax

February 23, 2016

To Whom It May Concern:

This letter is to inform that FairPoint Communications has the capacity and willingness to serve the proposed residential 4 unit building to be located at the corner of Fore St and Waterville St in Portland. FairPoint currently has aerial facilities on a pole adjacent to the proposed building. Please do not hesitate to contact me with any questions.

Sincerely,

Scott Derrig

FairPoint Outside Plant Engineer

207-797-1866

January 14, 2016

William Savage
Principal- Project Manager
Acorn Engineering, Inc

Subject: 31 Fore Street Redevelopment

Re: Ability to serve

Dear Mr. Savage:

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 redevelopment project.

I show that we have a ½" intermediate pressure service line currently active to this property. This service will need to be cut off prior to construction. A new service line size and installation can be determined once additional information regarding the natural gas load is obtained.

Work necessary to provide service will be executed 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) 541-2505 or at fowler@unitil.com.

Sincerely,
Bridget L. Harmon
Business Development Representative
Unitil Corporation
(o) 207-541-2536 (f) 207-541-2586

Portland Water District

From Sebago Lake To Casco Bay

February 16, 2016

Acorn Engineering, Inc.
P.O. Box 3372
Portland, ME 04104-3372

Attn: William Savage
Re: 31 Fore Street - Portland
Ability to Serve with PWD Water

Dear Mr. Savage:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on January 5, 2016. Based on the information provided, we can confirm that the District will be able to serve the proposed project as further described in this letter.

Conditions of Service

The following conditions of service apply:

- It is the District's understanding that a four unit residential building with a NFPA 13R life safety sprinkler system is proposed at this location. New fire and domestic services may be installed from the water main in either Fore Street or Waterville Street. We recommend a minimum domestic service size of 1.5-inch diameter to serve the four residential units. The existing ¾-inch service is undersized for the proposed use and must be retired by shutting the corporation and cutting the copper pipe from the main.

- The configuration shown on the plans is suitable where a single building owner/tenant organization is the customer of record, the sizing is not adequate however. Please provide the anticipated fire and domestic demands in order to ensure proper sizing. Memo metering (submeters called out on plans) would be private and the responsibility of the customer of record. If individual billing is desired, individual services at the streetline would be required (with separate curbstops). The sprinkler service would remain billed to the building owner/tenant organization.

- The Utility Layout Plan shows a single tap into the water main with a manifold at the street line, this is an acceptable configuration to the District; However, the sprinkler system designer should be consulted to confirm that the domestic demand (which we recommend increasing to a minimum of 1.5-inch) would not undermine the sprinkler service line sizing.

- Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary. If individual billing is desired, separate services from the main with individual control valves would be required.

225 Douglass Street P.O. Box 3553 Portland, Maine 04104-3553
Phone: 207.774.5961 Fax: 207.523.5440 Web: www.pwd.org

- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our standards.

Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line, located as shown on the attached water service card, provides water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 8-inch diameter cast iron water main on the northwest side of Fore Street, two 6-inch cast iron water mains on the southwest side of Waterville Street and a public fire hydrant located at the site. Recent flow data is not available in this area. The most recent static pressure reading was 90 psi on September 3, 2015.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Gordon S. Johnson, P.E.
Engineering Services Manager

William Savage

From: David Margolis-Pineo <DMP@portlandmaine.gov>
Sent: Monday, February 22, 2016 4:26 PM
To: William Savage; Bob LeBlanc
Cc: Barbara Barhydt; Benjamin Pearson; Helen Donaldson; Jean Fraser; Jeff Levine; John Emerson; Nancy Gallinaro; Rachel Smith; Rick Knowland; Scott Firmin; Shana Lowe
Subject: Wastewater Capacity Application Approval for 31 Fore St

February 22, 2016

Rw: Wastewater Capacity Application Approval for Wastewater Flows from 31 Fore Street – Multi-Family Housing

Dear Carrie and Robert La Blanc: (robertleblanc1@me.com)

The Department of Public Works, which includes the Water Resource Division have reviewed and determined that the downstream sewers from has the capacity to convey the estimated of proposed wastewater which will be generated from this facility. You are reminded that the sewer you are proposing to connect is combined and therefore a backflow preventer is required. This system surcharges frequently.

As you may be aware, any addition of wastewater flows in this drainage area will have an impact on India Street CSO discharge volumes. However, with the proposed bio-retention or rain garden, the volume of rainwater removed from the combined sewer will offset the proposed wastewater addition.

If the City can be of further assistance, please call 874-8850 or 400-6695.

Sincerely,
CITY OF PORTLAND

David Margolis-Pineo

David Margolis-Pineo
Deputy City Engineer

Proposed Wastewater Flows from 31 Fore Street – Three Unit Multi-Family
One – One Bedroom Unit @ 120 gpd = 120 gpd
One – Two Bedroom Unit @ 180 gpd = 180 gpd
Two – Three Bedroom Unit @ 270 gpd = 540 gpd **Total = 840 gpd**
Water consumption of razed building: 270 gpd
Net Increase in water usage: 840 gpd – 270 gpd = 570 gpd

Jeffrey Levine, 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
Nell Donaldson, Department of Planning and Urban Development, City of Portland
Shukria Wiar, Planner, Department of Planning and Urban Development, City of Portland
Jean Fraser, Planner, Department of Planning and Urban Development, City of Portland
Rick Knowland, Planner, Department of Planning and Urban Development, City of Portland
Nancy Gallinaro, Water Resources Manager
Benjamin N. Pearson, Industrial Pretreatment Coordinator, City of Portland
Rachel Smith, Assistance Industrial Pretreatment Coordinator, City of Portland
John Emerson, Wastewater Coordinator, City of Portland
Scott Firmin, Director of Wastewater, Portland Water District

10. Written Request for Waivers

The following is a list of known project related waivers.

1. **Landscape Preservation** – The overhead power lines run through the existing 24" diameter deciduous tree canopy along Waterville Street. As such the tree canopy has been significantly altered through the years and appears more in the shape of a "Y". As seen in the images below, the core structure of the tree has been compromised. We are proposing to remove the one tree as part of the building construction work and in its place plant two street trees in accordance with Section 14-526 Site Plan Standards (b)2.a.iv(a). As per City Arborist suggestion, we are proposing planting two Ginko 'Autumn Gold' trees that are known to survive urban conditions and, contrast to other gingko varieties, is a fruitless tree. Also addressed by the City during the application process, the two trees will be planted within raised granite tree wells; the raised wells will serve to protect the root integrity of the tree from snow removal along the sidewalk as well as limit the salt impact from Waterville Street.

2. **Parking Lot Landscaping** – The applicant is requesting a waiver to the parking lot landscaping requirements for parking lots with five (5) or more parking spaces. Because the parking is within an enclosed garage the landscaping required for 6 parking spaces will be provided for within the open space. As such a contribution to the City of Portland Tree Fund will not be necessary.

3. **Street Trees** – The applicant is seeking a waiver to the street trees requirements for multi-family residential properties. Due to the large proposed building footprint, existing tree to be preserved and limited sidewalk space along Waterville and Fore street fronts, it is not feasible to place the required four (4) trees for every residential unit within the City ROW. Opportunities may exist onsite within the open space.

4. **Traffic Study** - Given the net increase in units is one we are requesting a waiver to complete

a Traffic Impact Study as allowed for within the City of Portland Technical Manual Section 1.1.1.2. Scope of Study.

5. **Soil Survey Standards** - Given the urban development , no onsite wastewater is proposed, the applicant does not intend to perform a more intense (Class A, B, or C) hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/12 are met.

6. **35 ft. Driveway Setback - Technical Standard 1.7.2.7.** – The technical standard stipulates that driveways on corner lots be located as minimum of 35 ft from the intersection right of way (ROW) lines to the center of the driveway. The present layout provides for 31.26 ft instead of the 35 ft. A prior layout presented at the November 24th, 2015 Pre-Application Meeting provided a 25.5 ft setback from the ROW. At the meeting the City requested the driveway separation be increased to provide a min. of 35 ft from the edge of the driveway to the edge of the existing curb if that condition was met then the planning division would be supportive of a waiver request. The present plan meets this request.

   Moving the center of the driveway an additional 4 ft to the west on Waterville St. to increase set back to 35 ft. would increase the elevation of the garage floor and overall building height, reduce the area of the first, second and third floor plans, and impact the location of the ADA doorway. The driveway was reduced from 12'-4" to 12' and moved 6" to be flush with the building edge from our prior submission to increase the setback by 8". We believe the current layout meets the intent of the technical standard and respectively request a waiver to the driveway setback.

7. **24' Maximum Driving Aisle Width – Technical Standard 1.14** – Per the technical standard outlined in parking lot and space design for standard spaces at 90°, a 24' driving aisle width is required. Due to available space within the basement, we are proposing expanding this width to 25'-8". The wider aisle will not impede parking within the lot and will serve to increase overall maneuverability.

Att. I

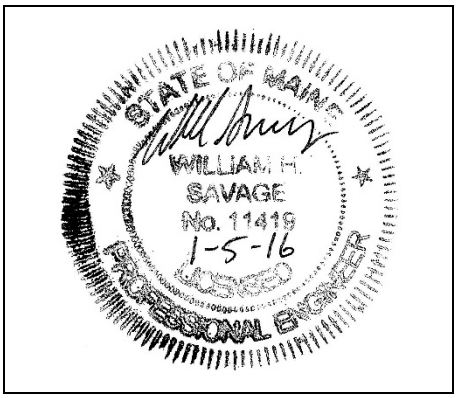
STORMWATER MANAGEMENT REPORT

Prepared For:

Peninsula Property Development, LLC
31 Fore Street Redevelopment
31 Fore Street
Portland, Maine 04101

Prepared By:

Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102



January 2016

INTRODUCTION

Acorn Engineering, Inc. has been retained by Peninsula Property Development, LLC to provide civil engineering services for the proposed redevelopment of 31 Fore Street. The proposed project is a residential 4-unit redevelopment of an existing 3-unit building. The existing 3-story, wood frame building will be removed as part of the construction of the urban infill development.

A stormwater analysis will be 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 rooftops, sidewalks, and gravel driveways with parking. The current course of action is to provide water quality treatment to the stormwater through filtration utilizing a Maine Department of Environmental Protection – Rain Garden (Bioretention Cell) approved stormwater Best Management Practice (BMP). This development shall incorporate green infrastructure to provide water quality treatment for no less than 95% of the new impervious area and 80% of the developed area.

The stormwater analysis is documented with supporting calculations and reports attached to this narrative.

EXISTING CONDITIONS

The proposed project site is located on the southeasterly corner of the intersection of Waterville and Fore Street. Portland has zoned this area as an R-6 Residential Zone. A boundary plan has been prepared by Owen Haskell, Inc. of Falmouth, Maine dated 9/24/15 and revised 10/17/15.

Abutting Uses:

- North R-6 Zone – Multi-Family Residential
- West R-6 Zone - Multi-Family Residential
- South R-6 Zone - Multi-Family Residential
- East B6 Zone – Portland Company

The project area is previously developed and comprised of grassed areas, rooftops, sidewalks, gravel driveways with parking. From south to north the grades are approximately 10% up to an existing retaining wall. The project area presently drains towards the intersection of Waterville and Fore Street before entering the municipal storm drain system.

.

The project team is not aware of the presence of any existing significant natural features located on the site. Given the urban setting, existing free-draining soils and steep slopes a field inventory of significant natural feature was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.

PROPOSED DEVELOPMENT

The proposed project is a residential 4-unit redevelopment of an existing 3-unit building. The existing 3-story, wood frame building will be removed as part of the construction of the urban infill development. To minimize the development's footprint and impervious area the project will include a parking garage beneath the building that will include 6 parking spaces, bicycle parking and solid waste/recycling storage area.

The moderate change in grade will be incorporated into the building design by terracing the building into the slope. Terracing will be completed through stepped foundations and reuse of the existing retaining walls. The proposed pedestrian access off of Fore Street will access the first floor above the garage level while the garage level will be accessed from the low point on Waterville Street setback the maximum distance from the intersection. Structural Integrity Consulting Engineering will provide the foundation/retaining wall design for the building permit application. The parcel will be landscaped with trees, shrubs and ornamental grasses.

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 development shall provide water quality treatment for no less than 95% of the new impervious area and 80% of the developed area. The project includes the redevelopment of existing impervious area including rooftops, asphalt and gravel driveways and parking. The entire parcel is previously developed and as such the will not create any new developed area. Water quality treatment shall be provided through the use of a Rain Garden meeting the specifications of a Maine DEP Bioretention Cell. From herein the Bioretention Cell shall be referred to as a Rain Garden.

The rain garden was sized to meet or exceed the requirements set forth within the MDEP Volume III: BMPs Technical Design Manual Section 7.2. Filtration BMPs have been shown to be very effective at removing a wide range of pollutants from stormwater runoff. The stormwater runoff shall first flow into the rain garden whose plants and storage area shall provide initial treatment. The stormwater shall be detained above the surface before flowing vertically through the soil filter layer. The treated stormwater shall then be collected within perforated pipes and released slowly by the outlet control at an attenuated rate. Larger storm events shall overflow into an oversized horizontal atrium grate.

The treatment of the impervious surface is 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
Rain Garden	2,070	2,842	772	2,457	318%

As shown above the project anticipates meeting and exceeding the required treatment for new impervious surfaces through the use of the rain garden BMP.

According to the requirements for a rain garden as defined in the Volume III: BMPs Technical Design Manual, Chapter 7.2, the surface area of the filter shall be no less than the sum of 7% of the tributary impervious area and 3% of the tributary vegetated area. The filter area is calculated by the following formula:

$$[(\text{Imp. SF} \times 0.07) + (\text{Veg. SF} \times 0.03)] = \text{Filter Area (SF)}$$

Please refer to Table 2 below.

Table 2 – Total Filter Surface Area, displays the proposed Rain Garden sizing requirements, actual size and the percentage of required area.

Table 2 –Total Filter Surface Area			
	Required Filter Area (SF)	Actual Filter Area (SF)	Percentage of Required Area (%)
Rain Garden	170	175	102%

The outflow from the Rain Garden is then tributary to the municipal stormwater system. As shown, the size of the soil filter area will meet and exceed the surface area requirements. Values from the HydroCAD calculations attached to this report.

In accordance with the Volume III: BMPs Technical Design Manual, a water quality volume of 1.0 inches times the tributary impervious area plus 0.4 inches times the tributary disturbed area is required to be treated by the Rain Garden. The water quality volume is calculated by the following formula:

$$\left(\frac{\text{Imp. SF} \times 1.0''}{12''/1'}\right) + \left(\frac{\text{Veg. SF} \times 0.4''}{12''/1'}\right) = \text{Treatment Volume (CF)}$$

The proposed water quality volume is as follows:

Table 3 - Water Quality Volume Table				
	Disturbed Area (SF)	Impervious Area (SF)	Treatment Volume Required (CF)	Treatment Volume Provided (CF)
Rain Garden	0	2,842	**236**	**256**

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.

Provided the infiltration rates of the water quality volume through the soil filter are variable 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 control structure. The orifice diameter is sized to detain the stormwater for an approximate period of 24 hours. The orifice shall be placed at the end of the outfall pipe into the municipal catch basin. The orifice is intended to be a PVC cap placed on the outfall pipe (no glue) with the orifice drilled into the cap eccentrically. The PVC cap can be easily 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.

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. A 24-hour SCS Type III storm distribution for the 2, 10, and 25 year storm events were used. The corresponding rainfall amounts for these storms are 3.10", 4.60", and 5.80" respectively.

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. However due to the small size of the project the stormwater runoff shall be rounded to the nearest tenth of a cubic feet per second (cfs).

Time of Concentration (T_c)

In our initial submission a time of concentration (T_c) of 5 minutes was applied to each subcatchment for both the pre and post-development condition, given the urban setting, and moderate slopes. This was a conservative approach that in the post-development condition would result in the two separate subcatchments peak flow rates combining at the reach at the same time. Using different Tc's can result in a multiple peak flow rates and can result in an overall lower combined peak flow.

Curve Number

Conservative curve number (CN) runoff values were used within the subcatchment for the landscaped area. The stormwater calculations used the following CN values in the post development condition for vegetated areas, as follows:

- 75% Grass Cover, Good
- Woods/Grass Combination Good

Given the landscaping plan is to design a densely planted perennial gardens the Woods/Grass Combination was deemed an appropriate CN value for the projected portion of the project area to receive landscaping.

Pre-development Calculations

The pre-development condition was modeled as one subcatchment to determine the net impact of the development.

- Subcatchment 1 – The subcatchment area is defined by the property line to the intersection of Waterville and Fore 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 C, or this report. Peak flow rates for the storm events are as follows:

Table 4 – Pre-Development Peak Stormwater Flows			
Drainage Area	**2 – Year Storm Event (cfs)**	**10 – Year Storm Event (cfs)**	**25 – Year Storm Event (cfs)**
POI #1	0.1	0.2	0.3

Post-development Calculations:

The one predevelopment subcatchment was broken into two separate subcatchments for the post-development condition.

- Subcatchment 1 – This is comprised of the building's roof and a small portion of the driveway.
- Subcatchment 2 – This is comprised of the landscaped area, patio and internal sidewalks.

The post development calculations include changes to the land use, and the compensation provided by the detention facility. The following table represents comparison of predevelopment and post-development condition peak runoff rates for the proposed development and tributary area.

Table 5 – Comparison of Peak Flows						
Drainage Area	**2 – Year Storm Event (cfs)**		**10 – Year Storm Event (cfs)**		**25 – Year Storm Event (cfs)**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
POI #1	0.1	0.1	0.2	0.2	0.3	0.3

As shown in Table 5 the net impact of the post development peak flows shall remain at or below the predevelopment levels. A Post-development Watershed Map developed for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment C of this report.

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. 6/17/12 are met.

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	.17	.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.

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. As a result the design of the proposed development and stormwater system does not anticipate to create 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: HydroCAD Calculations

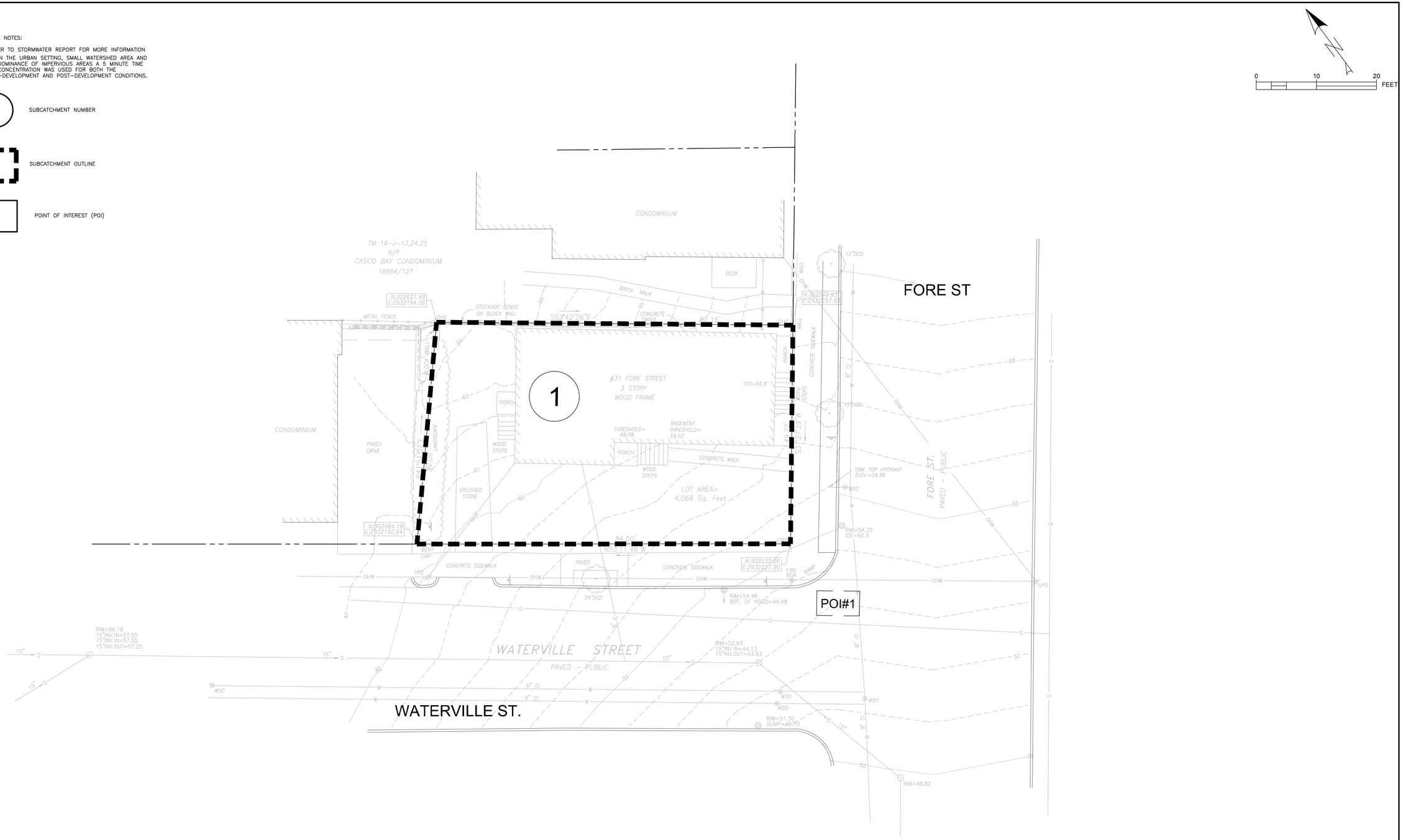
GENERAL NOTES:

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

SUBCATCHMENT OUTLINE

1 POINT OF INTEREST (POI)



FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 1/25/16
FINAL APPLICATION	WHS 3/1/16

REVISION	REV. / DATE

DRAWING NAME: PRE-DEVELOPMENT STORMWATER PLAN

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, MADE TO THIS PLAN SHALL BE MADE AT THE USER'S RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
3-1-16
PROFESSIONAL ENGINEER

DRAWING NO.
PRE

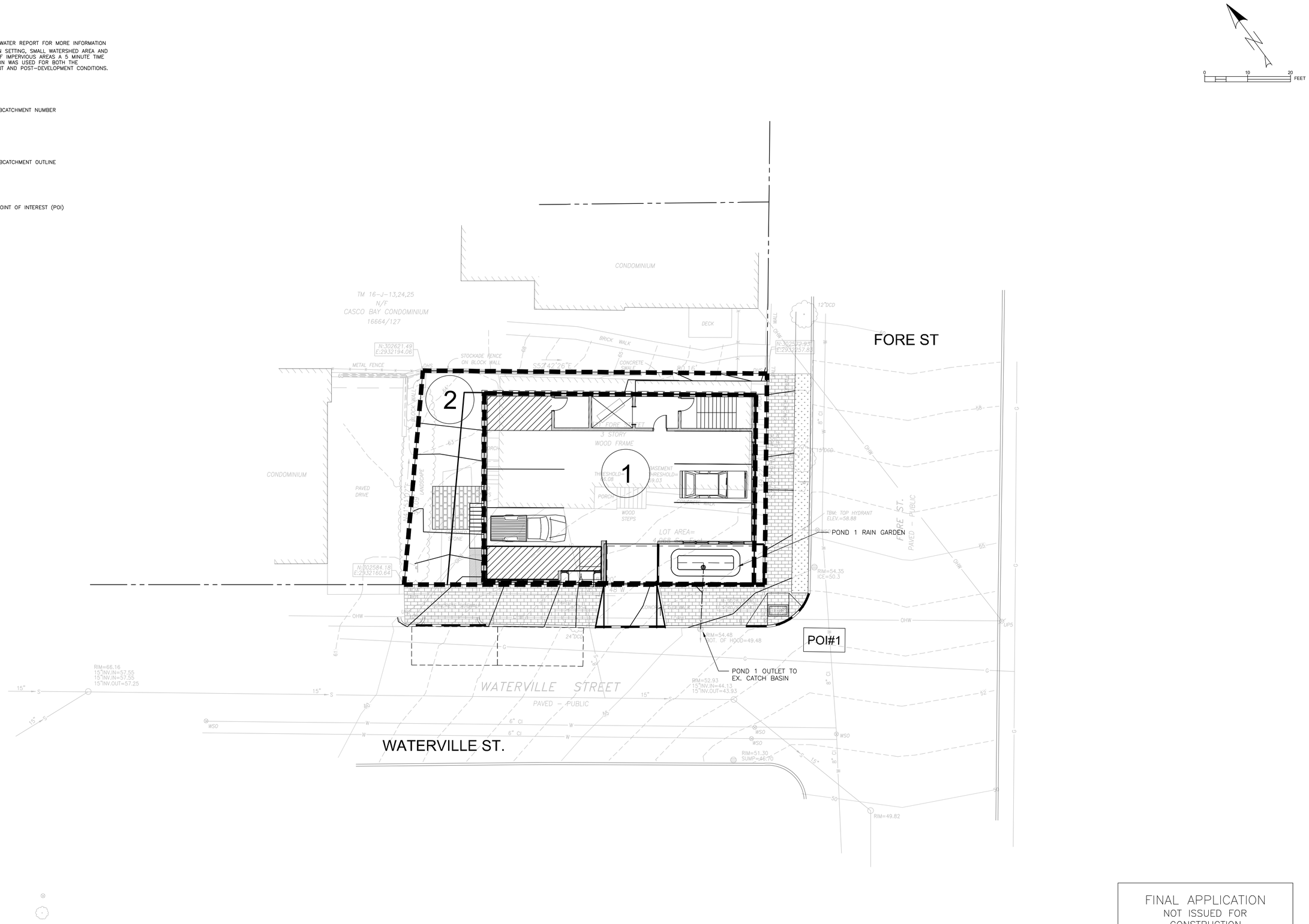
GENERAL NOTES:

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

SUBCATCHMENT OUTLINE

1 POINT OF INTEREST (POI)



FINAL APPLICATION
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 1/5/16
FINAL APPLICATION	WHS 3/1/16

REVISION	REV. / DATE

DRAWING NAME: POST-DEVELOPMENT STORMWATER PLAN

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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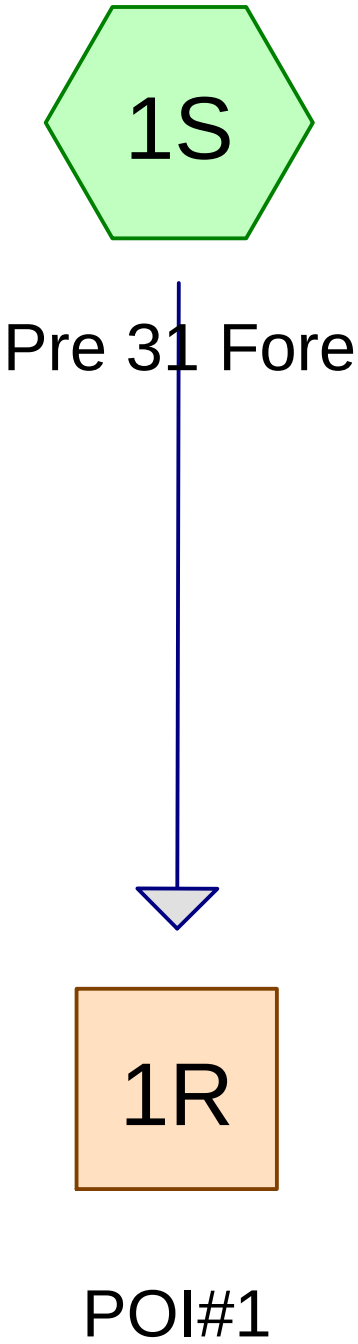
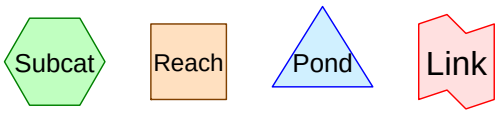
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
3-1-16
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
POST





Routing Diagram for Pre_12-31-15
Prepared by Acorn Engineering, Inc., Printed 1/4/2016
HydroCAD® 10.00-15 s/n 00620 © 2015 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.046	39	>75% Grass cover, Good, HSG A (1S)
0.037	98	Building (1S)
0.005	96	Gravel Parking (1S)
0.006	98	Stairs/Sidewalks (1S)
0.093	**69**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.046	HSG A	1S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.048	Other	1S
0.093		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.046	0.000	0.000	0.000	0.000	0.046	>75% Grass cover, Good	1S
0.000	0.000	0.000	0.000	0.037	0.037	Building	1S
0.000	0.000	0.000	0.000	0.005	0.005	Gravel Parking	1S
0.000	0.000	0.000	0.000	0.006	0.006	Stairs/Sidewalks	1S
0.046	**0.000**	**0.000**	**0.000**	**0.048**	**0.093**	**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 31 Fore Runoff Area=4,068 sf 45.97% Impervious Runoff Depth=0.72"
Tc=5.0 min CN=69 Runoff=0.07 cfs 0.006 af

Reach 1R: POI#1 Inflow=0.07 cfs 0.006 af
Outflow=0.07 cfs 0.006 af

Total Runoff Area = 0.093 ac Runoff Volume = 0.006 af Average Runoff Depth = 0.72"
54.03% Pervious = 0.050 ac 45.97% Impervious = 0.043 ac

Summary for Subcatchment 1S: Pre 31 Fore

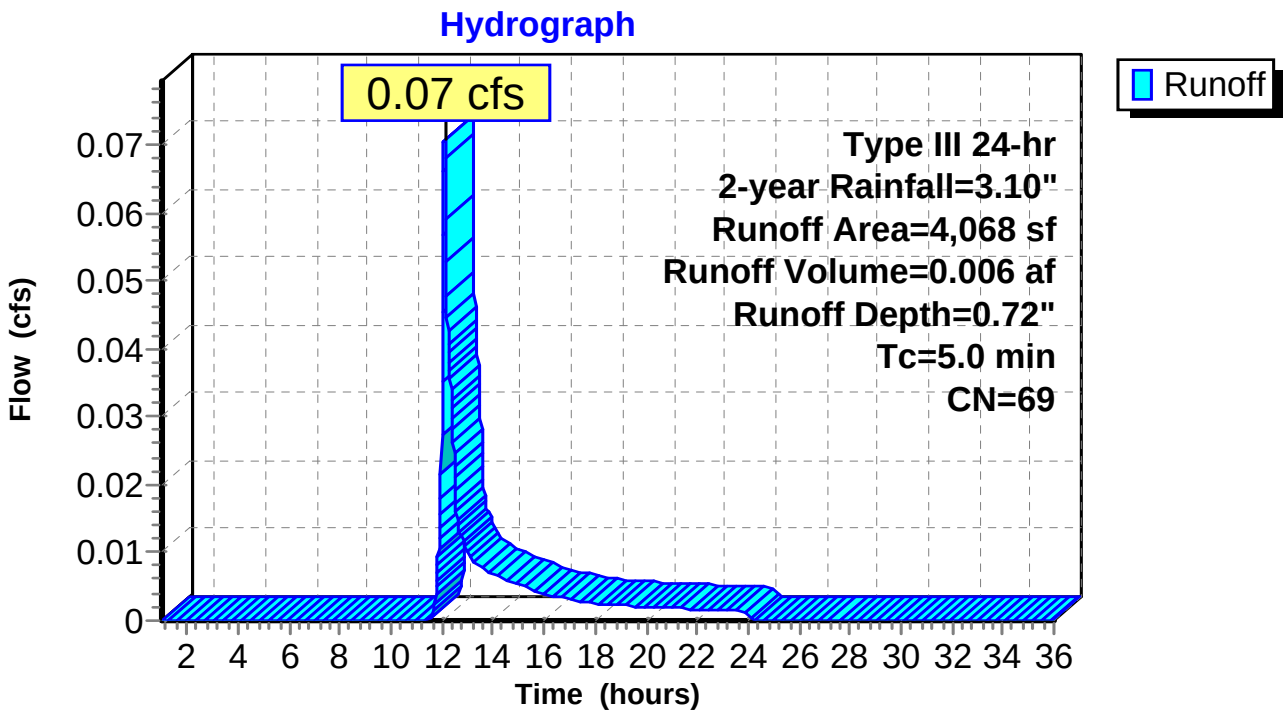
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 0.72"

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 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	1,590	98	Building
*	280	98	Stairs/Sidewalks
*	200	96	Gravel Parking
	1,998	39	>75% Grass cover, Good, HSG A
	4,068	69	Weighted Average
	2,198		54.03% Pervious Area
	1,870		45.97% Impervious Area

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

Subcatchment 1S: Pre 31 Fore



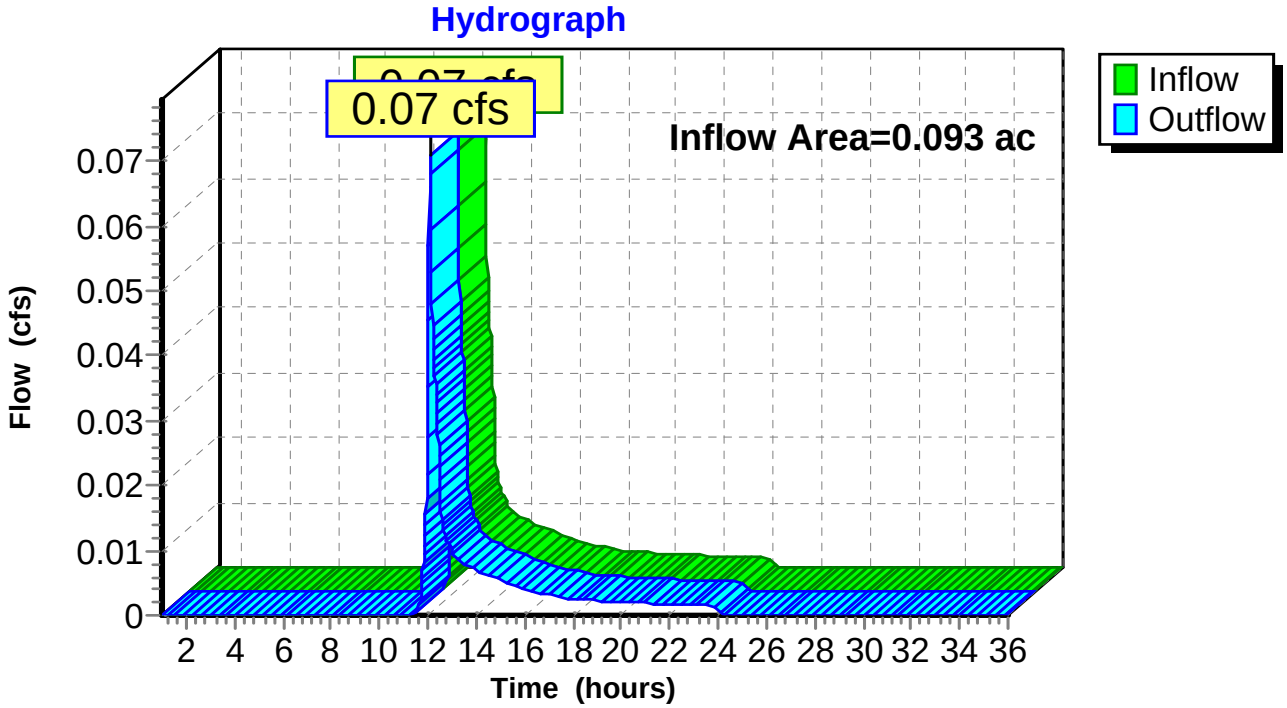
Summary for Reach 1R: POI#1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.093 ac, 45.97% Impervious, Inflow Depth = 0.72" for 2-year event
Inflow = 0.07 cfs @ 12.09 hrs, Volume= 0.006 af
Outflow = 0.07 cfs @ 12.09 hrs, Volume= 0.006 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



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 31 Fore Runoff Area=4,068 sf 45.97% Impervious Runoff Depth=1.67"
Tc=5.0 min CN=69 Runoff=0.18 cfs 0.013 af

Reach 1R: POI#1 Inflow=0.18 cfs 0.013 af
Outflow=0.18 cfs 0.013 af

Total Runoff Area = 0.093 ac Runoff Volume = 0.013 af Average Runoff Depth = 1.67"
54.03% Pervious = 0.050 ac 45.97% Impervious = 0.043 ac

Summary for Subcatchment 1S: Pre 31 Fore

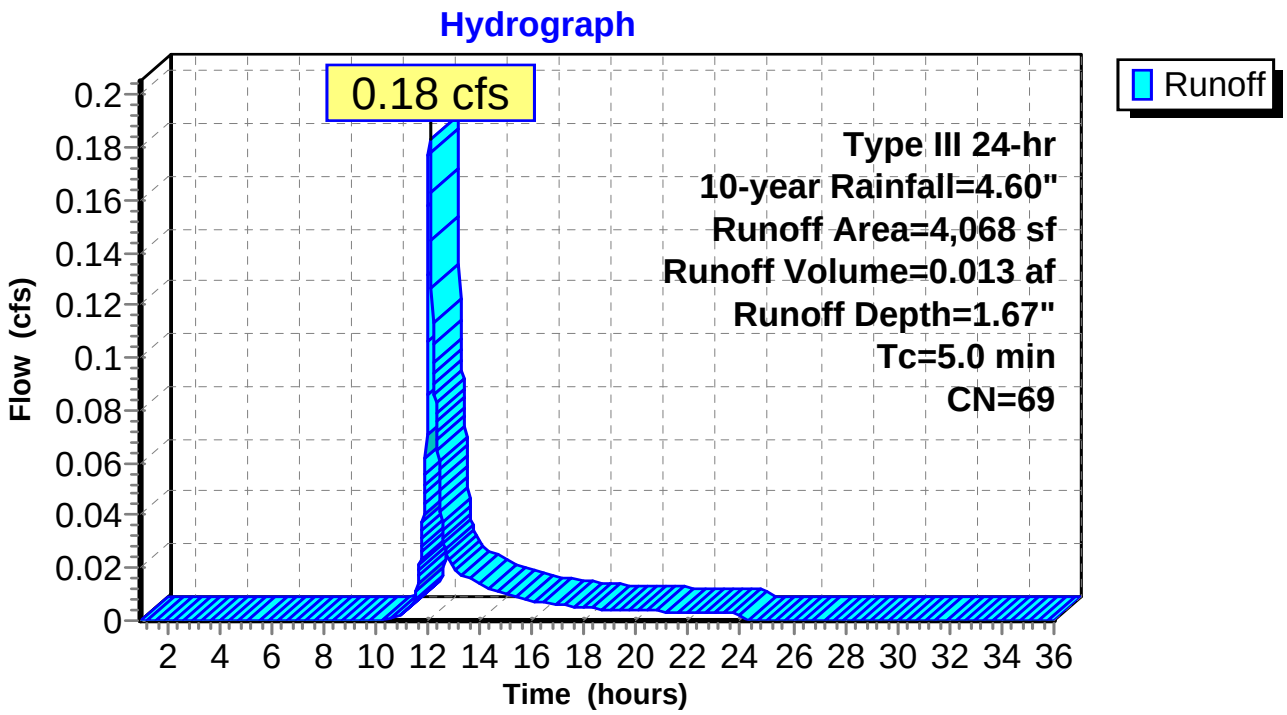
Runoff = 0.18 cfs @ 12.08 hrs, Volume= 0.013 af, Depth= 1.67"

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 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	1,590	98	Building
*	280	98	Stairs/Sidewalks
*	200	96	Gravel Parking
	1,998	39	>75% Grass cover, Good, HSG A
	4,068	69	Weighted Average
	2,198		54.03% Pervious Area
	1,870		45.97% Impervious Area

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

Subcatchment 1S: Pre 31 Fore



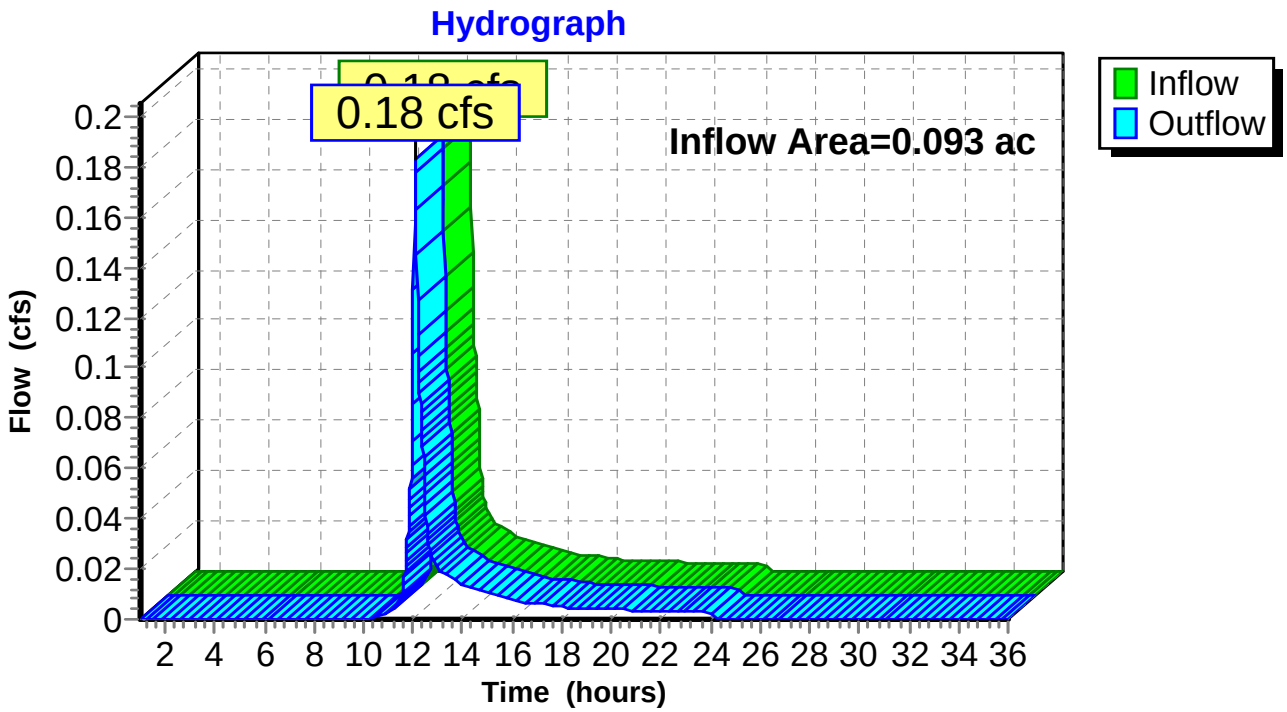
Summary for Reach 1R: POI#1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.093 ac, 45.97% Impervious, Inflow Depth = 1.67" for 10-year event
Inflow = 0.18 cfs @ 12.08 hrs, Volume= 0.013 af
Outflow = 0.18 cfs @ 12.08 hrs, Volume= 0.013 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



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 31 Fore Runoff Area=4,068 sf 45.97% Impervious Runoff Depth=2.56"
Tc=5.0 min CN=69 Runoff=0.29 cfs 0.020 af

Reach 1R: POI#1 Inflow=0.29 cfs 0.020 af
Outflow=0.29 cfs 0.020 af

Total Runoff Area = 0.093 ac Runoff Volume = 0.020 af Average Runoff Depth = 2.56"
54.03% Pervious = 0.050 ac 45.97% Impervious = 0.043 ac

Summary for Subcatchment 1S: Pre 31 Fore

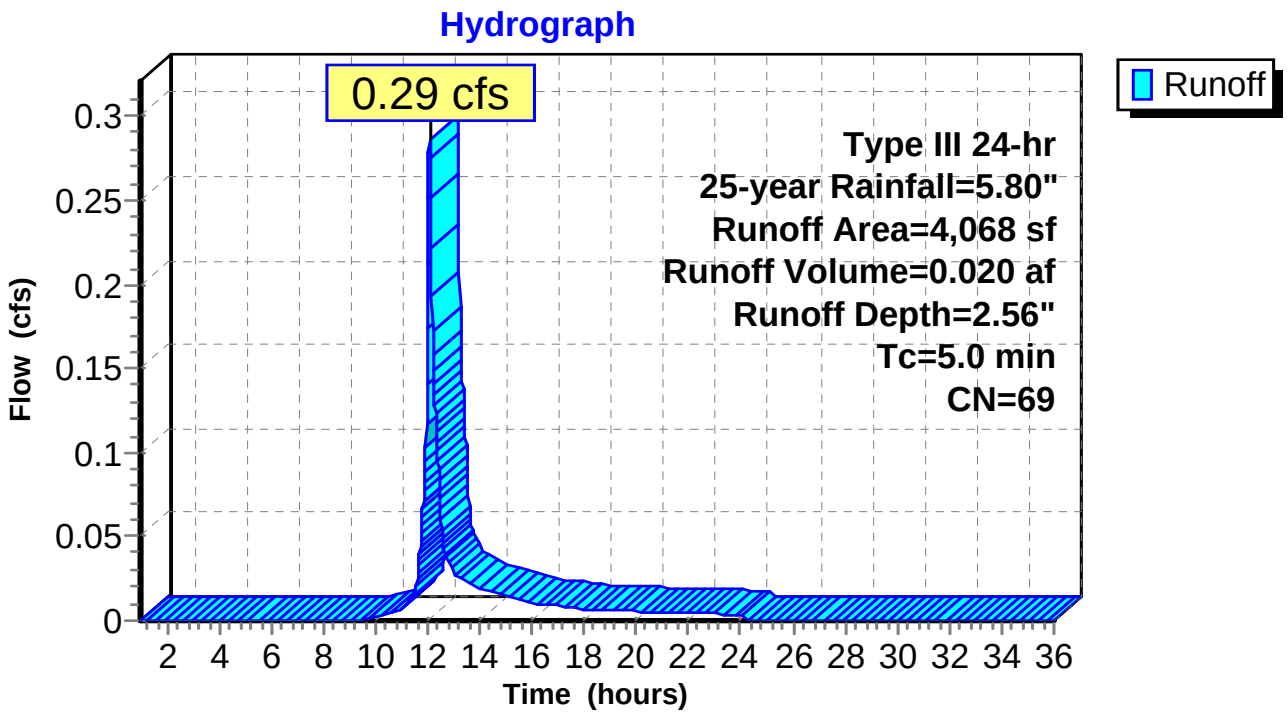
Runoff = 0.29 cfs @ 12.08 hrs, Volume= 0.020 af, Depth= 2.56"

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
*	1,590	98	Building
*	280	98	Stairs/Sidewalks
*	200	96	Gravel Parking
	1,998	39	>75% Grass cover, Good, HSG A
	4,068	69	Weighted Average
	2,198		54.03% Pervious Area
	1,870		45.97% Impervious Area

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

Subcatchment 1S: Pre 31 Fore



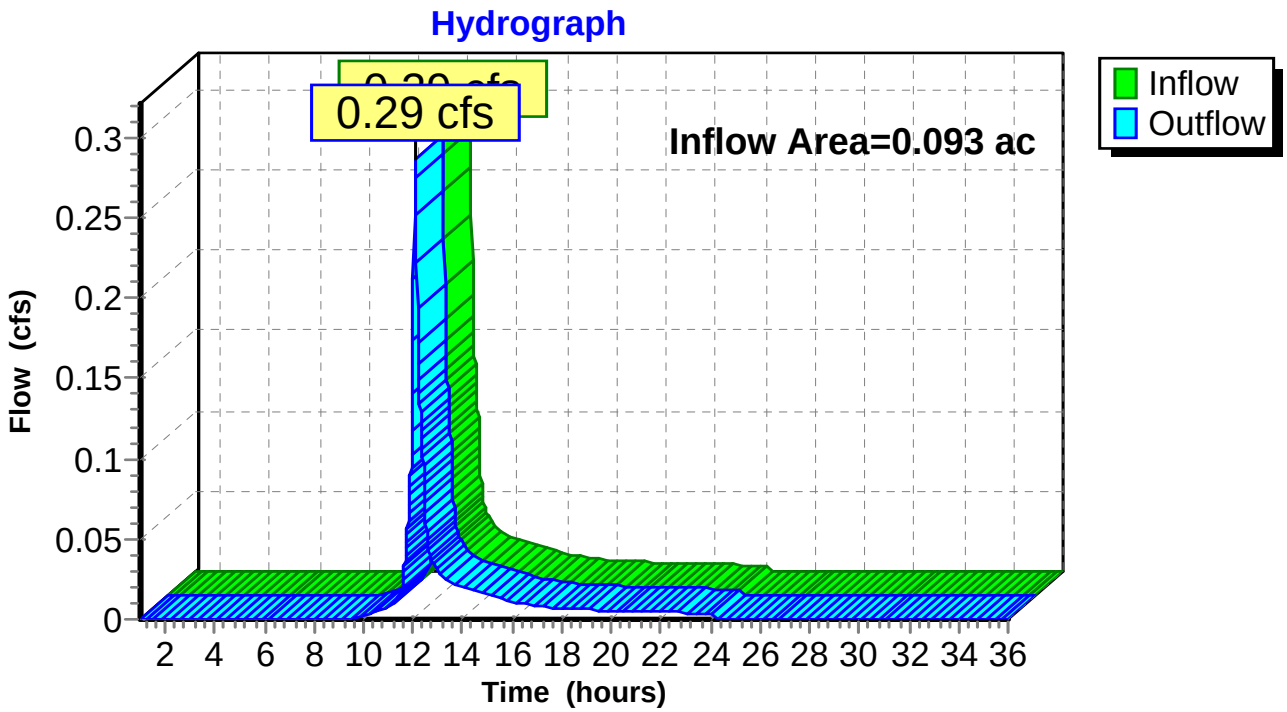
Summary for Reach 1R: POI#1

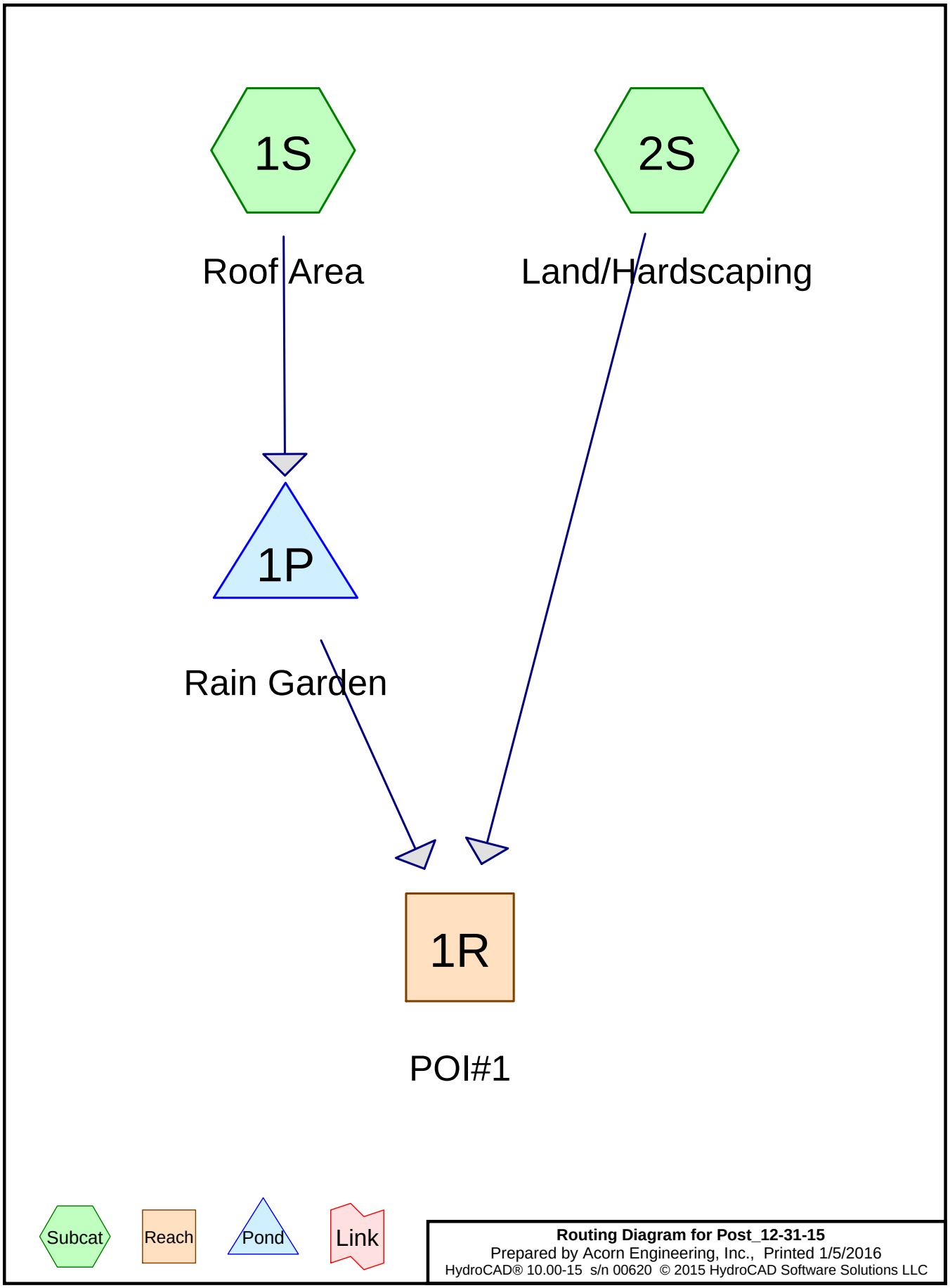
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.093 ac, 45.97% Impervious, Inflow Depth = 2.56" for 25-year event
Inflow = 0.29 cfs @ 12.08 hrs, Volume= 0.020 af
Outflow = 0.29 cfs @ 12.08 hrs, Volume= 0.020 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




1S
Roof Area
2S
Land/Hardscaping
1P
Rain Garden
1R
POI#1
Subcat
Reach
Pond
Link
Routing Diagram for Post_12-31-15
Prepared by Acorn Engineering, Inc., Printed 1/5/2016
HydroCAD® 10.00-15 s/n 00620 © 2015 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.021	39	>75% Grass cover, Good, HSG A (2S)
0.056	98	Building (1S)
0.003	98	Patio (2S)
0.008	98	Stairs/Sidewalks (2S)
0.007	32	Woods/grass comb., Good, HSG A (2S)
0.096	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.028	HSG A	2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.068	Other	1S, 2S
0.096		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.021	0.000	0.000	0.000	0.000	0.021	>75% Grass cover, Good	2S
0.000	0.000	0.000	0.000	0.056	0.056	Building	1S
0.000	0.000	0.000	0.000	0.003	0.003	Patio	2S
0.000	0.000	0.000	0.000	0.008	0.008	Stairs/Sidewalks	2S
0.007	0.000	0.000	0.000	0.000	0.007	Woods/grass comb., Good	2S
0.028	**0.000**	**0.000**	**0.000**	**0.068**	**0.096**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	51.00	50.90	10.0	0.0100	0.010	6.0	0.0	0.0

Time span=0.00-36.00 hrs, dt=0.02 hrs, 1801 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: Roof Area Runoff Area=2,457 sf 100.00% Impervious Runoff Depth=2.87"
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.013 af

Subcatchment 2S: Land/Hardscaping Runoff Area=1,711 sf 28.35% Impervious Runoff Depth=0.20"
Tc=5.0 min CN=54 Runoff=0.00 cfs 0.001 af

Reach 1R: POI#1 Inflow=0.09 cfs 0.014 af
Outflow=0.09 cfs 0.014 af

Pond 1P: Rain Garden Peak Elev=54.63' Storage=94 cf Inflow=0.18 cfs 0.013 af
Outflow=0.09 cfs 0.013 af

Total Runoff Area = 0.096 ac Runoff Volume = 0.014 af Average Runoff Depth = 1.77"
29.41% Pervious = 0.028 ac 70.59% Impervious = 0.068 ac

Summary for Subcatchment 1S: Roof Area

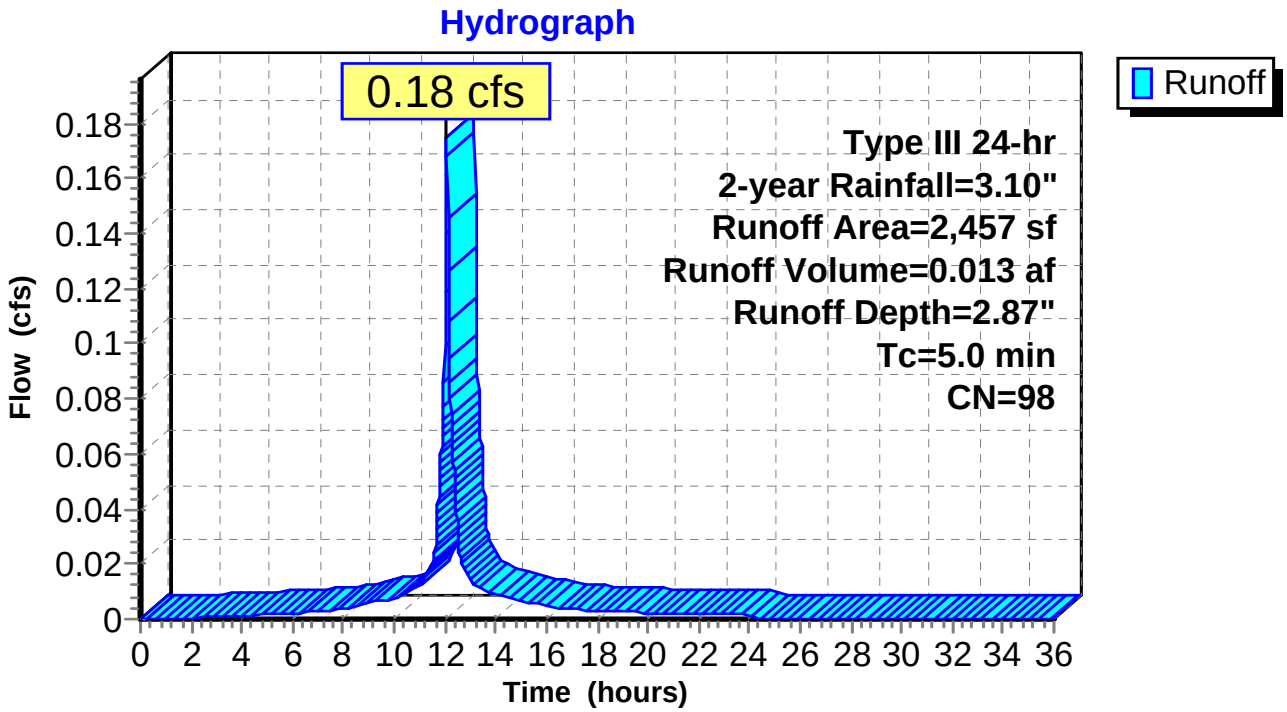
Runoff = 0.18 cfs @ 12.07 hrs, Volume= 0.013 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,457	98	Building
	2,457		100.00% Impervious Area

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

Subcatchment 1S: Roof Area



Summary for Subcatchment 2S: Land/Hardscaping

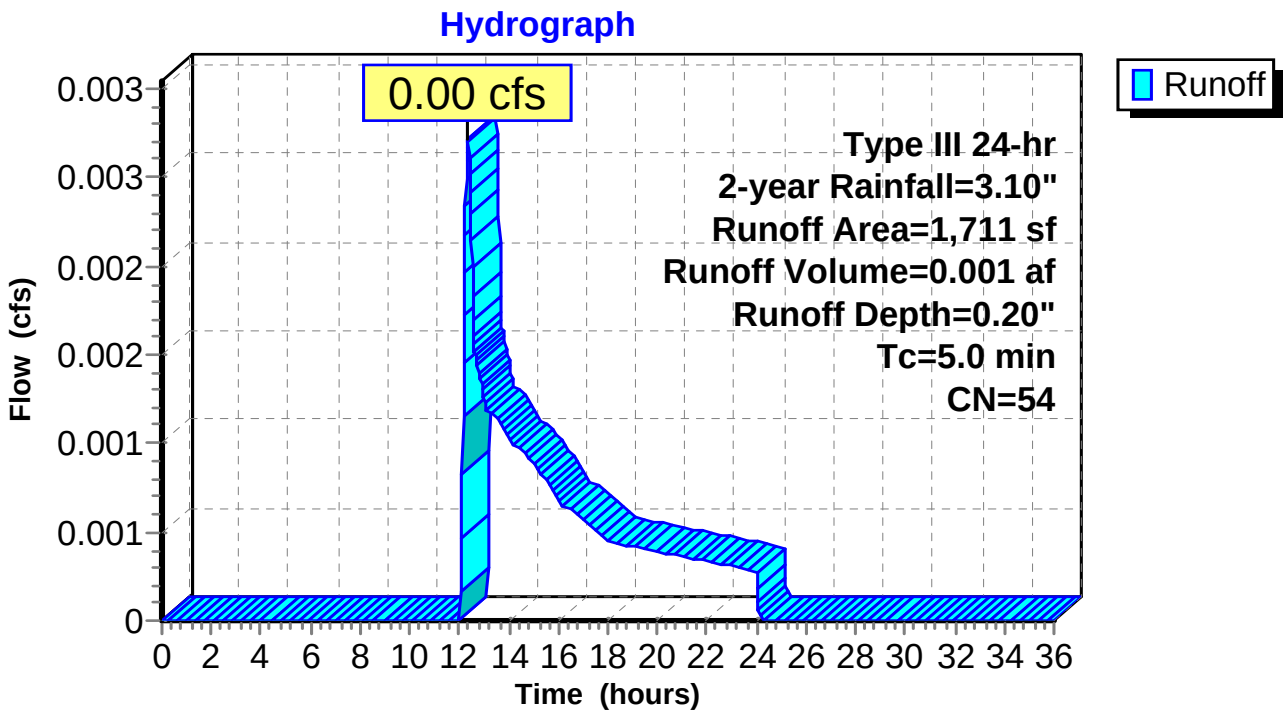
Runoff = 0.00 cfs @ 12.36 hrs, Volume= 0.001 af, Depth= 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	365	98	Stairs/Sidewalks
*	120	98	Patio
	926	39	>75% Grass cover, Good, HSG A
	300	32	Woods/grass comb., Good, HSG A
	1,711	54	Weighted Average
	1,226		71.65% Pervious Area
	485		28.35% Impervious Area

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

Subcatchment 2S: Land/Hardscaping



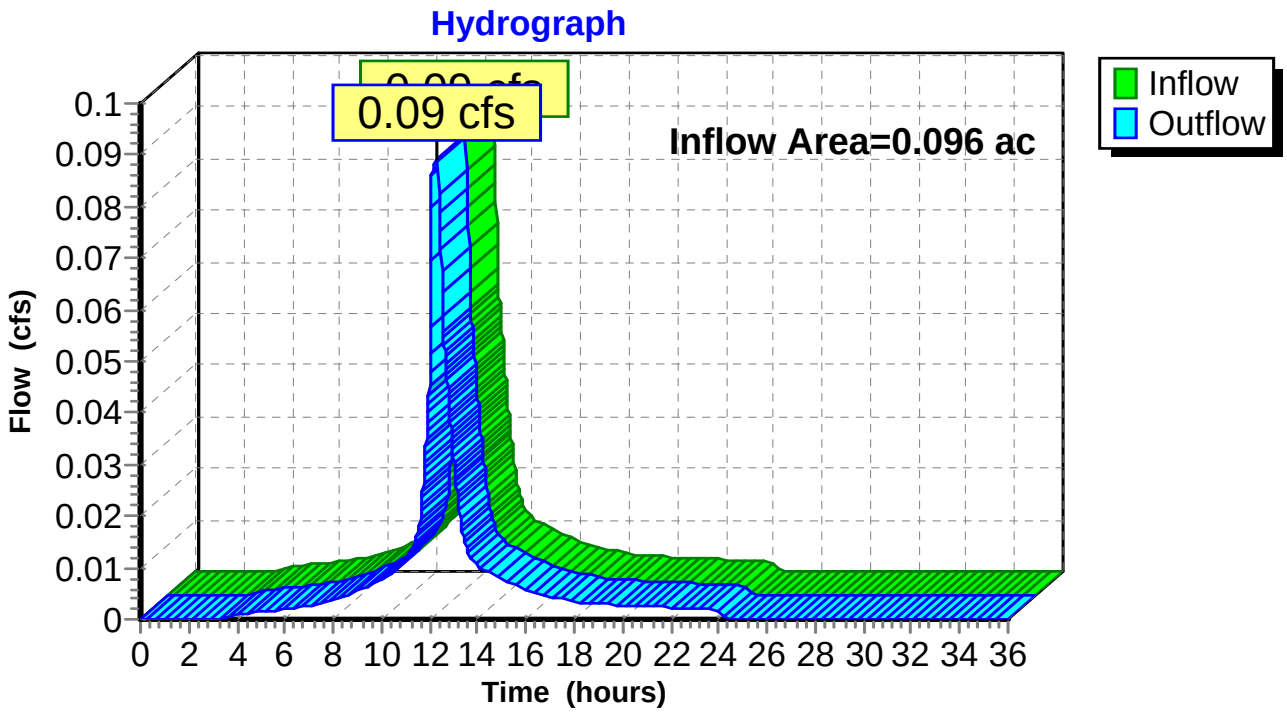
Summary for Reach 1R: POI#1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.096 ac, 70.59% Impervious, Inflow Depth = 1.76" for 2-year event
Inflow = 0.09 cfs @ 12.27 hrs, Volume= 0.014 af
Outflow = 0.09 cfs @ 12.27 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs

Reach 1R: POI#1



Summary for Pond 1P: Rain Garden

Inflow Area = 0.056 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-year event
Inflow = 0.18 cfs @ 12.07 hrs, Volume= 0.013 af
Outflow = 0.09 cfs @ 12.20 hrs, Volume= 0.013 af, Atten= 50%, Lag= 7.7 min
Primary = 0.09 cfs @ 12.20 hrs, Volume= 0.013 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Peak Elev= 54.63' @ 12.20 hrs Surf.Area= 319 sf Storage= 94 cf

Plug-Flow detention time= 19.6 min calculated for 0.013 af (99% of inflow)
Center-of-Mass det. time= 15.0 min (771.2 - 756.1)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	256 cf	**Water Quality Volume (Prismatic)** Listed below (Recalc)
#2	52.50'	20 cf	**Loam/Soil Filter Media (Prismatic)** Listed below (Recalc) 200 cf Overall x 10.0% Voids
#3	51.00'	60 cf	**Crushed Stone (Prismatic)** Listed below (Recalc) 150 cf Overall x 40.0% Voids
		336 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.50	100	0	0
55.00	175	69	69
56.00	200	188	256

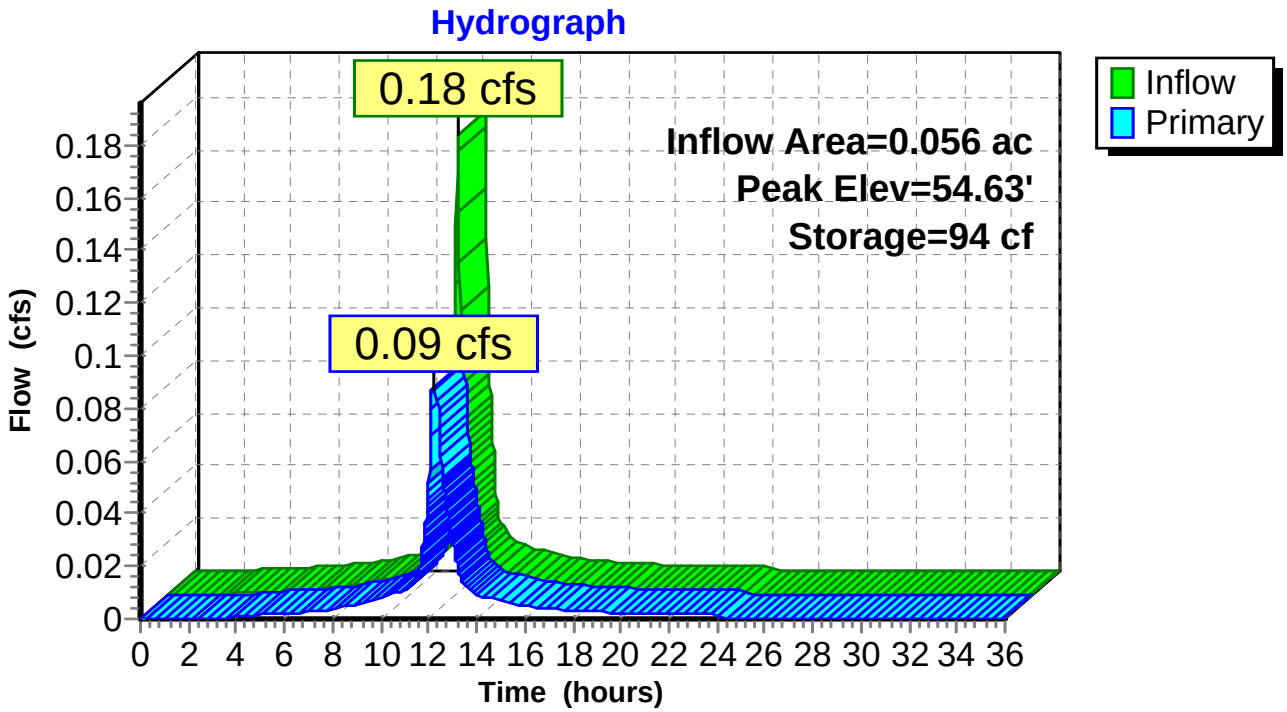
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
52.50	100	0	0
54.50	100	200	200

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	100	0	0
52.50	100	150	150

Device	Routing	Invert	Outlet Devices
#1	Primary	51.00'	**6.0" Round Culvert** L= 10.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 51.00' / 50.90' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	55.00'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	51.10'	**0.3" Vert. Orifice/Grate** C= 0.600
#4	Device 1	51.10'	**1.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.09 cfs @ 12.20 hrs HW=54.63' (Free Discharge)
└─**1=Culvert** (Passes 0.09 cfs of 1.53 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  ├─**3=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.03 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.08 cfs @ 8.97 fps)

Pond 1P: Rain Garden



Time span=0.00-36.00 hrs, dt=0.02 hrs, 1801 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: Roof Area Runoff Area=2,457 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.26 cfs 0.021 af

Subcatchment 2S: Land/Hardscaping Runoff Area=1,711 sf 28.35% Impervious Runoff Depth=0.73"
Tc=5.0 min CN=54 Runoff=0.02 cfs 0.002 af

Reach 1R: POI#1 Inflow=0.15 cfs 0.023 af
Outflow=0.15 cfs 0.023 af

Pond 1P: Rain Garden Peak Elev=55.04' Storage=156 cf Inflow=0.26 cfs 0.021 af
Outflow=0.14 cfs 0.020 af

Total Runoff Area = 0.096 ac Runoff Volume = 0.023 af Average Runoff Depth = 2.87"
29.41% Pervious = 0.028 ac 70.59% Impervious = 0.068 ac

Summary for Subcatchment 1S: Roof Area

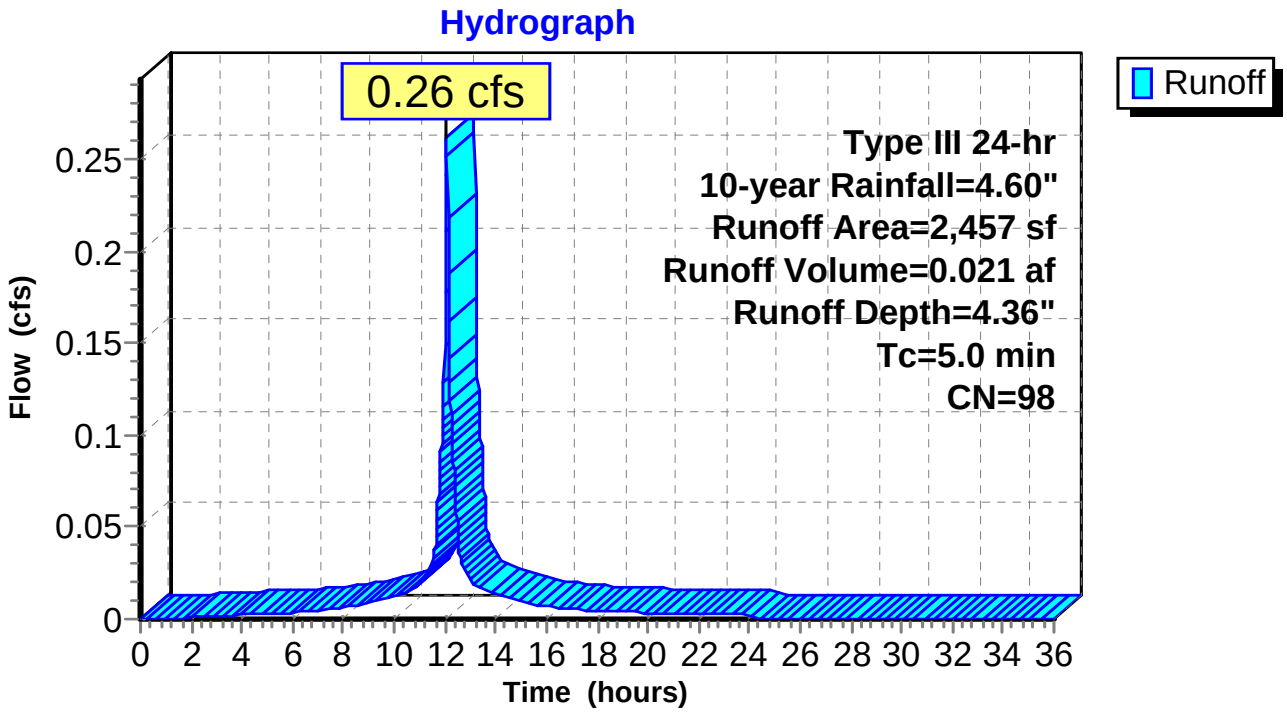
Runoff = 0.26 cfs @ 12.07 hrs, Volume= 0.021 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,457	98	Building
	2,457		100.00% Impervious Area

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

Subcatchment 1S: Roof Area



Summary for Subcatchment 2S: Land/Hardscaping

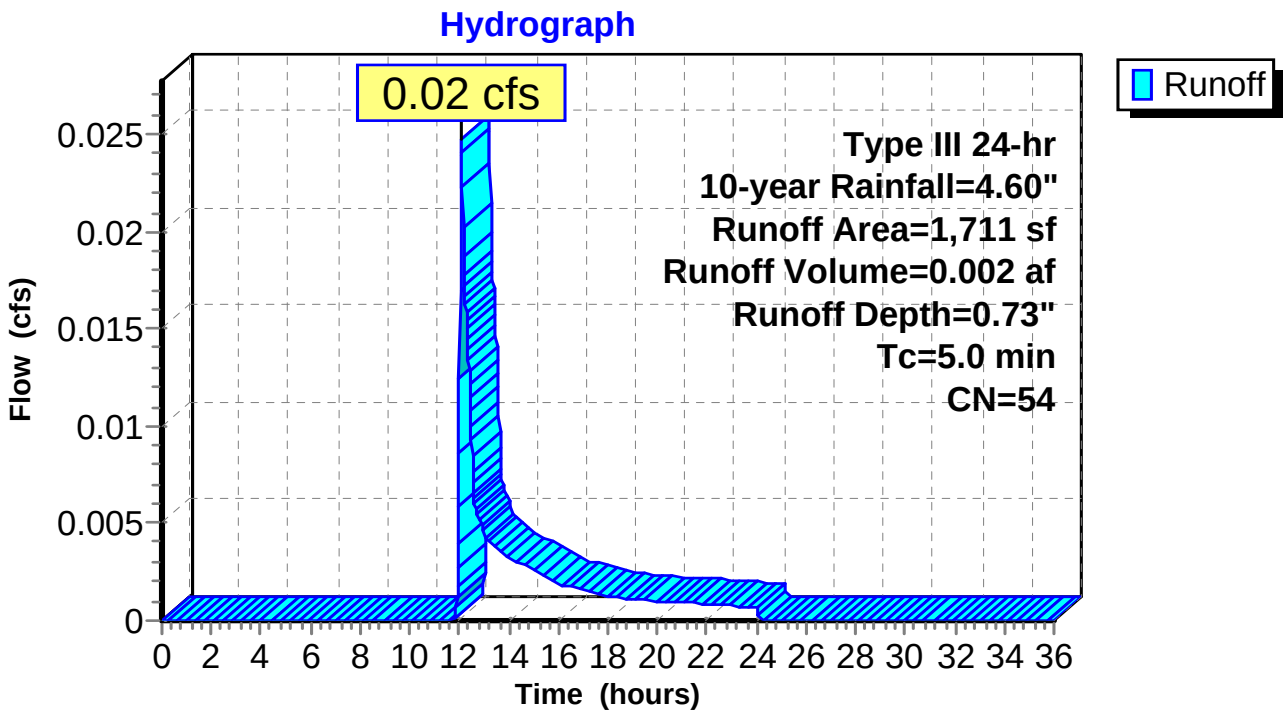
Runoff = 0.02 cfs @ 12.10 hrs, Volume= 0.002 af, Depth= 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	365	98	Stairs/Sidewalks
*	120	98	Patio
	926	39	>75% Grass cover, Good, HSG A
	300	32	Woods/grass comb., Good, HSG A
	1,711	54	Weighted Average
	1,226		71.65% Pervious Area
	485		28.35% Impervious Area

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

Subcatchment 2S: Land/Hardscaping



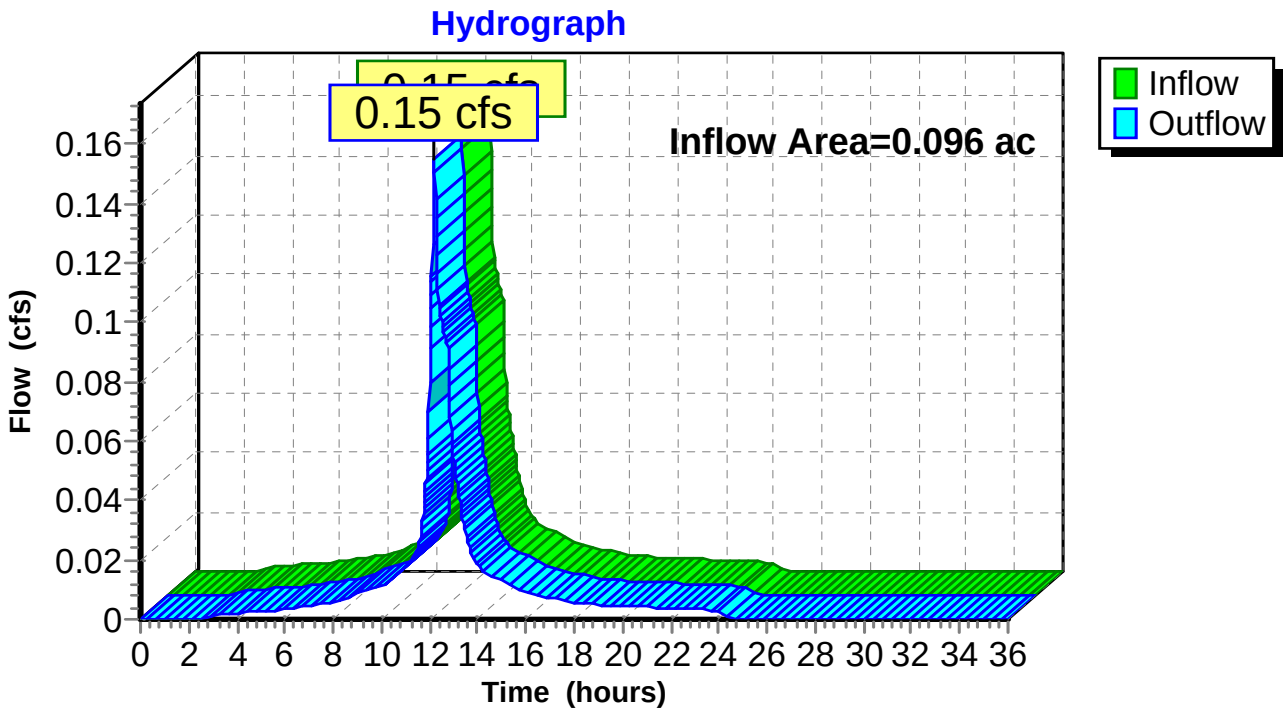
Summary for Reach 1R: POI#1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.096 ac, 70.59% Impervious, Inflow Depth = 2.86" for 10-year event
Inflow = 0.15 cfs @ 12.19 hrs, Volume= 0.023 af
Outflow = 0.15 cfs @ 12.19 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs

Reach 1R: POI#1



Summary for Pond 1P: Rain Garden

Inflow Area = 0.056 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-year event
Inflow = 0.26 cfs @ 12.07 hrs, Volume= 0.021 af
Outflow = 0.14 cfs @ 12.19 hrs, Volume= 0.020 af, Atten= 48%, Lag= 7.2 min
Primary = 0.14 cfs @ 12.19 hrs, Volume= 0.020 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Peak Elev= 55.04' @ 12.19 hrs Surf.Area= 376 sf Storage= 156 cf

Plug-Flow detention time= 18.9 min calculated for 0.020 af (99% of inflow)
Center-of-Mass det. time= 15.9 min (764.4 - 748.5)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	256 cf	**Water Quality Volume (Prismatic)** Listed below (Recalc)
#2	52.50'	20 cf	**Loam/Soil Filter Media (Prismatic)** Listed below (Recalc) 200 cf Overall x 10.0% Voids
#3	51.00'	60 cf	**Crushed Stone (Prismatic)** Listed below (Recalc) 150 cf Overall x 40.0% Voids
		336 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.50	100	0	0
55.00	175	69	69
56.00	200	188	256

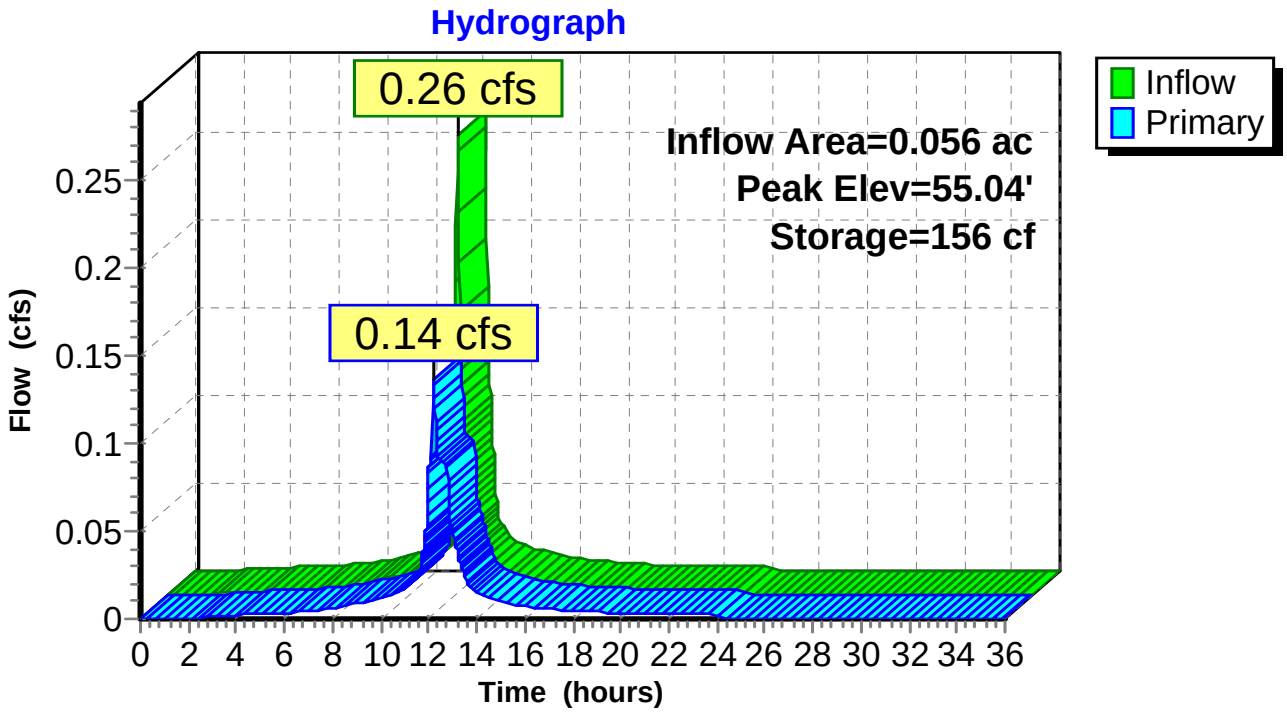
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
52.50	100	0	0
54.50	100	200	200

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	100	0	0
52.50	100	150	150

Device	Routing	Invert	Outlet Devices
#1	Primary	51.00'	**6.0" Round Culvert** L= 10.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 51.00' / 50.90' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	55.00'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	51.10'	**0.3" Vert. Orifice/Grate** C= 0.600
#4	Device 1	51.10'	**1.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.13 cfs @ 12.19 hrs HW=55.04' (Free Discharge)
└─**1=Culvert** (Passes 0.13 cfs of 1.62 cfs potential flow)
  ├─**2=Orifice/Grate** (Weir Controls 0.04 cfs @ 0.63 fps)
  ├─**3=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.54 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.09 cfs @ 9.49 fps)

Pond 1P: Rain Garden



Time span=0.00-36.00 hrs, dt=0.02 hrs, 1801 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: Roof Area Runoff Area=2,457 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=0.33 cfs 0.026 af

Subcatchment 2S: Land/Hardscaping Runoff Area=1,711 sf 28.35% Impervious Runoff Depth=1.33"
Tc=5.0 min CN=54 Runoff=0.05 cfs 0.004 af

Reach 1R: POI#1 Inflow=0.33 cfs 0.030 af
Outflow=0.33 cfs 0.030 af

Pond 1P: Rain Garden Peak Elev=55.11' Storage=168 cf Inflow=0.33 cfs 0.026 af
Outflow=0.28 cfs 0.026 af

Total Runoff Area = 0.096 ac Runoff Volume = 0.030 af Average Runoff Depth = 3.82"
29.41% Pervious = 0.028 ac 70.59% Impervious = 0.068 ac

Summary for Subcatchment 1S: Roof Area

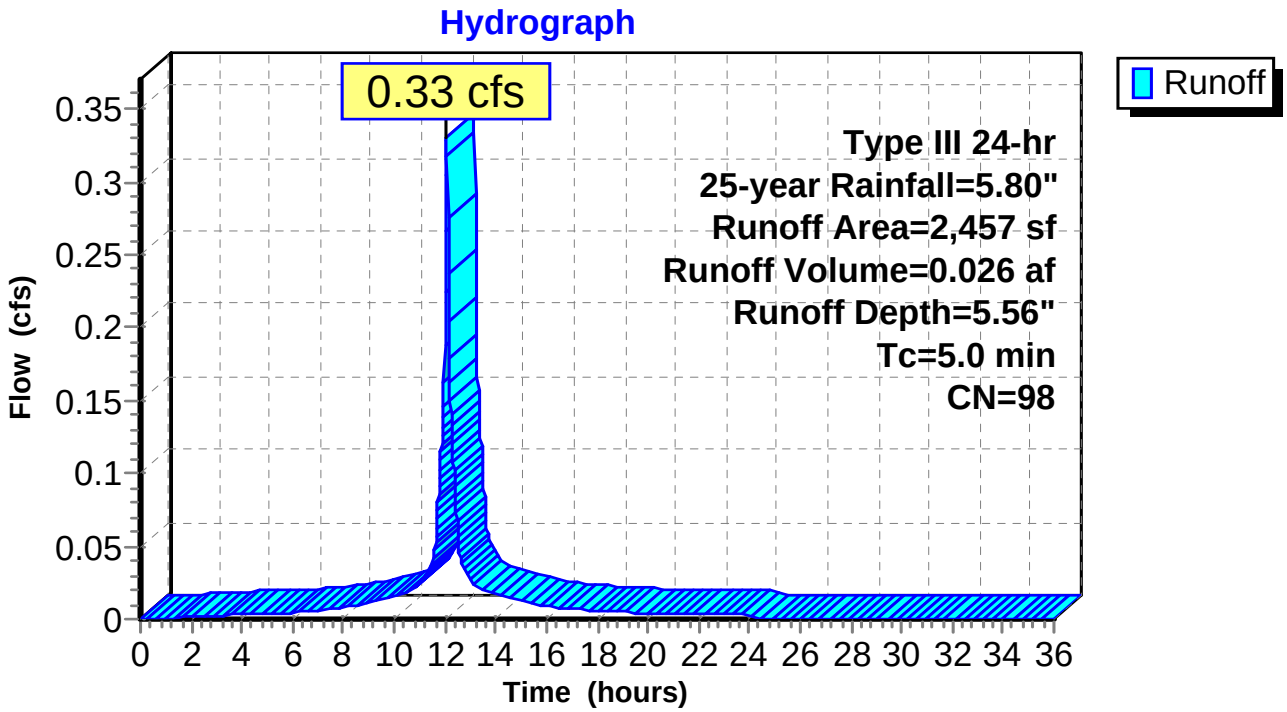
Runoff = 0.33 cfs @ 12.07 hrs, Volume= 0.026 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,457	98	Building
	2,457		100.00% Impervious Area

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

Subcatchment 1S: Roof Area



Summary for Subcatchment 2S: Land/Hardscaping

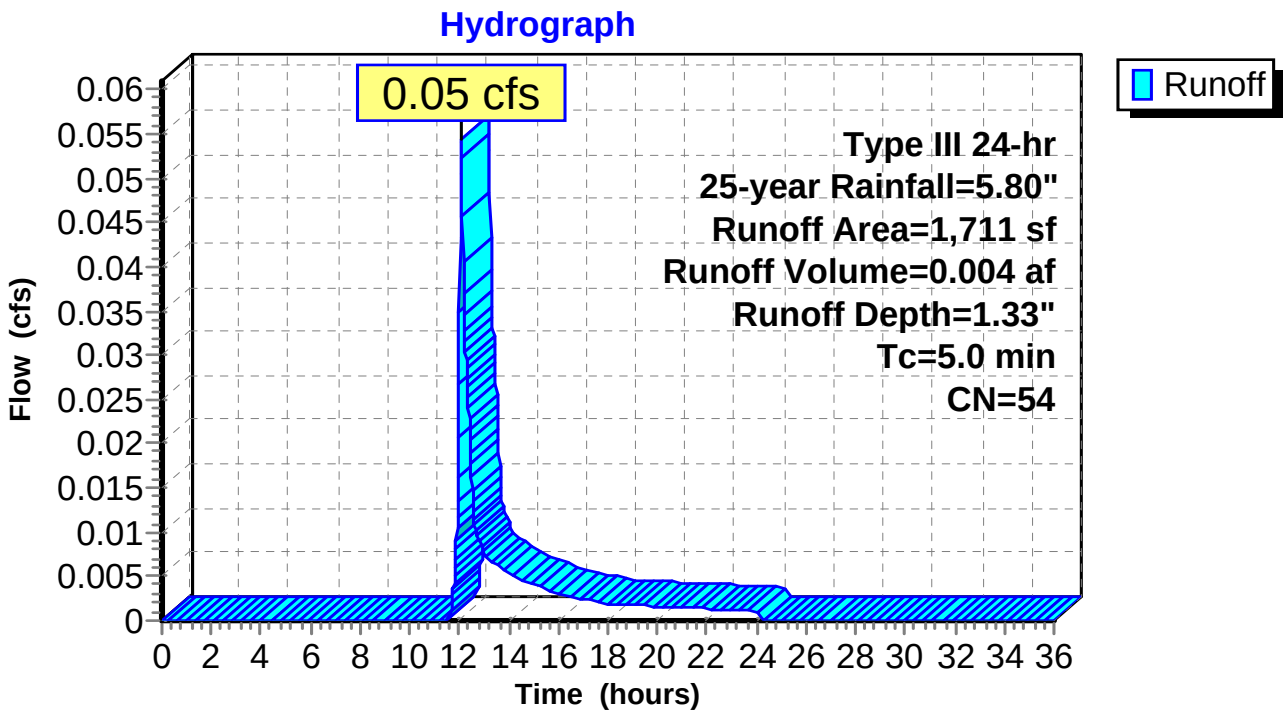
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth= 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	365	98	Stairs/Sidewalks
*	120	98	Patio
	926	39	>75% Grass cover, Good, HSG A
	300	32	Woods/grass comb., Good, HSG A
	1,711	54	Weighted Average
	1,226		71.65% Pervious Area
	485		28.35% Impervious Area

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

Subcatchment 2S: Land/Hardscaping



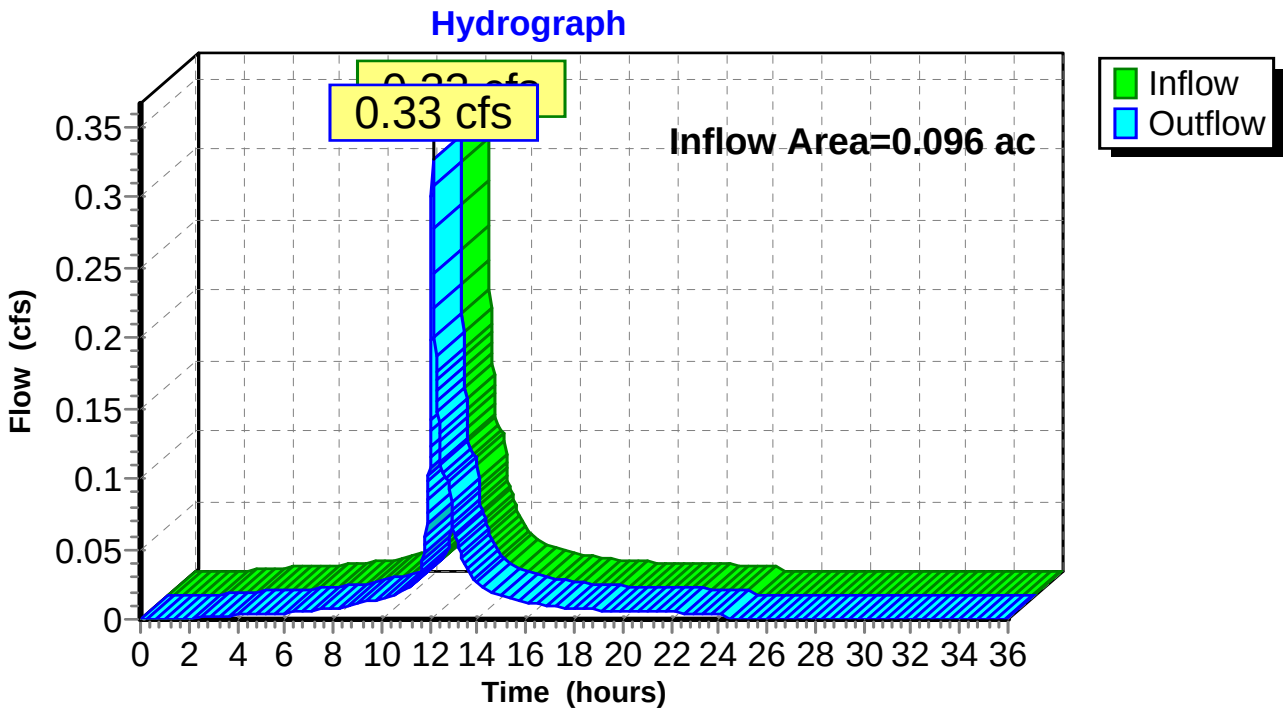
Summary for Reach 1R: POI#1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.096 ac, 70.59% Impervious, Inflow Depth = 3.81" for 25-year event
Inflow = 0.33 cfs @ 12.12 hrs, Volume= 0.030 af
Outflow = 0.33 cfs @ 12.12 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs

Reach 1R: POI#1



Summary for Pond 1P: Rain Garden

Inflow Area = 0.056 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-year event
Inflow = 0.33 cfs @ 12.07 hrs, Volume= 0.026 af
Outflow = 0.28 cfs @ 12.12 hrs, Volume= 0.026 af, Atten= 16%, Lag= 3.2 min
Primary = 0.28 cfs @ 12.12 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Peak Elev= 55.11' @ 12.12 hrs Surf.Area= 378 sf Storage= 168 cf

Plug-Flow detention time= 17.1 min calculated for 0.026 af (100% of inflow)
Center-of-Mass det. time= 14.7 min (759.4 - 744.7)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	256 cf	**Water Quality Volume (Prismatic)** Listed below (Recalc)
#2	52.50'	20 cf	**Loam/Soil Filter Media (Prismatic)** Listed below (Recalc) 200 cf Overall x 10.0% Voids
#3	51.00'	60 cf	**Crushed Stone (Prismatic)** Listed below (Recalc) 150 cf Overall x 40.0% Voids
		336 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.50	100	0	0
55.00	175	69	69
56.00	200	188	256

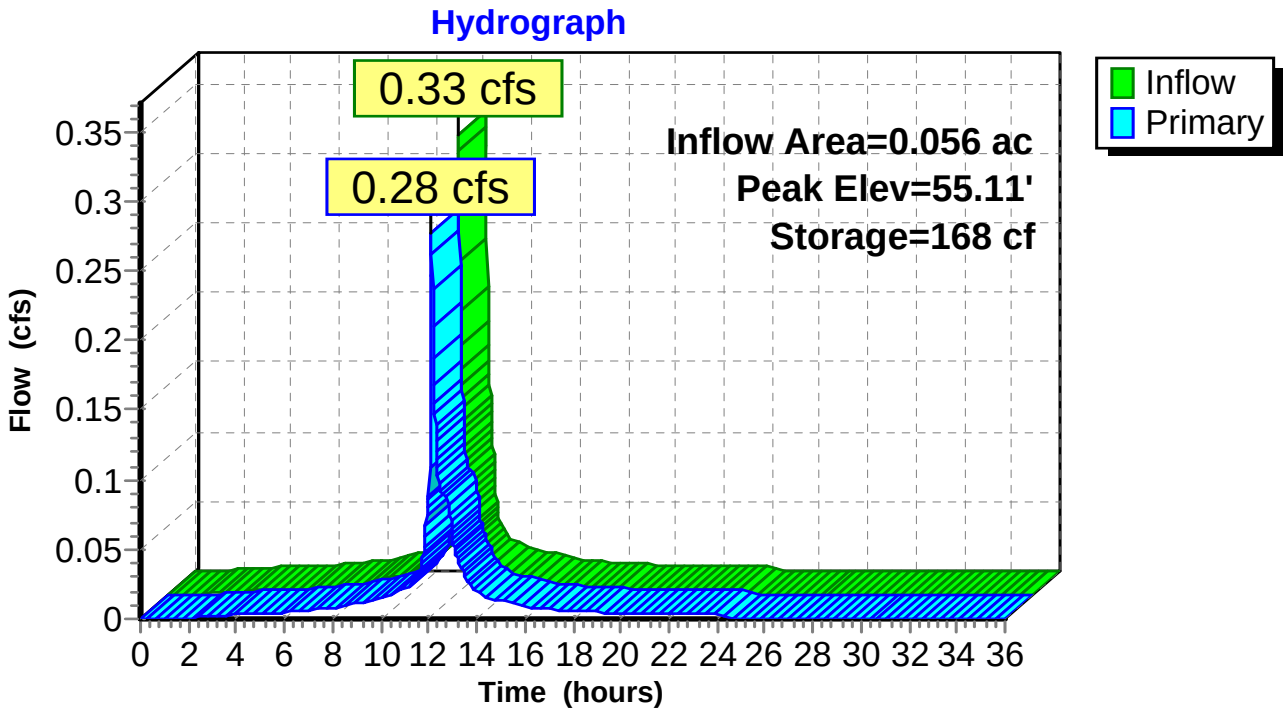
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
52.50	100	0	0
54.50	100	200	200

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	100	0	0
52.50	100	150	150

Device	Routing	Invert	Outlet Devices
#1	Primary	51.00'	**6.0" Round Culvert** L= 10.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 51.00' / 50.90' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	55.00'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	51.10'	**0.3" Vert. Orifice/Grate** C= 0.600
#4	Device 1	51.10'	**1.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.27 cfs @ 12.12 hrs HW=55.11' (Free Discharge)
└─**1=Culvert** (Passes 0.27 cfs of 1.64 cfs potential flow)
  ├─**2=Orifice/Grate** (Weir Controls 0.18 cfs @ 1.07 fps)
  ├─**3=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.62 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.09 cfs @ 9.57 fps)

Pond 1P: Rain Garden



Att. J

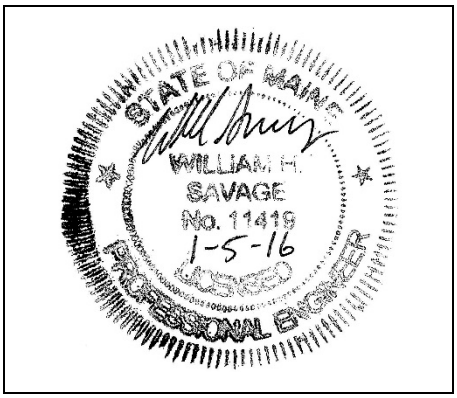
EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

Peninsula Property Development, LLC
31 Fore Street Redevelopment
31 Fore Street
Portland, Maine 04101

Prepared By:

Acorn Engineering, Inc.
158 Danforth Street
Portland, Maine 04102



January 2016

INTRODUCTION

Acorn Engineering, Inc. has been retained by Peninsula Property Development, LLC to provide civil engineering services for the proposed redevelopment of 31 Fore Street. The proposed project is a residential 4-unit redevelopment of an existing 3-unit building. The existing 3-story, wood frame building will be removed as part of the construction of the urban infill development.

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, dated March 2003.

1.0 EXISTING CONDITIONS

The proposed project site is located on the southeasterly corner of the intersection of Waterville and Fore Street. Portland has zoned this area as an R-6 Residential Zone. A boundary plan has been prepared by Owen Haskell, Inc. of Falmouth, Maine dated 9/24/15 and revised 10/17/15.

Abutting Uses:

- North R-6 Zone – Multi-Family Residential
- West R-6 Zone - Multi-Family Residential
- South R-6 Zone - Multi-Family Residential
- East B6 Zone – Portland Company

The project area is previously developed and comprised of grassed areas, rooftops, sidewalks, gravel driveways with parking. From south to north the grades are approximately 10% up to an existing retaining wall. The project area presently drains towards the intersection of Waterville and Fore Street before entering the municipal storm drain system.

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. 6/17/12 are met.

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	.17	.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 catch basins located in the Southeast and Southwest corners of the property.

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 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.

2.1.5 Waterville and Fore 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.

2.1.6 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.

2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14 gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.8 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.

2.1.9 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.

2.1.10 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.

2.1.11 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.

2.1.12 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.

2.1.13 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.

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 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.

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 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. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Commence installation of drainage infrastructure.
5. 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 Waterville.
6. Commence earthwork operations, wall and foundation installation.
7. Commence installation of utilities.
8. Continue earthwork and grading to subgrade as necessary for construction.
9. Complete installation of drainage infrastructure, as well as other utility work.
10. Complete remaining earthwork operations.
11. Install sub-base and base gravels in paved areas.
12. Install paving, curbing and brickwork.
13. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
14. Once the site is stabilized, 90% catch of grass has been obtained, or mulching of landscape areas is complete remove all temporary erosion control measures.
15. Touch up areas without a vigorous catch of grass with loam and seed.
16. Complete site signage and striping.
17. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those areas in which work is expected to be undertaken during the following 30 days.

The contractor shall re-vegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.

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

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.

3. Construction Management Plan

Project Address: 31 Fore Street

Project Description:

The proposed project is a residential 4-unit redevelopment of an existing 3-unit building. The existing 3-story, wood frame building will be removed as part of the construction of the urban infill development.

Project Team Summary:

Owner:	Peninsula Property Development, LLC
General Contractor:	Peninsula Property Development, LLC
Civil Engineer:	Acorn Engineering, Inc.
Architect:	Port City Architecture
Structural Engineer:	Structural Integrity

Timeline and Schedule:

Projected Start Date:	Spring 2016
Project Duration:	Approximately one year.
Projected Completion:	Spring 2017
Street Interruption:	During the installation of utilities within the street.

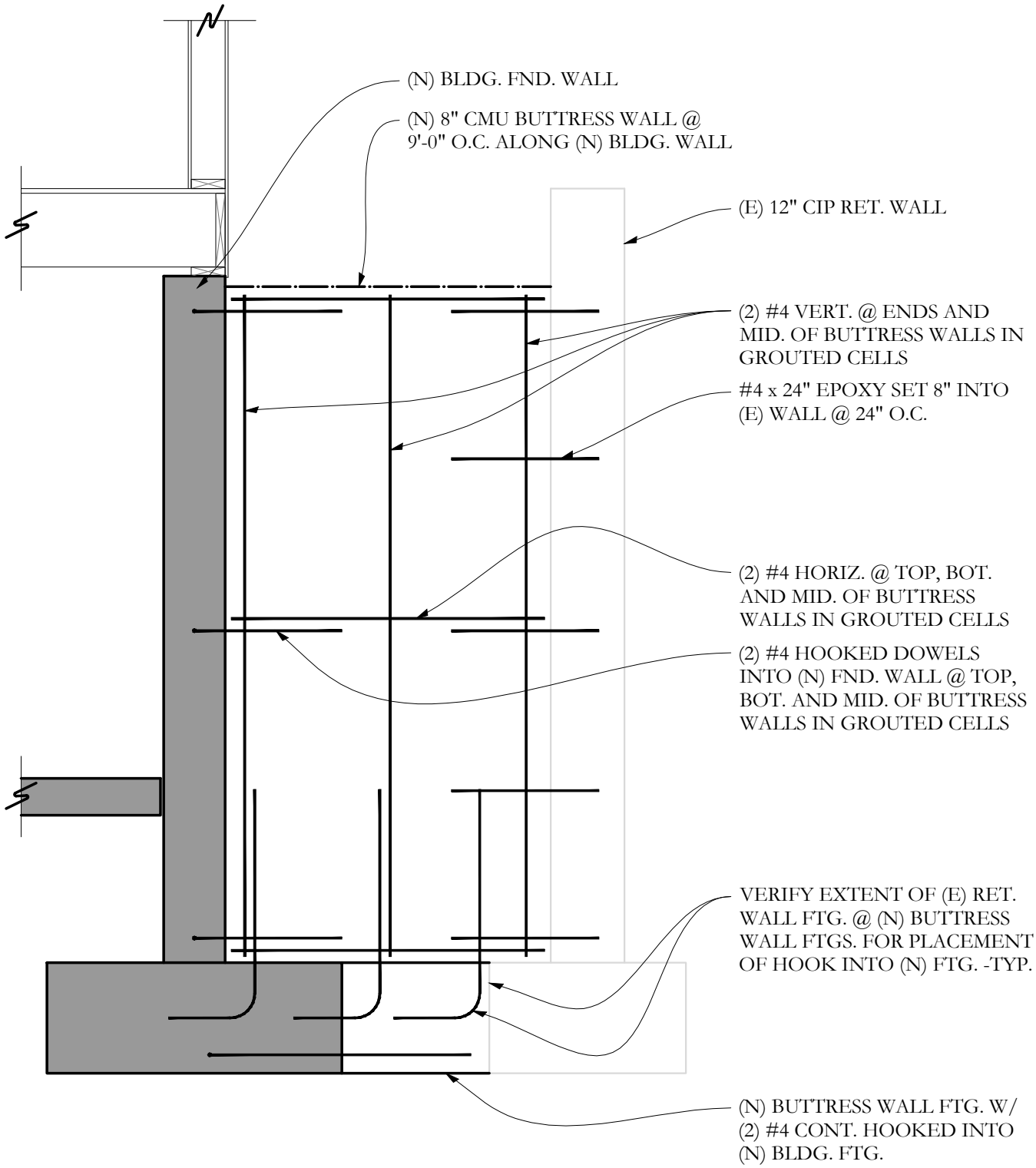
Emergency Contact:	Bob LeBlanc Cell (207) 776-0913

Work Hours:	7:00 am to 5:00 pm
Delivery Truck Access:	Contact Bob LeBlanc to coordinate.
Worker Parking:	On-street parking

Peninsula Property Development, LLC and their contractor will work with the City of Portland, and adjacent landowners to minimize any project impacts.

There will not be any need for offsite temporary easements related to construction. A cross-section by Structural Integrity on how the existing foundation wall will be utilized as shoring during construction to mitigate the need for offsite temporary construction easements is attached to this document.

The 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.



RETAINING WALL BUTTRESS

Structural Integrity Consulting Engineers, Inc.
77 Oak Street
Portland, ME, 04101
p. 207-774-4614
f. 866-793-7835
www.structuralinteg.com

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SI JOB# 16-0032

31 FORE ST.

Portland, ME

Scale: 1/2"=1'-0"

Date: 3/1/16

PCSK-1

PORT ▪ CITY
ARCHITECTURE
65 Newbury Street, Portland, ME 04101-4218 • Voice 207.761.9000 • www.portcityarch.com

31 FORE ST
R-6 Design Standards

Zoning Analysis:

City of Portland Zoning Codes: (See bold type for project specific information)
The project will meet all city of Portland zoning codes (listed below) as well NFPA and IBC.
Minimum lot size: 2,000 sf **Actual 4100 SF**
Minimum lot area/dwelling unit: 725 sf **5 Units Possible, 4 units proposed**
Minimum front yard setback (principal structure): 5 ft
Neighboring property is directly on front Property line, Average from City of Portland req and neighbor is 2'-6", As confirmed by Anne Machado of Zoning Dept, See attached Zone Analysis plan
Minimum rear yard setback (principal structure) : 10 ft **See attached Zone Analysis plan**
Minimum side yard setback (principal structure): 5 ft **See attached Zone Analysis plan**
Side yard on side street: 0 **See attached Zone Analysis plan**
Structure Step backs: Portions of a structure above 35ft shall be no closer than 10ft from the side property line and no closer than 15 ft from the rear property line when such property line abuts a residential zone. Does not apply to side yards on side street.
See Elevations and plans, This requirement does not apply to Circulation elements (Stairs, Elevators, Lobbies) As confirmed by Anne Machado of Zoning Dept
Maximum lot coverage: **60% 2460 SF allowed Proposed 2457 SF**
Maximum height: (Principal and attached accessory structure)45ft **Proposed 43'-6",with average grade 42'-0"**
(accessory structure)- 18ft
Landscape open space: 20% not include parking areas or other impervious surfaces
Maximum garage opening: (front facades) not to exceed the greater of 9ft or 40% of the front façade & ever exceed on a front façade 20ft. **No Garage opening on Front Side (Fore ST)**

ADA/Pedestrian Access
Current proposed plan and design will meet all ADA requirements as per HUD Fair Housing and Maine Human Rights Act. Exterior bike parking for visitors will be incorporated into the landscape.

City of Portland R-6 Design Standards

Principle A Overall Context

Scale and Form: The proposed project meets the current City of Portland R-6 height Limit of 45' from average grade. Existing buildings in the surrounding area are mostly between 3-4 stories, the proposed project is a total of 4 stories including the garage level.

Composition of Principal Facades: Existing buildings in the Area consist of a mixture of typical Portland Regional Architetcure, a modern Contemporary building (Modern design, Large open window/door fenestrations with modern cladding materials) directly behind on Waterville Street and across Waterville Street the Munjoy South Apartments (Small punched openings spaced sparingly on facades

with little to no Architectural Merit) development site with little relation to local design standards. The proposed building incorporates regional design with a contemporary design standard, Punched window openings as well as large/modern windows to take advantage of Casco Bay views that are similar to two buildings directly neighboring the proposed site.

Relationship to street: The proposed project respects the rhythm, spacing and orientation of existing buildings in the neighborhood.

Principle B Massing

Massing: The buildings massing of the proposed building meets the massing of existing buildings in the area (Rectalinear shapes**)**

Roof Forms: Roof Forms within a 2-block radius include Gables Pitched roofs as well as flat roofs.

Main Roofs and Subsidiary Roofs: The proposed building has a clear roof form.

Roof Pitch: Not Applicable

Façade Articulation: Balconies, Recessed entries, Covered Porches and Covered Entries are incorporated in the proposed design.

Garages: The garage entrance is located on the Waterville St side of the property, Fore Street is considered the front façade. Not Applicable

Principle C Orientation to the Street

Entrances: Main Entrance is clearly articulated to the front façade of the building on Fore St. Landscape features as well as building features clearly indicate the main entrance.

Visual Privacy: Visual privacy is met on main living spaces with the building being raised a story above public pedestrian paths.

Transition Spaces: Landscape features create transitions from Public to private.

Principle D Proportion and Scale

Windows: Windows are rectangular and vertically proportioned.

Fenestration: Doors, Windows and other openings are scaled appropriately per the buildings massing and exceed 12% of the total façade area.

Porches: Not applicable, no porches proposed on front façade.

Principle E Balance

The proposed design meets standardsE-1 through E-3. See Elevations and Renderings

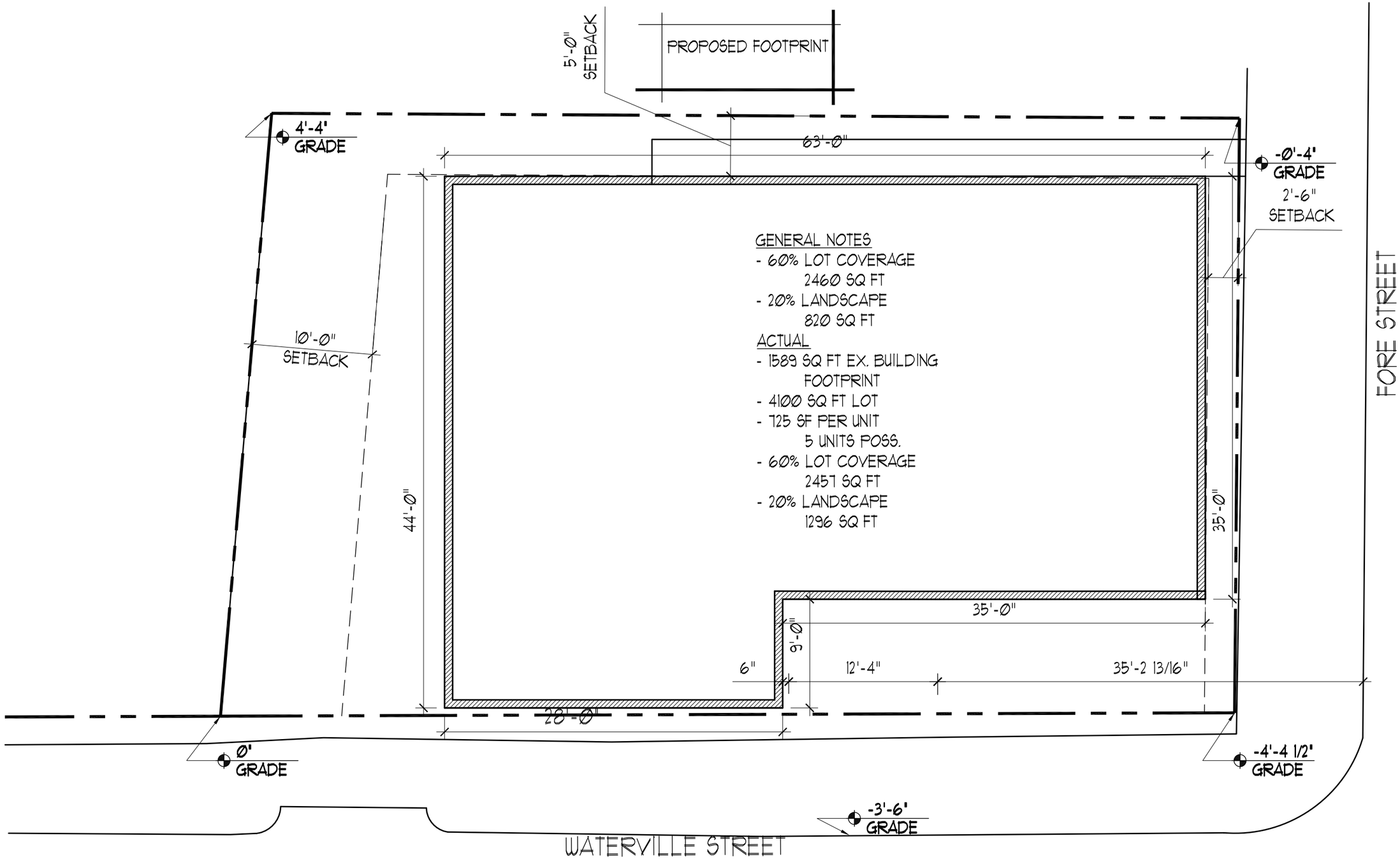
Principle F Articulation

The proposed design meets standards F-1 through F-8. See Elevations and Renderings

Principle G Materials

Materials: The proposed materials mainly consist of Dipped Cedar Shakes and Hardie Board or AZEK Trim. Existing buildings in the area materials consist of wood cladding, vinyl siding, Cedar shakes, Hardie Board and Brick.

The proposed design meets standards G-2 through G-5.



PORT ▫ CITY ARCHITECTURE

RESIDENTIAL MULTI-UNIT STUDY
31 FORE STREET

SETBACK ANALYSIS &
PROPOSED FOOTPRINT

Ref Dwg:	Scale: 1/16"-1'-0"	Issued :
		Revised :

PR

PORT CITY ARCHITECTURE 65 NEWBURY STREET PORTLAND, MAINE 04101 ph: 207.761.9000 fx: 207-761-2010

Att. M

PORT ▪ CITY
ARCHITECTURE
65 Newbury Street, Portland, ME 04101-4218 • Voice 207.761.9000 • www.portcityarch.com

31 FORE ST
ADA and Maine Human Rights Act

Since Accessibility requirements in IBC 2009 Chapter 11 were replaced with the Maine Human Rights Act. As per Maine Human Rights Act Part 12, Chapter 337, Subchapter 4, §4582-C. Standards for multifamily and public housing constructed on or after September 1, 2012 this project is defined as a "Covered Multifamily Dwellings" section 1 subsection C states:

> C. "Covered multifamily dwellings" means:
>
> (1) Buildings consisting of 4 or more units if such buildings have one or more elevators; and
>
> (2) Ground floor units in other buildings consisting of 4 or more units that have no elevators.
>
> [2011, c. 613, §14 (NEW); 2011, c. 613, §29 (AFF).]

The proposed project does have a full sized commercial elevator however does not contain any ground floor units. The next applicable section 3 states:

> A. The failure to design and construct covered multifamily dwellings subject to this section in such a manner that:
>
> (1) The public use and common use portions of the dwellings are readily accessible to and usable by people with physical or mental disabilities;
>
> (2) All the doors designed to allow passage into and within all premises within the dwellings are sufficiently wide to allow passage by persons in wheelchairs; and
>
> (3) All premises within the dwellings contain the following features of adaptive design:
>
> (a) An accessible route into and through the dwelling;
>
> (b) Light switches, electrical outlets, thermostats and other environmental controls in accessible locations;
>
> (c) Reinforcements in bathroom walls to allow later installation of grab bars; and
>
> (d) Usable kitchens and bathrooms such that an individual in a wheelchair can maneuver about the space; [2011, c. 613, §14 (NEW); 2011, c. 613, §29 (AFF).]

The proposed project meets all Maine Human Rights act Requirements with a full sized commercial Elevator installed to service all floors of the building. Access to the elevator is through the garage which is accessible from the street. All public doors are sized at a minimum of 3'-0" wide to allow wheel chair accessibility, ADA 2010 requirement is 30" clear. All hallways meet the ADA 2010 width requirement of 3'-0" in and outside of each unit. All light switches, electrical outlets, thermostats and environmental controls will be installed at accessible heights as per ADA 2010. Reinforcements in bathroom walls to allow future installation of grab bars will be installed per the Maine Human Rights Act and ADA 2010. All kitchens will be designed to be wheel chair accessible as per the Maine Human Rights Act and ADA 2010.

From: "Jason Pica" <jason@portcityarch.com>
To: "'Jean Fraser'" <JF@portlandmaine.gov>, "'William Savage'" <wsavage@acorn-engineering.com>
CC: "'Andrew Hyland'" <andy@portcityarch.com>, "'Olivia Dawson'" <odawson@acorn-engineering.com>
Date: 1/29/2016 10:42 AM
Subject: RE: ADA issues RE: Prelim review comments 31 Fore St

Good Morning, A couple of concerns on the ADA accessibility of the proposed project. I went to the site this morning and took some pitch measurements of the sidewalks around the site. On Fore St (The front street of the proposed project) has a pitch of around 1:6, legal ADA accessibility for a pitched slope is 1:12 (with a railing otherwise its 1:20), Technically a person in a wheel chair couldn't get to any entrance on Fore St based on these guidelines. The same issue exists on Waterville Street, a 1:8 pitch was measured and is also above the legal requirements. Unless the city of Portland is planning on re-grading the road, an ADA accessible approach is not possible to this site. The "Fair Housing Act Design Manual" states on page 14, part one "The Guidelines", requirement 1 states "

> REQUIREMENT 1
>
> *Accessible Building Entrance on an Accessible Route: Covered multifamily dwellings must have at least one building entrance on an accessible route,* ***unless it is impractical to do so because of terrain or unusual characteristics of the site.***

With the public sidewalks not meeting ADA accessibility, we believe the bold faced line above applies and the existing sidewalk makes an accessible entrance impractical. With that being said, if/when a Handicapped person comes to visit the building it would have to be by vehicle and they would have to pull up/pull in to the proposed garage, where street level access to the elevator is located. To alleviate the concerns about the garage being a second class entrance we would change the man door located on Waterville street to a more approachable entrance, A glass door with a canopy above, and a possible buzzer or PA system installed. We are already in the process of articulating the lower garage level exterior with some windows and a possible material change based on the notes you provided yesterday. So the garage would be day-lit, heated and also artificially well lit. Since these condos are meant to be on the higher end, the garage was already planned to be more than just a dark cold space, but a well lit and heated space. I hope this alleviates some concerns on the ADA accessibility. Thanks and let me know of any comments on this proposal.

Jason Pica

Senior Architectural Designer
Port City Architecture
(E) <mailto:jason@portcityarch.com> jason@portcityarch.com
(P) (207)761-9000
(C) (207)632-3523
<http://www.portcityarch.com/> www.portcityarch.com
65 Newbury St
Portland Maine 04101

Att. N

3-7-16 IBC AVERAGE GRADE CALCULATIONS SUMMARY
3-16-16 Zoning Building Height

FORE ST

REUSE EX. FOUNDATION WALL DURING CONSTRUCTION TO SUPPORT SOIL PER STRUCTURAL ENGINEER'S RECOMMENDATIONS AND MITGATE NEED FOR TEMPORARY EASEMENTS.

EX. TWL 69.68'
BWL 64.50'

USE SIDEWALK FOUNDATION WALL TO MATCH EX. GRADES AT PROPERTY LINE (TYP.)

SIX 7" RISERS

SIX 7" RISERS

FIRST FLOOR ENTRANCE 66.50'

63.00'

EX. 61.50'

64.50'

2%

64'

56.75'

56.75'

63'

GARAGE FLOOR ELEV. = 56.75'
FIRST FLOOR ELEV.= 66.50'

56.45'

GRADE AWAY FROM BUILDING (TYP)

56.75'
EX. 56.25'

56.75'
57.02'

56.75'

62'

61'

56.75'
57.08'

57.08'

56.70'

56.87'

56.77'

BOTTOM OF RG: 54.75'

55.90'

55.80'

EX. 60.55'
TWL 61.75'

EX. 59.49'

EX. 56.35'

EX. 55.40'

EX. 56.00'

RAIN GARDEN (PER DETAIL)

FOUNDATION DRAIN CONNECTION TO 6" SD
4" TO 6" WYE

CORE 6" CONNECTION TO EX. CATCH BASIN
ELEV. 50.50'

AVERAGE GRADE:

ZONING: USE FOUR BUILDING CORNERS

64.25'
59.49'
56.25'
+63.00'
243.24' / 4 = **60.81'**

FIRST FLOOR FFE: 66.50'
AVERAGE GRADE: 60.81'
5.69'

Building Heights
101.25'-60.81'=40.44'

IBC: USE LOW POINTS WITHIN 6' OF BUILDING UP TO THE PROPERTY LINE

INSTALL CATCH BASIN

64.50'
61.50'
54.75'
+61.75'
242.75' / 4 = **60.63'**

FIRST FLOOR FFE: 66.50'
AVERAGE GRADE: 60.63'
5.88'

EX.

WATERVILLE STREET

Att. O

ACORN ENGINEERING, INC.

Jean Fraser
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

March 1, 2016

Subject: 31 Fore Street Redevelopment
Comment Response Letter

On behalf of Peninsula Property Development, LLC we are pleased to respond to the comments provided by multiple reviewers.

To facilitate the review, City and reviewer comments are provided on separate pages below in italics followed by Acorn Engineering, Inc.'s response. The comments were attached to the City Planning Division's Memo dated February 5th, 2016.

Keith Gautreau – Submitted Comments 1/20/16

Comment -- *Emergency access is really good to this site being on the corner of Fore and Waterville.*

Response – We agree that this designated section of the property provides the best access for emergencies; thank you for your review.

Comment -- *Hydrant located right in front of this building will be adequate water supply for this 4-unit light hazard building.*

Response – Thank you for your review.

Comment -- *NFPA 101 2009 ed. Would allow a single means of egress in a sprinklered building up to 4 stories in height.*

Response – The Architect has confirmed that one means of egress is acceptable.

<u>David Senus, Civil Engineer Peer Review – 1/25/16 Email Correspondence</u>

Comment -- *The Application is preliminary. As such, we anticipate additional information and details will be provided with the final submittal.*

Response – The final submittal includes modifications as discussed in this review summary but also a landscaping plan, and updated subdivision plat.

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:*

a) Basic Standards: The written Plan included with the application addresses erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500. The plan sheets should reflect specific elements of the plan, including catch basin inlet protection, a stabilized construction entrance, perimeter controls, and notes regarding dust control and frequent street sweeping.

b) General Standards: The project will result in a net increase of impervious area of just below 1,000 SF, as such, the project is not required to include stormwater management features for stormwater quality control. The Applicant has proposed to construct a rain garden to capture and treat stormwater runoff. We find this to be an acceptable approach for stormwater management for the site. We request additional grading detail be added to the site plan in and around the rain garden to understand how the rain garden in-slopes will transition to the building wall and the adjacent sidewalk. Also, a stabilized discharge location for the roof water into the raingarden should be identified in the Final submittal.

c) Flooding Standard: The project will result in a net increase of impervious area of just below 1,000 SF, as such, the project is not required to include stormwater management features for stormwater quantity control. The Applicant has proposed to construct a rain garden to capture and filter stormwater runoff. This measure will help to reduce the rate of runoff from the site to the combined sewer system; as such, we find the project to be in conformance with the Flooding Standard.

Response – Thank you for your review. C-30 has been revised and updated to reflect greater grading detail in and around the rain garden as well as a stabilized location for the rainwater discharge. A detail of the rain garden with grades and stabilized discharges was also added to C-43.

Additional information regarding erosion control measures to be implemented, including catch basin inlet protection, stabilized construction entrance, perimeter controls, and dust control measures, are outlined in C-44 was added to C-30.

Comment -- *The Applicant has requested letters from utilities confirming capacity to serve the proposed development; evidence of confirmation of capacity to serve the proposed development should be provided upon receipt.*

Response – As part of the preliminary application, ability to serve requests were sent out to the Portland Water District, Central Maine Power, Unitil, Fairpoint Communications, and Time Warner Cable. We have since received responses from each of these companies and have incorporated their determinations and design requirements, if any, as necessary.

As addressed in the Planning Board memo for the February 9th meeting, the Wastewater Application for the City of Portland was revised and resubmitted for the Department of Public Services. The application was approved. Please refer to the attached ability to serve responses from Central Maine Power, Fairpoint Communications, Unitil and the Portland Water District.

Comment -- *In accordance with Section 2.6.9 of the City's Technical Manual, all new (sewer) laterals connecting to a combined sewer system shall have a back water valve. The back water valve should be located on private property and a detail should be provided.*

Response – As noted in C-20 of the Civil Plan Set (Note 5), there is a back water valve provided within the City right-of-way along Waterville Street for the sanitary sewer outlet to the combined sewer system. The valve assembly is detailed in C-43.

Comment -- *Pavement saw cut lines should be shown for the utility connections within Waterville Street.*

Response – Pavement saw cut lines for utilities have been added to C-20 of the Civil Plan Set; refer to the attachments for an updated plan set.

Comment -- *An Oil/Water separator unit is required to treat the garage floor drains prior to entry into the City's combined sewer*

Response – An Oil/Water separator has been added to C-20 and is described in greater detail in the Details portion of the attached plan set. The design of the Oil/Water separator was coordinated with the City Engineer - David Margolis-Pineo.

Comment -- *Future plans should indicate the location and connection point for the building foundation drain; this connection can be combined with the storm drain discharge from the site if preferable, but should not be combined with the sewer pipe discharge from the site.*

Response – C-30 has been updated to reflect the foundation drain connection to the 6" Stormdrain outlet from the rain garden; the stormwater flow then outlets to the existing catch basin on Waterville Street.

<u>Tom Errico – 2/3/16 E-mail Correspondence</u>

Comment -- *The proposed project does not meet City standards as it relates to corner clearance. City standards require 35 feet of clearance, and the project will be providing approximately 31 feet of clearance. Given that the project is providing a driveway on the lower volume street (not on Fore Street), providing increased separation with a nearby driveway, and site design factors, I find the driveway location to be acceptable and I support a waiver from City standards.*

Response – Thank you for your review. We agree with your conclusion and continue to request a waiver to this standard.

Comment -- *The aisle width for the parking lot is slightly wider than City standards. I support a waiver from City standards.*

Response – We are in agreement that the increase in aisle width will only increase internal parking mobility; the waiver is being requested as part of the attached applicant's waiver request.

Comment -- *The applicant shall provide a construction management plan for review and approval.*

Response – Acorn has updated the Construction Management Plan submitted with the Preliminary Application; it is attached to and is submitted as part of this response. The Construction Management Plan includes a detail from Structural Integrity on how the existing foundation wall will be utilized as shoring during construction to mitigate the need for offsite temporary construction easements.

Comment -- *On-street parking regulations appear to require changes with the project and will require City Council action. This comment is intended to notify the applicant of this requirement and will need to support City staff in preparation of the City Council packet.*

Response – We will continue to coordinate and support the City in making these amendments.

<u>David Margolis-Pineo – 1/29/16 Email Correspondence</u>

Comment – *Add State Plane Coordinates for the property corners and three foot offset monument to be set. Show the monument to be set on the Site Plan in addition to the Subdivision Plat.*

Response – Owen Haskell has provided the design team with a 1 ft. topographic survey that includes State Plane Coordinates and offset monuments; the updated survey is included in the final submission. The Subdivision Plat has been also updated to show the new survey and highlights the monuments.

Comment – *The proposed 12'-4" wide driveway on Waterville St. has an approximate 31' separation from the street corner as measured from the center of the drive to the street right of way (corner) of Fore St. Code requires 35'. Please try to make up the additional four feet by reducing the drive cut to 12', reduce the aisle width from 25'-8" to 24' and incorporate compact parking spaces (8' X 15') in an innovative manner.*

Response – Due to architectural constraints it is not feasible for the driveway to be moved, allowing for a maximum 31.26' from Fore Street without a significant redesign of the living spaces above the garage. The driveway was reduced from 12'-4" to 12' and moved 6" to be flush with the building edge from our prior submission to increase the setback by 8".

Jeff Tarling - Email Correspondence 2/4/16

Comment -- *The two new street trees proposed for Waterville Street should be 'Autumn Gold' Ginkgo 2" caliper, planted in 4 x 7' tree cut outs in the walk. Exact tree locations should match the 'in-between' spaces for any on-street parking to help avoid door openings into the tree trunk.*

Response – The street trees have been added and defined in the plant schedule as the Ginkgo 'Autumn Gold' in coordination with the developer and abutting property owners. The tree wells have been orientated so to not be impacted by on street parking space allocation as noted on L-1.

As addressed in the City Planning Board meeting on February 9th, the new street trees will also be planted within raised granite curb tree wells; the tree wells will serve to protect the tree root integrity against sidewalk snow removal processes and limit salt impact from Waterville Street.

Comment -- *The street tree along Fore Street should be protected during construction, any broken branches damaged should be pruned as part of the project.*

Response – The street tree along Fore Street is to remain and be protected as noted in C-10 and in accordance with the detail outlined in C- 41.

Comment -- *The area North or uphill of the project between the existing residential unit should receive landscape treatment. This should be in the form of trees / shrubs and ground treatment options of 'lawn' or 'groundcover'. The same for the space between the building and the next door unit on Fore Street. Vegetated buffer similar to existing should be considered for the proposed project.*

Response – A landscaping plan has been developed and is attached as part of the final submission. It includes landscaped areas along the Fore Street frontage, as part of the rain garden, along Waterville Street, and within the northernmost property setback. These areas are defined by a plant schedule.

All species were selected based on sun availability and durability with special attention to salt resistant for areas along Fore and Waterville Street; all species are also listed as preferred buffer species within the Maine DEP's Buffer Handbook Plant List.

Comment -- *Specific details on the rain garden are requested, if the project is to qualify for 'Stormwater' credits the project should follow Portland Water Resources 'rain garden' guidelines.*

Response – As per City requests, C-30 has been updated and revised to show greater detail in how the rain garden is to be implemented and graded; additional information is provided in C-43. The rain garden shall be populated by species as noted in the Plant Schedule on the landscaping plan. These species comply with those recommended and approved by the Maine DEP Best Management Practices guidelines.

Please let me know if you have any additional questions or comments.

Sincerely,

William H. Savage, P.E.
Principal - Project Manager
Acorn Engineering, Inc.

PC1

From: Denise Preisser <dpreisse@maine.rr.com>
To: Jean Fraser <JF@portlandmaine.gov>
Date: 2/6/2016 8:36 PM
Subject: Re: 31 Fore Street

Hello Jean,
Thank you for keeping me up to date on the plans of 31 Fore Street.

Overall, I think the plan submitted looks like it will fit in well in the neighborhood. Please add these comments for the Planning Board to consider and keep me posted on any changes. I would also like contact information of the person at the city to file complaints or concerns at any time during this construction process.

1. External buffers: An effective and permanent screening from neighboring properties and roadways;

Strengths:
•The limited number of windows on the side of the building abutting the 25 Fore Street condo and garden pathway is a real plus. The buildings are so close and this new design provides privacy for both buildings. As i interpret the plans the windows on this side will be only be for stairs and landings for each floor.

Concerns:
• The visitor/delivery entrance abutting 25 Fore Street property line does not seem to be an effective screening for privacy for 25 Fore decks and garden area. At this time our space is gated for security and privacy and this plan looks like anyone could walk up this side entrance and have access to our property. I want to make sure the developer makes provisions to compliment both properties, but also maintain the privacy and security for 25 Fore property that now exists. My first choice would be not to have an entrance on this side however, if that can not be addressed, I suggest fencing be added to define secure our property lines (like we currently have) and/or vegetation added that enhances the 5 foot space to be added the length of the building with the new footprint of this building.

• Demolition of the current 31 Fore property in regards to protecting the 25 Fore land on the uphill side from being disturbed and to prevent damage to our building structure must be highly observed. This land disturbance could really impact our property and wondering what protections we will have to prevent this? (i.e.. The new Bay House condo development affecting surrounding property foundations.)

Other comments:
•The curb appeal of the ground front and parking side areas needs special attention. This is a massive amount of siding that is a great wall for graffiti. Vegetation would enhance this since so much green space is being lost with this new building filling in grass area to the sidewalk.
• Brick sidewalks - tree roots from trees on this block of Fore Street have been a constant problem with lifting concrete as a pedestrian hazard. This has been a big safety issue and a city liability for this heavy foot traffic sidewalk for years. The removal of the tree on Waterville is a good idea with the insertion of tree wells added for the new trees to prevent this uprooting. I suggest removing the Fore Street tree as well and have the developer plant a new tree there with the same tree well to prevent this from happening again. I know the city has been wanting to improve the uneven sidewalks on Munjoy Hill and this would be a good start with this new addition to the neighborhood to do it right from the beginning.
•Construction vehicles and working hours to limit disruptions to the peaceful summers when all windows will be open.
• Parking is an issue and the denser the Hill gets the need for the city to protect residents on street parking rights is vital. I propose 2 hour parking limit signs on Waterville and (Fore Street residence side) and allow resident stickers to be issued.
• The antique fire post that now exists on the Fore/Waterville city sidewalk needs to be preserved. I would love to see this be saved and utilized somehow for the history of fires on Munjoy Hill.

Sincerely,
Denise Preisser

PC2

From: Mary Westort Casale <dirtgirl1@aol.com>
To: "jf@portlandmaine.gov" <jf@portlandmaine.gov>
Date: 2/9/2016 1:07 PM
Subject: 31 Fore St. / comments
Attachments: photo.JPG; Part.002

Jean ,
I just took this photo of the tree in question ,and clearly this tree is not an issue .It is established and has been like this for a number of years . If the city continues to take down trees to suit developers needs , I fear we will no longer be "the forest city " It appears as though it does interfere with the driveway plans . Also as the new R6 zoning barley leaves any open space on the lot for landscaping ,perhaps a tree or trees along Fore St at the front of the building would assist in meeting requirements
Thank you
Mary Casale
39 Waterville St
PS please forward these comments to the planning Board

PC3

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Re: Tree at 31 Fore St.

1 message

Mary Casale <dirtgirl1@aol.com>
To: Jean Fraser <jf@portlandmaine.gov>

Jean,
Glad to hear that Mr. Tarling considers this a nice healthy tree.
And if that's the case why should it be removed ? A "safe location " for the driveway,he states .
Then isn't it upon the developer to configure the driveway in a location that's safe.? Or should we continue to take down trees because they included more photos of where the trees are located next to a number of driveways on Waterville St. , I would say 5 ft or less next to drivew assuming that root growth was taken into account .
I think , if truth be told , the reason for taking down this healthy mature tree is that it's location would diminish the view from that side of the redesign , it will come down and the neighborhood loses again.
Also in reference to the comment that this is not a "view corridor " . I have included photos of the view down Waterville St. While it may no assure you that I and anyone living on this street would beg to differ.
Please forward comments and photos to the Planning Board. Thank you Jean.
Mary Casale

Sent from my iPad

On Mar 8, 2016, at 2:38 PM, Jean Fraser <jf@portlandmaine.gov> wrote:

Mary

Thank you for sending the photo- the Planning Board were concerned at the loss of the tree but there were members of the public wh

I will include this in the PB packet (I anticipate the PB Hearing will be the evening of March 22) - Jeff Tarling agrees it is a nice tree ar
this site would probably need to remove that tree in order to locate the driveway in a safe location.

I went back to Jeff after the PB Workshop and he feels that even if the driveway were relocated to miss the tree, that the tree would nc
roots.

Thank you
Jean

On Sun, Mar 6, 2016 at 3:09 PM, Mary Casale <dirtgirl1@aol.com> wrote:

> Hello Jean ,
> Don't know if it's too late but I found this picture of the tree in question. I think it gives a better idea of what it really looks like with f
> Please forward to the Planning Board .
> Thank you
> Mary Casale
>
> Sent from my iPad

--
Jean Fraser, Planner
City of Portland
874 8728

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. The
written in an e-mail could be released to the public and/or the media if requested.

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Tree at 31 Fore St.

1 message

Mary Casale <dirtgirl1@aol.com> Sun, Mar 6, 2016 at 3:09 PM
To: Jean Fraser <jf@portlandmaine.gov>

Hello Jean ,
Don't know if it's too late but I found this picture of the tree in question. I think it gives a better idea of what it really looks like with foliage . As you can see it is very healthy.
Please forward to the Planning Board .
Thank you
Mary Casale

Sent from my iPad

IMG_0883.JPG
1772K

Plan 1

31 FORE STREET REDEVELOPMENT

PENINSULA PROPERTY DEVELOPMENT, LLC
PORTLAND, MAINE

LEGEND:

EXISTING		PROPOSED
REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION	STRIPING	
	BRICK SIDEWALK	
	GREEN SPACE	
	EDGE OF EX. PAVEMENT	
	RESURFACED PAVEMENT	
	RECONSTRUCTED ROAD	
	UTILITY PAVEMENT CUTS	
	SEDIMENTATION BARRIER	
	UNDERGROUND CONDUIT	
	UNDERDRAIN	
	CURB	
	SIGN	
	LAMP OR LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	WATER VALVE	
	FIRE HYDRANT	
	SEWER MANHOLE	
	CATCH BASIN	
	DRAIN MANHOLE	
	INTERIOR DRAIN INLET	
X	OVERHEAD UTILITY LINE	
	UNDERGROUND ELECTRIC LINE	UGE/T/C
	UNDERGROUND WATER LINE	FW FW FW
82	CONTOURS	82
	GAS LINE	GAS
	STORM DRAIN LINE	
	SEWER LINE	S S
	EXISTING/PROPOSED BUILDING	
	PROPERTY LINE	
	FOUNDATION DRAIN	
	ROOF DRAIN	RD
	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	OHE/T/C
	UNDERGROUND ELECTRICAL	UGE

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CALL BEFORE YOU DIG
1–888–DIG–SAFE
1–888–344–7233

UTILITIES

SEWER:

PUBLIC SERVICES ENGINEERING DEPARTMENT
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: DAVID MARGOLIS–PINEO
(207) 874–8850

WATER:

PORTLAND WATER DISTRICT
225 DOUGLAS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: GLISSEN HAVU, E.I.
(207) 761–8310

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: TONY TANGUAY
(207) 458–1925

TELEPHONE:

FAIRPOINT COMMUNICATIONS
45 FOREST AVE
PORTLAND MAINE 04101
CONTACT: SCOTT DERRIG
(207) 797–1866

CABLE:

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: KELLY FOWLER
(207) 541–2536

PROJECT TEAM

DEVELOPER:

PENINSULA PROPERTY DEVELOPMENT, LLC
PORTLAND, MAINE
CONTACT: ROBERT LEBLANC
(207) 776– 0913

ARCHITECT:

PORT CITY ARCHITECTURE
PORTLAND, MAINE
CONTACT: ANDY HYLAND, MAINE LICENSED ARCHITECT
(207) 761–9000

SURVEYOR:

OWEN HASKELL, INC.
FALMOUTH, MAINE
CONTACT: ELLEN BREWER, P.L.S.
(207) 774–0424

STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
PORTLAND, MAINE
CONTACT: AARON JONES, P.E.
(207) 774–4614

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
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 APPLICATION
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APPLICATION	WHS	1/5/16
FINAL APPLICATION	WHS	3/1/16

REVISION	REV. DATE

DRAWING NAME: COVER SHEET
PROJECT NAME: 31 FORE STREET REDEVELOPMENT
CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11415 LICENSED 3-1-16 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 STAMPED "AS-BUILT".

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 FROM THE PLAN TITLED CONDOMINIUM PLAT BY OWEN HASKELL, INC. FOR PENINSULA PROPERTY DEVELOPMENT, DATED SEPTEMBER 24, 2015 AND REVISED ON OCTOBER 17TH, 2015.

8. EXISTING SPOT GRADE ELEVATIONS RECORDED BY THE OWNER.

9. SUBSURFACE DATA MAY BE OBTAINED FOR THE STRUCTURAL ENGINEER'S DESIGN. THE CONTRACTOR SHALL REQUEST AND REVIEW THE GEOTECHNICAL REPORT PRIOR TO SUBMITTING A BID. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT.

10. 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.

11. THE CONTRACTOR SHALL DEVELOP A CONSTRUCTION MANAGEMENT PLAN AND INCLUDE ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

12. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

13. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM STRUCTURES ADJACENT TO 31 FORE STREET. A COPY OF THE SURVEY SHALL BE PROVIDED TO THE OWNER.

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 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 A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF MAINE.

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 PENINSULA PROPERTY DEVELOPMENT 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 THE PROPOSED BUILDING CORNER LOCATIONS AND A TEMPORARY BENCHMARK WITHIN THE SITE.

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. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.

6. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.

7. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

8. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.

2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.

3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.

4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.

6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

2. CONTRACTOR TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.

3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.

4. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.

5. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.

6. CONTRACTOR TO PROVIDE 5'-6" OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.

7. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C-42.

8. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURES", MOST RECENT REVISION.

9. 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.

10. 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.

11. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.

12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

13. 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.

14. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.

15. 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.

16. 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 APPLICATION
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 12/5/15
FINAL APPLICATION	WHS 3/1/16

REVISION	REV. DATE

DRAWING NAME: NOTES SHEET

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

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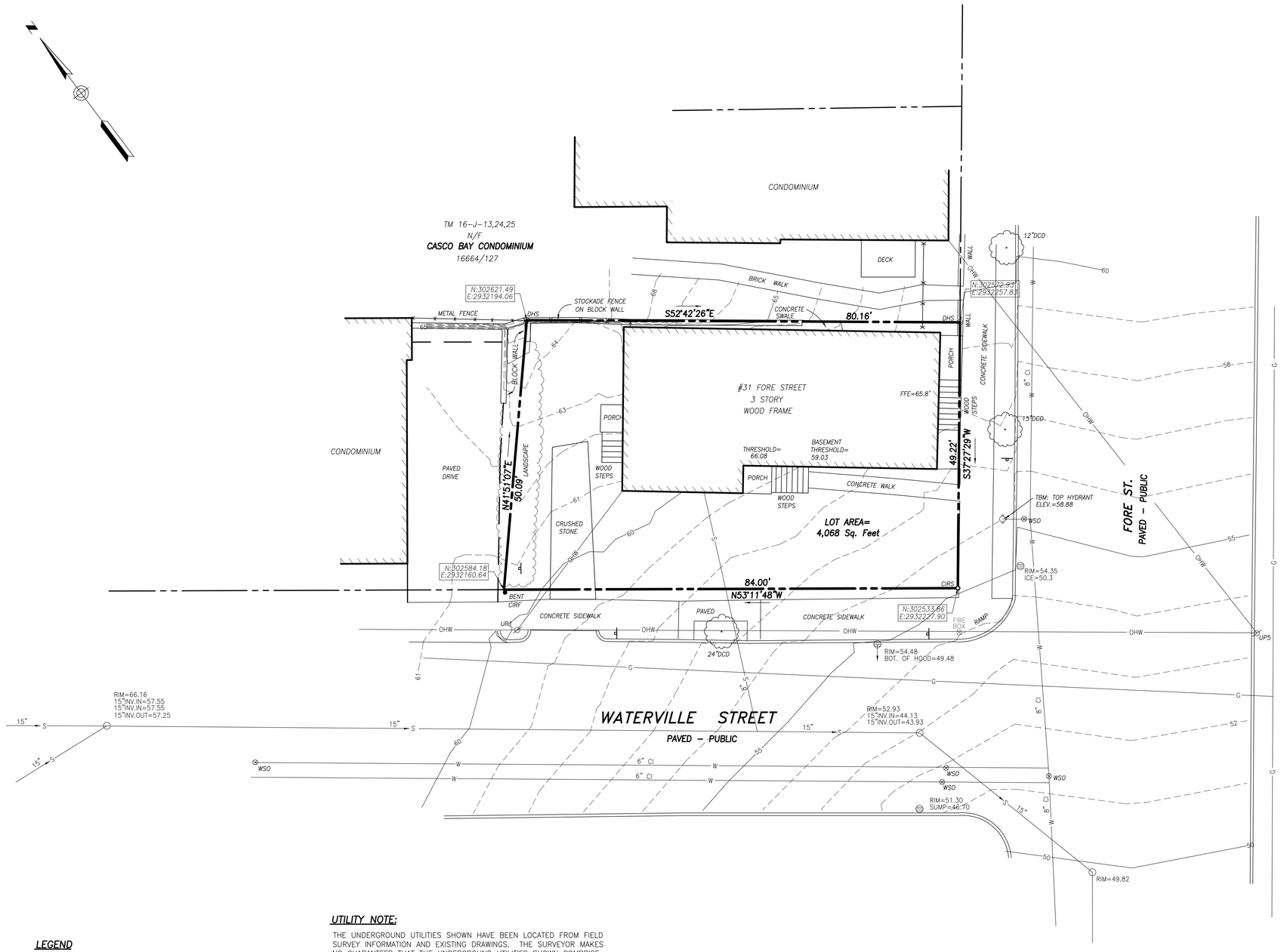
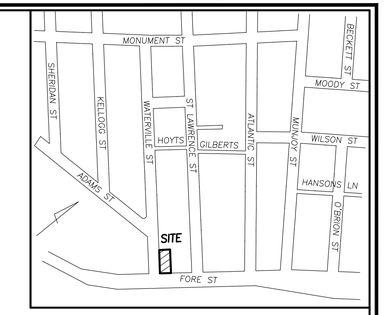
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
3-1-16
PROFESSIONAL ENGINEER

DRAWING NO.
C-02

Plan 2





LOCATION MAP

N.T.S.

LEGEND

- DHS — DRILL HOLE SET
- CIRS — CAPPED IRON ROD SET
- IRON PIPE FOUND
- WATER SHUTOFF
- SIGN
- DECIDUOUS TREE
- CATCHBASIN
- FENCE
- HYDRANT
- CURB
- UTILITY POLE
- MANHOLE
- W — WATER LINE
- OHW — OVERHEAD WIRE
- G — GAS LINE
- S — SEWER LINE

GRAPHIC SCALE

0 5' 10' 20' 40'

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.**

PLAN REFERENCES:

1. BOUNDARY AND TOPOGRAPHIC SURVEY ON ST. LAWRENCE STREET FOR GEORGE ROBIN WHITTEN DATED OCTOBER 27, 2011 BY OWEN HASKELL, INC.
2. STANDARD BOUNDARY SURVEY OF 1-3 ST. LAWRENCE STREET FOR CASCO BAY VENTURES DATED 2-20-2001 BY BACK BAY BOUNDARY, INC.
3. STANDARD BOUNDARY SURVEY ON WATERVILLE STREET, PORTLAND, MAINE MADE FOR LARRY DAVIS DATED SEPT. 12, 2000 BY OWEN HASKELL, INC.

NOTES:

1. OWNER OF RECORD: PENINSULA PROPERTY DEVELOPMENT LLC CCRD 32563/21
2. LOCUS IS SHOWN AS LOT 26 ON CITY OF PORTLAND ASSESSORS MAP 16 BLOCK J.
3. PROPERTY IS LOCATED IN CITY OF PORTLAND RESIDENTIAL ZONE R6.
4. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM MAINE WEST NAD83. CITY POINTS T111-38-146 (N:303177.39 E:2932043.79) & T113-78-203 (N:302835.35 E:2932458.96) USED.
5. BENCH MARK: CITY BENCHMARK HIGHEST POINT ON "M" MONUMENT AT NORTHWESTERLY CORNER OF ST. LAWRENCE AND FORE STREET, ELEVATION=69.35 NGVD 1929.

CERTIFICATE

OWEN HASKELL, INC. 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.

FEB. 16, 2016
DATE

JOHN W. SWAN, PLS NO. 1038

STATE OF MAINE
JOHN W. SWAN
1038
PROFESSIONAL LAND SURVEYOR

BOUNDRAY & TOPOGRAPHIC SURVEY

ON

FORE ST. AND WATERVILLE ST, PORTLAND, MAINE

MADE FOR OWNER OF RECORD

PENINSULA PROPERTY DEVELOPMENT LLC

71 WEST ST., PORTLAND, ME 04102

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

Drwn By	RS	Date	Job No.
Trace By	JLW	FEBRUARY 16, 2016	2015-189P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 10'	1

Plan 3

GENERAL NOTES:
1. ZONING ANALYSIS COMPLETED BY PORT CITY ARCHITECTURE.
2. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO UTILITY PLAN, SHEET C–20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING, DRAINAGE, & EROSION CONTROL PLAN, SHEET C–30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY PORT CITY ARCHITECTURE; REFER TO ARCHITECTURE PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.096 ACRE (4180 S.F.). R.O.W. WIDTHS FOR FORE STREET AND WATERVILLE STREET ARE 60–FEET AND 50–FEET RESPECTIVELY PER EXISTING CONDITIONS PLAN. REFER TO EXISTING CONDITIONS PLAN DATED 9/24/2015 AND REVISED 10/17/15.
6. LIGHTING PLAN

7. PER REVIEW OF THE CITY OF PORTLAND HISTORICAL DISTRICTS UPDATED 4/9/15, THE PROPOSED REDEVELOPMENT SITE IS NOT WITHIN ANY IDENTIFIED DISTRICTS.
8. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY OWEN HASKELL, INC
9. AS OF 10/17/2015, SITE IS BOUNDED BY THE FOLLOWING ZONES PER CITY OF PORTLAND GIS WEBSITE:
   9.1. R–6 ZONE TO THE NORTH, WEST, AND SOUTH ALONG ST LAWRENCE STREET AND WATERVILLE STREET
   9.2. B–6 ZONE TO THE EAST ALONG FORE STREET OCCUPIED BY PORTLAND COMPANY.

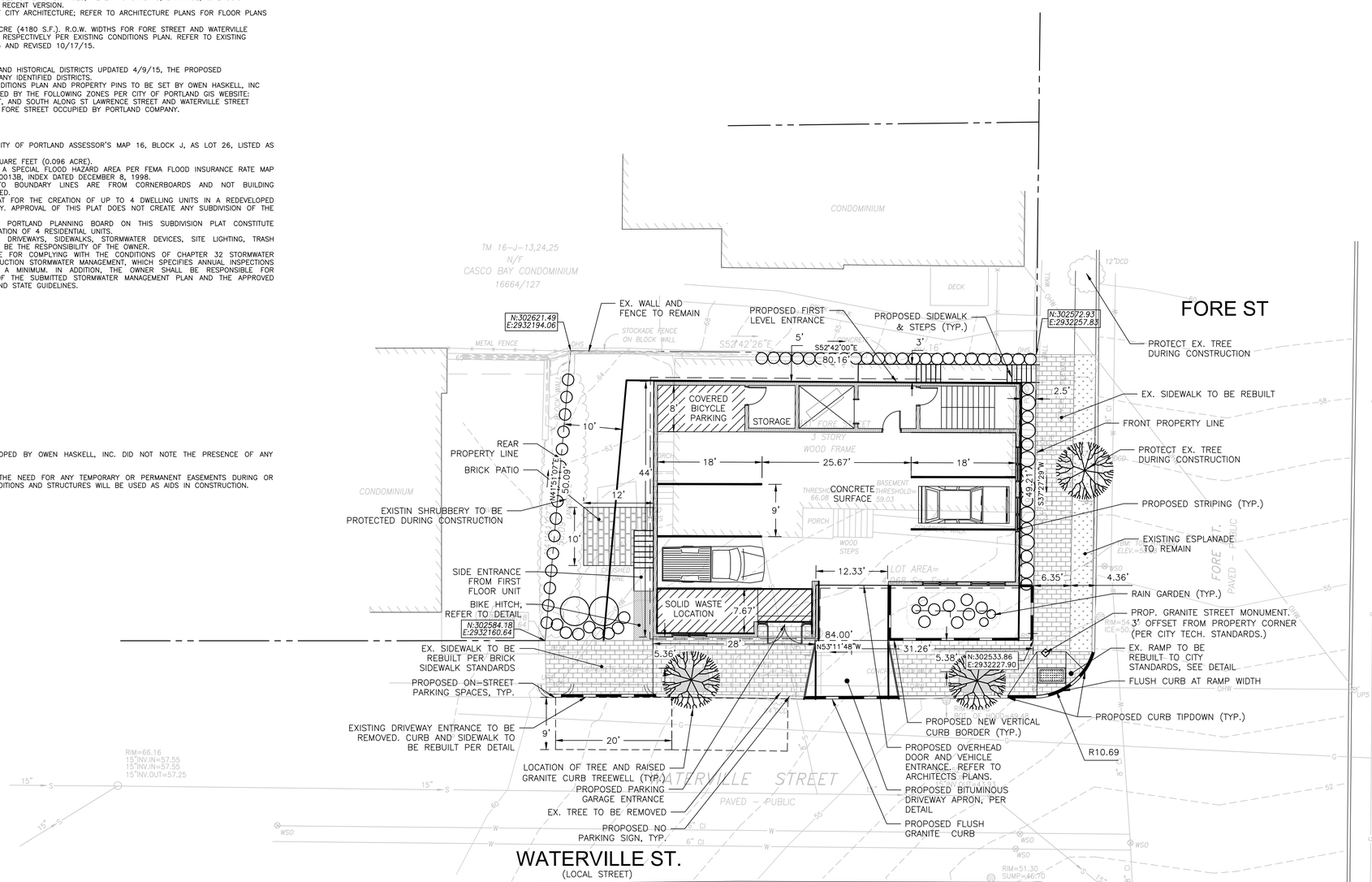
SITE PLAT NOTES:
1. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 16, BLOCK J, AS LOT 26, LISTED AS 31 FORE STREET.
2. AREA OF LOCUS PARCEL IS 4180 SQUARE FEET (0.096 ACRE).
3. LOCUS PARCEL DOES NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 230051 0013B, INDEX DATED DECEMBER 8, 1998.
4. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
5. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO 4 DWELLING UNITS IN A REDEVELOPED BUILDING ON THE SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
6. THE SIGNATURES OF THE CITY OF PORTLAND PLANNING BOARD ON THIS SUBDIVISION PLAT CONSTITUTE SUBDIVISION APPROVAL FOR THE CREATION OF 4 RESIDENTIAL UNITS.
7. MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, AND SNOW REMOVAL SHALL BE THE RESPONSIBILITY OF THE OWNER.
8. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST–CONSTRUCTION STORMWATER MANAGEMENT, 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.

WAIVERS & CONDITIONS OF APPROVAL:
TBD

EASEMENTS:

THE EXISTING CONDITIONS PLAN DEVELOPED BY OWEN HASKELL, INC. DID NOT NOTE THE PRESENCE OF ANY EXISTING EASEMENTS.

THE APPLICANT DOES NOT ANTICIPATE THE NEED FOR ANY TEMPORARY OR PERMANENT EASEMENTS DURING OR AFTER CONSTRUCTION; EXISTING CONDITIONS AND STRUCTURES WILL BE USED AS AIDS IN CONSTRUCTION.



LEGEND:

STRIPING
BRICK SIDEWALK
GREEN SPACE
CURB
PROPOSED BUILDING
PROPERTY LINE
PROPERTY SETBACK

SPACE AND BULK STANDARDS

ZONE: R6	REQUIRED	PROVIDED
MINIMUM LOT SIZE	2,000 SF	4,180 SF
MINIMUM STREET FRONTAGE	20'	146'–8"
FRONT YARD (AVG. SETBACK)	2'–6"	2'–6"
SIDE YARD	5'	5'
REAR YARD	10'	>15'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	15'
MAXIMUM LOT COVERAGE	60%	60%
MINIMUM LOT WIDTH	20'	>20'
MAXIMUM BUILDING HEIGHT	45'	41'
LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 5 UNITS	4 UNITS
RESIDENTIAL PARKING: 1 DWELLING PER UNIT	4 SPACES	6 SPACES
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES	2 SPACES/5 D.U. =1.6	2 SPACES
MAX. GARAGE OPENING	20'	12'–4"

UNIT TABULATION	
UNIT NUMBER	SIZE (S.F.)
1	742
2	876
3&4	1756

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	6
COMPACT WIDTH/LENGTH (8'X15')	0
TOTAL SPACES	6

SURVEYOR'S STATEMENT:

OWEN HASKELL, INC. HEREBY STATES EXCLUSIVELY TO THE CASCO BAYTO HERSON,
THAT THE PARCEL BOUNDARIES DEPICTED ON THIS PLAN ARE 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 MINIMUM STANDARDS OF
PROFESSIONAL LAND SURVEYORS STANDARDS OF PRACTICE.

THE SCALING OF THIS PLAN BY FEDERAL LAND SURVEYS IS ADEQUATE FOR THE PARCEL
BOUNDARIES AND EASEMENTS DEPICTED HEREON. THIS OFFICE SHALL NOT BE HELD
LIABLE FOR ANY MATTERS REGARDING THIS SUBMISSION PLAN OTHER THAN FOR THE
PARCEL BOUNDARIES AND EASEMENTS DEPICTED HEREON.

THIS PLAN IS NOT VALID WITHOUT THE SIGNATURE AND EMBOSSED SEAL OF THE
BELOW LISTED PROFESSIONAL LAND SURVEYOR WHO PREPARED THIS PLAN AS IT
MAY CONTAIN UNAUTHORIZED ALTERATIONS UNKNOWN TO THIS OFFICE.

OWEN HASKELL, INC.

JOHN W. SWAN, P.L.S. # *DATE:*

OWNER/SUBDIVIDER:

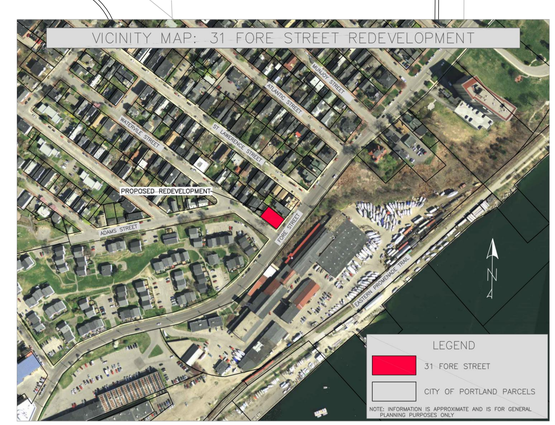
PENINSULA PROPERTY DEVELOPMENT LLC
PORTLAND, MAINE
CONTACT: ROBERT LEBLANC

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.

SURVEYOR:

OWEN HASKELL, INC.
FALMOUTH, MAINE
CONTACT: JOHN W. SWAN, P.L.S.



APPROVED: PORTLAND PLANNING BOARD
CHAIRPERSON: DATE:

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS
RECEIVED:
RECORDED IN
ATTEST:
REGISTRAR

ISSUED FOR	BY
PRELIM. APPLICATION	WHS 7/5/16

REVISION	REV. DATE

DRAWING NAME: SUBDIVISION PLAT
PROJECT NAME: 31 FORE STREET REDEVELOPMENT
CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775–2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE THE USER'S SOLE RISK AND RESPONSIBILITY TO INDEMNIFY ACORN ENGINEERING, INC.

FILE:	1068_CIVIL
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

DRAWING NO.
P-1

Plan 4

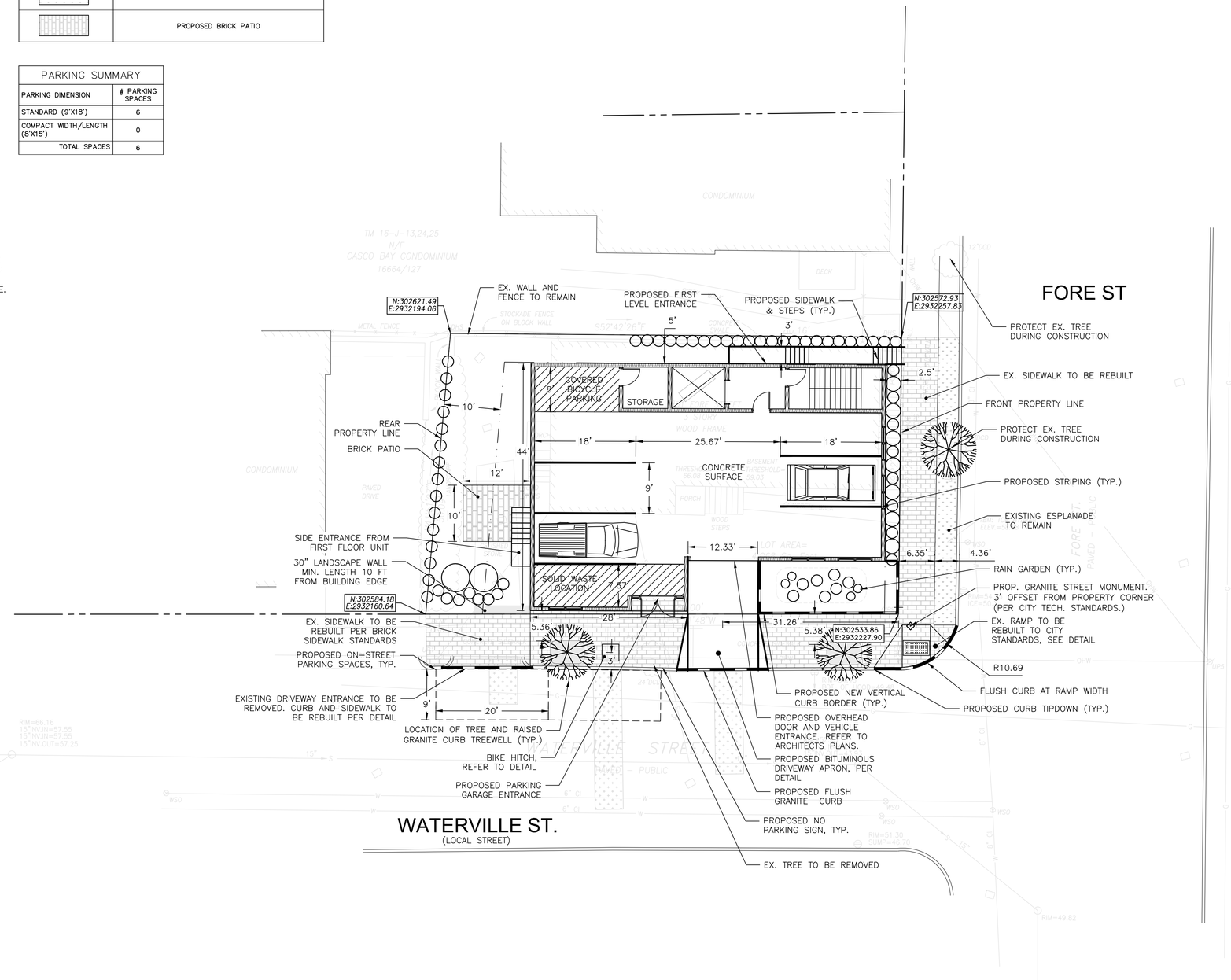
SPACE AND BULK STANDARDS		
ZONE: R6	REQUIRED	PROVIDED
MINIMUM LOT SIZE	2,000 SF	4,180 SF
MINIMUM STREET FRONTAGE	20'	146'-8"
FRONT YARD (AVG. SETBACK)	2'-6"	2'-6"
SIDE YARD	5'	5'
REAR YARD	10'	>15'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	15'
MAXIMUM LOT COVERAGE	60%	60%
MINIMUM LOT WIDTH	20'	>20'
MAXIMUM BUILDING HEIGHT	45'	41'
LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 5 UNITS	4 UNITS
RESIDENTIAL PARKING: 1 DWELLING PER UNIT	4 SPACES	6 SPACES
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES	2 SPACES/5 D.U. =1.6	2 SPACES
MAX. GARAGE OPENING	20'	12'-4"

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED BRICK SIDEWALK
	UTILITY PAVEMENT CUTS
	ESPLANADE TO REMAIN AND RESURFACED AS NECESSARY
	PROPOSED BRICK PATIO

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	6
COMPACT WIDTH/LENGTH (8'X15')	0
TOTAL SPACES	6

GENERAL NOTES:

1. CONTRACTOR SHALL PLACE NEW CURBING IN LOCATIONS WITHOUT EXISTING CURBING, IN ACCORDANCE WITH DETAIL. EXISTING TIPDOWNS ARE LOCATED AT ALL CURB CUTS. FOR PURPOSES OF BIDDING, CONTRACTOR SHALL NOTE THAT ALL TIPDOWNS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH DETAIL, AND THAT EXISTING TIPDOWNS MAY NOT MEET CITY OF PORTLAND STANDARD.
2. INTERIOR STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING SHALL BE WHITE UNLESS OTHERWISE NOTED.



FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APPLICATION	WHS	1/5/16
FINAL APPLICATION	WHS	3/1/16
REV. GRADES	WHS	3/7/16

DRAWING NAME: SITE PLAN

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, MODIFICATIONS, OR REPRODUCTIONS MADE WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2635

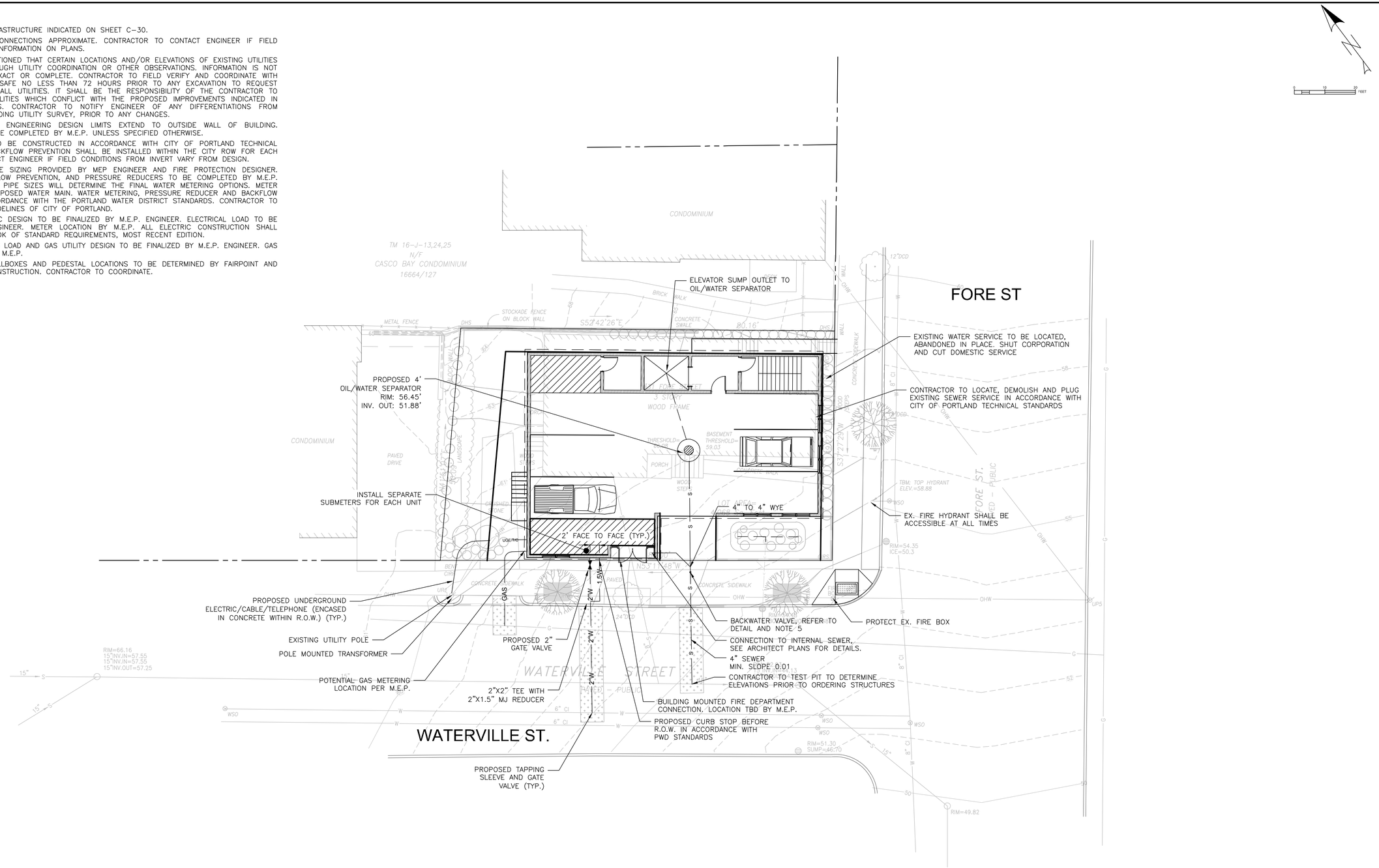
FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
3-1-16
PROFESSIONAL ENGINEER

DRAWING NO.
C-10

GENERAL NOTES:

1. STORMWATER DRAINAGE INFRASTRUCTURE INDICATED ON SHEET C-30.
2. LOCATION OF PROPOSED CONNECTIONS APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
3. 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.
4. 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.
5. SEWER: SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE CITY ROW FOR EACH SEWER CONNECTION. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY MEP ENGINEER AND FIRE PROTECTION DESIGNER. 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 SUB-METERING GUIDELINES OF 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 BY M.E.P. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION.
8. GAS UTILITIES: PROJECT GAS LOAD AND GAS UTILITY DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. GAS METERS TO BE LOCATED BY M.E.P.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY FAIRPOINT AND TIME WARNER PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE.



FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 12/28/15
FINAL APPLICATION	WHS 3/1/16

DRAWING NAME: UTILITY LAYOUT PLAN

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, WITHOUTTED BY OTHERS, SHALL BE DONE AT THE SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

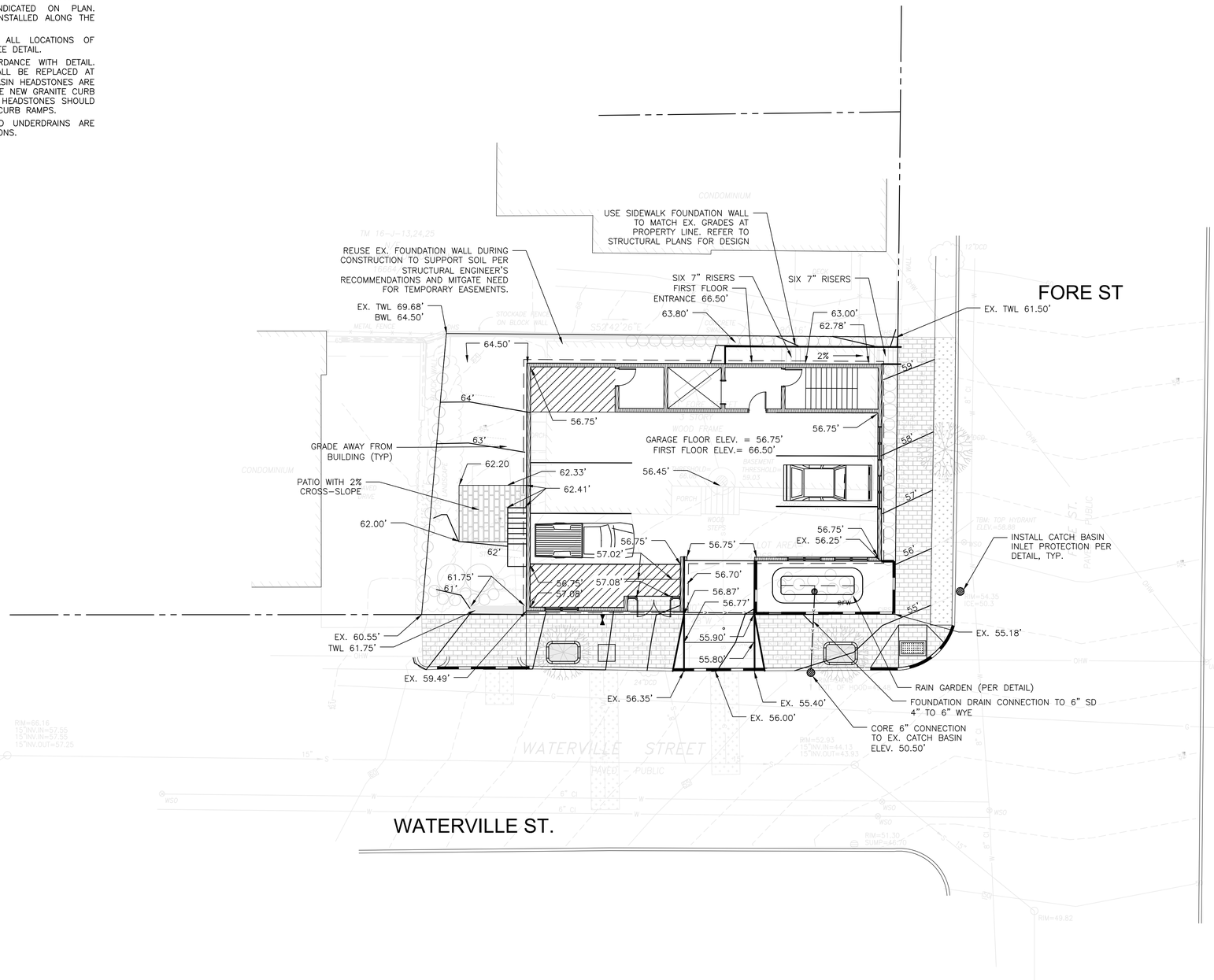
FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 3-1-16 PROFESSIONAL ENGINEER

DRAWING NO.
C-20

GENERAL NOTES:

1. REFER TO STRUCTURAL ENGINEER'S PLANS FOR FOUNDATION WALL DESIGN. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
2. STORM DRAIN MH INVERT APPROXIMATE. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
3. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
4. LOCATION OF PROPOSED SEDIMENTATION BARRIER IS INDICATED ON PLAN. CONTRACTOR TO ENSURE THAT SEDIMENTATION BARRIER IS INSTALLED ALONG THE DOWN-GRADIENT LOCATION OF DISTURBANCE, PER DETAIL.
5. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
6. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. IN INSTANCES WHERE CATCH BASIN HEADSTONES ARE TO BE REPLACED WITH TIPDOWNS, CONTRACTOR SHALL PROVIDE NEW GRANITE CURB TIPDOWN AND OTHER CURBING AS NECESSARY. CATCH BASIN HEADSTONES SHOULD ONLY BE REMOVED IF THEY ARE TO HINDER ADA ACCESS TO CURB RAMPS.
7. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.



FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APPLICATION	WHS	1/5/16
FINAL APPLICATION	WHS	3/1/16
REV. GRADES	WHS	3/7/16

DRAWING NAME: GRADING, DRAINAGE & EROSION CONTROL PLAN

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

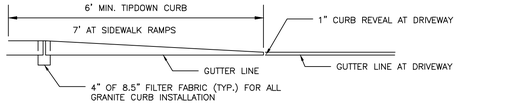
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, WITHOUTAND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2655

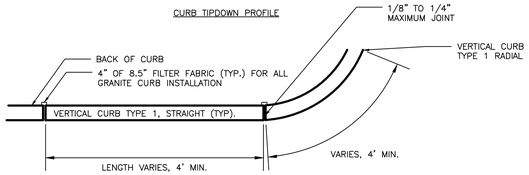
FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 3-1-16 PROFESSIONAL ENGINEER

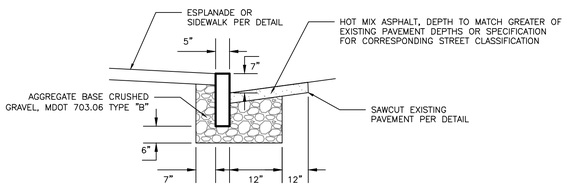
DRAWING NO.
C-30



CURB TIPDOWN PROFILE



VERTICAL GRANITE CURB PLAN VIEW



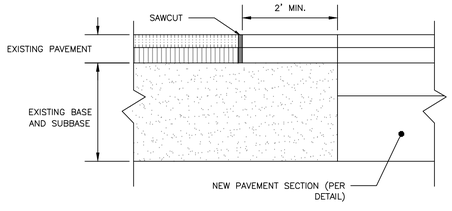
VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION

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 ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.

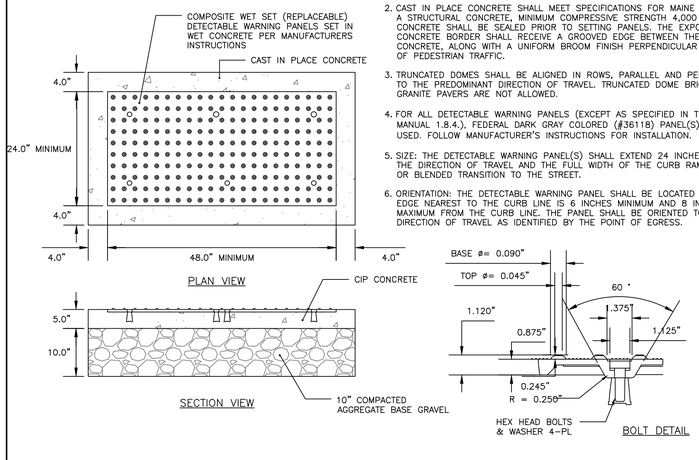


PAVEMENT SAWCUT DETAIL

NOT TO SCALE

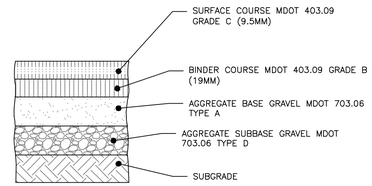
NOTES:

1. COMPOSITE WET SET (REPLACEABLE) DETECTABLE WARNING PANELS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. (WWW.ADATILE.COM) OR APPROVED EQUAL.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. FOR ALL DETECTABLE WARNING PANELS (EXCEPT AS SPECIFIED IN TECHNICAL MANUAL 1.8.4.), FEDERAL DARK GRAY COLORED (#36118) PANEL(S) SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
5. SIZE: THE DETECTABLE WARNING PANEL(S) SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
6. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST TO THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



SIDEWALK RAMP DETECTABLE WARNING PANEL

NOT TO SCALE



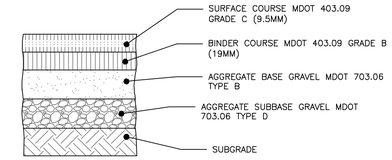
NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
2. ARTERIAL BITUMINOUS PAVEMENT PROFILE APPLIES ONLY WITHIN FORE STREET R.O.W.

THICKNESS OF LAYERS	
STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
3"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
6"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE



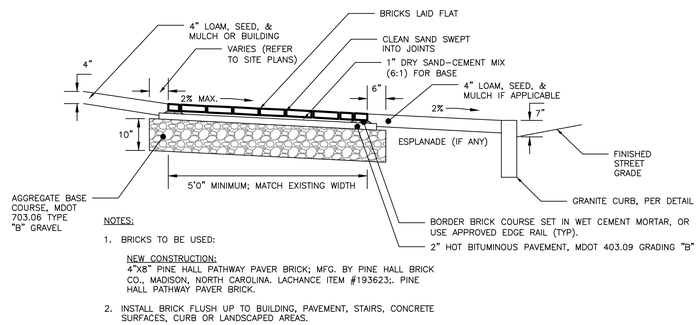
NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557
2. LOCAL BITUMINOUS PAVEMENT PROFILE APPLIES TO THE SITE DRIVEWAY & WATERVILLE STREET

THICKNESS OF LAYERS	
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (9.5mm)
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

LOCAL BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE



NOTES:

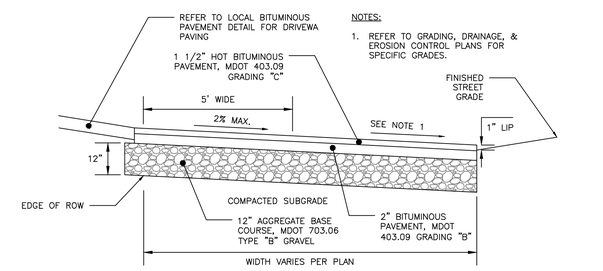
1. BRICKS TO BE USED:

   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.

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. REFER TO GRADING, DRAINAGE, & EROSION CONTROL PLANS FOR SPECIFIC GRADES.

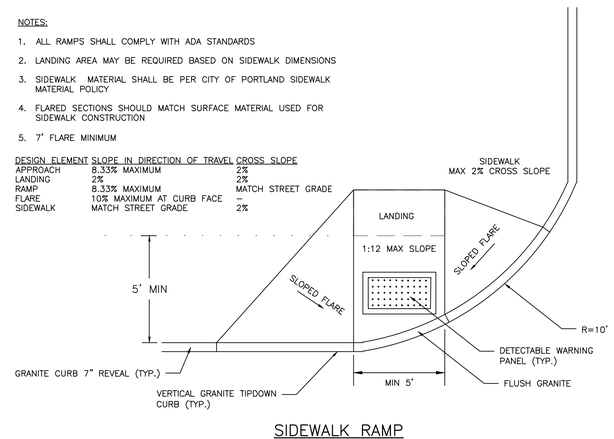
BITUMINOUS DRIVEWAY APRON DETAIL

NOT TO SCALE

NOTES:

1. ALL RAMPS SHALL COMPLY WITH ADA STANDARDS
2. LANDING AREA MAY BE REQUIRED BASED ON SIDEWALK DIMENSIONS
3. SIDEWALK MATERIAL SHALL BE PER CITY OF PORTLAND SIDEWALK MATERIAL POLICY
4. FLARED SECTIONS SHOULD MATCH SURFACE MATERIAL USED FOR SIDEWALK CONSTRUCTION
5. 7' FLARE MINIMUM

DESIGN ELEMENT	SLOPE IN DIRECTION OF TRAVEL	CROSS SLOPE
APPROACH	8.33% MAXIMUM	2%
LANDING	2%	2%
RAMP	8.33% MAXIMUM	MATCH STREET GRADE
FLARE	10% MAXIMUM AT CURB FACE	–
SIDEWALK	MATCH STREET GRADE	2%

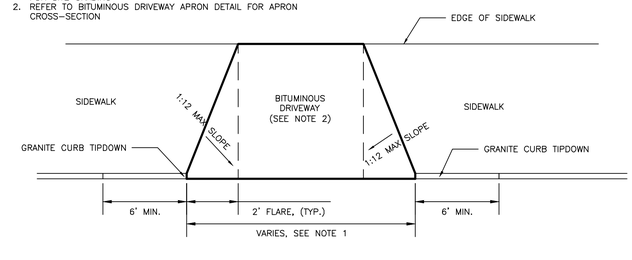


SIDEWALK RAMP

NOT TO SCALE

NOTES:

1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLANS FOR SITE GRADING
2. REFER TO BITUMINOUS DRIVEWAY APRON DETAIL FOR APRON CROSS-SECTION



DRIVEWAY APRON LAYOUT DETAIL

NOT TO SCALE

FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 1/5/16
FINAL APPLICATION	WHS 3/1/16

REVISION	REV. DATE

DRAWING NAME: SITE DETAILS 1

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATION MADE WITHOUT LIMITATION TO ACORN ENGINEERING, INC. 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) 775-2005

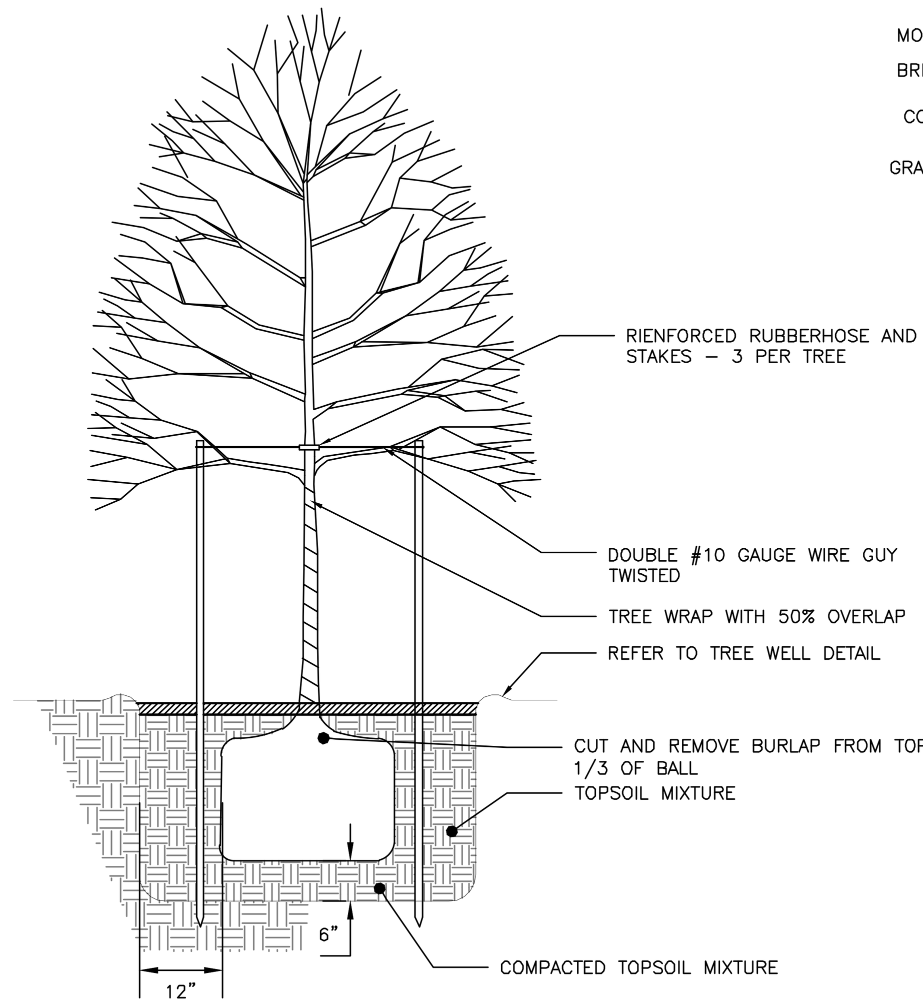
FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11418 3-1-16 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-40

PLANTING NOTES

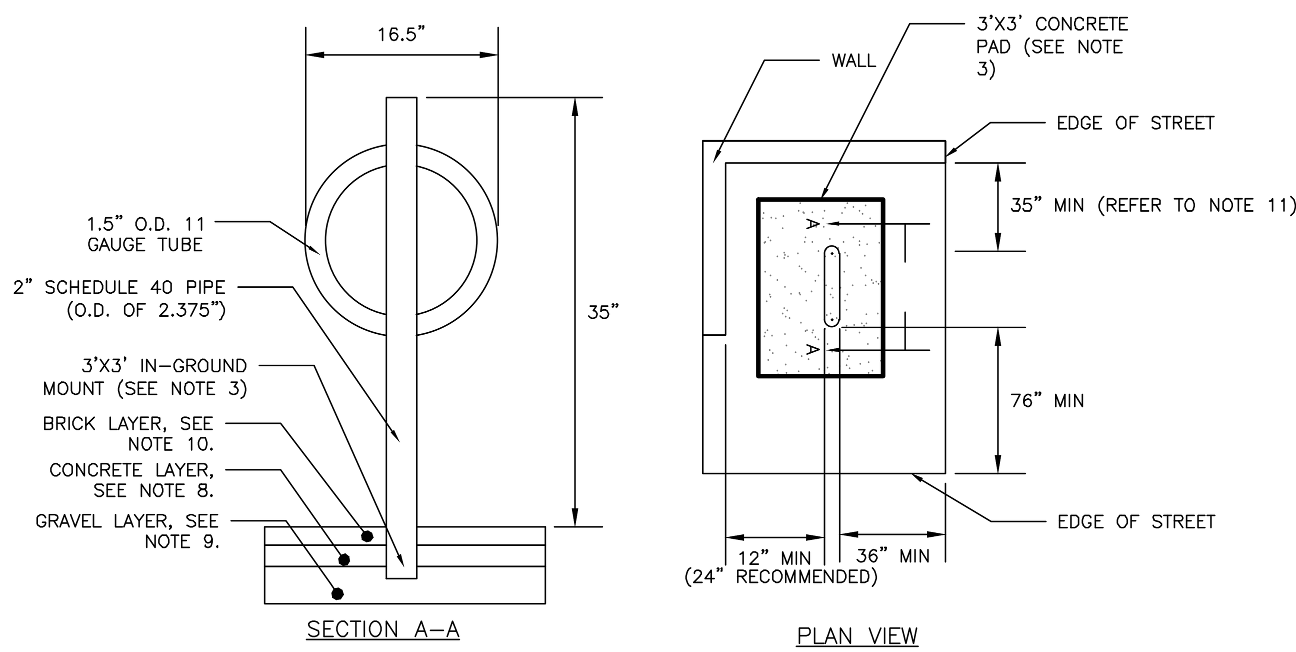
1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WILL THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN 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. 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.
6. ALL PROPOSED PLANTS SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLANS AND THE PLACEMENTS SHALL BE APPROVED BY ENGINEER BEFORE THE PLANTS ARE INSTALLED.
7. 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.
8. STAKING AND GUYING SHALL BE DETERMINED BY THE ENGINEER ON A TREE BY TREE BASIS. 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.
9. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDED AS NECESSARY.
10. DIG HOLE AT LEAST 2 TIMES THE DIA. OF THE ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH THE TOP AT GROUND LEVEL CORRECT HOLE DEPTH AS REQUIRED.
11. TOPSOIL BACKFILL SHALL BE NATURAL FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING THE CHARACTERISTICS OF TOPSOILS 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.
12. CONTAINER GROWN STOCK REMOVE CONTAINER PROTECTING THE ROOT BALL. GENTLY COMB OUT THE ROOTS. PRUNE DAMAGED ROOTS.
13. 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 WITH WATER TWICE WITHIN THE FIRST TWENTY-FOUR HOURS OF PLANTING.



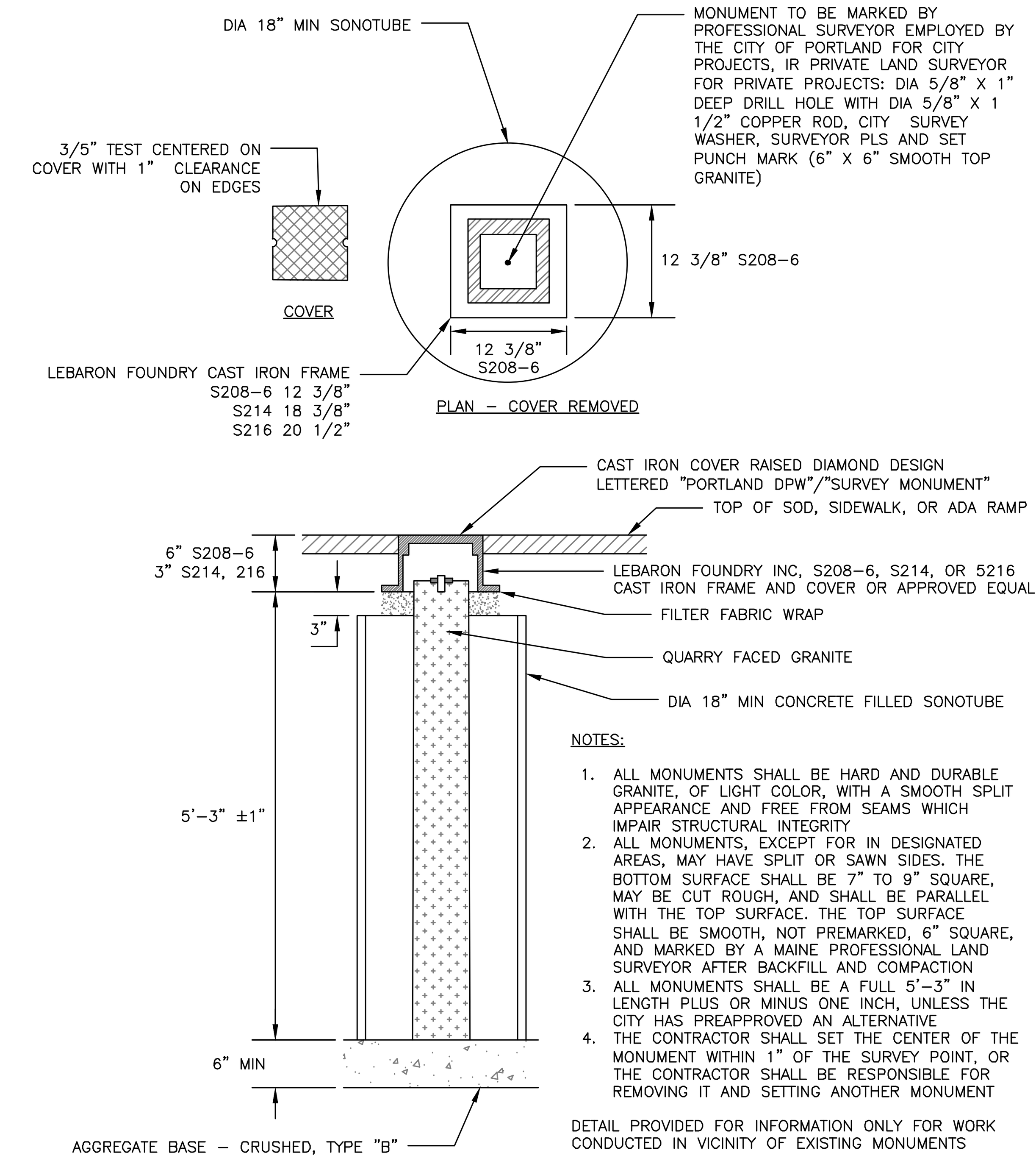
TREE PLANTING DETAIL
NOT TO SCALE

NOTES:

1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 38".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APRROX. 4"–7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINEDOT 703.06 TYPE B.
10. TOP OF BRICK LAYER SHALL BE AT SAME ELEVATION IN ACCORDANCE WITH BRICK SIDEWALK DETAIL.
11. 54" MIN DISTANCE BETWEEN EDGE OF STREET AND BICYCLE HITCH IF AISLE IS REQUIRED.



BICYCLE HITCH DETAIL
NOT TO SCALE



NOTES:

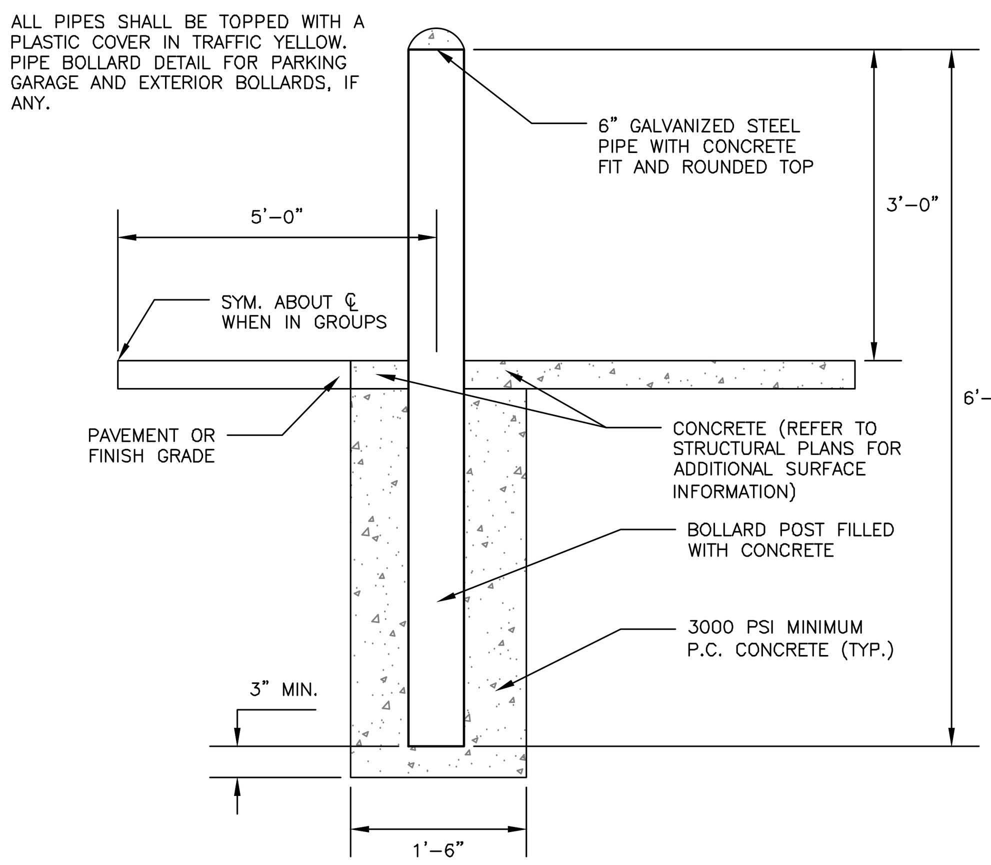
1. ALL MONUMENTS SHALL BE HARD AND DURABLE GRANITE, OF LIGHT COLOR, WITH A SMOOTH SPLIT APPEARANCE AND FREE FROM SEAMS WHICH IMPAIR STRUCTURAL INTEGRITY
2. ALL MONUMENTS, EXCEPT FOR IN DESIGNATED AREAS, MAY HAVE SPLIT OR SAWN SIDES. THE BOTTOM SURFACE SHALL BE 7" TO 9" SQUARE, MAY BE CUT ROUGH, AND SHALL BE PARALLEL WITH THE TOP SURFACE. THE TOP SURFACE SHALL BE SMOOTH, NOT PREMARKED, 6" SQUARE, AND MARKED BY A MAINE PROFESSIONAL LAND SURVEYOR AFTER BACKFILL AND COMPACTION
3. ALL MONUMENTS SHALL BE A FULL 5'–3" IN LENGTH PLUS OR MINUS ONE INCH, UNLESS THE CITY HAS PREAPPROVED AN ALTERNATIVE
4. THE CONTRACTOR SHALL SET THE CENTER OF THE MONUMENT WITHIN 1" OF THE SURVEY POINT, OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING IT AND SETTING ANOTHER MONUMENT

DETAIL PROVIDED FOR INFORMATION ONLY FOR WORK CONDUCTED IN VICINITY OF EXISTING MONUMENTS

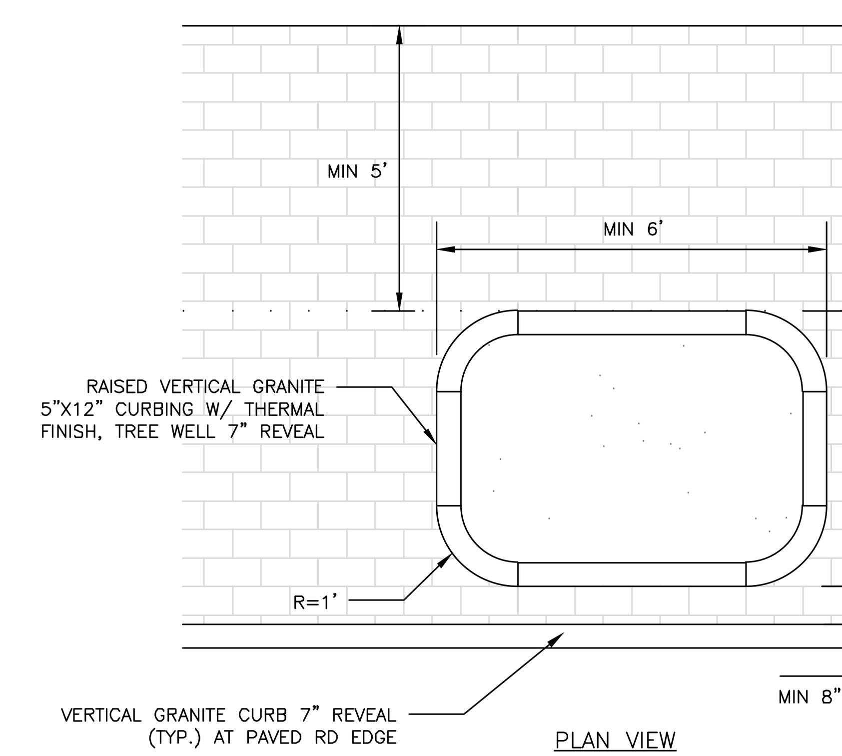
GRANITE STREET MONUMENT
NOT TO SCALE

NOTES:

1. ALL PIPES SHALL BE TOPPED WITH A PLASTIC COVER IN TRAFFIC YELLOW.
2. PIPE BOLLARD DETAIL FOR PARKING GARAGE AND EXTERIOR BOLLARDS, IF ANY.



PIPE BOLLARD
NOT TO SCALE

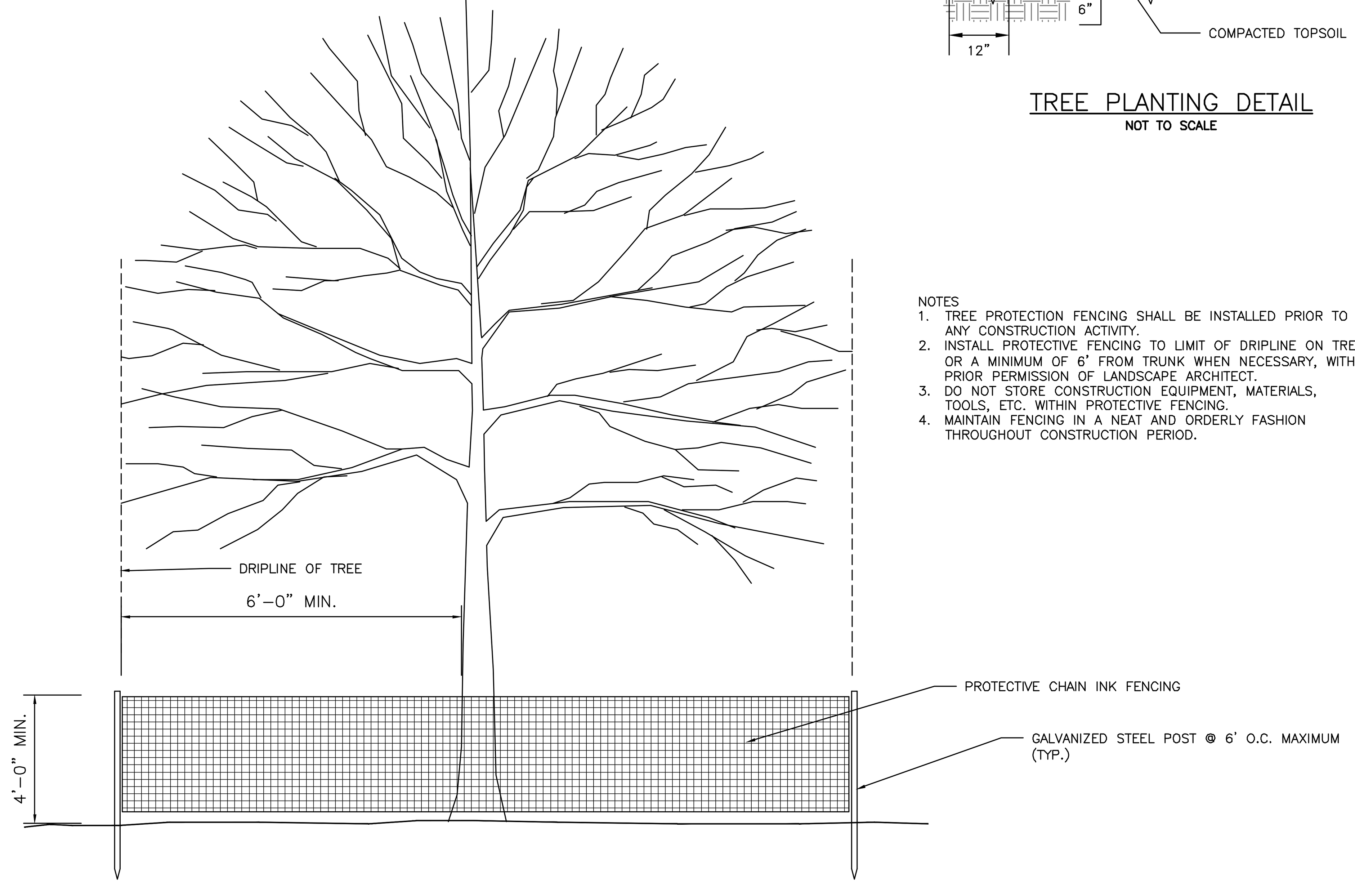


NOTES:

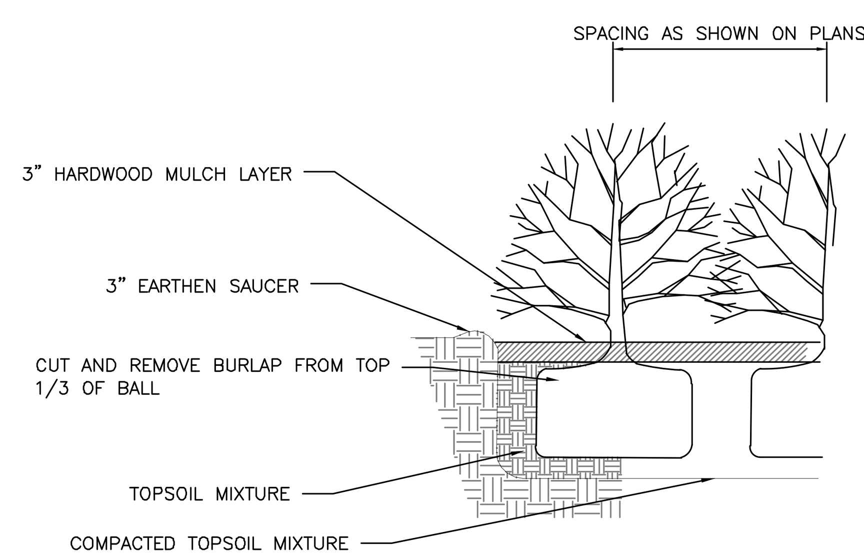
1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST
2. GRANITE CURB TREE WELL SHALL BE SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY

RAISED GRANITE CURB TREEWELL
NOT TO SCALE

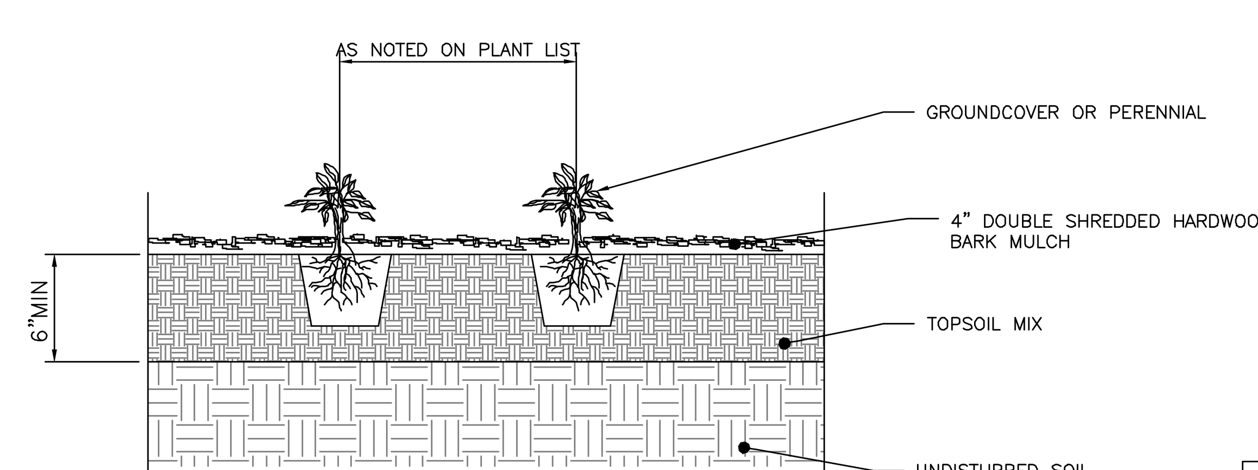
NOTES
1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. INSTALL PROTECTIVE FENCING TO LIMIT OF DRIPLINE ON TREE OR A MINIMUM OF 6' FROM TRUNK WHEN NECESSARY, WITH PRIOR PERMISSION OF LANDSCAPE ARCHITECT.
3. DO NOT STORE CONSTRUCTION EQUIPMENT, MATERIALS, TOOLS, ETC. WITHIN PROTECTIVE FENCING.
4. MAINTAIN FENCING IN A NEAT AND ORDERLY FASHION THROUGHOUT CONSTRUCTION PERIOD.



TREE PROTECTION DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE



PERENNIAL PLANTING DETAIL
NOT TO SCALE

FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 1/5/16
FINAL APPLICATION	WHS 3/1/16

REVISION	REV. / DATE

DRAWING NAME: **SITE DETAILS 2**

PROJECT NAME: **31 FORE STREET REDEVELOPMENT**

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND MAINE 04101

A C O R N ENGINEERING, INC.

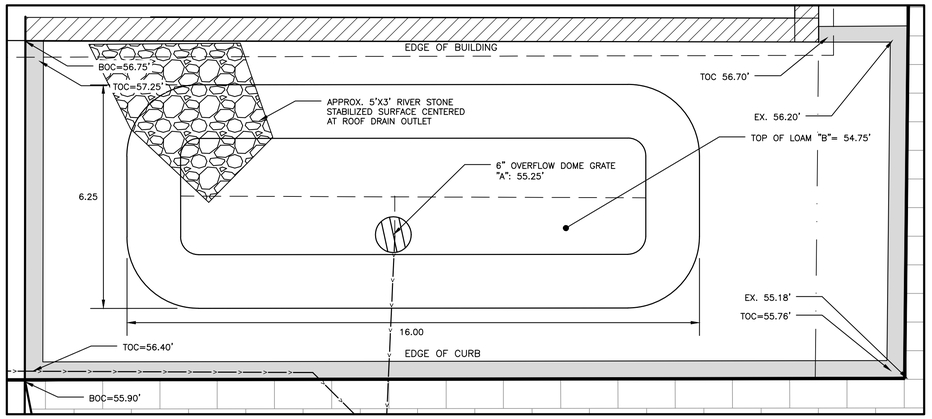
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

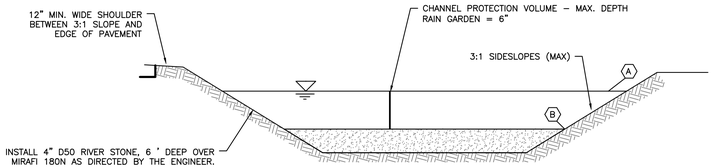
FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — LICENSED PROFESSIONAL ENGINEER — 3-1-16

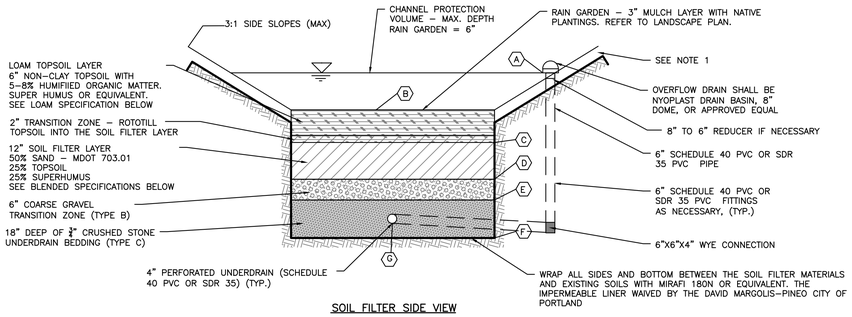
DRAWING NO.
C-41



PLAN VIEW RAIN GARDEN



SOIL FILTER CROSS SECTION



SOIL FILTER SIDE VIEW

NOTES:
1. THE SIDESLOPES SHALL BE STABILIZED WITH HARDWOOD MULCH.

2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.

3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.

4. A SCHEDULE OF APPROPRIATE PLANTS FOR THE RAIN GARDENS AT THE SITE CONDITIONS IS LOCATED IN THE LANDSCAPE PLAN.

6. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

7. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

SCHEDULE	
ITEM	RG–1
(A) PROPOSED OVERFLOW RIM	55.25'
(B) TOP OF LOAM TOPSOIL LAYER	54.75'
(C) TOP OF SOIL FILTER	54.25'
(D) TOP OF GRAVEL	53.25'
(E) TOP OF STONE	52.75
(F) BOTTOM OF STONE	51.25'
(G) UNDERDRAIN INVERT	51.50'
STREET CATCH BASIN INV. OUT	49.48'

6" LOAM TOPSOIL LAYER SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75–95
#10	60–90
#40	35–85
#200	20–70
1. CLAY FRACTION <10% PASSING THE #200 SIEVE.*	
2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.	

*<10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT – MDEP TO WILL SAVAGE DATED 9/20/13

SOIL FILTER BED – SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0–5
MINIMAL CLAY CONTENT, NO MORE THAN 3–5% PASSING #200 SIEVE	

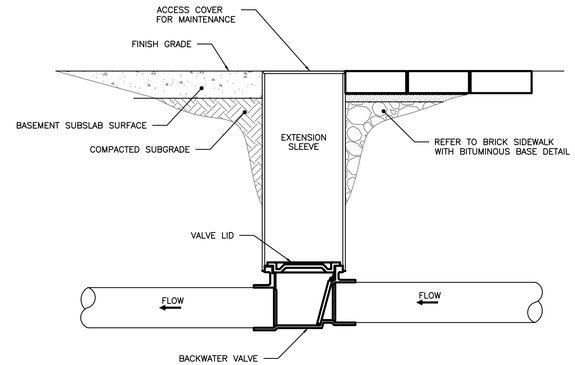
12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85–100
#20	70–100
#60	15–40
#200	8–15
1. CLAY FRACTION <2% PASSING THE #200 SIEVE. 2. SUPERHUMUS OR EQUIVALENT	

SOIL FILTER BED – TRANSISTION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	0–15
#200	0–5

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90–100
3/8"	0–75
#4	0–25
#10	0–5

RAIN GARDEN DETAIL

NOT TO SCALE

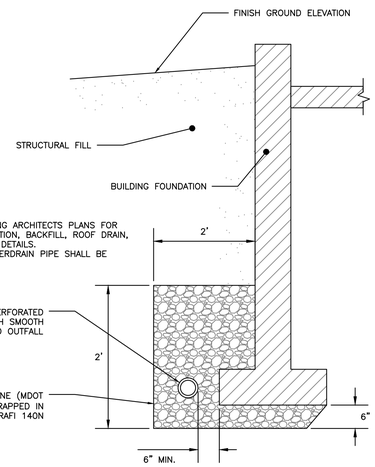


BACKWATER VALVE ASSEMBLY

NOT TO SCALE

NOTES:

1. BACKWATER 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.

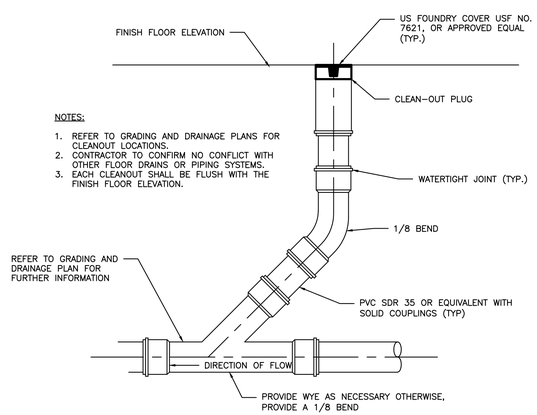


NOTES:

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. REFER TO GRADING AND DRAINAGE PLANS FOR CLEANOUT LOCATIONS.
2. CONTRACTOR TO CONFIRM NO CONFLICT WITH OTHER FLOOR DRAINS OR PIPING SYSTEMS.
3. EACH CLEANOUT SHALL BE FLUSH WITH THE FINISH FLOOR ELEVATION.

CLEANOUT DETAIL

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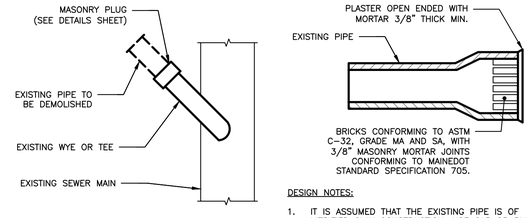

DESIGN NOTES:

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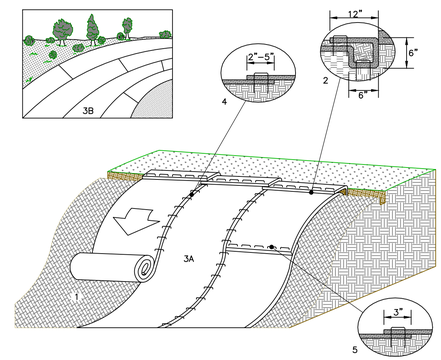
MASONRY PLUG DETAIL

NOT TO SCALE



SLOPE INSTALLATION DETAIL

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.

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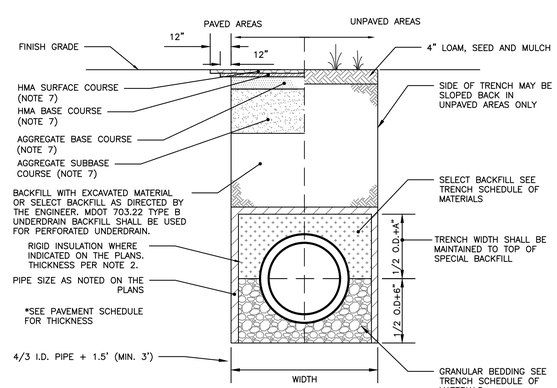
4. THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON THE ECB TYPE.

5. CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

*NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE



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
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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

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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 APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 12/5/15
FINAL APPLICATION	WHS 3/1/16
REV. GRADES	WHS 3/7/16

REVISION	REV. DATE

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND MAINE 04101

ACORN ENGINEERING, INC.

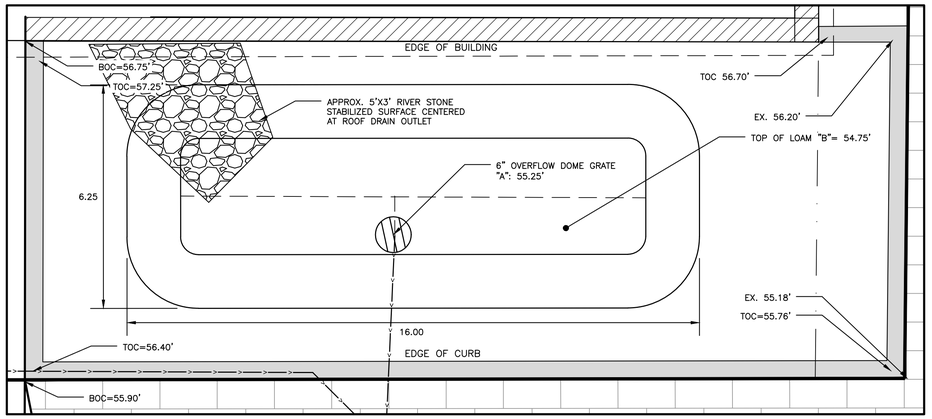
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATION, ALTERATION OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2563

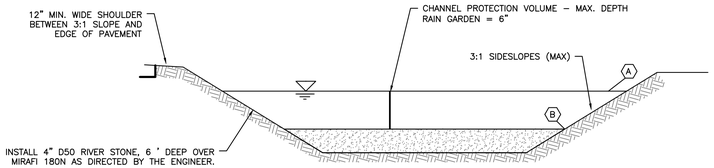
FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11416 LICENSED PROFESSIONAL ENGINEER 3-1-16

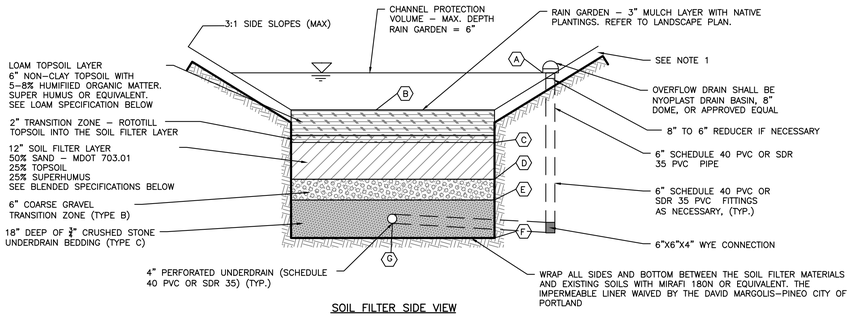
DRAWING NO.
C-43



PLAN VIEW RAIN GARDEN



SOIL FILTER CROSS SECTION



SOIL FILTER SIDE VIEW

NOTES:
1. THE SIDESLOPES SHALL BE STABILIZED WITH HARDWOOD MULCH.

2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.

3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.

4. A SCHEDULE OF APPROPRIATE PLANTS FOR THE RAIN GARDENS AT THE SITE CONDITIONS IS LOCATED IN THE LANDSCAPE PLAN.

6. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

7. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

SCHEDULE	
ITEM	RG–1
(A) PROPOSED OVERFLOW RIM	55.25'
(B) TOP OF LOAM TOPSOIL LAYER	54.75'
(C) TOP OF SOIL FILTER	54.25'
(D) TOP OF GRAVEL	53.25'
(E) TOP OF STONE	52.75
(F) BOTTOM OF STONE	51.25'
(G) UNDERDRAIN INVERT	51.50'
STREET CATCH BASIN INV. OUT	49.48'

6" LOAM TOPSOIL LAYER SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75–95
#10	60–90
#40	35–85
#200	20–70
1. CLAY FRACTION <10% PASSING THE #200 SIEVE.*	
2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.	

*<10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT – MDEP TO WILL SAVAGE DATED 9/20/13

SOIL FILTER BED – SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0–5
MINIMAL CLAY CONTENT, NO MORE THAN 3–5% PASSING #200 SIEVE	

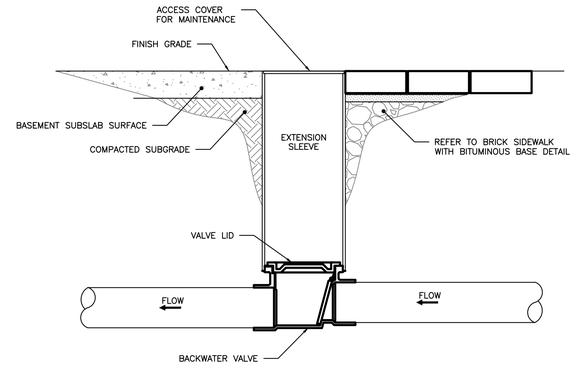
12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85–100
#20	70–100
#60	15–40
#200	8–15
1. CLAY FRACTION <2% PASSING THE #200 SIEVE. 2. SUPERHUMUS OR EQUIVALENT	

SOIL FILTER BED – TRANSISTION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	0–15
#200	0–5

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90–100
3/8"	0–75
#4	0–25
#10	0–5

RAIN GARDEN DETAIL

NOT TO SCALE

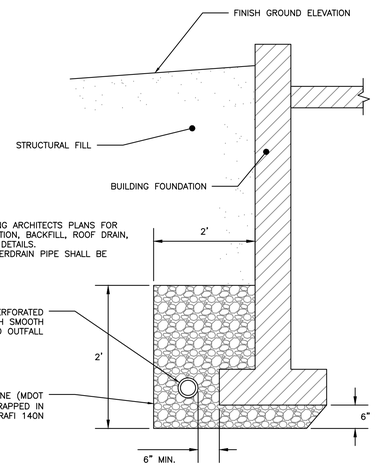


BACKWATER VALVE ASSEMBLY

NOT TO SCALE

NOTES:

1. BACKWATER 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.

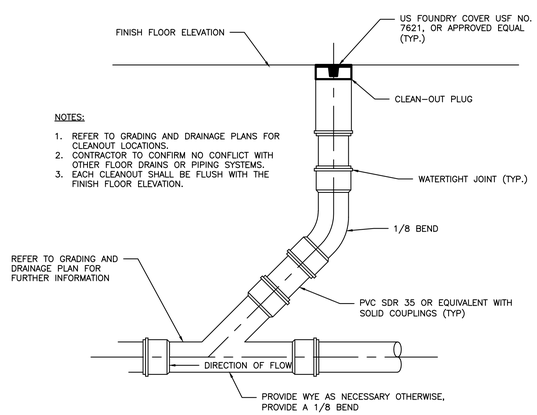


NOTES:

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



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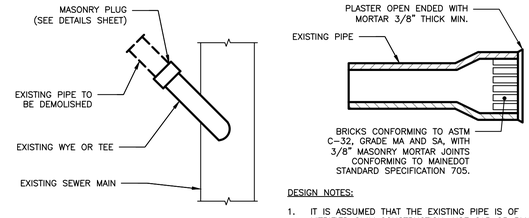

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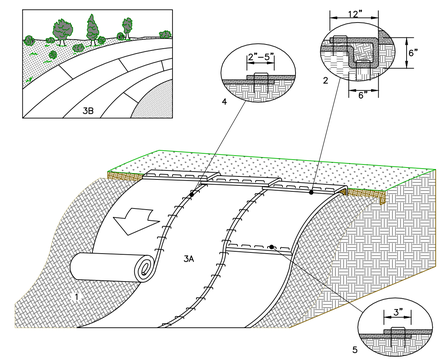

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EROSION CONTROL BLANKET SLOPE INSTALLATION

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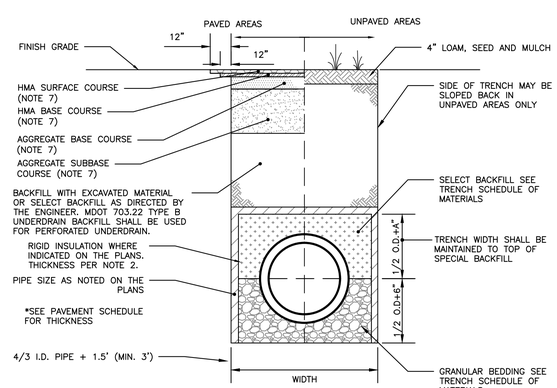

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STORM DRAIN AND SEWER TYPICAL TRENCH SECTION

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FINAL APPLICATION
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ISSUED FOR	BY / DATE
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REV. GRADES	WHS 3/7/16

REVISION	REV. DATE

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
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STATE OF MAINE WILLIAM H. SAVAGE No. 11416 LICENSED PROFESSIONAL ENGINEER 3-1-16

DRAWING NO.
C-43

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 WATERVILLE & FORE STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 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. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. 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 WATERVILLE.
6. COMMENCE EARTHWORK OPERATIONS, FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

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:

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

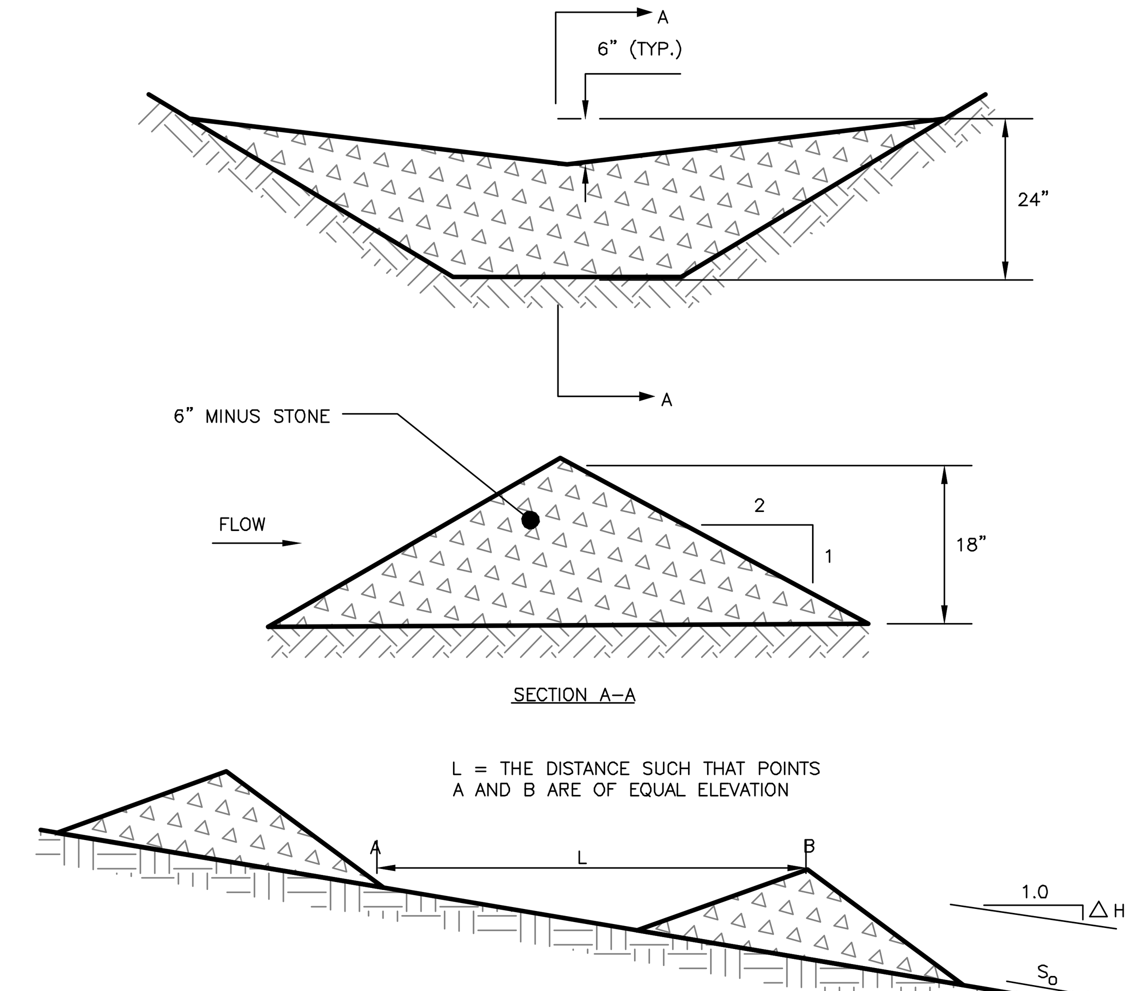
MULCHING

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 APPLICATION
NOT ISSUED FOR
CONSTRUCTION



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

NOTES:

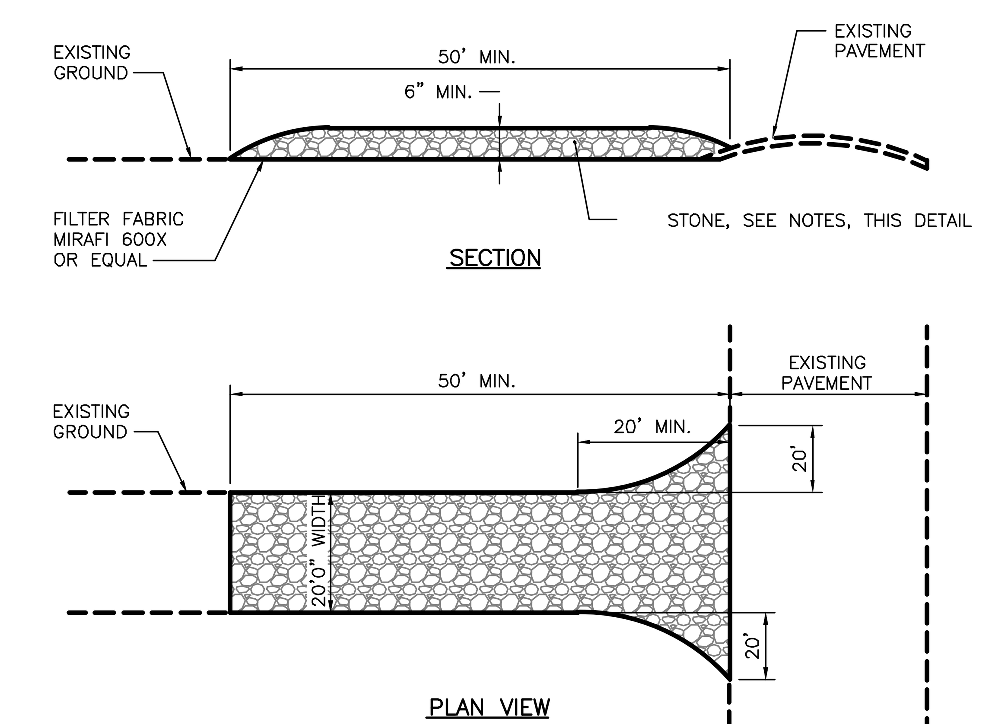
1) CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

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.

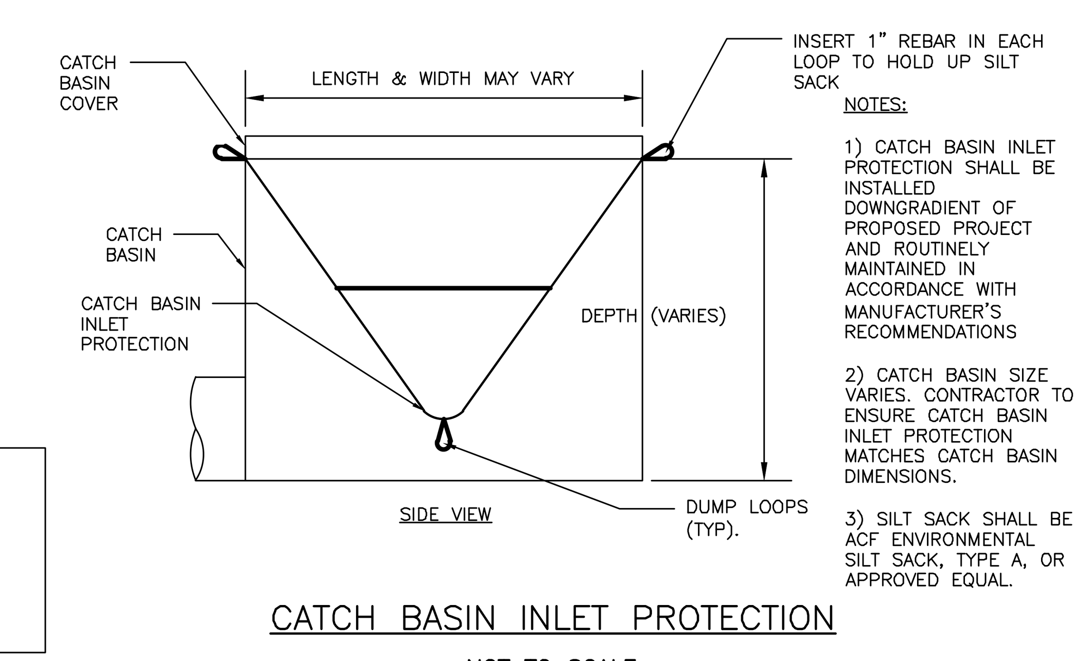
4) WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.

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



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

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 1/5/16
FINAL APPLICATION	WHS 3/1/16

REVISION	REV. / DATE

DRAWING NAME: EROSION & SEDIMENT CONTROL DETAILS

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND MAINE 04101

A C O R N ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED 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:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 LICENSED PROFESSIONAL ENGINEER 3-1-16

DRAWING NO.
C-44

GENERAL NOTES:

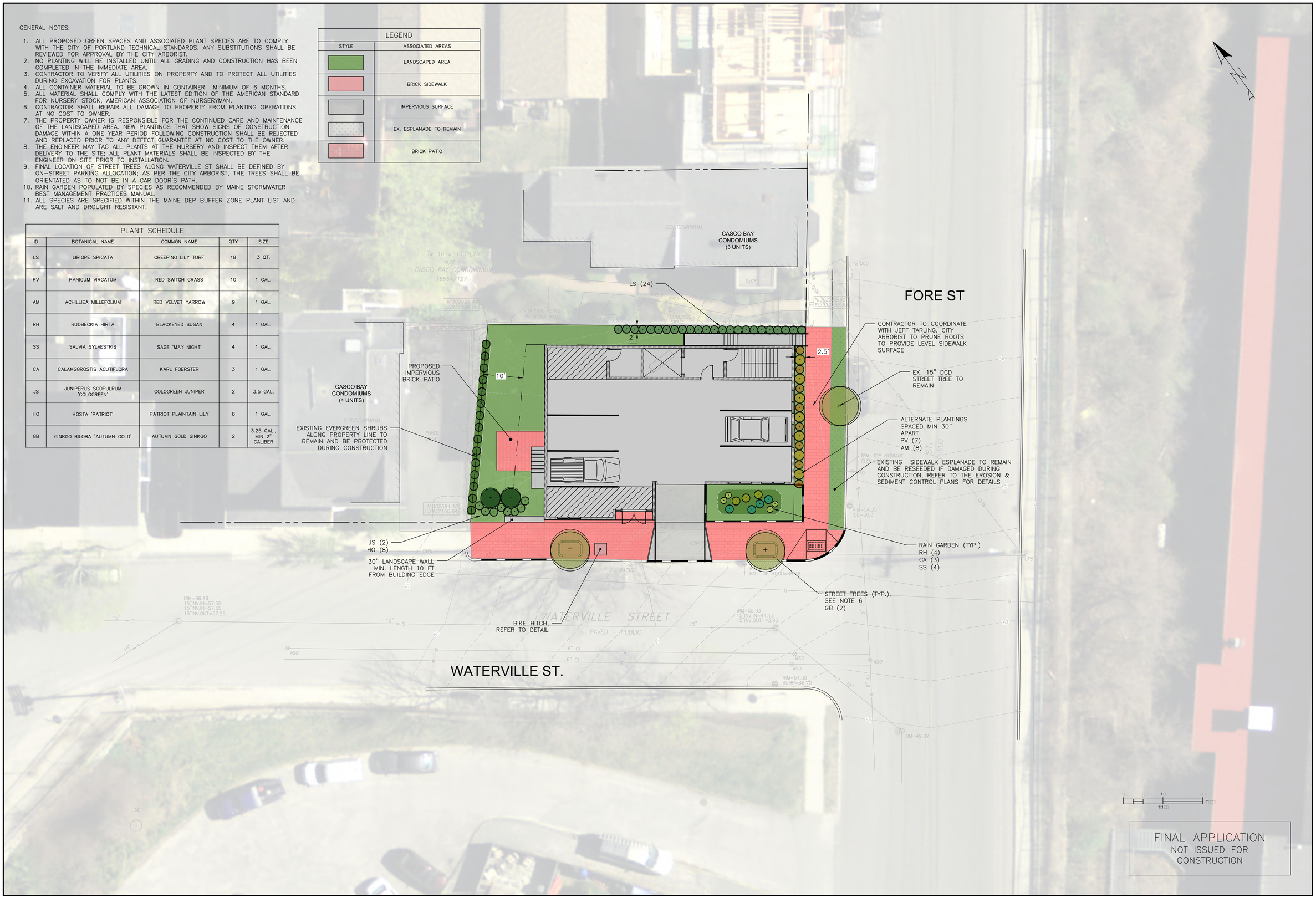
1. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH THE CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST.
2. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
3. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
4. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER MINIMUM OF 6 MONTHS.
5. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
6. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
7. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA. NEW PLANTINGS THAT SHOW SIGNS OF CONSTRUCTION DAMAGE WITHIN A ONE YEAR PERIOD FOLLOWING CONSTRUCTION SHALL BE REJECTED AND REPLACED PRIOR TO ANY DEFECT GUARANTEE AT NO COST TO THE OWNER.
8. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE; ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
9. FINAL LOCATION OF STREET TREES ALONG WATERVILLE ST SHALL BE DEFINED BY ON-STREET PARKING ALLOCATION; AS PER THE CITY ARBORIST, THE TREES SHALL BE ORIENTATED AS TO NOT BE IN A CAR DOOR'S PATH.
10. RAIN GARDEN POPULATED BY SPECIES AS RECOMMENDED BY MAINE STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
11. ALL SPECIES ARE SPECIFIED WITHIN THE MAINE DEP BUFFER ZONE PLANT LIST AND ARE SALT AND DROUGHT RESISTANT.

LEGEND

STYLE	ASSOCIATED AREAS
	LANDSCAPED AREA
	BRICK SIDEWALK
	IMPERVIOUS SURFACE
	EX. ESPLANADE TO REMAIN
	BRICK PATIO

PLANT SCHEDULE

ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
LS	LIRIOPE SPICATA	CREEPING LILY TURF	18	3 QT.
PV	PANICUM VIRGATUM	RED SWITCH GRASS	10	1 GAL.
AM	ACHILLIEA MILLEFOLIUM	RED VELVET YARROW	9	1 GAL.
RH	RUDBECKIA HIRTA	BLACKEYED SUSAN	4	1 GAL.
SS	SALVIA SYLVESTRIS	SAGE 'MAY NIGHT'	4	1 GAL.
CA	CALAMSGROSTIS ACUTIFLORA	KARL FOERSTER	3	1 GAL.
JS	JUNIPERUS SCOPULRUM 'COLOGREEN'	COLOGREEN JUNIPER	2	3.5 GAL.
HO	HOSTA 'PATRIOT'	PATRIOT PLAINTAIN LILY	8	1 GAL.
GB	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO	2	3.25 GAL., MIN 2" CALIBER



FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	DATE	BY
PRELIM. APPLICATION	1/5/16	WHS
FINAL APPLICATION	3/1/16	WHS

DRAWING NAME: SITE LAYOUT & LANDSCAPE PLAN

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, MADE WITHOUT WRITTEN PERMISSION, WILL RELEASE ACORN ENGINEERING, INC. FROM ANY AND ALL LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2635

FILE:	1068_DETAILS
DATE:	12/28/15
JN:	1068
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

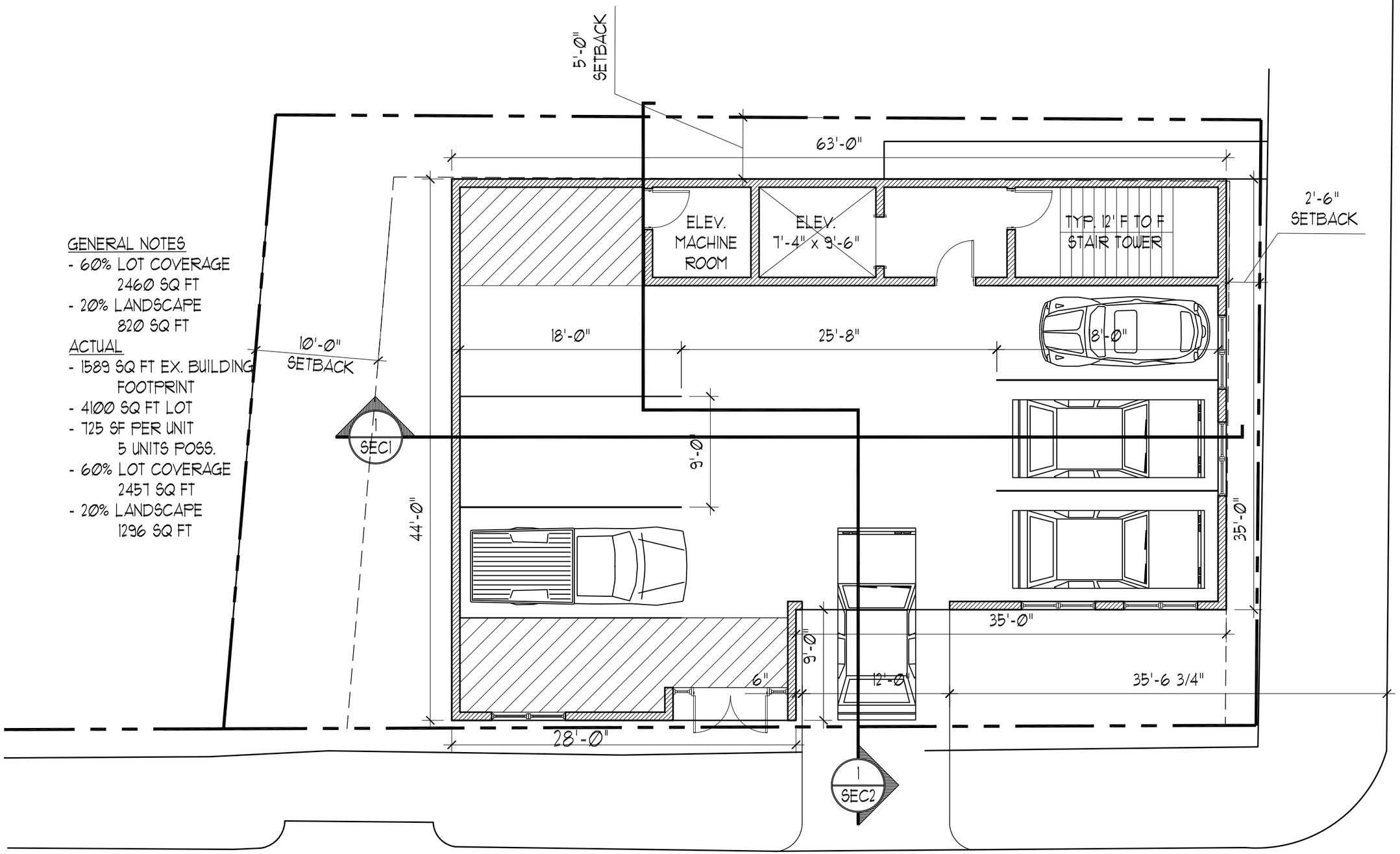
STATE OF MAINE WILLIAM H. SAVAGE No. 11419 3-1-16 PROFESSIONAL ENGINEER

DRAWING NO.
L-1

Plan 9

GENERAL NOTES
- 60% LOT COVERAGE
  2460 SQ FT
- 20% LANDSCAPE
  820 SQ FT

ACTUAL
- 1589 SQ FT EX. BUILDING FOOTPRINT
- 4100 SQ FT LOT
- 725 SF PER UNIT
  5 UNITS POSS.
- 60% LOT COVERAGE
  2457 SQ FT
- 20% LANDSCAPE
  1296 SQ FT



PORT CITY ARCHITECTURE

RESIDENTIAL MULTI-UNIT STUDY
31 FORE STREET

GARAGE/BASEMENT PLAN

Ref Dwg:	Scale: 1/8"-1'-0"	Issued : 3.7.16
		Revised :

A1

PORT CITY ARCHITECTURE 65 NEWBURY STREET PORTLAND, MAINE 04101 ph: 207.761.9000 fx: 207-761-2010

GENERAL NOTES
- 60% LOT COVERAGE
  2460 SQ FT
- 20% LANDSCAPE
  820 SQ FT

ACTUAL
- 1589 SQ FT EX. BUILDING FOOTPRINT
- 4100 SQ FT LOT
- 725 SF PER UNIT
  5 UNITS POSS.
- 60% LOT COVERAGE
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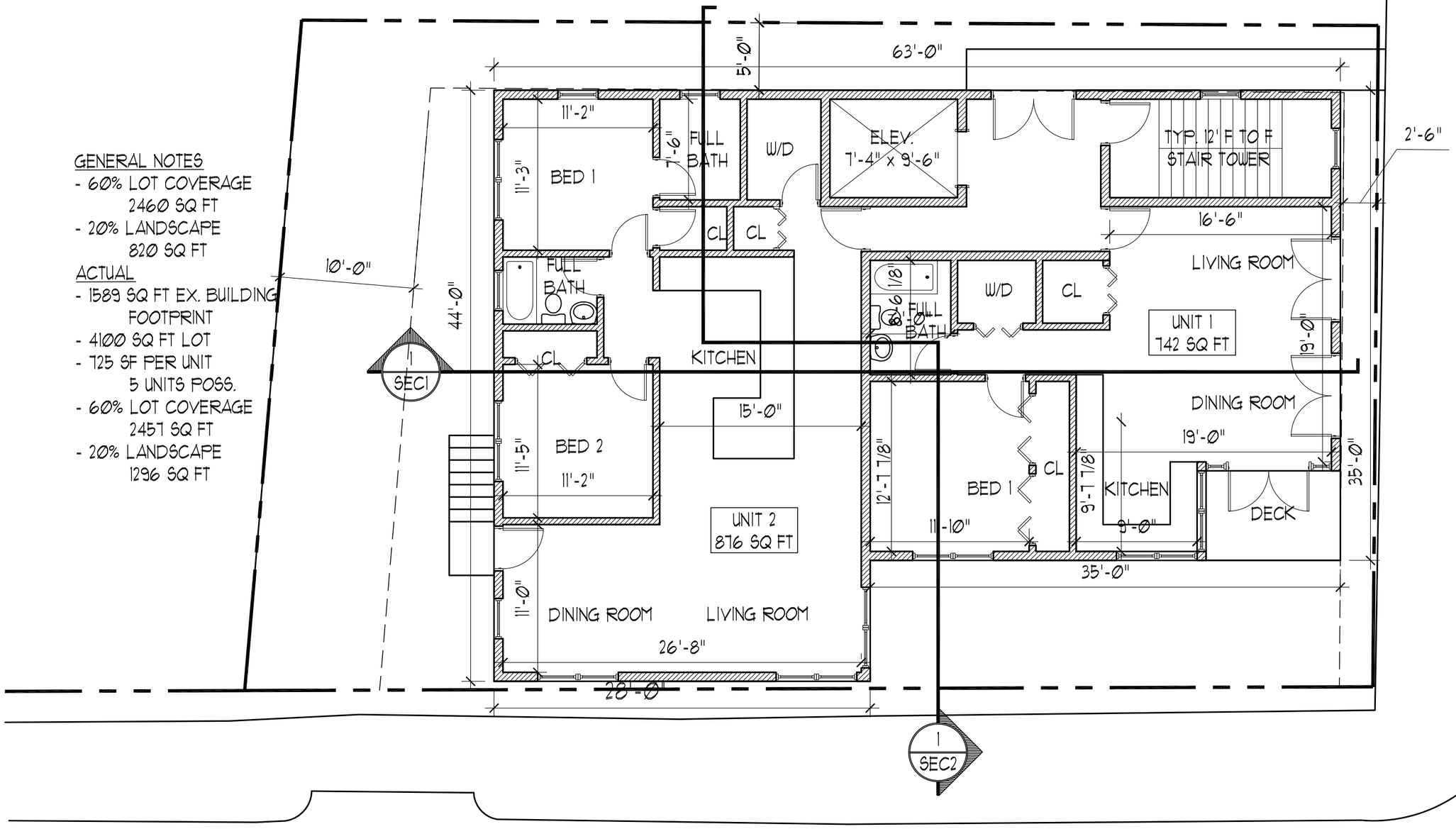
- 20% LANDSCAPE
  1296 SQ FT



PORT ▫ CITY ARCHITECTURE

RESIDENTIAL MULTI-UNIT STUDY
31 FORE STREET

FIRST FLOOR PLAN

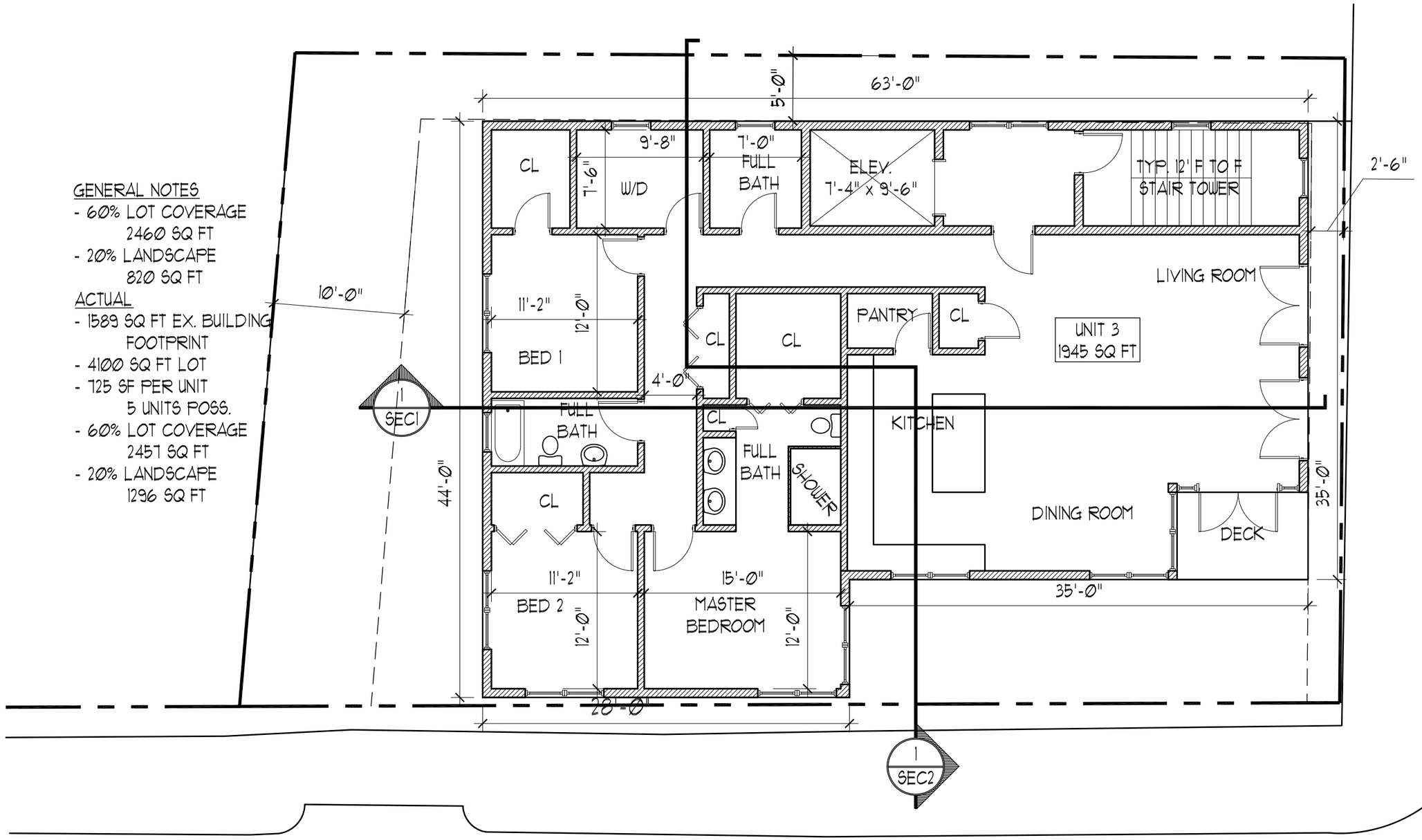
Ref Dwg:	Scale: 1/8"-1'-0"	Issued : 3.7.16
		Revised :

A2

PORT CITY ARCHITECTURE 65 NEWBURY STREET PORTLAND, MAINE 04101 ph: 207.761.9000 fx: 207-761-2010

GENERAL NOTES
- 60% LOT COVERAGE
  2460 SQ FT
- 20% LANDSCAPE
  820 SQ FT

ACTUAL
- 1589 SQ FT EX. BUILDING FOOTPRINT
- 4100 SQ FT LOT
- 725 SF PER UNIT
  5 UNITS POSS.
- 60% LOT COVERAGE
  2457 SQ FT
- 20% LANDSCAPE
  1296 SQ FT



PORT CITY ARCHITECTURE

RESIDENTIAL MULTI-UNIT STUDY
31 FORE STREET

SECOND FLOOR PLAN

Ref Dwg:	Scale: 1/8"-1'-0"	Issued : 3.7.16
		Revised :

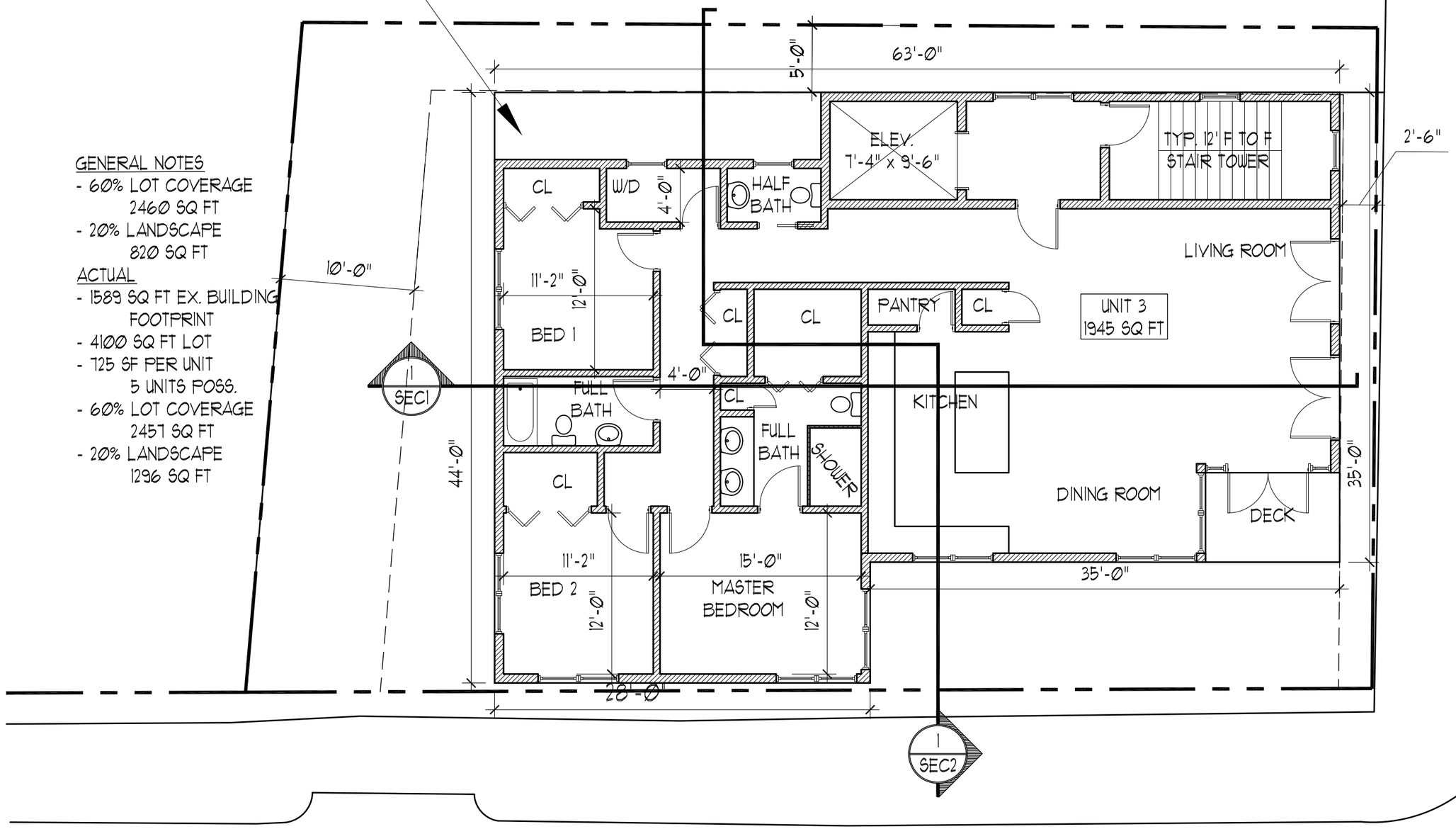
A3

PORT CITY ARCHITECTURE 65 NEWBURY STREET PORTLAND, MAINE 04101 ph: 207.761.9000 fx: 207-761-2010

STEPBACK ONLY
ON THE 3RD FLOOR

GENERAL NOTES
- 60% LOT COVERAGE
  2460 SQ FT
- 20% LANDSCAPE
  820 SQ FT

ACTUAL
- 1589 SQ FT EX. BUILDING
  FOOTPRINT
- 4100 SQ FT LOT
- 725 SF PER UNIT
  5 UNITS POSS.
- 60% LOT COVERAGE
  2457 SQ FT
- 20% LANDSCAPE
  1296 SQ FT



PORT CITY ARCHITECTURE

RESIDENTIAL MULTI-UNIT STUDY
31 FORE STREET

THIRD FLOOR PLAN

Ref Dwg:	Scale: 1/8"-1'-0"	Issued : 3.7.16
		Revised :

A4

4 ELEVATION -REAR

SCALE: 3/16" = 1'-0"

2 ELEVATION - SIDE

SCALE: 3/16" = 1'-0"

3 ELEVATION - FRONT - FORE ST

SCALE: 3/16" = 1'-0"

1 ELEVATION - SIDE - WATERVILLE ST

SCALE: 3/16" = 1'-0"

NOTE: ELEVATION DATUMS HAVE BOTH ARCHITECTURAL (A) AND CIVIL (C) DIMENSIONS

PORT ▪ CITY ARCHITECTURE
65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000

Consultants:

Owner :
Peninsula Property Dev.
attn: Mr. Bob LeBlanc
(207) 776-0913
robertleblanc1@me.com

PRELIMINARY DESIGN

31 FORE ST CONDOS

31 Fore Street
Portland, Maine

#	DATE	DESCRIPTION

Date Issued	MARCH 17, 2016
Project Number	15108
Drawing Scale	AS NOTED

ELEVATIONS

Drawn By	JAP
Checked By	ACH

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4 ELEVATION -REAR

SCALE: 3/16" = 1'-0"

2 ELEVATION - SIDE

SCALE: 3/16" = 1'-0"

3 ELEVATION - FRONT - FORE ST

SCALE: 3/16" = 1'-0"

1 ELEVATION - SIDE - WATERVILLE ST

SCALE: 3/16" = 1'-0"

NOTE: ELEVATION DATUMS HAVE BOTH ARCHITECTURAL (A) AND CIVIL (C) DIMENSIONS

PORT ▪ CITY ARCHITECTURE
65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000

Consultants:

Amended 3.17.16 - not as on web

Owner :
Peninsula Property Dev.
attn: Mr. Bob LeBlanc
(207) 776-0913
robertleblanc1@me.com

PRELIMINARY DESIGN

31 FORE ST CONDOS

31 Fore Street
Portland, Maine

#	DATE	DESCRIPTION

Date Issued	MARCH 17, 2016
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ELEVATIONS

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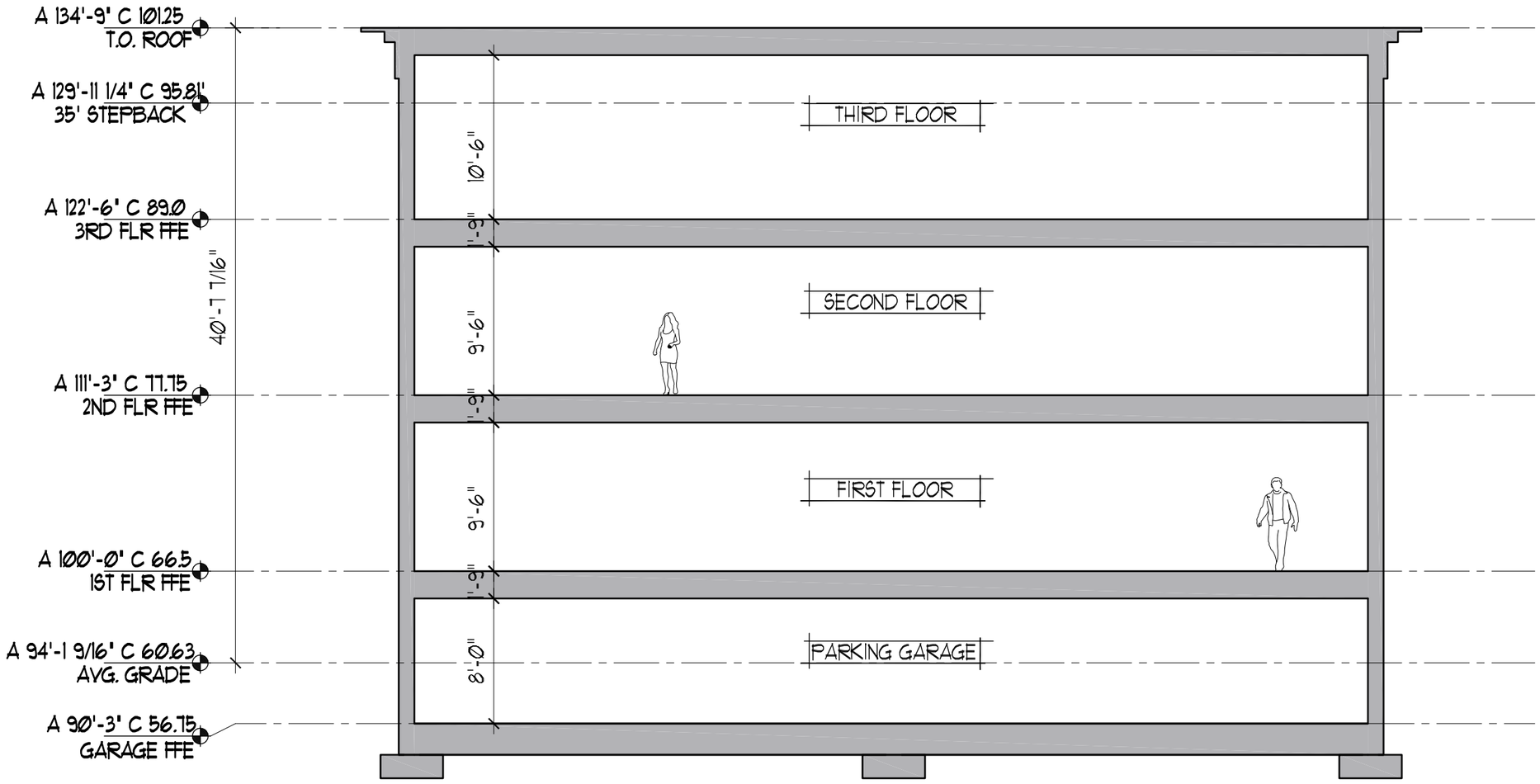
Planner's Note: Average Grade is 60.81' not 60.63"; corrected elevations to be submitted but the proposal meets zoning height requirements in either case.



PORT CITY ARCHITECTURE

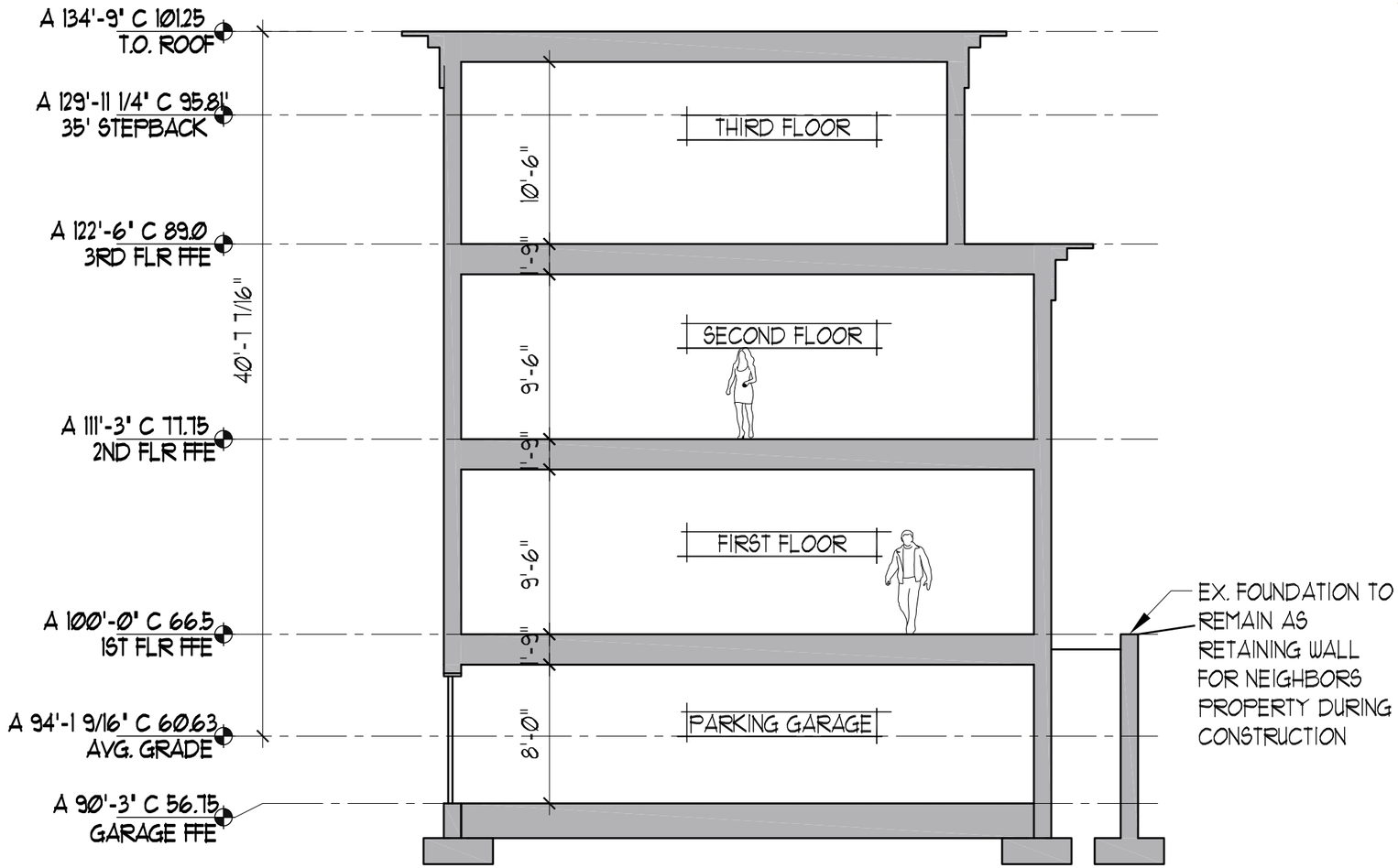
RESIDENTIAL MULTI-UNIT STUDY
31 FORE STREET

SECTION 1

Ref Dwg:	Scale: 1/8"-1'-0"	Issued :3.7.16
		Revised :

S1

Planner's Note: **Average Grade is 60.81' not 60.63"; corrected elevations to be submitted but the proposal meets zoning height requirements in either case.**



PORT CITY ARCHITECTURE

RESIDENTIAL MULTI-UNIT STUDY
31 FORE STREET

SECTION 2

Ref Dwg:	Scale: 1/8"-1'-0"	Issued : 3.7.16
		Revised :

S2

RENDERING 3

RENDERING 2

RENDERING 1

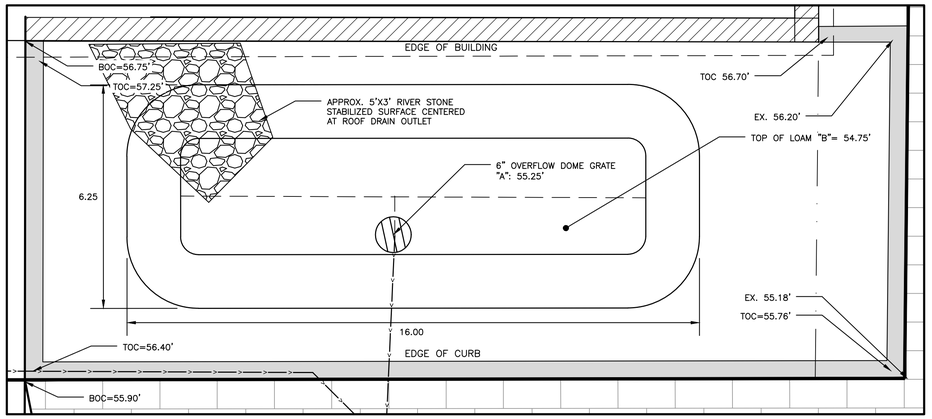
GARAGE AND ADA ENTRY

MAIN ENTRY

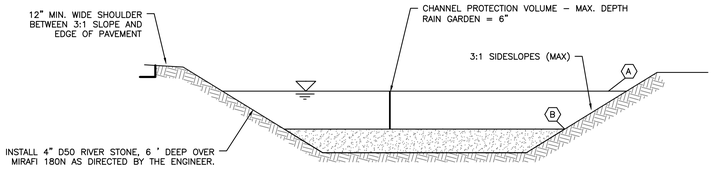
PORT ▪ CITY
ARCHITECTURE

31 FORE ST

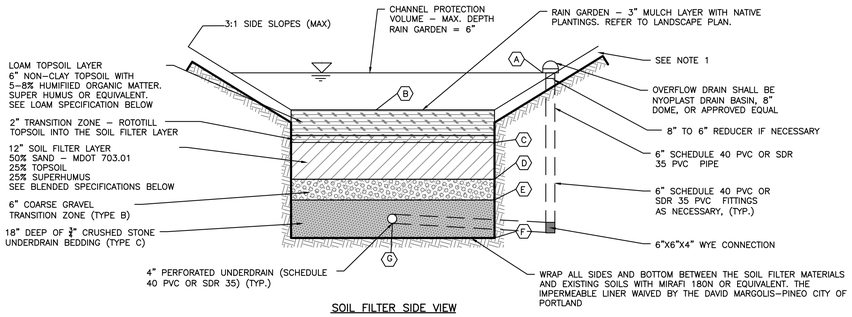
RENDERINGS



PLAN VIEW RAIN GARDEN



SOIL FILTER CROSS SECTION



SOIL FILTER SIDE VIEW

NOTES:
1. THE SIDESLOPES SHALL BE STABILIZED WITH HARDWOOD MULCH.

2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.

3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.

4. A SCHEDULE OF APPROPRIATE PLANTS FOR THE RAIN GARDENS AT THE SITE CONDITIONS IS LOCATED IN THE LANDSCAPE PLAN.

6. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

7. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

SCHEDULE	
ITEM	RG–1
(A) PROPOSED OVERFLOW RIM	55.25'
(B) TOP OF LOAM TOPSOIL LAYER	54.75'
(C) TOP OF SOIL FILTER	54.25'
(D) TOP OF GRAVEL	53.25'
(E) TOP OF STONE	52.75
(F) BOTTOM OF STONE	51.25'
(G) UNDERDRAIN INVERT	51.50'
STREET CATCH BASIN INV. OUT	49.48'

6" LOAM TOPSOIL LAYER SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75–95
#10	60–90
#40	35–85
#200	20–70
1. CLAY FRACTION <10% PASSING THE #200 SIEVE.*	
2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.	

*<10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT – MDEP TO WILL SAVAGE DATED 9/20/13

SOIL FILTER BED – SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0–5
MINIMAL CLAY CONTENT, NO MORE THAN 3–5% PASSING #200 SIEVE	

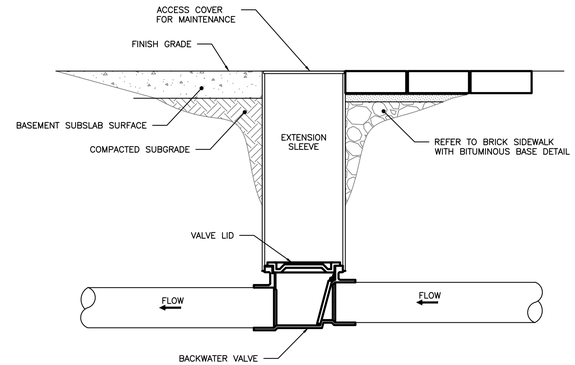
12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85–100
#20	70–100
#60	15–40
#200	8–15
1. CLAY FRACTION <2% PASSING THE #200 SIEVE. 2. SUPERHUMUS OR EQUIVALENT	

SOIL FILTER BED – TRANSISTION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	0–15
#200	0–5

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90–100
3/8"	0–75
#4	0–25
#10	0–5

RAIN GARDEN DETAIL

NOT TO SCALE

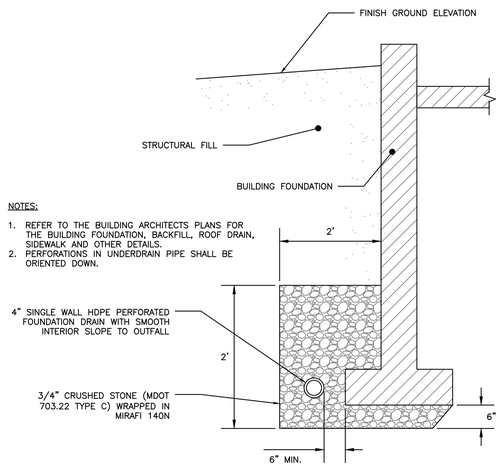


BACKWATER VALVE ASSEMBLY

NOT TO SCALE

NOTES:

1. BACKWATER 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.

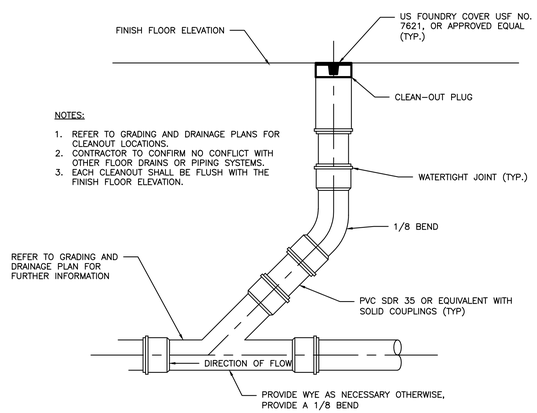


NOTES:

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

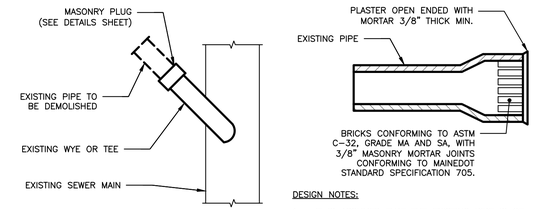


NOTES:

1. REFER TO GRADING AND DRAINAGE PLANS FOR CLEANOUT LOCATIONS.
2. CONTRACTOR TO CONFIRM NO CONFLICT WITH OTHER FLOOR DRAINS OR PIPING SYSTEMS.
3. EACH CLEANOUT SHALL BE FLUSH WITH THE FINISH FLOOR ELEVATION.

CLEANOUT DETAIL

NOT TO SCALE

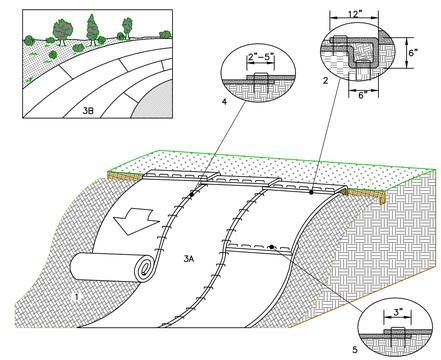


DESIGN NOTES:

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



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.

3. ROLL THE ECB (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.

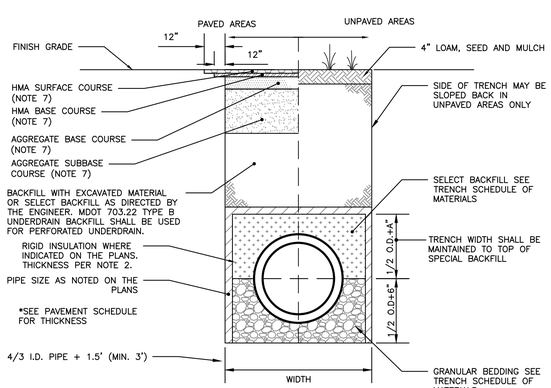
4. THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON THE ECB TYPE.

5. CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

*NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE



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 APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 12/5/18
FINAL APPLICATION	WHS 3/1/18
REV. GRADES	WHS 3/7/18

REVISION	REV. DATE

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: 31 FORE STREET REDEVELOPMENT

CLIENT: PENINSULA PROPERTY DEVELOPMENT, LLC.
59 MOODY STREET, PORTLAND MAINE 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATION, ALTERATION 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) 775–2563

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STATE OF MAINE WILLIAM H. SAVAGE No. 11416 3-1-18 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-43