1. Legal Ad

    Documents: PB LEGAL AD 7-14-15.PDF

2. Agenda

    Documents: PB AGENDA 7-14-15.PDF

3. 17 Carleton Street

    3.I. Memo

        Documents: CARLETON ST. - 17 (MEMO).DOCX

    3.II. Memo Attachments

        Documents: CARLETON ST. - 17 (MEMO ATTACHMENTS).PDF

    3.III. Public Comment

        Documents: CARLETON ST. - 17 (PUBLIC COMMENT).PDF

    3.IV. Applicants Submittal

        Documents: CARLETON ST. - 17 (APPLICANTS SUBMITTAL).PDF

    3.V. Plans

        Documents: CARLETON ST. - 17 (PLANS).PDF

4. 605 Stevens Avenue

    4.I. Memo, Memo Attachments And Public Comment

        Documents: STEVENS AVE. - 605 (MEMO, MEMO ATTACHMENTS AND PUBLIC COMMENT).PDF

    4.II. Att. A (Application And Supporting Documents)

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

    4.III. Att. B (Traffic Report)

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

    4.IV. Att. C (Stormwater Management Report)

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

    4.V. Att. D (Additional Traffic And Parking Information)

        Documents: STEVENS AVE. - 605 (ADDITIONAL PARKING AND TRAFFIC INFO.).PDF

    4.VI. Plans

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

5. 20 Marginal Way

    5.I. Report

Documents: MARGINAL WAY - 20 (REPORT).PDF

5.II. Report Attachments

Documents: MARGINAL WAY - 20 (REPORT ATTACHMENTS).PDF

5.III. Applicants Submittal

Documents: MARGINAL WAY - 20 (APPLICANTS SUBMITTAL).PDF

5.IV. Plans

Documents: MARGINAL WAY - 20 (PLANS).PDF

6. 1342 Congress Street

6.I. Report

Documents: CONGRESS ST. - 1342 (REPORT).PDF

6.II. Report Attachments

Documents: CONGRESS ST. - 1342 (REPORT ATTACHMENTS).PDF

6.III. Public Comment

Documents: CONGRESS ST. - 1342 (PUBLIC COMMENTS).PDF

6.IV. Applicants Submittal

Documents: CONGRESS ST. - 1342 (APPLICANTS SUBMITTAL).PDF

6.V. Applicants Submittal Continued

Documents: CONGRESS ST. - 1342 (APPLICANTS SUBMITTAL CONTINUED - EASEMENTS AND RESPONSE TO PUBLIC COMMENTS.PDF

6.VI. Plans

Documents: CONGRESS ST. - 1342 (PLANS).PDF

7. 72 Bishop Street

7.I. Report

Documents: BISHOP ST. - 72 (REPORT).PDF

7.II. Report Attachments

Documents: BISHOP ST. - 72 (REPORT ATTACHMENTS).PDF

7.III. Applicants Submittal 1 Of 2

Documents: BISHOP ST. - 72 (APPLICANTS SUBMITTALS) 1 OF 2).PDF

7.IV. Applicants Submittal (2 Of 2)

Documents: BISHOP ST. - 72 (APPLICANTS SUBMITTALS) 2 OF 2.PDF

7.V. Plans

Documents: BISHOP ST. - 72 (PLANS).PDF

7.VI. Public Comment

Documents: BISHOP ST. - 72 (PUBLIC COMMENT).PDF

LEGAL ADVERTISEMENT
PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will hold a meeting on Tuesday, July 14, 2015, Council Chambers, 2nd Floor, City Hall, 389 Congress Street. **Public comments will be taken at this meeting.**

Workshop – 4:30 p.m.

i. Level III Site Plan and Subdivision; 17 Carleton Street; Avesta Housing, Applicant. (4:30 – 5:30 p.m. estimated time) The Board will hold a workshop on a 37 unit affordable housing project with a total floor area of 26,375 sq. ft. and a building footprint of 5,495 sq. ft. The bedroom mix is for 9 efficiency, 26 one-bedroom and 2 two-bedroom units. A total of 31 parking spaces are proposed for this project.

iii. Level III Site Plan and Subdivision; 605 Stevens Avenue; Motherhouse Associates, LP, Applicant. (5:30- 6:30 estimated time) The Board will hold a workshop on the proposed rehabilitation of the former St. Joseph's Convent into 88 units of senior housing, with 66 affordable units and 22 market rate units. The overall property includes 18.98 acres and the proposal includes subdividing the McAuley campus into four lots. Seventy-three (73) parking spaces with 9 handicap spaces are proposed on Lot 3 (4.39 acre lot) for the Motherhouse Senior Housing.

Public Hearing – 7:00 p.m.

i. Level III Site Plan and Conditional Use; 20 Marginal Way; Bangor Savings Bank, Applicant. (7:00 – 8:00 p.m. estimated time) The Board will hold a public hearing on a proposed bank and office building at 20 Marginal Way. The new 3 story building has a footprint of 2,706 sq. ft. and a total floor area of 2,100 sq. ft. The proposed bank includes a proposal for a double lane drive-through, which is a conditional use in the B-7 zone.

ii. Level III Site Plan and Conditional Use; 1342 Congress Street; Jewish Community Alliance of Southern Maine, Applicant. (8:00 -9:00 p.m. estimated time) The Board will hold a public hearing on a proposal by the applicant to construct a neighborhood center at 1342 Congress Street, which is a conditional use (place of assembly) in the R-5 zone. The 91,146 sq. ft. lot is located in the R-5 zone on the site of the former St. Patrick's Church. The proposal is to demolish the existing building and construct a 19,146 sq. ft. building for a neighborhood center with a portion of the building used for a pre-school/day care center.

iii. Level III Site Plan and Subdivision; 72 Bishop Street; AVESTA 72 Bishop Street, LP, Applicant (9:00-10:00 p.m. estimated time) The Board will hold a public hearing on a proposal by the applicant to construct a 21,274 sq. ft. building at 72 Bishop Street. Thirty (30) efficiency units are proposed for homeless individuals under the "housing first" approach, which will include support services for the residents. The lot has 52,383 sq. ft. with 50 feet of frontage along Bishop Street. Site improvements include 12 vehicle parking spaces and 12 bicycle spaces.

STUART O'BRIEN, CHAIR - PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE

PLANNING BOARD

Stuart G. O'Brien, Chair
Elizabeth Boepple, Vice Chair
Sean Dundon
Bill Hall
Carol Morrissette
Jack Soley
David Eaton

AGENDA
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iii. Level III Site Plan and Subdivision; 605 Stevens Avenue; Motherhouse Associates, LP, and Sea Coast at Baxter Woods Associates, LLC, Applicants. (5:30- 6:30 estimated time) The Board will hold a workshop on the proposed rehabilitation of the former St. Joseph's Convent into 88 units of senior housing, with 66 affordable units and 22 market rate units. The overall property includes 18.98 acres and the proposal includes subdividing the McAuley campus into four lots. Seventy-three (73) parking spaces with 9 handicap spaces are proposed on Lot 3 (4.39 acre lot) for the Motherhouse Senior Housing.

PUBLIC HEARING – 7:00 p.m.

1. ROLL CALL AND DECLARATION OF QUORUM
2. COMMUNICATIONS AND REPORTS
3. REPORT OF ATTENDANCE AT THE FOLLOWING MEETINGS:
June 9th, 2015:
Workshop: O'Brien, Boepple, Eaton, Hall (4:50 p.m.), Morrissette, and Soley present; Dundon absent.
Public Hearing: O'Brien, Boepple, Eaton, Hall, Morrissette and Soley present; Dundon absent.
June 23, 2015:
Workshop Only:

4. REPORT OF DECISIONS AT THE FOLLOWING MEETINGS:

June 9th, 2015:

i. 802 Ocean Avenue; Zoning Map Amendment; Portland Retirement Residence; OBO Hawthorn Development, LLC., Applicant. Boepple moved and Morrissette seconded a motion to find the proposed R-5A text amendments consistent with the comprehensive plan and recommend adoption of the amendments to the City Council. Vote: 6-0, Dundon absent. Boepple moved and Morrissette seconded a motion to find the proposed R-5A and ROS map amendments consistent with the comprehensive plan and on the assumption the easement is escrowed prior to Council action recommend adoption of the amendments to the City Council. Vote: 6-0, Dundon absent.

Boepple moved and Morrissette seconded a motion to recommend to Council that Conditional rezoning agreement C-34 be rescinded. Vote: 6-0, Dundon absent.

ii. 138 Kennebec Street; Level III Site Plan; Bo Po, LLC., Applicant. Boepple moved and Morrissette seconded a motion to waive the street tree requirement for five trees subject to a financial contribution proportionate to the cost. Vote: 6-0, Dundon absent. Boepple moved and Morrissette seconded a motion to waive the requirement for a permanent parking lot to allow a temporary lot with a condition that the final parking lot plan be submitted by Feb. 1, 2016 or until the Somerset Plans are finalized and a performance guarantee is provided to cover the cost of permanent improvements. Vote: 6-0, Dundon absent. Boepple moved and Morrissette seconded a motion to temporarily waive the street lighting requirement along Kennebec Street until the final site plans for the permanent parking lot are submitted. Vote: 6-0, Dundon absent. Boepple moved and Morrissette seconded a motion to waive the landscape buffer requirements for a parking lot subject to a condition that the landscaping be included in the performance guarantee. Vote: 6-0, Dundon absent. Boepple moved and Morrissette seconded a motion to approve the Traffic Movement Permit subject to two conditions of approval. Vote: 6-0, Dundon absent. Boepple moved and Morrissette seconded a motion to approve the site plan with 15 conditions of approval. Vote: 6-0, Dundon absent.

June 23, 2015:
This meeting was a workshop only – There were no public hearing items to report on.

5. NEW BUSINESS

i. Level III Site Plan and Conditional Use; 20 Marginal Way; Bangor Savings Bank, Applicant. (7:00 – 8:00 p.m. estimated time) The Board will hold a public hearing on a proposed bank and office building at 20 Marginal Way. The new 3 story building has a footprint of 2,706 sq. ft. and a total floor area of 2,100 sq. ft. The proposed bank includes a proposal for a double lane drive-through, which is a conditional use in the B-7 zone.

ii. Level III Site Plan and Conditional Use; 1342 Congress Street; Jewish Community Alliance of Southern Maine, Applicant. (8:00 -9:00 p.m. estimated time) The Board will hold a public hearing on a proposal by the applicant to construct a neighborhood center at 1342 Congress Street, which is a conditional use (place of assembly) in the R-5 zone. The 91,146 sq. ft. lot is located in the R-5 zone on the site of the former St. Patrick's Church. The proposal is to demolish the existing building and construct a 19,146 sq. ft. building for a neighborhood center with a portion of the building used for a pre-school/day care center.

iii. Level III Site Plan and Subdivision; 72 Bishop Street; AVESTA 72 Bishop Street, LP, Applicant (9:00-10:00 p.m. estimated time) The Board will hold a public hearing on a proposal by the applicant to construct a 21,274 sq. ft. building at 72 Bishop Street. Thirty (30) efficiency units are proposed for homeless individuals under the "housing first" approach, which will include support services for the residents. The lot has 52,383 sq. ft. with 50 feet of frontage along Bishop Street. Site improvements include 12 vehicle parking spaces and 12 bicycle spaces.

Memorandum
Planning and Urban Development Department
Planning Division

To:	Stuart O'Brien, Chair, and Members of the Portland Planning Board
From:	Shukria Wiar, Planner
Date:	July 10, 2015
Re:	17 Carleton Street, Avesta Housing Development
Project #:	2015-078 **CBL:** 055 A004001
Meeting Date:	July 14, 2015

I. INTRODUCTION

Avesta Housing Development has submitted a Level III application for site plan and subdivision review for their property at 17 Carleton Street. The property is situated on Carleton Street and backs up to an alley passageway to West Street. The proposal is to construct a new building with thirty-seven (37) affordable housing units with a surface parking lot with thirty-one (31) spaces. The new building will be four stories along Carleton Street with the surface parking lot at the rear of the property.

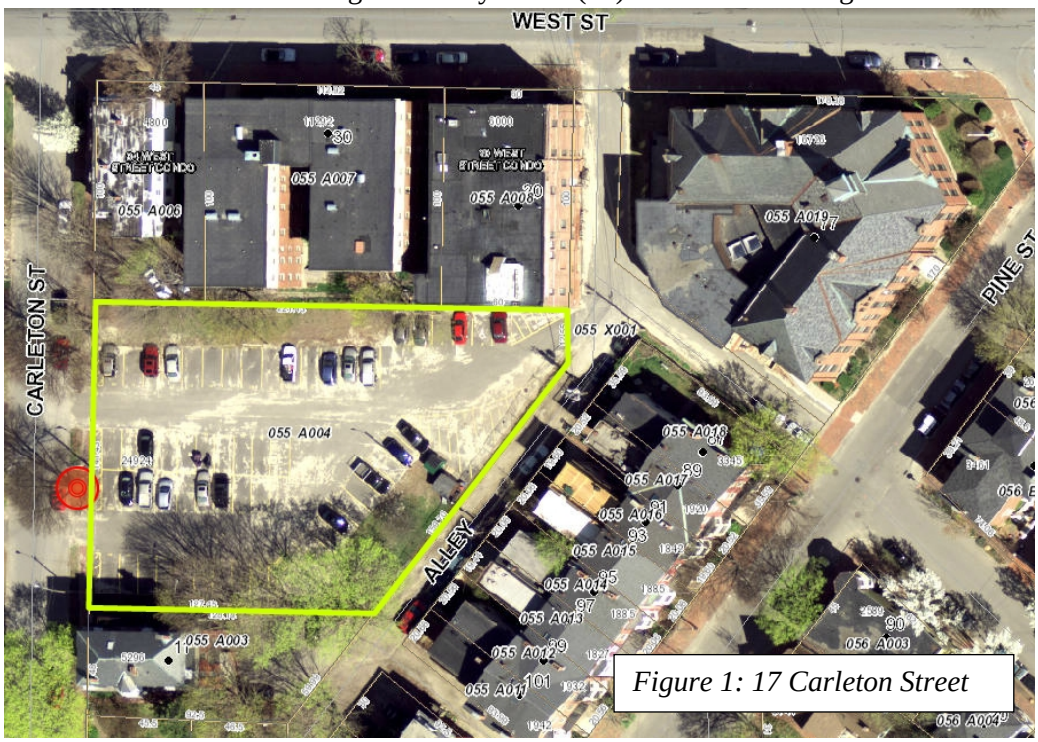


Figure 1: 17 Carleton Street

The site is currently a surface parking lot that consists of 25, 247 square feet. The property is located in the Residential R-6 zone and is in the West End Historic District. The project is being reviewed by the Historic Preservation Board for the design of the building and compatibility with the neighborhood. This proposal is being reviewed as a final plan and subject to the Site Plan and Subdivision Ordinance of the Land Use Code.

Applicant Name	Avesta Housing Development Corporation
Consultants	
Agent Representative	Thomas Greer of Pinkham and Greer
Engineer	Thomas Greer of Pinkham and Greer
Surveyor	Owen Haskell, Inc.
Architect	David Lloyd, Archetype Architects

II. PROJECT REVIEW

Review	*Applicable Standards*
Site Plan	14-526
Subdivision	14-491

REQUESTS FOR WAIVERS (staff evaluation within review under standards)

Waiver Request	**Applicable Standard**
Street tree Requirement – Sec. 14-526 2.b.iii. a The street tree requirement is one tree per unit for a total of 32 trees.	*Sec. 14-526 2.b.iii* (b) Waiver. Where the applicant can demonstrate that site constraints prevent the planting of required street trees in the City right of way, the Reviewing Authority may permit the planting of street trees in the front yard, within ten feet of the property line. Existing preserved healthy trees that are six (6) inches or more in caliper and are on the site within ten (10) feet of the property line may be counted towards this requirement. If planting street trees is neither feasible in the City right of way nor within the site, the applicant shall contribute to the City of Portland Tree Fund an amount proportionate to the cost of required street trees.

III. PROJECT DATA

Existing Zoning	R-6	
Tax Map	CBL: 055 A004001	
Existing Use	Surface Parking Lot	
Proposed Use	Rental Housing	
Parcel Size	25, 247 SF	
Number of Affordable Units	37 units	
	Existing	***Proposed***
Residential Data	None	37 dwelling units
Building Footprint	Zero	5,495 SF
Building Floor Area	Zero	26,375 SF
Building Height	Zero	43 feet
Impervious Surface Area	19,245	19,210
Parking Spaces	58	3, of which 7 are handicapped
Bicycle Parking Spaces	0	20
Estimated Cost of Project	$6.5 Million	
Uses in Vicinity	The site is surrounding by Multifamily buildings that are either owner-occupied or being rented.	

IV. EXISTING CONDITIONS/ BACKGROUND

a. Background

77 Pine Street and 17 Carleton Street- Butler School and the Parking Lot

The parcel at 17 Carleton Street was originally part of the Butler School property; it was the playground for the School. The Planning Report, dated 01.31.1975 (Attachment 3), to the Board of Appeals gives background of the Butler School and the site at 17 Carleton Street:

Late in 1973, the City advertised for the disposition of the Butler School. Later, the Butler School Playground

> *was included in the disposition description for both properties to be disposed of as a package. After numerous meetings, Council voted to sell both properties to Community Development Services, Inc. (CDS) for reuse as rehabilitated housing and associated parking, with the understanding that CDS would have to obtain a permit from the Board of Appeals.*

The first site plan that City staff found on record for the property was submitted on January 20, 1975 to the Department of Public Services to convert this parcel from a playground to a parking lot. In the same year, on February 12, the Board of Appeals granted an appeal to the premises at 17 Carleton Street as an off-street parking lot for 64 passenger cars subject to two conditions. It appears very likely that this appeal has expired since a similar proposal was submitted again for thirty-four (34) parking spaces (at 13-23 Carleton Street) and 15 parking spaces (rear 13-23 Carleton Street) for a total of forty-nine (49) spaces. On November 10, 1976, the Board of Appeals granted appeals to the owner/ developer for both the Space and Bulk and for the lot size per dwelling unit requirement and the required off-street parking variances. The Zoning Ordinance at that time required one off-street parking space per unit, totaling thirty-nine parking spaces for the development. The appeal granted that no required off-street parking had to be provided on the property and the density standard could be reduced. At this same meeting, the Board granted conditional uses for the property at 17 Carleton Street (stated as 13-23 Carleton Street and rear 13-23 Carleton Street) to be converted for a total of forty-nine (49) space parking lot (34 spaces for 13-23 Carleton Street and 15 for rear 13-23 Carleton Street). The previously referenced 1975 Planning Report stated the following regarding parking in the surrounding neighborhood:

> *Parking is a problem on the peninsula. For the residential areas in the City, parking is most acute in the West End. While the uncontrolled proliferation of parking lots in residential areas can have a blighting effect, off-street parking is a necessity and can be an asset if done well.*

The Butler School and the property at 17 Carleton Street were both developed in 1976 and 1977 for thirty-nine (39) residential units.

Jennifer Thompson, Associate Corporation Counsel reviewed the deed from when the City sold the Butler School and surrounding parcels. The deed contained covenants and specifically required the development of the former playground into a parking lot. There are also restrictions on the use of the property which states the use expired after a period of fifteen (15) years. Below are the excerpts from the deed; see Attachment 18 for the full description of the deed.

By the acceptance of this deed, Grantee covenants and agrees that:

1. It shall within one year from the date of this deed rehabilitate the building to accommodate twelve to thirteen dwelling units and incidental school uses, all work to be performed in compliance with the provisions of the Municipal Code and in accordance with architectural plans approved by the Planning Board and the City Council before work is undertaken. In performing said work, the present architectural features of the building and its relationship with adjoin properties shall be preserved.

…

3. In developing the playground area for parking purposes, all work shall be performed in compliance with the provisions of the Municipal Code and subject to the approval of the Planning Board. All significant trees within said area shall be retained and maintained.

….

6. Grantee shall not during said periods of 15 years, without Council approval, mortgage or otherwise encumber said premises, or any part thereof, except that necessary for the initial rehabilitation work, which mortgage or encumbrance shall remain the obligations of Grantee, its successors and assigns.

7. Grantee shall not develop the premises herein conveyed for any purposed other than set forth above without the prior written approval of the City Council within a period of 15 years form the date of this deed.

Below are Ms. Thompson's comments:

So, given that there does not appear to me to be any surviving limitation in the deeds to the properties on the ability to sell or develop them separately, it appears that if there is any requirement that the "playground/parking lot" lot provide parking to the Butler School or any other property, that requirement will need to be found in an approval by some City administrative body.

After a somewhat summary review, it appears to me that the review and approval of the Butler School lot and the parking lot in connection with this sale were done separately. Namely, there was a:

1. Space and bulk/change of use variance granted with respect to the Butler School that, according to the agenda, allowed its use to be changed from a school to an apartment house with 39 units despite the fact that it didn't meet the lot coverage requirements. The agenda also indicates that the requirement that 39 parking spaces be provided was also waived. I have not seen a written decision reflecting that approval - and so cannot determine whether the waiver of the parking was conditioned on those parking spaces being provided elsewhere or was simply waived without condition. If there was no condition on that approval, then obviously the Butler School will continue to be a lawful use under that approval despite the lack of parking. If there was a condition that required the Butler School to provide off-street parking, its failure to provide the parking would likely render it a nonconforming use. However, in the absence of some covenant or condition that is binding on the Carleton Street lot and prevents the proposed development of that lot, I'm not sure that the legality of the Butler Street's use under its prior change of use variance is a matter that can or should be resolved by the Planning Board in connection with its review of a different property.

2. Conditional Use Approval was granted with respect to the Carleton Street (playground/parking lot lot) that allowed that lot to be used as a parking lot. Again, I have not seen a written decision on that approval and so cannot determine whether the approval was conditioned on the lot providing spots to certain properties. Even if this approval was so conditioned, however, I think that condition would only continue to apply to the parking lot use. If the use of the lot is changed, such that the conditional use approval is no longer necessary, it seems to me that that approval would no longer have any effect.

On July 8, 2015, the Planning Division and Corporation Counsel received a letter from Avesta Housing's attorney, Maurice Selinger of Curtis Thaxter. In the letter it is stated the following, refer to Attachment 20 for the full letter:

In sum, I see nothing in these materials saying affirmatively that the Carleton Street lot must be available to tenants at the old Butler School for parking. The public record is clear that the existing approvals for the former Butler School do not require off street parking on the Carlton Street lot or anywhere else.

If you are in possession of official City records that suggest otherwise, I would appreciate the opportunity to review them.

Ms. Thompson is on vacation for the week of July 6, 2015 and will review the letter upon her return.

20 West Street - 20 West Street Condos

The property at 20 West Street was granted two appeals to convert the building from a warehouse to residential dwelling units in 1980. The Board of Appeals granted on August 11, 1980, to convert the space to ten (10) dwelling units with the requirement that there are ten off-street parking spaces within 300 feet of the site. The second appeal was granted in October 30, 1980 to convert the rest of the building to an additional nine dwelling units with the requirement that there are nine off-street parking spaces within 300 feet for a total of nineteen (19) dwelling units and off-street parking spaces. After researching the microfiche for this specific site, there were three lease agreements submitted at the time. There was an agreement between the owner at the time and Pine Street Garage, at 72 Pine Street, for ten parking spaces. This garage has since been converted to condominiums. The second lease was with State Street Management Company for then spaces. The third was a lease with Butler Payson for seven spaces with a provision for

additional twelve spaces for a total of nineteen (19) spaces. It has been determined the State Street Management Company managed Butler School and the parking lot at 17 Carleton Street.

Even though parking was leased at these locations, it was not the responsibility of the lessor to continue to provide these spaces. The Board of Appeals' requirement was that these spaces be located within 300 feet of the site and not tied to a specific property.

30 West Street -

There was a building permit, dated September 3, 1924 for 30 West Street that conve
apartments. Considering this building permit was issued in 1924, it is highly unlike
parking requirements for this change of use. . This residential building pre-dated the development of the parking lot at Carleton Street.

Figure 2: Proposed Site Along with the Three Properties

A detailed chronological history of the City's Board decisions and findings found on microfiche is included in the chart below. Planning Staff did not find any decisions, whether administrative or issued by a City Board, requiring the parking lot at 17 Carleton Street to provide parking to the Butler School or any other property.

	Chronology of the Properties at 77 Pine Street, 17 Carleton Street, and 20 West Street
January 17, 1975	Application for Certificate of Occupancy for the Use of Premises was submitted to the Inspection Division to allow the use of the property at 17 Carleton (13-23 Carleton Street) to be used as a parking lot for 64 spaces. The present use of the property is listed as playground. The application includes the question: "Proposed use to be accessory to a building or other use on this lot?" The applicant answers *Yes*. Then application form also asks: "If so, what is use of building or other use?" and the applicant answers *Apartments*. Owner is Community Development Services, Inc. (CDS) Attachment 1
January 20, 1975	Department of Public Works (now Public Services) received a site plan for 17 Carleton Street property to convert the playground to 64-space parking lot with conditions. Attachment 2
January 31, 1975	Planning Report from the Portland Planning Department to the Board of Appeals. Attachment 3
February 12, 1975	Based on the Finding of Facts, the Board of Appeals granted the appeal to CDS, Inc. to use the premises at 13-23 Carleton Street (17 Carleton Street) as an off-street parking lot for 64 passenger cars, subject to the following conditions: (1) Installation of light screening on fence (2) Planning Staff will work with Mr. Kinney and other abutters and the developer to provide fencing as needed as well as additional lighting is such is found necessary. This may have expired since the project was granted appeal again on November 10, 1976, see below. Currently appeals granted have an expiration date of six months. Attachment 4
October 22, 1976	Applications for Certificate of Occupancy for the Use of Premises was submitted to the Inspection Division to allow the use of the property at 17 Carleton (13-23 Carleton Street) to be used as a parking for 34 spaces. The present use of the property is listed vacant. Owner is Butler School Associates Attachment 5
November 10, 1976	Based on the Findings of Fact, the Board of Appeals Board granted Space and Bulk Variances (Density) to 214-220 State Street and 71-83 Pine Street, see below the except from the meeting:

	214-220 State Street, cor. 32-36 Deering St. - Masada Trust The Board granted the change of use of this building from school use to an apartment house with 17 dwelling units. **71-83 Pine St. cor. 4-16 West St. -Public School Assoc.** The Board granted the change of use of this building at the above named location from school use to an apartment house with 39 dwelling units. Attachment 6
	At the same meeting, conditional use was granted to 13-23 Carleton Street and rear 13-23 Carleton Street, see below: **13-23 Carleton St. - Butler School Associates** The Board granted permission to permit off street parking for 34 passenger cars at the above named location. **rear 13-23 Carleton St. - Butler School Associates** The Board granted permission to permit off street parking for 15 passenger cars at the above named location. Attachment 7
November 12, 1976	Planning Department Site Plan Review sheet that list the parking lot conversion as a 'Major Development' that was 'Approved Conditionally' and the reasons stated were the following: On November 9, 1976, the Portland Planning Board approved a site plan for this proposal. The plan was revised from the original to show 31 parking spaces with nine foot widths. The Board's approval also involved the provision of landscaping which had been submitted in the interim and which has been revised according to recommendations of the City Arborist. The approval is conditional upon both these revisions. The Building Permit should be withheld until the property has been conveyed to the applicant by the City. Attachment 8
	Public Works Department Site Plan Review sheet that the parking lot conversion as 'Approved' and the reason stated was the following: Corrections in review are due to the reception of a revised plan. Attachment 9
June 13, 1977	The subdivision for Butler-Payson Co was recorded in the Cumberland County of Registry of Deeds and included both the Butler School and the 17 Carleton Street properties. The subdivision was not signed by any city board Attachment 10
August 11, 1980	A variance for dwelling unit conversion appeal was granted to 20 West Street (owner: Larry Adlerstein) by the Board of Appeals to allow conversion of 10 apartments. The decision was based on the owner provide 10 parking spaces, meeting the requirement of Section 602.14 (has to be within 300 feet of the property). Attachment 11
October 30, 1980	A variance for dwelling unit conversion appeal was granted to 20 West Street (owner: Larry Adlerstein) by the Board of Appeals to allow conversion of 9 apartments. The decision was based on the owner providing 9 parking spaces meeting the requirement of Section 602.14 (has to be within 300 feet of the property). With the two above variances, 20 West Street had a total of 19 dwelling units with a required 19 parking spaces. There were three parking leases found on microfiche for 20 West street: Pine Street garage at 72 Pine Street for 10 parking spaces (dated August 28, 1980) and State Street Management Company for 10 spaces (dated April 27, 1981) and a lease agreement for 7 parking spaces plus 12 addition spaces at 17 Carleton Street property. According to an abutter, State Street Management Co. managed the parking lot at 17 Carleton Street. Attachment 12

According to the applicant, currently the parking spaces are leased out on a monthly basis to area residents; ten of the

spaces are for the tenants of Butler School. Below are photographs of the current site.

Figure 3: View of Site from Carleton Street

Figure 4: View of the north side of Site (Rear of 20 and 30 West St)

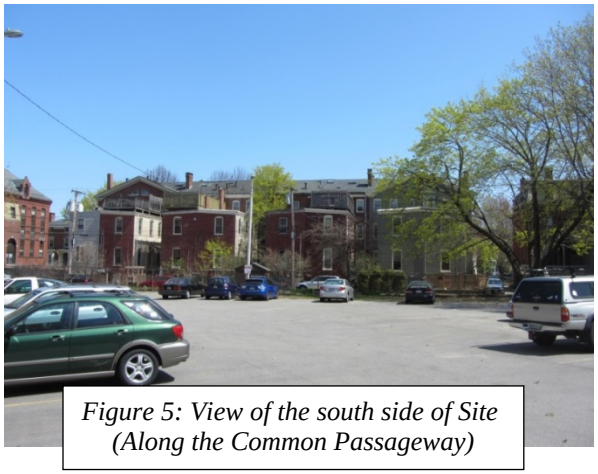


Figure 5: View of the south side of Site (Along the Common Passageway)

Figure 6: View of Site from Carleton St. This curb cut will be closed

To summarize, replacement of the existing parking lot with a new housing proposal has raised questions and concerns from the surrounding neighborhood. Though Planning staff is sensitive to their concern for the loss of neighborhood off-street parking, nothing found in the course of extensive research into prior documentation and approvals and documentation has demonstrated that there is a requirement to keep this as a parking lot in perpetuity, or that the applicant does not have the right to proceed with this application. We will continue to review any additional documentation that may come forward, and evaluate it for any impact it might have on this implication. Corporation Counsel has not indicated there is cause for the application not to proceed as presented.

b. Proposed Development

The proposed plan is for the construction of a thirty-seven (37)-unit apartment building at 17 Carleton Street in the West End. The subject property is located on the east side of Carleton Street, between Pine and West Streets. The property is currently fully developed surface parking lot that extends deep into the interior of the triangular block bounded by Carleton, West and Pine Streets. The site has three curb cuts, two on Carleton Street and one on the shared passageway at the rear of the site. As part of the proposal, one of the curb cuts on Carleton Street will be closed and the one at the rear of the site will remain open.

The front façade of the building is set back approximately 10 feet from the sidewalk. At the sidewalk line a low retaining wall with fence extends the full width of the property, with openings for vehicular and pedestrian entries. The fencing is metal and the base and posts are concrete.

The ground floor of the building features a 24' wide open passageway that provides vehicular access to the parking lot behind the building. The main entrance to the apartment complex is located behind a projecting first floor canopy and porch. The porch extends in width beyond the entrance itself. There are two large, mature deciduous trees in the esplanade in front of the property. These trees are proposed to be retained.

Figure 8: West Elevation Rendering

Behind the proposed building is the surface parking lot. The applicant is proposing a total of thirty-one (31) parking spaces of which seven are dedicated handicapped spaces. Two handicapped spaces are required for Butler School under the Maine Housing Authority. The applicant is providing these two required parking spaces as well as eleven (11) other spaces for Butler School housing development for a total of thirteen (13) spaces. The applicant is proposing to provide a ride share car, which the Zoning Ordinance allows, and which reduces the required parking spaces by eight spaces.

V. PUBLIC COMMENT

A notice was sent out on May 14, 2015 to the area property owners indicating that the Planning Office had received this application. A notice of this Workshop was sent to 357 property owners within 500 feet and interested citizens, and appeared in the July 6th and July 7th, 2015 editions of the *Portland Press-Herald*.

A Neighborhood Meeting is required for this project and was held at Reiche School on June 11, 2015; the notes are in Attachment W. The Neighborhood meeting was attended by about 40 people. A total of nine people called the Planning Division office either to inquire or express concerns about the project of which five to six called a number of times recurrently to discuss the project in detail. Twelve (12) written comments have been received at the time this report was prepared and all the letters raise objections to the project. The main concerns to date are

the loss of much needed parking space at this location and the design of the building. There were also some questions raised about the stormwater capacity and sewer capacity at this location since some of the abutters have had sewer backup their basements during a heavy rainfall.

There have also been four Freedom of Information requests. The specific questions raised pertain to whether this parking lot was approved for the specific use of the Butler School, when the School was converted to dwelling units in the late 1970s, and for 20 West Street when it was converted to dwelling units in 1980. The Planning staff reviewed files in the Planning Division, Inspections and Zoning Divisions, and Department of Public Services; the documents that pertained to the requestors' questions (conversion dates, parking requirements, etc.) were organized by address and given to the four requestors.

VI. RIGHT, TITLE AND INTEREST AND FINANCIAL/TECHNICAL CAPACITY

a. The owner of the property is Avesta Butler Payson LP. The applicant has provided a copy of quitclaim deeds, recorded at the Cumberland County Registry of Deeds (Please see Attachment D for the Book and Page) which demonstrates their right, title and interest in the property.

b. The estimated cost of the development is listed as approximately $6.5 Million on the application. The applicant has submitted a letter from Gorham Savings Bank, dated April 28, 2014, as demonstration of their financial and technical capacity to complete the proposed development.

VII. ZONING ASSESSMENT

This project is for a new, four (4) story building with 37 residential dwelling units, located in the R-6 zone. There is also a Historic Overlay zone. On June 18th, the architect e-mailed me information regarding the average grade and the height of the building. The project height is at 43', which is under the maximum 45' building height. The project is meeting all other dimensional requirements.

At the time of HVAC permitting this office will require unit information on dBA emissions. Separate permits are required for any new signage. Since the site in in the historic district, all signs will need to be reviewed by the Historic Preservation staff.

VIII. DEVELOPMENT REVIEW

A. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)

The applicant has submitted a recording plat. The final plat will need to be revised to reflect any waivers and conditions of approval that relate to the subdivision plan. Any waivers granted must be recorded at the Registry of Deeds within 90 days of a Planning Board decision.

B. SUBDIVISION (Section 14-497)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Staff comments are listed below.

1. *Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)*
   The project will not result in undue water or air pollution, as it is not in a flood plain and is for residential use. The proposal will not cause unreasonable soil erosion as the site is already paved.

2. *Sufficient Water Available (Section 14-497 (a) 2 and 3)*
   The applicant has not provided a 'Capacity to Serve' letter from Portland Water District; this would need

to be provided by the public hearing to have a complete application.

3. *Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)*
Carleton Street is a one-way street from Pine Street to West Street. The street on the south is Pine Street and the street to the north is West Street. All speed limits in the immediate area are posted 25 mph or not posted and assumed to be 25 mph.

The applicant has submitted a Parking and Traffic Study. Tom Errico, Consultant Traffic Engineer with TY Lin, has reviewed the study and states:

> *I have reviewed the traffic study and find the methods and conclusions to be acceptable. The project is estimated to generate 8 new AM peak hour trips and 10 new PM peak hours trips. Capacity analyses were conducted at the Carleton Street intersections with West Street and Pine Street and results indicate both intersections will operate at excellent levels of service. A review of crash data indicated there are no High Crash Locations in the vicinity of the project. Accordingly, the project is not anticipated to have a significant impact on traffic mobility and safety.*

4. *Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)*
As part of the revised plans, the applicant is proposing to separate the roof drain from the stormwater and sanitary sewer by draining all the roof water to a rain garden. David Margolis-Pineo, Deputy Engineer with the Department of Public Services, had reviewed the submitted plans. A wastewater application to confirm capacity has been submitted to the Department of Public Services. The wastewater application indicates that this new project will be putting approximately 3,000 gallons per day of sanitary waste into the sewer. There is a problem on the Western Peninsula of basements flooding when there is a heavy rain storm. Below is Mr. Margolis-Pineo's comment about the current situation in the neighborhood:

> *All streets in the West End of Portland, West, Pine, and Carlton Streets included, were designed with one sewer pipe to convey both stormwater and sanitary wastes. In recent years, more rain events have exceeded the capacity of the sewer resulting in residential sewer backups into basements. It has been estimated that the 37 Avesta units proposed on Carlton Street will add approximately 3,000 gallons per day (gpd) of sanitary waste with no increase in stormwater runoff. To offset this estimated wastewater addition, the applicant is requested to calculate and propose means to retain/remove 3,000 gallons of stormwater for a one inch storm event.*

The Department of Public Services will make a determination on the wastewater capacity letter when the applicant has addressed the above comment.

The floor plan shows a trash room that will be utilized by the tenants. The details of how it will be used is not outlined in the application. The applicant should address this.

5. *Scenic Beauty, Natural, Historic, Habitat and other Resources (Section 14-497 (a) 8*
The proposed building is located within the West End Historic District and was considered by the Historic Preservation Board in May 2015. For subdivisions within historic districts the Historic Preservation Board must apply the standards of Section 14-651of Article IX which sets out criteria for review of new construction.

The Historic Preservation Board reviewed the proposed project at a Workshop on May 13, 2015 and the current renderings reflect the changes made to address the Historic Preservation Board's concerns. The building design contributes to the character of the area.

The City's Technical Standards regarding the provision of street trees applies to this subdivision which requires one street tree per unit, therefore thirty-seven (37) street trees are being proposed. The landscaping plan shows two existing trees that will remain on Carleton Street and two paperbark maples that are being proposed along the common passageway at the rear of the site. Jeff Tarling, the City Arborist, has reviewed the tree selection types and states the following about the selection:

> *Tree selection types also need to be larger tree variety vs Hawthorn and Paperbark Maple which are very small trees. European Hornbeam or some of the upright Oak varieties like 'Regal Prince' which can grow in tight space but offer more height for screening. See: http://www.jfschmidt.com/pdfs/regalprinceoak.pdf*
>
> *The north edge space for example, could use 4 of the upright trees vs the two Hawthorns as shown.*

The plan is not showing any new trees being proposed on Carleton Street. Given the limited space on the site and along the sidewalk, three more street trees should be planted as part of the project: one tree on Carleton Street and two along the common passageway side of the site. As the remaining thirty-two (32) trees cannot be located on the site, the applicant will need to request a waiver of the street trees and make a financial contribution to the City's Residential Tree Program for the provision of 32 trees to be planted in the vicinity of the proposed project.

6. *Easements*

According to the applicant, the only easement on this site is one that requires that Avesta Housing provide two ADA spaces for the use by the Butler School Project.

7. *Comprehensive Plan (Section 14-497 (a) 9)*

The staff has identified the following goals and policies which are relevant to the proposed housing development and finds the proposal in conformance with the Comprehensive Plan:

Portland Housing Goal: Ensure that an adequate supply of housing is available to meet the needs, preferences, and financial capabilities of all Portland households, now and in the future.

Policies

- Ensure the construction of a diverse mix of housing types that offers a continuum of options across all income levels, which are both renter and owner-occupied, including but not limited to the following:
  - ii. Housing units for decreasing household size, such as young professionals, empty nesters, single-parent households, and senior citizens.
  - viii. Housing with a range of services and medical support for the elderly and special needs population, including assisted living, congregate care, group homes and nursing homes;
- Encourage higher density housing for both rental and home ownership opportunities, particularly located near services, such as schools, businesses, institutions, employers, and public transportation.
- Increase Portland's rental housing stock to maintain a reasonable balance between supply and demand yielding consumer choice, affordable rents, and reasonable return to landlords.
- Identify vacant land and redevelopment opportunities throughout the City to facilitate the construction of new housing.

Portland Housing Goal: Maintain and enhance the livability of Portland's neighborhoods as the City grows and evolves through careful land use regulations, design and public participation that respects neighborhood integrity.

Policies

- Encourage innovative new housing development, which is designed to be compatible with the scale, character, and traditional development patterns of each individual residential neighborhood.

- Encourage new housing development in proximity to neighborhood assets such as open space, schools, community services and public transportation.
- Ensure the integrity and economic value of Portland's neighborhoods.

Volume 2 Implementation - Housing Initiatives:

3. New Senior Citizen Housing: A variety of housing opportunities are needed to assist Portland's senior citizens, including subsidized apartments.

   (b) Update zoning to encourage neighborhood livability with higher density multi-family and innovative mixed use projects that are along major public transportation routes, near service areas, in redevelopment (underutilized) or infill area, locations near downtown and in business zones.

8. Financial Capability (Section 14-497 (a) 10)

The estimated cost of the development is listed as approximately $6.5 Million on the application. The applicant has submitted a letter from Gorham Savings Bank, dated April 28, 2014, as demonstration of their financial and technical capacity to complete the proposed development.

C. SITE PLAN STANDARDS (Section 14-526)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations. Staff comments are listed below.

1. Transportation Standards

a. *Impact on Surrounding Street Systems and Access and Circulation*

The proposed project is located on a site that has access off of Carleton Street via one curb cut and has access via a common passageway from the rear of the property. There are two access points for this common passageway from the site; the passageway connects to West and Pine Streets.

The applicant has submitted a traffic study and Mr. Errico has reviewed it. Please refer to Paragraph VIII B (3) for his analysis.

b. *Public Transit Access*

The public transit requirements do not apply to this project but there is a bus route, Route #8, which serves West Street. West Street is approximately 125 feet from the site.

c. *Parking*

It is understood that the applicant is using the site at present for parking for tenants from other properties and are on a monthly rental. The neighborhood is worried that when this project gets developed, the cars currently parking at this lot (58 spaces of which are 10 are being used by the Butler Street apartments) will be displaced. These cars will be placed on the surrounding on-streets, where parking is so scarce.

Section 14-332.1 (k) – For residential development on the peninsula and in the R-6 and R-6A Zones, including new construction, the parking requirement is one space per dwelling unit, the first three units are exempt from providing parking. This same section also states that:

> The planning board may establish a parking requirement that is less than the normally required number of spaces upon a finding of unique conditions that result in a lesser parking demand, such as housing for persons who cannot drive, housing that participates in a travel demand management program, availability of transit, or housing which includes permanent restrictions on automobile usage, and which is permanently restricted from utilizing resident on-street parking stickers.

The applicant is proposing to provide a ride share car, per Zoning Ordinance (Section 14-332.1 (k) 2), which allows the parking spaces to be reduced by eight spaces. The applicant will have to determine where the parking space will be provided for the car.

Section 14-332.2 (b) - *Incentives for affordable housing- parking reductions,* the Planning Board may establish a parking requirement for affordable units that are less than the one parking per unit requirement, regardless of the size of the structure.

The following is the breakdown of the parking that is required by zoning:

Proposed Development has 37 Units	34 spaces are required per R6 zoning
Development is proposing u-car share	8 spaces are reduced per Zoning Ordinance for car share
Total of Spaces required	26 Parking Spaces

The applicant is proposing a total of thirty-one (31) parking spaces of which seven spaces are handicapped at the rear of the site, behind the proposed building. Two handicapped spaces are required for Butler School under the Maine Housing Authority. The applicant is providing these two required parking spaces as well as eleven (11) other spaces for Butler School housing development for a total of thirteen (13) spaces. As part of the proposal, one of the curb cuts on Carleton Street will be closed and the one at the rear of the site will remain open.

According to the applicant's cover letter, Attachment A, it states:

> *Historically, AVESTA's parking demand for their projects is 70% of total number of units, or 26 spaces. The ride share care will further reduce this number to 18. We would like this to be the required number.*

The applicant has submitted Supplemental Parking Information Parking Occupancy Evaluation (Attachment T). Mr. Errico has reviewed the information this information and offers the following:

> *The applicant has provided updated parking demand analysis information that indicates the proposed site will require 0.37 parking spaces per residential unit, but is suggesting a parking supply – for 17 Carleton Street only – of 0.48 parking spaces per unit or 18 parking spaces. I would note that the parking rates developed by the applicant are based on cars observed to be parked. According to their data, at many sites the number vehicles parked did not closely correlate to tenant automobile ownership. If automobile ownership was used, the average parking demand rate would be 0.59 parking spaces per residential units. I need to continue to review this and historical parking information, before I render a conclusion on the parking demand analysis.*

Mr. Ericco also adds that any *"Changes to the on-street parking schedule for Carleton Street will be required in conjunction with changes to existing driveway conditions. This will require City Council action and the applicant shall provide supporting documentation at the time of the request"*.

d. *Bicycle Parking*
Currently there is not bicycle parking at the surface parking lot. The applicant is proposing a total of twenty (20) spaces on site, four of these will be exterior and sixteen (16) will be in the Bike Room, which is within the building.

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 applicant is proposing to have landscaping along the front of the building as well as along the back of the property. The applicant is proposing to save two street trees on Carleton Street, in front of the building. The street tree requirement would be one tree per unit, or thirty-seven street trees, in or near the ROW (refer to Section VIII B5, above). Due to the site constraints, the applicant cannot plant the required amount. Therefore the applicant will need to contribute to the City's Tree Fund for the balance of required trees.

   Jeff Tarling, City Arborist, has reviewed the landscaping plan and feels additional screening is needed along north edge, see below:

   > *The north edge space for example, could use 4 of the upright trees vs the two Hawthorns as shown.*

   c. *Water Quality, Storm Water Management and Erosion Control*
   The site is fully developed as a parking lot. The site currently drains to two catch basins on site which connect to the drainage system in Pine Street. With the proposed development, the amount of impervious surface on the site will be reduced. The developed conditions will match the existing conditions with flow going to the existing onsite catch basin. A series of field inlets, underdrains and catch basins will collect the runoff and convey it to the catch basin at the rear of the site. The drainage from the parking area will flow to Pine Street via the existing storm drain, as it currently does.

   David Senus, Consultant Engineer with Woodard and Curren, had recommended in his preliminary comments that the roof drain be should be discharged to the ground or preferably to landscaping or a rain garden area instead of a connection into the storm drain system, which ultimately connects to the City's combined sewer system. The applicant has revised the plans to show that the roof drain will be discharged to a rain garden. Mr. Senus also offers the following comments:

   > *The addition of an underdrained soil filter to manage runoff from the proposed rooftop area will help to reduce the volume and slow the rate of inflow into the City's combined sewer system; an enhancement over the existing site condition where runoff from the existing parking area directly enters the City's combined sewer system. The City has received comments and complaints from neighbors with concerns regarding the capacity of the combined sewer system, specifically related to sewer backups into nearby basements. We request that the Applicant calculate the reduction in stormwater discharge rate and the volume reduction potential (estimated infiltration) for the soil filter system for a typical 1", 24-hr storm event and provide a comparison to the anticipated sanitary sewer flowrates generated by the project.*

   Please refer to Attachment 15 for Mr. Senus' full review.

3. Public Infrastructure and Community Safety Standards

a. *Public Safety and Fire Prevention*

The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime. Overhead lighting poles are being proposed at the parking lot that will provide a well lite area. The applicant is also providing a well illuminated passageway from Carleton Street to the parking lot.

Captain Keith Gautreau of the Fire Department has reviewed the proposed plans. Capt. Gautreau's main concern is that the proposed building has access on a minimum of two sides and the access to the rear of the building be maintained year round. There are two accesses to the building, one from Carlton Street and one from the common passageway. According to the applicant, the common passageway to West Street is maintained by Avesta Housing and cars do not park at this location. Capt. Gautreau may want signage at this location. The Fire Department's full comments for the project are in Attachment 17; City staff and the applicant are working together to resolve any issues.

b. *Availability and Adequate Capacity of Public Utilities*

The project will be served by the existing utility services located in Carleton Street. The electrical and communication utilities are located in the common passageway. The Applicant has received a capacity letter from the Portland Water District and has contacted the City Department of Public Services requesting ability to serve sewer demand, and awaits response. Confirmation of ability to serve sewer from DPS should be forwarded to the Planning Authority upon receipt.

5. Site Design Standards

a. *Snow and Ice Loading*

The application and site plan was unclear about onsite snow loading areas on the site. The applicant will have to address this standard requirement.

b. *Exterior Lighting*

The site is located in the West End Historic District; therefore the Historic Preservation Board will review the proposed fixtures. The revised photometric plans have been reviewed by Planning Staff the lighting trespass at the north edge of the property is now meeting the required trespass standard of .01 foot candle at property line.

c. *Noise and Vibration*

All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment will have to be shown on the plans and meet state and federal emissions requirements. Mechanical equipment should be located to the interior of the site, away from abutting residential properties and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry walls or a combination thereof. This information will have to be submitted for review.

d. *Signage and Wayfinding*

The site is located in a historic district; therefore all commercial signs will need to be reviewed by the Historic Preservation staff. Separate permits are required for any new commercial signage.

e. *Zoning Related Design Standards*

Since the property is located in the West End Historic District, the Historic Preservation Board will review the design of the building. The Board has had one workshop on the item and a second one is scheduled for July 15, 2015.

IX. NEXT STEPS

1. Address staff comments;
2. Address additional comments of the Planning Board;
3. Prepare final plan submission for review by the Planning Authority and Planning Board; and
4. Hold final Planning Board Hearing.

ATTACHMENTS

PLANNING BOARD ATTACHMENTS

1. Application for Certificate of Occupancy for the Use of Premises
2. Site plan for 17 Carleton Street Property
3. Planning Report from the Portland Planning Department to the Board of Appeals
4. Board of Appeals Finding of Facts for Carleton Street Site
5. Application for Certificate of Occupancy for the Use of Premises
6. Marge Schmuckal Determination Letter
    a. Board of Appeals Space and Bulk Variance Appeal for 214-220 State Street
    b. Board of Appeals Space and Bulk Variance Appeal for 71-83 Pine Street
7. Board of Appeal Conditional Use for the Carleton Street Property
8. Planning Department Site Plan Review sheet
9. Public Works Department Site Plan Review sheet
10. Subdivision for Butler-Payson Co. recorded in 1977
11. 20 West Street- Board of Appeals Board granted Space and Bulk Variance
12. 20 West Street- Board of Appeals Board granted Space and Bulk Variance
13. Traffic Engineering Review (Tom Errico, T Y Lin), comments dated 06.04.2015 and 07.02.2015
14. Department of Public Services Review, David Margolis-Pineo, dated 06.05.2015
15. Civic Engineer Review, David Senus, dated 05.28.2015 and 07.09.2015
16. City Arborist Review, Jeff Tarling, dated 06.02.2015
17. Fire Department, Capt. Keith Gautreau, dated 05.07.2015
18. Jennifer Thompson Email dated 07.01.2015
19. Butler School Associates Deed
20. Maurice Selinger of Curtis Thaxter Letter dated 07.08. 2015

PUBLIC COMMENTS

PC1. Anne Adams at 30 West Street
PC2. Clair Oppenheim
PC3. Deborah Boyajiin and Bill Nelligan at 27 West Street
PC4. Derek Jaskulski at 50 Carleton Street
PC5. Elliot Rappaport at 20 West Street
PC6. Jen DeRosa
    1. Comments dated 06.02.2015
    2. Comments dated 06.08.2015
    3. Photographs
PC7. Jenson Steel at 30 West Street #6
PC8. Liz Kellogg
PC9. Mason Sears at 106 Pine Street
PC10. Resident at 30 West Street Apt. #2
PC11. Resident at 30 West Street
PC12. FOAA request - Penrose
PC13. FOAA request - Mary Doughty
PC14. FOAA request - George Silverman
PC15. FOAA request - Larry Reinhartsen
PC16. Kathy DiMatteo at 20 West Street

PC17. Julie DiMatteo at 20 West Street
PC18. Joshua Roy at 20 West Street

APPLICANT'S SUBMITTAL

A. Cover Letter (Tom Greer, Pinkham &Greer Civil Engineers) dated 05.07.2015
B. Site Plan Application, Checklist & Authorization Letter
C. Project Information and Photos
D. Deed and Passageway Agreement
E. USGS Location Map
F. Financial Capacity
G. Technical Ability
H. Tax Map
I. Portland Water District Ability to Serve Letter Request
J. Flood Map
K. Soils Map
L. Wastewater Ability to Serve Letter Application
M. Unitil Ability to Serve Letter
N. Construction Plan
O. Electrical Site Plan & Photometric
P. Traffic and Parking Study
Q. Drew Wing's Email dated 06.17.2015and 06.30.2015
R. Cover Letter Addressing (Tom Greer, Pinkham &Greer Civil Engineers) dated 06.30.2015
S. Updated Project Data Sheet
T. Supplemental Parking Information Parking Occupancy Evaluation
U. Lighting Catalogue Cuts
V. Portland Water District Ability to Serve Letter
W. Neighborhood Meeting and Minutes

PLANS

Plan1	C1.0 – Subdivision Recording Plat
Plan2	C1.1 – Site Plan
Plan3	C1.2 – Existing Conditions and Demolition Plan
Plan4	C1.3 – Grading and Utilities Plan
Plan5	C1.4 – Erosion Control and Landscape Plan
Plan6	C2.1 – Detail
Plan7	C2.2 – Detail
Plan8	C2.3 – Detail
Plan9	C2.3 – Detail
Plan10	C2.4Butler Payson Survey
Plan11	Photometric Plan
Plan12	Carleton Street - Front View Rendering
Plan13	Carleton Street - West Elevation Render
Plan14	Carleton Street - BACK VIEW
Plan15	Carleton Street - Model in Street NW
Plan16	Carleton Street - Model in Street SW
Plan17	Carleton Street - A2.1 - BUILDING ELEVATIONS
Plan18	Carleton Street - Floor Plans

Att. 1

APPLICATION FOR CERTIFICATE OF OCCUPANCY FOR USE OF PREMISES

3-23 Carleton St. Portland, Maine January 17, 1975

Lot 55-A- 4 & 5, Pine St Zone R-6

INSPECTOR OF BUILDINGS, Portland, Maine

The undersigned hereby applies for a certificate of occupancy to the use of the above named premises for parking as set forth on the attached site plan (made by CBS address is PO Box 7130, Portland, Me) to show compliance with the Ordinance according to the intended use and the zone in which the property is located; and in accordance with the following pertinent information:-

(Owner's name, address and phone number) CBS, PO Box 7130, Portland, Me. 04112

(Lessee's name, address and phone number)

Proposed use to be accessory to a building or other use on this lot?

yes , If so, what is use of building or other use apartments

If off-street parking is sought, what is proposed maximum number of vehicles to be parked - passenger cars? 64 , commercial vehicles 0 .

Have you secured on the site plan the written approval of existing and proposed entrances to and exits from the premises for vehicles over sidewalks by the Traffic Engineer (Dept. of Public Works? no And, if access to the premises is available from more than one street, have you secured similar approval by the Planning Board? no

Have you shown on the site plan the true location of all trees on the public street along the frontage of the premises (both streets if a corner lot)? yes

Do you propose to remove or disturb any tree on a public street? no Have you secured on the site plan the written approval of the Superintendent of Parks and Recreation? n/a

Signature of Owner

By (duly authorized thereto)

****

THIS IS NOT A CERTIFICATE OF OCCUPANCY

You are COMMENCING the above proposes use of the premises would be IN VIOLATION of the Zoning Ordinance unless a Certificate of Occupancy is first procured from the Department of Building Inspection.

However, improvement of the premises according to the site plan and the above application may now proceed without further authorization, but subject to the conditions indicated below - notice of readiness for final inspection to be given to this department when the premises have been placed in compliance with the requirements:-

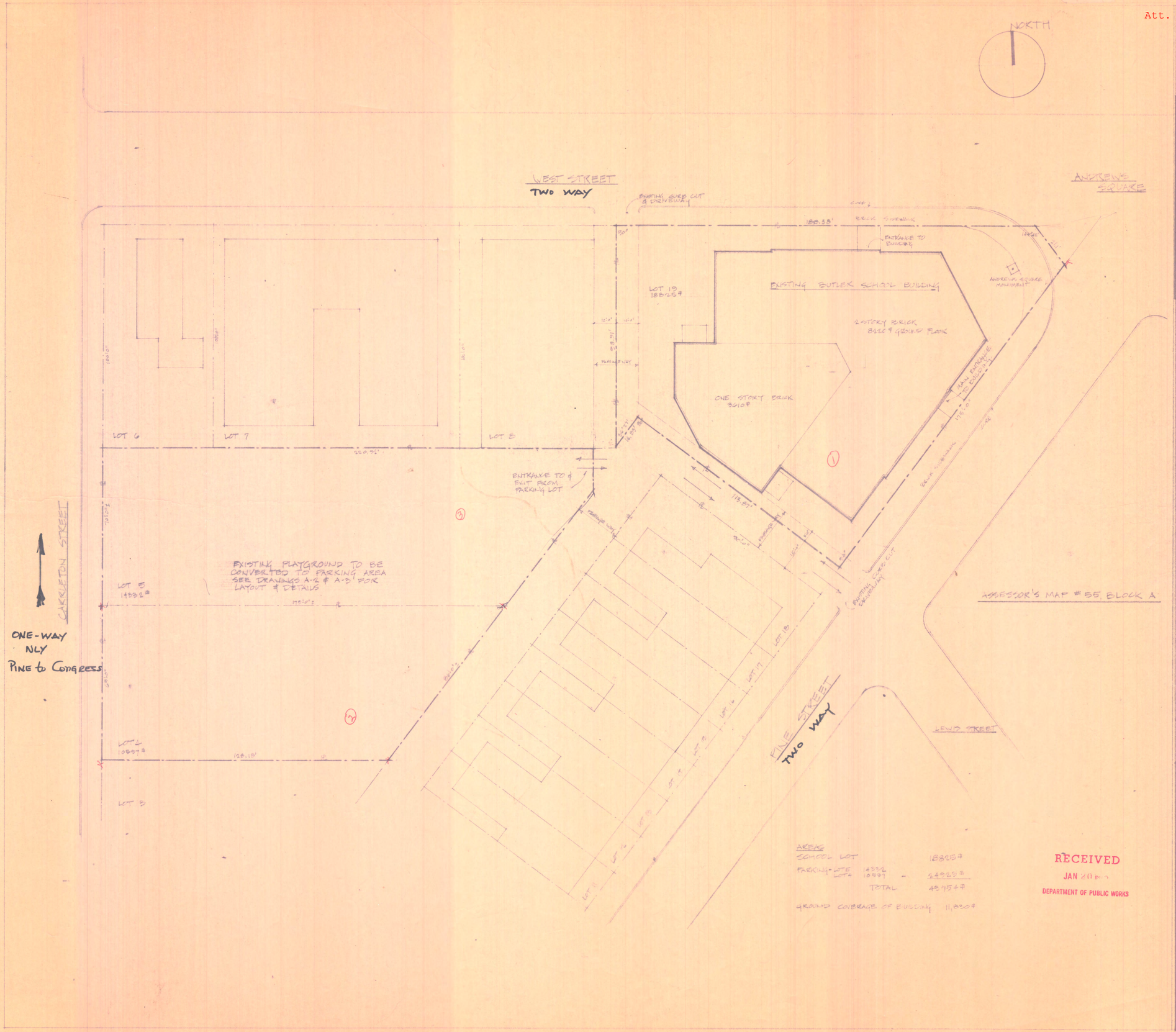
(Date)

Inspector of Buildings

2-11-75 Not satisfied

Appeal sustained conditionally 2-12-75

Att. 2



RECEIVED
JAN 20 [illegible]
DEPARTMENT OF PUBLIC WORKS

CDS INC
343 fore street
portland maine

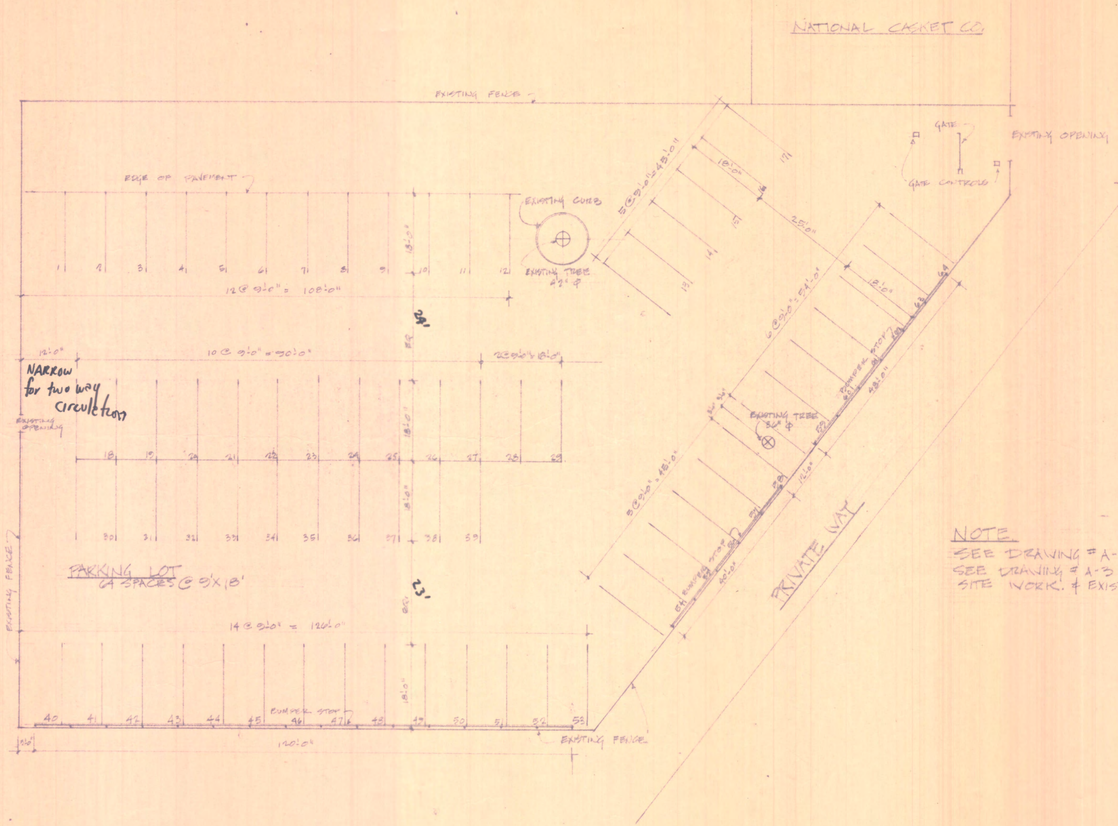
BUTLER SCHOOL
77 PINE STREET
PORTLAND, MAINE

SITE PLAN

scale 1" = 20'-0"
date 13 JAN 73
drawn by WAC

drawing no
A-1

job no



NOTE
SEE DRAWING # A-1 FOR SITE BOUNDRIES
SEE DRAWING # A-3 FOR ADDITIONAL SITE WORK & EXISTING CONDITIONS.

RECEIVED
JAN 20 1975
DEPARTMENT OF PUBLIC WORKS

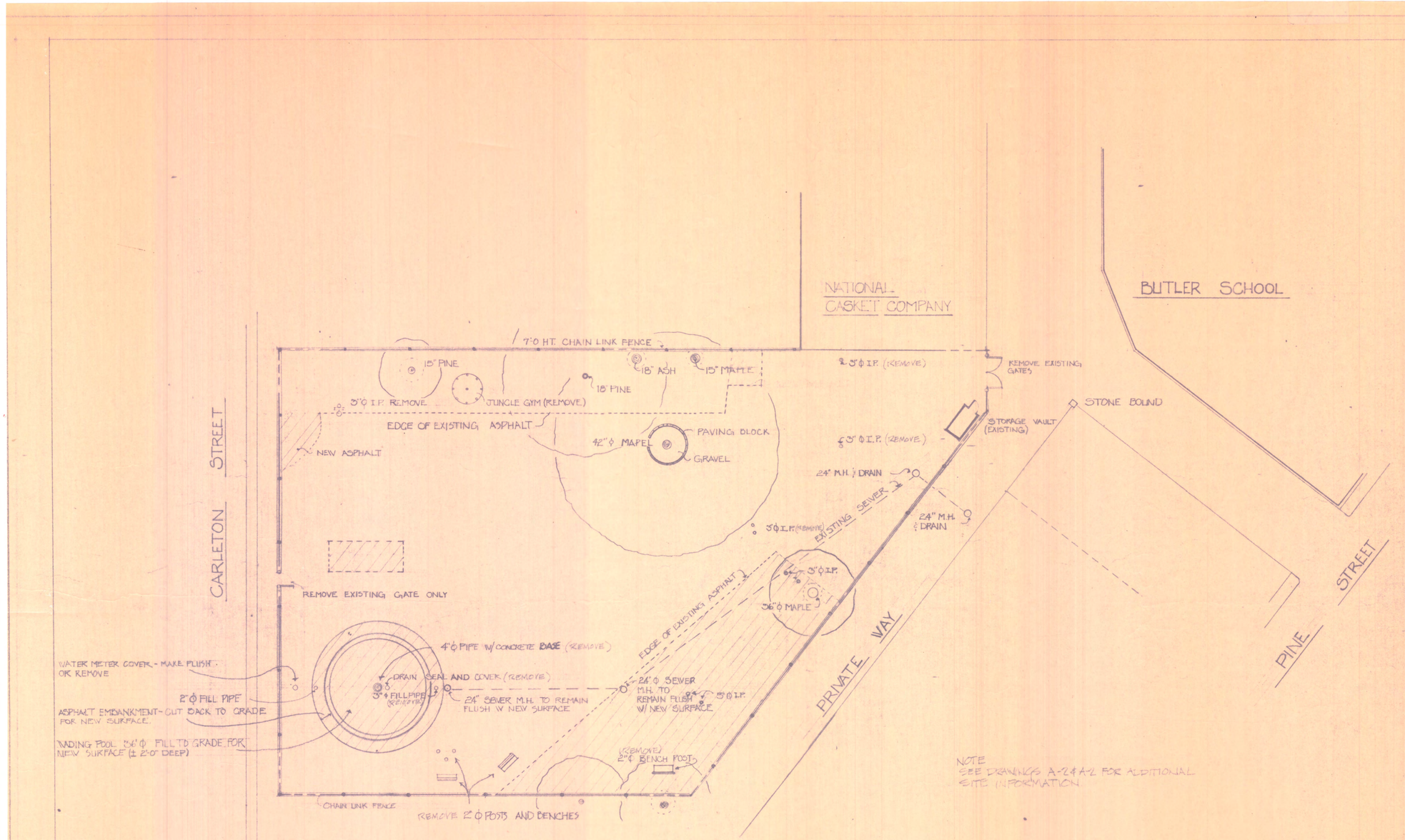
CDS INC
343 fore street
portland maine

BUTLER SCHOOL
77 FINE STREET
PORTLAND MAINE

PARKING LOT LAYOUT
drawn by
date 18 JAN 75
scale 1" = 1'-0"

drawing no
A-2

job no



NOTE
SEE DRAWINGS A-2 & A-2 FOR ADDITIONAL SITE INFORMATION

NOTES

1. ALL EXISTING TREES TO REMAIN
2. ALL PIPES ECT FROM BENCHES PLAYGROUND EQUIPMENT ECT WITHIN PARKING AREA TO BE CUT OFF AT OR BELOW GRADE AND REMOVED
3. CONTRACTOR TO VARIFY ALL CONDITIONS ON SITE AND REPORT ANY DISCREPANCIES TO OWNER
4. ALTERNATE A. PATCH OUT SHADED AREAS ONLY, GRADE LIEVEL NEW ASPHALT SURFACE
   B. GRADE LEVEL NEW ASPHALT AREA AS NOTED

Grade Pavement to utilize existing SD & CB as much possible
depress MH slightly existing

RECEIVED
JAN 20 1975
DEPARTMENT OF PUBLIC WORKS

CDS INC
343 fore street
portland maine

BUTLER SCHOOL
77 PINE STREET
PORTLAND, MAINE

PARKING
SITE PLAN

Scale 1"=10'
Date 13 JAN 75
Drawn by CDK

DRAWING No. A-3

JOB No.

Att. 3

CITY OF PORTLAND, MAINE
MEMORANDUM

TO: Chairman and Members of the Board of Appeals

DATE: 1/31/75

FROM: Portland Planning Department

SUBJECT: Planning Report - Board of Appeals Agenda - 2/12/75

1. Butler School Play Yard - Parking Lot. Community Development Services, Inc.

Facts: Parking lot for 64 cars with gate control
Existing zone - R-6
LDP proposed zone - R-6
Site area - 24,929 square feet (0.57 acres)
No conflict with City projects
No LDP land use conflicts

Background: Late in 1973, the City advertised for the disposition of the Butler School. Later, the Butler School Playyard was included in the disposition description for both properties to be disposed of as a package. After numerous meetings, Council voted to sell both properties to Community Development Services, Inc. (CDS) for use as rehabilitated housing and associated parking, with the understanding that CDS would have to obtain a permit from the Board of Appeals.

Staff Review: Access to the 64 space lot is proposed over an existing alley-way from Pine Street and behind the Butler School (see opinion below). The developer intends to utilize the existing pavement as much as possible with new paving only where necessary. As required by the City, all trees are being preserved and the site plan has set aside tree areas. A twenty-foot buffer strip along the north side of the lot (where many of the trees are located) is being preserved.

Parking stalls are designed at 9' x 18' and bay widths are as narrow as 59 feet. Normally a 60 foot bay width is required; however, discussions with the developer revealed that this was necessary so as to (1) utilize existing pavement and (2) preserve the 20 foot buffer strip. Since intentions are for each space to be assigned to one person and since there will be a gate to prohibit the casual parker, the reduced bay widths should be adequate.

The gate opening is shown as 10 feet wide. This appears somewhat narrow particularly for two-way traffic; however, design of the gate control system may dictate the narrow opening. The accessway inside the gate expands to 22 feet.

While there is a 20-foot buffer on the northerly side of the lot, none is proposed for the southerly lot line. During the disposition process, a Mr. Wesley Kinney of Cumberland Center, owner of the abutting property, contacted the Planning staff regarding a means of buffering that could be installed along the property line. CDS has been advised to contact Mr. Kinney to resolve the problem and Mr. Kinney has been notified.

No lighting is shown on the plans. While the lot probably could use additional illumination, the installation of lights could result in a nuisance to abutting residential properties. Since potential vandalism should be reduced by the controlled nature of the lot, the absence of lighting may not be a problem.

Opinion: Access to the lot via the private alleyways creates some problems. While the alleys pass behind the Butler School, their ownership is uncertain. They are only 20 feet wide and are presently used for parking. While the parking area will not be open to the general public, it will generate the traffic of 64 cars over this alley. It is the staff's opinion that while the use of the alley for access is not wholly unacceptable, there may be some flow and safety consequences because of the narrow width.

The alternative to the use of the alley would be access from Carleton Street. This might create security problems for CDS with their control gate so easily accessible. Secondly, it would generate additional traffic on Carleton Street, which is predominantly residential. And third, the one-way nature of Carleton Street would make access to the lot somewhat inconvenient. Therefore, while both access schemes are workable, neither is perfect.

Parking is a problem on the peninsula. For residential areas in the City, parking is most acute in the West End. While the uncontrolled proliferation of parking lots in residential areas can have a blighting effect, off-street parking is a necessity and can be an asset if done well. This proposal incorporates the retention of the existing mature tree cover; these trees will tend to soften many of the detrimental effects of a parking lot. Access via the alleyway, while not wholly desirable, will tend to lessen the visibility of the parking area by the neighborhood as a whole.

cc: A. Allan Soule, Assistant Director, Building & Inspection Services
Charles Lane, Assistant Corporation Counsel

Att. 4

CITY OF PORTLAND, MAINE
IN THE BOARD OF APPEALS

CONDITIONAL USE APPEAL

Findings of Fact

The applicant is CDS, Inc. (David Schurman, President)and he is interested in the property located at 13-23 Carleton Street as holder of an option The owner of the property is City of Portland and his address is 389 Congress Street, Portland, ME. The property is located in a R-6 Zone The present use of the property is playground

The applicant respectfully petitions the Board of Appeals for a conditional use permit to permit a certificate of occupancy for use of the premises at the above-named location as an off-street parking lot for 64 passenger cars.

Further Findings of Fact

CDS, Inc. is the holder of an option which must be exercised by March 31, 1975.

Appearances

The names and addresses of those appearing in support of the application are, David Schurman, President CDS, P.O. Box 7130, Portland, ME, Charleton Smith, Esquire, 148 Pine Street, Portland, ME.

and the names and addresses of those appearing in opposition to the application are: Dorothy LeButt, 144 Pine Street, Portland, ME, Wesley Kinney, Cumberland Center, ME, Scott Dexter, (minor address unknown), Philip Jenkins, Tate Street, Portland, ME, David Osborn, (minor address unknown).

Exhibits

The documentary evidence presented to the Board, including, but not by way of limitation, plans, specification, photographs, etc. consisted of the following: A report from the Planning Department and several letters both in support and in opposition to the proposed use.

REASONS FOR DECISIONS

The proposed building or use (will/~~will not~~) be in harmony with the general purpose, goals, objectives and standards of the Land Development Plan, the Zoning Ordinance and the Site Plan Ordinance, as evidenced by: The conditions placed upon the development of the parking lot by the Planning Board

The proposed building or use (~~will~~/will not) have a substantial adverse effect, including monetary, upon adjacent property, the character of the neighborhood, the traffic conditions, utility facilities and other matters affecting the public health, safety and general welfare, because of the following: the present use of the property and its suitability as a parking lot in the particular neighborhood and also the conditions imposed upon the use permit by the Board of Appeals

The proposed building or use (will/~~will not~~) be constructed, arranged and operated so as to interfere with the development and use of neighboring property in accordance with the applicable zoning regulations as demonstrated by: it will aid in the development of adjacent property because the development of the Butler School will retain the character of the neighborhood.

The proposed building or use (will/~~will not~~) be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water and sewers, and schools, as evidenced by: the applicant will preserve a 24 foot strip for storage of snow during snow removal operations. There are existing sewers on the property which adequately serve it.

and the persons or agencies responsible for the establishment of the proposed use (will/~~will not~~) provide adequately for such services as shown by: Approval of the proposed plans by the Building Inspector

The proposed building or use (will/will not) result in the destruction, loss or damage of any natural, scenic or historic feature of major importance, because of the following: because of the retention of existing trees.

The proposed building or use (will/will not) comply with all standards imposed on it by the regulations applicable to the zone in which the use will be located and any additional standards relating to the specific conditional use as demonstrated by the following: Reports of the Building Inspector and Planning Staff

The proposed building or use at the particular location requested (is/is not) necessary or desirable to provide a service or a facility which is in the interest of the public convenience or which (will/will not) contribute to the general welfare of the neighborhood or community, as demonstrated by: Current parking need

The public goals described above (can/cannot) be met by the location of the proposed building or use at some site or in some area which may be more appropriate than the proposed site, because of the following: Lack of parking in the area.

All steps possible (have/have not) been taken to minimize any adverse effects of the proposed buildings or use on the immediate vicinity through building design, site design, landscaping and screening as evidenced by: Report of the Planning Staff and approval by the Building Inspection Department

SPECIFIC RELIEF GRANTED

After a public hearing on February 12, 1975, the Board of Appeals find that all of the conditions required by the Ordinance (do/do not) exist with respect to this property and that a conditional use should _____ be granted in this case.

It is therefore determined that a conditional use _____ be granted *

this case by:

James O'Malley

Walter E. Nelson

Jacqueline Cole

Thomas J. Murphy

Carl D. Snow

* Subject to the following conditions: (a) Installation of light screening on fence (b) Planning Staff will work with Mr. Kinney and other abutters and the developer to provide fencing as needed as well as additional lighting if such is found necessary.

Att. 5

APPLICATION FOR CERTIFICATE OF OCCUPANCY FOR USE OF PREMISES

Portland, Maine Oct. 22, 1976

Location: 13-23 Carlton St. - Rear Zone R-6

To the INSPECTOR OF BUILDINGS, Portland, Maine

The undersigned hereby applies for a certificate of occupancy to allow the use of the above named premises for parking lot

as set forth on the attached site plan (made by Schurman whose address is 24 Exchange St.) to show ance with the Zoning Ordinance according to the intended use an s in which the property is located; and in accordance with the following pertinent information:-

Owner (name, address and phone number) Butler School Assoc. -24 Exchange St. 774-0440

Lessee (name, address and phone number)

Is proposed use to be accessory to a building or other use on this lot? . If so, what is use of building or other use

If off-street parking is sought, what is proposed maximum number of vehicles to be parked - passenger cars? 15, commercial vehicles

Have you secured on the site plan the written approval of existing and proposed entrances to and exits from the premises for vehicles over public sidewalks by the Traffic Engineer (Dept. of Public Works? And, if access to the premises is available from more than one street, have you secured similar approval by the Planning Board?

Have you shown on the site plan the true location of all trees on the public street along the frontage of the premises (both streets if a corner lot)?

Do you propose to remove or disturb any tree on a public street? If so, have you secured on the site plan the written approval of the Director of Parks and Recreation?

Signature of Owner Butler School Associates

By David Schurman - Architect (duly authorized thereto)

****

THIS IS NOT A CERTIFICATE OF OCCUPANCY

To:

COMMENCING the above proposes use of the premises would be IN VIOLATION of the Zoning Ordinance unless a Certificate of Occupancy is first pro cured from the Department of Building Inspection.

However, improvement of the premises according to the site plan and the above application may now proceed without further authorization, but subject to the conditions indicated below - notice of readiness for final inspection to be given to this department when the premises have been placed in compliance with the requirements:-

(Date) Inspector of Buildings

APPLICATION FOR CERTIFICATE OF OCCUPANCY FOR USE OF PREMISES

Portland, Maine Oct. 22, 1976

Location 13 -23 Carlton St. Zone R-6

To the INSPECTOR OF BUILDINGS, Portland, Maine

The undersigned hereby applies for a certificate of occupancy to allow the use of the above named premises for parking lot as set forth on the attached site plan (made by David Schurman whose address is 24 Exchange St.) to show compliance with the Zoning Ordinance according to the intended use and the zone in which the property is located; and in accordance with the following pertinent information:-

Owner (name, address and phone number) Butler School Assoc. 24 Exchange St. 774-0440

Lessee (name, address and phone number)

Is proposed use to be accessory to a building or other use on this lot? _____. If so, what is use of building or other use

If off-street parking is sought, what is proposed maximum number of vehicles to be parked - passenger cars? 34, commercial vehicles ___.

Have you secured on the site plan the written approval of existing and proposed entrances to and exits from the premises for vehicles over public sidewalks by the Traffic Engineer (Dept. of Public Works? _____ And, if access to the premises is available from more than one street, have you secured similar approval by the Planning Board? _____

Have you shown on the site plan the true location of all trees on the public street along the frontage of the premises (both streets if a corner lot)?

Do you propose to remove or disturb any tree on a public street? _____ If so, have you secured on the site plan the written approval of the Director of Parks and Recreation?

Signature of Owner BUTLER SCHOOL ASSOCIATES

By David Schurman Architect
(duly authorized thereto)

****

THIS IS NOT A CERTIFICATE OF OCCUPANCY

NOTE:

COMMENCING the above proposes use of the premises would be IN VIOLATION of the Zoning Ordinance unless a Certificate of Occupancy is first procured from the Department of Building Inspection.

However, improvement of the premises according to the site plan and the above application may now proceed without further authorization, but subject to the conditions indicated below - notice of readiness for final inspection to be given to this department when the premises have been placed in compliance with the requirements:-

(Date) _____ _____
Inspector of Buildings

Att. 6

Strengthening a Remarkable City. Building a Community for Life • www.portlandmaine.gov

Penny St. Louis Littell- Director of Planning and Urban Development
Marge Schmuckal, Zoning Administrator

October 15, 2009

Cory R. Fellows
The Wishcamper Companies, Inc.
Three Canal Plaza
Portland, ME 04101

RE: 77 Pine Street (71-83 Pine Street) – 055-A019 – (the "Property") – R-6 Zone with a Historic Overlay

Dear Mr. Fellows,

I am in receipt of your request to determine the parking requirement applicable to the Property.

The Property is located within an R-6 Zone with a Historic Overlay. The Property was developed in 1976 and 1977 for thirty-nine (39) dwelling units. On November 10, 1976 the owner/developer was granted a Space & Bulk Variance appeal for both the lot size per dwelling unit and required off-street parking. The Land Use Ordinance at that time required one off-street parking space for each dwelling unit or 39 parking spaces. The appeal granted allowed no off-street parking to be provided on the Property.

I have enclosed copies of the appeal actions for the Property.

If you have any other questions regarding this matter, please do not hesitate to contact me at 874-8695.

Very truly yours,

Marge Schmuckal
Zoning Administrator

CC: file

Enclosures

Att. 6A

CITY OF PORTLAND, MAINE
BOARD OF APPEALS

SPACE AND BULK VARIANCE APPEAL

I. Findings of Fact

A. Applicant Masada Trust (c/o Alan Levenson)

B. Property Location 214-220 State St. Corner of 32-36 Deering St.

C. Applicant's Interest in Property:

(x) Owner
( ) Tenant
( ) Other

D. Property Owner Masada Trust (c/o Alan Levenson)

E. Owner's Address 187 Middle St.

F. Zone (Circle One):

R-1 R-2 R-3 R-5 (R-6)

R-P B-1 B-2 B-3 A-B

I-P I-1 I-2 I-2b I-3 I-3b

RPZ

G. Site Plan Approval Required no

H. Present Use of Property vacant

I. Section(s) to Which Variance Related 602.7B.8 & 602..4B.1

J. Reasons Why Permit Cannot be Issued area of lotis only 9,240 sq. ft instead of the min. of 21,000 sq. ft. Only 4 parking space for off street parking instead of 17 minimum required.

K. Requested Variance Would Permit apt. house with 17 dwelling units.

L. Notice Sent to _____ Adjacent Property Owners

II. Appearances

A. Those Advocating Variance

Kermit Lipez - rep. Myerson, allen

David Schurman

John Allen

B. Those Opposing Variance

Dorothy LaBat - for information

(for information) Wm. Gawronski - 39 Deering

(Attachments, As Necessary)

III. Exhibits (Any documents, photos, plans, further findings of fact, etc. presented to the Board as part of its records)

map, overlay, blueprints

IV. Reasons for Decisions - Undue Hardship (The following checklist relates with the Board of Appeals hardship definitions for space and bulk variances as contained in Section 602.24C 3.b.(1) (a) through (e).

A. The parcel is exceptional due to physical characteristics or topographic features which amount to more than a mere inconvenience [Section 602.24C 3.b.(1) (a)]

(✓) Yes/Agreement with statement

( ) No/Disagreement with statement

Reasons existing building

B. If yes, the unique physical conditions: (Check One) [Sec. 602.24C 3.b.(1) (b)]

(✓) existed at the time of the enactment of the provision from which a variance is sought; or

( ) were caused by natural forces; or

( ) were the result of governmental action

C. Pertinent ordinance provision deprives owner of substantial use or enjoyment of property in the manner commonly enjoyed by owners of property subject to the same provisions [Sec. 602.24C 3.b.(1) (c)]

(1) Yes/Agreement with statement — other property owners have similar parking condition.

(4) No/Disagreement with statement

Reasons _____

_____

D. As evidenced by affirmative answers to either IV. A. or IV. C. above, the variance will not create a special privilege for the applicant. [Sec. 602.24C 3.b.(1) (d)]

(✓) Yes/Agreement with statement

( ) No/Disagreement with statement

Reasons _____

_____

E. The variance will not adversely affect neighborhood property in the same zone and will not be detrimental to the general public health and safety [Sec. 602.24C 3. b.(1) (e)]

(✓) Yes/Agreement with statement

( ) No/Disagreement with statement

Reasons Will improve the building

_____

V. Specific Relief Granted

After a public hearing held on Nov. 10, 1976, the Board of Appeals finds that: (Check One)

(✓) Approval - All of the conditions required by Sec. 602.24C 3.b.(1) exist with respect to this property, as evidenced by affirmative responses to all statements set forth in IV. A. through IV. E. above, and that a space and bulk variance be granted in this case.

Conditions of Approval (If Any) _____

_____

_____

( ) Disapproval - All conditions required by Sec. 602.24C 3.b.(1) do not exist with respect to this property, as evidenced by one or more negative responses to statements set forth in IV. A. through IV. E. above, and that a space and bulk variance should not be granted in this case.

VI. Signatures of Board

Chairman

Att. 6B

CITY OF PORTLAND, MAINE
BOARD OF APPEALS

SPACE AND BULK VARIANCE APPEAL

I. Findings of Fact

A. Applicant Public School Assoc.

B. Property Location 71-83 Pine Street, corner of 4-16 West Street

C. Applicant's Interest in Property:

(X) Owner
( ) Tenant
( ) Other

D. Property Owner Public School Assoc.

E. Owner's Address Box 4563 - Portland, Me. 04112

F. Zone (Circle One):

R-1 R-2 R-3 R-5 (R-6)

R-P B-1 B-2 B-3 A-B

I-P I-1 I-2 I-2b I-3 I-3b

RPZ

G. Site Plan Approval Required no

H. Present Use of Property vacant - school

I. Section(s) to Which Variance Related 602.7B.8 & 602.14B.1

J. Reasons Why Permit Cannot be Issued area of lot is 20,318 sq.ft. instead of 39,000 sq. ft. required. No off street parking will be provided instead of 39 parking spaces required.

K. Requested Variance Would Permit apartment house with 39 dwelling units

L. Notice Sent to _____ Adjacent Property Owners

II. Appearances

A. Those Advocating Variance

see State St.

B. Those Opposing Variance

(Attachments, As Necessary)

III. Exhibits (Any documents, photos, plans, further findings of fact, etc. presented to the Board as part of its records)

photo, overlay, blueprints

IV. Reasons for Decisions - Undue Hardship (The following checklist relates with the Board of Appeals hardship definitions for space and bulk variances as contained in Section 602.24C 3.b.(1) (a) through (e).

A. The parcel is exceptional due to physical characteristics or topographic features which amount to more than a mere inconvenience [Section 602.24C 3.b.(1) (a)]

(✓) Yes/Agreement with statement

( ) No/Disagreement with statement

Reasons

B. If yes, the unique physical conditions: (Check One) [Sec. 602.24C 3.b.(1) (b)]

(✓) existed at the time of the enactment of the provision from which a variance is sought; or

( ) were caused by natural forces; or

( ) were the result of governmental action

C. Pertinent ordinance provision deprives owner of substantial use or enjoyment of property in the manner commonly enjoyed by owners of property subject to the same provisions [Sec. 602.24C 3.b.(1) (c)]

(✓) Yes/Agreement with statement

( ) No/Disagreement with statement

Reasons _____

_____

D. As evidenced by affirmative answers to either IV. A. or IV. C. above, the variance will not create a special privilege for the applicant. [Sec. 602.24C 3.b.(1) (d)]

(✓) Yes/Agreement with statement

( ) No/Disagreement with statement

Reasons _____

_____

E. The variance will not adversely affect neighborhood property in the same zone and will not be detrimental to the general public health and safety [Sec. 602.24C 3. b.(1) (e)]

(✓) Yes/Agreement with statement

( ) No/Disagreement with statement

Reasons _____

_____

V. Specific Relief Granted

After a public hearing held on Nov. 10, 1976, the Board of Appeals finds that: (Check One)

(✓) Approval - All of the conditions required by Sec. 602.24C 3.b.(1) exist with respect to this property, as evidenced by affirmative responses to all statements set forth in IV. A. through IV. E. above, and that a space and bulk variance be granted in this case.

Conditions of Approval (If Any) _____

_____

_____

( ) Disapproval - All conditions required by Sec. 602.24C 3.b.(1) do not exist with respect to this property, as evidenced by one or more negative responses to statements set forth in IV. A. through IV. E. above, and that a space and bulk variance should not be granted in this case.

VI. Signatures of Board

Chairman

Att. 7

CITY OF PORTLAND, MAINE
IN THE BOARD OF APPEALS

CONDITIONAL USE APPEAL

Findings of Fact

The applicant is Butler School Associates and he is interested in the property located at 13-23 Carleton St. as parking lot. The owner of the property is _____ and his address is _____. The property is located in a R-6 Zone. The present use of the property is vacant.

The applicant respectfully petitions the Board of Appeals for a conditional use permit to permit off street parking for 34 passenger cars which is not issuable under the Zoning Ordinance because the proposed use is not allowable in the R-6 Residential Zone in which this property is located unless authorized by the Board of Appeals. (Sec. 602.8.d)

Further Findings of Fact

See State St

Appearances

The names and addresses of those appearing in support of the application are:

See State St;

and the names and addresses of those appearing in opposition to the application are:

Exhibits

The documentary evidence presented to the Board, including, but not by way of limitation, plans, specification, photographs, etc. consisted of the following:

See State St

REASONS FOR DECISIONS

The proposed building or use (will/~~will not~~) be in harmony with the general purpose, goals, objectives and standards of the Land Development Plan, the Zoning Ordinance and the Site Plan Ordinance, as evidenced by: _____

The proposed building or use (~~will~~/will not) have a substantial adverse effect, including monetary, upon adjacent property, the character of the neighborhood, the traffic conditions, utility facilities and other matters affecting the public health, safety and general welfare, because of the following: _____

The proposed building or use (~~will~~/will not) be constructed, arranged and operated so as to interfere with the development and use of neighboring property in accordance with the applicable zoning regulations as demonstrated by: _____

The proposed building or use (will/~~will not~~) be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water and sewers, and schools, as evidenced by: _____;

and the persons or agencies responsible for the establishment of the proposed use (will/~~will not~~) provide adequately for such services as shown by: _____

The proposed building or use (~~will~~/will not) result in the destruction, loss or damage of any natural, scenic or historic feature of major importance, because of the following: _____

_____

_____

The proposed building or use (will/~~will not~~) comply with all standards imposed on it by the regulations applicable to the zone in which the use will be located and any additional standards relating to the specific conditional use as demonstrated by the following: _____

_____

_____

The proposed building or use at the particular location requested (is/~~is not~~) necessary or desirable to provide a service or a facility which is in the interest of the public convenience or which (will/~~will not~~) contribute to the general welfare of the neighborhood or community, as demonstrated by: _____

_____

_____

_____

The public goals described above (~~can~~/can not) be met by the location of the proposed building or use at some site or in some area which may be more appropriate than the proposed site, because of the following: _____

_____

_____

_____

All steps possible (have/~~have not~~) been taken to minimize any adverse effects of the proposed buildings or use on the immediate vicinity through building design, site design, landscaping and screening as evidenced by: _____

_____

_____

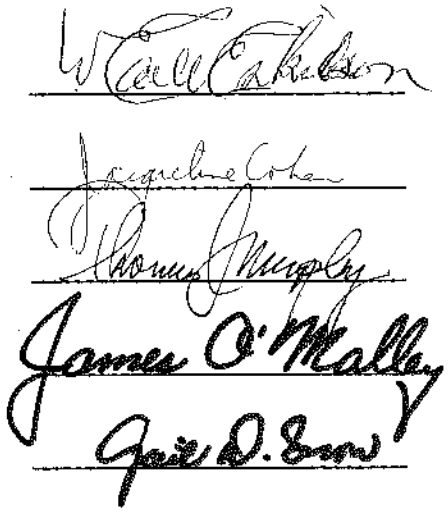
_____

SPECIFIC RELIEF GRANTED

After a public hearing on Nov. 10, 1976, the Board of Appeals find that all of the conditions required by the Ordinance (do/do not) exist with respect to this property and that a conditional use should _____ be granted in this case.

Condition — screen against headlights on south side of Carleton

It is therefore determined that a conditional use _____ be granted in this case by:



CITY OF PORTLAND, MAINE
IN THE BOARD OF APPEALS

CONDITIONAL USE APPEAL

Findings of Fact

The applicant is Butler School Associates and he is interested in the property located at Rear 13-23 Carleton St. as _____. The owner of the property is Butler School Associates and his address is 24 Exchange St. . The property is located in a R-6 Zone. The present use of the property is vacant .

The applicant respectfully petitions the Board of Appeals for a conditional use permit to permit off street parking for 15 cars

Further Findings of Fact

Appearances

The names and addresses of those appearing in support of the application are: See State St

and the names and addresses of those appearing in opposition to the application are: See State St

Exhibits

The documentary evidence presented to the Board, including, but not by way of limitation, plans, specification, photographs, etc. consisted of the following: See State St -

REASONS FOR DECISIONS

The proposed building or use (will/~~will not~~) be in harmony with the general purpose, goals, objectives and standards of the Land Development Plan, the Zoning Ordinance and the Site Plan Ordinance, as evidenced by: _____

The proposed building or use (~~will~~/will not) have a substantial adverse effect, including monetary, upon adjacent property, the character of the neighborhood, the traffic conditions, utility facilities and other matters affecting the public health, safety and general welfare, because of the following: _____

The proposed building or use (~~will~~/will not) be constructed, arranged and operated so as to interfere with the development and use of neighboring property in accordance with the applicable zoning regulations as demonstrated by: _____

The proposed building or use (will/~~will not~~) be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water and sewers, and schools, as evidenced by: _____

and the persons or agencies responsible for the establishment of the proposed use (will/~~will not~~) provide adequately for such services as shown by: _____

The proposed building or use (~~will~~/will not) result in the destruction, loss or damage of any natural, scenic or historic feature of major importance, because of the following: _____

_____

_____

The proposed building or use (will/will not) comply with all standards imposed on it by the regulations applicable to the zone in which the use will be located and any additional standards relating to the specific conditional use as demonstrated by the following: lights directed away from adjacent buildings, plantings supervised by city arborist.

The proposed building or use at the particular location requested (is/~~is not~~) necessary or desirable to provide a service or a facility which is in the interest of the public convenience or which (will/~~will not~~) contribute to the general welfare of the neighborhood or community, as demonstrated by: _____

_____

_____

_____

The public goals described above (~~can~~/can not) be met by the location of the proposed building or use at some site or in some area which may be more appropriate than the proposed site, because of the following: _____

_____

_____

_____

All steps possible (have/~~have not~~) been taken to minimize any adverse effects of the proposed buildings or use on the immediate vicinity through building design, site design, landscaping and screening as evidenced by: _____

_____

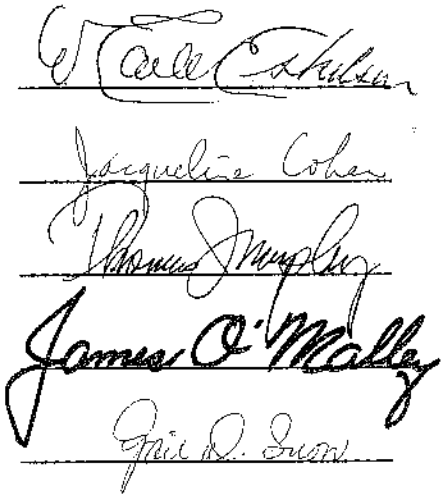
_____

_____

SPECIFIC RELIEF GRANTED

After a public hearing on Nov. 10, 1976, the Board of Appeals find that all of the conditions required by the Ordinance (do/do not) exist with respect to this property and that a conditional use should _____ be granted in this case.

It is therefore determined that a conditional use _____ be granted in this case by:



Att. 8

CITY OF PORTLAND, MAINE
SITE PLAN REVIEW
Processing Form

'76

Date

Applicant

Mailing Address

Address of Proposed Site

Site Identifier(s) from Assessors Maps

Present Use of Site

Zoning of Proposed Site

Area of Site — Ground Floor Coverage

Proposed Number of Floors

Total Floor Area

Conservation Review (DEP) Required: ( ) Yes ( ) No

Board of Appeals Action Required: ( ) Yes ( ) No

Planning Board Action Required: ( ) Yes ( ) No

Other Comments:

Date Site Review Due:

PLANNING DEPARTMENT REVIEW 10/26/76
(Date Received)

X Major Development — Requires Planning Board Approval: Review Initiated

Minor Development — Staff Review Below

	LOADING AREA	PARKING	CIRCULATION PATTERN	ACCESS	PEDESTRIAN WALKWAYS	SCREENING	LANDSCAPING	SPACE & BULK OF STRUCTURES	LIGHTING	CONFLICT WITH CITY PROJECTS	FINANCIAL CAPACITY	CHANGE IN SITE PLAN	
APPROVED	NA		X	X	X	X			X	X			
APPROVED CONDITIONALLY		X					X						CONDITIONS SPECIFIED BELOW
DISAPPROVED													REASONS SPECIFIED BELOW

REASONS: On November 9, 1976, the Portland Planning Board approved a site plan for this proposal. The ~~~~ plan was revised from the original to show 51 parking spaces with nine foot widths. The Board's approval also involved the provision of landscaping which has been submitted in the interim and which has been revised according to recommendations of the City Arborist. This approval ~~is~~ is conditional upon both these revisions. This Building Permit should be ~~withheld~~ withheld ~~until~~ until ~~~~ the property has been conveyed to the applicant by the City.

(Attach Separate Sheet if Necessary)

11/12/76
SIGNATURE OF REVIEWING STAFF/DATE

PLANNING DEPARTMENT COPY

Att. 9

CITY OF PORTLAND, MAINE
SITE PLAN REVIEW
Processing Form

Date

Mailing Address

Address of Proposed Site

Present Use of Site

Site Identifier(s) from Assessors Maps

Area of Site / Ground Floor Coverage

Zoning of Proposed Site

Site Location Review (DEP) Required: ( ) Yes (X) No

Proposed Number of Floors

Board of Appeals Action Required: (X) Yes ( ) No

Total Floor Area

Planning Board Action Required: ( ) Yes (X) No

Other Comments:

Date Dept. Review Due:

RECEIVED

OCT 26 1976

DEPARTMENT OF PUBLIC WORKS

PUBLIC WORKS DEPARTMENT REVIEW

(Date Received)

	TRAFFIC CIRCULATION	ACCESS	CURB CUTS	ROAD WIDTH	PARKING	SIGNALIZATION	TURNING MOVEMENTS	LIGHTING	CONFLICT WITH CITY CONSTRUCTION PROJECT	DRAINAGE	SOIL TYPES	SEWERS	CURBING	SIDEWALKS	OTHER	
APPROVED	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
APPROVED CONDITIONALLY								JR								CONDITIONS SPECIFIED BELOW
NOT APPROVED		JR	JR													REASONS SPECIFIED BELOW

REASONS: Corrections in review are due to the reception of a revised plan.

(Attach Separate Sheet if Necessary)

John P. Rogue 11-3-76

SIGNATURE OF REVIEWING STAFF/DATE

PUBLIC WORKS DEPARTMENT COPY

Description of Playground Lot to be Mortgaged

A certain lot or parcel of land situated on the Easterly side of Carleton Street in the City of Portland, County of Cumberland, and State of Maine bounded and described as follows:

Beginning at an iron pipe on the Easterly sideline of said Carleton Street at the Southwesterly Corner of land of Irving McCalmon, said iron pipe also being 100.00 feet distant as measured along said Easterly sideline of said Carleton Street on a bearing of S18°-38'-00"W from the intersection of the Southerly sideline of West Street and said Easterly sideline of Carleton Street;

Thence from said point of beginning S 71°-35'-00"E along said Irving McCalmon land, Lund Development Company land, and National Casket Company Incorporated land 221.34 feet to a Common Passageway and an iron pipe;

Thence S 18°-25'-00"W along said Common Passageway 12.55 feet to an iron pipe;

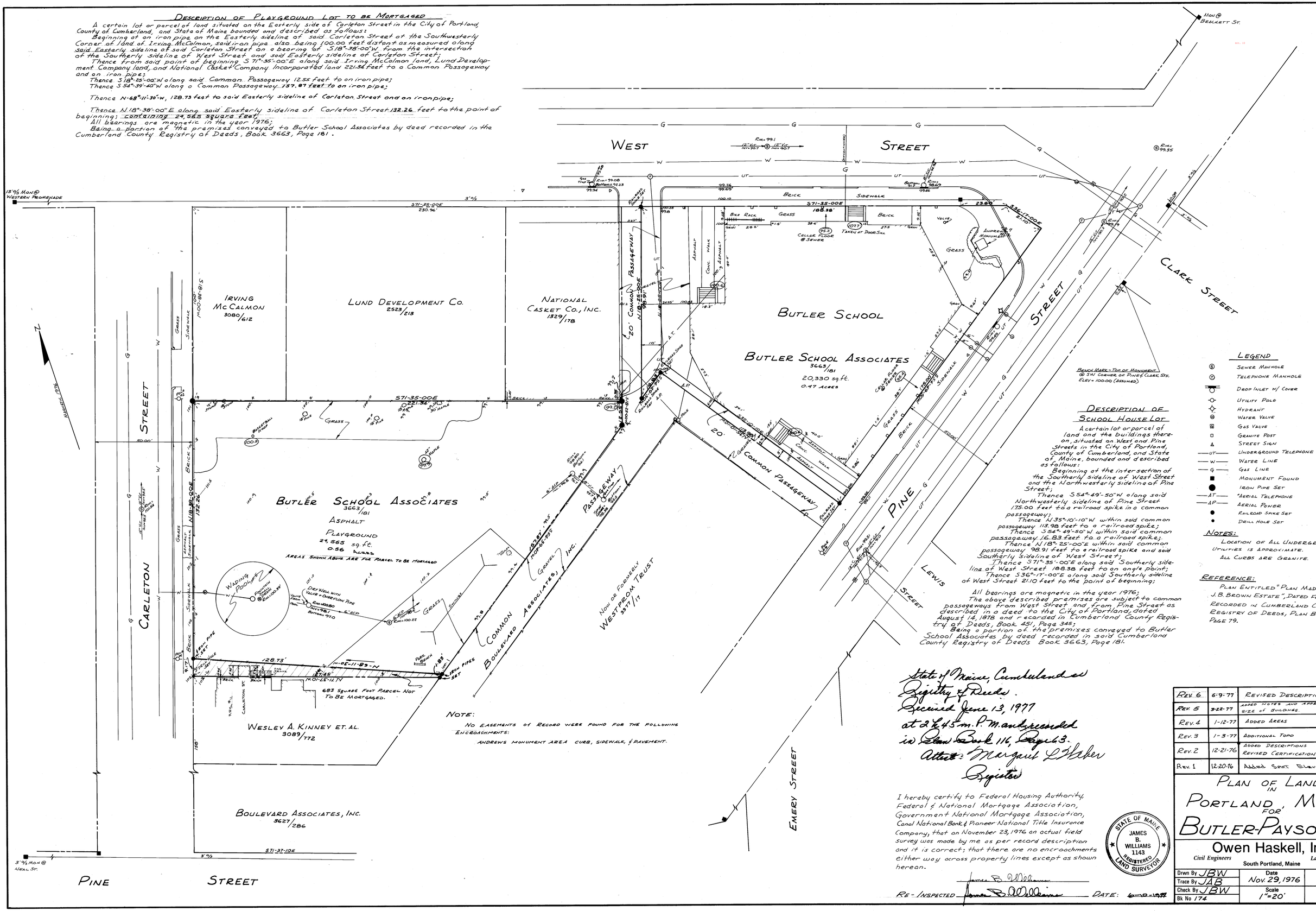
Thence S 54°-39'-40"W along a Common Passageway 137.87 feet to an iron pipe;

Thence N-68°-11'-30"-W, 128.73 feet to said Easterly sideline of Carleton Street and an iron pipe;

Thence N 18°-38'-00" E along said Easterly sideline of Carleton Street 132.26 feet to the point of beginning; containing 24,565 square feet;

All bearings are magnetic in the year 1976;

Being a portion of the premises conveyed to Butler School Associates by deed recorded in the Cumberland County Registry of Deeds, Book 3663, Page 181.



Description of School House Lot

A certain lot or parcel of land and the buildings thereon, situated on West and Pine Streets in the City of Portland, County of Cumberland, and State of Maine, bounded and described as follows:

Beginning at the intersection of the Southerly sideline of West Street and the Northwesterly sideline of Pine Street;

Thence S54°-49'-50"W along said Northwesterly sideline of Pine Street 175.00 feet to a railroad spike in a common passageway;

Thence N 35°-10'-10"W within said common passageway 113.98 feet to a railroad spike;

Thence S54°-49'-50"W within said common passageway 16.83 feet to a railroad spike;

Thence N18°-25'-00"E within said common passageway 98.91 feet to a railroad spike and said Southerly sideline of West Street;

Thence S71°-35'-00"E along said Southerly sideline of West Street 188.38 feet to an angle point;

Thence S36°-17'-00"E along said Southerly sideline of West Street 21.10 feet to the point of beginning;

All bearings are magnetic in the year 1976;

The above described premises are subject to common passageways from West Street and from Pine Street as described in a deed to the City of Portland, dated August 14, 1878 and recorded in Cumberland County Registry of Deeds, Book 451, Page 345;

Being a portion of the premises conveyed to Butler School Associates by deed recorded in said Cumberland County Registry of Deeds Book 3663, Page 181.

Legend

- Sewer Manhole
- Telephone Manhole
- Drop Inlet w/ Cover
- Utility Pole
- Hydrant
- Water Valve
- Gas Valve
- Granite Post
- Street Sign
- UT — Underground Telephone
- W — Water Line
- G — Gas Line
- Monument Found
- Iron Pipe Set
- AT — Aerial Telephone
- AP — Aerial Power
- Railroad Spike Set
- Drill Hole Set

Notes:

Location of All Underground Utilities is Approximate.

All Curbs are Granite.

Reference:

Plan Entitled "Plan Made for J.B. Brown Estate", Dated Feb. 1897 Recorded in Cumberland County Registry of Deeds, Plan Book 8, Page 79.

Note:

No easements of Record were found for the following Encroachments:

Andrews Monument area curb, sidewalk, & pavement.

State of Maine, Cumberland ss
Registry of Deeds.
Received June 13, 1977
at 2 h 45 m. P.M. and recorded
in Plan Book 116, Page 63.
Attest: Margaret L. Baker
Register

I hereby certify to Federal Housing Authority, Federal & National Mortgage Association, Government National Mortgage Association, Canal National Bank & Pioneer National Title Insurance Company, that on November 23, 1976 on actual field survey was made by me as per record description and it is correct; that there are no encroachments either way across property lines except as shown hereon.

STATE OF MAINE — JAMES B. WILLIAMS 1143 — REGISTERED LAND SURVEYOR

James B. Williams

Re-Inspected James B. Williams Date: 6-10-1977

Rev. 6	6-9-77	Revised Descriptions
Rev. 5	3-22-77	Added Notes and Approximate Size of Buildings.
Rev. 4	1-12-77	Added Areas
Rev. 3	1-3-77	Additional Topo
Rev. 2	12-21-76	Added Descriptions Revised Certification
Rev. 1	12-20-76	Added Spot Elevations

Plan of Land in Portland, Maine for Butler-Payson Co

Owen Haskell, Inc.
Civil Engineers — Land Surveyors
South Portland, Maine

Drwn By JBW	Date Nov. 29, 1976	Job. No. 7686 P.
Trace By JAB		
Check By JBW	Scale 1"=20'	Drwg. No. 2
Bk No 174		

Att. 11

CITY OF PORTLAND, MAINE
IN THE BOARD OF APPEALS

VARIANCE FOR DWELLING UNIT CONVERSIONS

Findings of Fact

The applicant is Larry Adlerstein and he is interested in the property located at 20 West St. as 10 apts. & pottery suppli
The owner of the property is Larry Adlerstein and his address is 20-22 West St. The property is located in a r-6 Zone.
The present use of the property is 1 apt. & pottery supplies.

The applicant respectfully petitions the Board of Appeals for a variance from the provision of Section 602.24 C of the Ordinance to permit 10 apts and pottery supplies

Further Findings of Fact

Appearances

The names and addresses of those appearing in support of the application are: Larry Adlerstein, Owner; Jim Costello, 20 West St; Tom Mitchell, 20 West St.;

and the names and addresses of those appearing in opposition to the application are:

Exhibits

The documentary evidence presented to the Board, including, but not by way of limitation, plans, specification, photographs, etc. consisted of the following:

Sanborn Map, overlay, plat, photo by owner

REASONS FOR DECISIONS

The subject property consists of a structure which by reason of its size or the size of the lot on which it is located (could/~~could not~~) legally accommodate more dwelling units than are permitted in the residential zone where it is located as evidenced by: _____

By reasons of its age, condition or marketability, the structure (~~can~~/can not) be economically used or maintained if used for no more than the number of dwelling units permitted in the residential zone where it is located for the following reasons:

_____

The existing uses in the immediate vicinity of the subject property (~~are~~/are not) of such a nature and condition a to justify rezoning a reasonable area in the vicinity of the subject property to a classification which would permit the economic use and maintenance of the subject property, because: _____

Adequate provision (has/~~has not~~) been made for on-site or off-site parking spaces in a number sufficient to meet the requirements of Section 602.14, which requires 10 parking spaces.

If the proposed variance should be granted, it (will/~~will not~~) comply with all other provisions of this ordinance and all other codes or ordinances of the City or meet the requirements for a variance of those provisions.

The conversion of the subject property so as to accommodate more dwelling units than are permitted in the zone in which it is located (~~would~~/would not) significantly interfere with the use and enjoyment of other land in the vicinity as evidenced by: _____

The foregoing conditions (~~have~~/have not) been deliberately created by, or with the consent or acquiescence of, the owner, his predecessors and title, or any user of the property in order to bring the subject property within the standards of this section, as shown by: _____

There (~~is~~/is not) any alternative available to the owner, other than a variance to permit an increase in the number of dwelling units, which would suffice to permit the economic use and maintenance of the subject property because of the following: _____

SPECIFIC RELIEF GRANTED

After a public hearing held on Sept. 11, 1980, the Board of Appeals find that all of the conditions required by the Ordinance (do/~~do not~~) exist with respect to this property and that a variance for dwelling unit conversion should _____ be granted in this case.

It is therefore determined that a variance from the provisions of the Zoning Ordinance should _____ be granted in this case.

Marvell S. Seltzer

Gail D. Zayac

Carl Eskelson

Michael E. [illegible]

Ernest E. Fletcher

Thomas Simpley

PINE ST. GARAGE
72 Pine Street
Portland, Maine 04102
772-2464

August 28, 1980

To Whom It May Concern:

Effective today I lease 10 Parking Spaces to Larry Adlerstein for use by tenants of 20 West Street.

My garage is within 300 feet of that building.

Signed Bart M. Donnelly

Owner

Att. 12

CITY OF PORTLAND, MAINE
IN THE BOARD OF APPEALS

VARIANCE FOR DWELLING UNIT CONVERSIONS

Findings of Fact

The applicant is Larry Adlerstein and he is interested in the property located at 20-22 West St. as 19 apartment bldg. The owner of the property is Larry Adlerstein and his address is 20 West St. The property is located in a R-6 Zone. The present use of the property is 10 apts. & pottery supplies.

The applicant respectfully petitions the Board of Appeals for a variance from the provision of Section 602.24 C of the Ordinance to permit change of use from 10 apts. & pottery supplies to 19 apts which is not issuable under the Zoning Ordinance because the lot on which this bldg is located is only about 6000 sq. ft. rather than the 19,000 sq. ft. min. (1000 sq.ft. per family) req. by Sec.602.7.B.8 of Ordinance applying to R-6 Resid. Zone

9 off street parking spaces will be provided within 300 ft. as required by Sec.602.14.C

Further Findings of Fact

Appearances.

The names and addresses of those appearing in support of the application are: Larry Adlerstein / Tom Mitchell;

and the names and addresses of those appearing in opposition to the application are:

Exhibits

The documentary evidence presented to the Board, including, but not by way of limitation, plans, specification, photographs, etc. consisted of the following:

Sanborn map, aerial, photos, financial statement, plans

REASONS FOR DECISIONS

The subject property consists of a structure which by reason of its size or the size of the lot on which it is located (could/~~could not~~) legally accommodate more dwelling units than are permitted in the residential zone where it is located as evidenced by: _____

By reasons of its age, condition or marketability, the structure (3 can/4 can not) be economically used or maintained if used for no more than the number of dwelling units permitted in the residential zone where it is located for the following reasons: _____

The existing uses in the immediate vicinity of the subject property (~~are~~/are not) of such a nature and condition as to justify rezoning a reasonable area in the vicinity of the subject property to a classification which would permit the economic use and maintenance of the subject property, because: _____

Adequate provision (has/~~has not~~) been made for on-site or off-site parking spaces in a number sufficient to meet the requirements of Section 602.14, which requires 9 parking spaces.

If the proposed variance should be granted, it (will/~~will not~~) comply with all other provisions of this ordinance and all other codes or ordinances of the City or meet the requirements for a variance of those provisions.

The conversion of the subject property so as to accommodate more dwelling units than are permitted in the zone in which it is located (~~would~~/would not) significantly interfere with the use and enjoyment of other land in the vicinity as evidenced by: _____

The foregoing conditions (~~have~~/have not) been deliberately created by, or with the consent or acquiescence of, the owner, his predecessors and title, or any user of the property in order to bring the subject property within the standards of this section, as shown by: _____

There (~~is~~/is not) any alternative available to the owner, other than a variance to permit an increase in the number of dwelling units, which would suffice to permit the economic use and maintenance of the subject property because of the following: 1 objects to alternatives available

SPECIFIC RELIEF GRANTED

After a public hearing held on Oct. 30, 1980, the Board of Appeals find that all of the conditions required by the Ordinance (do/do not) exist with respect to this property and that a variance for dwelling unit conversion should _____ be granted in this case.

It is therefore determined that a variance from the provisions of the Zoning Ordinance should _____ be granted in this case.

Merrill L. Seltzer

Gail D. Zayac

Earle Eskelsen

Ira E. Hafer

Thomas Murphy

State Street Management Company

P.O. Box 4654
Portland
Maine
04112

April 27, 2981

Mr. Larry Adlerstein
20 West Street
Portland, Maine 04102

Dear Mr. Adlerstein:

This is to inform you that, per the terms of the Parking Lease, ten (10) spaces are available for your use effective today.

Sincerely,

Jacqueline Price

Jacqueline Price
Financial Manager

JP/bl

Jan Keppel
Financial Manager

L E A S E

Lease Agreement made this day of April, 1981 by and between BUTLER/PAYSON COMPANY, a Maine limited partnership with a place of business in Portland, Maine (hereinafter "Lessor") and LARRY ADLERSTEIN of Portland, Maine (hereinafter "Lessee").

FOR AND IN CONSIDERATION of the covenants and agreements hereinafter set forth, Lessor does hereby lease and demise unto Lessee, subject to certain terms and conditions, a portion of the premises situated at 77 Pine Street in Portland, Maine, more particularly described as follows:

> Seven (7) spaces for the parking of vehicles located in the parking lot at the rear of the premises known as 77 Pine Street, Portland, Maine, which parking lot borders on Carlton Street in said Portland.

TO HAVE AND TO HOLD the above-described premises (hereinafter "the premises") unto the exclusive possession of the Lessee for a term of twelve (12) months from the 1st day of May, 1981, through the 30th day of April, 1982.

The Lessee paying and yielding therefore the sum of Two Thousand One Hundred Dollars ($2,100), payable in twelve (12) consecutive equal monthly installments of One Hundred Twenty-Five Dollars ($125) in advance on or before the 1st day of each and every month of the term.

The parties further agree as follows:

VIII. ADDITIONAL PARKING SPACES

Lessor agrees that as additional parking spaces in the said parking lot become available it shall offer to lease the said additional spaces, up to an additional twelve (12) in number, to the Lessee on the same terms and conditions ~~which~~ as amended herein. ~~it could otherwise obtain from any other lessee.~~

IX. GENERAL

This Agreement of Lease shall inure to and be binding upon the respective heirs, personal representatives, successors and assigns of the parties.

IN WITNESS WHEREOF, the Lessee has hereunto set his hand and seal and the Lessor has caused its name and seal to be affixed by _____, its _____, duly authorized, all on the day and year first above written.

SIGNED, SEALED and DELIVERED
In Presence Of:

_____

_____

LESSEE:

_____
Larry Adlerstein

LESSOR:

BUTLER/PAYSON COMPANY

By _____, its

_____

Att. 13

From: Tom Errico <thomas.errico@tylin.com>
To: Shukria Wiar <SHUKRIAW@portlandmaine.gov>
CC: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Jeff Tarling <JST@portlandmaine.gov>
Date: 6/4/2015 3:04 PM
Subject: 17 Carleton Street - Preliminary Traffic Comments

Hi Shukria - I have reviewed the application materials and offer the following preliminary comments.

* The applicant should provide dimensions of driveway width, parking aisles, etc. for review and comment.

* It is my understanding that a traffic study is being prepared and I will review traffic specific issues upon receipt of the study.

* The following outlines my comments as it relates to the review of parking conditions for the project:

o The applicant should specifically note details of vehicles parking in the existing lot. It should be noted whether any of the vehicles are using the lot as part of a site plan approval requirement.

o Given parking concerns in the neighborhood and limited parking opportunities, the applicant should conduct an updated parking generation survey at existing similar sites on the Portland Peninsula. The survey is intended to confirm parking demand requirements. The scope and details of the survey shall be coordinated with City staff.

* A brief paragraph has been provided in respect to a construction management plan. It isn't noted, but the plan will likely require the closure of the abutting sidewalk and a temporary sidewalk detour will be required. Other specific details can be reviewed at the Pre-Construction meeting.

Please contact me 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<mailto:thomas.errico@tylin.com>
Visit us online at www.tylin.com<http://www.tylin.com>
Twitter | Facebook | LinkedIn | YouTube

"One Vision, One Company"

Please consider the environment before printing.

Att. 13

From: Tom Errico <thomas.errico@tylin.com>
To: Shukria Wiar <SHUKRIAW@portlandmaine.gov>
CC: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@portlandmaine.gov>, Jeff Tarling <JST@portlandmaine.gov>, "JeremiahBartlett" <JBartlett@portlandmaine.gov>
Date: 7/2/2015 9:49 AM
Subject: 17 Carleton Street - Traffic Comments

Hi Shukria - I have reviewed the application materials and offer the following status update from my June 4th comments.

* The applicant should provide dimensions of driveway width, parking aisles, etc. for review and comment.
Status: The revised plans include dimensions and I find details to be acceptable. I would note that the compact parking spaces do not meet City standards, but because they are slightly longer, I support a waiver.

* It is my understanding that a traffic study is being prepared and I will review traffic specific issues upon receipt of the study.
Status: I have reviewed the traffic study and find the methods and conclusions to be acceptable. The project is estimated to generate 8 new AM peak hour trips and 10 new PM peak hours trips. Capacity analyses were conducted at the Carleton Street intersections with West Street and Pine Street and results indicate both intersections will operate at excellent levels of service. A review of crash data indicated there are no High Crash Locations in the vicinity of the project. Accordingly, the project is not anticipated to have a significant impact on traffic mobility and safety.

* The following outlines my comments as it relates to the review of parking conditions for the project:

o The applicant should specifically note details of vehicles parking in the existing lot. It should be noted whether any of the vehicles are using the lot as part of a site plan approval requirement.

o Given parking concerns in the neighborhood and limited parking opportunities, the applicant should conduct an updated parking generation survey at existing similar sites on the Portland Peninsula. The survey is intended to confirm parking demand requirements. The scope and details of the survey shall be coordinated with City staff.
Status: The applicant has provided updated parking demand analysis information that indicates the proposed site will require 0.37 parking spaces per residential unit, but is suggesting a parking supply - for 17 Carleton Street only - of 0.48 parking spaces per unit or 18 parking spaces. I would note that the parking rates developed by the applicant are based on cars observed to be parked. According to their data, at many sites the number vehicles parked did not closely correlate to tenant automobile ownership. If automobile ownership was used, the average parking demand rate would be 0.59 parking spaces per residential units. I need to continue to review this and historical parking information, before I render a conclusion on the parking demand analysis.

* A brief paragraph has been provided in respect to a construction management plan. It isn't noted, but the plan will likely require the closure of the abutting sidewalk and a temporary sidewalk detour will be required. Other specific details can be reviewed at the Pre-Construction meeting.
Status: The applicant has added a note to the Plan and I have no further comment.

* Changes to the on-street parking schedule for Carleton Street will be required in conjunction with changes to existing driveway conditions. This will require City Council action and the applicant shall provide supporting documentation at the time of the request.

* The applicant should provide information on the proposed location of the Car-Share vehicle for review and approval.

Please contact me 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<mailto:thomas.errico@tylin.com>
Visit us online at www.tylin.com<http://www.tylin.com>
Twitter | Facebook | LinkedIn | YouTube

"One Vision, One Company"

Att. 14

From: David Margolis-Pineo
To: Shukria Wiar
CC: DEVELOPMENT REVIEW GROUP
Date: 7/8/2015 11:44 AM

Also placed in Urban Insight

July 8, 2015

Memo To: Shukria Wiar
Barbara Barhydt
From: David Margolis-Pineo
Re: Review Comments for 17 Carlton St. – Avesta Housing

The Department of Public Services has the following preliminary comments.

1. Survey comments will be forwarded under a separate cover.
2. Please add note that all work within the Public Right of Way shall meet City of Portland Technical Manual standards.
3. All streets in the West End of Portland, West, Pine, and Carlton Streets included, were designed with one sewer pipe to convey both stormwater and sanitary wastes. In recent years, more rain events have exceeded the capacity of the sewer resulting in residential sewer backups into basements. It has been estimated that the 37 Avesta units proposed on Carlton Street will add approximately 3,000 gallons per day (gpd) of sanitary waste with no increase in stormwater runoff. To offset this estimated wastewater addition, the applicant is requested to calculate and propose means to retain/remove 3,000 gallons of stormwater for a one inch storm event.

We have no further comments at this time.

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. 15

MEMORANDUM

TO: Shukria Wiar, Planner
FROM: David Senus, P.E.
DATE: May 28, 2015
RE: 17 Carleton Street, Preliminary Level III Site Plan Application

---

Woodard & Curran has reviewed the Preliminary Level III Site Plan Application for the proposed development located at 17 Carleton Street in Portland, Maine. The project involves the construction of 37 affordable housing units with 31 parking spaces and associated site improvements.

Documents Reviewed by Woodard & Curran

- Preliminary Level III Site Plan Application and attachments, dated May 7, 2015, prepared by Pinkham & Greer, on behalf of Avesta Housing.
- Engineering Plans, Sheets C1.0, C1.1, C1.2, C1.3, C1.4, C2.1, C2.2, C2.3, & C2.4, dated April 10, 2015, prepared by Pinkham & Greer, on behalf of Avesta Housing.
- ALTA/ACSM Land Title Survey, dated May 26, 2010, prepared by Owen Haskell, Inc., on behalf of Butler Payson Company.

Comments

1) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standards: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements during-construction, and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500.
   b) General Standards: The project will result in a net decrease in impervious area. As such, the project is not required to include stormwater management features for stormwater quality control. We encourage the Applicant to review the City's Stormwater Service Charge Credit Manual (available online) to evaluate whether they may want to incorporate stormwater quality treatment measures that qualify for a future Stormwater Service Charge credit.
   c) Flooding Standard: The project will result in a net decrease in impervious area. As such, the project is not required to include stormwater management features to control the rate of stormwater runoff from the site.
2) The Applicant has requested confirmation of capacity to serve the proposed development from the Portland Water District and the City of Portland; copies of the approval letters should be forwarded to the City upon receipt.
3) The Existing Conditions and Demolition Plan (Sheet C1.2) should identify disconnecting and capping / plugging the existing sewer service at the downstream catch basin to eliminate continued inflow into the sewer system. A masonry plug repair should be noted on the existing catch basin.
4) The Grading & Utilities Plan (Sheet C1.3) should specify the highpoint with spot grades in the area of the driveway entrance between the 142 contours to ensure proper drainage away from the building in this area.
5) The Grading & Utilities Plan (Sheet C1.3) should identify pipe invert elevations for the proposed storm drain system at new and existing catch basins / manhole connections.
6) The Applicant should consider utilizing beehive grates for proposed field inlets in landscaped areas.
7) The Grading & Utilities Plan (Sheet C1.3) should include a backflow preventer on the new sewer service prior to the connection with the combined sewer system.
8) The limits and type of pavement repair noted in Carleton Street on Sheet C1.3 are inconsistent with what is shown and noted on the Demolition Plan (Sheet C1.2).

9) The Grading & Utilities Plan (Sheet C1.3) includes a line and several spot grades in the parking lot area; we are unclear what this line and the associated spot grades represent.
10) The Applicant should consider alternatives to the direct piped connection of the roof drain into the storm drain system, which ultimately connects to the City's combined sewer system. Discharge to the ground or preferably to landscaping or a rain garden area is recommended.

COMMITMENT & INTEGRITY
DRIVE RESULTS

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

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: Shukria Wiar, Planner
FROM: David Senus, P.E.
DATE: May 28, 2015
RE: 17 Carleton Street, Preliminary Level III Site Plan Application

---

Woodard & Curran has reviewed the Preliminary Level III Site Plan Application for the proposed development located at 17 Carleton Street in Portland, Maine. The project involves the construction of 37 affordable housing units with 31 parking spaces and associated site improvements.

Documents Reviewed by Woodard & Curran

- Preliminary Level III Site Plan Application and attachments, dated May 7, 2015, prepared by Pinkham & Greer, on behalf of Avesta Housing.
- Engineering Plans, Sheets C1.0, C1.1, C1.2, C1.3, C1.4, C2.1, C2.2, C2.3, & C2.4, dated April 10, 2015, prepared by Pinkham & Greer, on behalf of Avesta Housing.
- ALTA/ACSM Land Title Survey, dated May 26, 2010, prepared by Owen Haskell, Inc., on behalf of Butler Payson Company.

Comments

1) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standards: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements during-construction, and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500.
   b) General Standards: The project will result in a net decrease in impervious area. As such, the project is not required to include stormwater management features for stormwater quality control. We encourage the Applicant to review the City's Stormwater Service Charge Credit Manual (available online) to evaluate whether they may want to incorporate stormwater quality treatment measures that qualify for a future Stormwater Service Charge credit.
   c) Flooding Standard: The project will result in a net decrease in impervious area. As such, the project is not required to include stormwater management features to control the rate of stormwater runoff from the site.
2) The Applicant has requested confirmation of capacity to serve the proposed development from the Portland Water District and the City of Portland; copies of the approval letters should be forwarded to the City upon receipt.
3) The Existing Conditions and Demolition Plan (Sheet C1.2) should identify disconnecting and capping / plugging the existing sewer service at the downstream catch basin to eliminate continued inflow into the sewer system. A masonry plug repair should be noted on the existing catch basin.
4) The Grading & Utilities Plan (Sheet C1.3) should specify the highpoint with spot grades in the area of the driveway entrance between the 142 contours to ensure proper drainage away from the building in this area.
5) The Grading & Utilities Plan (Sheet C1.3) should identify pipe invert elevations for the proposed storm drain system at new and existing catch basins / manhole connections.
6) The Applicant should consider utilizing beehive grates for proposed field inlets in landscaped areas.
7) The Grading & Utilities Plan (Sheet C1.3) should include a backflow preventer on the new sewer service prior to the connection with the combined sewer system.
8) The limits and type of pavement repair noted in Carleton Street on Sheet C1.3 are inconsistent with what is shown and noted on the Demolition Plan (Sheet C1.2).

9) The Grading & Utilities Plan (Sheet C1.3) includes a line and several spot grades in the parking lot area; we are unclear what this line and the associated spot grades represent.
10) The Applicant should consider alternatives to the direct piped connection of the roof drain into the storm drain system, which ultimately connects to the City's combined sewer system. Discharge to the ground or preferably to landscaping or a rain garden area is recommended.

Att. 16

From: Jeff Tarling
To: Shukria Wiar
CC: Barbara Barhydt ; David Margolis-Pineo
Date: 6/4/2015 4:03 PM
Subject: 17 Carleton Street

Hi Shukria -

I have reviewed the proposed Landscape plan and feel additional screening is needed along the north edge. Tree selection types also need to be larger tree variety vs Hawthorn and Paperbark Maple which are very small trees. European Hornbeam or some of the upright Oak varieties like 'Regal Prince' which can grow in tight space but offer more height for screening. See:

http://www.jfschmidt.com/pdfs/regalprinceoak.pdf

The north edge space for example, could use 4 of the upright trees vs the two Hawthorns as shown.

With some of suggested improvements or conditions the project could be acceptable.

Thanks,

Jeff Tarling
City Arborist

MEMORANDUM

To: FILE

From: Shukria Wiar

Subject: Application ID: 2015-078

Date: 7/8/2015

Comments Submitted by: Keith Gautreau/Fire on 5/27/2015

Must have access to a minimum two sides of the proposed structure. Access to the rear of the building must be maintained via West Street and Pine Street year round.

Comments Submitted by: Keith Gautreau/Fire on 5/27/2015

Premises Identification
The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.
If the building entry faces a different street, both the street name and number should be large enough to read from the street.
Address numbers must be a minimum of 4 inches high.

Comments Submitted by: Keith Gautreau/Fire on 5/27/2015

Construction Management Plan
Streets must maintain a 20' width for Fire Department access at all times.
Fire Hydrants shall not be blocked or enclosed by fencing. A 3' foot clearance must be kept at all times around the fire hydrant.
If gates are locked, a Portland Fire Department Knox padlock must be purchased by the applicant to allow access for the Fire Department.
The Construction Company' emergency contact information shall be posted on the property in case of an after hours emergency.
All construction shall comply with 2009 NFPA 1 Chapter 16 Safeguards During Building Construction, Alteration, and Demolition Operations.
Any cutting and welding done will require a Hot Work Permit from Fire Department.

Comments Submitted by: Keith Gautreau/Fire on 5/27/2015

1.Hydrants

1.) 2009 NFPA 1 18.3 Water Supplies and Fire Hydrants
2.) Fire Department Connections shall not be located where large diameter hose may block egress.

2. Fire Vehicle Access

1.) Largest Fire Department Vehicle must be able to navigate through the parking lot to access building.
2.) Fire Department Access shall have an unobstructed vertical clearance of not less than 13 ft 6 in.

Att. 18

From: Jennifer Thompson
To: Barbara Barhydt; Shukria Wiar
Date: 7/1/2015 3:59 PM
Subject: 17 Carleton Street
Attachments: Butler School Associates Deed bk 3663 pg 181.pdf

Hi Shukria -

Following our meeting yesterday, I pulled the deed from back when the City sold the Butler School and surrounding parcels. You will see that the deed did contain covenants and specifically required the development of the former playground into a parking lot. However, you'll also see that the restrictions on the use of the property (including, I think, the requirement that the "playground lot" be used for parking) expired after a period of 15 years. Presumably, that is why there is no mention of that former covenant in the more recent deeds.

So, given that there does not appear to me to be any surviving limitation in the deeds to the properties on the ability to sell or develop them separately, it appears that if there is any requirement that the "playground/parking lot" lot provide parking to the Butler School or any other property, that requirement will need to be found in an approval by some City administrative body.

After a somewhat summary review, it appears to me that the review and approval of the Butler School lot and the parking lot in connection with this sale were done separately. Namely, there was a:

1. space and bulk/change of use variance granted with respect to the Butler School that, according to the agenda, allowed its use to be changed from a school to an apartment house with 39 units despite the fact that it didn't meet the lot coverage requirements. The agenda also indicates that the requirement that 39 parking spaces be provided was also waived. I have not seen a written decision reflecting that approval - and so cannot determine whether the waiver of the parking was conditioned on those parking spaces being provided elsewhere or was simply waived without condition. If there was no condition on that approval, then obviously the Butler School will continue to be a lawful use under that approval despite the lack of parking. If there was a condition that required the Butler School to provide off-street parking, its failure to provide the parking would likely render it a nonconforming use. However, in the absence of some covenant or condition that is binding on the Carleton Street lot and prevents the proposed development of that lot, I'm not sure that the legality of the Butler Street's use under its prior change of use variance is a matter that can or should be resolved by the Planning Board in connection with its review of a different property.

2 Conditional Use Approval was granted with respect to the Carleton Street (playground/parking lot lot) that allowed that lot to be used as a parking lot. Again, I have not seen a written decision on that approval and so cannot determine whether the approval was conditioned on the lot providing spots to certain properties. Even if this approval was so conditioned, however, I think that condition would only continue to apply to the parking lot use. If the use of the lot is changed, such that the conditional use approval is no longer necessary, it seems to me that that approval would no longer have any effect.

I realize that these questions have been the subject of much discussion and that a number of historical documents are being reviewed. I have not yet had an opportunity to review the entire packet so this email should be considered preliminary and may change as we receive more information. For now, however, this appears to me to be the status of things.

I plan to attend the workshop on the 14th and will be happy to talk further with you or the Board then.

Best,
Jen

4984

KNOW ALL MEN BY THESE PRESENTS, That the CITY OF PORTLAND, a body politic and corporate located in the County of Cumberland and State of Maine, in consideration of One Dollar ($1.00) and other good and valuable considerations, paid by Butler School Associates, located in said Portland in the County of Cumberland and State of Maine, the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said Butler School Associates, a duly organized and existing Maine Limited Partnership its successors and assigns forever, certain real estate located in said Portland, bounded and described as follows:

Beginning at the north-westerly corner of Pine and West Streets in the said City of Portland, thence running south-westerly on the northerly side line of Pine Street a distance of 175 feet to a passageway now 15 feet wide, thence north-westerly at right angles with said line of Pine Street on north-easterly side of said passageway a distance of 113.87 feet to the easterly line of a passageway 20 feet wide, thence south-westerly at right angles with last described line a distance of 16.83 feet to the centre of last named passageway, thence north on included angle of 36 degrees 27 minutes on said centre line a distance of 98.91 feet to the southerly line of West Street, thence south-easterly at right angles on the said line of West Street a distance of 188.38 feet to angle in said line of West Street, thence with an included angle of 144 degrees 42 minutes a distance of 21.1 feet to the point of beginning, containing by calculation an area of 188.25 square feet. A strip of the aforesaid land 5 feet wide and adjoining said first named passageway and extending from said Pine Street to said last named passageway is to be forever kept open as a passageway in connection with said first named passageway widening the same to 20 feet: said lot shall always have the use of said last named passageway to Pine Street and said lot is subject to all sewer and sidewalk assessments upon the same and to the common use of all said passageways by all the land adjoining the same including all the land of said John and Philip or either of them within the tract bounded by West, Pine and Carleton Streets.

Also one other certain lot or parcel of land in said Portland, bounded and described as follows: Beginning on the easterly side line of Carleton Street at the most northerly corner of land conveyed by Jessie D. Wright to Harrison C. Josslyn by deed dated August 18, 1926 recorded in Cumberland County Registry of Deeds in Book 1243, Page 375; thence northerly on Carleton Street sixty-nine (69) feet to a stake; thence southeasterly and parallel with the northerly line of a certain lot of land conveyed to the said Harrison C. Josslyn about one hundred and seventy-nine (179) feet to a common passageway; thence south-westerly on said passageway about eighty-six (86) feet to said Josslyn land and thence westerly on said Josslyn land to the first bound on Carleton Street.

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Also one other certain lot or parcel of land in said Portland bounded as follows: Beginning on the easterly side of Carleton Street at the northerly corner of the lot or parcel of land herein before described, said point being about one hundred seventy (170) feet southerly of West Street; thence northerly by Carleton Street to land now or formerly of one Black at a point one hundred (100) feet southerly of West Street; thence by said Black land and other land formerly belonging to the Trustees under the Will of John B. Brown, keeping the distance of one hundred (100) feet southerly of West Street and two hundred twenty-five (225) feet more or less to a proposed way as delineated on Plan 55 of Assessors Plans of Portland; thence by the westerly side of said passageway to the lot of land herein before in this deed described; thence by the northerly line of said land one hundred seventy-nine (179) feet more or less to the point begun at.

The first parcel being the same premises conveyed to the Grantor by deed of J. B. Brown and P. H. Brown, dated August 14, 1878, recorded in the Cumberland County Registry of Deeds in Book 451, Page 345. The second and third parcels being the same premises conveyed to the Grantor by deed of Eleanor W. Vanamee, et al, dated March 30, 1945, recorded in said Registry in Book 1773, Page 334.

By acceptance of this deed, Grantee covenants and agrees that:

1. It shall within one year from the date of this deed rehabilitate the building to accomodate twelve to thirteen dwelling units and incidental school uses, all work to be performed in compliance with the provisions of the Municipal Code and in accordance with architectural plans approved by the Planning Board and the City Council before work is undertaken. In performing said work, the present architectural features of the building and its relationship with adjoining properties shall be preserved.

2. Andrews Square Monument now located on the premises shall be refurbished and upgraded to the satisfaction of the Planning Board.

3. In developing the playground area for parking purposes, all work shall be performed in compliance with the provisions of the Municipal Code and subject to the approval of the Planning Board. All significant trees within said area shall be retained and maintained.

4. In the event of failure of the Grantee to complete or substantially complete the work required above within said period, the Grantee shall be required at the election of the Grantor to reconvey to the Grantor all of the premises herein conveyed at the said purchase price of $20,000.00

5. In the event Grantee shall within a period of 15 years desire to dispose of said premises, or any part thereof, it shall notify the City

in writing of its desire to so dispose of said premises, or any part thereof, and the City shall have the right within a period of sixty (60) days after receipt of said notice, to elect to purchase said premises, or any part thereof. If Grantee and the City shall be then unable to agree upon a mutually satisfactory purchase price, said price shall be determined by a board of three arbitrators, after which the City shall have a period of thirty (30) days to determine whether it will exercise its election to purchase.

6. Grantee shall not during said period of 15 years, without Council approval, mortgage or otherwise encumber said premises, or any part thereof, except that necessary for the initial rehabilitation work, which mortgage or encumbrance shall remain the obligation of Grantee, its successors and assigns.

7. Grantee shall not develop the premises herein conveyed for any purposes other than set forth above without the prior written approval of the City Council within a period of 15 years from the date of this deed.

TO HAVE AND TO HOLD the same, together with all the privileges and appurtenances thereunto belonging, to the said Butler School Associates, its successors and assigns forever.

AND the said Grantor Corporation does covenant with the said Butler School Associates, its successors and assigns, that it will warrant and forever defend the premises to it the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under it.

IN WITNESS WHEREOF, the said City of Portland has caused this instrument to be sealed with its corporate seal and signed in its corporate name by JOHN G. DE PALMA, its Director of Finance, thereunto duly authorized, this 1st day of April in the year one thousand nine hundred and seventy-five.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF
Frances R. Meadly

CITY OF PORTLAND
By John G. De Palma
Director of Finance

STATE OF MAINE
CUMBERLAND, ss.

April 1, , 1975.

Personally appeared the above named John G. De Palma, Director of Finance of said Grantor Corporation as aforesaid, and acknowledged

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the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

Patricia E. Meadow

~~Justice of the Peace~~
Notary Public

APR 1 1975

REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 3 H 37 M P M, and recorded in
BOOK 3663 PAGE 181. Margaret L. Weber Acting Register

CURTIS THAXTER
ATTORNEYS AT LAW

ONE CANAL PLAZA, SUITE 1000, P.O. BOX 7320, PORTLAND, ME 04112-7320
TEL: 207.774.9000 • FAX 207.775.0612 • www.curtisthaxter.com

Maurice A. Selinger, III
mselinger@curtisthaxter.com

VIA ELECTRONIC MAIL

July 8, 2015

Shukria Wiar, Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

Danielle West-Chuhta, Esq.
City of Portland Corporation Counsel
389 Congress Street
Portland, ME 04101

RE: 17 Carleton Street

Dear Shukria and Danielle:

Avesta Housing Development Corporation provided me with materials obtained under a freedom of information act request with respect to the above property and adjacent property located at West and Pine Streets known as the former Butler School. The materials relate to the approvals process in the mid 1970s when Butler School was converted to apartments and the former school playground was approved for use as a parking lot.

By letter dated October 15, 2009, the City's then-Zoning Administrator, Marge Schmuckal, responding to the request of an interested party as to the parking requirements applicable to the former Butler School property, stated that "[t]he appeal granted allowed no off-street parking to be provided on the Property." The appeal Ms. Schmuckal was referring to was granted on November 10, 1976 to Public School Associates and allowed the former school to be used as a 39 unit apartment building with no off street parking.

I reviewed the entire 76 pages of materials furnished by the City to Avesta, and I have not found anything inconsistent with the statements in Ms. Schmuckal's letter, nor did I find anything stating that parking for the former Butler School property was to be provided on the Carleton Street lot or anywhere else. Note that on both the appeal agenda from November 10, 1976 (pages 8 and 9 of the PDF) and the memorandum summarizing the action of the board of appeals dated November 23, 1976 (page 10 of the PDF), the school property and the Carleton Street lot are shown as being in different ownership, and there is no condition requiring a parking agreement or lease of spaces by the owner of the school lot from the owner of the Carleton Street lot.

While an earlier set of approvals in favor of CDS, Inc. might seem to tie the parking lot and the school lot together, in fact none of those materials anywhere require that parking spaces

in the Carleton Lot are to be reserved for or made available to tenants at the Butler school property. Moreover, these 1975 approvals are superseded by the 1976 approvals.

In sum, I see nothing in these materials saying affirmatively that the Carleton Street lot must be available to tenants at the old Butler School for parking. The public record is clear that the existing approvals for the former Butler School do not require off street parking on the Carleton Street lot or anywhere else.

If you are in possession of official City records that suggest otherwise, I would appreciate the opportunity to review them.

Very truly yours,

Maurice A. Selinger, III

cc: Seth Parker
Drew Wing

O:\MAS\99475 Avesta\Carleton Street\Land use\Ltr to City re Carelton Street.docx

PC1

To the Portland Planning Board:

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

Currently several parking spaces are leased by tenants of both the Pilgrim apartment building and the Butler School. Many of these people are elderly or handicapped. Where will they park? Avesta plans on offering just two spaces to Butler School tenants (who must be over 62 or handicapped) once their project is completed and Avesta OWNS the Butler School building. It would seem that they are intent in inconveniencing current tenants in order to carry out plans for future tenants. While Portland needs rental units at affordable rates, I do not think this particular project has been thought through as well as it might.

I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

Sincerely,

Avesta needs to be held accountable for helping to uphold the very neighborhoods it plans to be apart of. This includes being responsible for providing parking for their tenants but also in not over running neighborhoods. There is also →

already an Avesta building just blocks from the proposed new building. The history, uniqueness + charm of the west end will quickly disappear should many AVESTA properties be situated in the same block/neighborhood.

Best,

Anne Adams

30 WEST ST resident for over 7 years

already an Avesta building just blocks from the proposed new building. The history, uniqueness + charm of the west end will quickly disappear should many AVESTA properties be situated in the same block/neighborhood.

Best,

Anne Adams

30 WEST ST resident for over 7 years

PC2

From: Claire Oppenheim <c.oppenheim@me.com>
To: "shukriaw@portlandmaine.gov" <shukriaw@portlandmaine.gov>
Date: 5/22/2015 3:14 PM
Subject: Avesta Housing

Hi,
I live in the West End near where Avesta Housing is planning a 36 unit housing project. I would like to attend the planning board meetings but have to arrange my work schedule in advance in order to do so. Could you tell me when the next meeting is planned?
Thanks,
Claire Oppenheim

Sent from my iPad

PC3

From: Deborah Boyajian <boyajiand@mac.com>
To: <shukriaw@portlandmaine.gov>
Date: 5/26/2015 2:44 PM
Subject: Concerns & Suggestions regarding Avesta / Carleton Street Proposal

Hello Shukria,
Thank you for speaking with me this afternoon. Here is the letter I mentioned.
Sincerely,
Deborah

To Whom it May Concern,

My name is Deborah Boyajian. My husband, Bill Nelligan, and I purchased our first Maine home at 27 West Street in Portland's Historic West End district in 2005. Since that time, we have contributed extensively to the immediate neighborhood by making numerous improvements to the once dilapidated property we now call home. We have also forged a positive relationship with Portland's various departments, by working closely with the city and the Historic Board by making the appropriate improvements to our home. These improvements have not only added to the face of the John Calvin Stevens block of row homes, but our individual efforts have ultimately uplifted this end of West Street. We planted trees, we hired Krista Butterfield to install a gorgeous walkway, and we hired another local small business person—James McCain—to design and implement a lovely front garden (where a disheveled dumping ground once stood). We have worked with the city to re-align the uneven, treacherous front brick walkway, so passers by would not trip and hurt themselves—particularly in the winter. In addition to these visible external improvements, we have spent more than 100K renovating the inside of the property.

At this time in our lives—getting older, son off to New York City, and our beloved Golden Retriever, Beau, now gone—it is time to downsize. It has been time to downsize for several years. Unfortunately, our house is not selling because we do not have off street parking. Inevitably, there have been opportunistic buyers who have offered to buy our home for $100,000 (and even $200,000) less than its value because we do not have off street deeded parking. Sadly, the City of Portland has repeatedly denied our requests to install a small and unobtrusive parking spot alongside our front hedge area. These denials come despite the approval of said installation by the Historic Board; yes, we have indeed been approved by the Historic Board to install a non conforming curb cut and driveway, yet Mike Bobinsky has repeatedly refused to grant us the permit to do so. . We have presented documentation with photos of numerous non conforming and illegally installed driveways in the immediate neighborhood. We have also presented Mr. Bobinsky with the facts that his denial has created a hardship for us, yet he has been steadfast in his inflexibility. Ergo, we have lost numerous buyers: one family on Thomas Street, one family on Deering Street, another on Spring Street, another three on Neal Street, et al. Do you know the perspective that is taken when real property does not sell for years; the perspective is that something is wrong with the property being sold. This is what has happened to our 3600 square foot John Calvin Stevens Historic Row Home. The difficulties experienced with no off street parking, have increased incrementally each year: neighbors who have off street parking, but persist in taking up two, three, and even four spaces on an already overburdened street, frequent overnight guests who take up spaces, and diners from Aurora Provisions, Caiola's, Bonobo Pizza, and now the new building on the corner of Brackett and Pine. The residents are now outnumbered by the non residents.

Avesta Housing is a terrific organization--providing housing opportunities for the less advantaged. I am in complete support of what they do for immigrants (both refugees and asylum seekers) and elderly and low income people. The issue here is not one against the project per se, it is against the hardships that we personally, and collectively, will incur as a result of the proposed development on Carleton Street. If this project is to be given any consideration, it should be done so with the caveat that accommodations must be made to the abutters who will shoulder the greatest burden from the project. I cannot speak to what others in the neighborhood want, but I can tell you what would satisfy me. What I suggest is this: the Maine Medical Building in the rear of our property, used to belong to this block of row homes when JB Brown owned the properties as apartments. In 1978, J B Brown sold these John Calvin Stevens apartments as Row Homes. J B Brown then sold the rear property parking lot and building (which I am told was the garage for these row homes) to Maine Medical Center; a decision seemingly steeped in monetary gain rather than the foresight of what might eventually be a disastrous decision in a growing population. I ask you this; where were the civil engineers and planning board minds at that time?

Portland is currently confronted with another daunting decision; should they grant permission to the Avesta project, in a highly populated neighborhood where off street parking is very limited, and on street parking is a persistent problem? If you are giving this project serious consideration, I propose the following: 1) allow us to install a driveway 2) work closely with Maine Medical Center to allow the five Row Homes to lease for a minimum of twenty years (but preferably for 99 years) with the option to renew, two parking spaces each. Since these are individually owned row homes, the leases should be separate legal contracts, rather than group ones as in condo associations.
I have had several conversations with Mr. Cloutier, property manager for the rear Maine Medical Pkg. lot, pleading with him to allow us (at our expense) to install a gated fence into our back yard so we could park there. His rationale for denying our request (albeit politely and regretfully) was based on his presumption that all of the abutters would then make the same request. The fact is that there are 14 abutting properties. Of those 14, there are five who do not have off street parking. Those five are the John Calvin Stevens Row homes—which is pretty ironic, wouldn't you agree? 3) post "Resident Parking Only" signs from 5:00 pm until 8:00 am every day, so that residents have priority over business overflow. 4) paint white parking lines to help minimize irregular parking and to prevent oversized vehicles from taking up two parking spaces. 5) require Avesta to limit the parking they are proposing to 15 spaces for tenant occupancy—thus giving present lot renters the other 17 spaces inside their proposed building. I know two Butler school residents who are both elderly and disabled who deserve at the least, a modest accommodation of inside parking in the new proposed building; I think this suggestion aligns quite well with Avesta's purported mission to help the less advantaged.

I hope my letter has given you a sliver of the concern that my husband and I have regarding the Avesta project. Additionally, I hope that by personalizing and generalizing the serious and significant parking issues on West Street, you take a long look at the negative impact this project will have in the area.

Thank you,

Deborah Boyajian
Bill Nelligan
27 West Street

Portland, Maine 04102
(207) 831-6998

PC4

From: "Your Friend Derek" <derekj@usa.net>
To: <shukriaw@portlandmaine.gov>
Date: 6/19/2015 3:31 PM
Subject: 17 Carleton St proposal

Hi!

I've been interested in this project since I live a block away. So I attended the historical zone workshop which I thought was pretty balanced. Then I attended the neighborhood meeting hosted by Pinkham & Greer. What a hornet's nest!

97.5% of the comments revolved around parking or rather the loss of spaces for those using the lot now and the fact that there will be only 31 spaces for a 37 unit development. A guy from Avesta finally said that the shortage of parking in the West End is not their problem, it's the city's problem. No one liked that but he was right about that.

Anyway, be prepared to swamped with complaints about parking!!

But I would like to raise another issue. I believe that I saw that Avesta paid $13.5 million for the lot. I was surprised they paid so much. I wondered how that could be economically feasible, though I admit I know little about the low income housing tax credit market.

However, my concern was heightened by two things that were said at the Pinkham & Greer meeting. The architect (who seemed like a really decent guy) answered a question about why a portion of the shell on the back was a clapboard (I think) rather than brick. His answer was that his budget was so tight that to put a brick facade in that section would cause the project to go overbudget. I'm not a contractor, but it astonished me that something that minor would blow out the budget.

My suspicion was confirmed by a gent from Avesta. Almost as an aside, he mentioned that they need to put so many "efficiency" units into the building to make it economically feasible. In other words, the neighborhood and residents of the building have to accept an over-crowded rabbit warren because Avesta paid too much for the property.

Why should residents of the building and the whole neighborhood suffer because the execs at Avesta made a big mistake and paid way too much for the building? Let Avesta take the loss for their own mistake.

Please encourage Avesta to reduce the number of units in the building.

Thanks for taking the time to read this.

Derek Jaskulski
50 Carleton Street

PC5

Stuart O'Brien, Chair
Portland City Planning Board
389 Congress St, 4th Floor
Portland, ME 04101

June 8, 2015

Dear Mr. O'Brien:

On behalf of the 20 West Street Condominium Association, I am writing to express concern over the proposed development of a 37-unit apartment building at 17 Carleton Street.

There is general concern throughout the neighborhood about the loss of the 60 leased parking spaces currently on the site, but even more critical to our residents is the issue of wastewater. We have had several occurrences in the past of backflow through floor drains and toilets on our basement level, when storm runoff has overwhelmed the sewer system. Unit occupants in abutting properties have experienced some of the same issues.

Will an engineering study be done, prior to any approvals, to determine what the impact will be of wastewater from an additional 37 units on a sewage system that is already of a deficient capacity? If not, we would like to request that this step be taken, and that this issue be considered along with the other likely impacts of increasing density in this neighborhood.

Respectfully,

Elliot Rappaport
President
20 West Street Condominium Association

From: Jen DeRose <jennifer.derose@gmail.com>
To: <shukriaw@portlandmaine.gov>
Date: 6/2/2015 4:00 PM
Subject: 17 Carleton Street Proposal
Attachments: avesta_policecars.jpg; avesta_ambulance.jpg

Shukria Wiar

shukriaw@portlandmaine.gov

To whom it may concern:

This email is in regards to the proposed 17 Carleton Street project in the West End Historic District. As a resident and landlord at 93 Pine Street (which abuts the building proposal), as well as a former editor at Elle Decor, House Beautiful, and Interior Designs magazines, I would appreciate the planning divisions deep consideration on the following issues:

1. Parking

This project proposes 37 units--with only 31 parking spots. Besides not even providing enough parking for the proposed units, the project would also *displace the dozens of cars* that park there now. With the recent new 39-unit building West End Place at Pine and Brackett Streets, (and only 32 parking spots) there has already been a significant impact on parking in the area. As an example of how tight the parking situation is, tenants in our building recently inquired about the cost of renting one of the existing spots in the current lot at 17 Carleton, and were told it was already full.

2. Design

The buildings in the vicinity of the proposal are architectural treasures on a national level. I have edited national design magazines, and I'm sure you agree with me, this neighborhood is incredibly special. It's what attracts newcomers like me to the city. But a new building that does not live up to the existing architectural standards of the neighborhood has a detrimental effect. This can be evidenced with the addition of West End Place at Brackett and Pine Street. Not only does it not add to the beauty of the neighborhood, it actually takes away from it. The proposed building design could appear in Bayside, South Portland, or Kansas City--there is no consideration for it keeping in within the historic context of the neighborhood. It is not harmonious with the landmarked buildings around it. If you're going to build new in this neighborhood, then build a beautiful design that is as architecturally significant, and Leeas its neighbors.

3. Height & Scale

The proposed building is four stories. Many of the buildings around this area (including ours at 93 Pine Street) are only three stories and only have two exposures. With only windows at the front and back of our building (and not on the sides) we greatly benefit from the light the current open lot affords. With a new building at this location, the amount of light afforded to surrounding units will be dramatically decreased.

4. Noise

Adding a large busy building to what is a narrow, one-way road will undoubtedly bring noise and disturbances from sirens, delivery traffic, private trash removal, dumpsters, and traffic between the two Avesta properties. Please see the attached photo from Saturday, Memorial Day weekend, May 23, 2015. There were *6 emergency vehicles *extending for half the block for an incident that occurred at the Avesta Housing at 77 Pine Street. Carleton Street is such a narrow, quiet street, how will it host this amount of emergency vehicles? Should this proposal go through, this would be happening not only in the front of our building, but also to the rear.

I urge you to please carefully consider the implications of this building, and should this go forward, that it be with a revised design that addresses all of these points.

Thank you,
Jen DeRose

From: Jen DeRose <jennifer.derose@gmail.com>
To: <shukriaw@portlandmaine.gov>
Date: 6/8/2015 1:03 PM
Subject: Fwd: 17 Carleton Street Proposal
Attachments: avesta_policecars.jpg; avesta_ambulance.jpg; avesta_June4_2015.jpg

Shukria,

I wanted to follow up per my last email regarding the proposal for the Avesta housing at Carleton Street. On Thursday, June 4, 2015, there were another two police cars called to Avesta's Butler School. (please see attached photo.) That's at least* two times that emergency vehicles have been there within the last 12 days. *

Are there city records for how often emergency workers are called to Avesta's Butler School?

This building is directly across from where a woman was sexually assaulted and it seems to me that the city's emergency resources would be much better used in patroling the entire neighborhood and keeping the community safe rather than continually being called to the same building. Why would the city consider allowing Avesta to manage another property when there are clear issues with their existing buildings? And how can a narrow, one-way street like Carleton handle the continuous emergency vehicles that would be called there?

I hope that the planning commission takes the issue of safety into consideration when they review this proposal.

Thank you for your time.

Best,
Jen DeRose

---------- Forwarded message ----------
From: Jen DeRose <jennifer.derose@gmail.com>
Date: Tue, Jun 2, 2015 at 3:59 PM
Subject: 17 Carleton Street Proposal
To: shukriaw@portlandmaine.gov

Shukria Wiar

shukriaw@portlandmaine.gov

To whom it may concern:

This email is in regards to the proposed 17 Carleton Street project in the West End Historic District. As a resident and landlord at 93 Pine Street (which abuts the building proposal), as well as a former editor at Elle Decor, House Beautiful, and Interior Designs magazines, I would appreciate the planning divisions deep consideration on the following issues:

1. Parking

This project proposes 37 units--with only 31 parking spots. Besides not even providing enough parking for the proposed units, the project would also *displace the dozens of cars* that park there now. With the recent new 39-unit building West End Place at Pine and Brackett Streets, (and only 32 parking spots) there has already been a significant impact on parking in the area. As an example of how tight the parking situation is, tenants in

our building recently inquired about the cost of renting one of the existing spots in the current lot at 17 Carleton, and were told it was already full.

2. Design

The buildings in the vicinity of the proposal are architectural treasures on a national level. I have edited national design magazines, and I'm sure you agree with me, this neighborhood is incredibly special. It's what attracts newcomers like me to the city. But a new building that does not live up to the existing architectural standards of the neighborhood has a detrimental effect. This can be evidenced with the addition of West End Place at Brackett and Pine Street. Not only does it not add to the beauty of the neighborhood, it actually takes away from it. The proposed building design could appear in Bayside, South Portland, or Kansas City--there is no consideration for it keeping in within the historic context of the neighborhood. It is not harmonious with the landmarked buildings around it. If you're going to build new in this neighborhood, then build a beautiful design that is as architecturally significant, and Leeas its neighbors.

3. Height & Scale

The proposed building is four stories. Many of the buildings around this area (including ours at 93 Pine Street) are only three stories and only have two exposures. With only windows at the front and back of our building (and not on the sides) we greatly benefit from the light the current open lot affords. With a new building at this location, the amount of light afforded to surrounding units will be dramatically decreased.

4. Noise

Adding a large busy building to what is a narrow, one-way road will undoubtedly bring noise and disturbances from sirens, delivery traffic, private trash removal, dumpsters, and traffic between the two Avesta properties. Please see the attached photo from Saturday, Memorial Day weekend, May 23, 2015. There were *6 emergency vehicles *extending for half the block for an incident that occurred at the Avesta Housing at 77 Pine Street. Carleton Street is such a narrow, quiet street, how will it host this amount of emergency vehicles? Should this proposal go through, this would be happening not only in the front of our building, but also to the rear.

I urge you to please carefully consider the implications of this building, and should this go forward, that it be with a revised design that addresses all of these points.

Thank you,
Jen DeRose

PORTLAND
PORTLAND
FIRE DEPT.
MEDICAL CRISIS UNIT
PFD
M6
EMERGENCY CALL
9-1-1

PORTLAND
PORTLAND
FIRE DEPT.
MEDICAL CRISIS UNIT
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EMERGENCY CALL
9-1-1

PORTLAND
POLICE

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POLICE

PC7

To the Portland Planning Board:

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

Currently several parking spaces are leased by tenants of both the Pilgrim apartment building and the Butler School. Many of these people are elderly or handicapped. Where will they park? Avesta plans on offering just two spaces to Butler School tenants (who must be over 62 or handicapped) once their project is completed and Avesta OWNS the Butler School building. It would seem that they are intent in inconveniencing current tenants in order to carry out plans for future tenants. While Portland needs rental units at affordable rates, I do not think this particular project has been thought through as well as it might.

I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

Sincerely,

Jenson Steel
30 West St #6

PC8

To the Portland Planning Board:

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

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I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

Sincerely,

Liz Kellogg

Liz Kellogg

DEAR SHUKRIA,

MORNING DEAR,

I LIVE IN THE PILGRIM APARTMENT. TOP FLOOR IN THE BACK OVERLOOKING PARKING LOT.

IT IS MY SANCURARY IN SPITE OF, PARKING DELEMA, PARKING BANS ECT.

I AM LUCKY TO HAVE A LANDLORD WHO IS A GOOD PERSON.

I RECENTLY (MARCH 2015) TOOK A BETTER JOB IN YARMOUTH THAT HAS ME DRIVING, AGAIN. AFTER WALKING BLISSFULLY ON THE PENNINSULA FOR 18 MONTHS.

I WOULD TAKE A LOWER PAYING JOB TO GET BACK ON THE SIDEWALKS AGAIN IF THIS BUILDING GOES UP.

BUT, YOU KNOW, I LIKE BUYING NEW CLOTHES, NEW BED LINENS, BETTER FOOD, BETTER HAIR CUTS ECT.

WELL, GOOD LUCK TO US.

THANKS FOR READING,

LIZ KELLOGG

PC9

From: Mason Sears <hmsears@sfmarinausa.com>
To: <shukriaw@portlandmaine.gov>
Date: 6/4/2015 11:01 AM
Subject: 17 carlton St Project

Shukria

Unfortunately , I cannot make the public meeting for the 17 carlton St. project being held June 11th

I would like to ask how the project accommodates all the parking for the development ? As I understand it the development would directly add 5 cars to the on street parking demand, and displace an additioanl 56 current parking spaces to the street. As you are aware, parking is tight already in this neighborhood.

What alternative plan, or reduce scale of this project does the developer have..

In addition I am concerned that the Historical consistency of the neighbor hood will not be maintained. The appearance of the building in my mind does not fit with the surrounding buildings. Having watched the new apartments go up on the corner of pine ,and bracket st and the Low level of quality of the exterior that presents to the neighborhood, I fear that this will also be a low quality building that will not fare well in the years to come.

Will this project site continue to have access from the rear of the parking lot (butler school building) or will it have fencing around.

Thank you,

Mason Sears
106 pine st
Portland me

PC10

To the Portland Planning Board: including Chairman Stewart O'Brien

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

Currently several parking spaces are leased by tenants of both the Pilgrim apartment building and the Butler School. Many of these people are elderly or handicapped. Where will they park? Avesta plans on offering just two spaces to Butler School tenants (who must be over 62 or handicapped) once their project is completed and Avesta OWNS the Butler School building. It would seem that they are intent in inconveniencing current tenants in order to carry out plans for future tenants. While Portland needs rental units at affordable rates, I do not think this particular project has been thought through as well as it might.

I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

Sincerely,

C. Zdanowicz

It is extremely disappointing that the city is moving ahead with the misguided project despite wide spread opposit + objection from all quarters of the west end + without regard t negative impacts incl. the elderly, infirm + handi ca

PC11

To the Portland Planning Board:

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

Currently several parking spaces are leased by tenants of both the Pilgrim apartment building and the Butler School. Many of these people are elderly or handicapped. Where will they park? Avesta plans on offering just two spaces to Butler School tenants (who must be over 62 or handicapped) once their project is completed and Avesta OWNS the Butler School building. It would seem that they are intent in inconveniencing current tenants in order to carry out plans for future tenants. While Portland needs rental units at affordable rates, I do not think this particular project has been thought through as well as it might.

I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

KEEP THE POOR PEOPLE OUT OF THIS SAFE NEIGHBORHOOD

Sincerely, RESIDENT
30 WEST ST, PORTLAND

LESS CRIME, LESS DRUGS, LESS LOITERING

PC12

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

June 29, 2015

Re: FOAA Request

Dear Mr. Penrose:

The following is the City of Portland's response pursuant to the State's Freedom of Access law (1 M.R.S.A. §§ 401-410) to your FOAA request dated June 19, 2015, seeking a copy of all files regarding the original Butler/Payson Site Plan Approval, which you estimate the time frame to be between 1970 and 1986.

To date, the Planning Office provided you with a thumb drive that contained all the documents stored on the Department's G:Drive and searched in the City Hall attic for files. There are no Planning Board files for the addresses that you have given. The planning staff recommended that you review the micro-fiche files stored in the Inspection Office. There may be documents from the Zoning Board of Appels that are on the micro-fiche, which may address your questions. If you would like the administrative staff to make copies of the relevant documents on the microfiche, we can compile that information. If you want copies of all the records, including all permits and inspections for this address, please let us know. I have asked staff in this department to search for any and all records responsive to your request and the staff will look once again in the attic. Given the scope of your request it is my estimate that it will take at least 3.5 hours of staff time to compile these records. See 1 M.R.S.A. § 408(4) and (5). At the statutorily established rate of $15 per hour, and the first hour free, the cost for compiling the relevant records will therefore be at least $37.50. If you want copies of all documents from microfiche and it is estimated that additional hour would be required. Additionally as only hard copies of these documents are available, copies will be provided at the cost of $0.50 per page.

The City hereby formally requests payment of the above amounts in advance. See 1 M.R.S.A. § 408. To the extent that the time required to compile the requested documents exceeds the 3.5 hour estimate, the City will notify you before the 3.5 hours has been exceeded with another estimate of the additional time that will be required and will similarly require an upfront payment for the additional work necessary to compile all of the documents requested. Overall, due to the nature of the documents, only selected city personnel can execute the work necessary to satisfy your request. As these employees have a number of daily responsibilities that must be completed prior to work on outside projects, it is estimated that satisfying your request will take approximately five days.

Please let me know how you wish to proceed. If you have any additional questions, do not hesitate to contact me.

Sincerely,

Barbara Barhydt
Development Review Services Manager

Cc: Jeff Levine, Director, Planning and Urban Development
Jennifer Thompson, Associate Corporation Counsel
Shukria Wiar, Planner
Jennifer Munson, Office Manager
Lannie Dobson, Administrative Assistant

PC13

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

June 30, 2015

Re: FOAA Request

Dear Mary Doughty:

The following is the City of Portland's response pursuant to the State's Freedom of Access law (1 M.R.S.A. §§ 401-410) to your FOAA request dated June 23, 2015, seeking a copy of:

> Documents of Public Records regarding the site plan applications for 17 Carleton Street, Portland, ME pertinent to developments at 30 West Street, 20 West Street and 77 Pine Street.

I have asked staff in this department to search for any and all records responsive to your request. Given the scope of your request it is my estimate that it will take at least 1 hour of staff time to compile these records. See 1 M.R.S.A. § 408(4) and (5). At the statutorily established rate of $15 per hour, and the first hour free, there are no costs anticipated for compiling the records unless the staff time exceeds an hour (see below). Additionally as only hard copies of these documents are available, copies will be provided at the cost of $0.50 per page.

The City hereby formally requests payment of the above amounts in advance. See 1 M.R.S.A. § 408. To the extent that the time required to compile the requested documents exceeds the 1 hour estimate, the City will notify you before the 1 hours has been exceeded with another estimate of the additional time that will be required and will similarly require an upfront payment for the additional work necessary to compile all of the documents requested. Overall, due to the nature of the documents, only selected city personnel can execute the work necessary to satisfy your request. As these employees have a number of daily responsibilities that must be completed prior to work on outside projects, it is estimated that satisfying your request will take approximately five days.

Please let me know how you wish to proceed. If you have any additional questions, do not hesitate to contact me.

Sincerely,

Barbara Barhydt
Development Review Services Manager

Cc: Jeff Levine, Director, Planning and Urban Development
Jennifer Thompson, Associate Corporation Counsel
Shukria Wiar, Planner
Jennifer Munson, Office Manager
Lannie Dobson, Administrative Assistant

PC14

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

June 30, 2015

Re: FOAA Request

Dear George Silverman:

The following is the City of Portland's response pursuant to the State's Freedom of Access law (1 M.R.S.A. §§ 401-410) to your FOAA request dated June 23, 2015, seeking a copy of planning files pertaining to 17 Carleton Street parking lot and Butler School project.

I have asked staff in this department to search for any and all records responsive to your request. Given the scope of your request it is my estimate that it will take at least 1 hours of staff time to compile these records. See 1 M.R.S.A. § 408(4) and (5). At the statutorily established rate of $15 per hour, and the first hour free, there are no costs anticipated for compiling the records unless the staff time exceeds an hour (see below). Additionally as only hard copies of these documents are available, copies will be provided at the cost of $0.50 per page.

The City hereby formally requests payment of the above amounts in advance. See 1 M.R.S.A. § 408. To the extent that the time required to compile the requested documents exceeds the 1 hour estimate, the City will notify you before the 1 hours has been exceeded with another estimate of the additional time that will be required and will similarly require an upfront payment for the additional work necessary to compile all of the documents requested. Overall, due to the nature of the documents, only selected city personnel can execute the work necessary to satisfy your request. As these employees have a number of daily responsibilities that must be completed prior to work on outside projects, it is estimated that satisfying your request will take approximately five days.

Please let me know how you wish to proceed. If you have any additional questions, do not hesitate to contact me.

Sincerely,

Barbara Barhydt
Development Review Services Manager

Cc: Jeff Levine, Director, Planning and Urban Development
Jennifer Thompson, Associate Corporation Counsel

Shukria Wiar, Planner
Jennifer Munson, Office Manager
Lannie Dobson, Administrative Assistant

PC15

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

June 30, 2015

Re: FOAA Request

Dear Mr. Reinhartsen:

The following is the City of Portland's response pursuant to the State's Freedom of Access law (1 M.R.S.A. §§ 401-410) to your FOAA request dated June 23, 2015, seeking a copy of planning files pertaining to 17 Carleton Street parking lot and Butler School project.

I have asked staff in this department to search for any and all records responsive to your request. Given the scope of your request it is my estimate that it will take at least 1 hours of staff time to compile these records. See 1 M.R.S.A. § 408(4) and (5). At the statutorily established rate of $15 per hour, and the first hour free, there are no costs anticipated for compiling the records unless the staff time exceeds an hour (see below). Additionally as only hard copies of these documents are available, copies will be provided at the cost of $0.50 per page.

The City hereby formally requests payment of the above amounts in advance. See 1 M.R.S.A. § 408. To the extent that the time required to compile the requested documents exceeds the 1 hour estimate, the City will notify you before the 1 hours has been exceeded with another estimate of the additional time that will be required and will similarly require an upfront payment for the additional work necessary to compile all of the documents requested. Overall, due to the nature of the documents, only selected city personnel can execute the work necessary to satisfy your request. As these employees have a number of daily responsibilities that must be completed prior to work on outside projects, it is estimated that satisfying your request will take approximately five days.

Please let me know how you wish to proceed. If you have any additional questions, do not hesitate to contact me.

Sincerely,

Barbara Barhydt
Development Review Services Manager

Cc: Jeff Levine, Director, Planning and Urban Development
Jennifer Thompson, Associate Corporation Counsel

Shukria Wiar, Planner
Jennifer Munson, Office Manager
Lannie Dobson, Administrative Assistant

PC16

7/1/15

20 West Street

Portland, Maine 04102

Dear Portland City Planning Board:

I'd like to address the parking issue that will be created when Avesta builds their new building at 17 Carlton Street. I have currently been on Avesta's "waiting list" for a parking spot for 2 years. Each time I called I was bounced to a different person. Either they never returned my call or I was either 3rd on the list, 1st on the list or not even on the list. It appears to me that Avesta has not intended to lease out these spaces in anticipation of this new building. I find it hard to believe that planning board back then allowed 20 West Street to be made into condos knowing that there is no off street parking. It also seems strange that all the legal documentation for this and the Butler building projects are nowhere to be found.

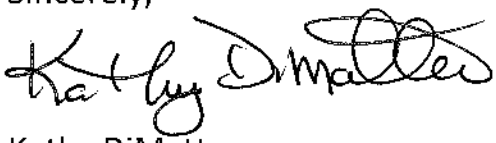
Now we find out that the new building on the corner of Pine and Brackett were promised 10 spaces in order for that project to move forward.

I attended the Rieche School meeting with the Avesta representatives. It was stated by one of them that "there is not that much of a demand in the West End for off street parking. Just drive through that lot and you will see a lot of empty spaces." My comment is "yes" there are empty spaces because Avesta has not been leasing them out to make it appear that there is no demand. My question is how many other people were on their "list" or never made it to the list or "fell off their list". I understand that Avesta owns this lot and it is a free country (the last time I checked) and they should be able to do what they want with it; however, if prior commitments are not being fulfilled, I hope the planning board will take this into consideration. This neighborhood will also be losing parking that is currently "Joe Smoke Shop" which many people in this area are also depend on for parking.

Portland is not quite a little Boston. We do not have the mass transportation available as the big cities do. We need our cars to commute. Not everyone can walk or bike to work. Winters here are very hard on every one, the parking issue makes it even harder. Hopefully you understand our plight and will come up with a viable solution to a very real problem.

Thank you in advance for taking this issue into consideration.

Sincerely,



Kathy DiMatteo

207-712-1170 cell

To the Portland Planning Board:

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

Currently several parking spaces are leased by tenants of both the Pilgrim apartment building and the Butler School. Many of these people are elderly or handicapped. Where will they park? Avesta plans on offering just two spaces to Butler School tenants (who must be over 62 or handicapped) once their project is completed and Avesta OWNS the Butler School building. It would seem that they are intent in inconveniencing current tenants in order to carry out plans for future tenants. While Portland needs rental units at affordable rates, I do not think this particular project has been thought through as well as it might.

I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

Sincerely,

Kathy DiMatteo
20 West St.
Portland, ME

PC17

To the Portland Planning Board:

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

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I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

Sincerely,

Julie DiMatteo

20 West St 6/30/15

7/1/15

PC18

To the Portland Planning Board:

As a neighbor of the 17 Carleton St. parking lot, I wish to formally state my opposition to the plans by Avesta Housing for a 37 unit affordable income housing project as it now stands. Should this project reach fruition, over 50 cars that now have off-street parking in that lot will have to park on the surrounding streets. If one looks at the parking situation now, there are few empty spaces on the surrounding streets at end of day. How do 50 more cars find space? During snow emergencies and street cleaning nights, the problem will grow expedientially. The West End will become a less desirable place to live if it gains a reputation for difficult parking close to home. This will ultimately affect housing prices and the small businesses in the neighborhood.

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I would respectfully ask that the Planning Board give this issue serious consideration and ask Avesta to revise or scrap their current plans before they create a lasting negative impact on our neighborhood.

It is also our understanding that they agreed to lease 10 spaces to the new building at the corner of Bracket + Pine in order for that Building to be approved. What about those spaces.

Sincerely,

Joshua M. Roy
20 WEST St

17 Carleton Street
Portland, Maine

Site Plan / Subdivision Application

Submitted to
City of Portland

May 7, 2015

Prepared by
PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

File: 15108

Att. A

May 7, 2015

Ms. Barbara Barhydt, Planning Department
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

RE: 17 CARLETON STREET, AVESTA HOUSING

Dear Barbara,

On behalf of AVESTA Housing, we are pleased to submit the attached information for a 37 unit affordable housing project to be located at 17 Carleton Street. This site, previously the playground for Butler School, is currently a parking lot, making this project a great infill project. Attached are photos showing the existing conditions around the site.

Working with Archetype, the building has been designed to fit into the historic neighborhood. The Historic Preservation Committee is currently reviewing the project as well.

The site design allows for access from Carleton Street to the site via a passageway under the building. This provides a diminished view of the parking. Overall the amount of impervious cover is reduced, making it an environmentally friendly project. A second connection to the Common Passageway is located at the back of the site.

The view from Carleton Street is critical in the design process. The existing street trees provide a canopy for the sidewalk and the edge of the street. These trees will be maintained with only minor trimming on the building side.

The existing brick sidewalk is in need of repair. This project will install a new sidewalk the full length of the project. The impact on the street trees will be addressed with input from Tony Muench, RLA. Currently the roots have been exposed in the sidewalk. The use of crushed stone for the sidewalk will help provide air for the roof systems.

The project consolidates the two curb cuts on Carleton Street to one. This helps enhance the aesthetic appeal of the project.

The landscaping and site design utilize historic plants and fencing. The plant selection by Tony Muench uses low maintenance materials, typical of historic landscapes. The front fence uses a mix of metal fencing and granite posts. The only thing missing would be hitching posts for horses to complete the historic nature of the site.

Parking for this building's occupants is accomplished in the rear of the building. There are 31 spaces for the 37 units. To assist the residents, AVESTA will be providing a ride share car. This reduces the need for parking by 8 spaces.

Historically, AVESTA's parking demand for these projects is 70% of total number of units, or 26 spaces. The ride share car will further reduce this number to 18. We would like this to be the required number.

Of the 31 spaces 7 of them will be marked as ADA spaces. Two will be dedicated to the Butler residence.

The public utilities will be underground. The sewer, water, and gas service will be from Carleton Street. The electrical and communication services will be from the common passage way in the rear of the building.

As this site is currently fully developed as a parking lot, the stormwater management and erosion control are less of an issue. The site currently drains to two catch basins on site which connect to the drainage system in Pine Street. Erosion control will consist of protecting these basins and ensuring soil isn't tracked on to Carleton Street.

As the site reduces the amount of impervious surface on the site, peak flow control or stormwater treatment is not a concern. The developed conditions will match the existing conditions with flow going to the existing on site catch basin. To ensure drainage around the parking a series of field inlets, underdrains and catch basins collect the runoff and convey it to the catch basin at the back of the site. All drainage will continue to flow to Pine Street via the existing storm drain.

This project will fully develop the site. No future expansions of the building or parking are planned at this time.

PINKHAM & GREER
CIVIL ENGINEERS

Attached are drawings of the site and building as well as short narratives on specific items.

Thank you very much for consideration of our project.

Sincerely,

PINKHAM & GREER

Thomas S. Greer, P.E.

Enclosures

cc: Drew Wing, David Lloyd, File

TSG/rjs

Att. B

PROJECT NAME: 17 Carleton Street

PROPOSED DEVELOPMENT ADDRESS:

17 Carleton Street

PROJECT DESCRIPTION:

The construction of a 37 unit affordable residential building with 31 parking spaces.

CHART/BLOCK/LOT: 55/A/4

PRELIMINARY PLAN 5/7/15 (date)
FINAL PLAN _____ (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Drew Wing Business Name, if applicable: Avesta Housing Development Corp. Address: 307 Cumberland Ave City/State : Portland, ME Zip Code: 04101	**Applicant Contact Information** Work # 207.245.3340 Home# Cell # Fax# e-mail: DWing@avestahousing.org
Owner – (if different from Applicant) Name: Same as Above Address: City/State : Zip Code:	**Owner Contact Information** Work # Home# Cell # Fax# e-mail:
Agent/ Representative Thomas S. Greer Name: Pinkham & Greer, Civil Engineers Address: 28 Vannah Avenue City/State : Portland, ME Zip Code: 04103	**Agent/Representative Contact information** Work # 207.781.5242 Cell # e-mail: tgreer@pinkhamandgreer.com
Billing Information Drew Wing Name: Avesta Housing Development Corp. Address: 307 Cumberland Ave City/State : Portland, ME Zip Code: 04101	**Billing Information** Work # 207.245.3340 Cell # Fax# e-mail: DWing@avestahousing.org

Engineer Pinkham & Greer, Civil Engineers Name: Thomas S. Greer Address: 28 Vannah Avenue City/State : Portland, ME Zip Code: 04103	**Engineer Contact Information** Work # 207.781.5242 Cell # Fax# 207.781.4245 e-mail: tgreer@pinkhamandgreer.com
Surveyor Name: Owen Haskell, Inc. Address: 390 US Route One #10 City/State : Falmouth, ME Zip Code: 04105	**Surveyor Contact Information** Work # 207.774.0424 Cell # Fax# 207.774.0511 e-mail:
Architect Archetype Architects Name: David Lloyd Address: 48 Union Wharf City/State : Portland, ME Zip Code: 04101	**Architect Contact Information** Work # 207.772.6022 Cell # Fax# 207.772.4056 e-mail: lloyd@archetypepa.com
Attorney Name: Address: City/State : Zip Code:	**Attorney Contact Information** Work # Cell # Fax# e-mail:

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)
___ 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 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 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:
[signature] AGENT	5/7/15

PROJECT DATA

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

Total Area of Site	sq. ft. 25,247
Proposed Total Disturbed Area of the Site	sq. ft. 25,247
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)	sq. ft.
Impervious Area (Total Proposed)	sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	sq. ft.
Building Footprint (Total Proposed)	sq. ft.
Building Floor Area (Total Existing)	sq. ft.
Building Floor Area (Total Proposed)	sq. ft.
Zoning	
Existing	R-6
Proposed, if applicable	
Land Use	
Existing	Parking Lot
Proposed	37 Residential Units w/ parking
Residential, If applicable	
# of Residential Units (Total Existing)	0
# of Residential Units (Total Proposed)	0
# of Lots (Total Proposed)	0
# of Affordable Housing Units (Total Proposed)	37
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	
# of One-Bedroom Units (Total Proposed)	
# of Two-Bedroom Units (Total Proposed)	
# of Three-Bedroom Units (Total Proposed)	
Parking Spaces	
# of Parking Spaces (Total Existing)	58
# of Parking Spaces (Total Proposed)	31
# of Handicapped Spaces (Total Proposed)	7
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	Exterior (4), Bike Room (16)
Estimated Cost of Project	

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
X		1	Completed Application form
		1	Application fees
X		1	Written description of project
X		1	Evidence of right, title and interest
n/a		1	Evidence of state and/or federal 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
		1	Written requests for waivers from site plan or technical standards, if applicable.
X		1	Evidence of financial and technical capacity
		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
X		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
X		Proposed grading and contours;	
X		Existing structures with distances from property line;	
X		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
X		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
X		Preliminary infrastructure improvements;	
X		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
X		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
X		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
X		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
X		Exterior building elevations.	

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)**
		1	* Completed Application form
		1	* Application fees
		1	* Written description of project
		1	* Evidence of right, title and interest
		1	* Evidence of state and/or federal permits
		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
		1	* Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site
		1	* Evidence of financial and technical capacity
		1	Construction Management Plan
		1	A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.
		1	Written summary of significant natural features located on the site (Section 14-526 (b) (a))
		1	Stormwater management plan and stormwater calculations
		1	Written summary of project's consistency with related city master plans
		1	Evidence of utility capacity to serve
		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;
n/a			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;
			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;
n/a			Ground water protection measures;
x			Existing and proposed sewer mains and connections;

- Continued on next page -

		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;
		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;
		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
		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;
		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;
n/a		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.

Avesta Housing Development Corporation
307 Cumberland Avenue
Portland, ME 04101

(207) 245-3340

April 14, 2015

To Whom It May Concern

This letter is to inform you that Thomas S. Greer and his associates of Pinkham & Greer Civil Engineers in Portland are hereby authorized to represent me throughout the approval process of the 17 Carleton Street Housing in Portland, Maine.

This includes representing me with the City of Portland and any other State or local agencies who may become involved in the process.

Should you have any questions or concerns, please feel free to contact me.

Sincerely,

Drew Wing
Development Officer
Avesta Housing Development Corporation

17 Carleton Street
File: 15108

Zoning Assessment

This project is in the R-6 Zone. As a residential property, it is a permitted use. The density allowed is one unit per 725 sq. ft of lot plus a 25% density bonus for affordable units. This would be 34 units plus 8 for the bonus; total allowable 42, 37 are proposed.

The building is approximately 43 feet in height, below the 45 feet allowed. Setbacks become 10 feet on each side due to the height. Side setbacks are approximately 10 feet or slightly greater. This project fits the R-6 Zone.

ZONE INFORMATION		
ZONE: R-6, RESIDENTIAL PERMITTED USE: MULTI-FAMILY DWELLING		
SPACE STANDARDS	REQUIRED	PROVIDED
MINIMUM LOT SIZE	2,000 SQ. FT.	25,248 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	685 SQ. FT. *
MINIMUM STREET FRONTAGE	20 FEET	141.43 FEET
MINIMUM FRONT YARD	5 FEET	5 FEET
MINIMUM REAR YARD	10 FEET	65 FEET
MINIMUM SIDE YARD	10 FEET	10.5 FEET
MAXIMUM LOT COVERAGE	60%	28%
MINIMUM LOT WIDTH	20 FEET	141 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	41 FEET
OPEN SPACE RATIO	20%	25%
OFF STREET PARKING	SEE PARKING REQUIREMENTS	
* DENISTY BONUS OF 25% FOR AFFORDABLE UNITS, SECTION 14-488. TOTAL ALLOWED: 42, PROVIDED: 37		

Easements

This site is to provide two ADA spaces for use by the Butler School Project.

Waivers

This site has a reduction in impervious surface. If required, we request a waiver for the stormwater technical standards. Existing impervious is 19,245 sq. ft. The proposed impervious is 19,210 sq. ft.

Significant Natural Features

This site is currently a parking lot. There are no significant natural features or cultural features on site, consistent with the City's Master Plan.

17 Carleton Street
File: 15108

Master Plan Compliance

This project provides the affordable housing noted in the City's Master Plan. The zoning and land use are consistent with the neighborhood.

Traffic

This 37 unit affordable apartment will generate less traffic than a standard apartment building. Standard apartments generate 6.63 trips per day during the week with 0.56 peak am hour trips and .067 peak pm hour trips. Total trips are listed below:

Total Daily Trips	6.63x37	245
Peak AM Trips	0.56x37	21
Peak PM Trips	0.67x37	25

AVESTA experience is 70% of the units will have cars. Assuming this is a 30% reduction in trips as well the expected trips are shown below:

Total Daily Trips	171
Peak AM Trips	15
Peak PM Trips	18

This amount of trips is very small considering the urban location of the project. The use of bikes and access to the bus service in the area are expected to further reduce the trips for this project.

Trip generation rates are from the ITE Manual Trip Generation.

Neighborhood Meeting

Neighborhood meeting is yet to be held.

Google earth

feet 800
meters 200

17 CARLETON STREET
FILE: 15108

PHOTO 1

PHOTO 2

17 CARLETON STREET
FILE: 15108

PHOTO 3

PHOTO 4

17 CARLETON STREET
FILE: 15108

PHOTO 5

PHOTO 6

17 CARLETON STREET
FILE: 15108

PHOTO 7

PHOTO 8

17 CARLETON STREET
FILE: 15108

PHOTO 9

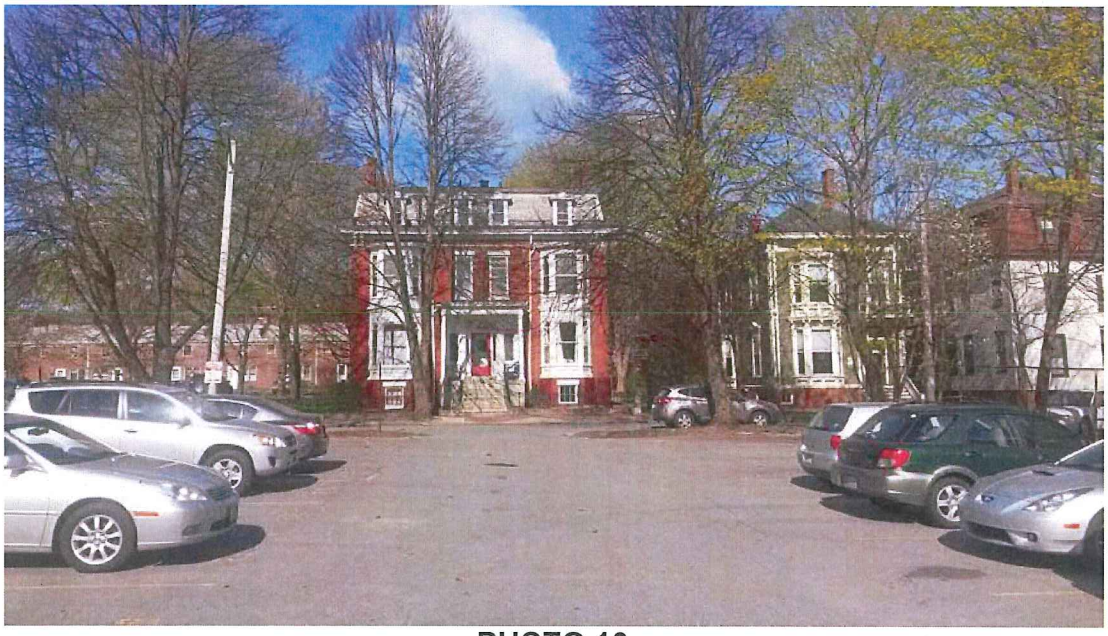


PHOTO 10

17 CARLETON STREET
FILE: 15108

PHOTO 11

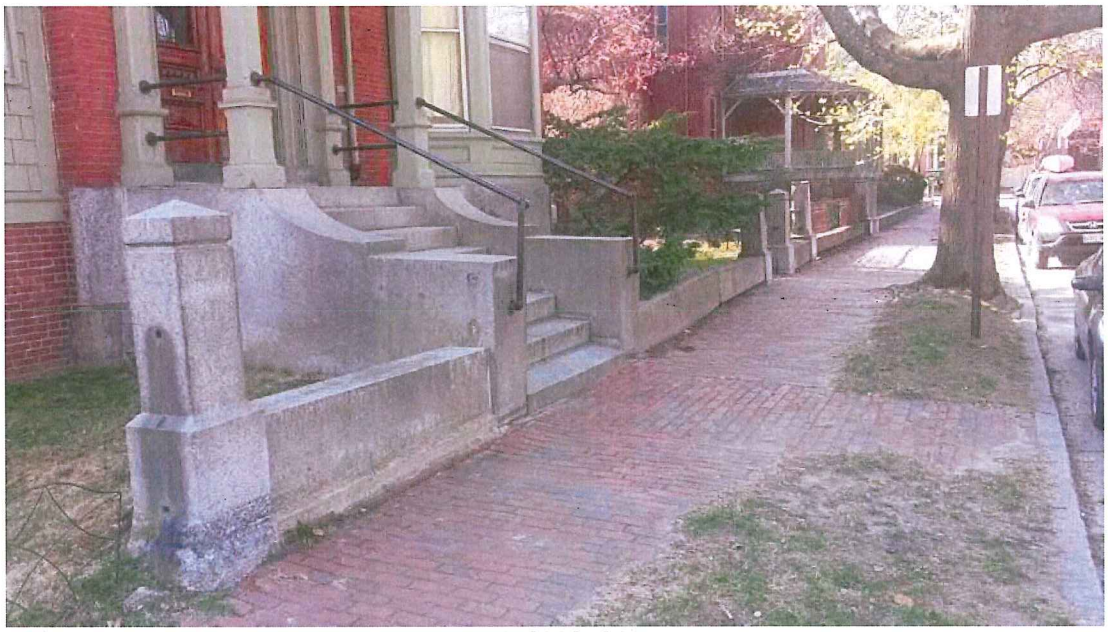


PHOTO 12

Att. D

Doc#: 13352 Bk:32169 Ps: 143

SHORT FORM QUITCLAIM DEED WITH COVENANT

KNOW ALL PERSONS BY THESE PRESENTS, THAT AVESTA HOUSING DEVELOPMENT CORPORATION, a Maine nonprofit corporation, doing business in Portland, Maine, FOR CONSIDERATION PAID, grants to AVESTA BUTLER PAYSON LP, a Maine limited partnership whose mailing address is 307 Cumberland Avenue, Portland, ME 04101, WITH QUITCLAIM COVENANT, the land located on West, Pine, Deering and State Streets in the City of Portland, County of Cumberland and State of Maine, more particularly described on Exhibit A attached hereto.

Being the same premises conveyed to Avesta Housing Development Corporation, by deed of Butler/Payson Company Limited Partnership dated October 21, 2011 and recorded in the Cumberland County Registry of Deeds in Book 29079, Page 282.

IN WITNESS WHEREOF, Avesta Housing Development Corporation has caused this instrument to be executed by Eric Boucher, its Chief Financial Officer thereunto duly authorized, this 30th day of March, 2015.

MAINE REAL ESTATE TAX PAID

WITNESS:

AVESTA HOUSING DEVELOPMENT CORPORATION

By: _____
Eric Boucher, its Chief Financial Officer

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. March 30, 2015

Personally appeared the above-named Eric Boucher, Chief Financial Officer of Avesta Housing Development Corporation, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Avesta Housing Development Corporation.

Before me,

_____
~~Notary Public~~/Attorney-at-Law
Print name: Amy N. Dennis
My commission expires: N/A

EXHIBIT A

Parcel 1 - 77 Pine Street, "School Lot":

A certain lot or parcel of land and the buildings thereon, situated on West and Pine Streets in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the southerly sideline of West Street and the northwesterly sideline of Pine Street;

Thence S 54°49'50" W along said northwesterly sideline of Pine Street 175.00 feet to a railroad spike in a common passageway;

Thence N 35°10'10" W within said common passageway 113.98 feet to a railroad spike;

Thence S 54°49'50" W within said common passageway 16.83 feet to a railroad spike;

Thence N 18°25'00" E within said common passageway 98.91 feet to a railroad spike and said southerly sideline of West Street;

Thence S 71°35'00" E along said southerly sideline of West Street 188.38 feet to an angle point;

Thence S 36°17'00" E along said southerly sideline of West Street 21.10 feet to the point of beginning.

All bearings are magnetic in the year 1976.

Together with the right in common to use common passageways from West Street and from Pine Street as described in a deed to the City of Portland dated August 14, 1878 and recorded in the Cumberland County Registry of Deeds in Book 451, Page 345, including, without limitation, the right to pass and to repass to and from said premises from and to Pine Street and West Street.

Parcel 2 - 218 State Street:

A certain lot or parcel of land and the buildings thereon, situated at Deering and State Streets in the City of Portland, County of Cumberland, and State of Maine, bounded and described as follows:

Beginning at the intersection of the southerly sideline of Deering Street and the westerly sideline of State Street at an iron pipe;

Thence S 01°50'00" W along the westerly sideline of State Street 97.82 feet to an iron pipe and land now or formerly of LF Associates LLC described in a deed recorded in the Cumberland County Registry of Deeds in Book 25869, Page 326;

Thence N 85°47'00" W along said land now or formerly of LF Associates LLC 100.00 feet to a point marking the southwesterly corner of the within described premises and the southeasterly corner of land now or formerly of LCB38, LLC described in a deed recorded in said Registry of Deeds in Book 28686, Page 115;

Thence N 01°50'00" E along land now or formerly of said LCB38, LLC 100.00 feet to said southerly sideline of Deering Street and a drill hole;

Thence S 84°32'00" E along said southerly sideline of Deering Street 100.12 feet to the point of beginning.

All bearings are magnetic in the year 1976.

O:\MAS\99475 Avesta\Butler Payson Apartments\Transfer Docs\Quitclaim Deed.docx

Received
Recorded Register of Deeds
Mar 31,2015 10:24:12A
Cumberland County
Nancy A. Lane

QUITCLAIM DEED WITH COVENANT

KNOW ALL PEOPLE BY THESE PRESENTS, that Butler/Payson Company Limited Partnership, a Maine limited partnership, having an office c/o Keen Development Corporation, 6 Bennett St, Cambridge, Massachusetts 02138, for consideration paid by Avesta Housing Development Corporation, a Maine non-profit corporation, having an office at 307 Cumberland Avenue, Portland, Maine, the receipt and sufficiency of which is hereby acknowledged, does grant, bargain, sell, convey, set over and transfer unto said Avesta Housing Development Corporation, its successors and assigns forever, three parcels of land and the buildings thereon, situated in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Parcel 1:

A certain lot or parcel of land and the buildings thereon, situated on West and Pine Streets in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the Southerly sideline of West Street and the Northwesterly sideline of Pine Street;

Thence S 54°49'50" W along said Northwesterly sideline of Pine Street 175.00 feet to a railroad spike in a common passageway;

Thence N 35°10'10" W within said common passageway 113.98 feet to a railroad spike;

Thence S 54°49'50" W within said common passageway 16.83 feet to a railroad spike;

Thence N 18°25'00" E within said common passageway 98.91 feet to a railroad spike and said Southerly sideline of West Street;

Thence S 71°35'00" E along said Southerly sideline of West Street 188.38 feet to an angle point;

Thence S 36°17'00" E along said Southerly sideline of West Street 21.10 feet to the point of beginning;

All bearings are magnetic in the year 1976.

The above-described premises are subject to common passageways from West Street and from Pine Street as described in a deed to the City of Portland dated August 14, 1878 and recorded in the Cumberland County Registry of Deeds in Book 451, Page 345.

Together with the right in common to use said common passageways including, without limitation, the right to pass and to repass to and from said premises from and to Pine Street and West Street.

Parcel 2:

A certain lot or parcel of land situated on the Easterly side of Carleton Street in the City of Portland, County of Cumberland, and State of Maine bounded and described as follows:

MAINE REAL ESTATE TAX PAID

Beginning at an iron pipe on the Easterly sideline of said Carleton Street at the Southwesterly corner of land now or formerly of Irving McCalmon, said iron pipe also being 100.00 feet distant as measured along said Easterly sideline of said Carleton Street on a bearing of S 18°38'00" W from the intersection of the Southerly sideline of West Street and said Easterly sideline of Carleton Street;

Thence from said point of beginning S 71°35'00" E along said Irving McCalmon land, land now or formerly of Lund Development Company, and land now or formerly of National Casket Company Incorporated 221.34 feet to a common passageway and an iron pipe;

Thence S 18°25'00" W along said common passageway 12.55 feet to an iron pipe;

Thence S 54°39'40" W along a common passageway 159.70 feet to land now or formerly of Wesley A. Kinney et al and an iron pipe;

Thence N 71°37' 10" W along said Wesley A. Kinney et al land 127.45 feet to said Easterly sideline of Carleton Street and a drill hole;

Thence N 18°38'00" E along said Easterly sideline of Carleton Street 141.43 feet to the point of beginning;

All bearings are magnetic in the year 1976.

Together with the right in common to use the common passageways referred to in Parcel 1 above, including, without limitation, the right to pass and repass to and from said premises from and to Pine Street and West Street.

Parcel 3:

A certain lot or parcel of land and the buildings thereon, situated at Deering and State Streets in the City of Portland, County of Cumberland, and State of Maine, bounded and described as follows:

Beginning at the intersection of the Southerly sideline of Deering Street and the Westerly sideline of State Street at an iron pipe;

Thence S 01°50'00" W along the Westerly sideline of State Street 97.82 feet to an iron pipe and land now or formerly of Masada Trust;

Thence N 85°47'00" W along said land now or formerly of Masada Trust 100.00 feet to land formerly of Eben Steele;

Thence N 01°50'00" E along land now or formerly of Donald F. Files 100.00 feet to said Southerly sideline of Deering Street and a drill hole;

Thence S 84°32'00" E along said Southerly sideline of Deering Street 100.12 feet to the point of beginning;

All bearings are magnetic in the year 1976.

The above premises being the premises conveyed to Butler/Payson Company Limited Partnership by deeds recorded in Cumberland County Registry of Deeds at Book 3979, Page 343 and Book 4034, Page 137. See also confirmatory deed recorded in Cumberland County Registry of Deeds at Book 4005, Page 279.

To have and to hold the same together with all the privileges and appurtenances thereunto belonging to the said Butler/Payson Company Limited Partnership, its successors and assigns forever.

And said Butler/Payson Company Limited Partnership does covenant with the said grantee, its successors and assigns, that it will warrant and forever defend the premises to the said grantee, its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through or under it.

[signature page follows]

IN WITNESS WHEREOF, this Deed has been duly signed and sealed by the Butler/Payson Company Limited Partnership as of this 31st day of October, 2011.

Butler Payson Company Limited Partnership

By: KAM LLC, its General Partner

By: the Estate of Robert H. Kuehn, Jr., its Manager

By: _____
Daniel A. Taylor, as Executor and not individually

COMMONWEALTH OF MASSACHUSETTS
Suffolk, SS. October 21, 2011

Personally appeared the above-named Daniel A. Taylor, Executor of the Estate of Robert H. Kuehn, Jr., Manager of KAM LLC, General Partner of Butler/Payson Company Limited Partnership as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company and limited partnership.

Before me, _____
Notary Public/Attorney-at-Law

LINDA A. MESSICK
Notary Public
Commonwealth of Massachusetts
My Commission Expires
February 20, 2015

SEAL

Received
Recorded Register of Deeds
Oct 31,2011 01:21:11P
Cumberland County
Pamela E. Lovley

AGREEMENT

THIS AGREEMENT made this ____ day of _____, 2015 by and between AVESTA BUTLER PAYSON LP, a Maine limited partnership with a place of business and mailing address of 307 Cumberland Avenue, Portland, Maine 04101 ("BP") and AVESTA HOUSING DEVELOPMENT CORPORATION, a Maine nonprofit corporation with a place of business and mailing address of 307 Cumberland Avenue, Portland, Maine 04101 ("Avesta")

W I T N E S S E T H:

WHEREAS, BP owns a certain lot or parcel of land at 77 Pine Street in Portland, Cumberland County, Maine, more particularly described in a deed to BP (the "BP Deed") recorded in the Cumberland County Registry of Deeds in Book 32169, Page 143 (the "BP Land"); and

WHEREAS, Avesta holds title to adjoining land located on Carleton Street in said Portland, described as Parcel 2 in a deed recorded in the Cumberland County Registry of Deeds in Book 29079, Page 279 (the "Avesta Land"); and

WHEREAS, the BP Land is benefited by appurtenant easements for vehicular and pedestrian access over certain "common passageways" as described in the BP Deed (the "Common Passageways"); and

WHEREAS, Avesta plans to develop the Avesta Land as affordable rental housing and has requested that BP enter into this Agreement to provide assurances that the Common Passageways will not be obstructed;

NOW THEREFORE, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in consideration of the mutual promises and covenants set forth herein, the parties agree as follows:

1. Non-Obstruction of Common Passageways. BP shall take reasonable commercial measures to keep the Common Passageways free of obstruction at all times, and to that end, in the event there occurs any such obstruction, BP shall take reasonable commercial enforcement measures to enforce its rights as an easement holder with respect to the Common Passageways and to cause any such obstruction to be removed.

2. No Objection to Use. BP agrees it shall not object to the use of, or attempt to prevent the use of, the Common Passageways by City of Portland Public safety vehicles accessing the Avesta Land for any legitimate public purpose.

3. General. This Agreement shall be biding upon and shall inure to the benefit of the parties and their respective successors and assigns. This Agreement may not be modified except in a written instrument executed by both parties and recorded in the Cumberland County Registry of Deeds. If any provision of this Cross Agreement is determined to be invalid or

unenforceable under any law or regulation, the validity or enforceability of any other provision of this Cross Agreement shall not be affected, and in lieu of such invalid or unenforceable provision there shall be added automatically, as part of this Cross Agreement, a provision as similar in terms as may be valid and enforceable, if possible.

IN WITNESS WHEREOF, the parties have caused this instrument to be signed and sealed as of the day and year first written above.

WITNESS:

AVESTA HOUSING DEVELOPMENT CORPORATION

_____

By:_____
Dana Totman, President

AVESTA BUTLER PAYSON LP

BY: Pinecone Housing Corporation, its General Partner

_____

By:_____
Dana Totman, President

STATE OF MAINE
County of Cumberland, ss.

_____, 2015

Then personally appeared the above-named Dana Totman, President of Avesta Housing Development Corporation, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity and the free act and deed of said corporation.

Before me,

_____
Notary Public/Attorney-at-Law
Print Name:_____
My Commission Expires: _____

STATE OF MAINE
County of Cumberland, ss. _____, 2015

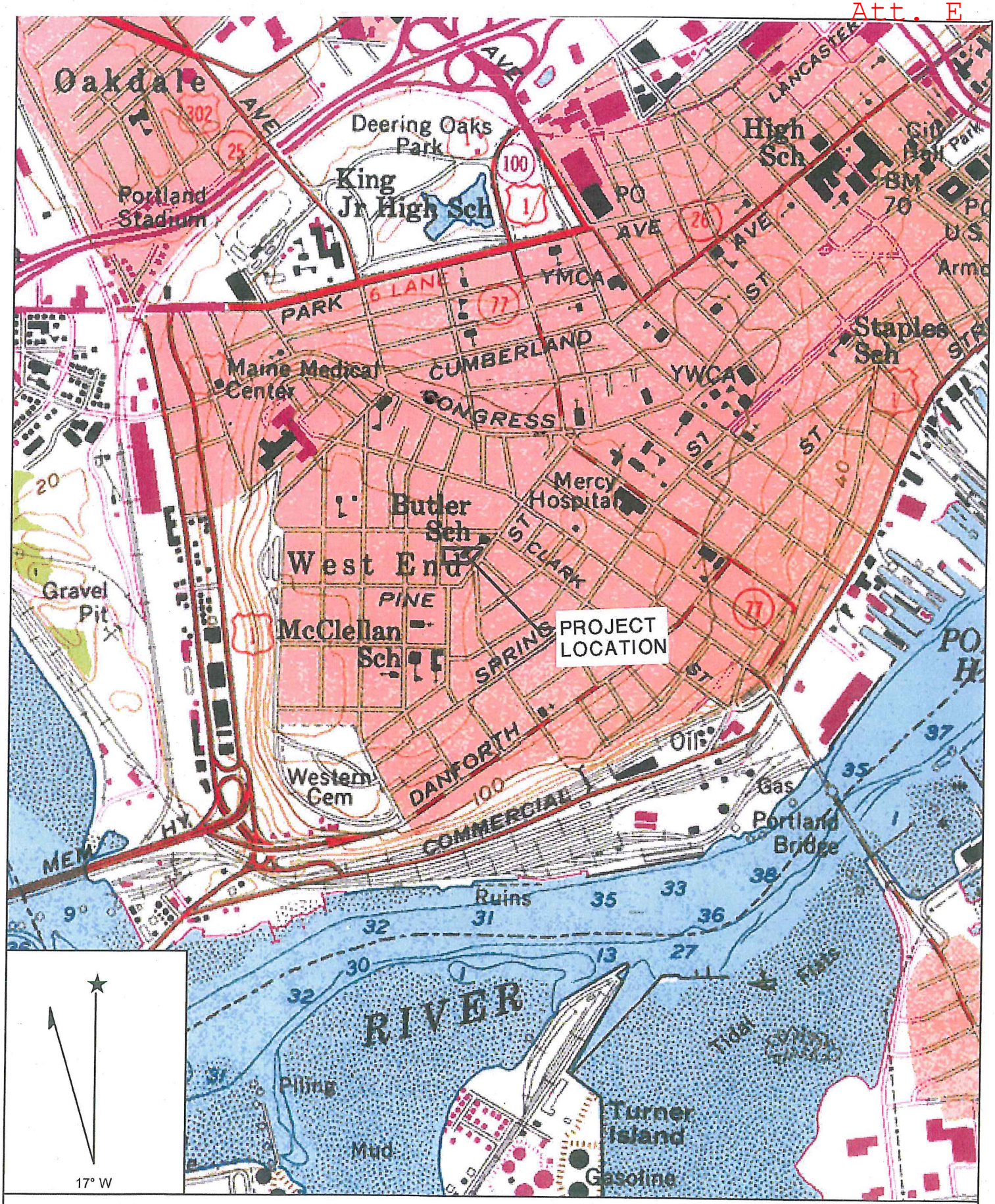
Then personally appeared the above-named Dana Totman, President of Pinecone Housing Corporation, General Partner of Avesta Butler Payson LP, and acknowledged the foregoing to be his free act and deed in his said capacity and the free act and deed of said limited partnership and corporation.

Before me,

_____
Notary Public/Attorney-at-Law
Print Name:_____
My Commission Expires: _____

O:\MAS\99475 Avesta\Carleton Street\Title\Agreement re passageways.docx

Att. E



Name: PORTLAND WEST
Date: 4/14/2015
Scale: 1 inch equals 1000 feet

Location: 043° 38' 56.86" N 070° 16' 10.32" W
Caption: 15108-CARLETON STREET

Copyright (C) 2002, Maptech, Inc.

Att. F

Gorham
SAVINGS BANK

Avesta Housing
307 Cumberland Avenue
Portland, ME 04101

City of Portland
389 Congress Street
Portland, ME 04101

April 28, 2015

RE: City of Portland – 17 Carleton Street

Gentlemen:

One behalf of Gorham Savings Bank, I am pleased to provide this letter in support of Avesta Housing for the above referenced project. Based on our experience with Avesta Housing for similar affordable housing development projects and a review of the financial elements of the proposed for the 17 Carleton Street low income housing project, we believe that the applicant has the ability to finance projected costs and develop a project of similar type and scale from a fiscal perspective.

Gorham Savings Bank has helped Avesta Housing complete successful affordable housing projects including Avesta Munjoy Commons in Portland, Avesta Cousens in Kennebunk, Avesta Cascade Brook in Saco, and Avesta Stonecrest in Standish. The Bank has successfully sponsored Maine Housing and Federal Home Loan Bank application for equity grants for Avesta Housing and the Bank has the capability to provide construction and tax increment credit financing. Avesta Housing has demonstrated the ability to secure development capital through low income housing tax credit program and other public and private sector sources and could, we believe, secure approximately $6.5 million needed to complete this project.

While this letter of support is not a commitment to lend, Gorham Savings Bank would welcome the opportunity to be a resource to Avesta Housing for financing and sponsoring any equity awards necessary in connection with this project. Our experience is that Avesta Housing is, in many ways, the premier affordable housing development organization in Maine with a solid record of supporting healthy and inclusive neighborhoods and helping to build strong and sustainable communities.

Sincerely,

Matthew W. Early
Senior Vice President

PINKHAM & GREER CIVIL ENGINEERS

FIRM

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.

PINKHAM & GREER
CIVIL ENGINEERS

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.

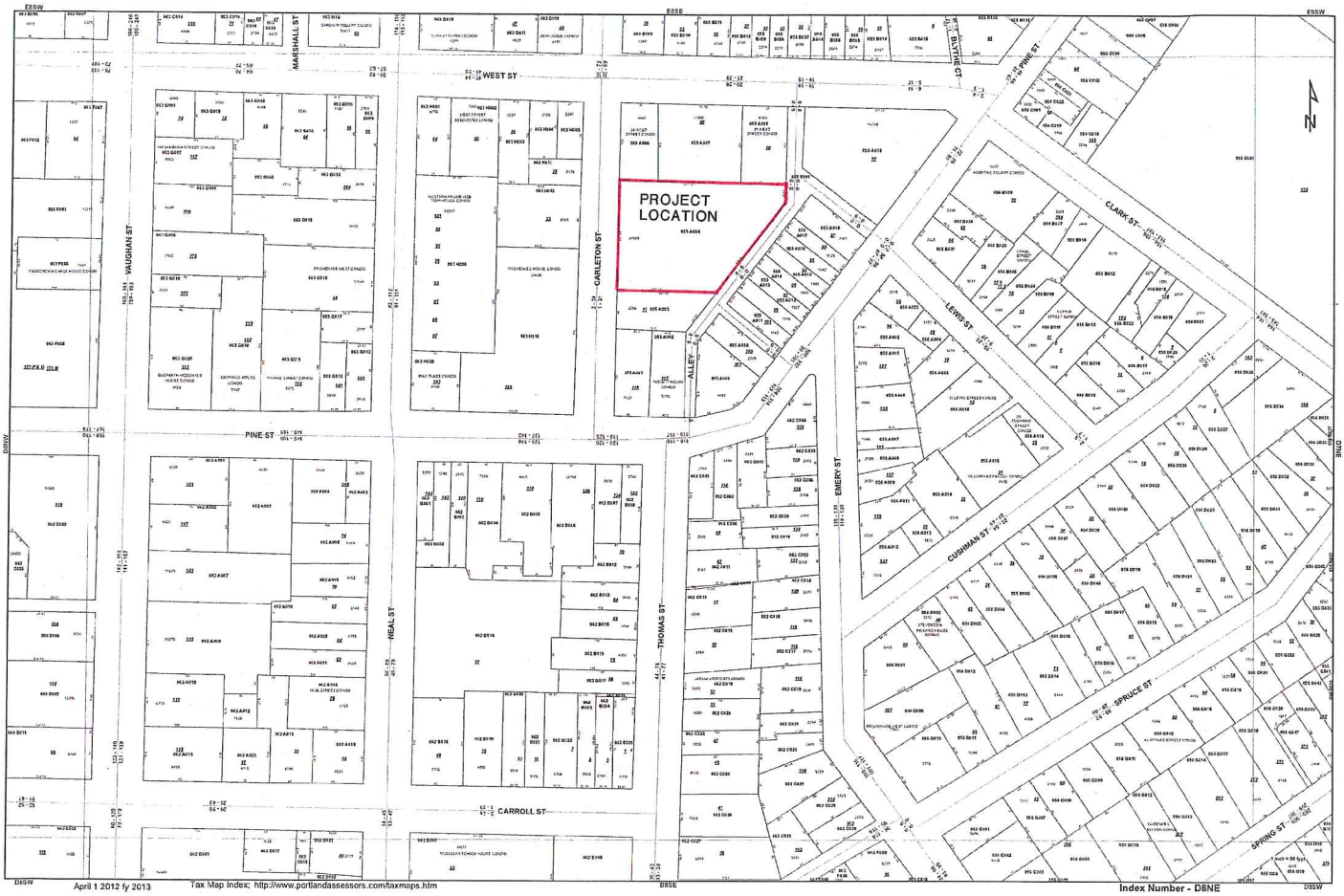
EDUCATION

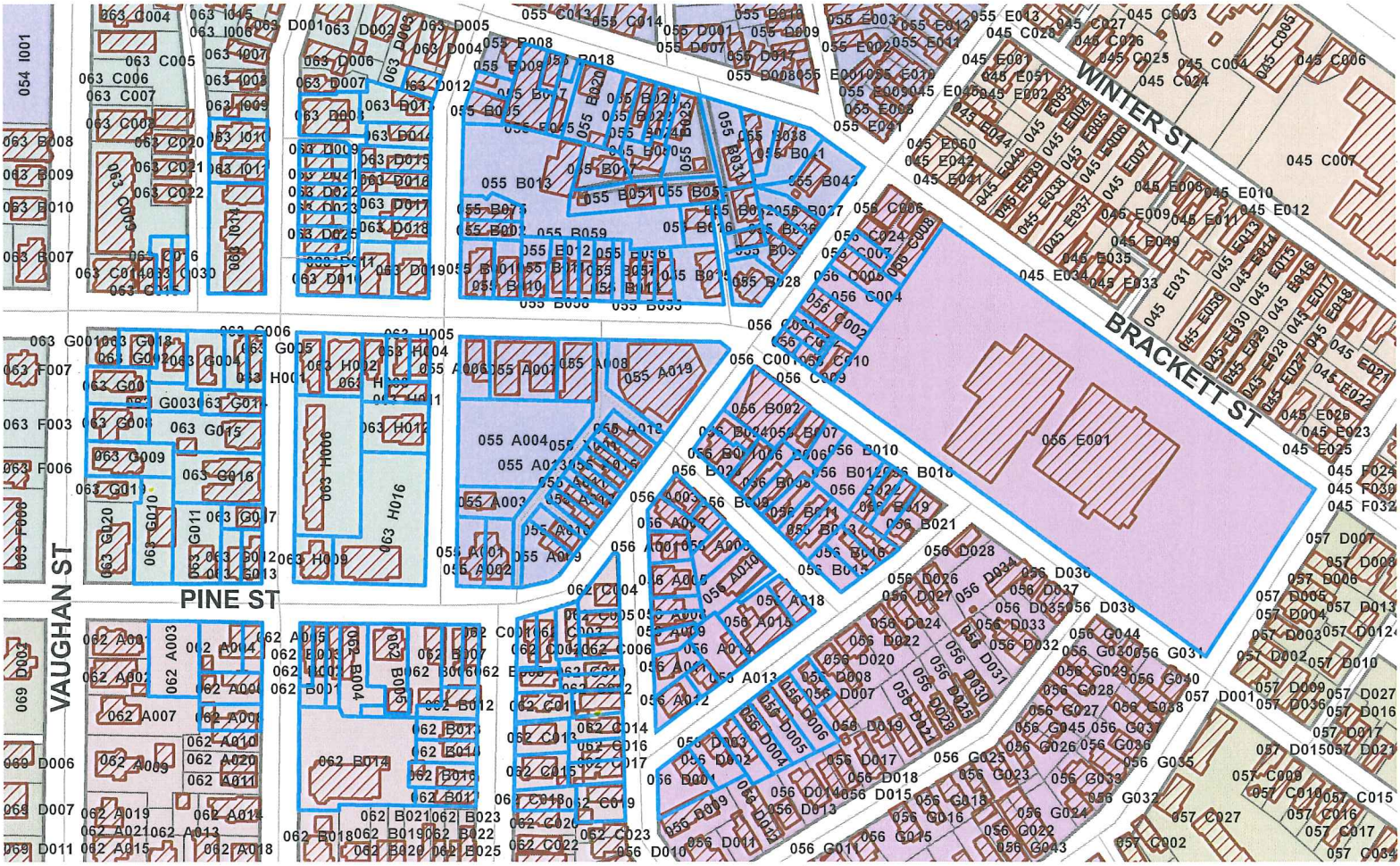
University of Maine, Orono, Maine
Bachelor of Science, Civil Engineering, 1976

REGISTRATION AND LICENSES

Professional Engineer licensed in Maine, Massachusetts, Connecticut, and New Hampshire

Att. H


PROJECT LOCATION
WEST ST
PINE ST
CARROLL ST
VAUGHAN ST
MARSHALL ST
CARLETON ST
NEAL ST
THOMAS ST
EMERY ST
CUSHMAN ST
LEWIS ST
CLARK ST
SPRUCE ST
SPRING ST
BLYTHE CT
ALLEY
E85W
E85E
D8SW
D8SE
D8NE
April 1 2012 fy 2013
Tax Map Index; http://www.portlandassessors.com/taxmaps.htm
Index Number - D8NE


WINTER ST
BRACKETT ST
PINE ST
VAUGHAN ST

Att. I

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

File: 15108

April 14, 2015

Ms. Glissen Havu
Portland Water District
PO Box 3553
Portland, ME 04104-3553

RE: 17 CARLETON STREET, PORTLAND

Dear Glissen,

We are in the process of designing a 33-37 unit building at 17 Carleton Street. Attached is a sketch plan showing one possible design. May we get copies of anything you may have about existing service in Carleton Street?

We are requesting an Ability to Serve letter to comply with the City's Planning requirements. We expect flows to be in the 3,000 gallons per day range. The building will also have a full sprinkler system for fire protection.

If you could provide a letter, we would be appreciative.

Sincerely,

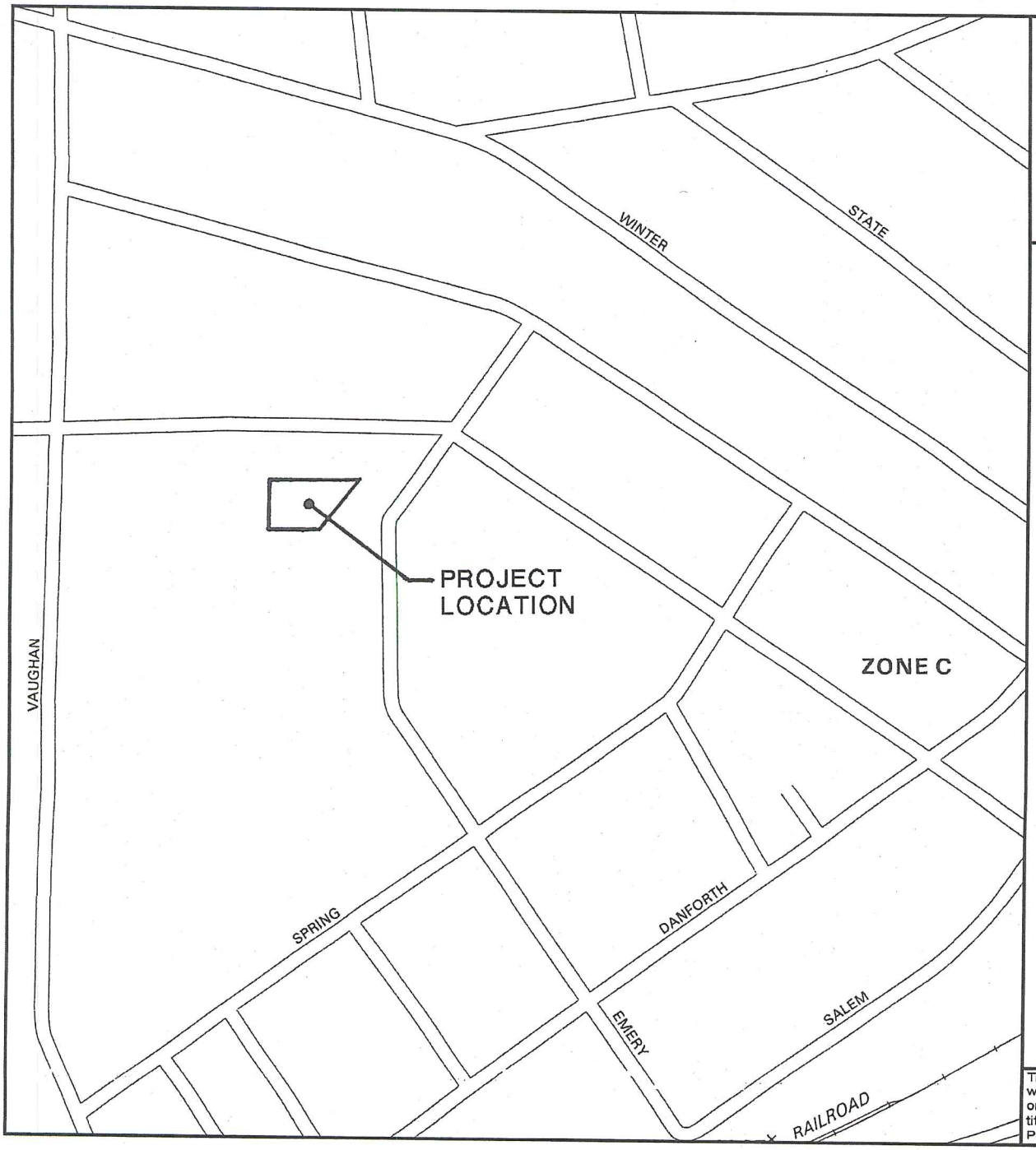
PINKHAM & GREER,
CIVIL ENGINEERS

Thomas S. Greer, P.E.

cc: (1) File

enclosures

TSG/rjs



APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

EFFECTIVE DATE:
JULY 17, 1986

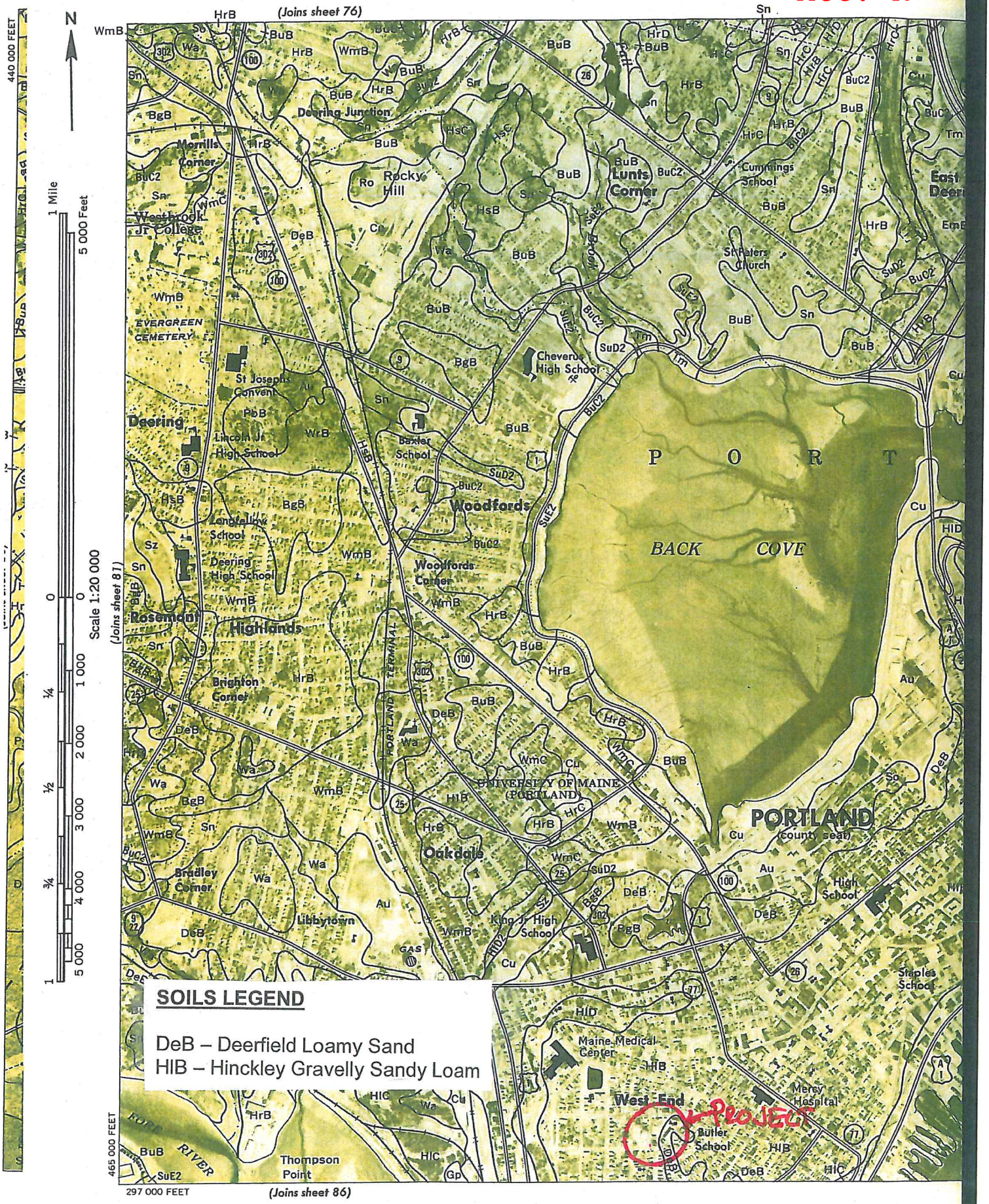
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Att. J

CUMBERLAND COUNTY,

Att. K



Att. L

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Date: Aoril 14, 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: 17 Carleton Street

Chart Block Lot Number: 55 / A / 4

Proposed Use: Apartment Building & Parking Lot

Previous Use: Parking Lot

Existing Sanitary Flows: 0 GPD

Existing Process Flows: 0 GPD

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

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: Helen Donaldson Phone: 207.874.8723

Owner/Developer Name: Avesta Butler Payson Pl (Drew Wing)

Owner/Developer Address: 307 Cumberland Avenue, Portland, ME 04101

Phone: 207.245.3340 Fax: E-mail: dwing@avestahousing.org

Engineering Consultant Name: Pinkham & Greer Civil Engineers (Thomas S. Greer, P.E.)

Engineering Consultant Address: 28 Vannah Avenue, Portland, ME 04103

Phone: 207.781.5242 Fax: 207.781.4245 E-mail: tgreer@pinkhamandgreer.com

(Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review)

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 3,000 GPD

Peaking Factor/ Peak Times: Typical Residential am & pm peaks

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)*

Based on EPA Standards water use per person 60 gpd / criteria.

(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: Not Required

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: 0 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

This is a standard residential building with a mix of 1 and 2 bedroom apartments. The total number of units will be between 33 and 37.

Att. M

Unitil
natural gas

April 16, 2015

Thomas Greer
Pinkham & Greer Civil Engineers
28 Vannah Avenue
Portland, ME 04103

Re: 17 Carleton Street, Portland, ME

Dear Mr. Greer:

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

Unitil has natural gas in the vicinity of this project to provide additional gas service. The evaluation to complete the design, costs and determining what the customer contribution may be, if any, can be completed once Unitil receives the completed design and load information. Unitil welcomes the opportunity for further discussions regarding this project.

If you have any further questions or require additional information, please contact me directly at (207) 541-2536 or at Harmon@unitil.com.

Sincerely,

Bridget L. Harmon
Business Development Representative
Unitil Corporation
(o) 207-541-2536 (f) 207-541-2586

17 Carleton Street
File: 15108

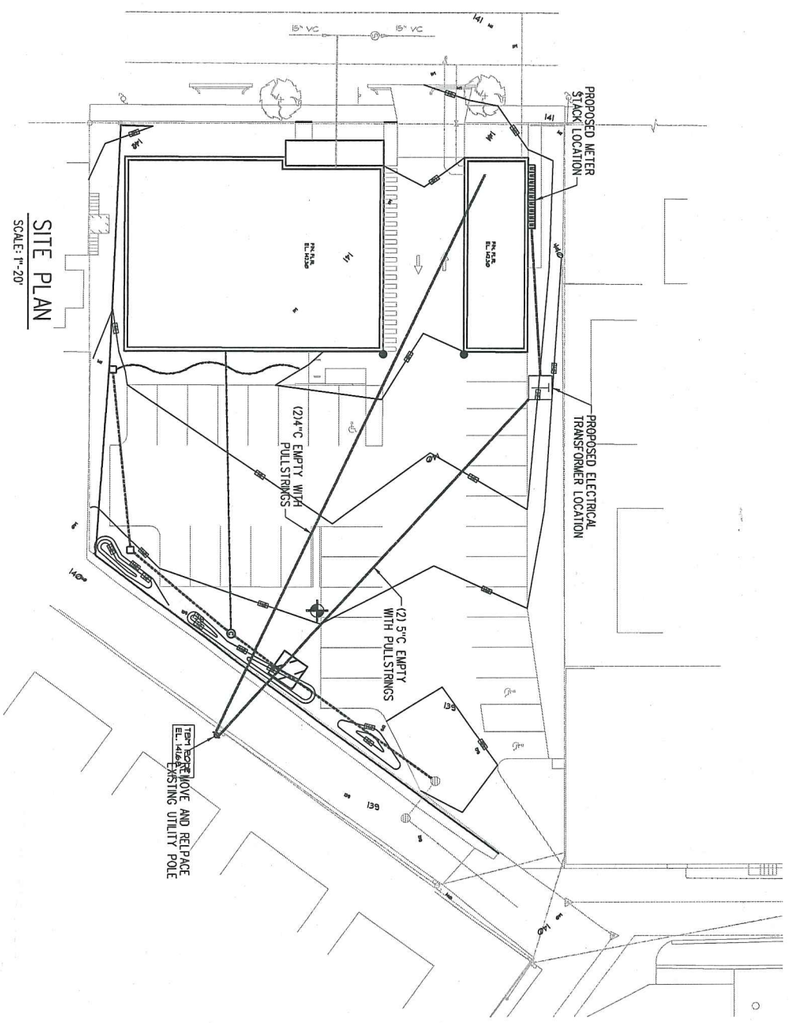
Construction Management Plan

This site is unique in that it has a significant area behind the building to stage the construction. We expect the contractor trailers, dumpsters, and construction parking to utilize this space. Some temporary short term parking will occur on Carleton Street. The current residents using the site will have to find parking elsewhere. Once constructed some of the new spaces may become available for lease.

The one way traffic on Carleton Street should be available throughout the project. Signs at each end of the street will be placed noting the sidewalk will be out of service while it is being reconstructed.

Most construction material deliveries will be made from Carleton Street. The use of the common passage way will be used as the need arises.

The existing chainlink fence around the site will be used to control access to the site. Additional temporary fencing will be used along Carleton Street. Limited access to the construction will be enforced.



SITE PLAN

SCALE: 1"-20'

PROGRESS PRINT
NOT FOR CONSTRUCTION

Date:	Scale:	Revisions:	Project:	Architect:	Consulting Engineer:	Prepared For:
	As Noted		CARLETON STREET SENIOR HOUSING 17 CARLETON St, PORTLAND, MAINE	ARCHETYPE architects 48 Union Wharf Portland, Maine 04101 (207) 772-6022 Fax (207) 772-4056	BENNETT ENGINEERING MECHANICAL • ELECTRICAL (207) 865-9405	AVESTA BUTLER PAYSON PL. 307 CUMBERLAND AVE PORTLAND, ME. 04101

Att. O

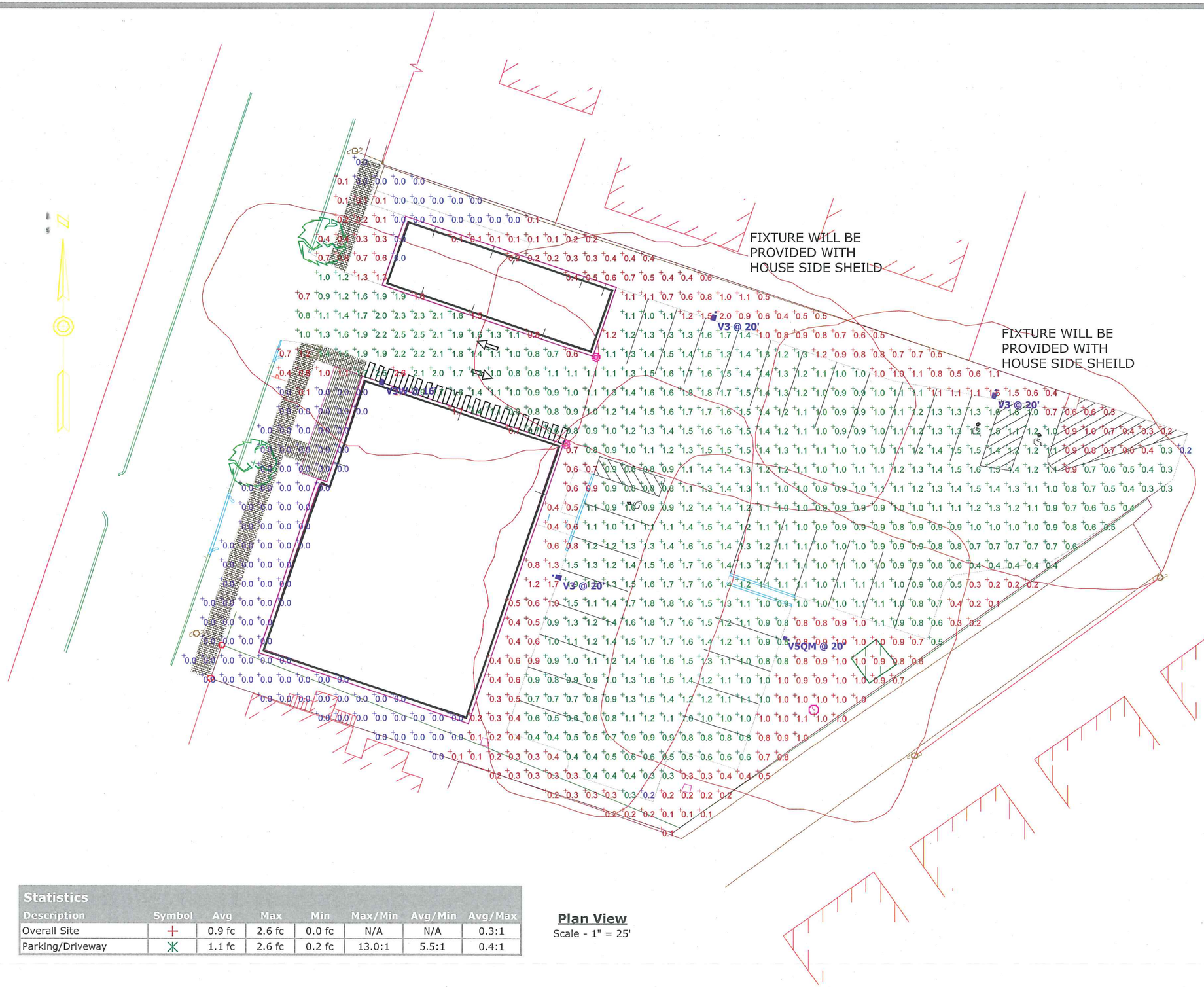
Luminaire Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	V3	3	BEACON PRODUCTS	22NB-50-T3-5K		22 NICHIA LEDS	1	VP-S-22NB-50-T3.ies	4710	1	50
	V5QM	1	BEACON PRODUCTS	22NB-500-T5SM		22 NICHIA LEDS	1	VP-S-22NB-50-T5QM.ies	4923	1	50
	V3W	1	BEACON PRODUCTS	22NB-50-T3-5K		22 NICHIA LEDS	1	VP-S-22NB-50-T3.ies	4710	1	50

VISUAL

Carleton St Senior Housing
17 Carleton St.
Portland, ME

Designer
SAJ
Date
5/5/2015
Scale
Not to Scale
Drawing No.
E0
Summary



Statistics							
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
Overall Site	+	0.9 fc	2.6 fc	0.0 fc	N/A	N/A	0.3:1
Parking/Driveway	✳	1.1 fc	2.6 fc	0.2 fc	13.0:1	5.5:1	0.4:1

Plan View
Scale - 1" = 25'

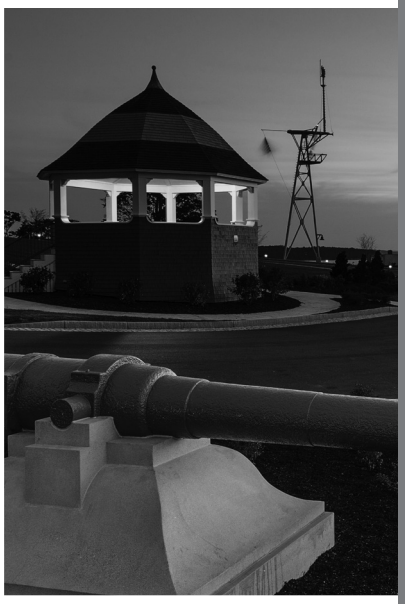
VISUAL

Carleton St Senior Housing
17 Carleton St.
Portland, ME

Designer
SAJ
Date
5/5/2015
Scale
Not to Scale
Drawing No.
E0
Summary

Att. P

Relationships.
Responsiveness.
Results.



Traffic Impact and Parking Study
Carleton Street Housing Project
Portland, Maine

PREPARED FOR:
Avesta Housing

June 2015

SUBMITTED BY:
Gorrill Palmer
P.O. Box 1237
15 Shaker Road
Gray, ME 04039
207.657.6910

Traffic Impact and Parking Study
Carleton Street Housing Project
Portland, Maine

I. Introduction

The purpose of this Study is to assess the traffic impact of the proposed senior housing development on the one-way Carleton Street in Portland, Maine and to estimate the parking demand forecast to be required for the project. This project will consist of 37 affordable housing units. The site is currently accessed by two driveways on the one-way Carleton Street. When it is completed it will be accessed by one driveway on Carleton Street.

The attached Figure 1 shows the approximate location of the site.

II. Existing Traffic Volumes

Gorrill Palmer (GP) completed morning and afternoon turning movement counts at the intersections of West Street with Carleton Street and Pine Street with Carleton Street. The turning movement counts were collected on Monday April 27, 2015 from 3:30-6:00 PM and Tuesday April 28, 2015 from 7:00-9:00 AM. The results of the counts are shown on the attached Figure 2.

III. Proposed uses in the Vicinity of the Proposed Development

Approved projects that are not yet opened as well as projects for which applications have been filed are required to be included in the predevelopment volumes. Based on conversations with Mr. Tom Errico, City of Portland Traffic Peer Reviewer, there are no significant projects in the immediate area that need to be included in the background traffic.

IV. Pre-Development Traffic Volumes

The traffic volumes shown in Figure 2 were counted in April 2015, and have been seasonally adjusted to approximate the 30th highest hour of the year using the weekly group mean factors published by the MaineDOT. This seasonal adjustment increases the volumes to those that may be experienced during the peak summer months. The seasonal adjustment resulted in an increase of eight percent for the morning and twelve percent for the afternoon.

In addition to seasonally adjusting the traffic volumes, they are also increased by a yearly growth to approximate the build out year of the project. The proposed project is anticipated to be occupied in 2016. MaineDOT traffic counts in the area show an average growth rate of approximately 2.3%.

Traffic volumes shown in Figure 3 reflect both the seasonal and annual adjustments to yield the 2016 Predevelopment Design Hour Volumes (DHV).

V. Trip Generation

A total of 37 affordable housing units are proposed.

The Institute of Transportation Engineers' publication *Trip Generation Manual, 9th Edition*, Land Use Code (LUC) 252 – Adult Senior Housing-Attached was utilized to forecast trip generation. The following summarizes the forecast trip generation for the proposed development:

- AM Peak Hour of Adjacent Street Traffic = 8 Trip Ends (3 In / 5 Out)
- PM Peak Hour of Adjacent Street Traffic = 10 Trip Ends (5 In / 5 Out)

A trip end is defined as a trip into or out of the site; thus a round trip is equal to two trip ends. The detailed trip generation calculations are attached.

This level of trip generation does not meet the threshold for filing a Traffic Movement Permit with the MaineDOT since it will generate less than 99 trip ends during the peak hours.

VI. Trip Composition and Assignment

We have assumed that all the trips to and from the site are primary trips made for the sole purpose of going to and from the site. The trip assignment has been based on the traffic counts completed at the study area intersections. The trip assignment is shown on the attached Figure 4.

VII. Post-Development Traffic Volumes

The pre-development traffic volumes shown in Figure 3 have been combined with the traffic forecast for the expansion shown on Figure 4 to yield the Post-development DHV shown on the attached Figure 5.

VIII. Capacity Analysis

GP completed capacity analyses for both the Carleton Street / West Street and the Carleton Street / Pine Street unsignalized intersections. The analysis was completed with Synchro/SimTraffic analysis software. Levels of service rankings are similar to the academic ranking system where an 'A' is very good with little control delay and an 'F' represents very poor conditions. At an unsignalized intersection, if the level of service falls below a 'D', an evaluation should be made to determine if mitigation is warranted.

The following table summarized the relationship between control delay and level of service:

Level of Service Criteria for Unsignalized Intersections

Level of Service	**Control Delay per Vehicle (sec)**
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

The results of the capacity analysis are summarized as follows. The detailed analysis is attached.

Level of Service Summary

Approach	**Level of Service**			
	AM Pre	**AM Post**	**PM Pre**	**PM Post**
Carleton / West				
West - WB	A	A	A	A
West - EB	A	A	A	A
Carleton - NB	A	A	A	A
Carleton / Pine				
Pine - WB	A	A	A	A
Pine - EB	A	A	A	A

IX. Sight Line Evaluation

Both the City and Maine Department of Transportation have guidelines for sight distances. The City's sight distance criteria is the same as the MaineDOT. The basic sight line standards are as follows:

Standards for Sight Distance

Posted Speed (mph)	MaineDOT Sight Distance	City of Portland Sight Distance
25	200	200
30	250	250
35	305	305
40	360	360
45	425	425

The MaineDOT and the City measure sight distance using the same methodology. GP has evaluated the available sight lines at the intersection in accordance with MaineDOT / City standards.

The evaluation method is as follows:

Driveway observation point: 10 feet off edge of shoulder
Height of eye at driveway: 3 ½ feet above ground
Height of approaching vehicle: 4 ¼ feet above ground

All speed limits in the immediate area are posted 25 mph or not posted and assumed to be 25 mph. The following table summarizes the measured sight distances.

Sight Distance Summary

Approach	Sight Distance			
	Looking Left (ft)	Looking Right (ft)	MaineDOT Required (ft)	Portland Required (ft)
Exiting driveway onto Carleton*	75	N/A	200	200
Exiting driveway onto West	100	250	200	200
Exiting driveway onto Pine	250	+250	200	200

*Carleton Street is one-way

As summarized in the table, most of the sight distances meet or exceed the requirements. The sight distances exiting the site onto Carleton Street looking left and exiting onto West Street looking left are less than the required due to on-street parked cars. This is common on a downtown street. It is our opinion, that the required sight distance could be achieved by restricting parked vehicles adjacent to the driveways as a driver looks left exiting both Carleton Street and onto West Street. We understand that parking is a sensitive issue and the decision to restrict on-street parking to obtain the required sight distance is the jurisdiction of the City. GP also recommends that all plantings that have the potential to block sight distances not exceed 2 feet in height and be maintained at or below that height. In addition, signage

should be located such that it does not interfere with sight lines. We also recommend that during construction, if heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

X. Crash Summary Data

GP obtained the crash data from MaineDOT for the period of 2012-2014, the most recent period available at the time this study was prepared (attached).

In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define a High Crash Location (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual crash rate to the rate for similar intersections in the state. A CRF of less than 1.00 indicates a rate of less than average) **and:**

2. A minimum of eight crashes over the same three-year period.

Based on the crash data provided by MaineDOT, there are no high crash locations within the immediate vicinity.

XI. Parking Demand

Our office reviewed parking data from other projects we have on file in our office in estimating an appropriate parking ratio for this project. That data is summarized as follows:

- As part of studies for similar projects in the past, our office examined the parking occupancy of apartment buildings in downtown Portland with dedicated parking lots, either behind or within the building as part of another application. Our office completed parking occupancy counts from 10-11 PM (within the peak period, based on ITE and ULI data) at 53 Danforth Street, 645 Congress Street, and Walker Terrace (at the corner of Congress and Walker Street) on Tuesday, October 26, 2010.

  In addition, we referenced the parking supply for Franklin Towers and Oak Street Lofts. Franklin Towers has 200 units, and based upon aerial data, a parking supply of 58 spaces. Oak Street Lofts has 37 units, and 16 parking spaces, although it should be noted that half of these spaces (eight) are for motorcycles. For the purposes of this letter, it is assumed that peak demand at both of these facilities are at 100 percent occupancy.

Based on the occupancy counts, the following parking demand was determined:

53 Danforth:	43 units, 29 spaces occupied	=	0.67 spaces/unit
645 Congress:	56 units, 28 spaces occupied	=	0.50 spaces/unit
Walker Terrace:	40 units, 20 spaces occupied	=	0.50 spaces/unit
Oak Street Lofts:	37 units, 16 spaces occupied *	=	0.43 spaces/unit
Franklin Towers:	200 units, 58 spaces occupied **	=	0.29 spaces/unit
	AVERAGE:		0.48 spaces/unit

***Assumes 100% occupancy at Oak Street.**

**** Assumes 58 spaces based upon aerial imagery, and 100% occupancy at Franklin Towers.**

This information indicates that within the Portland Peninsula, parking demand at similar facilities is an average of 0.48 spaces per apartment with a high of 0.67. Applying these rates to the proposed 37 units, yields an average forecast parking demand of 18 parking spaces and a high of 25 spaces, both of which are well below the proposed 31 spaces (includes 7 handicap spaces). In addition, the facility is planning to be set up with ride share, which will further reduce parking demand by approximately 7 parking spaces, lowering the demand to 11 to 18 parking spaces.

XII. Conclusions / Recommendations

The following is a summary of the Conclusions / Recommendations:

1. The proposed expansion project is forecast to generate 8 trip ends and 10 trip ends during the AM and PM peak hours respectively. This level of trip generation does not require a MaineDOT traffic movement permit.

2. The capacity analysis shows the existing unsignalized intersections are forecast to operate at acceptable levels of service with the proposed project having minimal negative impact.

3. Most sight distances at the immediate access to the site meet or exceed the sight distance requirements. However; two of the sight distances are less than required due to on-street parking.

4. The MaineDOT crash data indicates there are no high crash locations in the immediate area.

5. Parking demand for the site is forecast at approximately 11 to 18 parking spaces, well below the proposed 31 parking spaces.

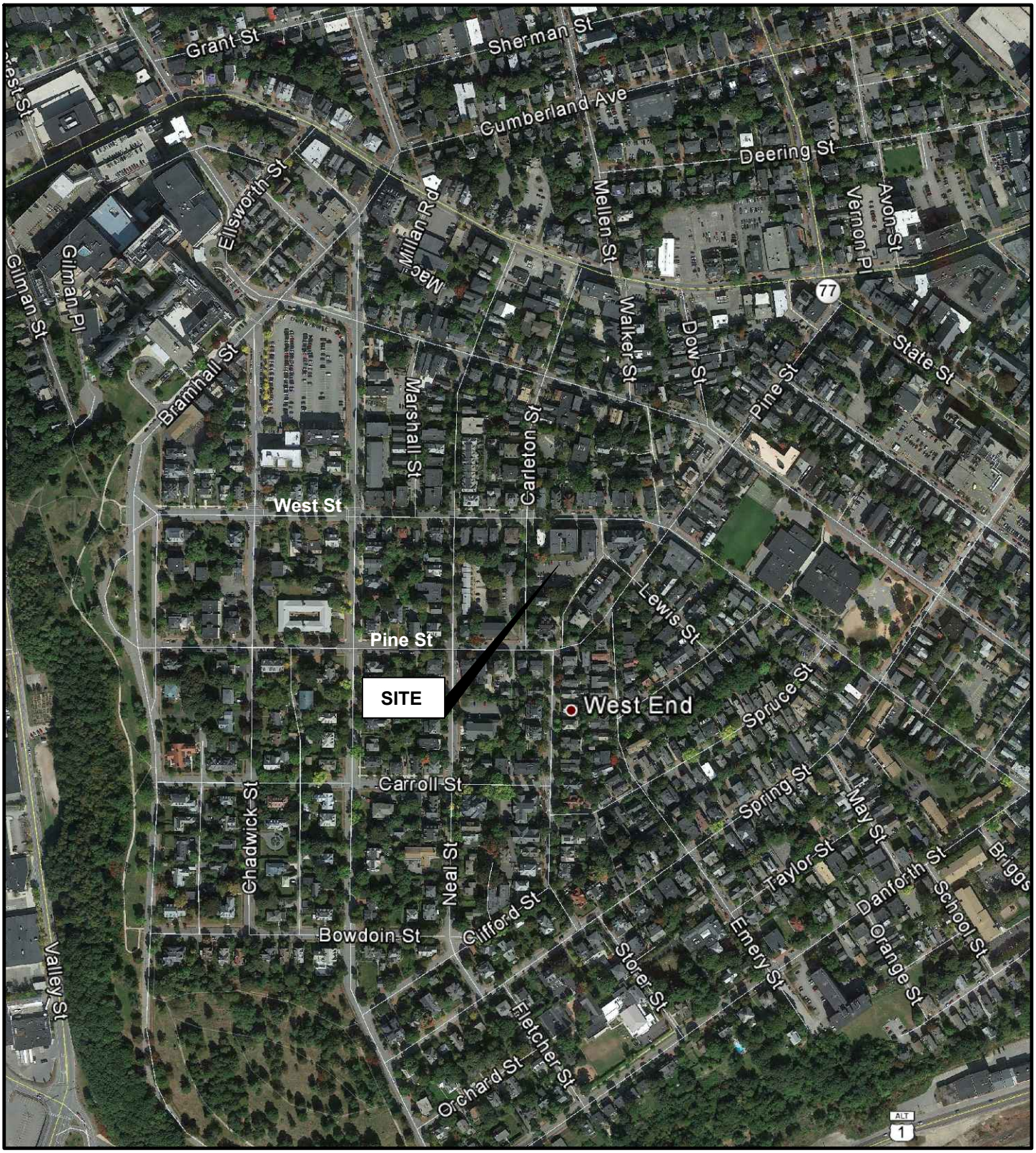
6. In our opinion, the proposed project will have minimal negative impact on the surrounding roadway network and the surrounding roadway network has the capacity to accommodate the proposed project.

Attachments

Site Location Map
Turning Movement Diagram
Trip Generation Calculation
Capacity Analysis
Crash History

Location Map

Figure No. 1



CARLETON STREET HOUSING PROJECT
PORTLAND, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	MAY 2015
Checked:	RED	File Name:	3008-TRAFF.dwg

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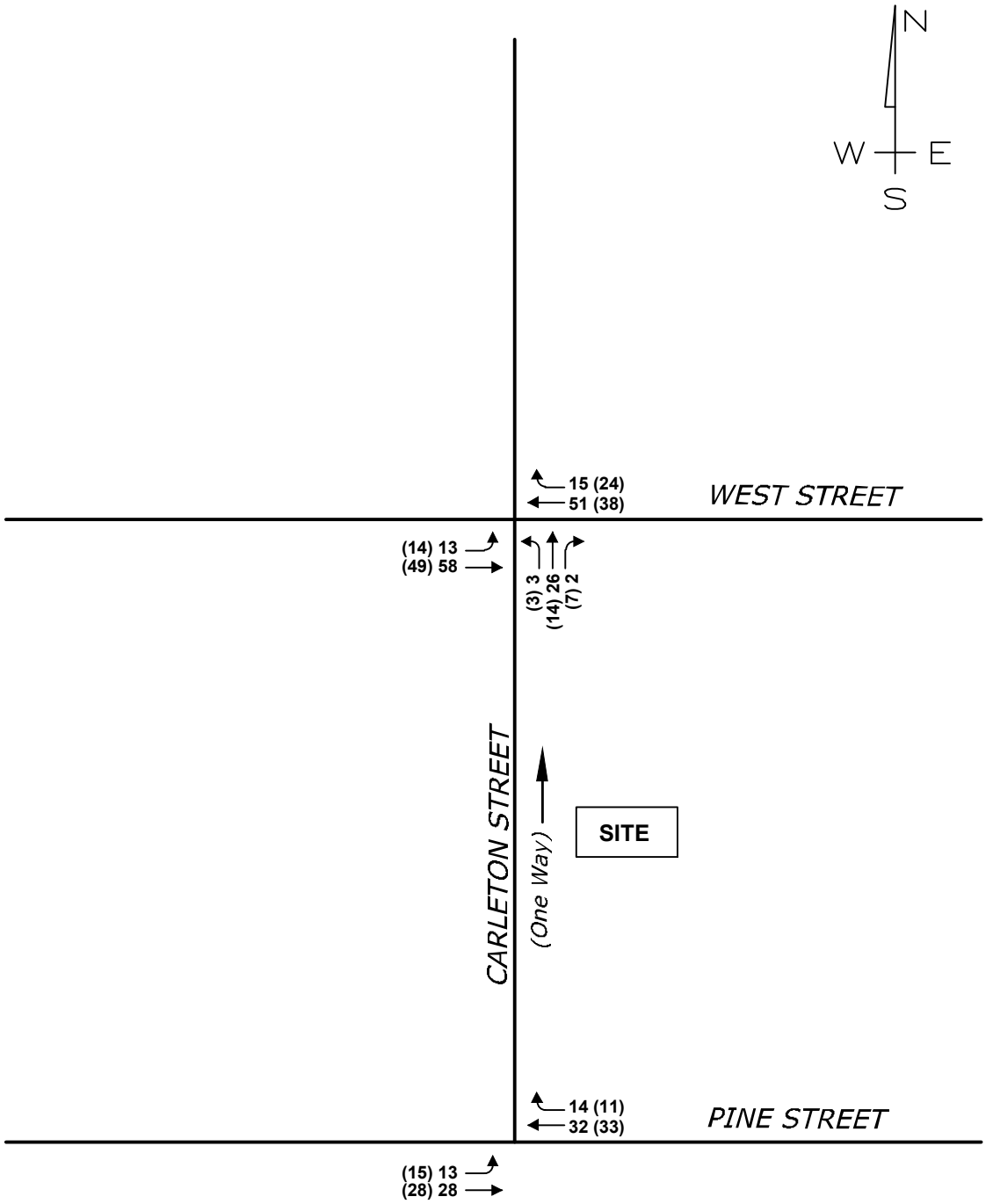
Raw Data

Figure No. 2



XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

NOTE: AM COUNTS COLLECTED 4/28/2015
AND PM COUNTS COLLECTED 4/27/2015

PEAK HOUR
7:15-8:15 AM
4:30-5:30 PM

CARLETON STREET HOUSING PROJECT
PORTLAND, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	MAY 2015
Checked:	RED	File Name:	3008-TRAFF.dwg

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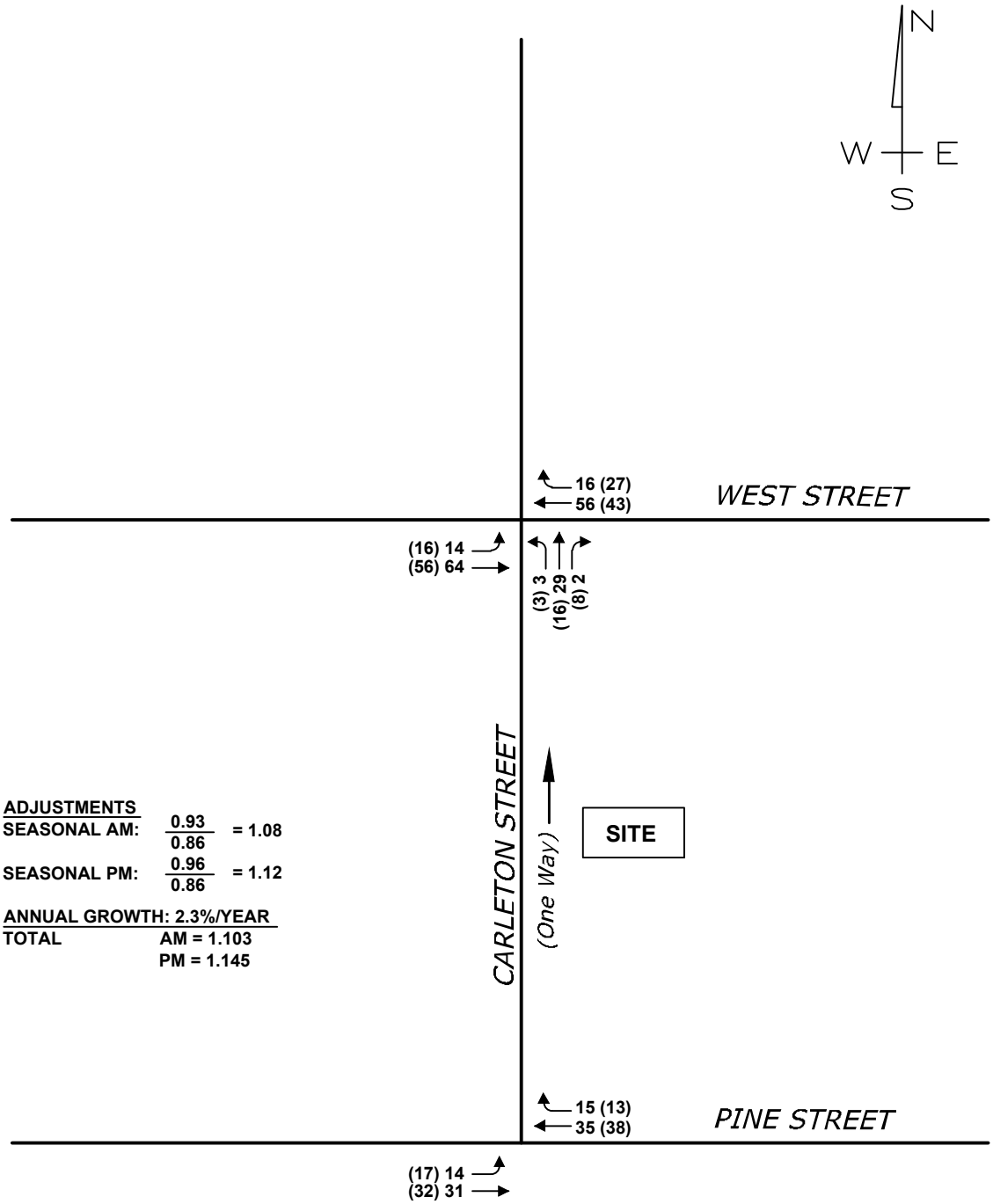
2016 Predevelopment Traffic Volumes

Figure No. 3



ADJUSTMENTS

SEASONAL AM: $\frac{0.93}{0.86}$ = 1.08

SEASONAL PM: $\frac{0.96}{0.86}$ = 1.12

ANNUAL GROWTH: 2.3%/YEAR

TOTAL AM = 1.103
PM = 1.145

XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

CARLETON STREET HOUSING PROJECT
PORTLAND, MAINE

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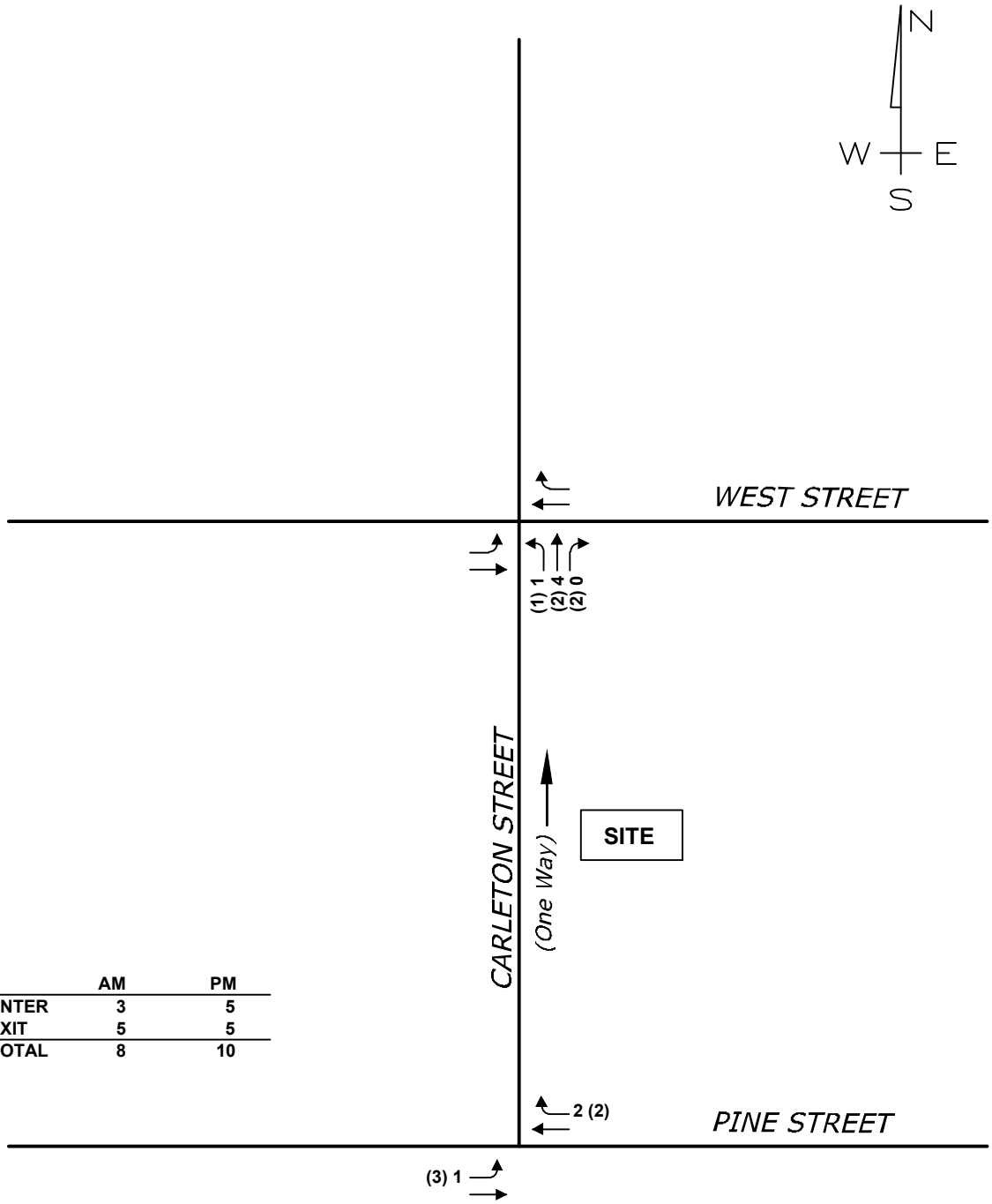
Trip Distribution and Assignment

Figure No. 4



	AM	PM
ENTER	3	5
EXIT	5	5
TOTAL	8	10

XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

CARLETON STREET HOUSING PROJECT
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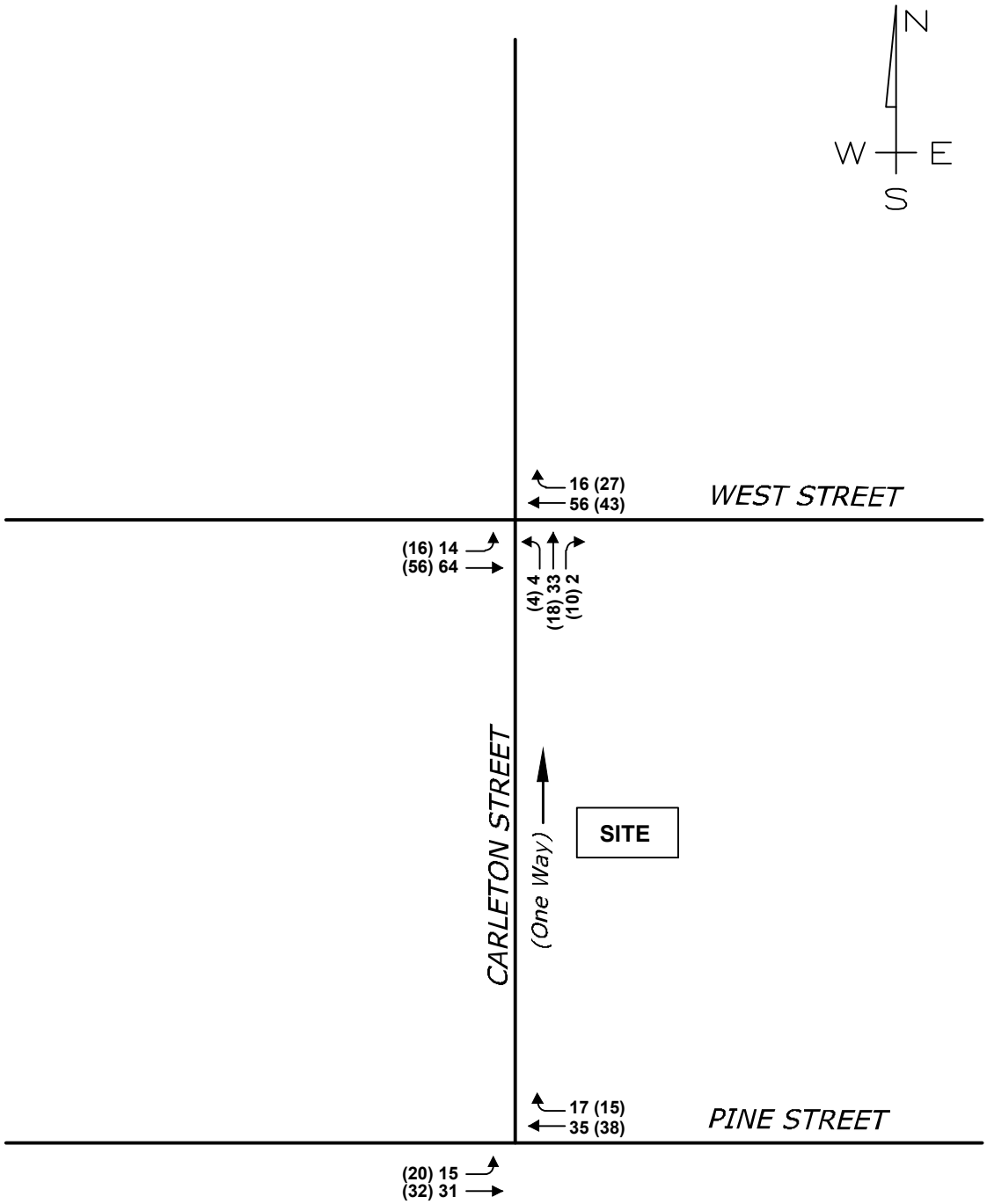
2016 Postdevelopment DHV

Figure No. 5



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FAX (207) 657-6912

JOB 3008
SHEET NO. _____ OF _____
CALCULATED BY ET DATE 5/19/15
CHECKED BY _____ DATE _____
SCALE _____

Trip Generation

Source: ITE Trip Generation Manual, 9th Edition
LUC 252 - Senior Adult Housing - Attached

Assumptions:
- ~~34~~ 37 affordable units

AM Peak Hour Adjacent Street Traffic

Avg rate: (0.20) × (~~34~~ 37) = ~~6.8~~ 7.4 trip ends

Equation: 0.20(~~34~~ 37) + 0.13 = ~~6.67~~ 7.27 trip ends

~~6.8~~ + ~~6.67~~ 7.4 + 7.27 / 2 = ~~6.73~~ 7.33 trip ends

34% entering: ~~2~~ 3 in
66% exiting: 5 out

PM Peak Hour Adjacent Street Traffic

Avg rate = (0.25) × (~~34~~ 37) = ~~8.5~~ 9.25 trip ends

Equation = 0.24 (~~34~~ 37) + 1.64 = ~~9.8~~ 10.52 trip ends

~~8.5~~ + ~~9.8~~ 9.25 + 10.52 / 2 = ~~9.15~~ 9.89 trip ends

54% entering: 5 in
46% exiting: 5 out

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	222	290	244	241	227	243
Vehs Exited	221	292	244	240	227	245
Starting Vehs	0	2	0	1	0	0
Ending Vehs	1	0	0	2	0	0
Travel Distance (mi)	19	25	21	20	19	21
Travel Time (hr)	0.9	1.2	1.0	1.0	0.9	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	40	41	43	34	29	37
Fuel Used (gal)	0.7	0.9	0.7	0.7	0.7	0.8

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	222	290	244	241	227	243
Vehs Exited	221	292	244	240	227	245
Starting Vehs	0	2	0	1	0	0
Ending Vehs	1	0	0	2	0	0
Travel Distance (mi)	19	25	21	20	19	21
Travel Time (hr)	0.9	1.2	1.0	1.0	0.9	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	40	41	43	34	29	37
Fuel Used (gal)	0.7	0.9	0.7	0.7	0.7	0.8

5: Carleton Street & West Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1
Total Del/Veh (s)	0.4	0.1	5.0	1.2

6: Pine Street & Carleton Street Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.1	0.1	0.1
Total Del/Veh (s)	0.5	0.1	0.2

Total Network Performance

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	1.2

Intersection: 5: Carleton Street & West Street

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	23	36
Average Queue (ft)	1	22
95th Queue (ft)	9	45
Link Distance (ft)	143	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Pine Street & Carleton Street

Movement	EB
Directions Served	LT
Maximum Queue (ft)	12
Average Queue (ft)	0
95th Queue (ft)	6
Link Distance (ft)	161
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	227	266	252	233	226	241
Vehs Exited	227	267	253	234	227	242
Starting Vehs	1	1	1	1	2	0
Ending Vehs	1	0	0	0	1	0
Travel Distance (mi)	18	22	21	19	19	20
Travel Time (hr)	0.9	1.1	1.0	0.9	0.9	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	20	33	33	25	24	27
Fuel Used (gal)	0.7	0.8	0.8	0.7	0.6	0.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	227	266	252	233	226	241
Vehs Exited	227	267	253	234	227	242
Starting Vehs	1	1	1	1	2	0
Ending Vehs	1	0	0	0	1	0
Travel Distance (mi)	18	22	21	19	19	20
Travel Time (hr)	0.9	1.1	1.0	0.9	0.9	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	20	33	33	25	24	27
Fuel Used (gal)	0.7	0.8	0.8	0.7	0.6	0.7

5: Carleton Street & West Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1
Total Del/Veh (s)	0.5	0.1	3.8	0.9

6: Pine Street & Carleton Street Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.1	0.1	0.1
Total Del/Veh (s)	0.5	0.1	0.3

Total Network Performance

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	0.9

Intersection: 5: Carleton Street & West Street

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	22	39
Average Queue (ft)	2	19
95th Queue (ft)	13	44
Link Distance (ft)	143	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Pine Street & Carleton Street

Movement	EB
Directions Served	LT
Maximum Queue (ft)	24
Average Queue (ft)	1
95th Queue (ft)	10
Link Distance (ft)	161
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	231	293	244	265	227	251
Vehs Exited	230	295	244	264	227	253
Starting Vehs	0	2	0	1	0	0
Ending Vehs	1	0	0	2	0	0
Travel Distance (mi)	20	26	21	22	19	22
Travel Time (hr)	1.0	1.2	1.0	1.1	0.9	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	41	54	43	43	39	44
Fuel Used (gal)	0.7	0.9	0.7	0.8	0.7	0.8

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	231	293	244	265	227	251
Vehs Exited	230	295	244	264	227	253
Starting Vehs	0	2	0	1	0	0
Ending Vehs	1	0	0	2	0	0
Travel Distance (mi)	20	26	21	22	19	22
Travel Time (hr)	1.0	1.2	1.0	1.1	0.9	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	41	54	43	43	39	44
Fuel Used (gal)	0.7	0.9	0.7	0.8	0.7	0.8

5: Carleton Street & West Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1
Total Del/Veh (s)	0.4	0.1	5.1	1.3

6: Pine Street & Carleton Street Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.1	0.1	0.1
Total Del/Veh (s)	0.6	0.1	0.3

Total Network Performance

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	1.4

Intersection: 5: Carleton Street & West Street

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	23	40
Average Queue (ft)	1	24
95th Queue (ft)	9	46
Link Distance (ft)	143	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Pine Street & Carleton Street

Movement	EB
Directions Served	LT
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	161
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	229	271	260	241	238	247
Vehs Exited	229	272	261	242	239	248
Starting Vehs	1	1	1	1	2	0
Ending Vehs	1	0	0	0	1	0
Travel Distance (mi)	19	22	22	20	20	21
Travel Time (hr)	0.9	1.1	1.1	0.9	1.0	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	28	31	38	26	33	31
Fuel Used (gal)	0.7	0.8	0.8	0.7	0.7	0.8

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	229	271	260	241	238	247
Vehs Exited	229	272	261	242	239	248
Starting Vehs	1	1	1	1	2	0
Ending Vehs	1	0	0	0	1	0
Travel Distance (mi)	19	22	22	20	20	21
Travel Time (hr)	0.9	1.1	1.1	0.9	1.0	1.0
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	28	31	38	26	33	31
Fuel Used (gal)	0.7	0.8	0.8	0.7	0.7	0.8

5: Carleton Street & West Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.1
Total Del/Veh (s)	0.5	0.0	3.7	0.9

6: Pine Street & Carleton Street Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.1	0.1	0.1
Total Del/Veh (s)	0.6	0.1	0.3

Total Network Performance

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	0.9

Intersection: 5: Carleton Street & West Street

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	22	39
Average Queue (ft)	2	22
95th Queue (ft)	14	45
Link Distance (ft)	143	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Pine Street & Carleton Street

Movement	EB
Directions Served	LT
Maximum Queue (ft)	19
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	161
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

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

Carleton St area

REPORT PARAMETERS

Year 2012, Start Month 1 through Year 2014 End Month: 12

Route: 0560782	Start Node: 12610	Start Offset: 0	☐ Exclude First Node
	End Node: 12612	End Offset: 0	☐ Exclude Last Node
Route: 0560735	Start Node: 12585	Start Offset: 0	☐ Exclude First Node
	End Node: 12586	End Offset: 0	☑ Exclude Last Node
Route: 0560579	Start Node: 12585	Start Offset: 0	☑ Exclude First Node
	End Node: 12609	End Offset: 0	☐ Exclude Last Node
Route: 0560112	Start Node: 12609	Start Offset: 0	☑ Exclude First Node
	End Node: 12610	End Offset: 0	☑ Exclude Last Node

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
12610	0560782 - 0.24	0503022 POR,CARLETON,WEST ST.	2	0	0	0	0	0	0	0.0	0.945	0.00	0.54	0.00
												Statewide Crash Rate:	0.14	
12586	0560782 - 0.29	0502998 POR,WEST ST,UNN#16	2	0	0	0	0	0	0	0.0	0.730	0.00	0.56	0.00
												Statewide Crash Rate:	0.14	
12612	0560782 - 0.30	0503024 POR,WEST ST,W.STREET GARAGE DR	2	0	0	0	0	0	0	0.0	0.324	0.00	0.60	0.00
												Statewide Crash Rate:	0.14	
12585	0560735 - 0	0502997 POR, PINE ST, UNN#16	2	0	0	0	0	0	0	0.0	0.377	0.00	0.60	0.00
												Statewide Crash Rate:	0.14	
12589	0560579 - 0.31	0503001 POR,PINE,THOMAS ST.	2	0	0	0	0	0	0	0.0	0.400	0.00	0.60	0.00
												Statewide Crash Rate:	0.14	
12609	0560579 - 0.33	0503021 POR,CARLETON,PINE ST.	2	0	0	0	0	0	0	0.0	0.445	0.00	0.60	0.00
												Statewide Crash Rate:	0.14	
Study Years: 3.00		NODE TOTALS:		0	0	0	0	0	0	0.0	3.221	0.00	0.40	0.00

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
12586	12610	186953	0 - 0.05	0560782 - 0.24	0.05	2	1	0	0	0	0	0	0.0	0.00036	925.27	1383.57	0.00
0502998 POR,WEST ST,UNN#16				RD INV 05 60782											Statewide Crash Rate: 359.83		
12586	12612	186954	0 - 0.01	0560782 - 0.29	0.01	2	0	0	0	0	0	0	0.0	0.00006	0.00	1293.24	0.00
0502998 POR,WEST ST,UNN#16				RD INV 05 60782											Statewide Crash Rate: 359.83		
12585	12586	186950	0 - 0.08	0560735 - 0	0.08	2	0	0	0	0	0	0	0.0	0.00007	0.00	1378.69	0.00
0502997 POR, PINE ST, UNN#16				RD INV 05 60735											Statewide Crash Rate: 359.83		
12585	12589	186951	0 - 0.01	0560579 - 0.30	0.01	2	0	0	0	0	0	0	0.0	0.00002	0.00	-998.05	0.00
0502997 POR, PINE ST, UNN#16				RD INV 05 60579											Statewide Crash Rate: 359.83		
12589	12609	186960	0 - 0.02	0560579 - 0.31	0.02	2	0	0	0	0	0	0	0.0	0.00008	0.00	1399.02	0.00
0503001 POR,PINE,THOMAS ST,				RD INV 05 60579											Statewide Crash Rate: 359.83		
12609	12610	187005	0 - 0.08	0560112 - 0	0.08	2	0	0	0	0	0	0	0.0	0.00012	0.00	1549.32	0.00
0503021 POR,CARLETON,PINE ST,				RD INV 05 60112											Statewide Crash Rate: 359.83		
Study Years: 3.00				Section Totals:	0.25		1	0	0	0	0	0	0.0	0.00072	462.49	1179.45	0.39
				Grand Totals:	0.25		1	0	0	0	0	0	0.0	0.00072	462.49	1410.38	0.33

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
12586	12610	186953	0 - 0.05	0560782 - 0.24	1	0	0	0	0	0	2014-16793	06/22/2014	0.27	
12586	12612	186954	0 - 0.01	0560782 - 0.29	0	0	0	0	0	0				
12585	12586	186950	0 - 0.08	0560735 - 0	0	0	0	0	0	0				
12585	12589	186951	0 - 0.01	0560579 - 0.30	0	0	0	0	0	0				
12589	12609	186960	0 - 0.02	0560579 - 0.31	0	0	0	0	0	0				
12609	12610	187005	0 - 0.08	0560112 - 0	0	0	0	0	0	0				
				Totals:	1	0	0	0	0	0				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM													
Day Of Week	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Un	Tot
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	1
2-(Sport) Utility Vehicle	0
3-Passenger Van	0
4-Cargo Van (10K lbs or Less)	0
5-Pickup	0
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	0
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	0
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	0
23-Bicyclist	0
24-Witness	0
25-Other	1
Total	**2**

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	0	0	0	0	0	0	0
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	0	0	0	0	0	0	0
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	0	0	0	0	0	0	0
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	0	0	0	0	0	0	0
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-39	0	0	0	0	0	0
40-49	1	0	0	0	0	1
50-59	0	0	0	0	0	0
60-69	0	0	0	0	0	0
70-79	0	0	0	0	0	0
80-Over	0	0	0	0	0	0
Unknown	1	0	0	0	0	1
Total	2	0	0	0	0	2

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total
1-Overturn / Rollover	0
2-Fire / Explosion	0
3-Immersion	0
4-Jackknife	0
5-Cargo / Equipment Loss Or Shift	0
6-Fell / Jumped from Motor Vehicle	0
7-Thrown or Falling Object	0
8-Other Non-Collision	0
9-Pedestrian	0
10-Pedalcycle	0
11-Railway Vehicle - Train, Engine	0
12-Animal	0
13-Motor Vehicle in Transport	0
14-Parked Motor Vehicle	0
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0
16-Work Zone / Maintenance Equipment	0
17-Other Non-Fixed Object	0
18-Impact Attenuator / Crash Cushion	0
19-Bridge Overhead Structure	0
20-Bridge Pier or Support	0
21-Bridge Rail	0
22-Cable Barrier	0
23-Culvert	0
24-Curb	0
25-Ditch	0
26-Embankment	0
27-Guardrail Face	0
28-Guardrail End	0
29-Concrete Traffic Barrier	0
30-Other Traffic Barrier	0
31-Tree (Standing)	0
32-Utility Pole / Light Support	0
33-Traffic Sign Support	0
34-Traffic Signal Support	0
35-Fence	0
36-Mailbox	0
37-Other Post Pole or Support	0
38-Other Fixed Object (wall, building, tunnel, etc.)	0
39-Unknown	1
40-Gate or Cable	0
41-Pressure Ridge	0
Total	**1**

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	0
2-Traffic Signals (Flashing)	0
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	0
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	1
14-Other	0
Total	**1**

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	0	0
C	0	0
PD	0	0
Total	**0**	**0**

Road Character

Road Grade	Total
1-Level	1
2-On Grade	0
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	**1**

Light

Light Condition	Total
1-Daylight	0
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	1
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**1**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2012	2013	2014	Total
JANUARY	0	0	0	0
FEBRUARY	0	0	0	0
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	0	0	0	0
JUNE	0	0	1	1
JULY	0	0	0	0
AUGUST	0	0	0	0
SEPTEMBER	0	0	0	0
OCTOBER	0	0	0	0
NOVEMBER	0	0	0	0
DECEMBER	0	0	0	0
Total	**0**	**0**	**1**	**1**

Report is limited to the last 10 years of data.

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0	0	1

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

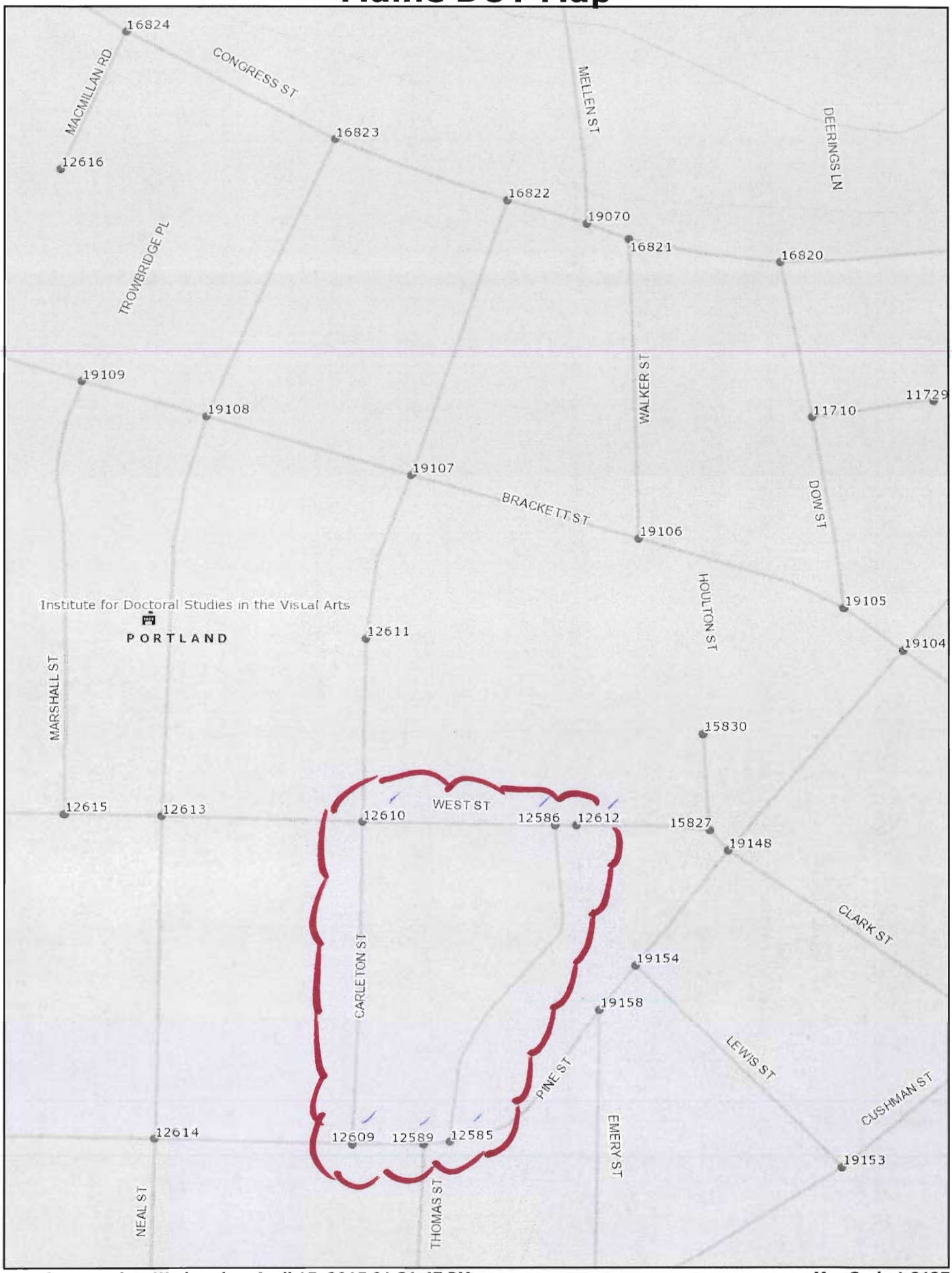
Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Maine DOT Map



Map Generated on Wednesday, April 15, 2015 01:31:47 PM ***Map Scale 1:2127***

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Att. Q

From: Drew Wing <DWing@avestahousing.org>
To: Shukria Wiar <SHUKRIAW@portlandmaine.gov>
CC: Seth Parker <SParker@avestahousing.org>
Date: 6/17/2015 8:57 AM
Subject: FW: Carleton Response
Attachments: Letter from Marge Schmuckal.pdf; TRAFFIC and PARKING STUDY_06-15-2015.pdf

Hi Shukria,

Please find responses to your questions below:

We are requesting more information on the proposed project. Please submit a Parking Demand Analysis for both the Butler School and the new proposed project at 17 Carleton Street. We would also like to see more information for the Butler School property, for example how many units are in the building, how many are handicapped, how many parking spaces are leased to the tenants. etc. Also, please provide documentation of any restrictions, easements, commitment, or burdens for the parking lot.

Response:

* The Butler School has 39 units, it is currently under renovation and upon completion will have 5 ADA units. There are 10 cars from the Butler School that are currently using the parking lot at 17 Carleton Street. Per the attached letter from Marge Schmuckal, dated October 15, 2009, you will see that there are no off street parking requirements for the Butler School. In refinancing the Butler School for the current renovations we agreed to provide 2 ADA parking spaces as required by Maine State Housing Authority. There are no other parking requirements for the Butler School.

* 17 Carleton Street has a total of 58 parking spaces. With the exception of the 10 spaces which we have allowed Butler residents to use at no cost, we rent the remaining spaces on a month to month basis. We have no documentation or knowledge of any long term parking agreements with users of 17 Carleton Street.

* There are no other restrictions, easements, commitments or burdens that encumber the lot. The development as we have proposed meets the zoning requirements of the R-6 zone. Per our calculations the density allows 42 units we are proposing 37. The proposed parking is supported by both the zoning ordinance and the traffic/parking analysis attached. We have proposed that 18 of the 31 spaces proposed would be required to serve 17 Carleton Street, the remaining 13 spaces would satisfy the required 2 ADA spaces for Butler School the balance of 11 spaces would serve Butler residents.

Thank you,

Drew Wing
Development Officer
Avesta Housing
307 Cumberland Ave
Portland, ME
207-245-3340
www.avestahousing.org<http://www.avestahousing.org/>

From: Drew Wing <DWing@avestahousing.org>
To: Tom Errico <thomas.errico@tylin.com>
CC: Shukria Wiar <SHUKRIAW@portlandmaine.gov>, Randy Dunton <RDunton@gorrillpalmer.com>
Date: 6/30/2015 9:44 AM
Subject: RE: 17 Carleton Street.
Attachments: Avesta Parking Lease.docx

Hi Tom-

Randy Dunton will be forwarding you the updated parking analysis this afternoon. You also inquired about data that we have regarding who is currently parking at the 17 Carleton Street Lot. As a matter of client confidentiality we cannot release specific names or addresses but I'm hoping the following will suffice for your purposes.

Parking Information:
10 – spaces occupied by residents of Butler School
43 – Spaces occupied by addresses on Pine Street within close proximity to site
2 – Spaces with addresses on Silver Street
3 – Spaces with addresses on Carleton Street within close proximity.

· 3 of the spaces appear to be used by small businesses, possibly for employee parking.

· There are several users who lease multiple parking spaces.

As previously represented there are no agreements in place which bind Avesta to meeting the parking requirements of other properties with the exception of 2 ADA spaces which we provide to Butler School. I have attached a sample lease which we use for leasing the parking spaces.

I hope this information is helpful and please let me know if you have any questions.

Thank You,
Drew Wing
Development Officer
Avesta Housing
307 Cumberland Ave
Portland, ME
207-245-3340
www.avestahousing.org<http://www.avestahousing.org/>

From: Tom Errico [mailto:thomas.errico@tylin.com]
Sent: Wednesday, June 24, 2015 3:50 PM
To: Shukria Wiar; Drew Wing
Subject: RE: 17 Carleton Street.

Hi Drew – I will be on vacation the week of July 6th, so I would like to get my preliminary finding to Shukria on July 2nd. I know this is tight, but I will do what I can to accelerate my review next week.
Thanks

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<mailto:thomas.errico@tylin.com>
Visit us online at www.tylin.com<http://www.tylin.com>
Twitter | Facebook | LinkedIn | YouTube

"One Vision, One Company"

Please consider the environment before printing.

From: Shukria Wiar [mailto:SHUKRIAW@portlandmaine.gov]

Sent: Wednesday, June 24, 2015 3:31 PM
To: Drew Wing
Cc: Tom Errico
Subject: Re: 17 Carleton Street.

Hello Drew:

The deadline for the revised plans and information is June 30th at noon so I can distribute them on Wednesday July 1st for staff review (we meet every Wednesday for Development Review). This will give them a week to review and give me comments. My report to the Planning Board needs to be done by Thursday July 9th.

Please do not hesitate to contact me if you have any questions.

Thank you.

Shukria

Shukria Wiar, Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101
Ph: 207-756-8083
Fax: 207-756-8258

>>> Drew Wing <DWing@avestahousing.org<mailto:DWing@avestahousing.org>> 6/24/2015 11:52 AM >>>
Hi Shukria,

I'm just checking in to see if there is anything you need and what the deadline would be for submitting information to your office for our July 14th meeting.

We will be coordinate with Tom on the updated parking analysis he requested. Tom, Randy will be reviewing the proposed scope with you prior to conducting the study. Can you please let me know your deadline for submitting the updated info to you.

Thank you,

Drew Wing
Development Officer
Avesta Housing
307 Cumberland Ave
Portland, ME
207-245-3340
www.avestahousing.org<http://www.avestahousing.org/>

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PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

File: 15108

June 30, 2015

Att. R

Ms. Shukria Wiar, Planning Department
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

RE: 17 CARLETON STREET, AVESTA HOUSING

Dear Shukria,

Below are our responses to Staff comments:

Comments Submitted by: Shukria Wiar / Planning on 6/5/2015

1. Plan C1.1- Label the areas around the parking; are these areas snow storage?

Snow Storage areas are labeled.

2. Show snow storage areas on the site plan.

Snow Storage is added to the plan.

3. The dimensions need to be shown on the parking lot.

Additional dimensions are provided.

4. It is a little hard to understand; will the existing curb cut at the rear of the lot be used as part of this proposal? If yes, will this be exit only? It may not meet the standards for a two-way.

The rear access towards Butler School will be used. Its width is consistent with the current access.

5. So the applicant have right to use this alleyway?

Yes. AVESTA Housing has rights to the common access. It will be used by the Butler School residents to access the two ADA parking spaces. It will continue to be open for emergency vehicles as well.

6. At the rear curb cut, there is a triangle shaped pavement; this is place to introduce a landscaped island.

This pavement will provide access for pedestrians to the door and ADA spaces.

7. The existing chain linked fence is being removed; will this be replaced with another fence? There have been a couple of abutters that would like it being replaced.

The existing fence on the north side will remain. The fencing on the east side will be replaced with landscaping.

8. A photometric plan has been submitted. The illumination levels/trespass is not meeting standards at the northern property line. This area is sensitive since it abuts residential buildings.

Attached is a revised Photometric Plan.

9. Submit catalogue cuts for all proposed lighting fixtures being proposed.

Attached are fixture cuts for the lights.

10. There seems to be proposed easements that benefit others. Please show all these easements on plan.

The survey plan shows all easements that we are aware of.

11. Submit the information of building footprint and floor area. What is the proposed bedroom mix?

Please see the revised project data sheet previously submitted.

12. What is the data on impervious area (existing and proposed)?

This data is on the project data sheet and on the plans.

13. What is the cost of the project?

The total budget is 6.5 million dollars.

14. How many units are in the Butler School building.

Butler School has 39 units.

Comments Submitted by: Keith Gautreau / Fire on 5/27/2015

Must have access to a minimum two sides of the proposed structure. Access to the rear of the building must be maintained via West Street and Pine Street year round.

The access in the rear will be maintained year round.

Construction Management Plan

Streets must maintain a 20' width for Fire Department access at all times.

Fire Hydrants shall not be blocked or enclosed by fencing. A 3' foot clearance must be kept at all times around the fire hydrant.

If gates are locked, a Portland Fire Department Knox padlock must be purchased by the applicant to allow access for the Fire Department.

The Construction Company' emergency contact information shall be posted on the property in case of an after hours emergency.

All construction shall comply with 2009 NFPA I Chapter 16 Safeguards During Building Construction, Alteration, and Demolition Operations.

Any cutting and welding done will require a Hot Work Permit from Fire Department.

These notes have been added to plan sheet C1.3.

Premises Identification

The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.

Street addresses shall be marked on the structure and shall be as approved by the City E-91 I Addressing Officer. If the building entry faces a different street, both the street name and number should be large enough to read from the street.

Address numbers must be a minimum of 4 inches high.

The building address and numbering will be consistent with the 911 standards.

Comments Submitted by: Keith Gautreau / Fire on 5I27I2015

1 .Hydrants
1.) 2009 NFPAI 18.3 Water Supplies and Fire Hydrants
2.) Fire Department Connections shall not be located where large diameter hose may block egress.
2. Fire Vehicle Access
1.) Largest Fire Department Vehicle must be able to navigate through the parking lot to access building.
2.) Fire Department Access shall have an unobstructed vertical clearance of not less than 13 ft 6 in.

Distances to hydrants are show on the plans.

Comments Submitted by: David Margolis-Pineo / Engineering DPS on 6/5/2015

1. *Survey comments will be forwarded under a separate cover.*

   Survey has been submitted. No additional comments have been received.

2. *Please add note that all work within the Public Right of Way shall meet City of Portland Technical Manual standards.*

   The note is on C1.1.

Comments Submitted by: Tom Errico / Traffic on 6/4/2015

1. *The applicant should provide dimensions of driveway width, parking aisles, etc. for review and comment.*

   Additional dimensions have been added.

2. *It is my understanding that a traffic study is being prepared and I will review traffic specific issues upon receipt of the study.*
3. *The following outlines my comments as it relates to the review of parking conditions for the project:*
   - *The applicant should specifically note details of vehicles parking in the existing lot. It should be noted whether any of the vehicles are using the lot as part of a site plan approval requirement.*
   - *Given parking concerns in the neighborhood and limited parking opportunities, the applicant should conduct an updated parking generation survey at existing similar sites on the Portland Peninsula. The survey is intended to confirm parking demand requirements. The scope and details of the survey shall be coordinated with City staff.*
4. *A brief paragraph has been provided in respect to a construction management plan. It isn't noted, but the plan will likely require the closure of the abutting sidewalk and a temporary sidewalk detour will be required. Other specific details can be reviewed at the Pre-Construction meeting.*

PINKHAM & GREER
CIVIL ENGINEERS

Planning and traffic will be submitted under a separate cover.

Comments Submitted by: Jeff Tarling / City Arborist on 6/5/2015

I have reviewed the proposed Landscape plan and feel additional screening is needed along the north edge. Tree selection types also need to be larger tree variety vs Hawthorn and Paperbark Maple which are very small trees. European Hornbeam or some of the upright Oak varieties like 'Regal Prince which can grow in tight space but offer more height for screening. See: http:!/www.jfschmidt.com/pdfs/regalPriflceOak. Pdf

The north edge space for example, could use 4 of the upright trees vs the two Hawthorns as shown. With some of suggested improvements or conditions the project could be acceptable.

The trees have been adjusted as a result of negotiations between Jeff and Tony Muench RLA.

Comments Submitted by: David Senus/Civil Engineering on 6/2/2015

1) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:

a) Basic Standards: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements during-construction, and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500.

b) General Standards: The project will result in a net decrease in impervious area. As such, the project is not required to include stormwater management features for stormwater quality control. We encourage the Applicant to review the City's Stormwater Service Charge Credit Manual (available online) to evaluate whether they may want to incorporate stormwater quality treatment measures that qualify for a future Stormwater Service Charge credit.

c) Flooding Standard: The project will result in a net decrease in impervious area. As such, the project is not required to include stormwater management features to control the rate of stormwater runoff from the site.

No response required.

2) The Applicant has requested confirmation of capacity to serve the proposed development from the Portland Water District and the City of Portland; copies of the approval letters should be forwarded to the City upon receipt.

The capacity letter is attached.

3) The Existing Conditions and Demolition Plan (Sheet C1.2) should identify disconnecting and capping I plugging the existing sewer service at the downstream catch basin to eliminate continued inflow into the sewer system. A masonry plug repair should be noted on the existing catch basin.

Notes have been added to the plan.

PINKHAM & GREER
CIVIL ENGINEERS

4) *The Grading & Utilities Plan (Sheet C1.3) should specify the highpoint with spot grades in the area of the driveway entrance between the 142 contours to ensure proper drainage away from the building in this area.*

Spot grades have been added.

5) *The Grading & Utilities Plan (Sheet C1.3) should identify pipe invert elevations for the proposed storm drain system at new and existing catch basins I manhole connections.*

Inverts and rims have been added.

6) *The Applicant should consider utilizing beehive grates for proposed field inlets in landscaped areas.*

Grates are under consideration.

7) *The Grading & Utilities Plan (Sheet C1.3) should include a backflow preventer on the new sewer service prior to the connection with the combined sewer system.*

A backflow preventer has been noted on the plans.

8) *The limits and type of pavement repair noted in Carleton Street on Sheet C1.3 are inconsistent with what is shown and noted on the Demolition Plan (Sheet C1.2).*

We believe the two plans are consistent.

9) *The Grading & Utilities Plan (Sheet C1.3) includes a line and several spot grades in the parking lot area; we are unclear what this line and the associated spot grades represent.*

This area is to be ADA compliant. Maximum grades are provided with a note.

10) *The Applicant should consider alternatives to the direct piped connection of the roof drain into the storm drain system, which ultimately connects to the City's combined sewer system. Discharge to the ground or preferably to landscaping or a rain garden area is recommended.*

We have added a rain garden for the roof water. It will be discharged to the ground by a gutter and down spout system.

Sincerely,

PINKHAM & GREER

Thomas S. Greer, P.E.

Enclosures

cc: Drew Wing, David Lloyd, File

TSG/rjs

Att. S

PROJECT DATA

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

Total Area of Site	sq. ft. 25,247
Proposed Total Disturbed Area of the Site	sq. ft. 25,247
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)	19,245 sq. ft.
Impervious Area (Total Proposed)	19,210 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	0 sq. ft.
Building Footprint (Total Proposed)	5,495 sq. ft.
Building Floor Area (Total Existing)	0 sq. ft.
Building Floor Area (Total Proposed)	26,375 sq. ft.
Zoning	
Existing	R-6
Proposed, if applicable	
Land Use	
Existing	Parking Lot
Proposed	37 Residential Units w/ parking
Residential, If applicable	
# of Residential Units (Total Existing)	0
# of Residential Units (Total Proposed)	0
# of Lots (Total Proposed)	0
# of Affordable Housing Units (Total Proposed)	37
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	9
# of One-Bedroom Units (Total Proposed)	26
# of Two-Bedroom Units (Total Proposed)	2
# of Three-Bedroom Units (Total Proposed)	
Parking Spaces	
# of Parking Spaces (Total Existing)	58
# of Parking Spaces (Total Proposed)	31
# of Handicapped Spaces (Total Proposed)	7
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	Exterior (4), Bike Room (16)
Estimated Cost of Project	

Att. T

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

Supplemental Parking Information
Parking Occupancy Evaluation
Portland, Maine

Project: Carleton Street Apartments, Portland, Maine
Memo Date: June 29, 2015
Prepared By: Randy Dunton, Gorrill Palmer
Distribution: City of Portland, Thomas Errico, Avesta Housing

The purpose of this evaluation is to determine the parking demand rate of existing facilities in the Portland area that are similar to the proposed Carleton Street apartments. The data was collected on Thursday June 25, 2015 starting at 10:00 PM at facilities owned or managed by Avesta Housing. All the facilities are non-age restricted, similar to the proposed Carleton Street apartments. The date and time of the data collection was preapproved by the City. The following is a summary of the results of the data collection:

Parking Demand Rates – Avesta Housing Facilities

Location	# spaces / occupied	# units	# spaces / units	Management Data*
409 Cumberland Ave	12	57	0.21	29
Munjoy Commons	23	39	0.59	25
Pearl Place I & II	40	124	0.32	66
Oak Street Lofts	7	37	0.19	25
Average Rate	---	---	**0.33**	---
Avg Rate (w/o Oak Street Lofts)	---	---	**0.37**	---

*This data represents the number of residents that own vehicles.

Based on the data collected, the average parking rate is 0.33 spaces per unit with a peak rate of 0.59 spaces per unit. Based on these rates the average parking supply for Carleton Street Apartments, which is 37 units, should be 13 spaces minimum with a maximum demand of 22 spaces. The Oak Street Lofts parking area is a total of 8 spaces, one of which is handicapped. Since this parking lot was essentially full, there could have been vehicles parked on the street, which would be difficult to distinguish from other on street vehicles. For that reason, we also calculated the parking rate without using Oak Street Lofts which increased the average rate from 0.33 to 0.37. All the other parking lots were underutilized so it is expected there was no on-street parking occurring.

The following locations were also counted but are not owned or operated by Avesta Housing and contain a mixture of affordable and market rate units. The proposed units at 17 Carleton Street are all affordable and therefore will likely demonstrate a lower vehicle to unit ratio in contrast to projects with market rate and affordable units.

Parking Demand Rates – Non Avesta Housing Facilities

Location	# spaces / occupied	# units	# spaces / units	Low Income / Market Rate
53 Danforth	22	43	0.51	30 / 13
Walker Terrace	29	40	0.73	22 / 18
Average Rate	---	---	**0.62**	---

As can be seen from the summary table, the average and peak parking rates are 0.62 and 0.73 respectively. These rates are higher than the Avesta properties counted.

Conclusion:

In 2010, Gorrill Palmer performed a similar evaluation to the one contained herein, with a resultant average rate of 0.48 spaces per unit, which is greater than the current rate of 0.37 spaces per unit. This may be a reflection of the efforts that the City and developers such as Avesta have made to make it easier to negotiate using alternate forms of transit. Carleton Street Apartments is proposing to include 37 affordable housing units. Based on the average rate of 0.37 spaces per unit determined above, the number of spaces needed on-site would be 14 spaces. To provide some buffer, Avesta is requesting 18 parking spaces be approved. The number of parking spaces provided on-site is proposed at 31 spaces. Approving 18 parking spaces for the proposed Carleton Street apartments will allow 11 standard spaces to serve Butler School, if needed, and also provide 2 ADA spaces for Butler School.

BEACON
design . performance . technology
www.beaconproducts.com

Type:	
Project Name:	
Notes:	

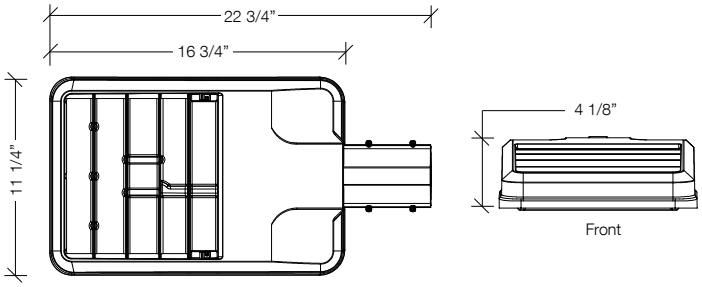
rev. 02.04.2015

VIPER - SMALL (LED)

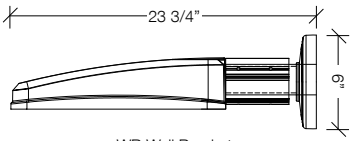
Small Viper Luminaire
Max Weight: 15.0 lbs
Max EPA: 0.67 sq ft

Sample	VP-S		30NB-90		5K		T5R		UNV		PCR-TL		SF2		GENIXX		BLC		RA		BBT
Ordering		/		/		/		/		/		/		/		/		/		/	
	A		B		C		D		E		F		G		H		I		J		K

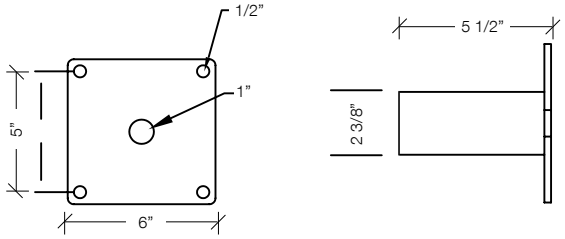
DETAILS

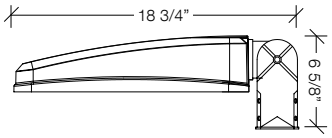


MOUNTING OPTIONS



WB Wall Bracket





PK2 2-3/8" Adjustable Knuckle

SF2 2-3/8" OD Slip Fitter

RA Rectangular Arm

A. MODEL

VP-S	Viper - Small

B. ENGINE-WATTS

22NB-50	50 Watts - LED Array
22NB-70	70 Watts - LED Array
30NB-70	70 Watts - LED Array
30NB-90	90 Watts - LED Array

C. CCT - COLOR TEMP

5K	5000K (std.)
4K	4000K
3K	3000K

D. OPTICS[6]

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

E. VOLTAGE

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

F. ELECTRICAL OPTIONS

PCR-TL	photocell, twist-lock
PCR-SC	photocell, shorting cap
2PF	dual power feed [1,2]

G. SENSOR OPTIONS

OCS	occupancy sensor (on/off)
MDD	motion dimming detector

H. CONTROL OPTIONS

GENI-XX	Energeni[5]

I. HOUSE SIDE SHIELD OPTIONS

HSS-90	house side shield 90°
HSS-180	house side shield 180°
BLC	backlight control[4]

J. MOUNTING OPTIONS

RA	rectangular arm
SF2	2 3/8" OD slip-fitter
PK2	2 3/8" adjustable knuckle
WB	wall bracket

K. COLOR

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

CERTIFICATIONS/LISTINGS

Certification Data: UL/cUL Wet Location Listed, LM79/LM80 Compliant, IDA Approved, 3G Vibration Rated, DesignLights Consortium® Qualified[3]

[1] not available with 64NB-135
[2] not available @ 347V or 480V input
[3] DesignLights Consortium Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
[4] T4 optic only
[5] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[6] To rotate optics Left or right 90 degrees, specify L or R after the optical distribution example T4L.

rev. 02.04.2015

VIPER - SMALL (LED)

Small Viper Luminaire
Max Weight: 15.0 lbs
Max EPA: 0.67 sq ft

General: The Beacon Viper luminaire is available in two sizes with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS and with 5 different mounting options for application in a wide variety of new and existing installations. Luminaires are suitable for wet locations.

Bezel Optic System: Each Viper luminaire is supplied with an one piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

The optical cartridge is secured to the die cast housing with fasteners. The optics are held in place without the use of adhesives. The cartridge assembly is available in various lighting distributions using TIR designed acrylic optical lenses over each LED.

Lifeshield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55ºC (131ºF). The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure or lumen depreciation. Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point. Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage. The device shall be located in an area of the luminaire that is protected from the elements. Thermal circuit shall be designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062” thick aluminum base layer, thermally conductive dielectric layer, 0.0014” thick copper circuit layer circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board will be mounted to the heat sink using minimum 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

Housing and LED Thermal Management: The Viper’ monolithic housing design creates over 4.5 square feet (small Viper) or 7.7 square feet (large Viper) of heat-sinking surface area. Vertical fins, combined with flow-thru openings prevent sediment and moisture buildup on critical heat sinking surfaces without the need for grates, screens or other debris control tactics. The Viper housing, electrical compartment and fitter are made from die cast aluminum that is pre-treated and powder-coated to meet the most rugged industry standards. The finish is corrosion resistant to meet ASTMB-117, resists cracking or loss of adhesion per ASTM D522, resists surface impacts of up to 160 inch-pound. All external hardware is corrosion resistant. The housing serves as a heat-sink for the LED bezel with a separate compartment for the drivers.

Electrical Assembly: The fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections. The housing is designed for an optional twist lock photo control receptacle.

Accessibility: Although the Viper luminaire is designed to operate for many years without maintenance, accessibility is a key component in its design. The Drivers are mounted on a removable door that is secured with keyslotted screws and hinges down for convenient access. The drivers are field replaceable using quick disconnects.

Drivers: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2. Dimming drivers are standard, with connections for external dimming equipment available upon request. Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations. The Beacon Viper is approved by the International Dark-Sky association as a dark sky friendly fixture.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

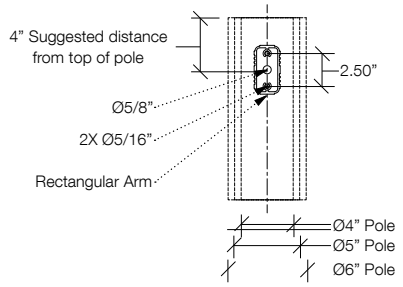
Power/Lumens & Distrubutions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
22NB	50	4700-5020	93-103	96.19%
22NB	70	5780-6200	82-103	85.79%
30NB	70	6408-6850	91-103	95.02%
30NB	90	7700-8260	85-97	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon’s web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

DRILL PATTERN



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Att. V

Portland Water District

From Sebago Lake To Casco Bay

May 20, 2015

Pinkham & Greer
28 Vannah Avenue
Portland, ME 04103

Attn: Thomas S. Greer
Re: 17 Carleton 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 April 14, 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 service apply:

- New service(s) may be installed from the water main in Carleton Street. Due to the age of the water main (> 50-years), a second gate valve will be required at the property line on any services 4-inch diameter and larger.

- 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 not currently have existing water service.

Water System Characteristics

According to District records, there is a 6-inch diameter cast iron water main on the easterly side of Carleton Street and a public fire hydrant located 150 feet from the site.

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

Hydrant Location:	Carleton Street 20 feet southerly of West Street
Hydrant Number:	POD-HYD00028
Last Tested:	1/6/2015
Static Pressure:	50 psi

225 Douglass Street P.O. Box 3553 Portland, Maine 04104-3553
Phone: 207.774.5961 Fax: 207.761.8307 Web: www.pwd.org

Residual Pressure: Not Measured
Flow: Not Measured

Public Fire Protection

It is not anticipated that 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.

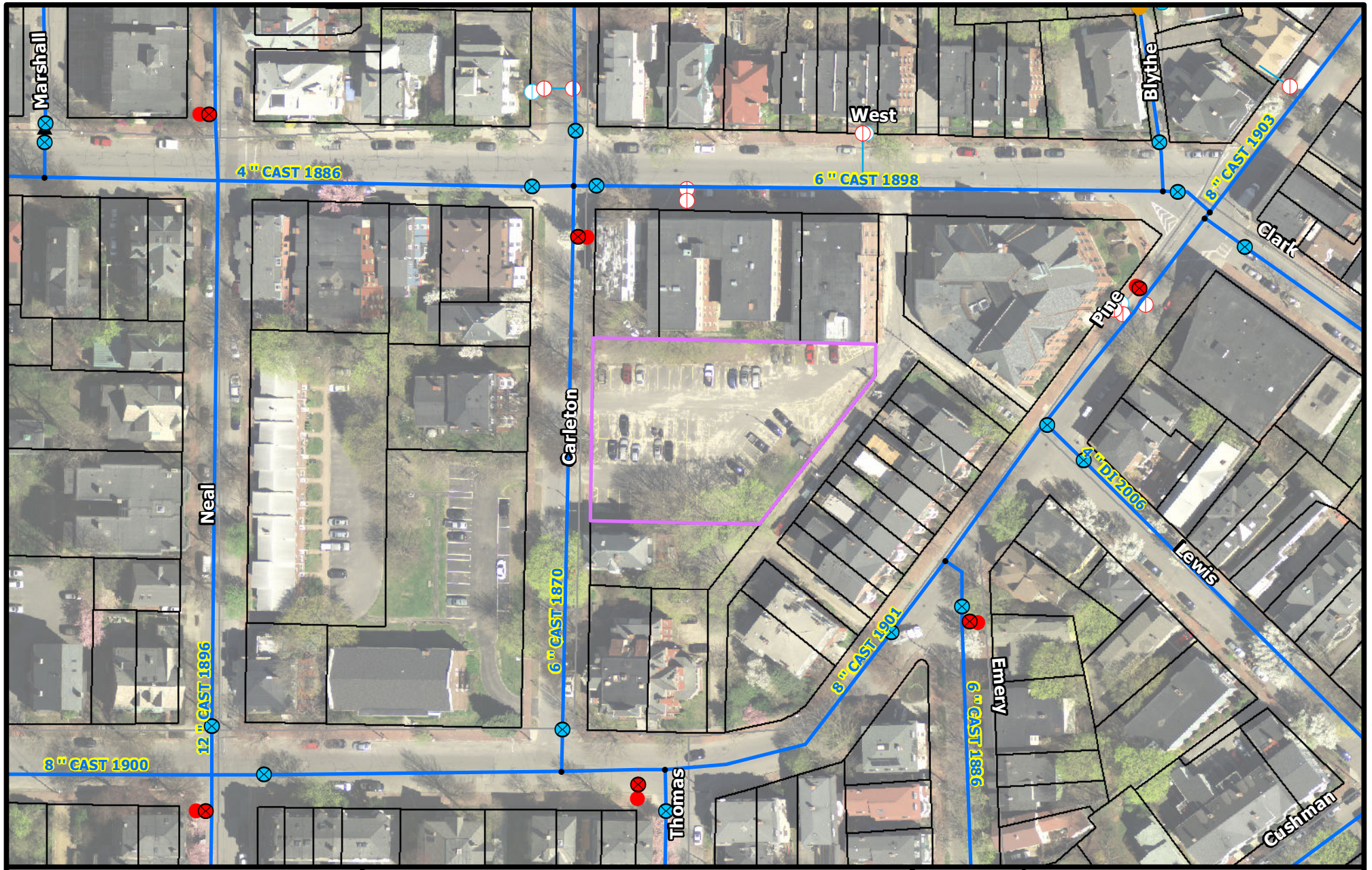
Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please 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 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, E.I.
Design Engineer



17 Carleton Street

Portland

PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104

Scale 0 25 50 100 150 200 Feet — 1 inch = 100 feet

Legend

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

N

Disclaimer: This map is suitable for preliminary study and analysis and is based on PWD record information. PWD is not liable for any damages whatsoever resulting from inaccurate data or from errors made in the location and marking of its infrastructure.

Drawn By: BSJ

Scale: As Noted

Date: April 14, 2015

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

Neighborhood Meeting

Att. W

May 27, 2015

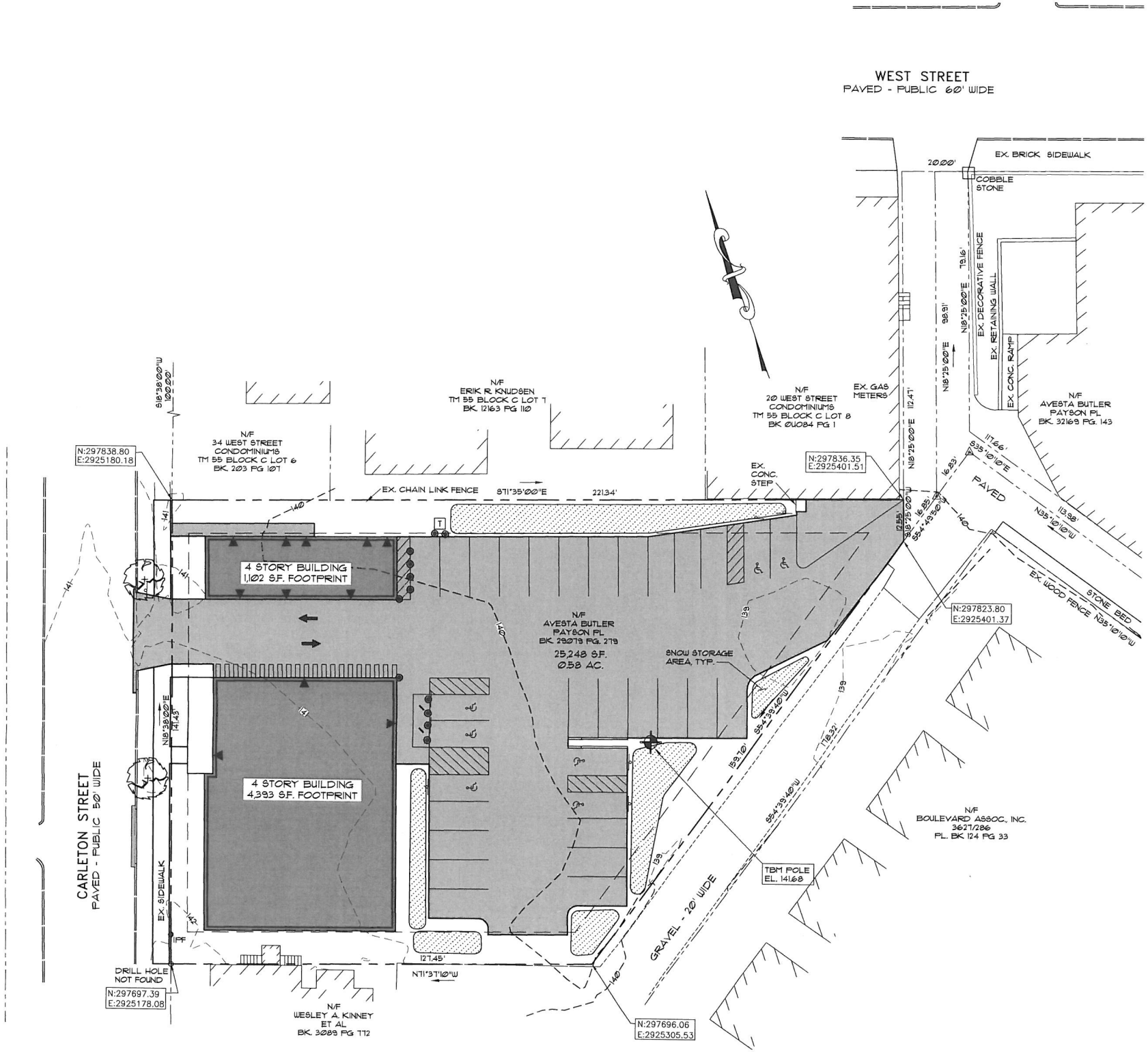
Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a 37 unit affordable housing residential building with 31 parking spaces located at 17 Carleton Street.

Meeting Location: Reiche Cafeteria
Meeting Date: June 11, 2015
Meeting Time: 6:00pm

The purpose of this meeting is to introduce the project to our neighbors as part of the City approval process.

If you have any questions, please call Thomas S. Greer, P.E., Pinkham & Greer, Civil Engineers at 207-781-5242 or email him at tgreer@pinkhamandgreer.com.


WEST STREET
PAVED - PUBLIC 60' WIDE
EX. BRICK SIDEWALK
COBBLE STONE
EX. DECORATIVE FENCE
EX. RETAINING WALL
EX. CONC. RAMP
EX. GAS METERS
N/F
AVESTA BUTLER PAYSON PL
BK. 32169 PG. 143
N/F
20 WEST STREET CONDOMINIUMS
TM 55 BLOCK C LOT 8
BK 04084 PG 1
N/F
ERIK R KNUDSEN
TM 55 BLOCK C LOT 7
BK. 12163 PG 110
N/F
34 WEST STREET CONDOMINIUMS
TM 55 BLOCK C LOT 6
BK. 203 PG 107
N:297838.80
E:2925180.18
N:297836.35
E:2925401.51
EX. CONC. STEP
EX. CHAIN LINK FENCE
S71°35'00"E 221.34'
PAVED
EX. WOOD FENCE
STONE BED
N:297823.80
E:2925401.37
4 STORY BUILDING
1,102 S.F. FOOTPRINT
4 STORY BUILDING
4,393 S.F. FOOTPRINT
N/F
AVESTA BUTLER PAYSON PL
BK. 29079 PG. 279
25,248 S.F.
0.58 AC.
SNOW STORAGE AREA, TYP.
CARLETON STREET
PAVED - PUBLIC 50' WIDE
EX. SIDEWALK
IPF
DRILL HOLE NOT FOUND
N:297697.39
E:2925178.08
127.45'
N71°37'10"W
N/F
WESLEY A. KINNEY ET AL
BK. 3088 PG 772
GRAVEL - 20' WIDE
TBM POLE
EL. 141.68
N:297696.06
E:2925305.53
N/F
BOULEVARD ASSOC., INC.
362/286
PL. BK 124 PG 33

NEIGHBORHOOD MEETING ATTENDEE LIST
17 Carleton Street
June 11, 2015

Name & Address	Name & Address
Thomas S. Greer Pinkham & Greer Civil Engineers 28 Vannah Avenue Portland, ME 04103	Michael Courts & Ellen Manett 56 West St. Portland, ME. 04102
PAUL STEVENS 21 THOMAS ST PORTLAND 04102	Daniel Nozzi Dana McEnaney 97 Pine St Portland
LIZ KELLOGG 30 WEST ST #24 PTLD. PILGRIM ART.	JAY KENNEDY 50 WEST ST # 3R PORTLAND, ME 04102
JOSHUA MURPHY 27 THOMAS ST PORTLAND ME 04102	Larry Reenhartsen 87 Pine St
Ken Hadden 25 West St Portland 04102	Claudine Grange 95 Pine St Portland, ME 04102
Tim Agnew 196 Pine St.	Rosanne Graef 30 salem st. Portland 04102
DAVID and Claudia Bantz 100 NEAL STREET Portland, ME 04102	GRETCHEN LANGNER 87 PINE ST PORTLAND 04102
Thomas Watt 290 Baxter Blvd Portland	Sally Jorgeleit 51 Thomas St. 04102
DEREK JASKULSKI 50 CARLETON ST PORTLAND	Donna Wood 30 West St. 04102
John Hutchens Don Kennedy 126 Pine St Portland 04102	Mary Anne Kinney for Wesley Kinney 11 carleton St / 39 Maple Ln Portland, ME / Knox, ME 04986

NEIGHBORHOOD MEETING ATTENDEE LIST
17 Carleton Street
June 11, 2015

Name & Address	Name & Address
Thomas S. Greer Pinkham & Greer Civil Engineers 28 Vannah Avenue Portland, ME 04103	Janet MISHOC 30 WEST Apt 11
Will Saunders 50 West St, Portland	Drew Wing - Avesta
ELLIOT RAPPAPORT 20 WEST ST. #6. 04102 20 WEST ASSOC. PRESIDENT	Darrell & Anne Jones 117 Pine St. #3
MICHAEL VALENTINE 217 VAUGHAN ST; UNIT 6 PORTLAND	TOM & NAN MILLER 122 NEAL ST. APT 1S
mary c dougherty 28 Carleton St	TINA DINSMORE 17 LINWOOD STREET CAPE ELIZABETH 04107
IAN S JACOB 59 STATE ST	TREVOR WATSON 33 WEST ST
george Silverman 15 West St	ANNE PRINGLE 44 NEAL ST. WESTERN PROM NA
[illegible] MCNEAR 2[illegible] WEST	Kurt Knudsen
PETER L HALL 64 CARLETON ST	STEPHEN SHAW 59 West St. #1 PORTLAND ME 04102
Michel P. Michaud 129 Pine St.	Phillip Incarnato / VAN AFES 58 WEST ST. 04102

NEIGHBORHOOD MEETING ATTENDEE LIST
17 Carleton Street
June 11, 2015

Name & Address	Name & Address
Thomas S. Greer Pinkham & Greer Civil Engineers 28 Vannah Avenue Portland, ME 04103	
Seth Parker 90 Spruce St. Portland, ME 04102	
Anne Rugh 105, 107 Pine St	
ROBERT LAMARCHE 91 NEAL ST.	

Carlton Street Neighborhood Meeting

June 11, 2015

Drew Wing explained who Avesta Housing was, and provided an overview of project.
Tom Greer reviewed site layout, drainage utilities
David Lloyd gave overview of design

Following are comments made after presentation:

1. Are tenants certified, is there a screening process, Answer, yes we requests references from past landlords, do credit checks, and background checks for criminal history, including sex offenders.

2. Tom Geer had a discussion about the sewer capacity and flooding during heavy rains. His response was that the city reviews our application and they have a city wide sewer/storm water separation projects.

3. Can the existing sewers meet the capacity for this building being added to the system, answer yes but some neighbors complained about system being overloaded and having sewers back up.

4. How many people will be in each unit? Answer possibly one or two in one bed units, possibly 2 or 3 in two bed units.

5. How do you know how much parking you need? 1. Answer- A parking analysis will be conducted across a number of properties on the peninsula including our existing properties. It is common for Avesta to request a reduction in the 1:1 parking ratio of .7 parking spaces per unit. We anticipate our actual usage will be less than this.

6. Several people expressed that there is a parking problem in the west end and that this project will exasperate it as the existing 58 cars parking there will no longer be able to park in the lot. Asked if there are parking lease agreements in place. Answer, Avesta leases parking spaces but is unaware of any long term leases or agreements which are tied to parking requirements.

7. Question asked if any of the nearby developments used parking in their lot to receive their approvals. Answer, not to our knowledge.

8. Why can't this be senior housing?

9. One comment that this is not a good fit for the neighborhood this is not a low income neighborhood.

10. Question on how rents are established and income levels required for people living there. Answer, income levels and the associated rents are established by Maine Housing.
11. Comment that this project is a cash cow for Avesta. Answer, Avesta is a nonprofit with a mission statement to provide affordable housing.

12. Comment that there are 58 air B&B in the west end, where are they going to park?

13. Does this project have restrictive covenants? Answer, yes 45 years for low income.

14. Comments from one gentleman asking about files on neighboring properties like the Butler School and 20 West Street, they can't be found at City Hall.

15. Where do people from 20 West Street Park? Answer, Avesta will share any and all files that it finds in relationship to this project.

16. Where are the people from Butler School going to park? Answer, we believe we have sufficient parking to meet the parking needs of the new development and potentially continue to allow a limited number of Butler cars to use the lot and we have done previously. There is no city parking requirements for the Butler School. We have committed to providing 2 ADA spaces in the lot for the Butler School.

17. Discussion about emergency vehicle access to the site: Tom Greer explained how access to building can be accomplished.

18. Comment of support for economic diversity and that parking in the west end is a city problem not Avesta's to solve.

19. Comments on building, someone does not like 4th floor with copper siding, does not like clapboard on east face of building.

20. Comment why does Avesta want to build here? Answer Avesta is interested in smart growth areas like this site.

21. Comment there is no need for this type of housing.

22. Do you screen potential tenants answer, yes and explained.

23. Comment that allowing units to have access to garden area in front of their unit will lead to a trashy site condition.

24. Where will construction workers park when it is under construction? Answer, not determined at this time.

25. Asked what rents will be. Answer, given in ranges, determined by income advised to look at MSHA web site to see how rents are determined.

26. Question where can I get a handicap parking sticker?

27. Question about water runoff. Answer, Tom Greer went over how water will be collected on site.

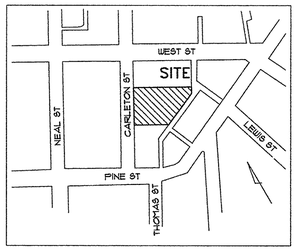
28. Questions and concerns about snow storage and removal and noise of trucks removing snow.

29. Have you been to see the site? Answer, yes.

30. What will Avesta pay in Taxes? Could not be answered at this time.

31. Comment that they believe design has improved greatly since last meeting at Historic Preservation but still has a long way to go. Answer, neighbor encouraged to be at next HP meeting to give their input.

Conclusion for architect of neighbors' comments. The building design is moving in the right direction. Neighbors need assurance that existing sewer and storm lines are sufficient for this project. Parking was the biggest concern expressed by the neighbors and their major concern seems to be the loss of the existing 58 parking spaces on site.



LOCATION PLAN

SCALE: 1"=250'±

SNOW CLEARANCE NOTES

1. SNOW IS TO BE STORED WITHIN THE SNOW STORAGE AREAS.
2. SNOW MAY BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE IF NECCESSARY.
3. SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXEMPTION REQUIREMENTS SPECIFIED WITHIN CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.
4. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, CURBING, LIGHTING, FENCING ETC. RESULTING FROM THEIR ACTIVITIES.
5. THE SNOW CONTRACTOR SHALL USE SALT OR CHLORIDE SUBSTITUTE TO DEICE THE PARKING LOT.
6. THE OWNER IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

PARKING REQUIREMENTS 37 UNITS

REQUIRED:	
FIRST 3 UNITS:	0
REMAINING 34 UNITS:	34
SHARED CAR BONUS:	-8 ①
TOTAL:	26
EXPECTED AFFORDIBLE HOUSING NEEDS:	
70% OF OCCUPANTS NEED SPACES:	26
SHARED CAR BONUS:	-8 ①
TOTAL:	18
PROVIDED:	
9'x18' STANDARD SPACES:	21
8'x18' COMPACT SPACES:	3
8'x18' HANDICAP ACCESSIBLE SPACES:	7
TOTAL:	31

① AVESTA IS COMMITTED TO PROVIDING ONE SHARE CAR FOR USE BY THE RESIDENTS OF THIS PROJECT.

ZONE INFORMATION

ZONE: R-6, RESIDENTIAL
PERMITTED USE: MULTI-FAMILY DWELLING

SPACE STANDARDS	REQUIRED	PROVIDED
MINIMUM LOT SIZE	2,000 SQ. FT.	25,248 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	685 SQ. FT.①
MINIMUM STREET FRONTAGE	20 FEET	141.43 FEET
MINIMUM FRONT YARD	5 FEET	5 FEET
MINIMUM REAR YARD	10 FEET	65 FEET
MINIMUM SIDE YARD	10 FEET	105 FEET
MAXIMUM LOT COVERAGE	60%	28%
MINIMUM LOT WIDTH	20 FEET	141 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	41 FEET
OPEN SPACE RATIO	20%	25%
OFF STREET PARKING	SEE PARKING REQUIREMENTS	
EXISTING IMPERVIOUS	--	19,245 SQ. FT.
PROPOSED IMPERVIOUS	--	19,210 SQ. FT.

① DENSITY BONUS OF 25% FOR AFFORDABLE UNITS, SECTION 14-488. TOTAL UNITS ALLOWED: 42, UNITS PROVIDED: 37

GENERAL NOTES

Plan 1

1. OWNER: AVESTA BUTLER PAYSON PL, 307 CUMBERLAND AVENUE, PORTLAND MAINE 04101. DEEDS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BK. 32169, PG. 143, DATE MARCH 31, 2015.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVENUE, PORTLAND, MAINE, 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC AND BOUNDARY INFORMATION PROVIDED BY OWEN HASKELL, INC. 390 US ROUTE ONE, FALMOUTH, MAINE. REFERENCE IS MADE TO "TOPOGRAPHIC SURVEY AT CARLETON STREET MADE FOR AVESTA HOUSING, 307 CUMBERLAND AVENUE, PORTLAND, MAINE" DATED 4/7/15.
5. UNDERLYING SOILS MAPPING TAKEN FROM SOIL CONSERVATION STUDY OF CUMBERLAND COUNTY AND CLASSIFIED AS HINCKLEY (HLB), GENERALLY SANDY LOAM, 3-8% SLOPES, HYDROLOGICAL GROUP "A". THE SURFACE OF THE SITE IS CURRENT URBAN LAND.
6. ZONE: R-6, RESIDENTIAL, PROPOSED USE: MULTIFAMILY DWELLING
7. TAX MAP REFERENCE: MAP 55 / BLOCK A / LOT 4.
8. TOTAL PARCEL = 0.58 acres
9. UNITS TO BE SERVICED BY PUBLIC WATER, SEWER, AND GAS FROM CARLETON STREET. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C1.3, GRADING AND UTILITIES PLAN.
10. POWER, TELEPHONE AND CABLE SERVICES ARE TO BE UNDERGROUND FROM THE COMMON PASSAGE WAY. THESE SERVICES ARE SHOWN ON SHEET C1.3, GRADING AND UTILITIES PLAN.
11. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 1-800-DIG-SAFE.
12. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. PROPOSED PARKING SPACES: 32 SPACES.
14. THE SUBJECT PARCEL SHOWN AS 17 CARLETON STREET IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
15. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR 17 CARLETON STREET SITE PLAN.
16. FLOODPLAIN: THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0013 B, EFFECTIVE DATE JULY 17, 1986. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
17. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON THIS SHEET UNDER SNOW CLEARANCE NOTES.
18. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION.
19. 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.
20. THIS APPROVAL IS DEPENDENT UPON, AND LIMITED TO, THE PROPOSALS AND PLANS CONTAINED IN THE APPLICATION AND SUPPORTING DOCUMENTS SUBMITTED AND AFFIRMED BY THE APPLICANT AND ANY VARIATION FROM THE PLANS, PROPOSALS AND SUPPORTING DOCUMENTS IS SUBJECT TO REVIEW AND APPROVAL BY THE PLANNING BOARD, EXCEPT FOR DE MINIMIS CHANGES WHICH THE DIRECTOR OF PLANNING AND ZONING MAY APPROVE.

SURVEY PLAN REFERENCES

1. PLAN OF LAND IN PORTLAND, MAINE FOR BUTLER-PAYSON CO. DATED NOVEMBER 29, 1916 REVISED THROUGH 3-13-79 BY OWEN HASKELL, INC.
2. PLAN MADE FOR JB BROWN ESTATE DATED FEB 1897 RECORDED IN PLAN BOOK 8 PAGE 79.
3. ALTA/ACSM LAND TITLE SURVEY AT #77 PINE ST., WEST ST. & CARLETON ST., PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR HALLKEEN MANAGEMENT DATED NOV. 2, 2004 BY OWEN HASKELL, INC.
4. ALTA/ACSM LAND TITLE SURVEY AT #77 PINE ST., WEST ST. & CARLETON ST., PORTLAND, CUMBERLAND COUNTY, MAINE UPDATED FOR BUTLER PAYSON COMPANY DATED MAY 26, 2010, REV. 1 07-09-11, BY OWEN HASKELL, INC.
5. ALTA/ACSM LAND TITLE SURVEY AT #77 PINE ST., WEST ST. & CARLETON ST., PORTLAND, CUMBERLAND COUNTY, MAINE UPDATED FOR AVESTA HOUSING DATED OCTOBER 11, 2011 REVISED OCTOBER 20, 2011 BY OWEN HASKELL, INC.

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 WORKS REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
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."

WAIVERS

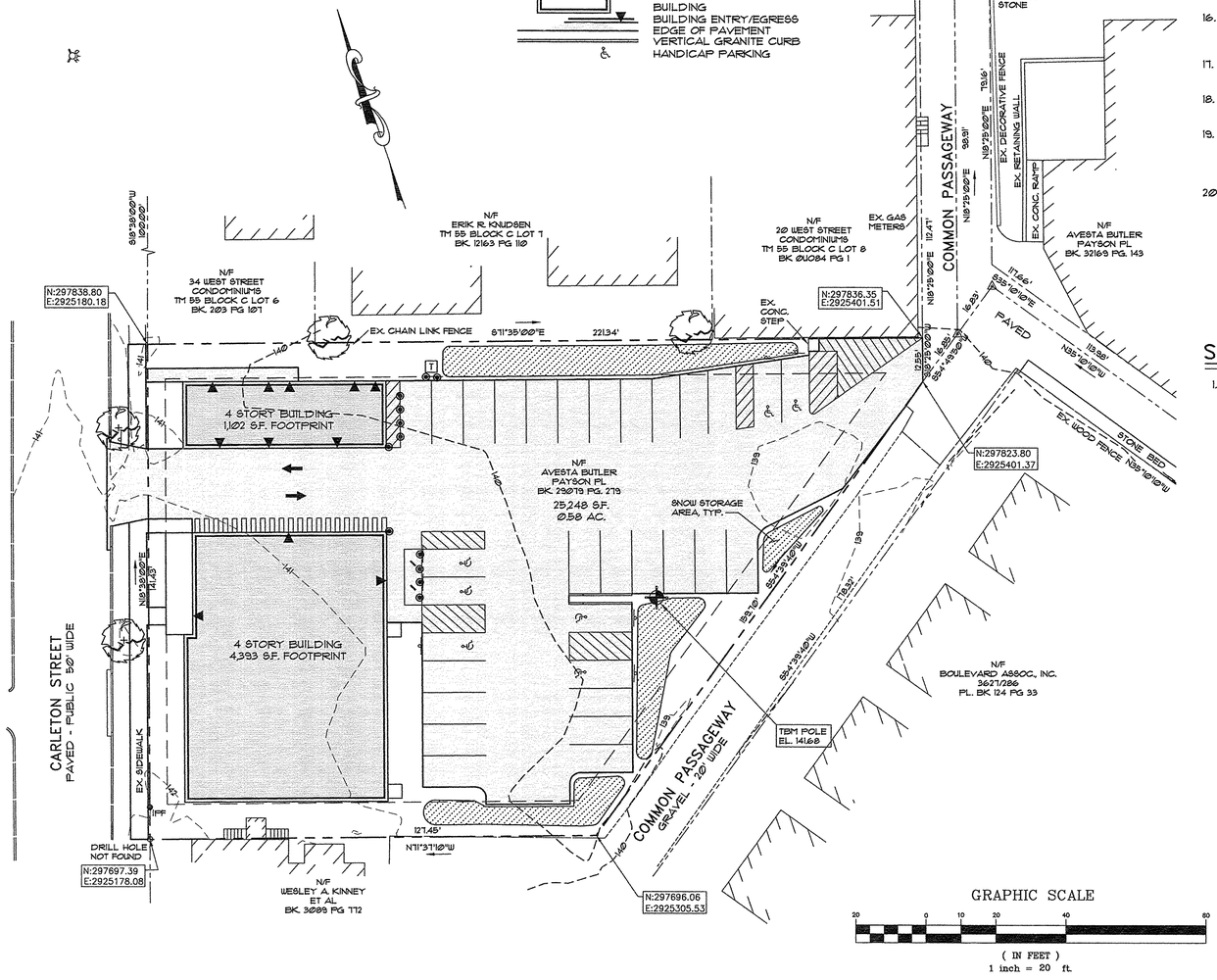
LEGEND

EXISTING

- PROPERTY LINE
- BUILDING SETBACK
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- 200 CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- CHAINLINK FENCE
- MONUMENT FOUND
- IRON PIPE OR ROD FOUND
- MAG NAIL FOUND
- TREE
- BENCHMARK

PROPOSED

- BUILDING
- BUILDING ENTRY/EGRESS
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- HANDICAP PARKING



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.

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: 207.781.4045

STATE OF MAINE THOMAS GREER No. 4206 LICENSED PROFESSIONAL ENGINEER
6/30/15

REV.	DATE	DESCRIPTION
2	6/30/15	REVD PER STAFF REVIEW AND COMMENTS
1	5/7/15	ISSUED FOR SUBDIVISION & SITE PLAN APPROVAL

AVESTA BUTLER PAYSON PL
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: APRIL 10, 2015
PROJECT: 15108
DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TSG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

SUBDIVISION RECORDING PLAT

C1.0

MAP/LOT 55/A/4

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.

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LEGEND

EXISTING

- PROPERTY LINE
- BUILDING SETBACK
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- GAS LINE
- SANITARY SEWER
- STORMDRAIN
- OVERHEAD UTILITY
- UNDERGROUND COMMUNICATION CABLE
- WATER LINE
- CATCH BASIN
- DRAIN MANHOLE
- TELEPHONE MANHOLE
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- CHAINLINK FENCE
- MOUNMENT FOUND
- IRON PIPE OR ROD FOUND
- MAG NAIL FOUND
- HYDRANT
- GATE VALVE
- GAS VALVE
- LIGHT POLE
- TREE
- BENCHMARK

PROPOSED

- EDGE OF PAVEMENT
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- BUILDING
- BUILDING ENTRY/EGRESS
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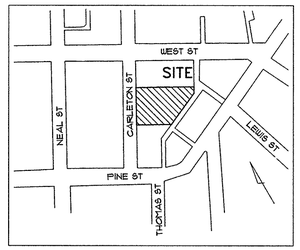
- WATER SHUT OFF
- LIGHT POLE
- WALL MOUNTED LIGHT
- TRANSFORMER
- BOLLARD
- SIGN
- HANDICAP PARKING
- PAINTED CROSSWALK
- BITUMINOUS PAVEMENT
- SHIM GRAVEL & PAVE
- BRICK PAVERS
- BUILDING HATCH
- BUILDING PORCH
- SNOW STORAGE AREAS



LOCATION PLAN

SCALE: 1"=250'±

PROJECT DRAWINGS

C1.0	SUBDIVISION RECORDING PLAT
C1.1	SITE PLAN
C1.2	EXISTING CONDITIONS AND DEMOLITION PLAN
C1.3	GRADING AND UTILITIES PLAN
C1.4	EROSION CONTROL AND LANDSCAPE PLAN
C2.1	DETAILS
C2.2	DETAILS
C2.3	DETAILS
C2.4	DETAILS
A0.1	BUILDING RENDERINGS
A1.2	BUILDING FLOOR PLANS
A2.1	BUILDING ELEVATIONS
1	ALTA/ACSM LAND TITLE SURVEY

ZONE INFORMATION

ZONE: R-6, RESIDENTIAL
PERMITTED USE: MULTI-FAMILY DWELLING

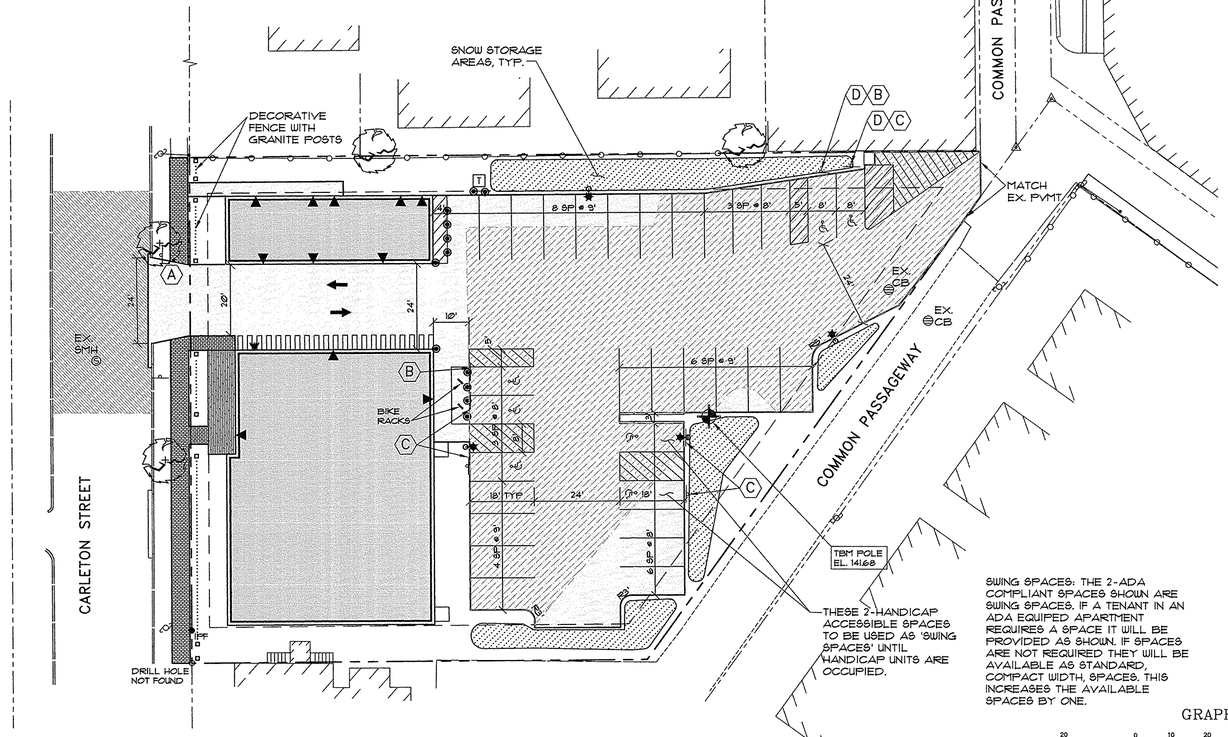
SPACE STANDARDS	REQUIRED	PROVIDED
MINIMUM LOT SIZE	2,000 SQ. FT.	25,248 SQ. FT.
MINIMUM AREA PER DWELLING UNIT	725 SQ. FT.	685 SQ. FT.①
MINIMUM STREET FRONTAGE	20 FEET	141.43 FEET
MINIMUM FRONT YARD	5 FEET	5 FEET
MINIMUM REAR YARD	10 FEET	65 FEET
MINIMUM SIDE YARD	10 FEET	10.5 FEET
MAXIMUM LOT COVERAGE	60%	28%
MINIMUM LOT WIDTH	20 FEET	141 FEET
MAXIMUM BUILDING HEIGHT	45 FEET	41 FEET
OPEN SPACE RATIO	20%	25%
OFF STREET PARKING	SEE PARKING REQUIREMENTS	
EXISTING IMPERVIOUS	--	19,245 SQ. FT.
PROPOSED IMPERVIOUS	--	19,210 SQ. FT.

① DENSITY BONUS OF 25% FOR AFFORDABLE UNITS, SECTION 14-488.
TOTAL UNITS ALLOWED: 42, UNITS PROVIDED: 37

GENERAL NOTES

1. OWNER: AVESTA BUTLER PAYSON PL, 307 CUMBERLAND AVENUE, PORTLAND MAINE 04101. DEEDS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BK. 32169, PG. 143, DATE MARCH 31, 2015.
2. ENGINEER: PINKHAM & GREER CIVIL ENGINEERS, 28 VANNAH AVENUE, PORTLAND, MAINE, 04103.
3. ARCHITECT: ARCHETYPE ARCHITECTS, 48 UNION WHARF, PORTLAND, MAINE 04101.
4. TOPOGRAPHIC AND BOUNDARY INFORMATION PROVIDED BY OWEN HASKELL, INC. 390 US ROUTE ONE, FALMOUTH, MAINE. REFERENCE IS MADE TO "TOPOGRAPHIC SURVEY AT CARLETON STREET MADE FOR AVESTA HOUSING, 307 CUMBERLAND AVENUE, PORTLAND, MAINE" DATED 4/1/15.
5. UNDERLYING SOILS MAPPING TAKEN FROM SOIL CONSERVATION STUDY OF CUMBERLAND COUNTY AND CLASSIFIED AS HINCKLEY (HLB.), GENERALLY SANDY LOAM, 3-8% SLOPES, HYDROLOGICAL GROUP "A". THE SURFACE OF THE SITE IS CURRENT URBAN LAND.
6. ZONE: R-6, RESIDENTIAL, PROPOSED USE: MULTIFAMILY DWELLING
7. TAX MAP REFERENCE: MAP 55 / BLOCK A / LOT 4.
8. TOTAL PARCEL = 0.58 acres
9. UNITS TO BE SERVICED BY PUBLIC WATER, SEWER, AND GAS FROM CARLETON STREET. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C1.3, GRADING AND UTILITIES PLAN.
10. POWER, TELEPHONE AND CABLE SERVICES ARE TO BE UNDERGROUND FROM THE COMMON PASSAGE WAY. THESE SERVICES ARE SHOWN ON SHEET C1.3, GRADING AND UTILITIES PLAN.
11. CALL DIG-SAFE PRIOR TO COMMENCING WORK, 1-800-DIG-SAFE.
12. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. PROPOSED PARKING SPACES: 32 SPACES.
14. THE SUBJECT PARCEL SHOWN AS 17 CARLETON STREET IS SUBJECT TO A CITY OF PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
15. DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE PLAN AS PART OF THE APPROVAL FOR 17 CARLETON STREET SITE PLAN.
16. FLOODPLAIN: THIS PROPERTY IS IN ZONE C OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 230051 0013 B, EFFECTIVE DATE JULY 17, 1986. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
17. SNOW CLEARANCE REQUIREMENTS ARE AS NOTED ON THIS SHEET UNDER SNOW CLEARANCE NOTES.
18. NEW PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT THE END OF CONSTRUCTION.
19. 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.
20. THIS APPROVAL IS DEPENDENT UPON, AND LIMITED TO, THE PROPOSALS AND PLANS CONTAINED IN THE APPLICATION AND SUPPORTING DOCUMENTS SUBMITTED AND AFFIRMED BY THE APPLICANT AND ANY VARIATION FROM THE PLANS, PROPOSALS AND SUPPORTING DOCUMENTS IS SUBJECT TO REVIEW AND APPROVAL BY THE PLANNING BOARD, EXCEPT FOR DE MINIMIS CHANGES WHICH THE DIRECTOR OF PLANNING AND ZONING MAY APPROVE.

Plan 2



SWING SPACES: THE 2-ADA COMPLIANT SPACES SHOWN ARE SWING SPACES. IF A TENANT IN AN ADA EQUIPED APARTMENT REQUIRES A SPACE IT WILL BE PROVIDED AS SHOWN. IF SPACES ARE NOT REQUIRED THEY WILL BE AVAILABLE AS STANDARD, COMPACT WIDTH, SPACES. THIS INCREASES THE AVAILABLE SPACES BY ONE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

SITE PLAN, 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 GREER No. 4206 — REGISTERED PROFESSIONAL ENGINEER

6/30/15

REV.	DATE	DESCRIPTION
2	6/30/15	REVD PER STAFF REVIEW AND COMMENTS
1	5/7/15	ISSUED FOR SUBDIVISION & SITE PLAN APPROVAL

AVESTA BUTLER PAYSON PL
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: APRIL 10, 2015
PROJECT: 15108

DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TSG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

SITE PLAN

C1.1

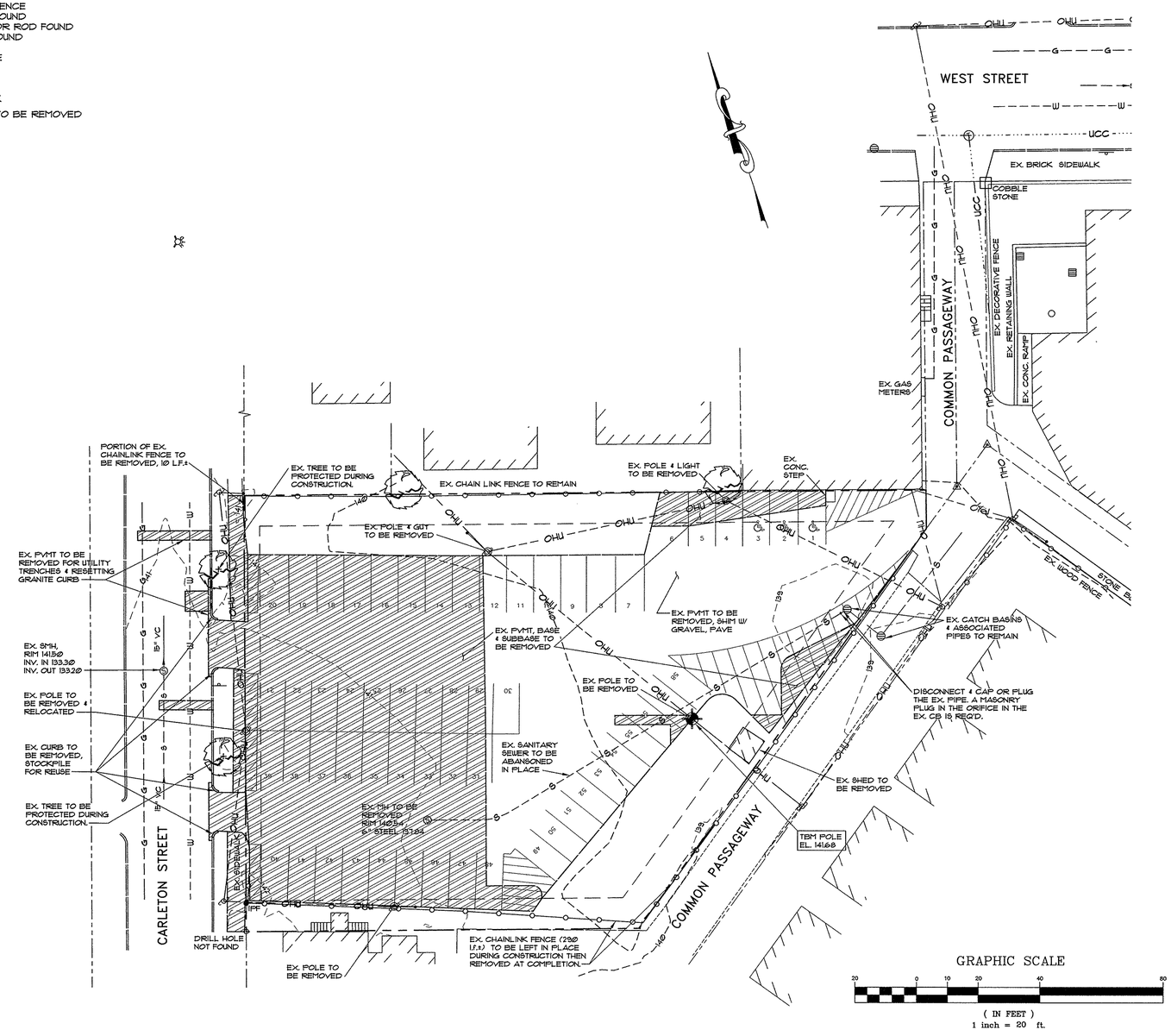
MAP/LOT 55/A/4

Plan 3

LEGEND

EXISTING

- PROPERTY LINE
- BUILDING SETBACK
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- GAS LINE
- SANITARY SEWER
- STORMDRAIN
- OVERHEAD UTILITY
- UNDERGROUND COMMUNICATION CABLE
- WATER LINE
- CATCH BASIN
- DRAIN MANHOLE
- TELEPHONE MANHOLE
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- CHAINLINK FENCE
- MONUMENT FOUND
- IRON PIPE OR ROD FOUND
- MAG NAIL FOUND
- HYDRANT
- GATE VALVE
- GAS VALVE
- LIGHT POLE
- TREE
- BENCHMARK
- PAVEMENT TO BE REMOVED



DEMOLITION NOTES

1. ANY UNUSED SERVICE LINES ARE TO BE PROPERLY REMOVED TO THE MAIN. CAP EACH IN ACCORDANCE WITH THE APPROPRIATE UTILITY REQUIREMENTS.
2. NOTIFY THE CITY OF PORTLAND ARBORIST TO APPROVE TREE PROTECTION MEASURES OF THE EXISTING TREES.
3. COORDINATE WITH THE ELECTRICAL CONSULTANT PLANS TO MAINTAIN SERVICES TO ADJACENT BUILDINGS.

PINKHAM & GREER
CIVIL ENGINEERS
28 HAMMY AVE. PORTLAND, ME. 04103
TEL: 207.781.3542 FAX: 207.781.4245

STATE OF MAINE
THOMAS S. GREER
No. 4208
LICENSED PROFESSIONAL ENGINEER

6/30/15

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307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: APRIL 10, 2015
PROJECT: 15108
DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TSG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

EXISTING CONDITIONS AND DEMOLITION PLAN

C1.2

MAP/LOT 55/A/4

LEGEND

EXISTING

- PROPERTY LINE
- BUILDING SETBACK
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- 200 CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- G GAS LINE
- S SANITARY SEWER
- SD STORMDRAIN
- OHU OVERHEAD UTILITY
- UCC UNDERGROUND COMMUNICATION CABLE
- W WATER LINE
- CATCH BASIN
- DRAIN MANHOLE
- TELEPHONE MANHOLE
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- CHAINLINK FENCE
- MOUNMENT FOUND
- IRON PIPE OR ROD FOUND
- MAG NAIL FOUND
- HYDRANT
- GATE VALVE
- GAS VALVE
- LIGHT POLE
- TREE
- BENCHMARK

PROPOSED

- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- 250 CONTOURS
- BUILDING
- BUILDING ENTRY/EGRESS
- G GAS LINE
- S SANITARY SEWER
- SD STORMDRAIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- W WATER LINE
- UD UNDERDRAIN
- FD FOUNDATION DRAIN
- × 291.5 SPOT GRADE
- TC 111.20 BC 110.10 TOP OF CURB/BOTTOM OF CURB SPOT GRADE
- FIELD INLET
- CATCH BASIN
- WATER SHUT OFF
- THRUST BLOCK
- LIGHT POLE
- WALL MOUNTED LIGHT
- UTILITY POLE
- T TRANSFORMER
- BOLLARD
- SIGN
- HANDICAP PARKING
- PAINTED CROSSWALK
- FULL DEPTH BITUMINOUS PVMT
- SHIM GRAVEL & PAVE
- BRICK PAVERS
- BUILDING HATCH
- BUILDING PORCH

FIRE DEPARTMENT SITE REQUIREMENTS

1. ACCESS TO THE REAR OF THE BUILDING MUST BE MAINTAINED VIA WEST STREET AND PINE STREET YEAR ROUND.
2. STREETS MUST MAINTAIN A 20' WIDTH FOR FIRE DEPARTMENT ACCESS AT ALL TIMES.
3. FIRE HYDRANTS SHALL NOT BE BLOCKED OR ENCLOSED BY FENCING. A 3' FOOT CLEARANCE MUST BE KEPT AT ALL TIMES AROUND THE FIRE HYDRANT.
4. IF GATES ARE LOCKED, A PORTLAND FIRE DEPARTMENT KNOX PADLOCK MUST BE PURCHASED BY THE APPLICANT TO ALLOW ACCESS FOR THE FIRE DEPARTMENT.
5. THE CONSTRUCTION COMPANY' EMERGENCY CONTACT INFORMATION SHALL BE POSTED ON THE PROPERTY IN CASE OF AN AFTER HOURS EMERGENCY.
6. ALL CONSTRUCTION SHALL COMPLY WITH 2003 NFPA 1 CHAPTER 16 SAFEGUARDS DURING BUILDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS.
7. ANY CUTTING AND WELDING DONE WILL REQUIRE A HOT WORK PERMIT FROM FIRE DEPARTMENT.

Plan 4

GAS LINE INSTALLATION TO BE COORDINATED WITH UNITIL

DO NOT UNDERMINE EX. TREE WHEN INSTALLING UTILITIES

2" SHUT OFF VALVE @ PROPERTY LINE

2" DOMESTIC, CONNECT W/ 2" CORPORATION

THRUSTBLOCK

6" FIRE PROTECTION, CONNECT TO EX. WATERMAIN W/ TAPPING SLV & GATE VALVE

EX. SMH, RIM 141.50
INV. IN 133.30
INV. OUT 133.20

SANITARY SEWER 4"ø PVC SDR35, CONNECT TO EX. PIPE: CORE AND SEAL BOOT AT SPRINGLINE, EX. PIPE INV. 133.4'±, 4"ø INV. IN 133.85±, (ø EX. SPRINGLINE)

BACKFLOW PREVENTOR

NOTE:
UNDERGROUND ELECTRIC, CABLE & COMMUNICATIONS, SEE ELECTRICAL SITE PLAN FOR ADD'L INFORMATION

15" VC

EX. HYDRANT NEAR CORNER, 160'±

EX. HYDRANT ON PINE STREET, 280'±

CARLETON STREET

EX. CHAIN LINK FENCE

EX. CONC. STEP

EX. HYDRANT ON PINE STREET, 260'±

FIN. FLR. EL. 142.30

FULL DEPTH CONSTRUCTION

H.P. 142.15

SHIM AREA W/ GRAVEL/PAVE

EX. CB, RIM 138.65
INV. IN 136.4±
INV. OUT 136.4±

EX. CB, RIM 138.65
INV. IN 136.2±
INV. OUT 135.6±

REUSE EX. INV. IN IF POSSIBLE OR CORE HOLE FOR NEW PIPE. INSTALL PIPE W/ WATERTIGHT, FLEXIBLE BOOT.

70 L.F. of 8"ø HDPE, S=0.005'/'

TEM POLE EL. 141.68

AREA OF MAXIMUM 2% GRADE TO COMPLY WITH ADA ACCESSIBILITY REQUIREMENTS

4'x4' PAD FOR DOWNSPOUT, SLOPE TO UDSF, TYP. 2 PLCS

INV. 137.50

UNDERDRAINED SOIL FILTER #1, TOP OF MEDIA EL. 140.00

50 L.F. of 6" UNDERDRAIN, S=0.005'/'

CB #3 RIM 139.80
INV. IN 136.75
INV. OUT 136.75

36 L.F. of 8" HDPE, S=0.005'/'

COMMON PASSAGEWAY

CB #2 RIM 139.85
INV. IN 136.93
INV. OUT 136.93

52 L.F. of 12" HDPE, S=0.01'/'

CB #1 RIM 140.35
INV. IN 137.25
INV. OUT 137.19

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

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STATE OF MAINE
THOMAS GREER No. 4206
REGISTERED PROFESSIONAL ENGINEER
6/30/15

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PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: APRIL 10, 2015
PROJECT: 15108
DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

GRADING & UTILITIES PLAN

C1.3

MAP/LOT 55/A/4

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.

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 SILTATION PROTECTION ON BASINS. (PRIOR TO ANY STRIPPING OF TOPSOIL OR OTHER EARTHWORK)
2. CLEAR AND GRUB WORK AREAS. TEMPORARILY SEED AREAS NOT TO BE WORKED ON WITHIN 14 DAYS.
3. BEGIN EARTHWORK FOR PARKING AND BUILDING FOUNDATION. INSTALL AND PROTECT STORM DRAINAGE SYSTEM.
4. BEGIN BUILDING CONSTRUCTION.
5. ROUGH GRADE PARKING AREAS.
6. FINE GRADE ALL PARKING AND DRIVEWAY SIDE SLOPES AND ROUGH GRADE REMAINDER OF SITE.
7. RESEED OR TEMPORARILY SEED ANY AREA WHICH WILL BE LEFT UNDISTURBED FOR MORE THAN 14 DAYS.
8. COMPLETE FINE GRADING AND PAVING OF WALKS AND PARKING AREAS.
9. FINE GRADE, LOAM SEED AND FERTILIZE REMAINDER OF SITE.
10. REMOVE TEMPORARY SOIL EROSION MEASURES.

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- 200 CONTOURS
- BUILDING
- EDGE OF GRAVEL
- CURB
- CATCH BASIN
- DRAIN MANHOLE
- TELEPHONE MANHOLE
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- CHAINLINK FENCE
- MOUNMENT FOUND
- IRON PIPE OR ROD FOUND
- MAG NAIL FOUND
- HYDRANT
- GATE VALVE
- GAS VALVE
- TREE

PROPOSED

- EDGE OF PAVEMENT
- 200 VERTICAL GRANITE CURB
- CONTOURS
- BUILDING
- BUILDING ENTRY/EGRESS
- FIELD INLET
- CATCH BASIN
- WATER SHUT OFF
- LIGHT POLE
- WALL MOUNTED LIGHT
- UTILITY POLE
- TRANSFORMER
- BOLLARD
- SIGN
- HANDICAP PARKING
- PAINTED CROSSWALK
- BITUMINOUS PAVEMENT
- BITUMINOUS OVERLAY
- BRICK PAVERS
- BUILDING HATCH
- BUILDING PORCH

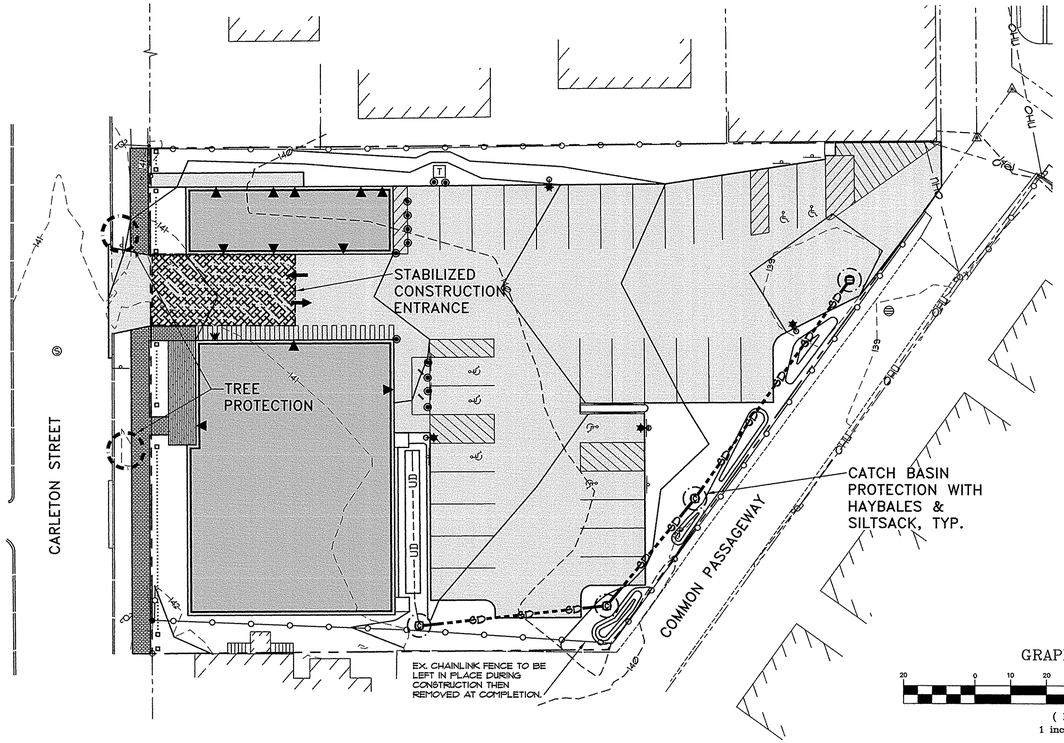
EROSION CONTROL

- CATCH BASIN PROTECTION WITH HAYBALES AND SILTSACK
- STABILIZED ENTRANCE
- TREE PROTECTION

PLANT LIST

(A / 12 = SYMBOL / QUANTITY)

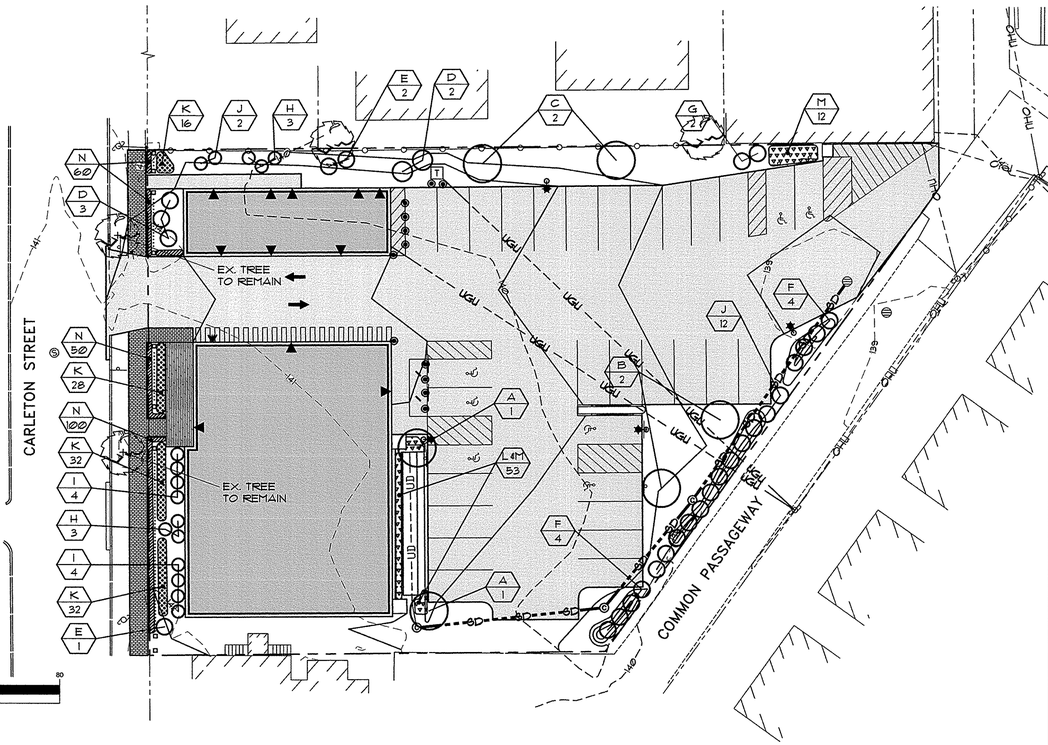
SYMBOL	COMMON NAME/BOTANICAL NAME	SIZE	QUANTITY	ROOT	NOTES
A	Pagoda Dogwood / C. Alternifolia	5'-6' tall	2	B&B	
B	Paperbark Maple / A. Griseum	7'-8' tall	2	B&B	Single Trunk
C	Hophornbeam / Ostrya Virginiana	2 1/2" Cal.	2	B&B	
D	Blackhaw Viburnum / V. Prunifolium	4'-5' tall	5	B&B	
E	Cornelliancherry Dogwood / C. Mas	5'-6' tall	3	B&B	3 Trunks
F	Amur Privet / L. Amurense	4' tall	8	B&B	3 Canes min.
G	Common Lilac / S. Vulgaris	4'-5' tall	2	B&B	Purple Blossums
H	Blue billow Hydrangea / H. Serrata 'Blue billow'	#3	6	Cont.	
I	Viburnum / V. Plicatum Tomentosum 'summer Snowflake'	#5	8	Cont.	
J	Viburnum / V. Plicatum Tomentosum 'Shasta'	4'-5' tall	14	B&B	
K	Daylily Varieties / Hemerocallis	--	108	Cont.	select for bloom Early Summer to Fall
L	Lady Fern / Filix-Femina 'Lady fern'	--	28	Cont.	
M	Christmas Fern / Polystichum Acrostichoides	--	37	Cont.	
N	Japanese Spurge / Pachysandra Terminalis	--	210	Flats	



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



Plan 5

PINKHAM & GREER
CIVIL ENGINEERS
28 WAMAN AVE., PORTLAND, ME. 04103
TEL: 207.781.5242 FAX: 207.781.4245

STATE OF MAINE
THOMAS GREER No. 4206
LICENSED PROFESSIONAL ENGINEER

4/30/15

REV.	DATE	DESCRIPTION
2	6/30/15	REVD PER STAFF REVIEW AND COMMENTS
1	5/7/15	ISSUED FOR SUBDIVISION & SITE PLAN APPROVAL

AVESTA BUTLER PAYSON PL
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

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17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

EROSION CONTROL & LANDSCAPE PLAN

C1.4

MAP/LOT 55/A/4

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. INSTALL EROSION CONTROL MESH IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. MESH TO BE EQUAL TO NORTH AMERICAN GREEN PRODUCT C125BN.

10. 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.

11. 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 STABILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 90% CATCH.

12. ALL CULVERT OR PIPE OUTFALL PROTECTION MUST BE INSTALLED WITHIN 48 HOURS OF INSTALLING NEW PIPE OR CULVERT.

13. DITCHES AND CHANNELS DESIGNATED TO BE LINED WITH RIPRAP AND/OR EROSION CONTROL MESH MUST BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR CHANNEL.

14. ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED BY INSTALLING AND MAINTAINING SILT SACKS DURING CONSTRUCTION.

15. 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.

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 0.000008 IN. DIAMETER (% BY VOLUME) ... 20 - 40
   CLAY - LESS THAN 0.000008 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

STABILIZING SITE FOR THE WINTER:

1. STANDARD CONDITIONS REQUIRING THE TIMELY STABILIZATION OF DITCHES AND CHANNELS - THE CONTRACTOR WILL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 1. THE CONTRACTOR WILL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. IF THE CONTRACTOR FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER:

   a. INSTALL A SOD LINING IN THE DITCH - THE CONTRACTOR WILL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD STRIPS FROM SLOUGHING DURING FLOW CONDITIONS.

   b. INSTALL A STONE LINING IN THE DITCH - THE CONTRACTOR WILL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 1. THE CONTRACTOR WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STANDARD CONDITIONS REQUIRING THE TIMELY STABILIZATION OF DISTURBED SLOPES - THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 1. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) IS A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

   a. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS - BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BEFORE NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF WOODWASTE COMPOST AS DESCRIBED IN ITEM C OF THIS CONDITION OR WITH STONE RIPRAP AS DESCRIBED IN ITEM D OF THIS CONDITION.

   b. STABILIZE THE SLOPE WITH SOD - THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. 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 TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).

   c. STABILIZE THE SLOPE WITH WOODWASTE COMPOST - THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF WOODWASTE COMPOST ON THE SLOPE BY NOVEMBER 1. PRIOR TO PLACING THE WOODWASTE COMPOST, THE CONTRACTOR WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE CONTRACTOR WILL NOT USE WOODWASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

   d. STABILIZE THE SLOPE WITH STONE RIPRAP - THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 1. THE CONTRACTOR WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR DRAINAGE AND SOIL SEPARATION.

3. STANDARD CONDITIONS REQUIRING THE TIMELY STABILIZATION OF DISTURBED SOILS - BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

   a. STABILIZING THE SOIL WITH TEMPORARY VEGETATION - BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN THE CONTRACTOR WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM C OF THIS STANDARD CONDITION.

   b. STABILIZE THE SOIL WITH SOD - THE CONTRACTOR WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

   c. STABILIZE THE SOIL WITH MULCH - BY NOVEMBER 1 THE CONTRACTOR WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE CONTRACTOR WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE CONTRACTOR WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

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, 15% 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 SF. (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 SF. (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 SF. OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75 LBS./1,000 SF. 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 SF. (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.

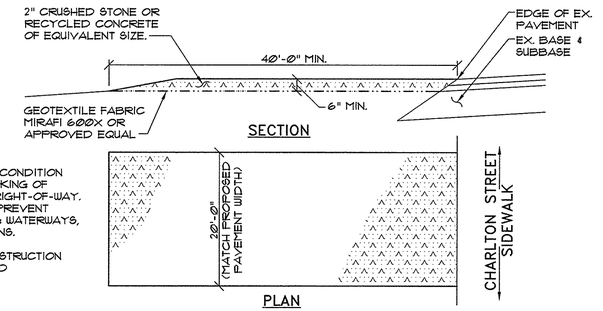
4. MULCHING ON SLOPES AND DITCHES
   SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS.
   MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1,000 SF. ON ALL SLOPES GREATER THAN 8%. MULCH NETTING 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 SF. 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.

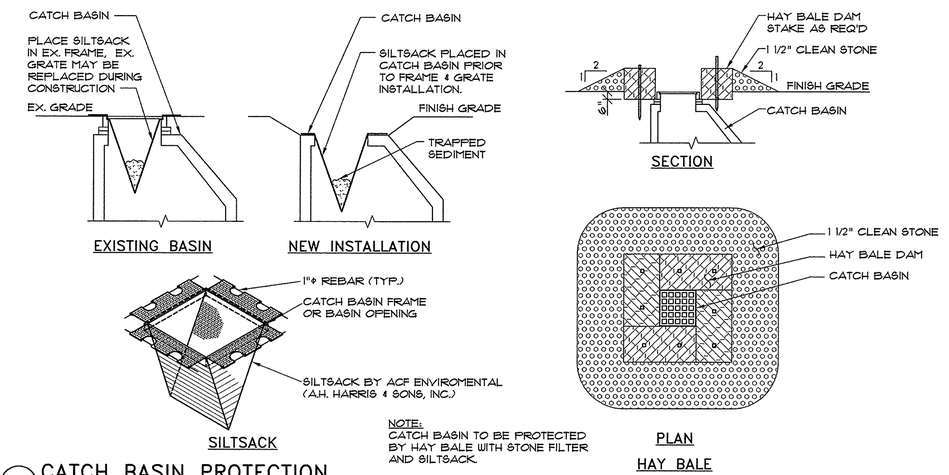
7. INSPECTION AND MONITORING
   MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS 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



1 STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



2 CATCH BASIN PROTECTION

NOT TO SCALE

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 · REGISTERED PROFESSIONAL ENGINEER · CIVIL ENGINEERING
6/30/15

NO.	DATE	DESCRIPTION
2	6/30/15	REV'D PER STAFF REVIEW AND COMMENTS
1	5/7/15	ISSUED FOR SUBDIVISION & SITE PLAN APPROVAL
REV.	DATE	DESCRIPTION

AVESTA BUTLER PAYSON PL
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: APRIL 23, 2015
PROJECT: 15108
DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TSG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

DETAILS

C2.1

MAP/LOT 55/A/4

SOIL FILTER MEDIA NOTES

1. THE SOIL FILTER MUST BE AT LEAST 12 INCHES DEEP AND MUST EXTEND ACROSS THE BOTTOM OF THE ENTIRE FILTER AREA AND UP THE SIDES TO THE DEPTH OR ELEVATION SPECIFIED. THIS SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS CAN BE MIXED WITHIN THE FILTER. THE RESULTANT MIXTURE SHOULD HAVE MINIMAL CLAY CONTENT WITH NO LESS THAN 8% FINES PASSING THE #200 SIEVE. DURING CONSTRUCTION, CARE SHOULD BE TAKEN TO AVOID COMPACTION OF BOTH THE GRAVEL AND SOIL FILTER. COMPACTION SHOULD BE BY SATURATION ONLY, UNLESS SPECIAL LOW COMPACTION EQUIPMENT IS AVAILABLE.

2. CARE SHOULD BE TAKEN, ESPECIALLY IN AREAS WHERE THE PREDOMINANT SOIL AND OVERBURDEN CONTAINS MARINE CLAY, TO BE SURE THAT THE SAND AND TOPSOIL USED IN THE MIXTURE HAVE VERY LITTLE OR NO CLAY CONTENT. USE OF SOILS WITH MORE THAN 2% CLAY CONTENT COULD CAUSE FAILURE OF THE SYSTEM.

3. THE SOIL FILTER MEDIA MUST BE COMPOSED OF A THOROUGHLY BLENDED MIXTURE OF MATERIALS MEETING THE SPECIFICATIONS IN **TABLE B**. ADJUST THE PROPORTIONS BASED ON THE ORGANIC CONTENT AND AMOUNT OF FINES OF EACH COMPONENT. IF THE SAND IS VERY CLEAN OR THE MULCH IS RELATIVELY COARSE, USE MORE MULCH AND LESS SAND WHILE STAYING WITHIN THE ESTABLISHED RANGES. IF THE SAND IS SILTY OR THE MULCH LOAMY, USE MORE SAND AND LESS MULCH.

TABLE A

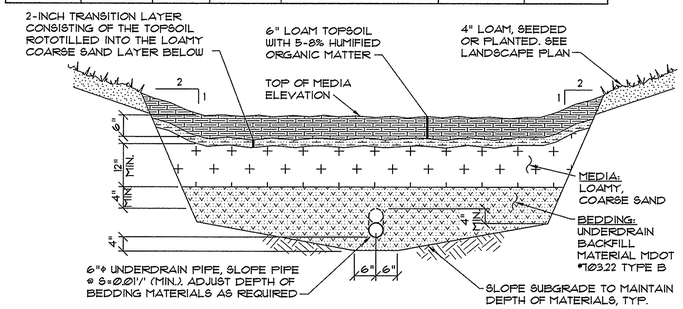
ME DOT SPECIFICATIONS FOR UNDERDRAINS (MDOT #703.22)	
SIEVE SIZE	% BY WEIGHT
UNDERDRAIN TYPE C	
1"	100
3/4"	90-100
3/8"	0-75
#4	0-25
#10	0-5

TABLE B

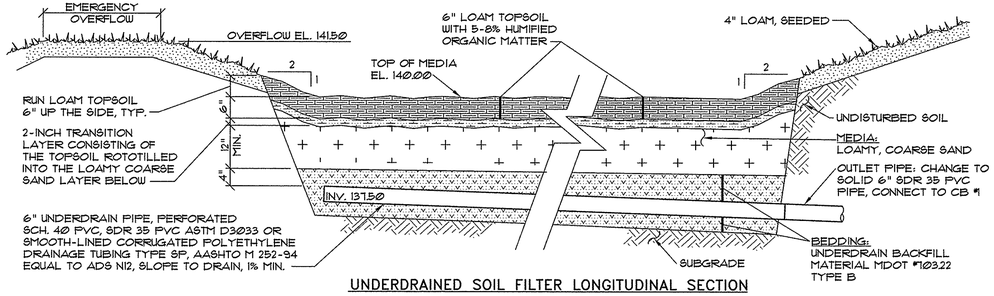
SOIL FILTER MEDIA		
FILTER MEDIA	MIXTURE BY VOLUME	SPECIFICATION
SAND	70%-80%	MEDOT SPECIFICATION #703.01 FINE AGGREGATE FOR CONCRETE (SEE TABLE C)
MULCH	20%-30%	MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 8%-10% PASSING THE 200 SIEVE

TABLE C

ME DOT SPECIFICATIONS FOR UNDERDRAINS (MDOT #703.01)	
SIEVE SIZE	% BY WEIGHT
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#60	10-30
#100	2-10
#200	0-5



UNDERDRAINED SOIL FILTER CROSS-SECTION



UNDERDRAINED SOIL FILTER LONGITUDINAL SECTION

4 UNDERDRAINED SOIL FILTER NOTES & SECTIONS

NOT TO SCALE

UNDERDRAINED SOIL FILTER CONSTRUCTION NOTES

1. PRIOR TO CONSTRUCTION OF UNDERDRAINED SOIL FILTER STABILIZE AREAS THAT DRAIN TO THEM WITH EITHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN, NOTES & DETAILS.

2. DO NOT PLACE THE FILTER MEDIA UNTIL AFTER THE SOIL FILTER AREA IS USED FOR A SETTLING BASIN DURING CONSTRUCTION AND ALL AREAS THAT DRAIN TO THE BASIN HAVE BEEN STABILIZED. PRIOR TO PLACEMENT OF THE FILTER MEDIA ALL SEDIMENT RESULTING FROM CONSTRUCTION ACTIVITIES MUST BE REMOVED.

3. EXCAVATE UNDERDRAINED SOIL FILTER AND DITCH IN A MANNER THAT WILL NOT COMPACT THE SUBGRADE. DO NOT OPERATE HEAVY MACHINERY INSIDE THE UNDERDRAINED SOIL FILTER.

4. THE TOP 6" OF SOIL FILTER MEDIA SHALL CONSIST OF LOAM TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER. SCREENED TOPSOIL FROM THE DEVELOPMENT MAY BE APPROPRIATE BUT SHOULD BE TESTED FOR ORGANIC CONTENT. THE MEDIA SHOULD HAVE SUFFICIENT NUTRIENT CONTENT TO SUPPORT A GOOD STAND OF GRASS TYPE VEGETATION, OR ORGANIC MATTER (SUCH AS SUPERHUMUS OR EQUIVALENT) CAN BE ADDED IF NECESSARY AND PROVIDED THAT THE TEXTURE IS SUITABLE.

5. IF 20 MIL GEOMEMBRANE IS USED:
THE CONTRACTOR SHALL PROVIDE DETAILS FOR THE PROPOSED RUFCO 2010B BLENDED LINEAR POLYETHYLENE LINER SYSTEM TO BE INSTALLED WITHIN THE SOIL FILTER BASIN. INFORMATION SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS AND INSTALLATION PROCEDURES THAT ADDRESS:
   - SEAMING OF LINER PANELS
   - BOOT INSTALLATION FOR PIPE PENETRATIONS
   - SEAM TESTING PROCEDURES
   - METHOD OF SUBGRADE PREPARATION
   - PLACEMENT AND COMPACTION OF STONE (TO MINIMIZE RISK OF PUNCTURING OF INSTALLED LINER)

6. PLACE UNDERDRAIN BEDDING, UNDERDRAIN PIPE AND BACKFILL MATERIAL IN A MANNER THAT DOES NOT COMPACT THE SUBGRADE, BEDDING OR BACKFILL.

7. PLACE SOIL FILTER BED OVER THE PREPARED SURFACES WITH AN EXCAVATOR WORKING FROM OUTSIDE THE SWALE OR DITCH SO THAT WHEN SHAPED TO FINISH GRADE DEPTH IS AT LEAST 18 INCHES. DO NOT COMPACT.

8. SUBMIT SAMPLES OF THE SCREENED SOIL FILTER BED MATERIAL TO A SOIL TESTING LABORATORY FOR TESTING TO DETERMINE LIME AND FERTILIZER APPLICATION NECESSARY FOR THE TOPSOIL FILTER TO GROW GRASS.

9. APPLY LIMESTONE AND FERTILIZER OVER THE TOPSOIL FILTER ACCORDING TO THE SOIL TEST RECOMMENDATIONS USING LIGHT SPREADING EQUIPMENT. WORK LIME AND FERTILIZER INTO TOPSOIL FILTER TO A DEPTH OF 2 INCHES USING LIGHT EQUIPMENT.

10. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL OR HYDROSEEDER (USING A SLURRY INCLUDING SEED AND FERTILIZER).

SEED MIXTURE	LBS/ACRE	LBS/1000 SF
CREEPING RED FESCUE (PENNLAWN, ENSYLVA OR WINTERGREEN)	20	0.46
RED TOP	2	0.05
TALL FESCUE (KENTUCKY 31)	20	0.46
TOTAL	42	0.97

11. MAINTENANCE: GRASS SHOULD BE MOWED NO MORE THAN 2 TIMES PER GROWING SEASON TO MAINTAIN GRASS HEIGHTS LESS THAN 12 INCHES. REMOVE CLIPPINGS. REMOVE SEDIMENT BUILD-UP WHEN IT HAS ACCUMULATED TO APPROXIMATELY 25% OF CHANNEL CAPACITY.

12. IF BEDROCK IS ENCOUNTERED IN THE UNDERDRAINED SOIL FILTER, OVER EXCAVATE AND REPLACE WITH ONE FOOT OF SOIL.

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

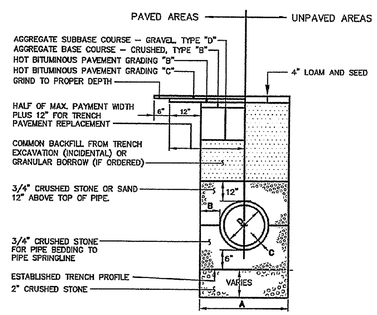
GENERAL NOTES FOR MANHOLES AND CATCH BASINS

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 11-09.

2 GENERAL NOTES FOR MANHOLES AND CATCH BASINS (11-4)

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

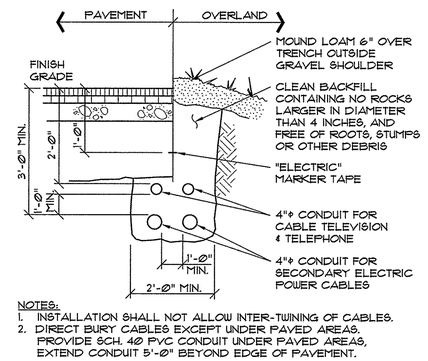
ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES..



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

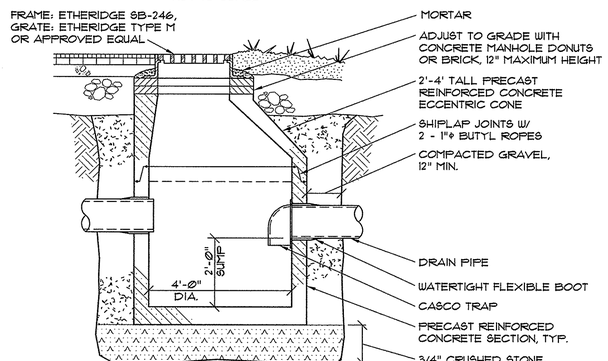
3 TYPICAL PIPE TRENCH INSTALLATION (11-12)



NOTES:
1. INSTALLATION SHALL NOT ALLOW INTER-TWINING OF CABLES.
2. DIRECT BURY CABLES EXCEPT UNDER PAVED AREAS, PROVIDE SCH. 40 PVC CONDUIT UNDER PAVED AREAS, EXTEND CONDUIT 5'-0" BEYOND EDGE OF PAVEMENT.

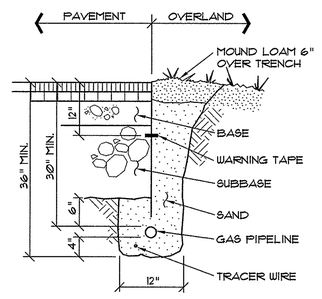
7 CABLE TRENCH SECTION

NOT TO SCALE



6 TYPICAL CATCH BASIN SECTION

NOT TO SCALE



5 GAS PIPING TRENCH SECTION

NOT TO SCALE

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE, PORTLAND, ME. 04103
TEL: 207.781.5242 FAX: 207.781.4245

THOMAS S. GREER No. 10121 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE

6/30/15

Plan 7

NO.	DATE	DESCRIPTION
1	5/7/15	ISSUED FOR SUBDIVISION & SITE PLAN APPROVAL
2	6/30/15	REV'D PER STAFF REVIEW AND COMMENTS

REV.

AVESTA BUTLER PAYSON PL
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: APRIL 23, 2015
PROJECT: 15108

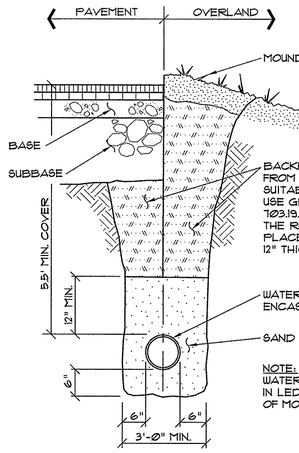
DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TSG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

DETAILS

C2.2

MAP/LOT 55/A/4

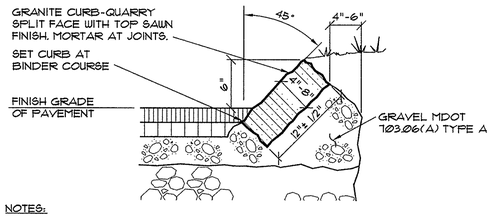


8 TYPICAL WATER MAIN SECTION ON–SITE

NOT TO SCALE

POLYETHYLENE ENCASEMENT GENERAL SPECIFICATIONS

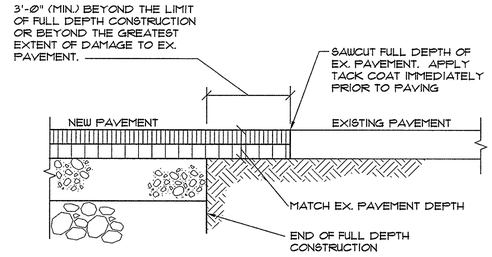
1. TUBE TYPE POLYETHYLENE ENCASEMENT SHALL BE INSTALLED ON ALL DUCTILE IRON PIPE AND FITTINGS IN ACCORDANCE WITH AWWA STANDARD C105 - LATEST REVISION, METHOD A.
2. POLYETHYLENE ENCASEMENT SHALL BE EITHER LINEAR LOW-DENSITY POLYETHYLENE (LLDPE) FILM WITH A MINIMUM THICKNESS OF 8-MIL OR HIGH-DENSITY, CROSS-LAMINATED POLYETHYLENE (HDCLPE) FILM WITH A MINIMUM THICKNESS OF 4-MIL.
3. CIRCUMFERENTIAL WRAPS OF TAPE OR PLASTIC TIE STRAPS SHALL BE PLACED AT 2-FT. INTERVALS ALONG THE BARREL OF THE PIPE.
4. THE POLYETHYLENE ENCASEMENT SHALL PREVENT CONTACT BETWEEN THE PIPE AND THE SURROUNDING BACKFILL AND BEDDING MATERIAL BUT IS NOT INTENDED TO BE A COMPLETELY AIRTIGHT OR WATERTIGHT ENCLOSURE. ALL LUMPS OF CLAY, MUD, CINDERS, AND SO FORTH, ON THE PIPE SURFACE SHALL BE REMOVED PRIOR TO INSTALLATION OF THE POLYETHYLENE ENCASEMENT. DURING INSTALLATION, CARE SHALL BE EXERCISED TO PREVENT SOIL OR EMBANKMENT MATERIAL FROM BECOMING TRAPPED BETWEEN THE PIPE AND THE POLYETHYLENE.
5. THE POLYETHYLENE FILM SHALL BE FITTED TO THE CONTOUR OF THE PIPE TO EFFECT A SNUG, BUT NOT TIGHT, ENCASEMENT WITH MINIMUM SPACE BETWEEN THE POLYETHYLENE AND THE PIPE. SUFFICIENT SLACK SHALL BE PROVIDED IN CONTOURING TO PREVENT STRETCHING THE POLYETHYLENE WHERE IT BRIDGES IRREGULAR SURFACES, SUCH AS BELL-SPIGOT INTERFACES, BOLTED JOINTS, OR FITTINGS, AND TO PREVENT DAMAGE TO THE POLYETHYLENE DUE TO BACKFILLING OPERATIONS. OVERLAPS AND ENDS SHALL BE SECURED WITH ADHESIVE TAPE, STRING, PLASTIC TIE STRAPS, OR ANY OTHER MATERIAL CAPABLE OF HOLDING THE POLYETHYLENE ENCASEMENT IN PLACE UNTIL BACKFILLING OPERATIONS ARE COMPLETE.
6. THREE LAYERS OF POLYETHYLENE ADHESIVE TAPE SHALL BE WRAPPED AROUND ANY POLYWRAPPED PIPE WHERE A TAPPING MACHINE WILL BE PLACED. ALL COPPER SERVICES CONNECTED TO A PIPE WRAPPED IN POLYETHYLENE ENCASEMENT SHALL BE WRAPPED WITHIN THREE FEET OF THE PIPE.



NOTES:
1. MINIMUM LENGTH OF THE CURB SECTIONS SHALL BE 3'-0".
2. FOR ALL CURBS WITH RADIUS LESS THAN 15' INSTALL STONES CUT TO THE RADIUS REQUIRED (NOT STRAIGHT SECTIONS).

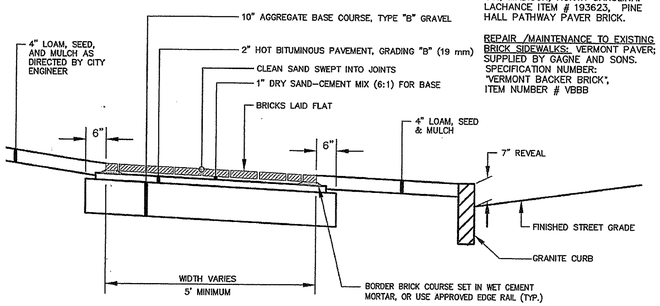
4 SLOPED GRANITE CURB SECTION ON–SITE

NOT TO SCALE



1 PAVEMENT CUTTING & MATCHING SECTION

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

5 BRICK SIDEWALK WITH BITUMINOUS BASE (I–10)

NOT TO SCALE

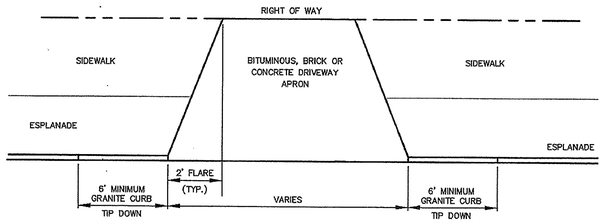
CONSTRUCTION	USE
1 1/4" HMA MDOT 9.5mm 2 1/4" HMA MDOT 19.0mm 4" COMPACTED AGGREGATE BASE, MDOT 703.06(a) TYPE A 15" COMPACTED AGGREGATE SUBBASE, MDOT 703.06(b) TYPE D COMPACTED SUBGRADE	BITUMINOUS FULL DEPTH CONSTRUCTION
1 1/4" HMA MDOT 9.5mm 2 1/4" HMA MDOT 19.0mm COMPACTED AGGREGATE BASE, MDOT 703.06(a) TYPE A COMPACTED EXISTING BASE & SUBBASE	BITUMINOUS SHIM & PAVEMENT
4" TOPSOIL, NO STONES OVER 3/4" DIA. GRANULAR MATERIAL IN FILL AREAS COMPACTED SUBGRADE	GRASS ALL DISTURBED AREAS
3" BARKMULCH PREPARED SUBGRADE	PLANT BED BARKMULCH

NOTES:
1. HMA = HOT MIX ASPHALT.
   MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
2. ALL COURSE THICKNESS AFTER FINAL COMPACTION.

2 SURFACE FINISHES ON–SITE

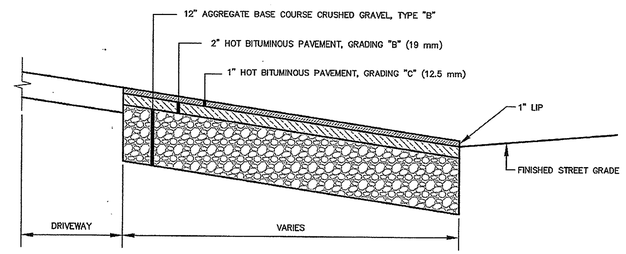
NOT TO SCALE

NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R. O. W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.



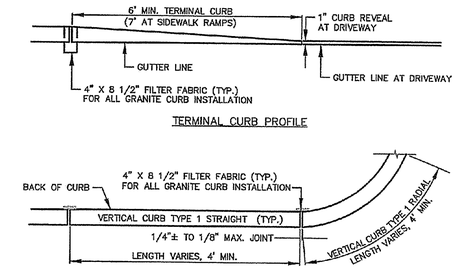
6 DRIVEWAY APRON LAYOUT (I–9)

NOT TO SCALE



7 BITUMINOUS DRIVEWAY APRON (I–13)

NOT TO SCALE



3 VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREET (I–17)

NOT TO SCALE

Plan 8

PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE., PORTLAND, ME. 04103
TEL: 207.781.3242 FAX: 207.781.4245

STATE OF MAINE
THOMAS S GREER No. 4208
REGISTERED PROFESSIONAL ENGINEER
6/30/15

REV.	DATE	DESCRIPTION
2	6/30/15	REV'D PER STAFF REVIEW AND COMMENTS
1	5/7/15	ISSUED FOR SUBDIVISION & SITE PLAN APPROVAL

AVESTA BUTLER PAYSON PL
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

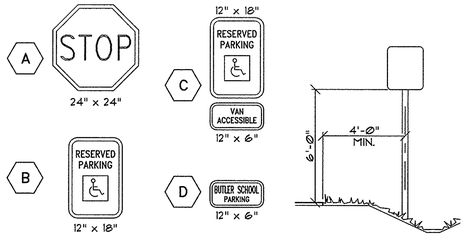
SCALE: AS SHOWN
DATE: APRIL 23, 2015
PROJECT: 15108
DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TSG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

DETAILS

C2.3

MAP/LOT 55/A/4

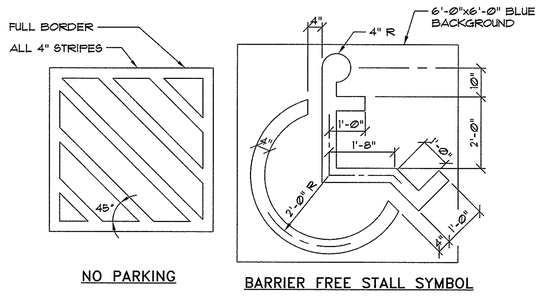


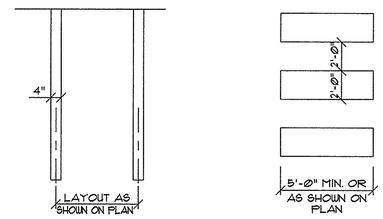
NOTES:

1. SIGNS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES REVISION OF DECEMBER 2002, SECTION 645.
2. ALL PERMANENT SIGNS ON THIS PROJECT ARE CLASSIFIED UNDER SECTION 645.03(b) TYPE I REGULATORY WARNING AND ROUTE MARKER ASSEMBLY SIGNS.
3. SIGN MATERIAL SHALL BE AS SPECIFIED IN SECTION 719 OF THE MDOT STANDARD SPECIFICATIONS.
4. POSTS SHALL BE METAL CHANNELS AS SPECIFIED IN SECTION 720.08. ALTERNATE POSTS MAY BE 4"x6" WOOD AS SPECIFIED IN SECTION 720.12, AS APPROVED BY ENGINEER.
5. POSTS IN THE PUBLIC RIGHT-OF-WAY TO BE ON BREAKAWAY POSTS AS SPECIFIED IN SECTION 720 OF THE MDOT STANDARD SPECIFICATIONS.

7 ROAD SIGN LEGEND

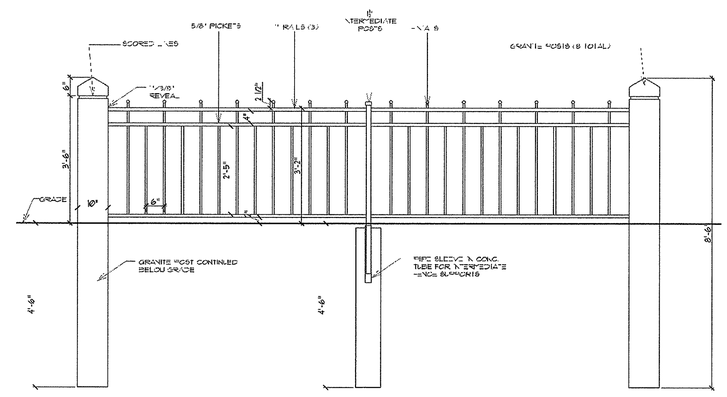
NOT TO SCALE





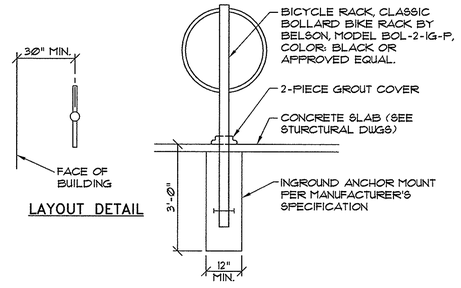
8 STRIPING DETAILS

NOT TO SCALE



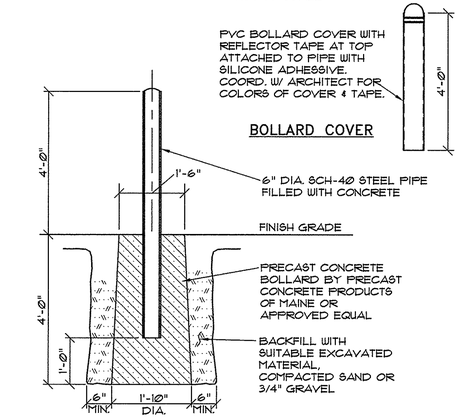
1 DECORATIVE FENCE SECTION

NOT TO SCALE



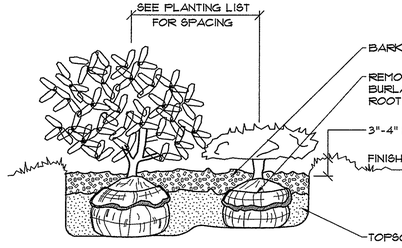
4 BIKE RACK DETAIL

NOT TO SCALE



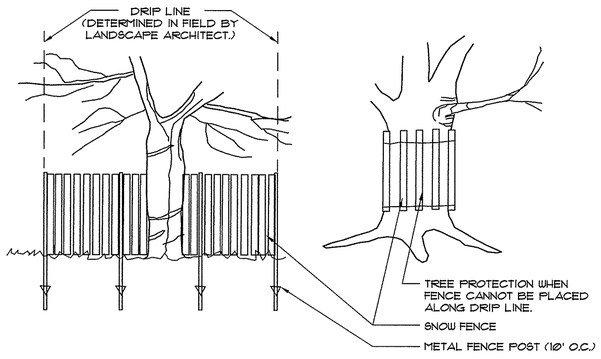
2 STEEL BOLLARD DETAIL

NOT TO SCALE



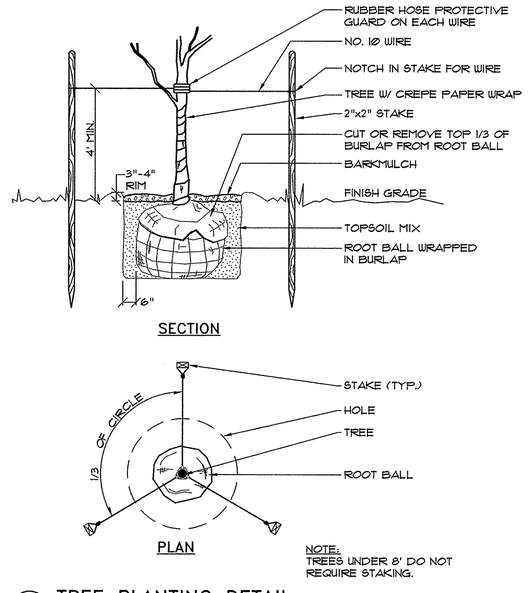
5 SHRUB PLANTING DETAIL

NOT TO SCALE



6 TREE PROTECTION FENCE

NOT TO SCALE



3 TREE PLANTING DETAIL

NOT TO SCALE

Plan 9

PINKHAM & GREER
CIVIL ENGINEERS
28 VAUGHAN AVE., PORTLAND, ME. 04103
TEL: 207.781.5242 FAX: 207.781.4245

STATE OF MAINE
THOMAS S. GREER
No. 7586
LICENSED PROFESSIONAL ENGINEER
6/30/15

REV.	DATE	DESCRIPTION
2	6/30/15	REV'D PER STAFF REVIEW AND COMMENTS
1	5/7/15	ISSUED FOR SUBDIVISION & SITE PLAN APPROVAL

AVESTA BUTLER PAYSON PL
307 CUMBERLAND AVENUE
PORTLAND, ME. 04101

SCALE: AS SHOWN
DATE: APRIL 23, 2015
PROJECT: 15108
DRN BY: RJS/JDC
DESG BY: TSG
CHK BY: TSG

17 CARLETON STREET
CARLETON STREET, PORTLAND, MAINE

DETAILS

C2.4

MAP/LOT 55/A/4

LEGAL DESCRIPTION "PLAY GROUND LOT"

A CERTAIN LOT OR PARCEL OF LAND SITUATED ON THE EASTERLY SIDE OF CARLETON STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE BOUNDED AND DESCRIBED AS FOLLOWS: BEGINNING AT AN IRON PIPE ON THE EASTERLY SIDELINE OF SAID CARLETON STREET AT THE SOUTHWESTERLY CORNER OF LAND OF IRVING MCCALMON, SAID IRON PIPE ALSO BEING 100.00 FEET DISTANT AS MEASURED ALONG SAID EASTERLY SIDELINE OF SAID CARLETON STREET ON A BEARING OF S 18° 35' 00" W FROM THE INTERSECTION OF THE SOUTHERLY SIDELINE OF WEST STREET AND SAID EASTERLY SIDELINE OF CARLETON STREET;

THENCE FROM SAID POINT OF BEGINNING S 71° 35' 00" E ALONG SAID IRVING MCCALMON LAND, LUND DEVELOPMENT COMPANY LAND AND NATIONAL CASKET COMPANY INCORPORATED LAND 221.34 FEET TO A COMMON PASSAGEWAY AND AN IRON PIPE;

THENCE S 18° 25' 00" W ALONG SAID COMMON PASSAGEWAY 12.55 FEET TO AN IRON PIPE;

THENCE S 54° 39' 40" W ALONG A COMMON PASSAGEWAY 159.70 FEET TO LAND NOW OR FORMERLY OF WESLEY A. KINNEY AND AN IRON PIPE;

THENCE N 71° 37' 10" W 127.45 FEET TO SAID EASTERLY SIDELINE OF CARLETON STREET AND AN DRILL HOLE;

THENCE N 18° 38' 00" E ALONG SAID EASTERLY SIDELINE OF CARLETON STREET 141.43 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION "SCHOOL HOUSE LOT" PARCEL 1

A CERTAIN LOT OR PARCEL OF LAND AND THE BUILDINGS THEREON, SITUATED ON WEST AND PINE STREETS IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHERLY SIDELINE OF WEST STREET AND THE NORTHWESTERLY SIDELINE OF PINE STREET;

THENCE S 54° 49' 50" W ALONG SAID NORTHWESTERLY SIDELINE OF PINE STREET 175.00 FEET TO A RAILROAD SPIKE IN A COMMON PASSAGEWAY;

THENCE N 35° 10' 10" W WITHIN SAID COMMON PASSAGEWAY 113.98 FEET TO A RAILROAD SPIKE;

THENCE S 54° 49' 50" W WITHIN SAID COMMON PASSAGEWAY 16.83 FEET TO A RAILROAD SPIKE;

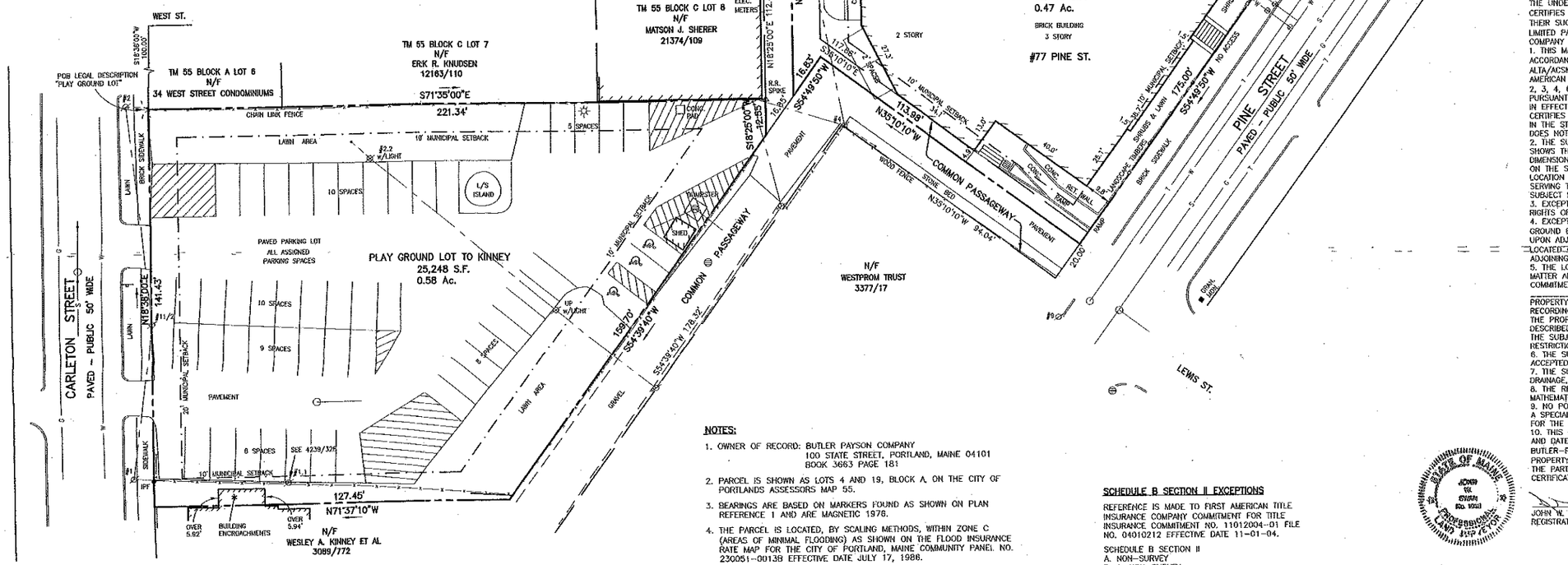
THENCE N 18° 25' 00" E WITHIN SAID COMMON PASSAGEWAY 98.91 FEET TO A RAILROAD SPIKE AND SAID SOUTHERLY SIDELINE OF WEST STREET;

THENCE S 71° 35' 00" E ALONG SAID SOUTHERLY SIDELINE OF WEST STREET 188.38 FEET TO AN ANGLE POINT;

THENCE S 36° 17' 00" E ALONG SAID SOUTHERLY SIDELINE OF WEST STREET 21.10 FEET TO THE POINT OF BEGINNING.

LEGEND:

- MONUMENT FOUND
- IRON PIPE OR ROD FOUND
- GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- MANHOLE
- CATCH BASIN
- SIGN
- FENCE
- CURB
- OVERHEAD WIRES
- WATER LINE
- GAS LINE
- SANITARY SEWER
- STORM DRAIN


WEST ST.
WEST STREET
PAVED – PUBLIC 60' WIDE
S71°35'00"E
188.38'
NO ACCESS
BRICK SIDEWALK
COBBLE STONE
LANDSCAPE TIMBERS
FLAG POLE "ANDREWS SQUARE" MONUMENT
POB LEGAL DESCRIPTION "SCHOOL HOUSE LOT"
S36°17'00"E 21.10'
20.00
20' COMMON PASSAGEWAY
N18°25'00"E 98.91'
79.16' DECORATIVE FENCE
RETAINING WALL
20' MUNICIPAL SETBACK
CONC. RAMP
PATIO
DRAIN
3 STORY
FORMERLY BUTLER SCHOOL
SCHOOL LOT
20,330 S.F.
0.47 Ac.
BRICK BUILDING
3 STORY
#77 PINE ST.
2 STORY
LANDSCAPING & LAWN
X-WALK
CLARK ST.
PINE STREET
PAVED – PUBLIC 50' WIDE
S54°49'50"W 175.00'
N35°10'10"W 113.98'
10' MUNICIPAL SETBACK
SHRUBS & LAWN
S54°49'50"W 16.83'
N18°25'00"E 112.47'
ELEC. METERS
TM 55 BLOCK C LOT 8
N/F
MATSON J. SHERER
21374/109
TM 55 BLOCK C LOT 7
N/F
ERK R. KNUDSEN
12163/110
TM 55 BLOCK A LOT 8
N/F
34 WEST STREET CONDOMINIUMS
POB LEGAL DESCRIPTION "PLAY GROUND LOT"
S18°35'00"W 100.00'
CHAIN LINK FENCE
S71°35'00"E
221.34'
5 SPACES
LAWN AREA
10' MUNICIPAL SETBACK
#2.2 W/LIGHT
10 SPACES
L/S ISLAND
PAVED PARKING LOT
ALL ASSIGNED PARKING SPACES
PLAY GROUND LOT TO KINNEY
25,248 S.F.
0.58 Ac.
CARLETON STREET
PAVED – PUBLIC 50' WIDE
N18°38'00"E 141.43'
9 SPACES
6 SPACES
SEE 4239/328
#1
#1.1
IPF
127.45'
N71°37'10"W
OVER 5.92'
BUILDING ENCROACHMENTS
OVER 5.94'
N/F
WESLEY A. KINNEY ET AL
3089/772
#3
#2
#4
#5
#6
#7
#8
#9
#10
#11
#12
#13
#14
#15
#16
#17
#18
#19
#20
#21
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#23
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#26
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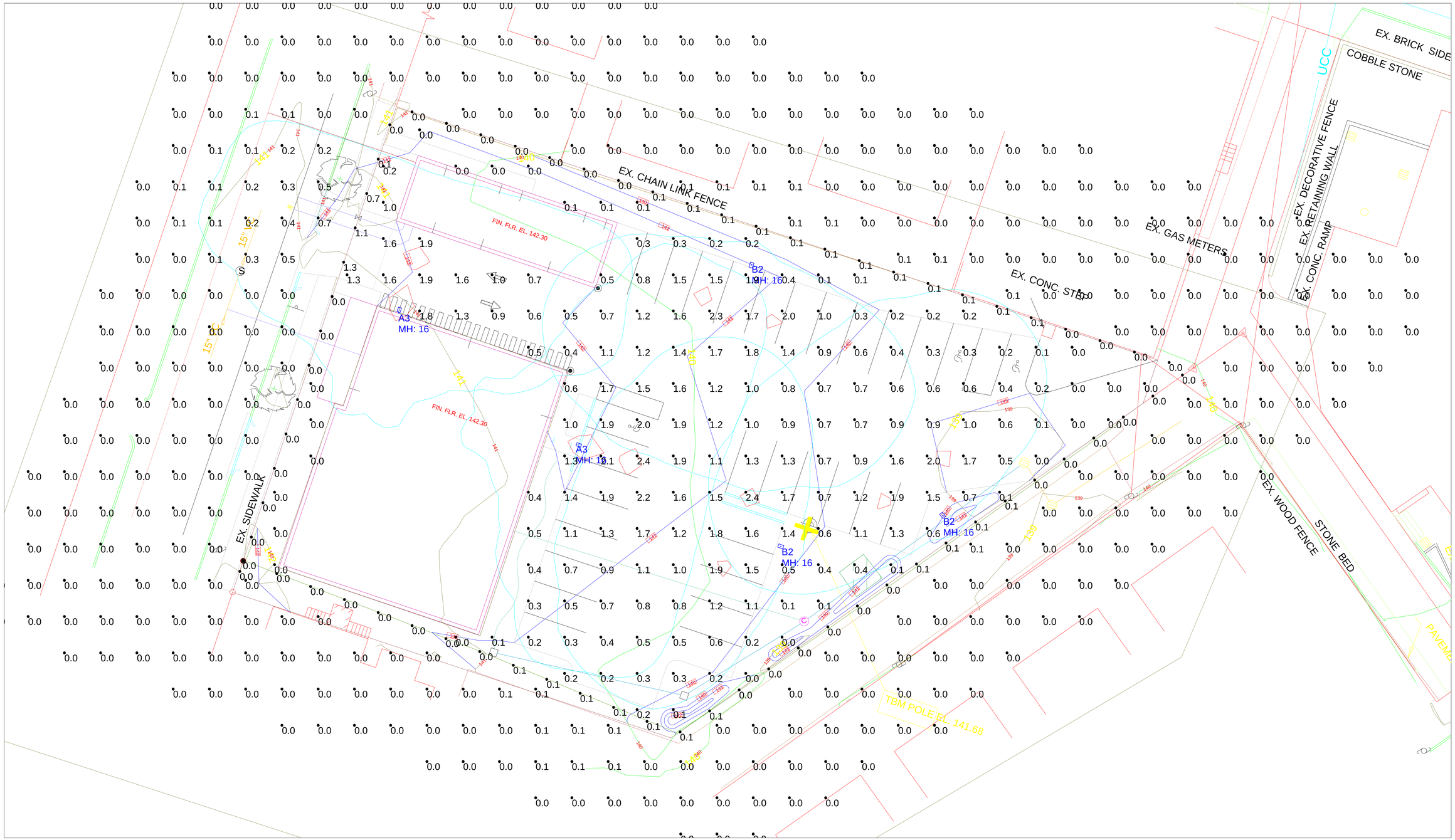
#28
#29
#30
#31
#32
#33
#34
#35
#36
#37
#38
#39
#40
#41
#42
#43

Calculation Summary					
Label	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
FULL SITE	0.83	2.4	0.0	N.A.	N.A.
OFF PROPERTY	0.02	0.7	0.0	N.A.	N.A.
PARKING	1.12	2.7	0.2	5.60	13.50
PROPERTY LINE	0.08	1.3	0.0	N.A.	N.A.

Luminaire Schedule (note fixture catalogue numbers are not complete)						
Type	**Symbol**	**Qty**	**Lum. Lumens**	**LLF**	**Lum. Watts**	**Description**
B2		3	3558	0.900	50	VP-S/22NB-50/BLC/5K
A3		2	4710	0.900	50	22NB-50-T3-5K

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS MAY SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES TAKEN AS SHOWN IN CALCULATION SUMMARY UNLESS OTHERWISE INDICATED.
4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
7) CHECK GRAPHIC SCALE. DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY OCCUR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.

Plan 12



PLAN VIEW

CARLTON ST PARKING.AGI

TITLE
CARLTON STREET
PORTLAND, ME
SITE LIGHTING LAYOUT

Date:6/18/2015

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

GENERATED FOR:
BENNETT ENGINEERING

SCALE NOT TO SCALE

Page 1 of 1

SWANEY LIGHTING ASSOCIATES, INC.

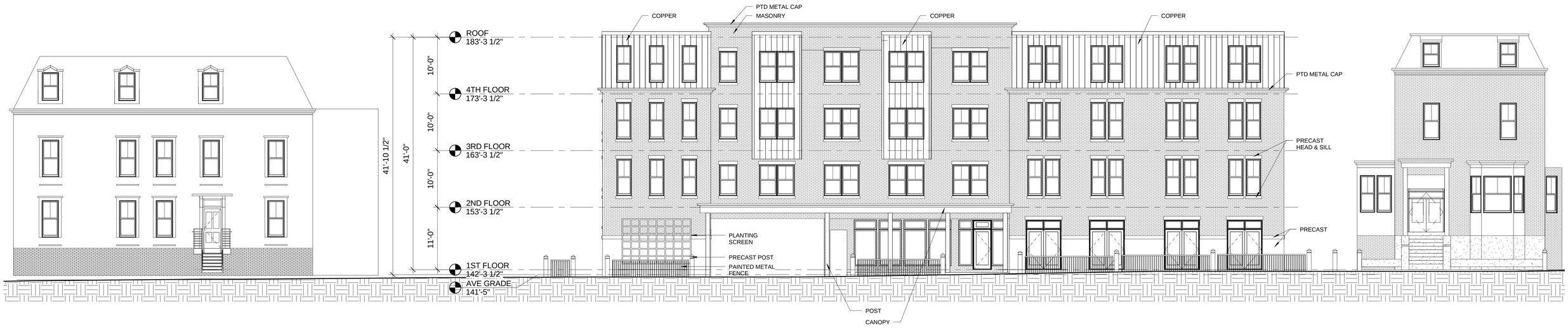
NOTICE: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SWANEY LIGHTING ASSOCIATES. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT THE DRAWING WILL BE TREATED AS CONFIDENTIAL. THIS DRAWING IS TO BE USED FOR NO PURPOSE OTHER THAN AS DETAILED IN WRITING BY SWANEY LIGHTING ASSOCIATES, AND IS TO BE RETAINED BY THE OWNER OR RETURNED UPON REQUEST AND IS NOT TO BE COMMUNICATED, DISCLOSED OR COPIED; EXCEPT AS PERMITTED BY THE AGREEMENT BETWEEN THE PARTIES.
IF LIGHTING FIXTURES INCLUDED IN THIS DRAWING, IT IS PROVIDED USING FIXTURE PHOTOMETRICS OF LIGHTING FIXTURES INCLUDED IN THIS DRAWING. IT IS THE RESPONSIBILITY OF THE PURCHASER TO ENSURE THAT ANY LIGHTING FIXTURE SELECTED AND/OR PURCHASED FROM THIS DRAWING OR OTHER SOURCE PERFORMANCE SHOWN IN IES FILE IS NOT THE RESPONSIBILITY OF THE MANUFACTURER, IT'S USE FOR ANY OTHER PURPOSE IS NOT AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.

Plan 14

Plan 15

Plan 16

Plan 17



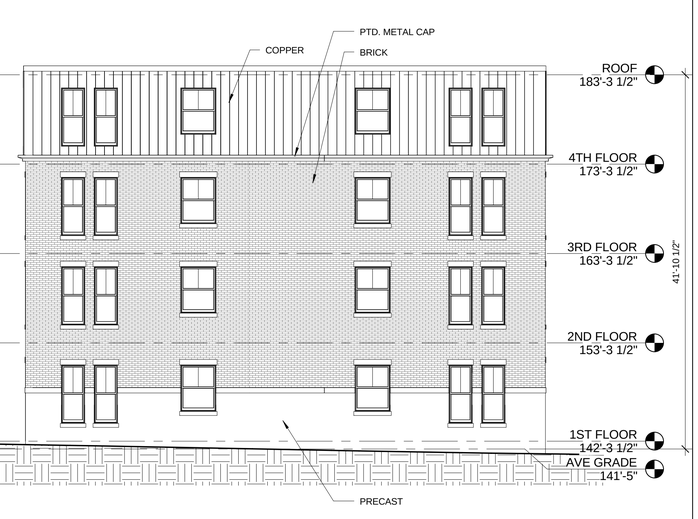
1 WEST ELEVATION
1/8" = 1'-0"

GENERAL NOTES:
1. AVERAGE GRADE BY DEFINITION: 4 CORNER AVERAGE GRADE - NW 141.2' + NE 142.0' + SE 141.1' + SW 141.5' = 565.8' / 4 = 141'-5" (AVERAGE GRADE)

2. BUILDING HEIGHT: THE VERTICAL MEASUREMENT FROM AVERAGE GRADE TO HIGHEST POINT OF THE ROOF BEAMS = 41'-10 1/2"

3 NORTH ELEVATION
1/8" = 1'-0"

2 EAST ELEVATION
1/8" = 1'-0"



4 SOUTH ELEVATION
1/8" = 1'-0"

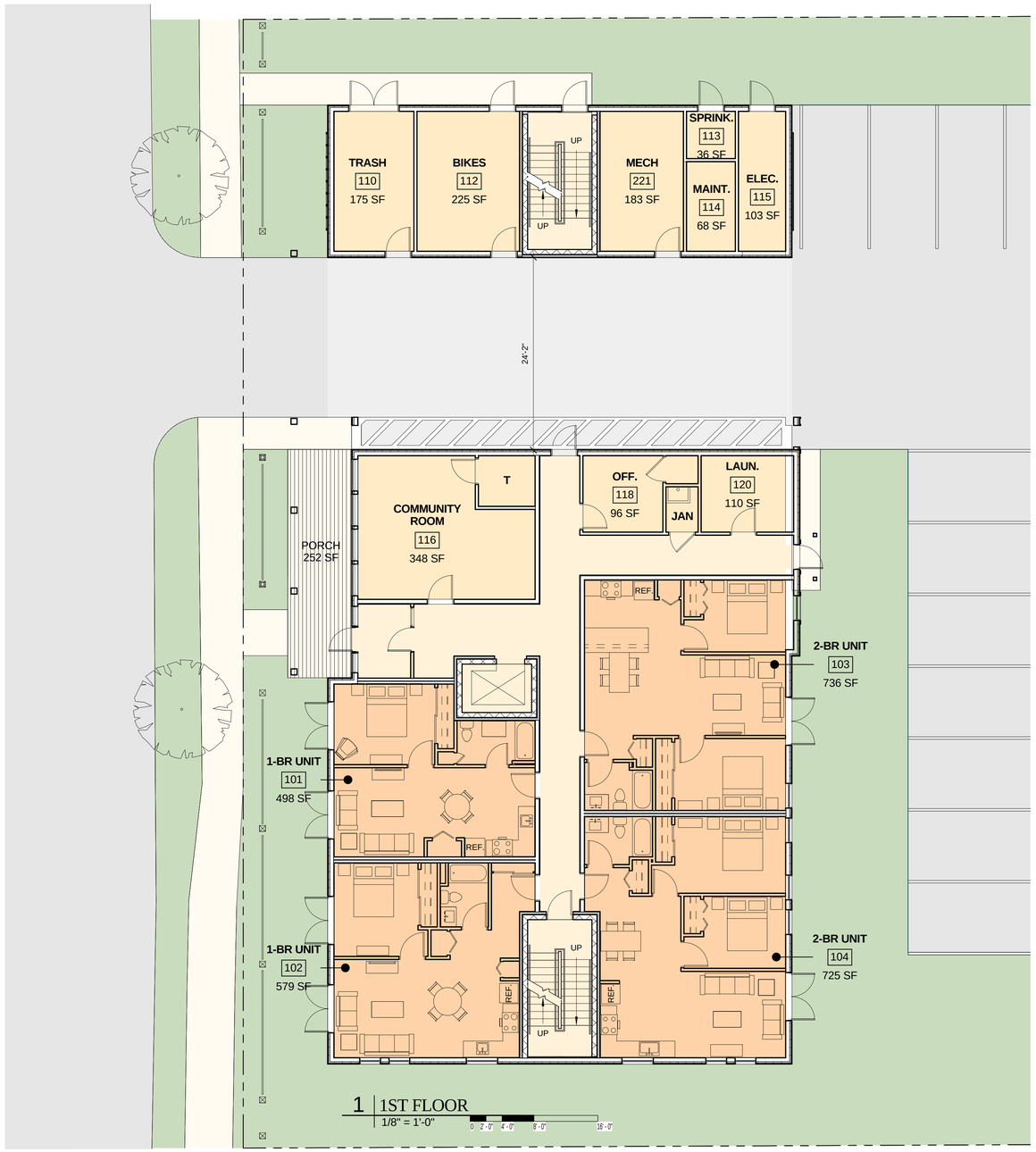
CARLETON STREET

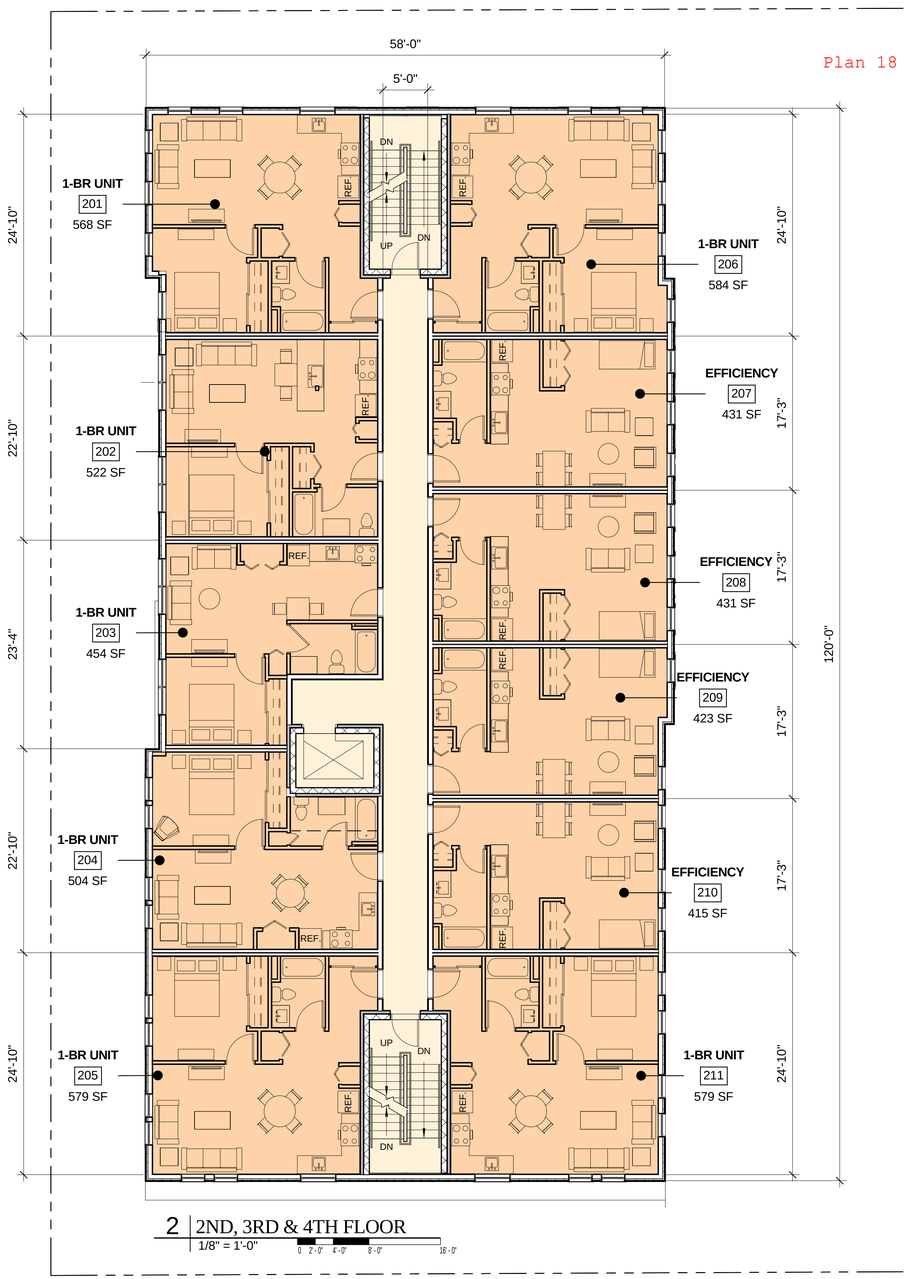
Carleton Street, Portland, Maine

JUNE 4, 2015

A2.1

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101





GROSS SF CALCULATIONS:
FOOTPRINT (4 FLOORS) 6,960 GSF +
TOTAL 27,840 GSF

TOTAL: 37 UNITS

SPACE CLASSIFICATIONS (MEASURED ROCK TO ROCK)

1ST FL: DRIVE ISLE UNDER BUILDING: **1,390 SF**

1ST FL. UNITS: **2,529 SF**

1ST FL. COMMUNITY SPACE, CIRCULATION, UTILITY: **2,392 SF**

UPPER FLOORS: UNITS: **5,490 SF** (ROCK TO ROCK)

CIRCULATION: **800 SF** (ROCK TO ROCK)

CARLETON STREET

Carleton Street, Portland, Maine

JUNE 2, 2015

A1.2

ARCHETYPE architects
48 Union Wharf Portland, Maine 04101

Memorandum
Planning and Urban Development Department
Planning Division

To: Stuart O'Brien, Chair and Members of the Portland Planning Board

From: Jean Fraser, Planner

Date: July 10, 2015

Re: Level III Site Plan and Subdivision; 605 Stevens Avenue;
Motherhouse Associates, LP & Sea Coast at Baxter Woods Associates, LLC, Applicant
Project #: 2015-110 CBL: 136 E006001

Meeting Date: July 14, 2015

I. INTRODUCTION

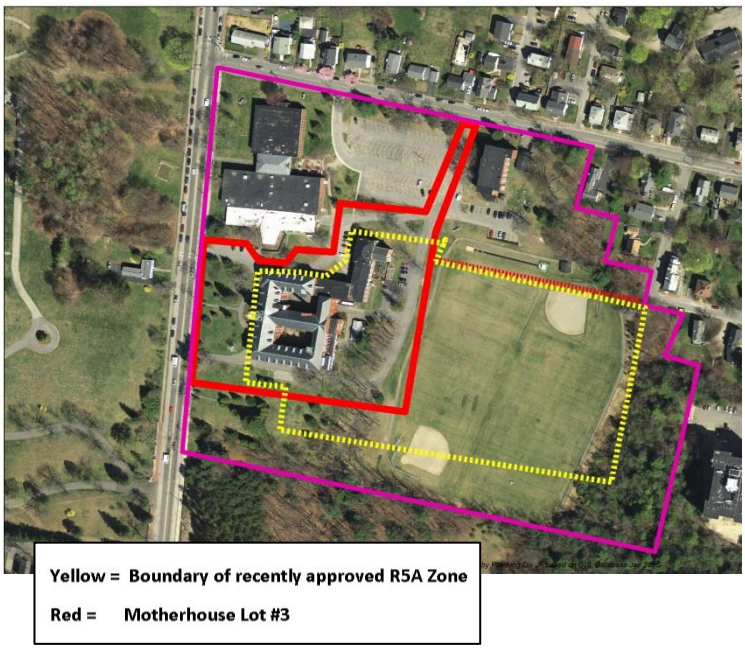
Motherhouse Associates, LP & Sea Coast at Baxter Woods Associates, LLC have requested a Level III site plan and subdivision review for the proposed rehabilitation of the former St. Joseph's Convent (known as the Motherhouse) at 605 Stevens Avenue into 88 units of senior housing, comprising 66 affordable units and 22 market rate units along with 73 parking spaces with 9 handicap spaces.

The Planning Board is required by ordinance to give this application an expedited review.

The Motherhouse is located on the 4.39 acre Lot 3 of a proposed 4-lot subdivision of the overall 18.98 acre property that is being purchased from the Sisters of Mercy.

The site is subject to the recently approved R5A Map and Text amendments that the Planning Board considered earlier this year. The Council approved the Text amendments exactly as recommended by the Planning Board, but amended the map so that the R5A zone applied to a smaller area and resulted in a lower density for the development parcel comprising Lots 3 and 4.

The amended R5A zone includes the Motherhouse building itself (see aerial to right) but 1.73 acres of the site along Stevens Avenue and Baxter Woods is in the R5 zone.



The applicant has confirmed (Cover letter) that a Master Development Plan application for Lot #4 (the open land mostly to the rear of the Motherhouse) will follow on from this application.

The review includes three reviews:

- Subdivision Review (Section 14-497) of the overall lot split into 4 lots, including Lot #3 for the Motherhouse;
- Subdivision Review (Section 14-497) of the division of the Motherhouse into 88 units;
- Site plan Review (Section 14-526) of the proposed multifamily development of 88 apartments.

The application does not include any waiver requests.

A notice of this Workshop was sent to 127 property owners within 500 feet and interested citizens, and appeared in the July 3rd / 7th, 2015 editions of the *Portland Press-Herald*. A Neighborhood Meeting will be required for this project. As of the time of completing this Memo, one public comment on this site plan/subdivision application has been received (PC SP 1) and any additional comments received as from now until the Workshop will be circulated at the Workshop.

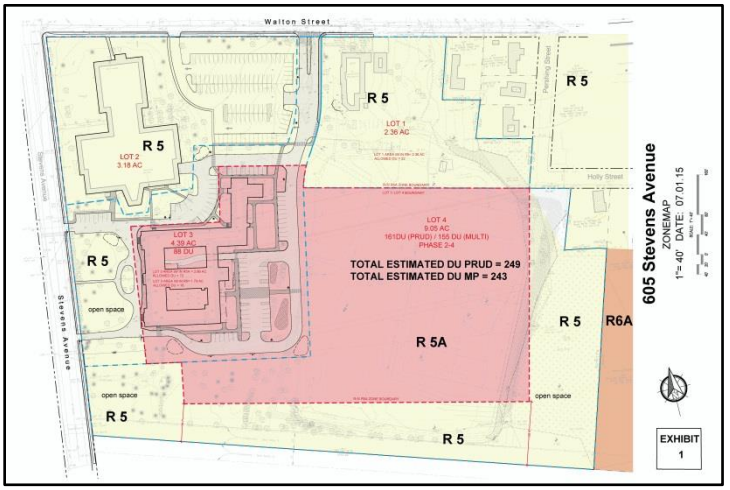
II. PROJECT DATA

Existing Zoning	R5: 1.73 acres R5A (recently approved): 2.66 acres		
Existing Use			
Proposed Use	Multi-family senior residential		
Proposed Development Program	66 affordable and 22 market rate senior apartment, of which 20 are 1 bedroom and 48 are studio		
Parcel Size	191,056 sq ft (Lot #3 Motherhouse)		
	Existing	***Proposed***	***Net Change***
Building Footprint	24,065 SF	24,065 SF	0 SF
Building Floor Area	102,241 SF	102,241 SF	0 SF
Impervious Surface Area	167, 748 SF	168,047 SF	299 SF (see Peer Engineer comments
Parking Spaces (on site)	34+	73	39
Bicycle Parking Spaces	0	12 + 24 inside	36
Estimated Cost of Project	TBD		

III. BACKGROUND AND EXISTING CONDITIONS

a. Background

The Board considered the zoning amendment request in the spring and the council has approved the Map Amendment as shown in the plan at right.



b. Existing Conditions

The existing Motherhouse building is a 5-story building dating 1909 and 1921 and set back about 125 feet from Stevens Avenue. It is a vacant building with historical importance and eligible for designation as a local landmark, although currently it has no historic designation. The "Smith" Wing part of the building

is not included in the proposal as it is currently occupied and will be separated as a second condominium unit.

IV. PROPOSED DEVELOPMENT

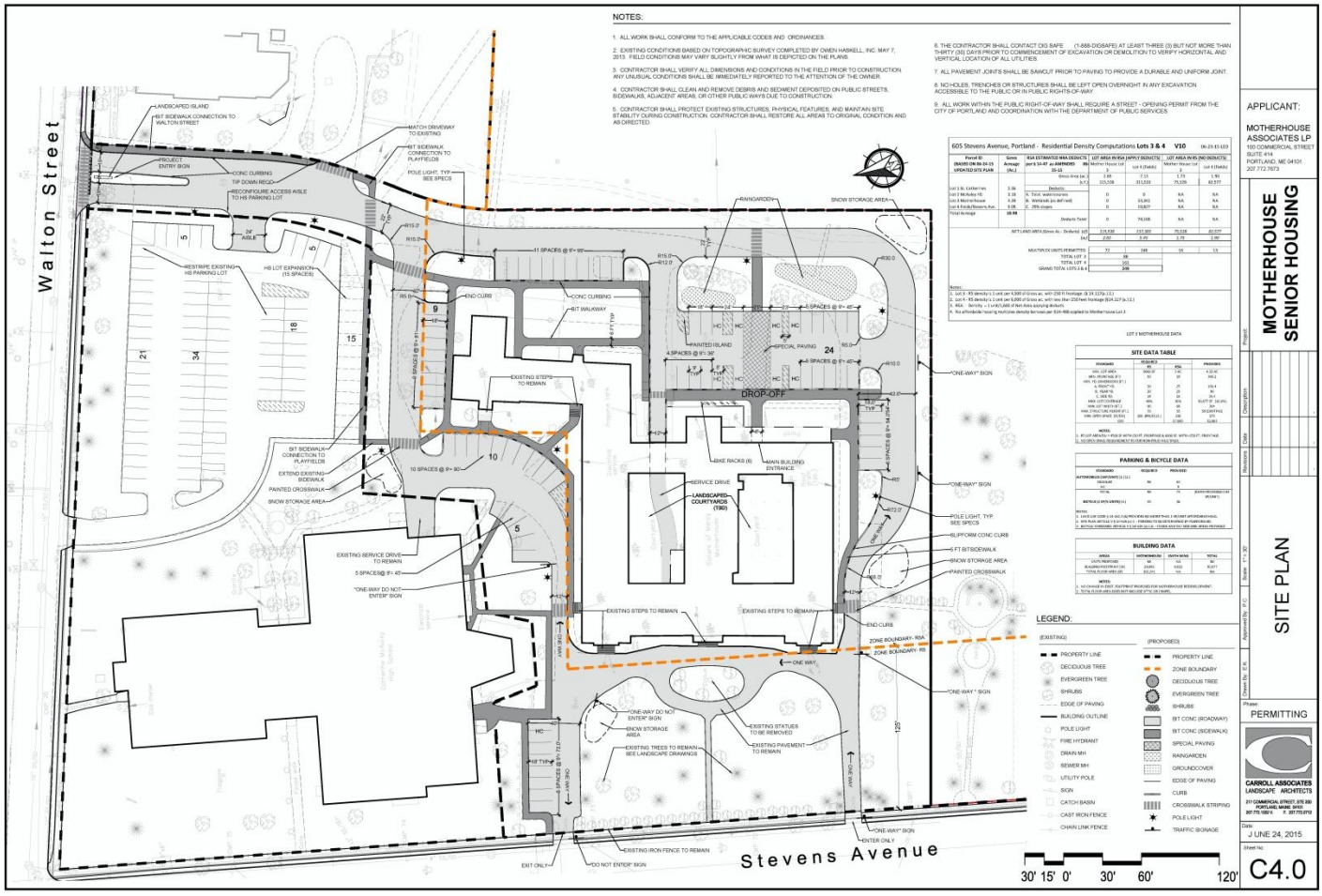
The applicant has described the proposal in detail at the beginning of the main application document (Attachment A) and in summary includes:

Subdivision: Creation of 88 units within the Motherhouse (see Sectional Recording Plat) and 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)

Site Plan:

- Rehabilitation of 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
- 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;
- Stormwater measures
- Landscaping.



V. RIGHT, TITLE AND INTEREST; FINANCIAL & TECHNICAL CAPACITY & SUMISSION REQUIREMENTS

The application is complete and includes all the required elements.

VI. ZONING ANALYSIS

The applicant has provided a table (Exhibit 5 of Attachment A) showing that the proposals meet the relevant zoning requirements. Based on the areas within the R5 and R5A zones, a total of 88 units can be created on Lot #3.

V. SUBDIVISION REVIEW *(Section 14-497(a))*

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff preliminary comments are included where staff have identified issues, but the Board should note that some reviewers have not been able to provide comments due to the holiday week and further comments will be available at the Workshop.

1. Water, Air Pollution

The Peer Engineer (Attachment 2) has indicated that the proposed stormwater quality treatment is acceptable.

2 & 3. Adequacy of Water Supply

The applicant has provided evidence of capacity from the Portland Water District (Exhibit 14 of Attachment A).

4. Soil Erosion

The applicant has met the MDEP requirements although some details have been requested by the Peer Engineer Reviewer (Attachment 2).

5. Impacts on Existing or Proposed Highways and Public Roads

Tom Errico, the City's consulting traffic engineer, has reviewed the submitted traffic analysis (Attachment B) and provided the following comments (Attachment 1):

> *I have reviewed the site plan prepared by Carroll Associates and traffic impact study prepared by Maine Traffic Resources and offer the following preliminary traffic comments.*
>
> - *The traffic impact study notes that the project will generate 18 AM peak hour and 22 PM peak hour trips. I need to review this in more detail but given the volumes estimated, the project would not be expected to have a significant impact on traffic conditions in the area.*
> - *As noted in the traffic impact study, there are no identified High Crash Locations in the project area.*
> - *The High School Parking lot layout is being modified. Dimensional details for the proposed layout should be provided.*
> - *The modified driveway at Walton Street seems very wide with 15-foot entry and exit lanes. The applicant should provide information in support of the driveway design.*
> - *The aisle width (22 feet) adjacent to the 8 parking spaces on the one-way egress road near Stevens Avenue does not meet City standards. Information in support of a formal technical standard waiver request shall be provided.*
> - *The applicant should provide dimensional details for the area on the north side of the building where the 5 and 10 space parking areas are located.*
> - *The applicant should review landscaping and other features as it relates to providing safe sight distance when existing the site onto Stevens Avenue. I am particularly concerned about safety for pedestrians on the sidewalk.*

- *A crosswalk is located at the egress driveway on Stevens Avenue and will need to be upgraded to meet accessibility standards. I would also like to review the location of the crosswalk to determine optimal placement.*
- *A detail should be provided for the sidewalk ramp at the driveway on Walton Street to ensure that it is fully accessible.*
- *The project is proposing three driveways and exceeds City standards. I support a waiver from this standard given that two of the driveways are one-way and the third driveway functions as a shared driveway with the High School.*
- *The applicant should provide documentation that supports the parking supply being provided. The applicant shall conduct parking surveys (or obtain previously conducted surveys) at similar sites that are located off-peninsula. The applicant shall coordinate the methods of the survey with City staff.*

The applicant has responded to these comments and provided additional parking information in Attachment D; Mr Errico may have further comments for the Board at the Workshop and further discussions are suggested prior to the final plan submission.

6. Sanitary Sewer/Stormwater Disposal

The proposals have been reviewed by the Peer Engineer and the following is an extract from his comments in Attachment 2 (underlining by the Planner):

1) *According to the project data sheet in the Project Application Form, the proposed development will disturb more than one acre; the Applicant is therefore required to file a Notice of Intent to Comply with the Maine Construction General Permit and a copy of the notice should be forwarded to the City. The project data sheet also indicates that the project will result in a net increase in impervious area of 299 square feet; however, the Stormwater Management Report indicates that the net increase in pavement area will be 2,000 square feet, and the water quality calculations indicate an increase in impervious area of 14,570 square feet. The Applicant should clarify what the net change in impervious area on the Site will be as a result of the proposed development.*
2) *In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:*
    a) *Basic Standards: A Plan, notes, and details have been provided to address 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; however, Sheet C6.0 should specify locations for catch basin inlet protection devices.*
    b) *General Standards: The Applicant proposes to provide water quality treatment for over an acre of impervious area through use of drip filter strips, infiltration trenches, and underdrained soil filter systems. Although the exact amount of proposed impervious area is unclear at this time (see comment 3), the Applicant's proposal will provide water quality treatment for an impervious area in far excess of the proposed increase in impervious area; as such, the project meets the City's requirements for conformance with the General Standards.*
    c) *Flooding Standard: The Applicant's stormwater analysis compares pre-development (existing) stormwater runoff from the site with post-development (future) stormwater runoff. The results of their analysis indicate that the storage and infiltration measures associated with the proposed stormwater Best Management Practices will effectively reduce the volume and rate of stormwater runoff from the site. As such, the project is in conformance with the Flooding Standard. Based on review of the Applicant's proposal, the project should serve to benefit drainage conditions on the site, reduce inflow into the City's combined sewer system, and reduce the rate and volume of surface stormwater runoff into Baxter Woods.*

7. Solid Waste
The applicant has proposed an internal trash and recycling room for residential use and has stated that a private hauler will be contracted for the removal of solid waste.

8. Scenic Beauty
The City Arborist comments are expected to be available for the Workshop. It is understood that the applicant's Landscape Architect has discussed the project with Jeff Tarling and the proposal reflects those discussions.

9. Comprehensive Plan
The proposal includes affordable senior housing and addresses the Comprehensive Policies for housing.

10. Financial and Technical Capacity
This has been included in the application.

11. Wetland/Water Body Impacts
The Motherhouse proposal does not impact wetlands.

12. Groundwater Impacts
There are no anticipated detrimental impacts to groundwater supplies.

13. Flood-Prone Area
Per the city's existing flood maps, the development is not proposed in a flood zone.

VI. SITE PLAN REVIEW *(Section 14-526)*
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 preliminary comments are included where staff have identified issues, but the Board should note that some reviewers have not been able to provide comments due to the holiday week and further comments will be available at the Workshop.

1. Transportation Standards
[See above under subdivision review for impact on surrounding streets, access and circulation and parking]

a. Public Transit Access
The proposed development is located along a public transit route with bus stops nearby on both sides of Steven Avenue. The proposal includes pedestrian ways so that residents and visitors can access the public transit. It has not yet been determined whether a transit facility (eg bus shelter) would be a requirement in this case.

The applicant is willing to install ADA tipdowns and to consider relocation of the crosswalk in Stevens Avenue (Attachment D); further discussion is required as to whether relocation is necessary. The sidewalk along the frontage is in good condition.

b. Transportation Demand Management
A transportation demand management plan is not an absolute requirement for the proposed site plan but may be needed to support the level of proposed parking.

2. Environmental Quality Standards
a. Preservation of Significant Natural Features}
b. Landscaping and Landscape Preservation } These have not been reviewed.
c. Site Landscaping}

d. Water Quality/Storm Water Management/Erosion Control
See above under subdivision review.

3. Public Infrastructure and Community Safety Standards

a. Consistency with Master Plans: no comments at this time.

b. Public Safety and Fire Prevention

Keith Gautreau, of the City's Fire Prevention Bureau, has commented that he supports the extent of pavement at the rear of the building as it facilitates access to all four sides of the building and provides turn around room for emergency vehicles (Attachment 3). [the back entrance is the ADA entrance]

c. Availability and Capacity of Public Utilities

See above under subdivision review; the wastewater capacity letter is awaited..

4. Site Design Standards

a. Massing, Ventilation, and Wind Impact

b. Shadows

c. Snow and Ice Loading

d. View Corridors

There are no comments at this time.

e. Historic Resources

The Historic Preservation Program Manager Deb Andrews has confirmed that this proposal does not require a review under this program because it is separated by a street from a Historic Landscape district, there are no proposed alterations along the front of the site, and the anticipated review for historic tax credits would address any potential issues.

f. Exterior Lighting

The applicant has provided a cut sheet for the proposed lights but the application does not include the photometric plan; this would need to be included in the final submissions.

g. Noise and Vibration

Information on the location of any HVAC vents and mechanical equipment should be provided with the final plans.

h. Signage and Wayfinding

No signage or wayfinding is proposed at this time.

i. Zoning-Related Design Standards

The multi-family design standards (*Design Manual, Section (i))* apply to this project, but most are not relevant as they are building design related. There are two standards that would apply regarding the provision of open space and design of parking and paved areas:

- *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;*
- *The scale and surface area of parking, driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets;*

The City Arborist has been requested to offer comments on these standards.

VII. NEXT STEPS

- Address staff comments;
- Address additional comments of the Planning Board;
- Prepare final plan submission, including subdivision and site plan submittal requirements as included in 14-496(a) and (b) and 14-527(e) and (f) for review by the Planning Authority and Planning Board; and
- Hold final Planning Board Hearing.

ATTACHMENTS:

Staff Review comments and background information

1. Traffic Engineer Review preliminary comments
2. Peer Engineer Review comments
3. Fire Department Preliminary comments
4. City Arborist comments (not received at time of completing the memo)
5. DPS (David Margolis-Pineo) comments (not received at time of completing the memo)

Public comments

PC SP 1 C MilNeil

Applicant's Submittal

A. Application and supporting documents
B. Traffic Study
C. Stormwater Management
D. Additional Traffic and Parking Info

Plan Set

(see cover sheet for index)

Att. 1

From: Tom Errico <thomas.errico@tylin.com>
To: Jean Fraser <JF@portlandmaine.gov>
CC: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@port...
Date: 7/1/2015 4:46 PM
Subject: Motherhouse Senior Housing - Preliminary Traffic Comments

Jean - I have reviewed the site plan prepared by Carroll Associates and traffic impact study prepared by Maine Traffic Resources and offer the following preliminary traffic comments.

* The traffic impact study notes that the project will generate 18 AM peak hour and 22 PM peak hour trips. I need to review this in more detail but given the volumes estimated, the project would not be expected to have a significant impact on traffic conditions in the area.

* As noted in the traffic impact study, there are no identified High Crash Locations in the project area.

* The High School Parking lot layout is being modified. Dimensional details for the proposed layout should be provided.

* The modified driveway at Walton Street seems very wide with 15-foot entry and exit lanes. The applicant should provide information in support of the driveway design.

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* The applicant should provide documentation that supports the parking supply being provided. The applicant shall conduct parking surveys (or obtain previously conducted surveys) at similar sites that are located off-peninsula. The applicant shall coordinate the methods of the survey with City staff.

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
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Falmouth, ME 04105
207.781.4721 (main)
207.347.4354 (direct)
207.400.0719 (mobile)
207.781.4753 (fax)
thomas.errico@tylin.com<mailto:thomas.errico@tylin.com>
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T 207.774.2112
F 207.774.6635

Att. 2

MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, P.E.
DATE: July 9, 2015
RE: Motherhouse Senior Housing, Final Level III Site Plan Application

Woodard & Curran has reviewed the Final Level III Site Plan Application for the proposed senior housing development located at 605 Stevens Avenue in Portland, Maine. The project involves the rehabilitation of the existing "motherhouse" and associated site and circulation improvements.

Documents Reviewed by Woodard & Curran

- Final Level III Site Plan Application and attachments, dated June 24, 2015, prepared by Licht Environmental Design, LLC, on behalf of Motherhouse Associates LP and Sea Coast at Baxter Woods Associates, LLC.
- Engineering Plans, Sheets C1-C9.1, dated June 24, 2015, prepared by FST, on behalf of Motherhouse Associates LP and Sea Coast at Baxter Woods Associates, LLC.

Comments

1) Site lighting is proposed, but a photometric plan has not been received at this time. The Applicant should provide a photometric plan in accordance with Section 12 of the City of Portland Technical Manual.
2) According to the project data sheet in the Project Application Form, the proposed development will disturb more than one acre; the Applicant is therefore required to file a Notice of Intent to Comply with the Maine Construction General Permit and a copy of the notice should be forwarded to the City. The project data sheet also indicates that the project will result in a net increase in impervious area of 299 square feet; however, the Stormwater Management Report indicates that the net increase in pavement area will be 2,000 square feet, and the water quality calculations indicate an increase in impervious area of 14,570 square feet. The Applicant should clarify what the net change in impervious area on the Site will be as a result of the proposed development.
3) 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: A Plan, notes, and details have been provided to address 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; however, Sheet C6.0 should specify locations for catch basin inlet protection devices.
   b) General Standards: The Applicant proposes to provide water quality treatment for over an acre of impervious area through use of drip filter strips, infiltration trenches, and underdrained soil filter systems. Although the exact amount of proposed impervious area is unclear at this time (see comment 3), the Applicant's proposal will provide water quality treatment for an impervious area in far excess of the proposed increase in impervious area; as such, the project meets the City's requirements for conformance with the General Standards.
   c) Flooding Standard: The Applicant's stormwater analysis compares pre-development (existing) stormwater runoff from the site with post-development (future) stormwater runoff. The results of their analysis indicate that the storage and infiltration measures associated with the proposed stormwater Best Management Practices will effectively reduce the volume and rate of stormwater runoff from the site. As such, the project is in conformance with the Flooding Standard. Based on review of the Applicant's proposal, the project should serve to benefit drainage conditions on the site, reduce inflow into the City's combined sewer system, and reduce the rate and volume of surface stormwater runoff into Baxter Woods.

4) The proposed stormwater management system will rely on an existing 12" Corrugated Plastic Pipe installed below the ball fields to convey excess drainage away from the development area. The Applicant should TV inspect the condition of this pipe and inspect the pipe outfall area prior to construction to ensure that the pipe and outfall are in good condition. Verification of pipe and outfall condition can be made a condition of approval, to occur prior to receiving a building permit.
5) Sheet C-6.0 – Some of the cleanouts in plan-view are not numbered, and therefore cannot be checked against the drain schedule.
6) The Applicant has provided letters from utilities confirming capacity to serve the proposed development; however, as noted in the letters, approval of the final design plans by the utilities is still required. The Applicant should provide the City with documentation demonstrating final approval by the utilities upon receipt.

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2015-110

Date: 7/9/2015

Comments Submitted by: Keith Gautreau/Fire on 7/8/2015

Access to the site looks good from Stevens Ave. and Walton Street. The proposed plan shows great access to all four sides of the structure and ample turn around room for emergency vehicles.

Comments Submitted by: Keith Gautreau/Fire on 7/8/2015

2009 NFPA 1 Chapter 18 Fire Department Access and Water Supply
18.1 General
18.1.1 Plans
18.1.1.1 Fire Apparatus Access
18.1.1.2 Fire Hydrant Systems
18.2 Fire Department Access
18.2.2 Access to structures or Areas
18.2.2.1 Access Box(es)
18.2.2.2 Access to Gated Subdivisions or Developments
18.2.2.3 Access Maintenance

2009 NFPA 1 18.2.3 Fire Department Access Roads
18.2.3.1 Required Access
18.2.3.2 Access to Building
18.2.3.3 Multiple Access Roads
2009 NFPA 1 18.2.3.4 Specifications

2009 NFPA 1 18.2.3.4.1 Dimensions
18.2.3.4.1.1 Fire Department access roads shall have an unobstructed width of not less than 20 ft.
18.2.3.4.1.2 Fire department access roads shall have an unobstructed vertical clearance of not less than 13 ft 6 in.

18.2.3.4.2 Surface
18.2.3.4.3 Turning Radius
18.2.3.4.7 Traffic Calming Devices
18.2.3.5 Marking of Fire Apparatus Access Road.
18.2.4 Obstruction and Control of Fire Department Access Road.
18.2.4.2 Closure of Accessways.

2009 NFPA 1 18.2.3.4.1 Dimensions
18.2.3.4.1.1 Fire Department access roads shall have an unobstructed width of not less than 20 ft.
-Fore and Union St. 20 ft width must be maintained.

18.2.4 Obstruction and Control of Fire Department Access Road.
18.2.4.1.1 The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.
-The Canal Plaza fire lane can not be used.

18.2.4.2 Closure of Accessways.
18.2.4.2.2 Where required, gates and barricades shall be secured in an approved manner.
-Knox padlocks are required at gates(locks are to be ordered at Central Fire Station 380 Congress St.)

From: Christian MilNeil <c.neal.milneil@gmail.com>
To: Jean Fraser <JF@portlandmaine.gov>, Jeff Levine <jlevine@portlandmaine.g...
CC: Ed Suslovic <esuslovic@portlandmaine.gov>, Jesse Thompson <jesse@kaplant...
Date: 7/8/2015 2:32 PM
Subject: Street connectivity for 605 Stevens Avenue

Hi all,

As the city takes up the Site Plan application for 605 Stevens Avenue (the Motherhouse and Catherine McAuley site) I'd like to weigh in with a request for a new public street connection through the development to connect Stevens and Forest Avenues, consistent with the requirements of section 14-498 of the city's zoning code, which requires new developments to continue the predominant pattern of blocks in surrounding neighborhoods.

A new street connection would provide transportation benefits, of course – relieving traffic pressure on existing neighborhood streets, and allowing for more convenient bike/ped and transit access between the proposed project and adjacent neighborhood businesses and schools.

But public street access to Stevens Avenue will also be crucial for any future redevelopment of the adjacent Deering Pavilion property, which the Council recently rezoned to R-6A in hopes that it would support additional transit-oriented housing development in the future.

For the developer, dedicating a new public street with on-street parking should count towards zoning-mandated parking and open space requirements. But instead of paying property taxes, stormwater fees and pavement maintenance costs for a traditional, privately-owned parking lot, a public street could serve the same access and parking functions, but without the costs to the property manager.

More than anything, though, having a public street – as opposed to the networks of dead-end driveways we've seen in other recent senior housing projects – will make a big difference in whether this emerging district feels like a neighborly extension of Deering Center, or a gated community on the outskirts and with little interaction with the outside world. Obviously, I'd prefer the former, and I think many of this development's future residents would as well (note how marketing materials for the recent "Munjoy Heights" project played up the development's Portland Trails connections to Cove Street and the Jack Path as resident amenities).

I'm hoping that the Planning Board, city staff and developers can work together to make this happen. Thanks for considering it.

-Christian MilNeil
45 Smith Street

The Vigorous North:
A field guide to the wilderness areas of American cities.
http://www.vigorousnorth.com

Motherhouse Senior Housing Subdivision and Final Level III Site Plan Application

605 Stevens Avenue & Walton Street
Portland, Maine

June 24, 2015

Prepared for:

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

LICHT
ENVIRONMENTAL DESIGN, LLC

Att. A

LICHT
ENVIRONMENTAL DESIGN, LLC

June 24, 2015 J14.067

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

Motherhouse Senior Housing
605 Stevens Avenue and Walton Street
Motherhouse Lot 3 - Level III Site Plan Review and Subdivision Application Submission
(CBL 136 E006001, 143 F004000, 144 B001000)

Dear Barbara:

On behalf of Motherhouse Associates LP and Sea Coast at Baxter Woods Associates, LLC we are pleased to submit a Subdivision and a Level III Site Plan Application for the redevelopment of the Motherhouse for staff and Planning Board review. The applications are being submitted pursuant to the Portland Land Use Code Articles IV Subdivision and Article V Site Plan review, respectively.

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 LIII Preliminary and Final Site Plans Development Review Application
- Site Plan/Subdivision Application Fee (Submitted separately)
- Exhibit 1 – Right, Title & Interest
- Exhibit 2 – Context Map
- Exhibit 3 - USGS Quad Locus
- Exhibit 4 - Assessors Maps
- Exhibit 5 - Compliance with Zoning
- Exhibit 6 - Easements & ROWs
- Exhibit 7 – Waiver Requests
- Exhibit 8 - Financial and Technical Ability
- Exhibit 9 – Traffic Analysis
- Exhibit 10 – Soils
- Exhibit 11 – Construction Management Plan
- Exhibit 12 – Agency Letters - Natural Areas
- Exhibit 13 – Consistency with Master Plans
- Exhibit 14 – Utility Serviceability Letters
- Exhibit 15 – Lighting
- Exhibit 16 – Stormwater Management and Erosion & Sedimentation Control
- Exhibit 17 – Metro Map

1. INTRODUCTION & BACKGROUND:

Motherhouse Associates, LP and John B. Wasileski representing Seacoast at Baxter Woods Associates, LLC are proposing to redevelop the historic St. Joseph's Convent and surrounding grounds into a senior living community. The property, located off Stevens Avenue and Walton Streets contains 18.98 acres including the Catherine McAuley High School and fields, St. Joseph's Convent and St. Catherine's residence hall. The highlight of the proposed plan is the re-purposing of the historic former St. Joseph's Convent "Motherhouse" into 88 affordable and market rate senior apartments and common areas.

The overall project was presented to and received a positive recommendation from the Planning Board to amend the zoning district from R5 to R5A and is currently before the Council for a formal final Map Amendment.

As the Board and Staff are aware, the Lot 3 Motherhouse development is being pursued by the applicant for a Maine State Housing - Low Income Housing Tax Credit (LIHTC) and Department of the Interior Historic Tax Credit (HTC) Financing. This project aligns directly with the City's affordable housing initiative and policies and will result in the re-purposing of one of the historic gems of the City which has for years laid fallow. The timelines for the financing applications have required that the Motherhouse site plans be submitted in advance of the full project master plan. However the applicants are committed to furthering the site master plan for the additional site development on Lot 4 subsequent to a successful permitting process for Lot 3.

Our design team includes:

- Licht Environmental Design, LLC – Project Manager
- Carroll Associates – Master Planning and Landscape Architecture
- Fay, Spofford & Thorndike – Civil Engineering
- Archetype, PA –Architecture
- Maine Traffic Resources – Traffic Assessment
- Titcomb Associates – Surveying

2. MOTHERHOUSE LIII SITE PLAN AND SUBDIVISION REVIEW:

The scope of this application is for the Motherhouse re-development and specifically includes:

a. Level III Site Plan approval in accordance with Article V Section 14-523(f);

b. Overall 4-Lot Master plan Subdivision Review pursuant to Article IV Section 14-495;

c. Sectional Recording Plat – Motherhouse Lot 3 subdivided into 88 apartment units.

The applicant will follow through with a Master Development Plan Application for the development of the Lot 4 Senior Housing campus following the Motherhouse permitting process. The two lots as well as the McAuley High School Lot 1 and St. Catherine's Lot 2 will share to a degree, common facilities, utilities, access and parking. Easements have been provided and listed on the subdivision plans where required.

3. EXISTING CONDITIONS AND ZONING

A. Zoning: The 18.98 acre property is currently located within the R5 - Medium Density Residential District. The anticipated re-zoning will result in portions of the campus remaining in R5 (Lots 1

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and 2) and portions of Lots 3 and 4 within the R5A Zone. Both multifamily and congregate uses are now permitted in the R5A Zone.

B. *Existing Uses:* As stated earlier the campus includes the Motherhouse and what is known as the "Smith Wing" - the northern addition to the Motherhouse, McAuley High School and St. Catherine's Residence Hall. This application does not change the use of the high school or St. Catherine's. The Motherhouse, once home to scores of nuns, has been vacant for years except for minimal use as administrative offices or use of the chapel by the McAuley students and staff. However the Smith Wing has and will continue to be used as administrative offices as part of McAuley High School including approximately 5-6 parking spaces outside of that wing.

C. *General Conditions and Parking:* The overall campus contains the McAuley High School and associated athletic fields and parking, St. Catherine's residence hall and the Motherhouse and includes several shrines amongst the maintained gardens and grounds. The eastern side of the site is occupied by the school athletic fields and a wooded wetland located at the eastern edge of the site below the fields. Wetlands were delineated by Hampton Associates in the spring of 2015. The main access to the campus is currently from Walton Street with secondary lesser access from Stevens Avenue through two driveway gates of which one is normally closed. A main parking lot for approximately 100 cars exists adjacent to the McAuley High School and parking is interspersed throughout the site totaling approximately 155 spaces+/-. Additional formal parallel parking is available, but not normally used, on Stevens Avenue. The pavement conditions vary on-site from good to poor depending on the site location. Refer to the Existing Conditions Plan – Sheet C1 for additional site information.

D. *Existing Buffers, Landscaping and Visual Quality:* The Motherhouse and campus in general contain a large number of mature hardwood and softwood specimen trees as well as several shrines and garden grotto areas associated with its past history as a convent. The project will save and protect as many trees as possible (see Tree Preservation Plan). The views from Stevens Avenue are muted and screened to a large degree by a thick hedge along with the ornate fence along the entire length of the Stevens Avenue property line. However the majestic prominence of the Motherhouse and gold dome enhance the character of the neighborhood providing a sense of place and prominence as such an historic building and grounds should.

Views from Baxter Woods are also well buffered even from the very near the fence line which is actually on the campus property. Walton Avenue offers a framed view of the internal athletic fields, the Motherhouse and the Smith Wing. St. Catherine's is a proud building representing period architecture and buffered by a ring of mature hardwood trees.

What may not be apparent to most visitors to the site is that the McAuley campus property extends 33 feet beyond the chain link fence demarking the apparent southern property line to the actual property line. This McAuley Campus property is for all practical purposes part of Baxter Woods and includes the side trail used by the public near the fence line. This strip is part of a 66-foot wide road reserved by Mayor James Baxter in the 1908 deed to the Roman Catholic Bishop Corporation (*Exhibit 1*). The applicant will provide covenants and restrictions on the use of this significant wooded buffer to maintain its natural state and not be developed subject to any rights the City of Portland has over future use of that right of way.

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E. *Unique Natural Areas:* We have contacted the Maine Department of Inland Fisheries and the Maine Natural Areas Program requesting a review of their respective databases for rare or unique habitat or plants on the property. Responses will be forwarded to the Planning Department when received. The City of Portland does not list any rare or unique areas on the property. The wooded 33-foot right of way at the edge of Baxter Woods will be preserved. (Refer to *Exhibit 12* for agency request letters.)

F. *Utilities and CSO's:* Existing water (domestic and fire main), sanitary sewer, stormdrainage, electric/communications and natural gas utilities are available in both Stevens Avenue and Walton Streets. The Motherhouse water and natural gas services are from Stevens Avenue. Electric service is currently provided from an overhead pole line into the site from Walton Street to a pole mounted transformer behind the Smith Wing and into the rear (east side) of the building. There is minimal site lighting on the property.

A large above ground fuel oil tank is located at the rear (west) side of the building which will be removed.

Sanitary sewer discharges into a common 8-Inch sanitary main to the northeast of the Smith Wing of the Motherhouse which runs to the east then north to a connection in Walton Street. A recent video analysis of that main suggests that the majority of the line is of PVC piping and in good condition. However the last section of pipe to the east of St. Catherine's into Walton Street was found to be old transite and VCT pipe (assumed circa 1910+/-) which will have to be removed and replaced.

The design team has met with the City Engineer and reviewed both stormwater and combined sewer overflow (CSO) systems in the vicinity and down gradient of the site. Although Walton Street, the receiving trunk line, has been separated to beyond the site sanitary connection, that main discharges in the collector main in Forest Avenue which is not yet separated. Therefore the site is considered to discharge to a CSO system.

The Motherhouse contains a series of gutters and roof drain downspouts which are believed to originally connect below grade to the foundation footing drains and eventually to the building sewer as was the practice 100 years ago. Some of the roof downspouts have deteriorated or been disconnected at the building drip edge. The proposed building rehabilitation will connect all roof drains to drip edges and to a storm drain system reducing or "separating" the flows to the Walton and Forest Avenue CSO system. Refer to Proposed Development - Section E discussion below for proposed utilities.

4. PROPOSED DEVELOPMENT - MOTHERHOUSE LOT 3

For the purpose of the 4 -Lot campus Subdivision Application and the Level III Site Plan Application, the project description will refer primarily to the proposed Motherhouse Lot development. Refer to the attached Exhibits and accompanying Site Plans and Architectural Plans for detailed site information.

A. *Motherhouse Rehabilitation:* The Motherhouse is a 4-story structure and will be re-developed into 88 senior apartment units. The breakout will include 66 affordable units and 22 market rate units. There will be a mix of 68 studio and 20 single bedroom apartments. The mix of units is

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based both on current demands on similar projects throughout Maine and on the metrics of the internal design of the building. As a former convent the structure has wide hallways, common areas, grand stairways and the stunning three story chapel complete with stained glass windows, alter and a grand organ. The basement level contains a former kitchen & dining area, utility areas, elevator and two internal/external courtyards. The northern courtyard is accessible from the outside rear of the building and is completely paved . The southern courtyard is in disrepair and is accessed through the rear overhead door utility entry. (See Architectural Plans and Existing Condition Plan.

The Motherhouse and the Smith Wing are, for the purposes of the sale of the property proposed as condominium Unit 1 and Unit 2 respectively, of the McAuley Place Condominium. The formal Declaration of the condominium would be prepared and recorded following the closing on the property.

As an historic building[1], all design and construction work and materials will conform to the Department of the Interior standards for rehabilitation and preservation under the Historic Tax Credit review process. The applicant and architects, Archetype, PA have been working closely with the historic preservation officer to facilitate appropriate design standards for the building and site.

The project will retain the Chapel in its current condition and does not anticipate any renovations to the attic space. The Smith Wing, while connected to the Motherhouse is functionally separated and is not a part of the proposed Site Plan review application.

Externally the building has no formal ADA access, with most doorways being raised one-half story over the daylight basement and stone plinth base of the building. Grades drop nearly 5 feet from the ceremonial front facing Stevens Avenue to the rear entry – exposing daylight windows at half story height. The rear of the building contains a two story porch and a free standing car port which will be razed.

Functionally, the project will make a dramatic change in the entry to the building. The main entry and parking lot will be from the rear or west side of the building under the existing porch. The front central doorway and two side entrances will be used by residents as secondary entrances with keyed or similar security system employed. The two end doorways on the east elevation (towards Stevens Avenue) will become part of new units and possibly closed off.

It is anticipated that most mechanical units will be on the rear roof areas and will not be visible from Stevens Avenue. Final design of these systems will proceed commensurate with final architectural plans.

B. *Site Layout and Circulation:* Lot 3 contains 4.39 acres and includes approximately 330 of frontage on Stevens Avenue and a 50-foot access to Walton Street. The existing parking lot entrance off Walton Street will be re-designed as a two lane boulevard with curbing and a center landscaped island. The design will include a more organized circulation and parking striping pattern for the existing McAuley parking lot and a designated two-way entry onto the

[1] The Motherhouse is eligible but not however listed on the National Register of Historic Places.

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new campus access drive. The main access corridor will serve as the future "spine" for access to the future Lot 4 development and will be 22 feet wide and paved. The access drive will loop to the south side of the building where it becomes one way in from Stevens Avenue. The existing paved ceremonial "loop" on the Stevens Avenue (front) side of the building will have a one-way in at the south gate and one way out at the north gate and be signed for right-turn only. Access to the north side of the building (Smith Wing and side door) will be two-way from the new main access drive from Walton Street and one way from Stevens Avenue. Additional parking will be added on the south and north sides of the building. (Refer to the Site Plan.)

Existing paved areas around the Motherhouse will be either ground and re-shimmed to meet new grades, box cut to provide new base material and pavement or turned into landscaped areas (See Layout & Materials Plan.) Curbing will be minimized to provide more of a campus feel as it exists today and used sparingly at intersections, as required for drainage and against walkways.

Lot 3 will provide 73 parking spaces (64 regular spaces and 9 handicap spaces) for a ratio of 0.83 spaces per unit. The plan will provide approximately 82 spaces at the McAuley HS lot. Refer to the Site Plan for site and parking tables.

The proposed Lot 3 site plan will not result in the loss of any existing playing fields. There will be some minor construction directly adjacent to the west side of the field complex for construction of the new access drive and utilities which will have only a short term impact.

C. *Pedestrian and Bicycle Circulation:* The site design will provide new paved and concrete/paver walkways to create a strong pedestrian connection to Walton Street and to Stevens Avenue from the new west side entrance as well as from other doorways. Internal connections between McAuley HS, St, Catherine's and the Smith Wing will continue to be used and enhanced as shown on the plans to provide a walk able campus. Several sections of former walkways near the athletic fields which conflict with the new site design will be removed and landscaped.

Twelve external bicycle racks will be provided and space for 24 bicycles provided internally in a secured room. (Refer to Site Plan.)

D. *Mass Transit Connections*: The site sits uniquely in a location serviced by the metro bus service. There are metro stops on Stevens Avenue and nearby on Forest Avenue a short walk from the site. Typical senior facilities find that a portion of residents do not own cars and those who do in an urban or semi-urban setting rely heavily on mass transit and walking for their day to day activities. (See Metro Map, *Exhibit 17.*)

E. *Utilities*: The existing utilities are dated and will be upgraded with new services. (Refer to *Exhibit 14* for Letters of Serviceability and flow projections.)
   1. Natural Gas – to be provided from Stevens Avenue.
   2. Water – A new fire and domestic service will be connected from Stevens Ave. to the building. The applicant is working with Portland Water District to review best options for servicing Lot 4 from the new main as well.
   3. Sanitary Sewer – The existing sanitary sewer main located at the rear (west) side of the building will be maintained, a new manhole installed and the older sections replaced to

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the connection with Walton Avenue. The applicant has submitted the Wastewater Capacity Application and supporting flows to the Department of Public Services for review with estimated flows of 6,776 gallons per day of water/wastewater projected for the Motherhouse development.

4. Electric/Communications – Two options for providing electric service are being considered with Central Maine Power Company (CMP). The first is to eliminate the entire existing overhead pole line from Walton Street and provide an underground service to a three - phase transformer located at the west side of the Motherhouse/Smith Wing. The second option is to leave the existing pole line up to pole #179.3 behind the Smith Wing and drop into an underground service and transformer and into both buildings. The selected option will be determined with further review with CMP. Refer to the Utility Plan.

F. *Site Lighting*: The project will provide site lighting fixtures along the new entrance drive from Walton Street and within the proposed parking and pedestrian areas around the Motherhouse. Refer to Exhibit 15 for lighting cut sheets and the Site Plan and Landscape and Lighting Plan for light fixture locations. The design intent is to provide subtle safety lighting and to not over-illuminate the site. Building lighting will be limited to external doorways and will be reviewed for historic compatibility through the HTC review process. Refer to the Landscape and Lighting plan for light fixture locations.

G. *Solid Waste Management*: The Motherhouse will not require a formal dumpster. Residents will be required to bring trash and recyclable materials to a dedicated waste management room located on the lower level of the Motherhouse for sorting into roll-away bins which will be rolled to the back drive at the north courtyard and picked up by a waste hauler. The facility will contract with a licensed waste hauler for pick up and disposal.

H. *Stormwater Management and Erosion & Sedimentation Controls*: Refer to Exhibit 16 for a discussion of Stormwater Management and Erosion Controls. A Stormwater Management report prepared by FST is bound separately and accompanies this submittal.

I. *Landscaping and Buffers*: The approach to the landscape plan for the project has been to preserve as many of the existing mature trees on site and provide supplemental infill where appropriate. Carroll Associates has performed an inventory of the existing trees on-site and prepared a Tree Preservation Plan, Sheet L1.0. The new and reconstructed parking and access drives have been laid out to respect the existing trees, landscaping and gardens to the greatest extent possible. There will be no impact to buffers to Baxter Woods from the Motherhouse development.

Proposed landscaping will be consistent with and compliment the style of the existing campus with simple planting beds to enhance the west side and east corners of the building and proposed trees spaced around the building and parking. The new entry off Walton Street will require the removal of several trees at the north edge of the property which will be replaced with center island plantings and trees. The main access drive will be defined by an allay of trees as one enters the site where currently there is stark pavement to create a formal entry statement to the site. Refer to the Landscape and Lighting Plan for additional details.

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J. *Easements:* Refer to the Overall Subdivision Plan, Sheet C2 for existing and proposed easements. The proposed Motherhouse development will require cross-easements with Lots 2 and 4 for sewer and drainage. Additionally any required shared parking and access easements between the lots will be provided and added to the plans prior to final approvals.

K. *NFPA-1 and Fire Safety Code Review:* The project architects, Archetype, PA, will provide a fire safety code review under separate cover and forward to the Planning Department for review. the design team will also review site fire access and safety with the Fire Chief.

5. SUMMARY:

In summary we believe that the proposed Lot 3 Motherhouse Level III Site Plan and Overall Subdivision plans meet the requirements of the Portland Land Use Code - Subdivision Article IV and Site Plan Article V. The project will both preserve a significant landmark in the City and provide affordable housing for the residents of Portland in a unique setting.

We look forward to meeting the Planning Board on July 14th. 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

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
Matt Teare; C/O Sea Coast at Baxter Woods Associates, LLC
David Haynes; RLA; Seacoast Management Company
Kevin Bunker; Motherhouse, LLC
Ron Epstein; Jensen, Baird, Gardner & Henry
Natalie Burns; Jensen, Baird, Gardner & Henry
Pat Carroll; Carroll Associates, Landscape Architects
Andrew Johnston; Fay, Spofford &Thorndike

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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. Check to be hand delivered.

Applicant Signature: _____ Date: 6/25/15

I have provided digital copies and sent them on: _____ Date: 6/25/15

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.

Att. B

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

Planning and Urban Development Department
Planning Division

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

Level III: Site Plan Development includes:

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

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719

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

Updated: June 1, 2015

PROJECT NAME: Motherhouse Senior Housing

PROPOSED DEVELOPMENT ADDRESS:

605 Stevens Avenue and Walton Street

PROJECT DESCRIPTION:

Level III Site Plan - Proposed rehabilitation of the former St. Joseph's Convent into 88 Units of affordable and market rate senior housing and proposed Subdivision of McAuley Campus into 4 Lot for Masterplan development as a Senior Living Campus.

CHART/BLOCK/LOT: 136-E006001 & (143 F004 144B001)

PRELIMINARY PLAN _____ (date)

FINAL PLAN June 24, 2015 (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Motherhouse Associates, LP and Sea Coast at Baxter Woods Associates, LLC Business Name, if applicable: Address: 100 Commercial Street, Suite 414 City/State : Portland, ME Zip Code: 04101	**Applicant Contact Information** Work # C/O Kevin Bunker Matt Teare Home# Cell # 207.766.1632 Fax# 207.837.2418 e-mail: kbunker@gmail.com mteare@highlandgreenlifestyle.com
Owner – (if different from Applicant) Name: St. Joseph's Convent & 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 Address: Licht Environmental Design, LLC 35 Fran Circle City/State : Gray, ME Zip Code: 04039	**Agent/Representative Contact information** Work # 207.749.4924 Cell # 207.749.4924 e-mail: rlicht@securespeed.net
Billing Information Name: Matthew Teare Address: Sea Coast at Baxter Woods Associates, LLC 100 Commercial Street, Suite 414 City/State : Porrtland ME Zip Code: 04101	**Billing Information** Work # 207.837.2418 Cell # 207.837.2418 Fax# e-mail: mteare@highlandgreenlifestyle.com

Engineer Fay, Spofford & Thorndike Name: C/O Andrew Johnston Address: 778 Maine Street, Suite 8 City/State : South Portland, ME Zip Code: 04106	**Engineer Contact Information** Work # 207.775.1121 Cell # Fax# 207.879.0896 e-mail: ajohnston@fstinc.com
Surveyor Titcomb Associates Name: David Titcomb, PLS Address: 133 Gray Road City/State : Falmouth, ME 04105 Zip Code:	**Surveyor Contact Information** Work # 207.797.9199 Cell # 207.797.9018 Fax# e-mail: dtitcpomb@titcombsurvey.com
Architect Archetype, PA Name: David Lloyd Address: 48 Union Wharf City/State : Portland, ME Zip Code: 04101	**Architect Contact Information** Work # 207.772.6022 Cell # Fax# 207.772.4056 e-mail: lloyd@archetypepa.com
Attorney Jensen, Baird, Gardner & Henry Name: Ron Epstein/Natalie Burns Address: 10 Free Street, PO Box 04112 City/State : Portland ME Zip Code: 04112	**Attorney Contact Information** 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.)

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)
X 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 92 x $25/lot = $2800
___ 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

Subddivision - 4 lots + 88 units = 92 lots/units

Updated: June 1, 2015

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 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: 6/25/15

PROJECT DATA

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

Total Area of Site	191,066 (LOT 3 Motherhouse) sq. ft.
Proposed Total Disturbed Area of the Site	3.1 Acres (135,036 sf) sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.	
Impervious Surface Area	
Impervious Area (Total Existing)	167,748 (Entire Campus) sq. ft.
Impervious Area (Total Proposed)	168,047 (Entire Campus) sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	24,065 sq. ft.
Building Footprint (Total Proposed)	24,065 sq. ft.
Building Floor Area (Total Existing) (excluding chapel and attic)	102,241 sq. ft.
Building Floor Area (Total Proposed) excluding chapel and attic)	102,241 sq. ft.
Zoning	
Existing	R5
Proposed, if applicable	R5 and R5A
Land Use	
Existing	Former Convent and Campus
Proposed	88 Units Senior Housing
Residential, If applicable	
# of Residential Units (Total Existing)	0
# of Residential Units (Total Proposed)	88
# of Lots (Total Proposed)	4
# of Affordable Housing Units (Total Proposed)	66
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	68
# of One-Bedroom Units (Total Proposed)	20
# of Two-Bedroom Units (Total Proposed)	0
# of Three-Bedroom Units (Total Proposed)	0
Parking Spaces	
# of Parking Spaces (Total Existing)	Lot 3 = 34+/- Campus = 150-155+/-
# of Parking Spaces (Total Proposed)	Lot 3 = 73
# of Handicapped Spaces (Total Proposed)	9
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	12 exteror + 24 interior = 36
Estimated Cost of Project	TBD

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
		1	Completed Application form
		1	Application fees
		1	Written description of project
		1	Evidence of right, title and interest
		1	Evidence of state and/or federal approvals, if applicable
		1	Written assessment of proposed project's compliance with applicable zoning requirements
		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
		1	Written requests for waivers from site plan or technical standards, if applicable.
		1	Evidence of financial and technical capacity
		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
		Proposed grading and contours;	
		Existing structures with distances from property line;	
		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;	
		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
		Preliminary infrastructure improvements;	
		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
		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);	
		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
		Exterior building elevations.	

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Completed Application form
X		1	* Application fees
X		1	* Written description of project
X		1	* Evidence of right, title and interest
NA		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
		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
		1	Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

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

- Continued on next page -

HYDRANTS		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;
SEE REPORT		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;
NA		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
NA		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;
SEE REPORT		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;
LOCATION ONLY		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.

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

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

Exhibit 1

Right, Title & Interest

Att. C

Assignment

For value received, Sea Coast Healthcare, Inc. hereby assigns the Purchase and Sale Agreement, dated June 16, 2014, between St. Joseph's Convent and Hospital, as Seller and Sea Coast Healthcare, Inc., as Purchaser, relating to property at 605 Steven's Avenue, Portland, Maine, to Sea Coast at Baxter Woods Associates, LLC, a Maine limited liability company. Baxter Woods Associates, LLC hereby assumes and agrees to perform all obligations as purchaser under said Agreement.

Dated: September 15, 2014.

Sea Coast Healthcare, Inc.

By: _____
John B. Wasileski, Its President

Sea Coast at Baxter Woods Associates, LLC

By: _____
John B. Wasileski, Its Manager

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: _____

OPTION AGREEMENT

THIS OPTION AGREEMENT (the "Agreement") made and entered into as of the 19th day of September, 2014, by and between Sea Coast at Baxter Woods Associates, LLC, a Maine limited liability company with a place of business and mailing address of 30 Governors Way, Suite 100, Topsham, ME 04086 ("Grantor") and MOTHER HOUSE LLC, a Maine limited liability company with a place of business in Portland, Maine and mailing address of c/o Developers Collaborative, 100 Commercial Street, Suite 414, Portland, Maine 04101 ("Grantee")

WITNESSETH:

WHEREAS, Grantor is the assignee of the Purchaser under a Purchase and Sale Agreement dated June 16, 2014 with St. Joseph's Convent and Hospital as Seller (the "P & S Agreement") concerning the purchase by Grantor of certain real property that includes the property more particularly described below; and

WHEREAS, Grantor wishes to grant the within option to Grantee on the terms and conditions set forth in this Agreement;

NOW THEREFORE, in consideration of One Dollar ($1.00) (the "Option Consideration"), the receipt of which is hereby acknowledged by Grantor, Grantor and Grantee hereby agree as follows:

1. Grant of Option. Grantor hereby grants to Grantee, its successors and assigns, the exclusive and irrevocable option to purchase Unit 1 in the McAuley Place Condominium, a condominium to be created by Grantor, as hereafter described, together with all rights and easements appurtenant thereto, such Unit being the portion of the building known as St Joseph's Convent, or the "Motherhouse" located at 605 Stevens Avenue, Portland, Cumberland County, Maine, being a portion of the property shown on City of Portland Tax Map 136-E-6, 143-F-4 and 144-B-1, being , together with all rights and easements appurtenant thereto (collectively the "Property"), on the terms and conditions contained in this Agreement, but subject, however, to the P & S Agreement and the occurrence of the Closing thereunder. The exercise of this option is conditioned upon the occurrence of closings by Grantor with St. Joseph's Convent and Hospital and by Grantee with Maine State Housing for tax credits for and construction financing by a lender of an affordable housing project on the Property (with Grantor being a Member of Grantee under its Limited Liability Company Agreement, dated September 19, 2014).

The property located at 605 Stevens Avenue, Portland, Maine currently owned by St. Joseph's Convent and Hospital when purchased by Grantor shall be subdivided into 5 lots, substantially as shown 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, with such changes thereto as may be required by the City of Portland or its Planning Board, consisting of the following Lots:

Lot 1: Catherine McAuley High School;
Lot 2: St. Catherine's Residence;
Lot 3: Land between Motherhouse and Baxter Woods;
Lot 4: Catherine McAuley High School ballfields; and
Lot 5: Motherhouse and the Smith building or wing.

Lot 5 shall be submitted to a Declaration of Condominium substantially in the form attached hereto as Exhibit B, and the following condominium units shall be created:

Unit 1: The portions of the four-story Motherhouse or convent building that was designed in the Italian Renaissance style and constructed in 1908-1909 shown as Unit 1 on the floor plans attached hereto as Exhibit C, but excluding the portions thereof described as Common Elements or Limited Common Elements herein or in Exhibit B and excluding the portions of the Motherhouse shown as part of Unit 2 on the floor plans attached hereto as Exhibit C;

Unit 2: 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 or in Exhibit B.

The floor plans attached hereto as Exhibit C shows the proposed boundary lines between Unit 1 and Unit 2, and the limited common elements and the common elements in the Condominium. Unit 1 shall consist of the entire Motherhouse building except: (a) the Chapel and access thereto, which shall be Common Elements; and (b) the Smith building or wing and portions of the basement of the Motherhouse not needed by Grantee, which shall constitute Unit 2. The Chapel will be a Common Element, with use shared by all of the Units and by Grantor, its successors and assigns. In addition, Grantor, its successors and assigns and the owners of Lots 1, 2, 3 and 4, their successors and assigns, will be granted or will reserve easements: (a) to use the Chapel together with rights of access thereto, (b) for access, drainage, utilities, parking and other matters as shown on the Plan; and (c) to create a physical connection or connections between the Motherhouse and buildings to be constructed on either Lot 3 (the land between Motherhouse and Baxter Woods) and/or Lot 4 (the current Catherine McAuley High School ball fields). All grounds and parking areas will be maintained by the respective unit owners, except those specifically designated for common use. Such areas (such as the lawn in front of the Motherhouse) will be denominated "Common Elements," and their expenses (landscaping, lighting, snowplowing, etc.) would be shared as Common Element expenses. The Common Element expense will be shared based on the relative square footage area of each Unit. Each Unit will have one vote in the Condominium Association. Unit 1 shall be allocated parking spaces as Limited Common Elements as shown on Exhibit C and Unit 2 shall be allocated parking spaces as Limited Common Elements as shown on Exhibit C. Grantor will reserve the right to create up to 2 additional units in the Condominium as shown on the plans attached hereto as Exhibit C.

Capital costs of basic rehabilitation to Chapel (e.g., necessary electrical, heating, fire alarm or sprinkler work) will be paid by the owner of Unit 1. Any decoration or other work in

excess of basic rehabilitation work to bring Chapel to standards desired by the owner of Unit 2 will be paid by the Unit 2 owner.

The Declaration of Condominium shall provide that the Smith Wing comprising Unit 2 cannot be demolished within five years of the completion of the rehabilitation of Unit 1; and that any work on the Smith Wing within 5 years of Unit 1 placement in service of its Motherhouse rehabilitation project must be performed in accordance with NPS standards for historic preservation.

Grantor reserves the right to change the lots line, reserved easement terms and locations and the terms of the Declaration of Condominium as necessary in response to (a) site details as determined by further civil engineering and site planning, and (b) comments and requirements of the Portland Planning Board and its staff and the Maine Department of Environmental Protection and its staff in connection with Grantor's and Grantee's proposed development plans with respect to the property that Grantor is purchasing from St. Joseph's Convent and Hospital, and (c) comments and requirements of tax credit investors and Maine State Housing Authority in connection with assuring the financial feasibility of the housing project proposed for Unit 1.

2. Expiration. This option shall expire on May 15, 2016, at midnight, Maine time unless exercised by that date and time.

3. Notice of Exercise. This option may be exercised only by Grantee giving written notice of election to exercise to Grantor by first class mail, postage prepaid, registered or certified, return receipt requested, addressed to Grantor at the address set forth at the beginning of this Agreement, or to such other address as Grantor may designate to Grantee in writing. Said notice shall be deemed to have been duly given if postmarked prior to the expiration date and time specified herein.

4. Failure to Exercise. In the event that Grantee fails to exercise the option granted in this Agreement within the time specified in Section 2 above, the Option Consideration, shall be retained by Grantor, except as provided below, and thereafter neither Grantor nor Grantee shall have any further rights or claims against the other.

5. Exercise. In the event that Grantee exercises the option granted in this Agreement to purchase the Property as provided herein, the following provisions shall be applicable:

a. Purchase Price. [redacted] the total purchase price for the [redacted] paid by Grantor for the Propert[redacted] cashiers' check or by wire tran[redacted] Purchase Price at closing.

b. Title. Grantor shall convey the Property to Grantee at the closing in fee simple with good and marketable title free and clear of all liens, claims and encumbrances except as set forth in Exhibits B and D hereto. In the event that Grantor is unable to convey title as aforesaid, Grantor shall be given a reasonable period of time, not to exceed thirty (30) days, after receipt of

notice from Grantee in which to remedy any title defects. In the event that said defects cannot be corrected or remedied within said time period, or in the event that Grantor elects not to remedy same, then this Agreement shall terminate whereupon Grantor shall refund to Grantee the Option Consideration. Grantee may elect to close notwithstanding such defects as may exist. Grantor agrees to convey the Premises using any new survey description resulting from Grantee's boundary survey.

c. Closing. The closing under this Agreement shall take place sixty (60) days after the date this option is exercised but in no event after June 30, 2016 (the "Closing Date") at 10:00 AM, local time, at Grantee's counsel's office, or at such other time and place as Grantor and Grantee shall mutually agree upon in writing. At the closing, Grantor shall execute and deliver to Grantee a Quitclaim Deed with Covenant, and such other affidavits, instruments and documents as Grantee may reasonably request and which are customary in commercial real estate transactions in Maine.

d. Adjustments, Prorations and Closing Costs. The recording fee for the deed or deeds of conveyance and any expenses related to any mortgages which Grantee may grant to a lender in connection with the purchase of the Property shall be paid for by Grantee. Grantee shall pay its share of the Maine real estate transfer tax in accordance with 36 M.R.S.A. § 4641-A.

e. Possession. Grantor shall deliver possession of the Property to Grantee at the closing, free and clear of all leases, tenancies or occupancies by any person.

f. Risk of Loss. All risk of loss to the Property prior to the closing shall be on Grantor.

g. Default; Remedies. In the event that Grantee exercises its option but fails to close hereunder for a reason other than the default of Grantor, Grantor's sole remedy shall be to retain the Option Consideration, as full and complete liquidated damages in lieu of any other legal or equitable remedy, whereupon this Agreement will terminate and neither party will be under any further obligation hereunder. In the event Grantor fails to close hereunder for a reason other than the default of the Grantee, Grantee shall have available all remedies at law and in equity, including, without limitation, the right of specific performance or, in the alternative, the right to seek a complete refund of the Option Consideration.

h. Condition Precedent. Grantee's obligation to purchase the Property is conditioned upon there having occurred no material adverse change in or to the Property between the date of Grantee's inspections and the Closing Date. If this condition is not satisfied as of the Closing Date, Grantee may terminate this Agreement. The Property is being sold and conveyed "as is", "where is" and "with all faults and defects", without representation, warranty or covenant, express, implied or statutory, of any kind whatsoever.

6. Brokerage. The parties represent to one another that neither has dealt with or had contact with any broker in connection with the transaction described in this Agreement.

7. Recording of Option. Grantor and Grantee agree that this Option shall not be recorded.

8. Notices. Except as provided in Section 3 above, all notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, registered or certified, return receipt requested, addressed to the recipient at the addresses set forth at the beginning of this Agreement. Either party may change its address for purposes of this Section by giving the other party notice of the new address in the manner described herein.

11. Assignment. Grantee may not assign this Agreement without the prior written consent of Grantor, which consent shall not be unreasonably withheld, delayed or conditioned. Grantor acknowledges that if the Property is developed using the low income housing tax credit, this Agreement will have to be assigned to a limited partnership. Upon such a permitted assignment, Grantor agrees to look solely to the assignee for performance of the obligations of the Grantee hereunder.

12. Miscellaneous. Time is of the essence hereof. This Option Agreement constitutes the entire agreement between Grantor and Grantee, there are no agreements or understandings between the parties except as set forth herein, and all prior agreements and understanding are superseded by this Agreement. This Option Agreement will inure to the benefit of and bind the respective successors and assigns of Grantor and Grantee. As used in this Option Agreement, the singular number shall include the plural, the plural the singular, and the use of one gender shall be deemed applicable to all genders. This Agreement shall be governed by and construed in accordance with the laws of Maine. The recitals contained in this Agreement are deemed by the parties to be accurate statements of fact. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

IN WITNESS WHEREOF, Grantor and Grantee have executed this Agreement as of the date first above written.

WITNESS:

Sea Coast at Baxter Woods Associates, LLC, Grantor

By: _____
John B. Wasileski, its Manager

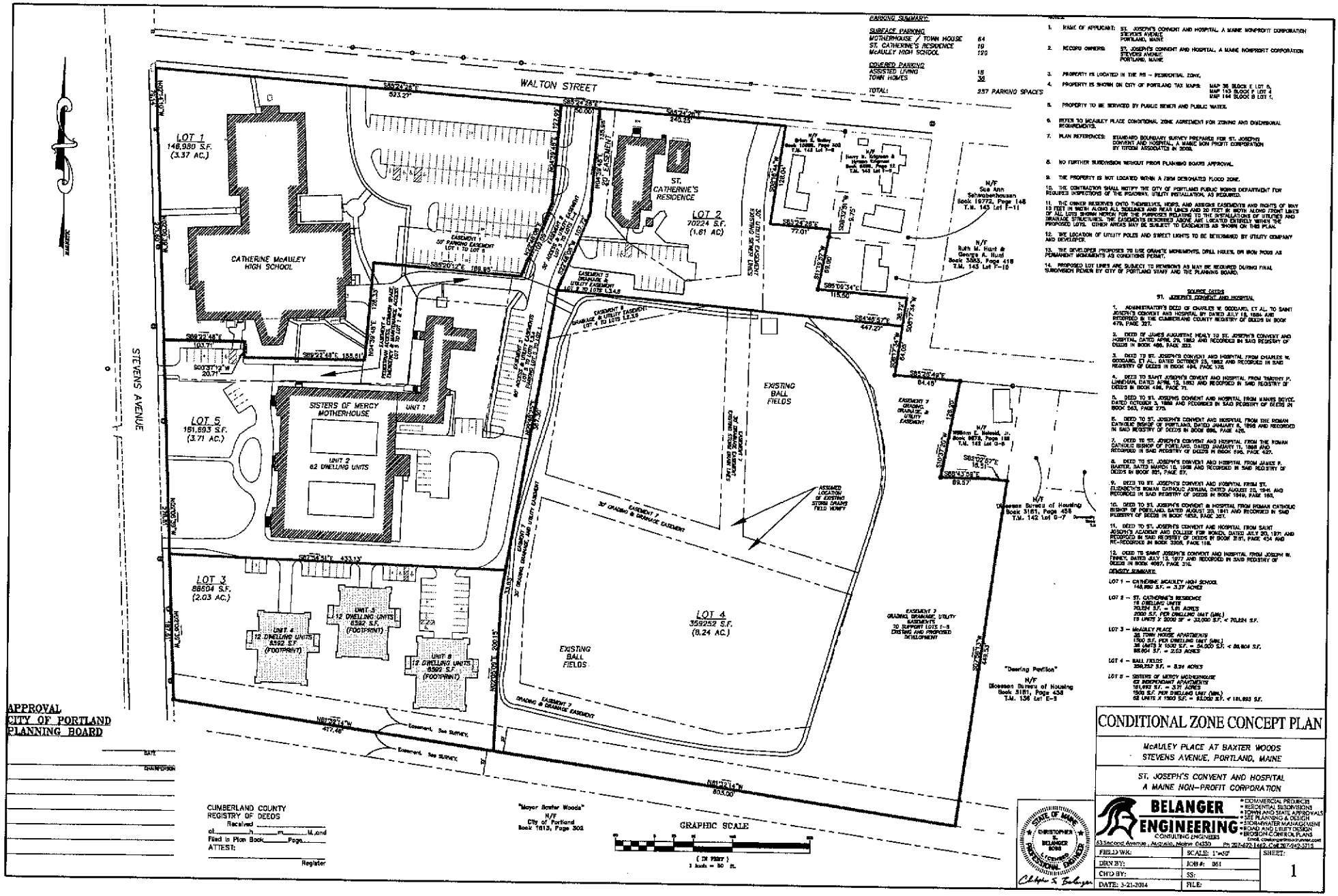
MOTHER HOUSE LLC, Grantee

By: _____
Kevin Bunker, its Manager

EXHIBIT A

Plan of the Property

Conditional Zone Concept Plan,
McAuley Place at Baxter Woods, Stevens Avenue, Portland, Maine prepared by Belanger Engineering,
March 21, 2014



PARKING SUMMARY:

SURFACE PARKING	
MOTHERHOUSE / TOWN HOUSE	64
ST. CATHERINE'S RESIDENCE	19
McAULEY HIGH SCHOOL	120
COVERED PARKING	
ASSISTED LIVING	15
TOWN HOMES	30
TOTAL:	257 PARKING SPACES

NOTES:

1. NAME OF APPLICANT: ST. JOSEPH'S CONVENT AND HOSPITAL, A MAINE NONPROFIT CORPORATION
   STEVENS AVENUE
   PORTLAND, MAINE
2. RECORD OWNERS: ST. JOSEPH'S CONVENT AND HOSPITAL, A MAINE NONPROFIT CORPORATION
   STEVENS AVENUE
   PORTLAND, MAINE
3. PROPERTY IS LOCATED IN THE R5 – RESIDENTIAL ZONE.
4. PROPERTY IS SHOWN ON CITY OF PORTLAND TAX MAPS: MAP 36, BLOCK E LOT A; MAP 193 BLOCK F LOT 4; MAP 194 BLOCK B LOT 1.
5. PROPERTY TO BE SERVICED BY PUBLIC SEWER AND PUBLIC WATER.
6. REFER TO McAULEY PLACE CONDITIONAL ZONE AGREEMENT FOR ZONING AND DIMENSIONAL REQUIREMENTS.
7. PLAN REFERENCES: STANDARD BOUNDARY SURVEY PREPARED FOR ST. JOSEPH'S CONVENT AND HOSPITAL, A MAINE NON PROFIT CORPORATION BY TITCOM ASSOCIATES IN 2008.
8. NO FURTHER SUBDIVISION WITHOUT PRIOR PLANNING BOARD APPROVAL.
9. THE PROPERTY IS NOT LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE.
10. THE CONTRACTOR SHALL NOTIFY THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT FOR REQUIRED INSPECTIONS OF THE ROADWAY, UTILITY INSTALLATION, AS REQUIRED.
11. THE OWNER RESERVES UNTO THEMSELVES, HEIRS, AND ASSIGNS EASEMENTS AND RIGHTS OF WAY 10 FEET IN WIDTH ALONG ALL SIDELINES AND REAR LINES AND 20 FEET IN WIDTH ALONG FRONT LINES OF ALL LOTS SHOWN HEREON FOR THE PURPOSES RELATING TO THE INSTALLATIONS OF UTILITIES AND DRAINAGE STRUCTURES. THE EASEMENTS RESERVED ABOVE ARE LOCATED ENTIRELY WITHIN THE PROPOSED LOTS. OTHER AREAS MAY BE SUBJECT TO EASEMENTS AS SHOWN ON THIS PLAN.
12. THE LOCATION OF UTILITY POLES AND STREET LIGHTS TO BE DETERMINED BY UTILITY COMPANY AND DEVELOPER.
13. THE DEVELOPER PROPOSES TO USE GRANITE MONUMENTS, DRILL HOLES, OR IRON RODS AS PERMANENT MONUMENTS AS CONDITIONS PERMIT.
14. PROPOSED LOT LINES ARE SUBJECT TO REVISIONS AS MAY BE REQUIRED DURING FINAL SUBDIVISION REVIEW BY CITY OF PORTLAND STAFF AND THE PLANNING BOARD.

SOURCE DEEDS
ST. JOSEPH'S CONVENT AND HOSPITAL

1. ADMINISTRATOR'S DEED OF CHARLES W. GODDARD, ET AL. TO SAINT JOSEPH'S CONVENT AND HOSPITAL BY DATED JULY 15, 1886 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 679, PAGE 327.
2. DEED OF JAMES AUGUSTINE HEALY TO ST. JOSEPH'S CONVENT AND HOSPITAL DATED APRIL 29, 1862 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 466, PAGE 332.
3. DEED TO ST. JOSEPH'S CONVENT AND HOSPITAL FROM CHARLES W. GODDARD, ET AL. DATED OCTOBER 21, 1882 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 494, PAGE 170.
4. DEED TO SAINT JOSEPH'S CONVENT AND HOSPITAL FROM TIMOTHY P. LYNCHAN, DATED APRIL 15, 1882 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 488, PAGE 71.
5. DEED TO ST. JOSEPHS CONVENT AND HOSPITAL FROM MANNIS BOYCE, DATED OCTOBER 3, 1888 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 540, PAGE 275.
6. DEED TO ST. JOSEPH'S CONVENT AND HOSPITAL FROM THE ROMAN CATHOLIC BISHOP OF PORTLAND, DATED JANUARY 6, 1898 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 696, PAGE 420.
7. DEED TO ST. JOSEPH'S CONVENT AND HOSPITAL FROM THE ROMAN CATHOLIC BISHOP OF PORTLAND, DATED JANUARY 11, 1898 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 696, PAGE 422.
8. DEED TO ST. JOSEPH'S CONVENT AND HOSPITAL FROM JAMES P. BAXTER, DATED MARCH 15, 1898 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 691, PAGE 87.
9. DEED TO ST. JOSEPH'S CONVENT AND HOSPITAL FROM ST. ELIZABETH'S ROMAN CATHOLIC ASYLUM, DATED AUGUST 20, 1941, AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 1949, PAGE 160.
10. DEED TO ST. JOSEPH'S CONVENT & HOSPITAL FROM ROMAN CATHOLIC BISHOP OF PORTLAND, DATED AUGUST 20, 1941 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 1952, PAGE 357.
11. DEED TO ST. JOSEPH'S CONVENT AND HOSPITAL FROM SAINT JOSEPH'S ACADEMY AND COLLEGE FOR WOMEN, DATED JULY 20, 1971, AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 3181, PAGE 454 AND RE-RECORDED IN BOOK 3268, PAGE 118.
12. DEED TO SAINT JOSEPH'S CONVENT AND HOSPITAL FROM JOSEPH W. FINNEY, DATED JULY 13, 1977 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 4097, PAGE 316.

DENSITY SUMMARY:

LOT 1 – CATHERINE McAULEY HIGH SCHOOL
146,950 S.F. = 3.37 ACRES

LOT 2 – ST. CATHERINE'S RESIDENCE
19 DWELLING UNITS
70,224 S.F. = 1.61 ACRES
2000 S.F. PER DWELLING UNIT (MIN.)
19 UNITS X 2000 SF = 38,000 S.F. < 70,224 S.F.

LOT 3 – McAULEY PLACE
30 TOWN HOUSE APARTMENTS
1500 S.F. PER DWELLING UNIT (MIN.)
30 UNITS X 1500 S.F. = 54,000 S.F. < 88,604 S.F.
88,604 S.F. = 2.03 ACRES

LOT 4 – BALL FIELDS
359,252 S.F. = 8.24 ACRES

LOT 5 – SISTERS OF MERCY MOTHERHOUSE
62 INDEPENDENT APARTMENTS
161,892 S.F. = 3.71 ACRES
1500 S.F. PER DWELLING UNIT (MIN.)
62 UNITS X 1500 S.F. = 93,000 S.F. < 161,893 S.F.

APPROVAL
CITY OF PORTLAND
PLANNING BOARD

DATE: _____

CHAIRPERSON: _____

CUMBERLAND COUNTY
REGISTRY OF DEEDS
Received _____
at _____ h _____ m _____ M. and
Filed in Plan Book _____ Page _____
ATTEST: _____
Register

CONDITIONAL ZONE CONCEPT PLAN

McAULEY PLACE AT BAXTER WOODS
STEVENS AVENUE, PORTLAND, MAINE

ST. JOSEPH'S CONVENT AND HOSPITAL
A MAINE NON–PROFIT CORPORATION

STATE OF MAINE
CHRISTOPHER S. BELANGER
3098
LICENSED PROFESSIONAL ENGINEER
Christopher S. Belanger

BELANGER ENGINEERING
CONSULTING ENGINEERS
• COMMERCIAL PROJECTS
• RESIDENTIAL SUBDIVISIONS
• TOWN AND STATE APPROVALS
• SITE PLANNING & DESIGN
• STORMWATER MANAGEMENT
• ROAD AND UTILITY DESIGN
• EROSION CONTROL PLANS
53 Second Avenue, Augusta, Maine 04330 Ph 207-622-1462, Cell 207-242-3713
Email: cbelangerengineering@yahoo.com

FIELD WK:	SCALE: 1"=50'	SHEET: 1
DRN BY:	JOB #: 861	
CHK'D BY:	SS:	
DATE: 3-21-2014	FILE:	

Exhibit B
Declaration of Condominium

DECLARATION OF CONDOMINIUM OF MCAULEY PLACE 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 30 Governor's Way, Suite 100, Topsham, 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 McAuley Place Condominium (hereinafter the "Condominium"). The Property is depicted on the plat prepared by _____ 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, McAuley Place 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 McAuley Place Condominium. The name of the Association organized under the Act is McAuley Place 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 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 a 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 as provided below in subparagraph D.

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 Schedule 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, ___ assigned Limited Common Element parking spaces as shown on the Plat consisting of P-#__ through P-#__; and

To Unit 2, ___ assigned Limited Common Element parking spaces as shown on the Plat consisting of P-#__ through P-#__; and

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 1602-105(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 Schedule 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 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; and (ii) 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, 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 Schedule 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 McAuley Place

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) Units 1 and 2 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, except that no lease will be entered for a term of less than 30 days. The Association shall promulgate no rule or regulation, or take any action, that shall or could unreasonably interfere with the use of any Unit as affordable rental housing, and if requested by lenders and investors of any Unit used or leased as affordable rental housing, the Association shall provide reasonable assurances as to its commitment set forth in this sentence.

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. 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, subject, however, to the provisions of Subsection B above. No rule or regulation may be adopted that (a) would impede or adversely affect the ability of the owner of Unit 1 from leasing to tenants in the ordinary course of business subject to the provisions of Section 42 of the Internal Revenue Code, or (b) conflict with any applicable provision of law, including, without limitation, all Fair Housing Act provisions..

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, subject to the limitations set forth in Article VII(D) hereof, 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.

(7) No Amendment to Interfere with Use of Units as Affordable Rental Housing. Notwithstanding anything to the contrary contained in this Declaration, upon (i) the conveyance of any to a Maine limited partnership or other entity that intends to develop such unit as affordable rental housing, and (ii) the closing by such limited partnership or entity on construction and permanent financing, this Declaration shall not be amended in any manner that shall prevent or restrict the leasing of dwelling units within such unit to very low, and/or low and moderate income persons or families without the written consent of the owner of such Unit and its mortgagees, whether Eligible Mortgage Holders or not.

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 _____, 2014 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

SCHEDULE A
MCAULEY PLACE 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 #5 as shown on

_____ (hereinafter the "Subdivision Plan").

Together with and also hereby conveying for the benefit of the owners of each Unit in the Condominium, their respective heirs, successors and assigns, described below and for the benefit of the McAuley Place Condominium Association, its successors and assigns, and also excepting and reserving for the benefit of Declarant, its successors and assigns, as the owner of Lots 1, 3 and 4 as noted below, the following described perpetual rights and easements for the following described purposes across the portion of land of the Declarant, bounded and described as set forth below, which easements shall be appurtenant to and shall burden and run with the land described above in this Schedule A as described below:

1. Easement #1 (Shared Parking on Lot 1): The perpetual right and easement to use the parking spaces located on Lot #1, as shown on the Plan, for the parking of vehicles, in the area shown as Easement #1 on the Subdivision Plan, for the benefit of the Unit Owners, in common with the owners of Lot 1, Lot 3 and Lot 4, is hereby granted. This parking easement shall include shall include the right to park vehicles and to pass therefrom by foot to and from the land described in this Schedule A, provided, however that the owner of Lot 1 shall have priority over the land described in this Schedule A at all times that the school located on Lot 1 is in session and for all school related athletic and other events scheduled in advance by at least 7 days notice to the McAuley Place Condominium Association. The owners of Lot 1, Lot 3 and Lot 4 and the Association shall establish procedures for the scheduling of events and communication to all Lot and unit owners when events are scheduled that will affect use of such parking areas in order to avoid having multiple events scheduled for the same time that would impact use of such Easement 1 parking area. The owner of Lot 1 shall pay all costs of maintenance and repair of such Easement #1 area.

2. Easement #2 & Easement 3 (Access and utilities to and from Walton Street): The perpetual rights and

easements to use the area shown as Easement 2 and Easement 3 on the Subdivision Plan, for the benefit of Lots 1, 2, 3 and 4, in common with the land described in this Schedule A, is hereby reserved by Declarant, its successors and assigns, for the following described purposes:

a. Access Right of Way: The perpetual right and easement, over Easement 2 and Easement 3, to pass and repass on foot and with vehicles at any and all times from Walton Street to Lots 1, 2, 3, 4 and 5 together with the right to enter from time to time within said areas to inspect, install, construct, maintain, repair, rebuild, replace and remove fill, pavement and other facilities and appurtenances intended to facilitate or improve access over such premises.

b. Utilities: Together with the perpetual right and easement, over Easement 2 and Easement 3, to install, construct, erect, lay, relay, repair, inspect, operate, maintain, rebuild, replace and remove utility conduits, pipes and mains, and poles and wires with all necessary fixtures and appurtenances upon, through, under or over such premises for any and all utilities including but not limited to electric power, transmission and distribution lines, other energy, transmission and distribution lines, gas mains, cable-television, telephone and other communications or intelligence lines, together with suitable and sufficient lines, pipes, cables, mains, poles and towers with sufficient foundations together with wires strung upon and extending between the same, above or below ground, together with all necessary facilities, fixtures, anchors, guys, crossarms, and other equipment and appurtenances and also for conveying and transmitting water, sewerage, wastewater and other liquids and substances together with the right at all times to make connection with all of said facilities to land adjoining the premises. Together with the right to maintain, relay, repair, inspect, operate, maintain, rebuild, replace and remove utility conduits, pipes and mains, and poles and wires with all necessary fixtures and appurtenances, in all existing locations, even if not part of the areas shown as Easement 2 and Easement 3, of existing utilities lines, conduits, pipes, mains, poles and wires.

c. Drainage: Together with the perpetual right and easement, over Easement 2 and Easement 3, to enter such areas and to install, construct, lay, relay, maintain, inspect, repair, rebuild, replace and remove drainage lines, pipes, swales, conduits, manholes, mains and other equipment and facilities for drainage purposes together with all necessary fixtures and appurtenances, and to make connection therewith to the property described in Schedule A, and to flow and direct water into such areas.

d. Landscaping: Together with the perpetual right and easement, over Easement 2 and Easement 3, to fill, grade, landscape, seed, plant grass, trees and shrubs, to mow, cut and trim the same and to remove and replace the same.

e. Related Rights: Together with the perpetual right and easement in connection with or in exercising any of the above described rights to enter such areas and to work, fill, excavate, tunnel, trench and/or landfill with such areas, and to trim, clear, cut down and remove trees, timber and bushes to such extent as is reasonably necessary or appropriate for any of the above described purposes.

McAuley Place Condominium Association, as a Common Element Expense of the Unit Owners, shall pay all costs of maintenance and repair of such Easement #2 and Easement 3 area.

3. Easement #4 (Access from Stevens Avenue): The perpetual rights and easements to use the area shown as Easement 4 on the Subdivision Plan, for the benefit of Lots 1, 3 and 4, in common with Lot 5, is hereby reserved by Declarant, its successors and assigns, for the following described purposes:

a. Access Right of Way: The perpetual right and easement, over Easement 4, to pass and repass on foot and with vehicles at any and all times together with the right to enter from time to time

within said areas to inspect, install, construct, maintain, repair, rebuild, replace and remove fill, pavement and other facilities and appurtenances intended to facilitate or improve access over such premises.

b. Utilities: Together with the perpetual right and easement, over Easement 4, to install, construct, erect, lay, relay, repair, inspect, operate, maintain, rebuild, replace and remove utility conduits, pipes and mains, and poles and wires with all necessary fixtures and appurtenances upon, through, under or over such premises for any and all utilities including but not limited to electric power, transmission and distribution lines, other energy, transmission and distribution lines, gas mains, cable-television, telephone and other communications or intelligence lines, together with suitable and sufficient lines, pipes, cables, mains, poles and towers with sufficient foundations together with wires strung upon and extending between the same, above or below ground, together with all necessary facilities, fixtures, anchors, guys, crossarms, and other equipment and appurtenances and also for conveying and transmitting water, sewerage, wastewater and other liquids and substances together with the right at all times to make connection with all of said facilities to land adjoining the premises.

c. Drainage: Together with the perpetual right and easement, over Easement 4, to enter such areas and to install, construct, lay, relay, maintain, inspect, repair, rebuild, replace and remove drainage lines, pipes, swales, conduits, manholes, mains and other equipment and facilities for drainage purposes together with all necessary fixtures and appurtenances, and to make connection therewith to the property described in Schedule A, and to flow and direct water into such areas.

d. Landscaping: Together with the perpetual right and easement, over Easement 4, to fill, grade, landscape, seed, plant grass, trees and shrubs, to mow, cut and trim the same and to remove and replace the same.

e. Related Rights: Together with the perpetual right and easement in connection with or in exercising any of the above described rights to enter such areas and to work, fill, excavate, tunnel, trench and/or landfill with such areas, and to trim, clear, cut down and remove trees, timber and bushes to such extent as is reasonably necessary or appropriate for any of the above described purposes.

f. Parking: Together with the perpetual right and easement to use the parking spaces for the parking of vehicles, in the parking spaces constructed by McAuley Place Condominium Association along the sides of the area shown as Easement 4 on the Subdivision Plan, for the benefit of Lot 1, in common with Lot 5, is hereby reserved. This parking easement shall include shall include the right to park vehicles and to pass therefrom by foot to and from Lot 1, provided, however that the McAuley Place Condominium Association shall have priority over Lot 1 except for school related athletic and other events scheduled in advance by at least 7 days notice to the McAuley Place Condominium Association. The owner of Lot 1 and the Association shall establish procedures for the scheduling of events and communication to all Lot and unit owners when events are scheduled that will affect use of such parking areas in order to avoid having multiple events scheduled for the same time that would impact use of such Easement 4 parking area.

McAuley Place Condominium Association, as a Common Element expense of the Unit Owners, shall pay all costs of maintenance and repair of such Easement #4 area.

4. Easement #5: The perpetual rights and easements to use the area shown as Easement 5 located on Lot 2 as shown on the Subdivision Plan, for the benefit of Lots 1, 3, 4 and 5, is hereby reserved by Declarant, its successors and assigns, for the following described purposes:

a. Access Right of Way: The perpetual right and easement, over Easement 5, to pass and repass on foot and with vehicles, but with vehicles solely for maintenance and for emergency access purposes, at

any and all times together with the right to enter from time to time within said areas to inspect, install, construct, maintain, repair, rebuild, replace and remove fill, pavement and other facilities and appurtenances intended to facilitate or improve access over such premises.

b. Common Open Space: Together with the perpetual right and easement, over Easement 5, to use the common open space in Easement 5 for special events scheduled with the McAuley Place Condominium Association at least 7 days in advance.

c. Drainage: Together with the perpetual right and easement, over Easement 5, to enter such areas and to install, construct, lay, relay, maintain, inspect, repair, rebuild, replace and remove drainage lines, pipes, swales, conduits, manholes, mains and other equipment and facilities for drainage purposes together with all necessary fixtures and appurtenances, and to make connection therewith to the property described in Schedule A, and to flow and direct water into such areas.

d. Landscaping: Together with the perpetual right and easement, over Easement 5, to fill, grade, landscape, seed, plant grass, trees and shrubs, to mow, cut and trim the same and to remove and replace the same.

e. Related Rights: Together with the perpetual right and easement in connection with or in exercising any of the above described rights to enter such areas and to work, fill, excavate, tunnel, trench and/or landfill with such areas, and to trim, clear, cut down and remove trees, timber and bushes to such extent as is reasonably necessary or appropriate for any of the above described purposes.

Parking: Notwithstanding the foregoing, the Owner of Units 1 and 2, shall have the right to park vehicles in the portion of Easement 5 on which parking spaces are designated.

McAuley Place Condominium Association, as a Common Element expense of the Unit Owners, shall pay all costs of maintenance and repair of such Easement #5 area.

5. Easement #6: The perpetual right and easement to use the area shown as Easement 6A located on Lot 4 as shown on the Subdivision Plan, for the benefit of Lots 1, 2, 3 and 5, in common with Lot 4,is hereby submitted to this Declaration for the benefit of the Unit Owners and is hereby reserved by Declarant, its successors and assigns, for the following described purposes:

a. Utilities: Together with the perpetual right and easement, over Easement 6A, to install, construct, erect, lay, relay, repair, inspect, operate, maintain, rebuild, replace and remove utility conduits, pipes and mains, and poles and wires with all necessary fixtures and appurtenances upon, through, under or over such premises for any and all utilities including but not limited to electric power, transmission and distribution lines, other energy, transmission and distribution lines, gas mains, cable-television, telephone and other communications or intelligence lines, together with suitable and sufficient lines, pipes, cables, mains, poles and towers with sufficient foundations together with wires strung upon and extending between the same, above or below ground, together with all necessary facilities, fixtures, anchors, guys, crossarms, and other equipment and appurtenances and also for conveying and transmitting water, sewerage, wastewater and other liquids and substances together with the right at all times to make connection with all of said facilities to land adjoining the premises.

b. Drainage: Together with the perpetual right and easement, over Easement 6A, to enter such areas and to install, construct, lay, relay, maintain, inspect, repair, rebuild, replace and remove drainage lines, pipes, swales, conduits, manholes, mains and other equipment and facilities for drainage purposes together with all necessary fixtures and appurtenances, and to make connection therewith to Lots 1, 3 and 4, and to flow and direct water into such areas.

c. Landscaping: Together with the perpetual right and easement, over Easement 6A, to fill, grade, landscape, seed, plant grass, trees and shrubs, to mow, cut and trim the same and to remove and replace the same.

d. Related Rights: Together with the perpetual right and easement in connection with or in exercising any of the above described rights to enter such areas and to work, fill, excavate, tunnel, trench and/or landfill with such areas, and to trim, clear, cut down and remove trees, timber and bushes to such extent as is reasonably necessary or appropriate for any of the above described purposes.

The McAuley Place Condominium Association, as a Common Element expense of the Unit Owners, the owner of Lot 1, and the owner of Lot 4 shall each pay 1/3rd of all costs of maintenance and repair of such Easement #6A area.

6. Easement #7: The perpetual right and easement to use the area shown as Easement 7 located on Lot 4 as shown on the Subdivision Plan, for the benefit of the Land submitted to this Declaration, in common with Lots 1, 3, and 4, is hereby granted and reserved, for the following described purposes:

a. Drainage: Together with the perpetual right and easement, over Easement 7, to enter such areas and to install, construct, lay, relay, maintain, inspect, repair, rebuild, replace and remove drainage lines, pipes, swales, conduits, manholes, mains and other equipment and facilities for drainage purposes together with all necessary fixtures and appurtenances, and to make connection therewith to Lots 1, 3 and 5, and to flow and direct water into such areas, together with the perpetual right and easement in connection with or in exercising any of the above described rights to enter such areas and to work, fill, excavate, tunnel, trench and/or landfill with such areas, and to trim, clear, cut down and remove trees, timber and bushes to such extent as is reasonably necessary or appropriate for any of the above described purposes.

The McAuley Place Condominium Association, as a Common Expense of the Unit Owners, shall pay all costs of maintenance and repair of such Easement #7 area.

Notwithstanding the foregoing, the owner of Lot 4, its successors and assigns, shall have the right to relocate at its expense, all drainage facilities located in the Easement 7 area to another location, either on Lot 4 or elsewhere, provided that the same are replaced with comparable drainage facilities for the benefit of Lots 1, 3 and 5.

Easement #8: Declarant, its successors and assigns, except and reserve, for the benefit of Lots 1, 3 and 4, the perpetual right and easement to create physical connections between the Motherhouse located on the land submitted to this Declaration and buildings to be constructed on Lot 1, 3 and/or 4. Declarant, its successors and assigns, shall pay all costs of construction and maintenance of any such physical connections.

The premises described above as Lot 5 are 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, 3 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 #5; 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 _____, dated _____ and recorded in the Cumberland County Registry of Deeds, Book __, Page ___.

SCHEDULE B
MCAULEY PLACE 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 McAuley Place 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 Schedule 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.

SCHEDULE C
MCAULEY PLACE CONDOMINIUM DECLARATION OF CONDOMINIUM

BYLAWS OF MCAULEY PLACE CONDOMINIUM ASSOCATION

ARTICLE I: Name, Location, and Fiscal Year

Section l. Name. The name of the corporation is McAuley Place 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 McAuley Place 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 1. 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 McAuley Place 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, 20__ 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.

ARTICLE IV: The Board of Directors

Section 1. 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 1. 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.

Exhibit C

Condominium Floor Plans showing division between Unit 1 and Unit 2, Common Elements and Limited Common Elements

And

Condominium Survey Plat

Exhibit D
Title Exceptions

1. Title to and rights of the public and others entitled thereto in and to those portions of the insured premises lying within the bounds of Stevens Avenue and Walton Street.

2. Any condition, covenant, easement, fact, reservation, restriction or right set forth in the attached Exhibit A and not otherwise expressly excepted herein.

3. 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.

4. Rights and easements reserved in the deed from Daniel W. Fessenden et al. as Executors of the Estate of Francis O.J. Smith, dated October 25, 1882 and recorded in said Registry, Book 494, Page 178.

5. Rights and easements set forth in the deed recorded in said Registry, Book 486, Page 322.

6. Such state of facts as shown on the Plan of Property & Existing Conditions Catherine McAuley High School & St. Joseph's Convent prepared by Titcomb Associates, dated September 26, 2006.

Source Deeds
St. Joseph's Convent and Hospital

1. Administrator's Deed of Charles W. Goddard, et al. to Saint Joseph's Convent and Hospital by dated July 18, 1884 and recorded in the Cumberland County Registry of Deeds in Book 479, Page 327.

2. Deed of James Augustine Healy to St. Joseph's Convent and Hospital, dated April 29, 1882 and recorded in said Registry of Deeds in Book 486, Page 322.

3. Deed to St. Joseph's Convent and Hospital from Charles W. Goddard, et al., dated October 25, 1882 and recorded in said Registry of Deeds in Book 494, Page 178.

4. Deed to Saint Joseph's Covent and Hospital from Timothy P. Linnehan, dated April 12, 1883 and recorded in said Registry of Deeds in Book 496, Page 71.

5. Deed to St. Josephs Convent and Hospital from Manns Boyce, dated October 3, 1889 and recorded in said Registry of Deeds in Book 563, Page 275.

6. Deed to St. Joseph's Convent and Hospital from the Roman Catholic Bishop of Portland, dated January 6, 1898 and recorded in said Registry of Deeds in Book 698, Page 426.

7. Deed to St. Joseph's Convent and Hospital from the Roman Catholic Bishop of Portland, dated January 11, 1898 and recorded in said Registry of Deeds in Book 698, Page 427.

8. Deed to St. Joseph's Convent and Hospital from James P. Baxter, dated March 10, 1908 and recorded in said Registry of Deeds in Book 821, Page 57.

9. Deed to St. Joseph's Convent and Hospital from St. Elizabeth's Roman Catholic Asylum, dated August 20, 1941 and recorded in said Registry of Deeds in Book 1649, Page 160.

10. Deed to St. Joseph's Convent & Hospital from Roman Catholic Bishop of Portland, dated August 20, 1941 and recorded in said Registry of Deeds in Book 1652, Page 357.

11. Deed to St. Joseph's Convent and Hospital from Saint Joseph's Academy and College for Women, dated July 20, 1971 and recorded in said Registry of Deeds in Book 3181, Page 454 and re-recorded in Book 3205, Page 118.

12. Deed to Saint Joseph's Convent and Hospital from Joseph W. Finney, dated July 13, 1977 and recorded in said Registry of Deeds in Book 4067, Page 310.

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 of the reports of formation, amendment and cancellation of certificates of limited partnership and annual reports filed by the same.*

I further certify *that MOTHERHOUSE ASSOCIATES LP is a duly formed limited partnership under the laws of the State of Maine and that the date of formation is September 17, 2014.*

I further certify *that said limited partnership has filed annual reports due to this Department, and that no action is now pending by or on behalf of the State of Maine to forfeit the certificate of limited partnership and that according to the records in the Department of the Secretary of State, said limited partnership is a legally existing limited partnership in good standing under the laws of the State of Maine at the present time.*

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 ninth day of June 2015.

Matthew Dunlap
Secretary of State

Att. E

Exhibit 2

Aerial Context Map

Att. E

MAGNETIC

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

AERIAL PHOTO

McAULEY PLACE AT BAXTER WOODS
RETIREMENT COMMUNITY

SISTERS OF MERCY–ST. JOSEPHS CONVENT & HOSPITAL
STEVENS AVENUE, PORTLAND, MAINE

STATE OF MAINE
CHRISTOPHER S. BELANGER
9098
LICENSED
PROFESSIONAL ENGINEER

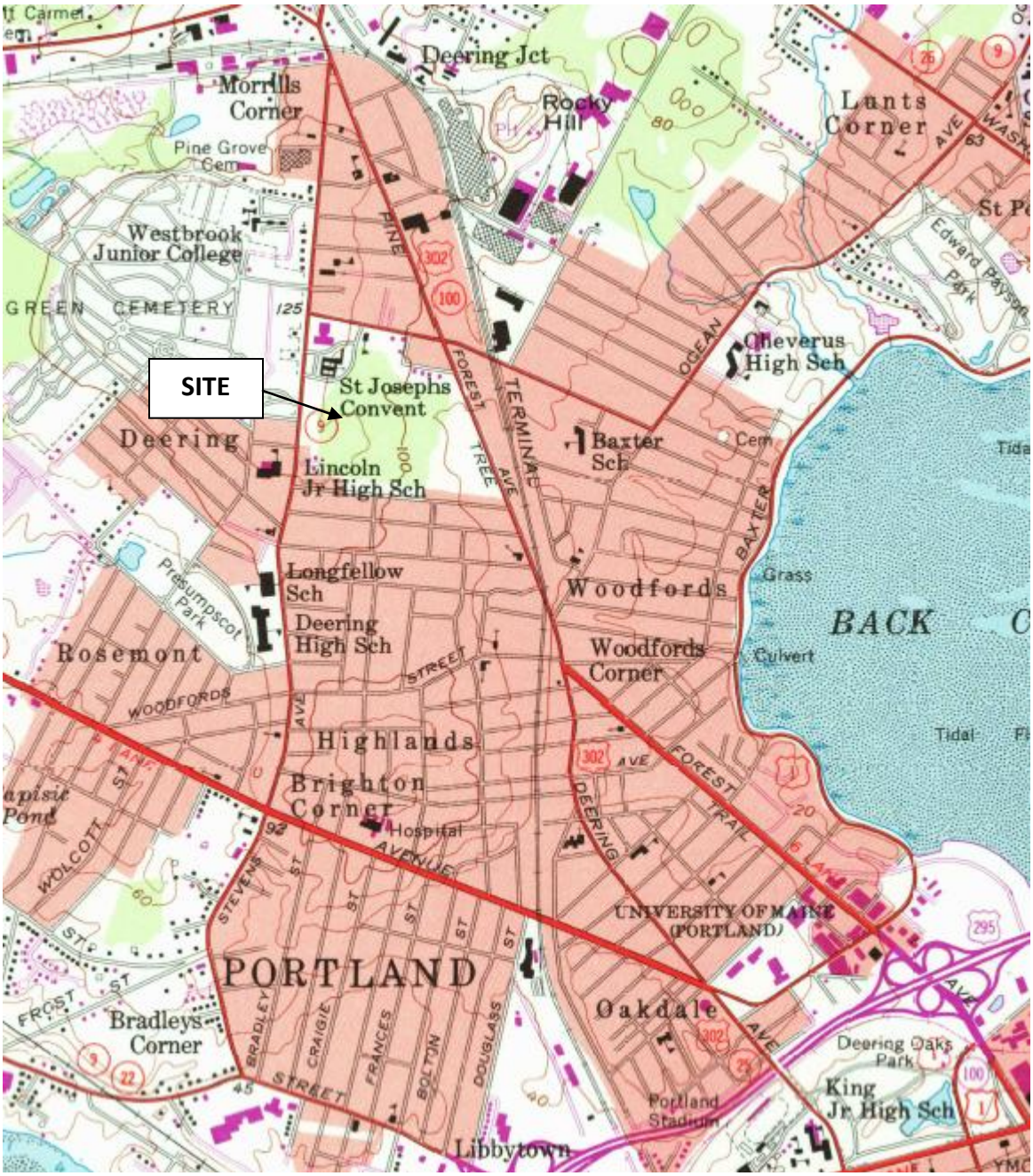
BELANGER ENGINEERING
CIVIL ENGINEERING
SITE PLANNING & DESIGN
STORMWATER ANALYSIS
EROSION CONTROL
63 Second Avenue, Augusta, Maine 04330
Ph 207-622-1462, Cell 207-242-5713 Email: cbelanger@roadrunner.com

FIELD WK:	SCALE: 1"=50'	SHEET:
DRN BY: CSB	JOB #: 061	3
CH'D BY:	SS:	
DATE: 7-8-2010	FILE:	

Exhibit 3

USGS Quad Locus

- REFERENCE : USGS Portland West Quad., 7.5 Minute Series, 1978



- TITLE:

EXHIBIT 3
USGS LOCUS MAP

- PREPARED FOR:

605 STEVENS AVE. PROJECT
MOTHERHOUSE ASSOC. LP
100 COMMERCIAL STREET
SUITE 414
PORTLAND, ME 04104

LICHT
ENVIRONMENTAL DESIGN, LLC

- DATE: 06/2015 SCALE: 1"=1000' JOB NO: 14.067

Exhibit 4

Assessors Maps

J6NE J7NW J7NE

J6SE J7NE

I6NE I7NW I7NE

WELLINGTON RD
CARLYLE RD
DERBY RD
CANCO RD
WALTON ST
HOLLY ST
PERSHING ST
FOREST AVE

April 1 2012 fy 2013

Tax Map Index; http://www.portlandassessors.com/taxmaps.htm

Index Number - J7SW

1 inch = 50 feet

J6NW J6NE J7NW

J6SW J7NE

I6NW I6NE I7NW

WALTON ST
245 - 298
246 - 297
234 - 244
233 - 243
214 - 232
213 - 231
187 - 211
186 - 212
650 - 668
649 - 667
582 - 648
581 - 647
562 - 580
561 - 579
2 - 20
1 - 19
2 - 26
1 - 25
2 - 28
1 - 27
2 - 42
1 - 41
DINGLEY CT
MORGAN CT
PERSHING ST
HOLLY ST
STEVENS AVE
N

144 C003 3 8547
144 C002 651 7000
144 C005 11 6462
144 C004
144 C001 293 7965
285 7325
144 A043 17 12382
23
144 A042 9430
144 A044 5152 299
144 A045 5808 275
144 A046 9225 269
144 A041 16645
144 A047 263 7182
144 A048 15200 259
144 A052 27816
144 A067 14136 253
144 A053 8446 249
144 A054 7490
144 A055 18 9695
20
144 A059 4875
13
144 A058
144 A066
144 A064
144 A081 2112
144 A065
144 A060 9 4800
144 A080 10 5003
144 A061 4725 5
144 A082 8 7115 6
144 A062 6000 239
144 A063 6888 233
144 B011 21 2 21 1 12799
144 B017 12000 17 1
144 B001
144 B016 9 3280
144 B012 3201
144 B014 7 4000
144 B013
144 B009
144 B002
144 B015 5290 229
223 11183
144 B010 4910 219
213 7503
144 B008
144 F006 226 9856
144 F005 218 8884
144 F011 16 6720
144 F010 12 7952
142 E011 210 7176
142 E014 8177 37
142 E012
142 E015 33
142 G008 34 10144
142 G007
144 A004 9413
144 A003 9281
144 A001
631
242
144 A002 612
144 B001
605
143 F004
134 A001
134 F001
135 X003
135 X002
135 A005
136 E006
136 E005
821926

1 inch = 50 feet

April 1 2012 fy 2013 Tax Map Index; http://www.portlandassessors.com/taxmaps.htm

Index Number - J6SE

J6SE J7SW J7SE

I6NE I7NW

I6SE I7SW I7SE

143 F004
136 E006
880
136 E005
136 X001
807.46
136 D004
716902
136 D008
5000
136 D001
61
136 D002
57
136 D003
245.4 Total
137 E011
137 E010
137 E009
137 E008
137 E007
137 E006
137 E005
137 E012

142 F008
137 C013
25724
887
137 C014
16835
264.1
137 C012
43560
867
137 H001
137 C011
36706
865
849
26890
849
137 C010
843
137 C009
6785
137 C008
835
17342
829
137 C007
6440
137 C006
6080
819
137 C004
5960
137 C015
4803
815
137 C018
9457
803
137 C005
17409
800
137 E003
137 C003
137 C001
137 K001
249566
137 A008

FOREST AVE
791 - 972
791 - 971

142 H002
142 H003
142 H006
142 H007
7640
142 H004
15225
142 H005
7550
86
82
138 D003
7400
138 D004
9360
138 D005
138 D025

137 A006
9246
137 A015
3000
137 A014
65
2961
137 A007
61
4615
137 A010
110
6333
137 A011
53
4192
138 D024
4555
138 D019
6336
45
137 A009
104
5903
137 J004
4815
60
137 J005
6358
56
137 A005
102
5263
137 A012
630
137 A013
795
137 A004
96
4773
137 J003
6518
46
138 C011
7986
44
138 C024
8945
94
137 A003
5416
137 J002
89
5301
138 C012
88
137 A002
4934
7157
137 J001
5083
138 C001
49
138 C002
5857
45
138 C003
6500
84
137 A001
5575
41
37
634
138 C004

1 - 67
2 - 68
MAYLAND ST
IRVING ST
761 - 112
801 - 111
SAWYER ST

1 inch = 50 feet

April 1 2012 fy 2013

Tax Map Index; http://www.portlandassessors.com/taxmaps.htm

Index Number - I7NW

J6SW J6SE J7SW

I6NW I7NE

I6SW I6SE I7SW

STEVENS AVE 562 - 580 561 - 579

NEW ST 2 - 36 1 - 35

LELAND ST 122 - 136 121 - 135

LEONARD ST

CROSBY ST 2 - 36 1 - 35

PERCIVAL ST 146 - 164 145 - 163

HARTLEY ST 110 - 178 109 - 177

582 - 648 581 - 647

538 - 560 537 - 559

524 - 536 523 - 535

504 - 522 503 - 521

484 - 502 483 - 501

96 - 112 95 - 111

114 - 120 113 - 119

1 - 43 2 - 44

144 B001

143 F004

143 F004

135 X003

135 X002

134 A001

134 F001

132550

136 E006

136 E005

136 X001

5026.41

134 G008

132

134 G007

135 D015 131 4406

135 D012 127 4099

135 D016 123 4146

135 D010 8949 24

135 D008 22 3842

135 D011 3842

135 D006 6394 18

135 D004 16 6228

135 D001 550 18900

135 D013 119 6017

135 D007

135 D005

135 D003

135 D014 546 5123

135 D017 27 2626

135 D009 4002 23 4002

6707 19

5340 17

5314 11

135 D002 5486 542

135 A005

342866

136 D004

135 A002 535 13384

135 A003 5000

135 A004 4800

527 135 A001 5736

135 B018 519 6858

135 B016 150 5000

135 B022 6450

135 B019 515 6437

135 B020 511 5534

135 B021 165 3475

135 B017 8500

135 B014 6500

135 B012 5000

135 B010 145 5000

135 B008 5000

135 B006 139 5000

135 E014 107 4631

135 E024 3161

135 E006 26 6135

135 E005 20 6043

135 E004 14 6043

135 E003 10 6043

135 E001 534 5564

135 E002 528 5705

135 E015 99 6942

135 E016 7249

135 E007 512 80131

135 E017 6400

135 E029 81 4577

135 E030 4480

135 E008 510 6400

135 E019 77 7595

135 E013 73 4056

135 E018 13026

135 E009 9643 502

135 E023 71 4777

135 E022 33 9198

135 E027 3460

135 E021

135 E020

135 E025 500 3000

135 E010 4414

135 E026

499 135 C019 6946

135 C002 166 5340

135 C017 162

135 C015 156

135 C012

135 C008

135 C006

135 C003

135 C001

136 A008

134 F009

134 F010

133 H010

Index Number - I6NE

1 inch = 50 feet

April 1 2012 fy 2013

Tax Map Index; http://www.portlandassessors.com/taxmaps.htm

Exhibit 5

Compliance With Zoning

LICHT ENVIRONMENTAL DESIGN, LLC

EXHIBIT 5

COMPLIANCE WITH ZONING

The applicant is seeking a zone change from R5 to R5A over portions of the campus. Text amendments to the R5A zone were approved by the City Council on June 15, 2015. The map amendment is anticipated to be approved on July 6th. The project will be in compliance with all zoning requirements.

Following are the site data standards demonstrating compliance with applicable standards for the Motherhouse Lot 3. Refer to the Site Plan and Overall Subdivision Plan for zoning and zone line locations as proposed.

SITE DATA TABLE

STANDARD	REQUIRED		PROVIDED
	R5	R5A	
MIN. LOT AREA	9000 SF	2 AC	4.35 AC
MIN. FRONTAGE (FT)	50	50	380.2
MIN. YD. DIMENSIONS (FT.)			
A. FRONT YD.	20	25	130.4
B. REAR YD.	20	25	80
C. SIDE YD.	14	16	36.4
MAX. LOT COVERAGE	40%	30%	30,677 SF (16.0%)
MIN. LOT WIDTH (FT.)	90	60	304
MAX. STRUCTURE HEIGHT (FT.)	35	55	58 (EXISTING)
MIN. OPEN SPACE (SF/DU)	300 (PRUD) (2.)	200	373
(SF)		17,600	32,863

NOTES:

1. R5 LOT AREA/DU = 4500 SF WITH 250 FT. FRONTAGE & 6000 SF. WITH <250 FT. FRONTAGE
2. NO OPEN SPACE REQUIREMENT R5 FOR NON-PRUD MULTIPLEX.

Exhibit 6

Easements and ROW's

LICHT ENVIRONMENTAL DESIGN, LLC

EXHIBIT 6

EASEMENTS AND RIGHTS OF WAYS

Existing Easements:

The existing site contains a 33-foot right of way easement along the southern property line deeded in 1908 by James Baxter as part of a 66 foot wide paper street. The applicants will preserve that right of way as a natural buffer subject to any rights or interests the City may have in the right of way. Alternatively the applicant may approach corporation counsel to discuss the opportunity to extinguish that entire right of way.

The site is subject to an overhead utility line easement 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 stormdrainage are shown on the Preliminary Subdivison Plat, Sheet C2.

Additional easements may be require for parking and access as well and may be added to the plans.

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

Exhibit 7

Waiver Requests

EXHIBIT 7

WAIVERS

No waivers of Site Plan or Subdivision Standards are being requested at this time.

Exhibit 8

Financial and Technical Ability

Att. K

Androscoggin Bank

130 Middle Street
Portland, Maine 04101
207.518.6300
1.800.966.9172
androscogginbank.com

6/19/2015

City of Portland
389 Congress Street
Portland, ME 04101

RE: Motherhouse Associates LP

To Whom It May Concern:

On behalf of Androscoggin Bank, I am pleased to provide this letter of support for Kevin Bunker and John Wasileski for the Motherhouse project. Based on past projects with Kevin and John, we believe that the applicants have the ability to finance projected costs and develop a project of similar type and scale from a fiscal perspective.

Androscoggin Bank has worked with both Kevin and John in the past in various projects, and we believe that they possess the skills and expertise to complete the proposed project on time and within budget.

While this letter is not a commitment to lend, Androscoggin Bank would welcome the opportunity. Please feel free to call me with any questions.

Sincerely,

Paul Collins
Vice President
Androscoggin Bank

Member FDIC EQUAL HOUSING LENDER

Exhibit 9

Traffic Analysis

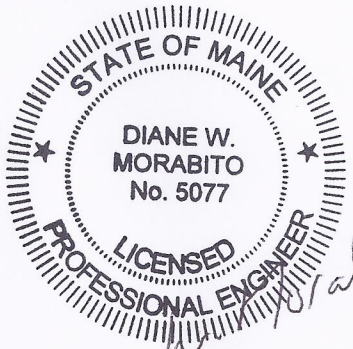
Att. L

TRAFFIC IMPACT STUDY
Motherhouse Senior Housing
Portland, Maine

June 23, 2015

Prepared for:

Motherhouse Associates LP
100 Commercial Street
Suite 414
Portland, ME 04101



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 proposed senior residential apartments to be located in the Motherhouse on the McAuley site on Stevens Avenue in Portland, Maine. The existing Motherhouse building will be renovated to provide eighty-eight (88) senior dwelling-units. Access to Motherhouse Senior Housing will be provided by a full-movement drive to Walton Street and by a secondary entrance on Stevens Avenue and 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. The renovation project is expected to begin in early 2016. Occupation is expected to be completed sometime in fall of 2017.

Trip Generation

The number of trips which will be generated by the proposed senior apartments was estimated using the most recent Institute of Transportation Engineers (ITE) ñTrip Generation, 9th Editionò report, published in 2012. Land Use Code 252 ï Senior Adult Housing ï Attached was used on the basis of 88 dwelling units. The results are summarized below:

	ITE Trip Generation
Time Period	One-way Trip-Ends
Weekday	302
AM Peak Hour ï adjacent street	18
Entering Site	6
Exiting Site	12
AM Peak Hour ï generator	34
Entering Site	16
Exiting Site	18
PM Peak Hour ï adjacent street	22
Entering Site	12
Exiting Site	10
PM Peak Hour ï generator	31
Entering Site	17
Exiting Site	14

As can be seen above, the senior apartments are expected to generate just 18 one-way trips during the weekday AM peak hour and 22 trips during the weekday PM peak hour of the adjacent street system. Given that trip generation will be well under 100 trips, a Traffic Movement Permit (TMP) will not be required from the Maine Department of Transportation (MaineDOT) for this first phase of the senior housing development.

The trip assignments were based upon the travel patterns observed during turning movement counts. These 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 Motherhouse apartments are expected to generate a maximum of six (6) lane hour trips. This minimal level of traffic should have no noticeable or measurable impact on traffic operations off-site. The study area was extended for safety analysis purposes as follows:

Stevens Avenue - from Hartley Street northerly to Waverly Street
Walton Street - from Stevens Avenue easterly to Pershing Street.

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 table excerpted from the 2000 "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

Existing Traffic Volumes

Existing average annual daily traffic (AADT) data for the vicinity of the Motherhouse site was obtained from "Traffic Volume Counts, 2013, 2009 and 2006 Annual Reports", published by MaineDOT. This data is summarized below:

	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 Avenue	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	---	3,740	---	2,800	3,120

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.

Existing Conditions Analysis

While this Motherhouse project, with its limited traffic volumes, is not expected to have any impact off-site on level of service or capacity it is important to note that there are no existing capacity concerns within the previously determined study area. Maine Traffic Resources recently conducted turning movement/vehicle classification counts at three signalized area intersections, requested by the City of Portland, during the AM (7:00 ï 9:00) and PM (3:00 ï 6:00) peak hour periods. Those counts were conducted during the last week of April 2015, which was UNEôs last full week of regular classes and when both McAuley High School and Portland City Schools were back from April break. These are expected to be peak volumes for the study area given all of the schools in the immediate area.

Synchro 7 was used to analyze the intersections under existing 2015 conditions to determine existing operations. The results were previously submitted to the City of Portland in a Summary Memorandum prepared by Maine Traffic Resources and dated May 4th, 2015, along with the traffic count records and the Synchro analysis runs. The results for the intersection of Stevens Avenue and Walton Street, given its proximity to the Motherhouse, are repeated in the following table with the LOS followed by the associated delay in seconds:

	Intersection of Stevens Avenue and Walton Street **Existing Peak Hour Levels of Service**	
Approach/Movement	2015 AM	2015 PM
Westbound Walton Street	B (17.0)	B (17.6)
Northbound Stevens Avenue Rights	A (7.1)	A (7.2)
Northbound Stevens Avenue Throughs	B (15.9)	B (12.1)
Northbound Stevens Avenue Overall	B (10.8)	B (11.2)

Approach/Movement	2015 AM	2015 PM
Southbound Stevens Avenue Lefts	A (4.6)	A (4.8)
Southbound Stevens Avenue Throughs	A (5.2)	A (5.2)
Southbound Stevens Avenue Overall	A (5.1)	A (5.1)
Overall Intersection	**B (10.1)**	**A (9.3)**

As can be seen above, the Walton Street and Stevens Avenue intersection operates at LOS ñBò overall in the AM peak hour and at LOS ñAò overall in the PM peak hour with all movements at LOS ñBò or better. Based upon this level of service, there is plenty of capacity at this intersection to accommodate the senior apartments in the Motherhouse. No capacity concerns or constraints were identified by either the analysis or observed in the field during the turning movement counts.

Accident Review

In addition to trip generation analysis, Maine Traffic Resources has also looked at accident data for the vicinity of Motherhouse Senior Housing. 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 accident data is included in the appendix of this report. 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
Between Hartley Street and Percival Street	2	0.57
Intersection of Crosby Street	2	0.41
Between Crosby Street and New Street	2	0.56
Intersection of New Street	1	0.22
Between New Street and Walton Street	4	0.38
Intersection of Walton Street	4	0.24
Intersection of St Joseph Street	3	0.65
Between St Joseph Street and Elmwood	7	1.44
Intersection of Elmwood	1	0.22
Between Elmwood and Waverly Street	1	0.26
Intersection of Waverly Street	6	1.32

Walton Street Location Description	# of Acc.	CRF
Between Stevens Avenue and Pershing Street	0	0

As can be seen in the preceding accident table, there are no high crash locations within the vicinity of the proposed Motherhouse Senior Housing. As a result, no further accident review or evaluation should be necessary.

Sight Distance

Typically, sight distances are one of the most important safety aspects to consider in a traffic impact study, particularly for low volume generators, such as these senior apartments. Maine Traffic Resources recommends a minimum of 250ô 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 300ô distance is recommended. 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	250ô	>350ô	>350ô	Yes
Stevens Avenue Exit Drive	300ô	>400ô	400ô*	Yes*

* see discussion below

As can be seen above, the available sight distances exceed the recommended minimums. However, it is noted that sight distance to the right from the Stevens Avenue exit, although adequate at the time of the field visit, has the potential to be blocked if a car parks just to the right of the exit. This parking area, from the exit drive to about twenty-five feet north, should be eliminated to allow for proper sight distances at all times.

It is also important that these 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 apartments to be located within the renovated Motherhouse are expected to generate just 18 one-way trips during the weekday AM peak hour and 22 trips during the weekday PM peak hour. This limited level of traffic generally does not have any significant impact on off-site traffic operations. Given that trip generation will be well under 100, a Traffic Movement Permit will not be required for this first phase of the senior housing development.

While the project will not have any impact off-site on capacity, it is important to note that previous existing conditions analysis by Maine Traffic Resources did not identify any capacity concerns at the nearby intersection of Stevens Avenue and Walton Street.

In terms of safety, there are no high crash locations within the vicinity of the proposed Motherhouse Senior Housing. 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 removal of a parking space on Stevens Avenue to the north of the exit drive.

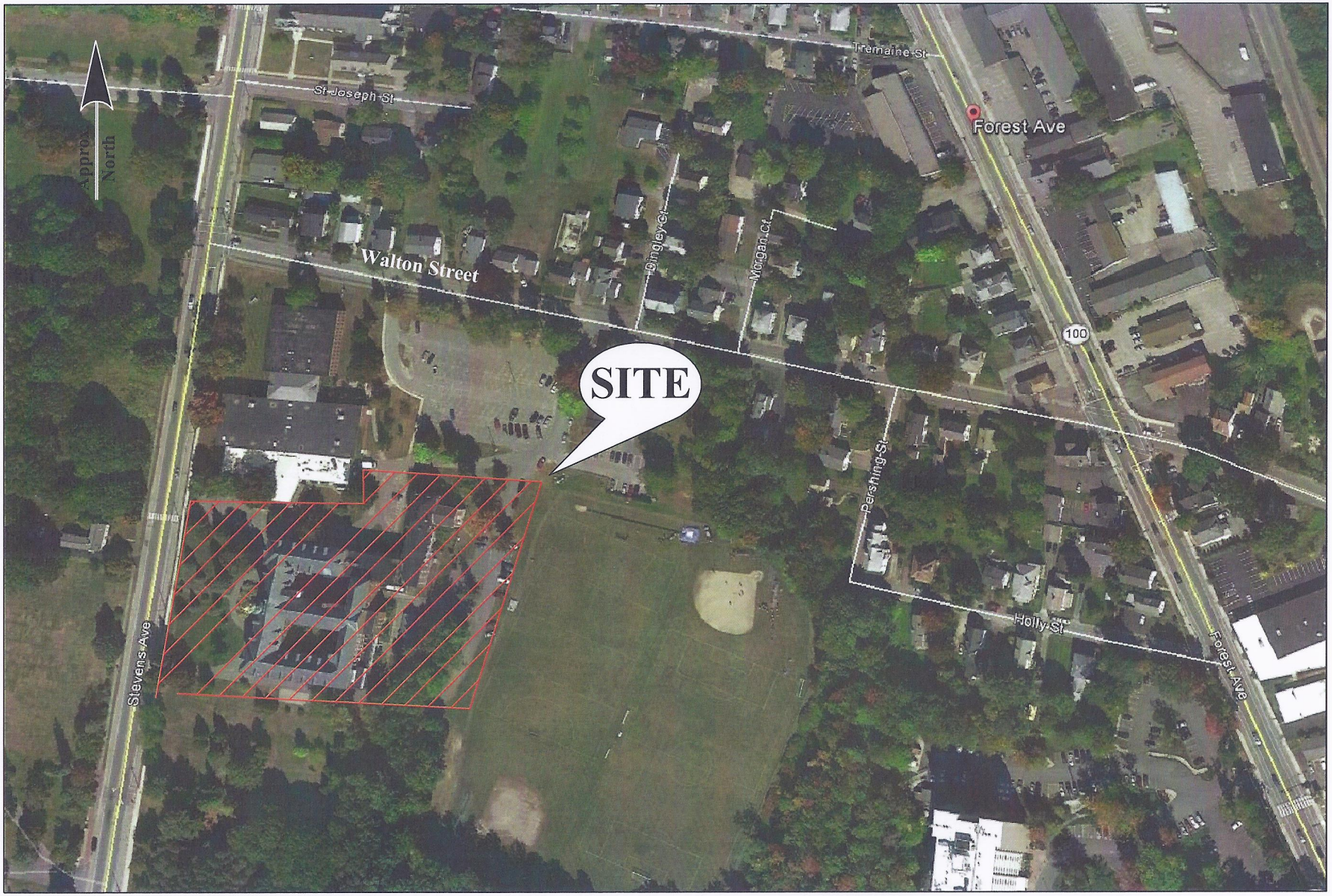


Figure 1

Site Location Map
Motherhouse Apartments
Portland, Maine

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

Figure 2

Peak Hour Trip Generations

Motherhouse Apartments

Portland, Maine

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

APPENDIX

Accident Data

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 Ave area

REPORT PARAMETERS

Year 2012, Start Month 1 through Year 2014 End Month: 12

Route: 3200987	Start Node: 13185	Start Offset: 0	☐ Exclude First Node
	End Node: 13189	End Offset: 0	☐ Exclude Last Node
Route: 0560678	Start Node: 13190	Start Offset: 0	☑ Exclude First Node
	End Node: 13196	End Offset: 0	☐ Exclude Last Node

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
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
												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
												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	1.18	0.00
												Statewide Crash Rate:	0.66	
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	
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
												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
												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	
Study Years:	3.00	NODE TOTALS:		17	0	0	2	2	13	23.5	37.791	0.15	0.31	0.48

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
13183	13185	3119201	0 - 0.05	3200987 - 0.41	0.05	2	2	0	0	1	0	1	50.0	0.00209	318.65	559.27	0.00
Int of PERCIVAL ST STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
13182	13183	3130460	0 - 0.03	3200987 - 0.46	0.03	2	0	0	0	0	0	0	0.0	0.00127	0.00	634.99	0.00
Int of CROSBY ST STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
13181	13182	3123618	0 - 0.05	3200987 - 0.49	0.05	2	2	0	0	0	0	2	0.0	0.00214	311.05	555.79	0.00
Int of NEW ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
13181	13190	187848	0 - 0.21	3200987 - 0.54	0.21	2	4	0	0	0	3	1	75.0	0.00914	145.87	386.72	0.00
Int of NEW ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
10883	13190	184603	0 - 0.12	3200987 - 0.75	0.12	2	0	0	0	0	0	0	0.0	0.00128	0.00	1019.38	0.00
Int of DINGLEY CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.96		
10883	12106	184602	0 - 0.03	3200987 - 0.87	0.03	2	0	0	0	0	0	0	0.0	0.00034	0.00	1401.47	0.00
Int of DINGLEY CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.96		
12106	13189	186354	0 - 0.05	3200987 - 0.90	0.05	2	0	0	0	0	0	0	0.0	0.00060	0.00	1235.20	0.00
Int of MORGAN CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.96		
13190	13192	187859	0 - 0.05	0560678 - 0	0.05	2	0	0	0	0	0	0	0.0	0.00205	0.00	562.51	0.00
Int of STEVENS AV, WALTON ST				RD INV 05 60678											Statewide Crash Rate: 190.34		
13192	13194	3118519	0 - 0.08	0560678 - 0.05	0.08	2	7	0	0	0	3	4	42.9	0.00326	716.67	498.75	1.44
Int of ST JOSEPH ST, STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 190.34		
13194	13196	3118901	0 - 0.06	0560678 - 0.13	0.06	2	1	0	0	0	1	0	100.0	0.00242	137.76	538.59	0.00
Int of ELMWOOD STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 190.34		
Study Years: 3.00				Section Totals:	0.73		16	0	0	1	7	8	50.0	0.02458	216.99	334.85	0.65
				Grand Totals:	0.73		33	0	0	3	9	21	36.4	0.02458	447.55	465.73	0.96

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
13183	13185	3119201	0 - 0.05	3200987 - 0.41	2	0	0	1	0	1	2012-38969	09/19/2012	0.43	B
											2013-17683	07/18/2013	0.43	PD
13182	13183	3130460	0 - 0.03	3200987 - 0.46	0	0	0	0	0	0				
13181	13182	3123618	0 - 0.05	3200987 - 0.49	2	0	0	0	0	2	2014-14374	05/23/2014	0.52	PD
											2013-11757	05/15/2013	0.53	PD
13181	13190	187848	0 - 0.21	3200987 - 0.54	4	0	0	0	3	1	2014-20946	07/27/2014	0.59	C
											2013-27296	11/02/2013	0.64	C
											2014-26774	10/05/2014	0.66	PD
											2013-6332	03/07/2013	0.68	C
10883	13190	184603	0 - 0.12	3200987 - 0.75	0	0	0	0	0	0				
10883	12106	184602	0 - 0.03	3200987 - 0.87	0	0	0	0	0	0				
12106	13189	186354	0 - 0.05	3200987 - 0.90	0	0	0	0	0	0				
13190	13192	187859	0 - 0.05	0560678 - 0	0	0	0	0	0	0				
13192	13194	3118519	0 - 0.08	0560678 - 0.05	7	0	0	0	3	4	2013-15717	06/29/2013	0.06	C
											2012-37085	08/30/2012	0.07	PD
											2013-12295	05/21/2013	0.07	PD
											2012-39041	09/20/2012	0.08	PD
											2012-38808	09/17/2012	0.09	C
											2013-9204	04/11/2013	0.09	C
											2012-26944	04/24/2012	0.11	PD
13194	13196	3118901	0 - 0.06	0560678 - 0.13	1	0	0	0	1	0	2014-2113	01/15/2014	0.16	C
				Totals:	16	0	0	1	7	8				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM												
	Hour of Day																								
Day Of Week	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Un	Tot
SUNDAY	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3
MONDAY	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
WEDNESDAY	0	0	0	0	0	0	0	3	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	7
THURSDAY	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	7
FRIDAY	0	0	0	0	0	0	0	1	2	1	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	8
SATURDAY	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	0	0	0	1	0	0	0	5	3	3	0	2	5	1	2	4	4	2	0	0	0	0	0	1	0	33

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	41
2-(Sport) Utility Vehicle	16
3-Passenger Van	3
4-Cargo Van (10K lbs or Less)	0
5-Pickup	5
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	0
12-Moped	1
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	0
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	1
23-Bicyclist	0
24-Witness	5
25-Other	0
Total	72

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	18	13	1	0	0	0	32
Ran Off Roadway	3	0	0	0	0	0	3
Failed to Yield Right-of-Way	2	4	0	0	0	0	6
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	3	0	0	0	0	0	3
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	6	7	2	1	0	0	16
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	1	0	0	0	0	1
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	1	0	0	0	0	1
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	0	2	0	0	0	0	2
Unknown	0	0	0	0	0	0	0
Total	32	28	3	1	0	0	64

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	29	28	3	1	0	1	62
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	1	0	0	0	0	0	1
Asleep or Fatigued	1	0	0	0	0	0	1
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	1	0	0	0	0	0	1
Total	32	28	3	1	0	1	65

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	14	0	0	0	0	14
20-24	11	0	0	0	0	11
25-29	6	0	0	0	0	6
30-39	7	0	0	0	0	7
40-49	9	0	0	0	0	9
50-59	10	0	0	0	0	10
60-69	5	0	0	0	0	5
70-79	3	0	0	0	0	3
80-Over	0	0	0	0	0	0
Unknown	1	0	0	1	0	2
Total	66	0	0	1	0	67

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	2
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	Total	66
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	62		
14-Parked Motor Vehicle	1		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	1		
36-Mailbox	0		
37-Other Post Pole or Support	0		

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	3	3
C	9	12
PD	21	0
Total	33	15

Road Character

Road Grade	Total
1-Level	29
2-On Grade	4
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	33

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	4
2-Traffic Signals (Flashing)	1
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	5
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	1
11-R.R. Crossing Device	0
12-No Passing Zone	1
13-None	20
14-Other	1
Total	33

Light

Light Condition	Total
1-Daylight	30
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	3
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	33

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2012	2013	2014	Total
JANUARY	0	0	1	1
FEBRUARY	0	0	0	0
MARCH	2	2	0	4
APRIL	1	1	1	3
MAY	0	3	2	5
JUNE	1	1	0	2
JULY	2	1	1	4
AUGUST	3	0	0	3
SEPTEMBER	3	0	0	3
OCTOBER	0	1	2	3
NOVEMBER	1	2	1	4
DECEMBER	0	1	0	1
Total	13	12	8	33

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	10	0	14	0	0	2	0	0	0	0	0	0	0	26
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	2	0	0	1	0	0	0	0	0	0	0	3
Pedestrians	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	1	0	1	0	0	1	0	0	0	0	0	0	0	3
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	12	0	17	0	0	4	0	0	0	0	0	0	0	33

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	1	0	0	0	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	2	0	0	0	0	0	0	0	0	0	0	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	20	0	0	0	0	0	0	0	0	0	1	21
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	3	0	0	0	0	0	0	0	0	0	2	5
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	1	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	2	2
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	25	0	0	0	0	0	0	1	0	0	0	33

Exhibit 10

Soils

EXHIBIT 10

SOILS

The applicant has retained Summit Geoengineering to perform a site geotechnical and soils evaluation. Onsite drilling was conducted in December, 2014 and 9 test borings logged. In general the subsurface site conditions consist of topsoil or pavement overlying fill and re-worked native soil overlying marine fan deposit overlying bedrock. Bedrock is relatively deep and varies over the site from a depth of 12.9 to 25.1 feet. Groundwater is also relatively deep being recorded in the marine fan layer from depths of 5.4 to 11.4 feet.

The soil conditions do not present any unusual design constraints for site development.
Attached are copies of test boring logs and a site key map.

SUMMIT
GEOENGINEERING SERVICES

EXPLORATION COVER SHEET

The exploration logs are prepared by the geotechnical engineer from both field and laboratory data. Soil descriptions are based upon the Unified Soil Classification System (USCS) per ASTM D2487 and/or ASTM D2488 as applicable. Supplemental descriptive terms for estimated particle percentage, color, density, moisture condition, and bedrock may also be included to further describe conditions.

Drilling and Sampling Symbols:

SS = Split Spoon Sample
UT = Thin Wall Shelby Tube
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RW = Rotary Wash
SV = Shear Vane
PP = Pocket Penetrometer
RC = Rock Core Sample

Hyd = Hydraulic Advancement of Drilling Rods
Push = Direct Push of Drilling Rods
WOH = Weight of Hammer
WOR = Weight of Rod
PI = Plasticity Index
LL = Liquid Limit
W = Natural Water Content
USCS = Unified Soil Classification System

Water Level Measurements:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable groundwater levels. In impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations. Groundwater monitoring wells may be required to record accurate depths and fluctuation.

Gradation Description and Terminology:

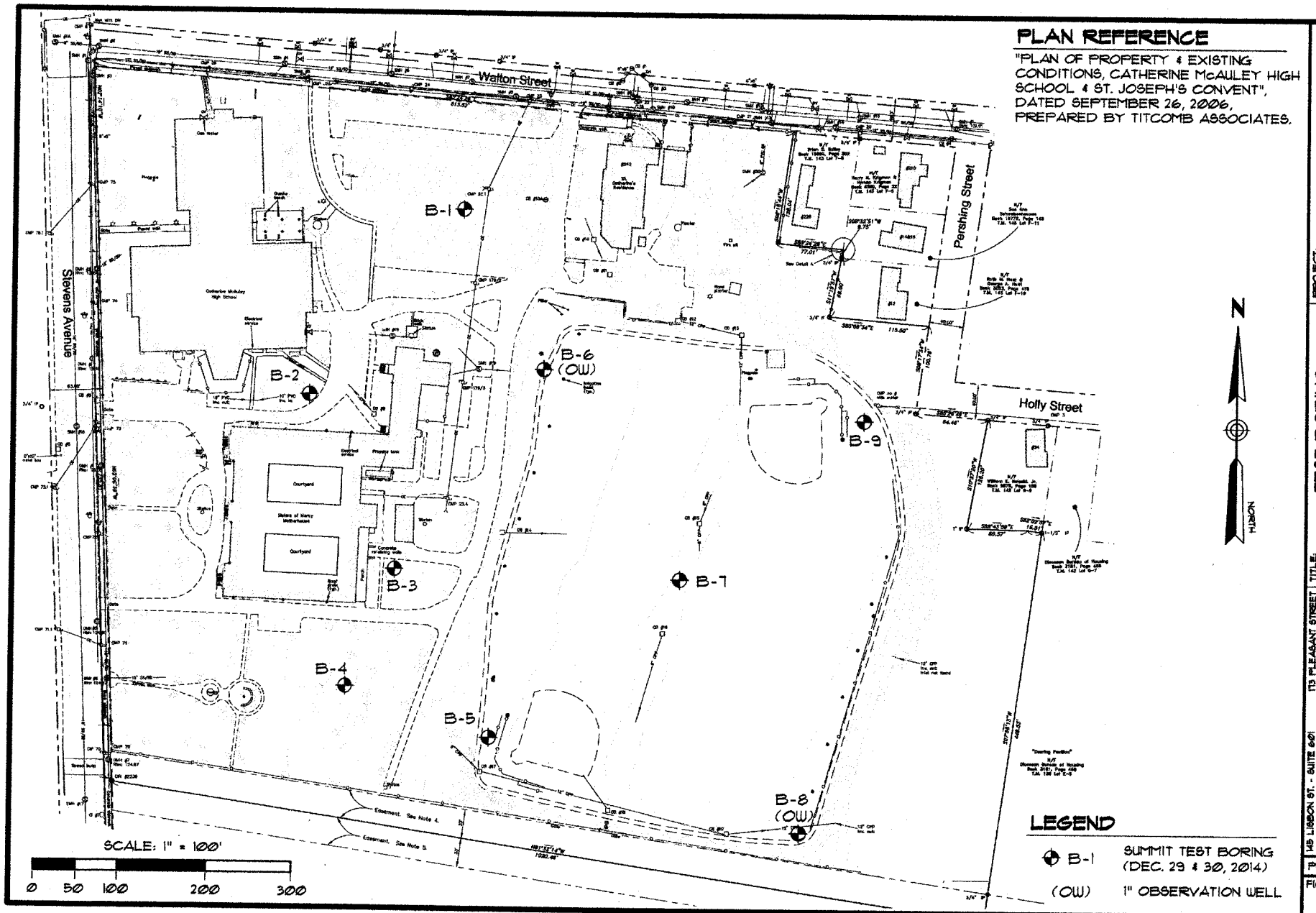
Boulders:	Over 12 inches
Cobbles:	12 inches to 3 inches
Gravel:	3 inches to No.4 sieve
Sand:	No.4 to No. 200 sieve
Silt:	No. 200 sieve to 0.005 mm
Clay:	less than 0.005 mm

Trace:	Less than 5%
Little:	5% to 15%
Some:	15% to 30%
Silty, Sandy, etc.:	Greater than 30%

Density of Granular Soils and Consistency of Cohesive Soils:

CONSISTENCY OF COHESIVE SOILS		DENSITY OF GRANULAR SOILS	
SPT N-value blows/ft	**Consistency**	**SPT N-value blows/ft**	**Relative Density**
0 to 2	Very Soft	0 to 4	Very Loose
2 to 4	Soft	5 to 10	Loose
5 to 8	Firm	11 to 30	Compact
9 to 15	Stiff	31 to 50	Dense
16 to 30	Very Stiff	>50	Very Dense
>30	Hard		

145 Lisbon Street (PO Box 7216), Lewiston, Maine 04243, (207) 576-3313
173 Pleasant Street, Rockland, Maine 04841, (207) 318-7761



PLAN REFERENCE

"PLAN OF PROPERTY & EXISTING CONDITIONS, CATHERINE McAULEY HIGH SCHOOL & ST. JOSEPH'S CONVENT", DATED SEPTEMBER 26, 2006, PREPARED BY TITCOMB ASSOCIATES.

LEGEND

B-1	SUMMIT TEST BORING (DEC. 29 & 30, 2014)
(OW)	1" OBSERVATION WELL

PROJECT: McAULEY PLACE
STEVENS AVENUE - PORTLAND, MAINE

CLIENT: SEACOAST MANAGEMENT CO.

TITLE: TEST BORING LOCATION PLAN

SCALE: 1" = 100' | DRAWN BY: KRF
DATE: JANUARY 5, 2015 | APPR. BY: WAP

SUMMIT
GEOENGINEERING SERVICES
143 LISBON ST. - SUITE 501
LEWISTON, ME 04240
Tel.: (207) 516-3513
113 PLEASANT STREET
ROCKLAND, ME 04841
Tel.: (207) 318-7161

PROJ.#: 14238

FIGURE: 1

APPENDIX B

BORING LOGS

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place
Location:	Stevens Avenue
City, State:	Portland, Maine

Boring #:	**B-1**
Project #:	14238
Sheet:	1 of 1
Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services
Driller:	Craig Coolidge, P.E.
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.

Boring Elevation:	119 feet
Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Date started:	12/29/2014 Date Completed: 12/29/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/29/2014	5.9 ft	113.1 ft	Measured in augers

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/18	0 - 2	8		Bituminous Pavement = 4 inches		PAVEMENT
1				6		Dark brown SAND, little Silt and Gravel, mixed with black reclaim ashpalt, compact, humid, SM		0.3' FILL
2				5		Light brown medium grained SAND, trace Silt, compact, humid, SP		1'
				5				
3								
4								
5								4'+/- MARINE FAN DEPOSIT
	S-2	24/20	5 - 7	8		Tan and slightly mottled Silty fine SAND, trace to little Clay with depth, compact/stiff, moist to wet, SM	Water at 5.9'	
6				8				
				7				
7				7				
8								
9						Denser drilling at 8'		8'+/-
10								
	S-3	24/3	10 - 12	15		Light brown to olive brown Gravelly SAND, some Silt, little Clay, dense, wet, SM (Rocks in spoon tip; little sample recovery.)		
11				12				
				20				
12				28				
13								
14						End of Exploration at 12.9', Auger Refusal		12.9' BEDROCK
15								
16								
17								
18								
19								
20								
21								
22								

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition ASTM D2487

< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition

Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place	Boring #:	B-2
Location:	Stevens Avenue	Project #:	14238
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	122 feet
Driller:	Craig Coolidge, P.E.	Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.	Date started: 12/29/2014	Date Completed: 12/29/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/29/2014	10.4 ft	111.6 ft	Measured in augers
12/29/2014	Caved at 5.4 ft	N/A	Measured in open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
0	S-1	24/18	0 - 2	2		Dark brown SILT, some to little Sand, trace Gravel,		TOPSOIL
1				3		rootlets, firm, damp, ML		
				3		Dark brown SAND, some Silt, loose, damp, SM		0.5'
2				3		Light brown medium to fine grained SAND, little Silt,		1.7' FILL/
3						loose, damp, SP-SM		REWORKED NATIVE
4								
5								4'+/-
	S-2	24/18	5 - 7	9		Tan medium to coarse grained SAND, trace Silt,		MARINE FAN
6				11		compact, damp, SP		DEPOSIT
				13				
7				15				
8								
9								
10								
	S-3	24/24	10 - 12	7		Tan medium to coarse SAND, little to trace Silt,	Water at 10.4'	
11				7		compact, moist, SP-SM		
				7				
12				19		Olive brown SILT-CLAY, fine Silty SAND seams,		11.5'
13						little Gravel, very stiff, moist to wet, ML to CL		
14								
15						Gray Silty CLAY, fine Silty SAND seams, stiff, wet, CL		
	S-4	1/1	15 - 15.1	50/1"		(Dark purple to black rock fragments in spoon tip)		
16						End of Exploration at 15.1', Spoon & Auger Refusal		15.1'
17								BEDROCK
18								
19								
20								
21								
22								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place	Boring #:	B-3
Location:	Stevens Avenue	Project #:	14238
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	119 feet
Driller:	Craig Coolidge, P.E.	Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.	Date started: 12/29/2014	Date Completed: 12/29/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/29/2014	7.5 ft	111.5 ft	Measured in augers

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/18	0 - 2	1		Dark brown SILT, little Sand and rootlets, soft,		TOPSOIL
1				1		damp, ML		
				2		Mottled brown SAND, trace Silt, loose damp, SP		1'
2				3				MARINE FAN
								DEPOSIT
3								
4								
5								
	S-2	24/24	5 - 7	7		Tan medium grained SAND, trace Silt, compact,		
6				10		damp, SP		
				10				
7				10				
8							Water at 7.5'	
9								
10								
						Running Sands at 10', Unable to sample		
11								
12								
13								
14								
15								
	S-3	24/24	15 - 17	7		Tan medium to coarse grained SAND, trace Silt,		
16				5		compact, wet, SP		
				3				
17				2		Gray Silty fine SAND to Sandy SILT, trace Clay,		16.7'
						loose/firm, wet, SM to ML		
18								
19								
20								
						End of Exploration at 20', Auger Refusal		20'
21								BEDROCK
22								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place	Boring #:	B-4
Location:	Stevens Avenue	Project #:	14238
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	121 feet
Driller:	Craig Coolidge, P.E.	Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.	Date started:	12/29/2014 Date Completed: 12/29/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/29/2014	11.4 ft	109.6 ft	Measured in augers
12/29/2014	Caved at 6 ft	N/A	Measured open hole

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/12	0 - 2	WOH		Dark brown SILT, little Sand and rootlets, soft,		TOPSOIL
1				1		damp, ML		
				2		Brown SAND, little to trace Silt, loose, humid to		0.7'
2				3		damp, SP to SP-SM		MARINE FAN
								DEPOSIT
3								
4								
5								
	S-2	24/18	5 - 7	5		Tan medium grained SAND, trace Silt, compact,		
6				8		damp, SP		
				11				
7				14				
8								
9								
10								
	S-3	24/18	10 - 12	6		Tan medium grained SAND, little to trace Silt,		
11				10		compact to dense, wet SP to SP-SM		
				15				
12				20			Water at 11.4'	
13								
14								
						Running sands at 15', sample contained 'fluffed' sand		
15						from inside auger. Due to disturbance, blow counts		
	S-4	24/24	15 - 17	1		are not represtative of the soil.		
16				WOH		Olive gray fine to medium grained Silty SAND,		
				1		loose, wet, SM		
17				1		Gray Silty CLAY, soft, wet, CL		16.7'
18								
19								
20								
	S-5	24/24	20 - 22	WOH		Gray Silty CLAY, trace Gravel, very soft, wet, CL		
21				WOH				
				5		Gray fine SAND-SILT, dense/stiff, wet, SM to ML		21'+/-
22				16				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place	Boring #:	B-5
Location:	Stevens Avenue	Project #:	14238
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	115 feet
Driller:	Craig Coolidge, P.E.	Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.	Date started: 12/29/2014	Date Completed: 12/29/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/29/2014	5.5 ft	109.5 ft	Measured in augers

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/24	0 - 2	3		Dark brown SILT, little Sand and rootlets, firm,		TOPSOIL
1				7		damp, ML		
				11		Brown SAND, some Gravel, little Silt, compact, damp,		0.9'
2				14		SM		MARINE FAN
3								DEPOSIT
4								
5								
	S-2	24/20	5 - 7	6		Tan SAND coarse to fine grained w/depth, trace to		
6				9		little Silt, compact, wet, SP to SP-SM	Water at 5.5'	
				10				
7				10				
8								
9								
10								
	S-3	24/24	10 - 12	6		Light brown medium to fine grained SAND, little		
11				4		Silt, loose to compact, wet, SP-SM		
				3		Gray Silty CLAY, firm, wet, CL		11'
12				3				
13								
14								
15								
	S-4	24/24	15 - 17	WOH		Gray Silty CLAY, firm, wet, CL		
16				4		Gray Silty fine SAND to Sandy SILT, dense/hard,		15.5'
				19		wet, SM to ML		
17				21				
18								
19								
20								
	S-5	24/24	20 - 22	8		Gray Silty fine SAND to Sandy SILT, very dense/hard,		
21				29		wet, SM to ML		
				70				
22				72				
						End of Exploration at 22', Spoon Refusal		22'
								PROBABLE BEDROCK

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place
Location:	Stevens Avenue
City, State:	Portland, Maine

Boring #:	**B-6**
Project #:	14238
Sheet:	1 of 1
Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services
Driller:	Craig Coolidge, P.E.
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.

Boring Elevation:	115 feet
Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Date started:	12/30/2014 Date Completed: 12/30/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/30/2014	6.4 ft	108.6 ft	Measured in augers
3/23/2015	8.0 ft	107.0 ft	Measured in OW on 3/23/2015

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/24	0 - 2	4		Dark brown SILT, little Sand and rootlets, firm to		TOPSOIL
1				5		stiff, damp to frozen, ML		
				5		Dark brown Silty SAND, little Gravel, compact,		0.7'
2				8		damp, SP		FILL
						Brown Sand, trace Silt and Gravel, compact, damp,		1.8'
3						SP		MARINE FAN DEPOSIT
4								1" PVC Well Screen 3.1' to 13.1'
5								
	S-2	24/18	5 - 7	8		Light brown to tan medium grained SAND, trace		
6				12		Silt, compact, damp, SP		
				12				
7				10			Water at 6.4'	
8								
9								
10								
	S-3	24/24	10 - 12	2		Olive brown and mottled fine Sandy SILT to Silty		
11				2		CLAY, some fine Sand, firm, wet, ML to CL		
				2				
12				5				
13								
						End of Exploration at 13.1', Auger Refusal	✓	13.1'
14								BEDROCK
15								
16								
17								
18								
19								
20								
21								
22								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place	Boring #:	B-7
Location:	Stevens Avenue	Project #:	14238
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	114 feet
Driller:	Craig Coolidge, P.E.	Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.	Date started: 12/30/2014	Date Completed: 12/30/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/30/2014	5.4 ft	108.6 ft	Measured in augers

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/15	0 - 2	5		Dark brown SILT, little Sand and rootlets, firm,		TOPSOIL
1				6		damp to frozen, ML		
				9		Brown SAND, little Silt and Gravel, compact, damp,		0.7'
2				7		SM		FILL /
								REWORKED NATIVE
3								
4								
5						Dark brown medium to fine grained SAND, some to		
	S-2	24/18	5 - 7	3		little Silt, moist to wet, loose, SM		
6				7		(Probable former topsoil and reworked native sand)	Water at 5.4'	
				13		Brown medium to fine grained SAND, little to trace		6'+/-
7				15		Silt, compact, wet, SP to SP-SM		MARINE FAN
8								DEPOSIT
						*Running Sands at 10'. Sampled 'fluffed' sand inside		
9	S-3	18/18	8.5 - 10	*		augers. Disturbed sample, no blow counts recorded.		
				*		Same as above, compact, wet, SP to SP-SM		
10				*				
11								
12								
13								
14								
15								
	S-4	24/24	15 - 17	2		Light brown Silty fine SAND, trace Clay, occasional		
16				7		Silty CLAY seam, compact/stiff, wet, SM		
				9				
17				14				
18								
						Denser drilling at 18'		
19								
20								
	S-5	24/24	20 - 22	7		Same as above, compact, wet, SM		
21				9				
				6				
22				7				
						End of Exploration at 22', No Refusal		22'

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place	Boring #:	**B-9**
Location:	Stevens Avenue	Project #:	14238
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	114 feet
Driller:	Craig Coolidge, P.E.	Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.	Date started: 12/30/2014	Date Completed: 12/30/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/30/2014	9.4 ft	104.6 ft	Measured in augers

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/18	0 - 2	3		Dark brown SILT, little Sand, Clay, and rootlets, firm		TOPSOIL
1				5		to stiff, damp to frozen, ML		
				9		Brown SAND, some Gravel, little Silt, compact, damp,		1'
2				8		SW-SM		FILL /
						Cobbles at 1.5'		REWORKED NATIVE
3								
4								
5								
	S-2	24/24	5 - 7	2		Olive brown Clayey SILT to Silty CLAY, little Sand		
6				2		and Gravel, firm, damp to moist, ML to CL		
				3				
7				4				
8								
9								
							Water at 9.4'	
10						Dark brown medium to fine grained SAND, some		
	S-3	24/20	10 - 12	3		Silt, rootlets and organics, wet, loose, SM		
11				6		(Probable former topsoil and reworked native sand)		
				13		Light brown and mottled SAND, little Silt, trace		11'
12				14		Gravel, compact, wet, SP-SM to SM		MARINE FAN
13								DEPOSIT
14								
15								
	S-4	24/24	15 - 17	5		Light brown and mottled coarse SAND, trace Silt,		
16				7		compact, wet, SP		16'
				6		Olive brown to gray Silty CLAY, stiff, wet, CL		
17				5				
18								
19								
20								
	S-5	7/7	19.5 - 20.1	4		Olive brown to gray Silty CLAY, some Sand and		
21				50/1"		Gravel, firm, to stiff, wet, CL		
						End of Exploration at 20.1', Spoon & Auger Refusal		20.1'
22								BEDROCK

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	McAuley Place
Location:	Stevens Avenue
City, State:	Portland, Maine

Boring #:	**B-8**
Project #:	14238
Sheet:	1 of 1
Chkd by:	WMP

Drilling Co:	Summit Geoengineering Services
Driller:	Craig Coolidge, P.E.
Summit Staff:	Bill Peterlein, P.E., Erika Hawksley, E.I.
Boring Elevation:	114 feet
Reference:	Estimated from Existing Conditions Plan provided by Titcomb Associates
Date started:	12/30/2014 Date Completed: 12/30/2014

DRILLING METHOD		SAMPLER	
Vehicle:	Power Probe	Length:	24" SS
Model:	AMS 9500	Diameter:	2"OD/1.5"ID
Method:	2-1/4" HSA	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
12/30/2014	6 ft +/-	108 ft +/-	Observed moisture content
2/16/2015	6.1 ft	107.9 ft	Measured in OW on 2/16/2015
3/23/2015	6.1 ft	107.9 ft	Measured in OW on 3/23/2015

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-1	24/12	0 - 2	8		Dark brown SILT, some to little Sand and Gravel,		TOPSOIL
1				5		rootlets, firm, damp to frozen, ML		
				4		Brown Gravelly SAND, little Silt, compact, damp, SM		0.5'
2				5		Cobbles at 1.5'		FILL /
								REWORKED NATIVE
3								
4								
5								
	S-2	24/18	5 - 7	2		Dark brown medium to fine grained SAND, some to		
6				3		little Silt, moist to wet, loose, SM		
				7		(Probable former topsoil and reworked native sand)		
7				14		Light brown medium to coarse SAND, trace Silt,		6.5'
						compact to dense, wet, SP		MARINE FAN
8								DEPOSIT
9								1" PVC Well
								Screen 4' to 9'
10								
	S-3	24/24	10 - 12	2		Light brown medium to coarse SAND, trace Silt and		
11				4		Gravel, loose, wet, SP		
				6				
12				8		Olive brown Silty CLAY, some fine Sand, stiff, wet,		11.7'
						CL		
13								
						End of Exploration at 13.1', Auger Refusal		13.1'
14								BEDROCK
15								
16								
17								
18								
19								
20								
21								
22								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

APPENDIX C

LABORATORY TESTING RESULTS

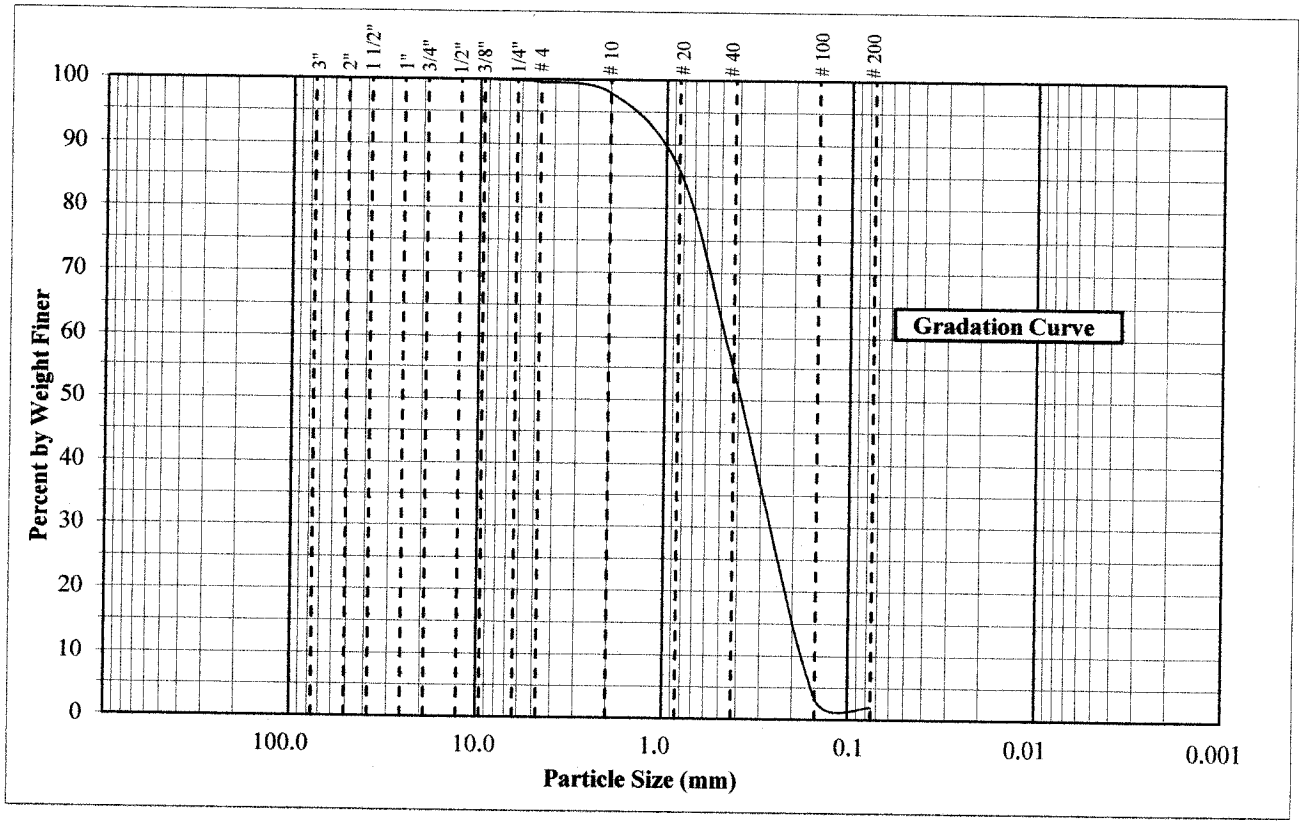
SUMMIT
GEOENGINEERING SERVICES

GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME:	McAuley Place	PROJECT NUMBER:	14238
CLIENT:	Sea Coast Management Company	SAMPLE NUMBER:	B-8, S-3
SOURCE:	B-8, 10'-12'	DESCRIPTION:	Medium-fine SAND, trace Silt, SP
DATE:	1/8/2015	TECHNICIAN:	Erika Hawksley, E.I.

DATA

PARTICLE SIZE mm		% BY WT FINER
76.20	(3 in)	100.0
50.80	(2 in)	100.0
38.10	(1-1/2 in)	100.0
25.40	(1 in)	100.0
19.05	(3/4 in)	100.0
12.70	(1/2 in)	100.0
9.53	(3/8 in)	100.0
6.35	(1/4 in)	99.9
4.75	(No. 4)	99.6
2.00	(No. 10)	98.0
0.85	(No. 20)	85.9
0.43	(No. 40)	54.8
0.15	(No. 100)	3.3
0.075	(No. 200)	2.0



REMARKS: Moisture Content = 18%

145 Lisbon Street (PO Box 7216) Lewiston, Maine (207) 576-3313
173 Pleasant Street, Rockland, Maine 04841, (207) 318-7761

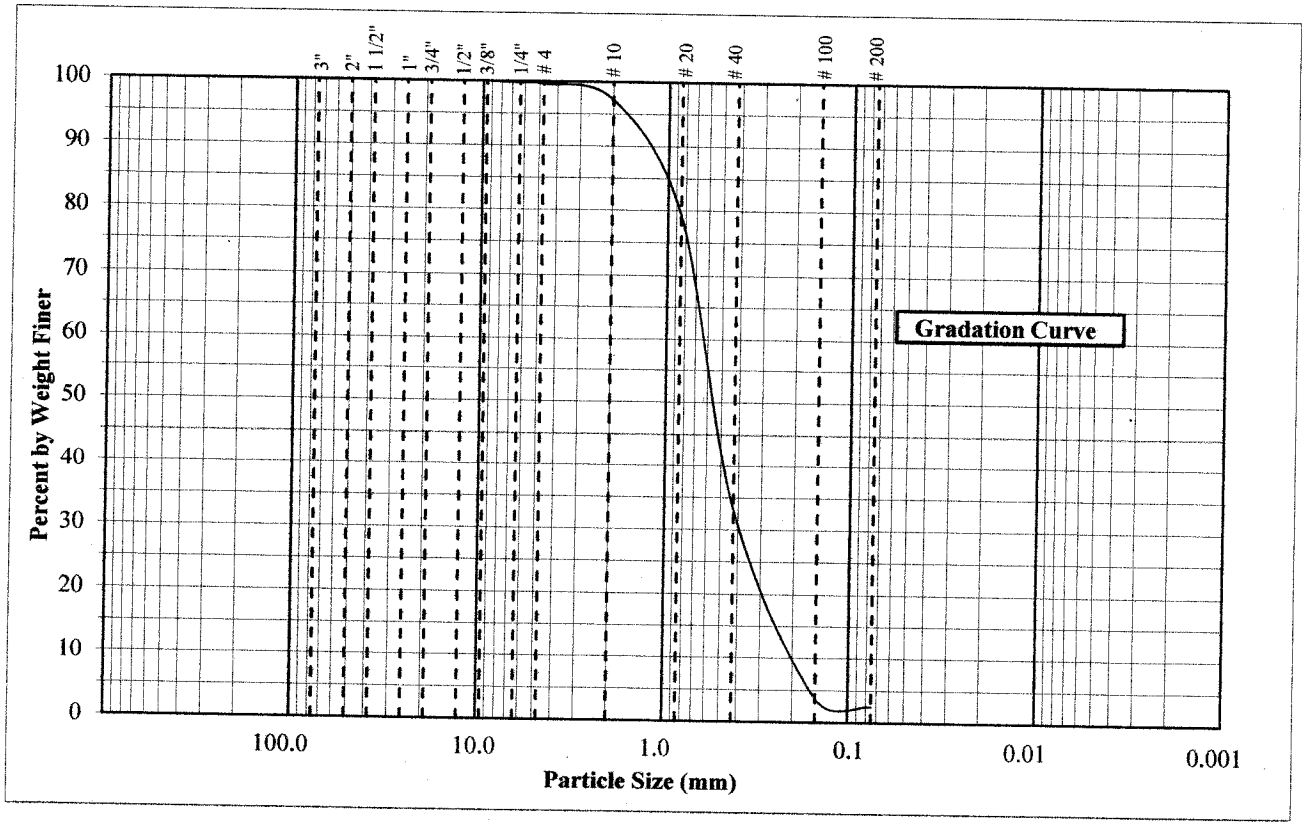
SUMMIT
GEOENGINEERING SERVICES

GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME:	McAuley Place	PROJECT NUMBER:	14238
CLIENT:	Sea Coast Management Company	SAMPLE NUMBER:	B-6, S-2
SOURCE:	B-6, 5'-7'	DESCRIPTION:	Medium-fine SAND, trace Silt, SP
DATE:	1/8/2015	TECHNICIAN:	Erika Hawksley, E.I.

DATA

PARTICLE SIZE mm		% BY WT FINER
76.20	(3 in)	100.0
50.80	(2 in)	100.0
38.10	(1-1/2 in)	100.0
25.40	(1 in)	100.0
19.05	(3/4 in)	100.0
12.70	(1/2 in)	100.0
9.53	(3/8 in)	100.0
6.35	(1/4 in)	99.8
4.75	(No. 4)	99.7
2.00	(No. 10)	97.3
0.85	(No. 20)	79.2
0.43	(No. 40)	33.1
0.15	(No. 100)	3.8
0.075	(No. 200)	2.5



REMARKS: Moisture Content = 14.7%

145 Lisbon Street (PO Box 7216) Lewiston, Maine (207) 576-3313
173 Pleasant Street, Rockland, Maine 04841, (207) 318-7761

Exhibit 11

Construction Management Plan

LICHT ENVIRONMENTAL DESIGN, LLC

EXHIBIT 11

CONSTRUCTION MANAGEMENT PLAN

Construction of the Motherhouse and site plan is expected to commence in the Winter of 2016 and complete in late Fall 2016.

The applicants have significant experience in site development and historic structure rehabilitation and regularly manage complex projects with seniors living on –campus. This project will include strict control of access and delivery routes, coordinated phasing with McAuley High School activities and site security measures. Communication between the parties occupying the campus and the neighbors is critical to a successful project. It is expected that much of the demolition materials will be recycled and taken to the Riverside Facility in Portland or Commercial Paving in Scarborough.

Utility connections will be required in Stevens Avenue and Walton Streets. All off-site construction will be coordinated with the Department of Public Services to ensure the least impact to traffic flow.

Exhibit 12

Agency Letters –Natural Areas

Att. O

LICHT
ENVIRONMENTAL DESIGN, LLC

June 18, 2015 J 14.067

Robin Reed
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, ME 04333-0065

605 Stevens Avenue, McAuley Campus, Portland
Request for Agency Database Review

Dear Ms. Reed:

On behalf of our client, Motherhouse Associates LP, represented by Kevin Bunker, we are contacting you with a request for information on a semi-urban site under consideration for re-development in Portland located at 605 Stevens Avenue. The 18.9 acre site is the site of the former St. Josephs Convent and current Catherine McAuley High School and athletic fields. The site is bordered by Baxter Woods to the south, Walton Street to the north and Stevens Avenue to the west.

The project envisions a master planned senior community anchored with the re-purposing of the circa 1909 St. Joseph's Convent building (the Motherhouse) into 88 units of affordable and market rate senior apartments. As you may be aware, the majestic Motherhouse and grounds are not currently listed on the National Register of Historic Places, however the site has been in use since the 1880's as a convent, school and college. The overall property contains the former St. Catherine's Home for Aged Women (St Catherine's-circa 1880) and the more recent Catherine McAuley High School building. The former two buildings are not currently included in the development plans however.

The applicant is seeking Historic Tax Credit Incentives through the Department of the Interior for rehabilitation of the Motherhouse and with the project architect, Archetype, PA, will be applying the Secretary's Standards for Rehabilitation to the re-use of the building.

As part of the planning and permitting process, we would like to identify any special historic areas of significance that might affect re-development of this particular site. We request that you kindly search your available resources and database and send us a written advisory as to the possible presence and location of any historic or archaeological features that may be a cause of concern. We have attached photographs of the Motherhouse and a USGS Quad locus map for your use. Please do not hesitate to contact me should you require anything further.

Sincerely,

Frederic (Rick) Licht
Principal
Encl. As Noted

35 Fran Circle, Gray, Maine 04039 • rlicht@securespeed.net • V 207.749.4924 F 207.428.4167

LICHT
ENVIRONMENTAL DESIGN, LLC

June 16, 2015 J 14.067

Don Cameron, Ecologist
Maine Natural Areas Program
93 State House Station
Augusta, Maine 04333-0093

605 Stevens Avenue, McAuley High School Campus, Portland
Request for Agency Database Review

Dear Mr. Cameron:

On behalf of our client, Motherhouse Associates LP, we are contacting you with a request for information on a semi-urban site under consideration for possible re-development in Portland located at 605 Stevens Avenue. The 18.9 acre site is the site of the former St. Josephs Convent and current Catherine McAuley High School and Athletic fields. The site is bordered by Baxter Woods to the south, Walton Street to the north and Stevens Avenue to the west.

As part of the planning process, we would like to identify any rare or unique botanical features in the site vicinity. We request that you kindly search your available resources send us a written advisory as to the possible presence of rare, threatened or endangered plant species and unique or exemplary natural communities on the site in question that might be a cause of concern.

Thank you for your assistance in conducting this site search. A USGS Quad Locus Map has been included for your use. Please send any invoice to the address below.

Sincerely,

Frederic (Rick) Licht
Principal

Enclosure: As Noted

35 Fran Circle, Gray, Maine 04039 • rlicht@securespeed.net • V 207.749.4924 F 207.428.4167

LICHT
ENVIRONMENTAL DESIGN, LLC

June 16, 2015 J 14.067

John Perry
Environmental Coordinator
Maine Department of Inland Fisheries & Wildlife
284 State St
Augusta, ME 04333

605 Stevens Avenue, McAuley High School Campus, Portland
Request for Agency Database Review

Dear John:

On behalf of our client, Motherhouse Associates LP, we are contacting you with a request for information on a semi-urban site under consideration for possible re-development in Portland located at 605 Stevens Avenue. The 18.9 acre site is the site of the former St. Josephs Convent and current Catherine McAuley High School and Athletic fields. The site is bordered by Baxter Woods to the south, Walton Street to the north and Stevens Avenue to the west.

As part of the planning process, we would like to identify any areas in the site vicinity that contains habitat for significant, rare or endangered species. We request that you kindly search your available resources and send us a written advisory as to the possible presence and location of any habitat areas or zoological species of which we would want to be aware.

Thank you for your assistance in conducting this site search. A USGS Quad Locus Map has been included for your use.

Sincerely,

Frederic (Rick) Licht
Principal

Enclosure: As Noted

35 Fran Circle, Gray, Maine 04039 • rlicht@securespeed.net • V 207.749.4924 F 207.428.4167

Exhibit 13

Consistency with Masterplans

LICHT ENVIRONMENTAL DESIGN, LLC

EXHIBIT 13

CONSISTENCY WITH MASTERPLAN
CONSISTENCY WITH COMPREHENSIVE PLAN

Consistency with Master Plan: There is currently no approved master plan or master development plan for the McAuley campus. However the applicant has presented a vision for development of the property as the foundation for the re-zoning process. This vision includes the re-purposing of the Motherhouse into senior affordable housing together with development of a quality senior living community on Lot 4. This vision will be further refined and vetted through the Master Development Plan process following the approvals of the Motherhouse.

Consistency with the Comprehensive Plan: As stated in the City of Portland Zoning Amendment Application, the proposed re-use plan for the property could be a model project for the City of Portland's comprehensive plan. Some of the key areas cited in the Comprehensive Plan and included the project are:

- Preservation of historic and natural resources
- Development of currently unused residential potential
- Seek incentives and partnerships to increase affordable housing options
- Encourage higher density housing and walk able neighborhoods
- Identify vacant land and redevelopment opportunities throughout the City
- Target vacant buildings for maintenance, rehabilitation and reuse
- Neighborhood stability and integrity
- Development that is close to city services, transportation and infrastructure
- Development that serves the diverse market including seniors

In summary, the proposed project is clearly consistent with the goals of the Comprehensive Plan.

The proposed use of the property is also consistent with the historic use of the property and therefore consistent with the surrounding neighborhood. The property has been used for a school, college, church, residential apartment building, convent and senior care facility at various times throughout its history. The proposed use as affordable senior housing and a senior retirement community is entirely consistent with this historic use. Moreover, the long history of this campus in this location with these uses – for approximately 130 years - clearly demonstrates that the proposed use is compatible with both the property and the surrounding neighborhood. As the center-piece of this neighborhood for over a century, the preservation and reuse of this property is essential for maintaining the stability and integrity of the neighborhood.

Exhibit 14

Utility Serviceability Letters

Att. Q

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

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, E.I.
Design Engineer

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

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

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

Date: 05.25.2015

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)

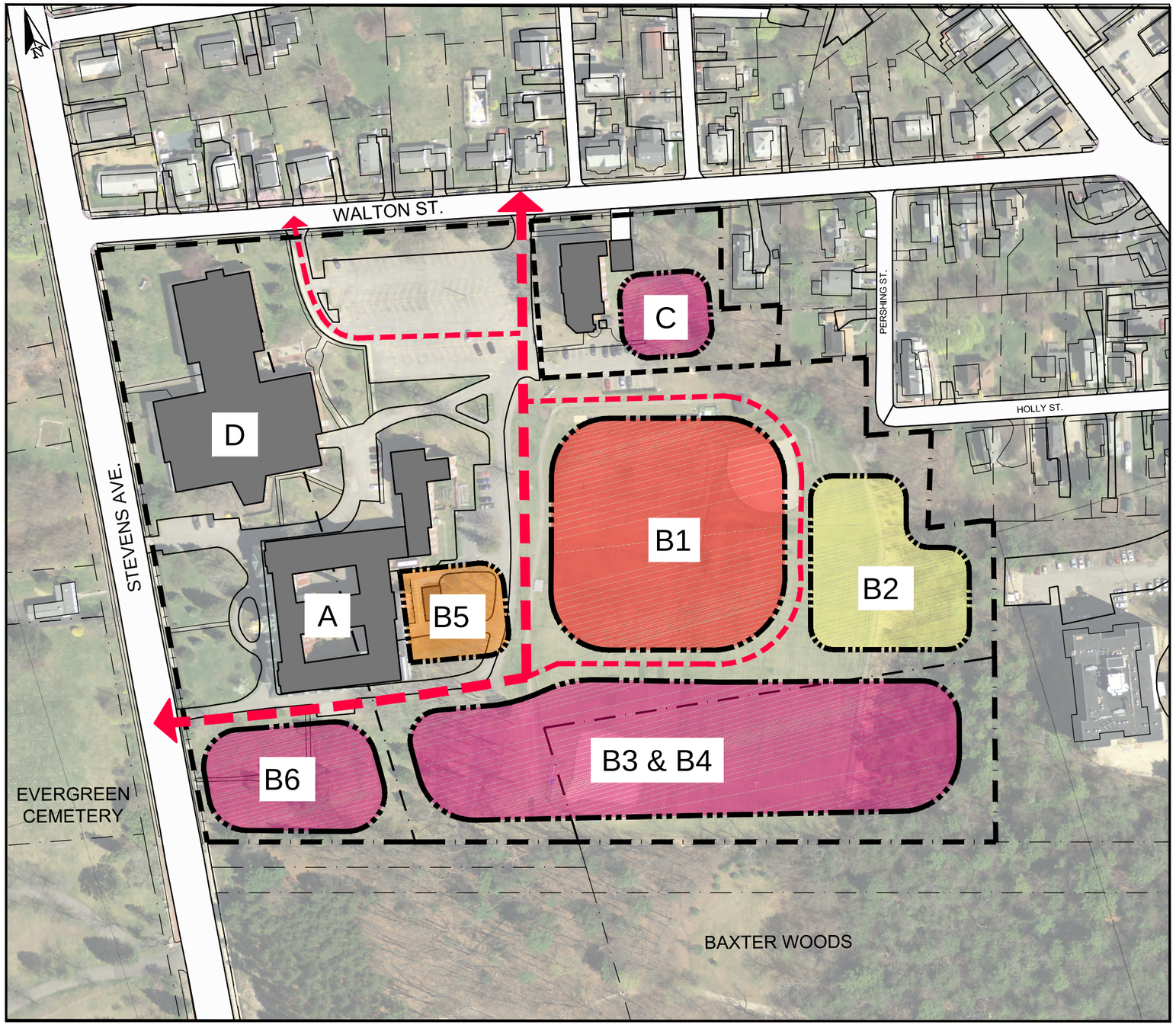
(Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided below, or attached, as a separate sheet)

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**

CONCEPTUAL SITE PLAN



0' 75' 150' 300'

SCALE:1"=150'

COMPONENT DESCRIPTIONS

		# OF UNITS
A	AFFORDABLE SENIOR LIHTC Renovation of Mother house into affordable senior housing using LIHTC and Historic Tax Credits.	**88 +/-**
B	MARKET RATE SENIOR LIVING 1. New construction of Main Lodge. Includes independent living apartments, dining, fitness, community activity space 2. New construction, Senior Independent Living Apartments connected to Main Lodge 3. New construction, Senior Independent Living Apartments 4. New construction, Senior Independent Living Apartments , high end 5. Assisted living community for 24-36 seniors 6. New construction, Senior Independent Living Apartments	**160-270**
C	SAINT CATHERINE'S REDEVELOPMENT Renovation and expansion of existing apartment building, 18-20 new apartments	**38**
D	POTENTIAL FUTURE COMMERCIAL MIXED USE High School / future commercial mixed use	**N/A**
	TOTAL # OF UNITS	**286 - 369**

LEGEND

- EX. PROPERTY LINE
- PROP. PROPERTY LINE
- PRIMARY CIRCULATION
- SECONDARY CIRCULATION
- MAIN LODGE - COMMUNITY CENTER
- INDEPENDENT LIVING
- SEMI-INDEPENDENT LIVING
- ASSISTED LIVING

McAuley Place

CONCEPTUAL MASTER PLAN

EXHIBIT 6

Exhibit 15

Lighting

Att. R

TYPE S1

D-Series Pole Mount
LED Area Luminaire

Specifications
Luminaire

EPA: 0.8 ft² (.07 m²)

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting [3]	Control Options
DSXWPM LED	10C 10 LEDs (one engin 20C 20 LEDs (two engines)	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000K 40K 4000K 50K 5000K AMBPC Amber phosphor converted	T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5M Type V medium T5S Type V short T5A Type V area T5W Type V wide ASYDF Asymmetric diffuse SYMDF Symmetric diffuse	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1] 347 [2] 480 [2]	**Shipped included** SPUMBA Square pole universal mounting adapter RPUMBA Round pole universal mounting adapter PUMBA Square and round universal mounting adapters	**Shipped installed** PE Photoelectric cell, button type [4] DMG 0-10V dimming driver (no controls) PIR Motion/ambient light sensor, <15' mtg ht [5,6] PIRH Motion/ambient light sensor, 15-30' mtg ht [5,6]

Other Options			Finish *(required)*		
Shipped installed	**Shipped separately** [8]		DDBXD Dark bronze	DSSXD Sandstone	DWHGXD Textured white
SF Single fuse (120, 277, 347V) [7]	BSW Bird-deterrent spike		DBLXD Black	DDBTXD Textured dark bronze	DSSTXD Textured sandstone
DF Double fuse (208, 240, 480 V) [7]	WG Wire guard		DNAXD Natural aluminum	DBLBXD Textured black	
HS House-side shield [8]	VG Vandal guard		DWHXD White	DNATXD Textured natural aluminum	
	DDL Diffused drop lens				

INTENDED USE
The energy savings, long life and easy-to-install design of the D-Series Pole Mount make it the smart choice for area and site illumination for nearly any facility.

CONSTRUCTION
Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to area lighting applications. Light engines are available in 3000K, 4000K or 5000K with 70 min. CRI configurations.

ELECTRICAL
Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (L88/100,000 hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and a minimum 6KV surge rating. The luminaire meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION
Includes universal mounting plate, which utilizes existing drill patterns and allows for quick and easy installation. Stainless steel bolts fasten the mounting block

LITHONIA LIGHTING.

SSA					
Series	**Nominal fixture mounting height**	**Nominal shaft base size/wall thickness**	**Mounting[1]**	**Options**	**Finish[10]**
SSA	8 – 35 feet (See back page.)	(See back page.)	Tenon mounting PT Open top T20 2-3/8" O.D. (2" NPS) T25 2-7/8" O.D. (2-1/2" NPS) T30 3-1/2" O.D. (3" NPS)[2] T35 4" O.D. (3-1/2" NPS)[2] Drill mounting[3] DM19 1 at 90° DM28 2 at 180° DM28PL 2 at 180° with one side plugged DM29 2 at 90° DM39 3 at 90° DM49 4 at 90° CSX/DSX/AERIS™/OMERO™ Drill mounting[3] DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM39AS 3 at 90° DM49AS 4 at 90° AERIS™ Suspend drill mounting[3,4] DMxxAST_ OMERO™ Suspend drill mounting[3,4] DMxxMRT_	Shipped installed L/AB Less anchor bolts FBC Full base cover VD Vibration damper TP Tamper proof H1-18Axx Horizontal arm bracket (1 fixture)[5,6] FDLxx Festoon outlet less electrical[5] CPL12xx 1/2" coupling[5] CPL34xx 3/4" coupling[5] CPL1xx 1" coupling[5] NPL12xx 1/2" threaded nipple[5] NPL34xx 3/4" threaded nipple[5] NPL1xx 1" threaded nipple[5] EHHxx Extra handhole[5,7] MAEX Match existiing [8] USPOM United States point of manufacture[9]	Standard colors DDB Dark bronze DWH White DBL Black DMB Medium bronze DNA Natural aluminum BA Brushed aluminum Classic colors DSS Sandstone DGC Charcoal gray DTG Tennis green DBR Bright red DSB Steel blue Class 1 architectural anodized ABL Black ADB Dark bronze ANA Natural Architectural colors (powder finish)[10]

INTENDED USE — Square straight aluminum general purpose pole for up to 35 foot mounting heights.

CONSTRUCTION — Shaft: Made from extruded 6063-T6 or 6061-T6 aluminum alloy, square tube is uniform in cross-section down length of shaft with no taper.

Hand hole: Reinforced rectangular hand hole is located 18" above base, 4" poles have 2" x 4" hand hole; 5" and 6" poles have 2.5" x 4" hand hole). Hand-hole cover plate made from aluminum alloy.

Hardware: Stainless steel

Top cap: Removable top cap provided with drill-mount poles.

Bolt covers: Nut cover discs provided. Optional cast aluminum base cover available.

FINISH — Must specify finish.

GROUNDING — Provision located inside hand hole rim. Grounding hardware is not included (provided by others).

ANCHOR BOLTS — Fabricated from carbon steel bar with minimum-yield strength of 55,000 psi. Upper portion of anchor bolt is galvanized per ASTM A-153. Each anchor bolt is furnished with two hex nuts and two flat washers.

LITHONIA LIGHTING.

TECHNICAL INFORMATION										
				EPA (ft2) with 1.3 gust						
Catalog Number	**Nominal mount ht. (ft)**	**Pole Shaft Size (in x ft)**	**Wall Thick (in)**	**80 mph**	**90 mph**	**100 mph**	**Max.**	**Bolt Circle (in)**	**Bolt Size (in. x in. x in.)**	**Approximate ship (lbs.)**
SSA 10 4C	10	4.0 x 10.0	0.125	11.5	8.6	6.5	230	8.5-9.625	3/4 x 18 x 3	37

D-Series Size 1
LED Wall Luminaire

TYPES S2 and S2A

d-series

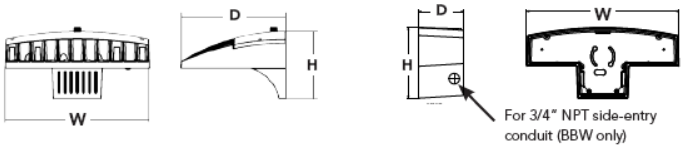
Specifications

Luminaire

Width:	13-3/4" (34.9 cm)	**Weight:**	12 lbs (5.4 kg)
Depth:	10" (25.4 cm)		
Height:	6-3/8" (16.2 cm)		

Back Box (BBW, ELCW)

Width:	13-3/4" (34.9 cm)	**BBW Weight:**	5 lbs (2.3 kg)
Depth:	4" (10.2 cm)	**ELCW Weight:**	10 lbs (4.5 kg)
Height:	6-3/8" (16.2 cm)		



Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options	Other Options	Finish *(required)*
DSXW1 LED	10C 10 LEDs (one engine)	350 350 mA	30K 3000 K	T2S Type II Short	MVOLT [1]	**Shipped included**	**Shipped installed**	**Shipped installed**	DDBXD Dark bronze
	20C 20 LEDs (two engines)	530 530 mA	40K 4000 K	T2M Type II Medium	120 [1]	(blank) Surface mounting bracket	PE Photoelectric cell, button type [4]	SF Single fuse (120, 277 or 347V) [7]	DBLXD Black
		700 700 mA	50K 5000 K	T3S Type III Short	208 [1]	BBW Surface-mounted back box (for conduit entry) [3]	DMG 0-10V dimming driver (no controls)	DF Double fuse (208, 240 or 480V) [7]	DNAXD Natural aluminum
		1000 1000 mA (1 A)	AMBPC Amber phosphor converted	T3M Type III Medium	240 [1]		PIR 180° motion/ ambient light sensor, <15' mtg ht [5]	HS House-side shield [8]	DWHXD White
				T4M Type IV Medium	277 [1]		PIRH 180° motion/ ambient light sensor, 15-30' mtg ht [5]	SPD Separate surge protection [9]	DSSXD Sandstone
				TFTM Forward Throw Medium	347 [2]		ELCW Emergency battery backup (includes external component enclosure) [6]	**Shipped separately**	DDBTXD Textured dark bronze
				ASYDF Asymmetric diffuse	480 [2]			BSW Bird-deterrent spikes	DBLBXD Textured black
								WG Wire guard	DNATXD Textured natural aluminum
								VG Vandal guard	DWHGXD Textured white
								DDL Diffused drop lens	DSSTXD Textured sandstone

INTENDED USE
The energy savings, long life and easy-to-install design of the D-Series Wall Size 1 make it the smart choice for building-mounted doorway and pathway illumination for nearly any facility.

CONSTRUCTION
Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to building mounted applications. Light engines are available in 3000 K (80 min. CRI), 4000 K (70 min. CRI) or 5000 K (70 CRI) configurations.

LITHONIA LIGHTING.

Exhibit 16

Stormwater Management and Erosion & Sedimentation Control

LICHT ENVIRONMENTAL DESIGN, LLC

EXHIBIT 16

STORMWATER MANAGEMENT
&
EROSION AND SEDIMENTATION CONTROLS

The project has been designed to meet the DEP Chapter 500 and City of Portland Chapter 32 Stormwater Standards for stormwater management. The site does not currently contain any stormwater mitigation facilities. Currently surface flows are either collected in on-site catch basins and piped to one of two discharge pipes located under the athletic fields on Lot 4 or flow overland to the west to the wooded wetlands located at the base of the slope to the athletic fields.

The proposed site development will result in a minimal increase in impervious and developed areas due to the existing levels of pavement which will be removed or redeveloped as new parking, access drives and walks. Mitigation and treatment of the new paved and developed areas will be accomplished with the installation of two bio-cells (rain gardens) installed in grassed island on the west side of the main parking lot. The rain gardens will outlet to the existing stormdrain under the athletic field and to the wetlands to the west.

A drainage easement will be provided on Lot 4 over the existing drain line which will be amended in the future to integrate with the Lot 4 development stormwater system as future phases of development occur.

Refer to the separately bound Stormwater Management Report and Erosion and Sedimentation Control Plan report prepared by FST accompanying this submittal.

Exhibit 17

Metro Map

Metro Bus Service

EXHIBIT EeXHIBIT

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0093

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

June 26, 2015

VIA ELECTRONIC MAIL

Frederic Licht
Licht Environmental Design, LLC
35 Fran Circle
Gray, ME 04039

Re: Rare and exemplary botanical features in proximity to: Job 14.067, McAuley High School, Portland, Maine

Dear Mr. Licht:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received June 26, 2015 for information on the presence of rare or unique botanical features documented from the vicinity of the project site in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. Based on the information in our files and the landscape context of this project, there is a low probability that rare or significant botanical features occur at this project location.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

MAINE NATURAL AREAS PROGRAM
MOLLY DOCHERTY, DIRECTOR

PHONE: (207) 287-8044
FAX: (207) 287-8040
TTY: (207) 287-2213

The Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Don Cameron
Ecologist
Maine Natural Areas Program
207-287-8041
don.s.cameron@maine.gov

Exhibit 9

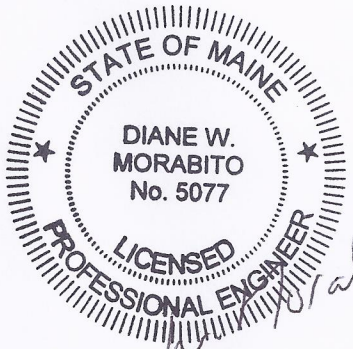
Traffic Analysis

TRAFFIC IMPACT STUDY
Motherhouse Senior Housing
Portland, Maine

June 23, 2015

Prepared for:

Motherhouse Associates LP
100 Commercial Street
Suite 414
Portland, ME 04101



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 proposed senior residential apartments to be located in the Motherhouse on the McAuley site on Stevens Avenue in Portland, Maine. The existing Motherhouse building will be renovated to provide eighty-eight (88) senior dwelling-units. Access to Motherhouse Senior Housing will be provided by a full-movement drive to Walton Street and by a secondary entrance on Stevens Avenue and 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. The renovation project is expected to begin in early 2016. Occupation is expected to be completed sometime in fall of 2017.

Trip Generation

The number of trips which will be generated by the proposed senior apartments was estimated using the most recent Institute of Transportation Engineers (ITE) ñTrip Generation, 9th Editionò report, published in 2012. Land Use Code 252 ï Senior Adult Housing ï Attached was used on the basis of 88 dwelling units. The results are summarized below:

	ITE Trip Generation
Time Period	One-way Trip-Ends
Weekday	302
AM Peak Hour ï adjacent street	18
Entering Site	6
Exiting Site	12
AM Peak Hour ï generator	34
Entering Site	16
Exiting Site	18
PM Peak Hour ï adjacent street	22
Entering Site	12
Exiting Site	10
PM Peak Hour ï generator	31
Entering Site	17
Exiting Site	14

As can be seen above, the senior apartments are expected to generate just 18 one-way trips during the weekday AM peak hour and 22 trips during the weekday PM peak hour of the adjacent street system. Given that trip generation will be well under 100 trips, a Traffic Movement Permit (TMP) will not be required from the Maine Department of Transportation (MaineDOT) for this first phase of the senior housing development.

The trip assignments were based upon the travel patterns observed during turning movement counts. These 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 Motherhouse apartments are expected to generate a maximum of six (6) lane hour trips. This minimal level of traffic should have no noticeable or measurable impact on traffic operations off-site. The study area was extended for safety analysis purposes as follows:

Stevens Avenue - from Hartley Street northerly to Waverly Street
Walton Street - from Stevens Avenue easterly to Pershing Street.

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 table excerpted from the 2000 "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

Existing Traffic Volumes

Existing average annual daily traffic (AADT) data for the vicinity of the Motherhouse site was obtained from "Traffic Volume Counts, 2013, 2009 and 2006 Annual Reports", published by MaineDOT. This data is summarized below:

	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 Avenue	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	---	3,740	---	2,800	3,120

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.

Existing Conditions Analysis

While this Motherhouse project, with its limited traffic volumes, is not expected to have any impact off-site on level of service or capacity it is important to note that there are no existing capacity concerns within the previously determined study area. Maine Traffic Resources recently conducted turning movement/vehicle classification counts at three signalized area intersections, requested by the City of Portland, during the AM (7:00 ï 9:00) and PM (3:00 ï 6:00) peak hour periods. Those counts were conducted during the last week of April 2015, which was UNEôs last full week of regular classes and when both McAuley High School and Portland City Schools were back from April break. These are expected to be peak volumes for the study area given all of the schools in the immediate area.

Synchro 7 was used to analyze the intersections under existing 2015 conditions to determine existing operations. The results were previously submitted to the City of Portland in a Summary Memorandum prepared by Maine Traffic Resources and dated May 4th, 2015, along with the traffic count records and the Synchro analysis runs. The results for the intersection of Stevens Avenue and Walton Street, given its proximity to the Motherhouse, are repeated in the following table with the LOS followed by the associated delay in seconds:

	Intersection of Stevens Avenue and Walton Street **Existing Peak Hour Levels of Service**	
Approach/Movement	2015 AM	2015 PM
Westbound Walton Street	B (17.0)	B (17.6)
Northbound Stevens Avenue Rights	A (7.1)	A (7.2)
Northbound Stevens Avenue Throughs	B (15.9)	B (12.1)
Northbound Stevens Avenue Overall	B (10.8)	B (11.2)

Approach/Movement	2015 AM	2015 PM
Southbound Stevens Avenue Lefts	A (4.6)	A (4.8)
Southbound Stevens Avenue Throughs	A (5.2)	A (5.2)
Southbound Stevens Avenue Overall	A (5.1)	A (5.1)
Overall Intersection	**B (10.1)**	**A (9.3)**

As can be seen above, the Walton Street and Stevens Avenue intersection operates at LOS ñBò overall in the AM peak hour and at LOS ñAò overall in the PM peak hour with all movements at LOS ñBò or better. Based upon this level of service, there is plenty of capacity at this intersection to accommodate the senior apartments in the Motherhouse. No capacity concerns or constraints were identified by either the analysis or observed in the field during the turning movement counts.

Accident Review

In addition to trip generation analysis, Maine Traffic Resources has also looked at accident data for the vicinity of Motherhouse Senior Housing. 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 accident data is included in the appendix of this report. 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
Between Hartley Street and Percival Street	2	0.57
Intersection of Crosby Street	2	0.41
Between Crosby Street and New Street	2	0.56
Intersection of New Street	1	0.22
Between New Street and Walton Street	4	0.38
Intersection of Walton Street	4	0.24
Intersection of St Joseph Street	3	0.65
Between St Joseph Street and Elmwood	7	1.44
Intersection of Elmwood	1	0.22
Between Elmwood and Waverly Street	1	0.26
Intersection of Waverly Street	6	1.32

Walton Street Location Description	# of Acc.	CRF
Between Stevens Avenue and Pershing Street	0	0

As can be seen in the preceding accident table, there are no high crash locations within the vicinity of the proposed Motherhouse Senior Housing. As a result, no further accident review or evaluation should be necessary.

Sight Distance

Typically, sight distances are one of the most important safety aspects to consider in a traffic impact study, particularly for low volume generators, such as these senior apartments. Maine Traffic Resources recommends a minimum of 250ô 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 300ô distance is recommended. 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	250ô	>350ô	>350ô	Yes
Stevens Avenue Exit Drive	300ô	>400ô	400ô*	Yes*

* see discussion below

As can be seen above, the available sight distances exceed the recommended minimums. However, it is noted that sight distance to the right from the Stevens Avenue exit, although adequate at the time of the field visit, has the potential to be blocked if a car parks just to the right of the exit. This parking area, from the exit drive to about twenty-five feet north, should be eliminated to allow for proper sight distances at all times.

It is also important that these 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 apartments to be located within the renovated Motherhouse are expected to generate just 18 one-way trips during the weekday AM peak hour and 22 trips during the weekday PM peak hour. This limited level of traffic generally does not have any significant impact on off-site traffic operations. Given that trip generation will be well under 100, a Traffic Movement Permit will not be required for this first phase of the senior housing development.

While the project will not have any impact off-site on capacity, it is important to note that previous existing conditions analysis by Maine Traffic Resources did not identify any capacity concerns at the nearby intersection of Stevens Avenue and Walton Street.

In terms of safety, there are no high crash locations within the vicinity of the proposed Motherhouse Senior Housing. 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 removal of a parking space on Stevens Avenue to the north of the exit drive.

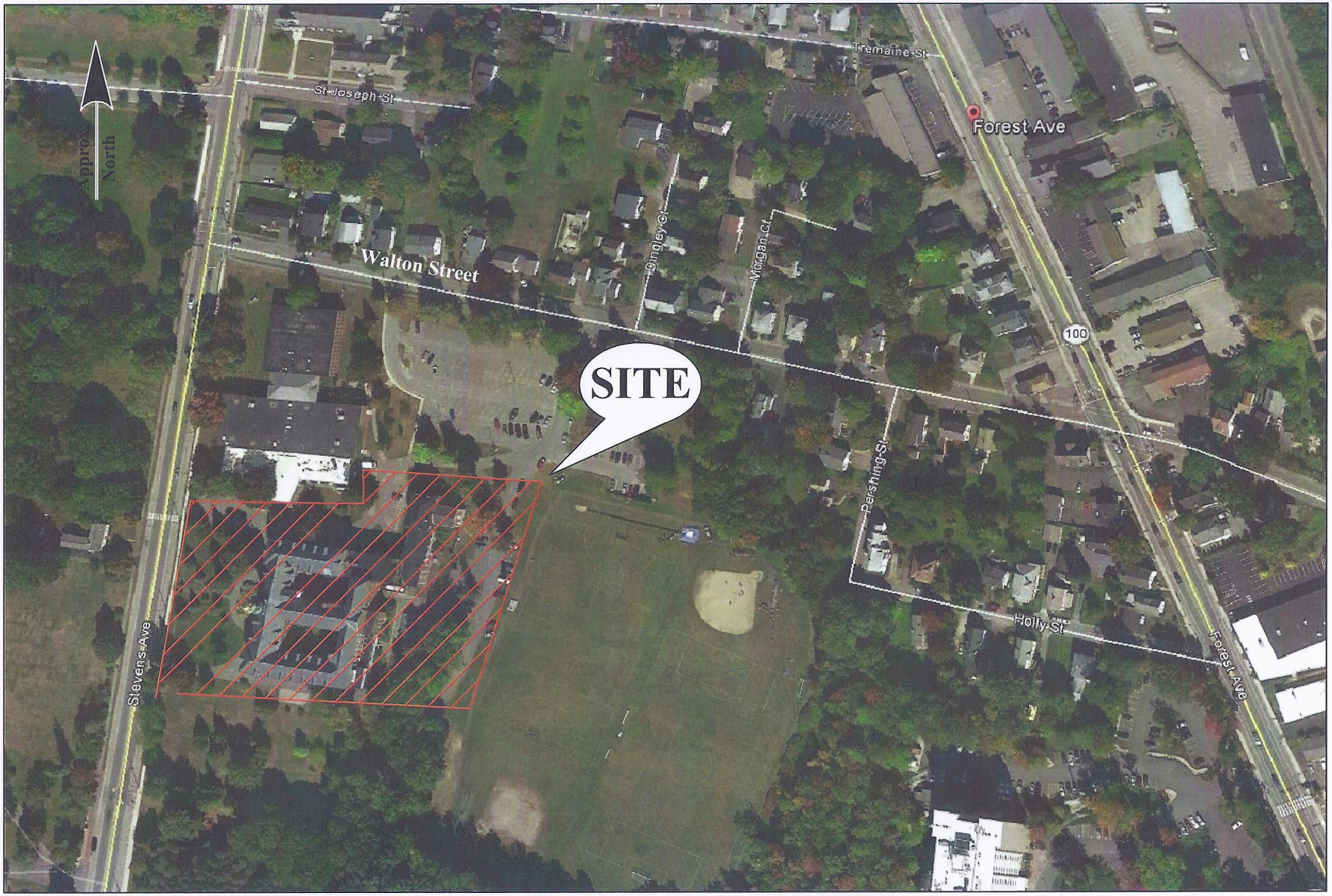


Figure 1

Site Location Map
Motherhouse Apartments
Portland, Maine

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

Figure 2

Peak Hour Trip Generations

Motherhouse Apartments

Portland, Maine

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

APPENDIX

Accident Data

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 Ave area

REPORT PARAMETERS

Year 2012, Start Month 1 through Year 2014 End Month: 12

Route: 3200987	Start Node: 13185	Start Offset: 0	☐ Exclude First Node
	End Node: 13189	End Offset: 0	☐ Exclude Last Node
Route: 0560678	Start Node: 13190	Start Offset: 0	☑ Exclude First Node
	End Node: 13196	End Offset: 0	☐ Exclude Last Node

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
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
												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
												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	1.18	0.00
												Statewide Crash Rate:	0.66	
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	
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
												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
												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	
Study Years:	3.00	NODE TOTALS:		17	0	0	2	2	13	23.5	37.791	0.15	0.31	0.48

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
13183	13185	3119201	0 - 0.05	3200987 - 0.41	0.05	2	2	0	0	1	0	1	50.0	0.00209	318.65	559.27	0.00
Int of PERCIVAL ST STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
13182	13183	3130460	0 - 0.03	3200987 - 0.46	0.03	2	0	0	0	0	0	0	0.0	0.00127	0.00	634.99	0.00
Int of CROSBY ST STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
13181	13182	3123618	0 - 0.05	3200987 - 0.49	0.05	2	2	0	0	0	0	2	0.0	0.00214	311.05	555.79	0.00
Int of NEW ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
13181	13190	187848	0 - 0.21	3200987 - 0.54	0.21	2	4	0	0	0	3	1	75.0	0.00914	145.87	386.72	0.00
Int of NEW ST, STEVENS AV				RD INV 3200987											Statewide Crash Rate: 190.34		
10883	13190	184603	0 - 0.12	3200987 - 0.75	0.12	2	0	0	0	0	0	0	0.0	0.00128	0.00	1019.38	0.00
Int of DINGLEY CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.96		
10883	12106	184602	0 - 0.03	3200987 - 0.87	0.03	2	0	0	0	0	0	0	0.0	0.00034	0.00	1401.47	0.00
Int of DINGLEY CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.96		
12106	13189	186354	0 - 0.05	3200987 - 0.90	0.05	2	0	0	0	0	0	0	0.0	0.00060	0.00	1235.20	0.00
Int of MORGAN CT, WALTON ST				RD INV 3200987											Statewide Crash Rate: 359.96		
13190	13192	187859	0 - 0.05	0560678 - 0	0.05	2	0	0	0	0	0	0	0.0	0.00205	0.00	562.51	0.00
Int of STEVENS AV, WALTON ST				RD INV 05 60678											Statewide Crash Rate: 190.34		
13192	13194	3118519	0 - 0.08	0560678 - 0.05	0.08	2	7	0	0	0	3	4	42.9	0.00326	716.67	498.75	1.44
Int of ST JOSEPH ST, STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 190.34		
13194	13196	3118901	0 - 0.06	0560678 - 0.13	0.06	2	1	0	0	0	1	0	100.0	0.00242	137.76	538.59	0.00
Int of ELMWOOD STEVENS AV				RD INV 05 60678											Statewide Crash Rate: 190.34		
Study Years: 3.00				Section Totals:	0.73		16	0	0	1	7	8	50.0	0.02458	216.99	334.85	0.65
				Grand Totals:	0.73		33	0	0	3	9	21	36.4	0.02458	447.55	465.73	0.96

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
13183	13185	3119201	0 - 0.05	3200987 - 0.41	2	0	0	1	0	1	2012-38969	09/19/2012	0.43	B
											2013-17683	07/18/2013	0.43	PD
13182	13183	3130460	0 - 0.03	3200987 - 0.46	0	0	0	0	0	0				
13181	13182	3123618	0 - 0.05	3200987 - 0.49	2	0	0	0	0	2	2014-14374	05/23/2014	0.52	PD
											2013-11757	05/15/2013	0.53	PD
13181	13190	187848	0 - 0.21	3200987 - 0.54	4	0	0	0	3	1	2014-20946	07/27/2014	0.59	C
											2013-27296	11/02/2013	0.64	C
											2014-26774	10/05/2014	0.66	PD
											2013-6332	03/07/2013	0.68	C
10883	13190	184603	0 - 0.12	3200987 - 0.75	0	0	0	0	0	0				
10883	12106	184602	0 - 0.03	3200987 - 0.87	0	0	0	0	0	0				
12106	13189	186354	0 - 0.05	3200987 - 0.90	0	0	0	0	0	0				
13190	13192	187859	0 - 0.05	0560678 - 0	0	0	0	0	0	0				
13192	13194	3118519	0 - 0.08	0560678 - 0.05	7	0	0	0	3	4	2013-15717	06/29/2013	0.06	C
											2012-37085	08/30/2012	0.07	PD
											2013-12295	05/21/2013	0.07	PD
											2012-39041	09/20/2012	0.08	PD
											2012-38808	09/17/2012	0.09	C
											2013-9204	04/11/2013	0.09	C
											2012-26944	04/24/2012	0.11	PD
13194	13196	3118901	0 - 0.06	0560678 - 0.13	1	0	0	0	1	0	2014-2113	01/15/2014	0.16	C
				Totals:	16	0	0	1	7	8				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM												
	Hour of Day																								
Day Of Week	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Un	Tot
SUNDAY	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3
MONDAY	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
WEDNESDAY	0	0	0	0	0	0	0	3	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	7
THURSDAY	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	7
FRIDAY	0	0	0	0	0	0	0	1	2	1	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	8
SATURDAY	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	0	0	0	1	0	0	0	5	3	3	0	2	5	1	2	4	4	2	0	0	0	0	0	1	0	33

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	41
2-(Sport) Utility Vehicle	16
3-Passenger Van	3
4-Cargo Van (10K lbs or Less)	0
5-Pickup	5
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	0
12-Moped	1
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	0
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	1
23-Bicyclist	0
24-Witness	5
25-Other	0
Total	72

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	18	13	1	0	0	0	32
Ran Off Roadway	3	0	0	0	0	0	3
Failed to Yield Right-of-Way	2	4	0	0	0	0	6
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	3	0	0	0	0	0	3
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	6	7	2	1	0	0	16
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	1	0	0	0	0	1
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	1	0	0	0	0	1
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	0	2	0	0	0	0	2
Unknown	0	0	0	0	0	0	0
Total	32	28	3	1	0	0	64

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	29	28	3	1	0	1	62
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	1	0	0	0	0	0	1
Asleep or Fatigued	1	0	0	0	0	0	1
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	1	0	0	0	0	0	1
Total	32	28	3	1	0	1	65

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	14	0	0	0	0	14
20-24	11	0	0	0	0	11
25-29	6	0	0	0	0	6
30-39	7	0	0	0	0	7
40-49	9	0	0	0	0	9
50-59	10	0	0	0	0	10
60-69	5	0	0	0	0	5
70-79	3	0	0	0	0	3
80-Over	0	0	0	0	0	0
Unknown	1	0	0	1	0	2
Total	66	0	0	1	0	67

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	2
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	Total	66
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	62		
14-Parked Motor Vehicle	1		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	1		
36-Mailbox	0		
37-Other Post Pole or Support	0		

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	3	3
C	9	12
PD	21	0
Total	33	15

Road Character

Road Grade	Total
1-Level	29
2-On Grade	4
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	33

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	4
2-Traffic Signals (Flashing)	1
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	5
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	1
11-R.R. Crossing Device	0
12-No Passing Zone	1
13-None	20
14-Other	1
Total	33

Light

Light Condition	Total
1-Daylight	30
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	3
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	33

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2012	2013	2014	Total
JANUARY	0	0	1	1
FEBRUARY	0	0	0	0
MARCH	2	2	0	4
APRIL	1	1	1	3
MAY	0	3	2	5
JUNE	1	1	0	2
JULY	2	1	1	4
AUGUST	3	0	0	3
SEPTEMBER	3	0	0	3
OCTOBER	0	1	2	3
NOVEMBER	1	2	1	4
DECEMBER	0	1	0	1
Total	13	12	8	33

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	10	0	14	0	0	2	0	0	0	0	0	0	0	26
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	2	0	0	1	0	0	0	0	0	0	0	3
Pedestrians	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	1	0	1	0	0	1	0	0	0	0	0	0	0	3
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	12	0	17	0	0	4	0	0	0	0	0	0	0	33

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	1	0	0	0	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	2	0	0	0	0	0	0	0	0	0	0	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	20	0	0	0	0	0	0	0	0	0	1	21
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	3	0	0	0	0	0	0	0	0	0	2	5
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	1	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	2	2
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	25	0	0	0	0	0	0	1	0	0	0	33

STORMWATER MANAGEMENT REPORT

MOTHERHOUSE SENIOR HOUSING
605 STEVENS AVENUE
PORTLAND, MAINE

Prepared for:

MOTHERHOUSE ASSOCIATES LP
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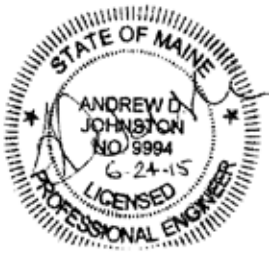

JUNE 2015

STORMWATER MANAGEMENT REPORT

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Attachments

Attachment A	Pre-development & Post-development Watershed Maps
Attachment B	Water Quality Calculations
Attachment C	TR-20 Computations (HydroCAD)
	§ Pre-development Model
	§ Post-development Model
Attachment D	Stormwater Operations and Maintenance Manual

STORMWATER MANAGEMENT REPORT

I. INTRODUCTION

Fay, Spofford &Thorndike (FST) has prepared the following stormwater management analysis for redevelopment of the Sisters of Mercy Motherhouse site at 605 Stevens Avenue in the City of Portland, Maine. The existing building will be renovated to provide senior living apartment units and updated to meet current residential standards. The site work associated with this project includes reconfiguration of the access and parking around the building, utility upgrades and the provision of new stormwater infrastructure.

This stormwater management analysis has been prepared in accordance with the City of Portland City of Portland Technical Manual, Section 5 and the Maine Department of Environmental Protection (MaineDEP) Chapter 500 Regulations, as applicable in order to ensure that the planned development will not result in a degradation of water quality or any other significant impacts to locations downstream of the development site as a result of stormwater runoff.

Runoff from the existing impervious areas on the site drains to two locations. The roof drainage from the existing building drains via downspouts and underground piping directly into the combined sewer system that serves the site. The remaining site area drains to a system of catch basins and storm drains that run across the property in an easterly direction. The system discharges to a wetland complex at the foot of the embankment located along the eastern property line. There is no provision for stormwater treatment or detention on the property. The project comprises redevelopment of the existing site, including repaving of existing parking lots and access roads, reconfiguration of vehicular circulation patterns, and updating of utility and stormwater infrastructure. The total area of the site that will be impacted by the project is approximately 3.10 acres. Of this area, 0.84 acres is the footprint of the building, which will remain u-disturbed, and 1.34 acres is repaving of existing parking lots and roadways, which is considered routine maintenance. This leaves a total disturbed area of just under one acre, which is below the threshold that requires a project to meet the General Standards under Chapter 500 Stormwater Law. The redevelopment of the site includes the removal of pavement to create landscaped islands and the addition of new pavement in existing landscaped areas to an almost equal degree. The net increase in pavement area as a result of the project will be approximately 2,000 square feet. This is negligible when considered in relation to the overall drainage area. Therefore, the stormwater management design for the project aims to meet the following key objectives:

- Removal of the existing roof drain inflow to the combined sewer system that serves the property;
- Water quality treatment of runoff from developed areas to the maximum extent practical;
- Detention, as necessary to ensure no increase in peak runoff from the site under design storm conditions; and
- The incorporation of Low Impact Design (LID) Best Management Practices (BMPs) to maximize groundwater recharge and ensure that there is no increase in surface runoff volume leaving the property.

II. EXISTING SITE CONDITIONS

The project site is approximately 4.5 acres in size and represents a lot to be subdivided from a larger overall parcel that totals approximately 19 acres and includes McAuley High School and

the associated facilities. The property is located on the east side of Stevens Avenue, just south of Walton Street.

The watershed area analyzed in this report includes the areas of the school and Motherhouse lot that drain towards the wetland at the eastern boundary of the property. The total area of the watershed is approximately 13.3 acres. The current impervious areas within the drainage area include the existing Motherhouse building, the High School building, and the associated paved access and circulation roads and paths, parking areas and courtyards. Other improvements include the current school playing fields, and landscaped and wooded areas around the perimeter of the property. It should be noted that the roof drains from the existing buildings at the site currently drain, via downspouts and underground piping, to the combined sewer system that serves the property. Site observations of the Motherhouse building indicate that approximately half of the downspouts are broken at, or above the ground surface, allowing roof runoff to drain directly to the ground adjacent to the building. For this reason, the existing conditions stormwater model includes half of the roof area from the Motherhouse building only in the subcatchment analysis. Roof runoff from the school building is excluded from the analysis as this drains to the sewer system in Walton Street.

The topography slopes in a generally easterly direction across the site, away from Stevens Avenue and towards the receiving wetland area. Slopes across most areas of the site are between 1% and 5%.

The existing project site is depicted on the drawings that are included in the Site Plan Review submission.

III. RECEIVING WATERS

The site drains in an easterly direction towards the wetland area located at the foot of the embankment, adjacent to the eastern property line. This entire area eventually drains into the municipal storm drain system in Forest Avenue.

IV. HISTORIC FLOODING

There are no reports of historic flooding on the project site. The site is within Flood Zone C, Areas of Minimal Flooding according to the FEMA Flood Insurance Rate Map for the area.

V. ALTERATIONS TO NATURAL DRAINAGE WAYS

There are no natural drainage ways on the site and therefore no alterations to natural drainage ways are proposed.

VI. METHODOLOGY AND MODELING ASSUMPTIONS

Runoff and routing calculations have been performed for the watershed areas affected by the proposed development under pre-development and post-development conditions scenarios. Time of concentration and runoff curve number calculations have been performed using the method described in Natural Resource Conservation Service (NRCS) Technical Release 55 (TR-55) – Urban Hydrology for Small Watersheds. The TR-20 based HydroCAD modeling software has been utilized to perform the more complex runoff and routing calculations, some of which are beyond the scope of the TR-55 method. Time of concentration calculations have been amended where the value given by the TR-55 method is less than six minutes (0.1 hour). In these cases a standard minimum value of six minutes has been used to keep this parameter within the acceptable working range of the model and prevent computational errors.

Design rainfall events have been modeled using the SCS Type III Hydrograph for 24-hour duration storms. The rainfall depth for each return period is taken from *Stormwater Management for Maine: Best Management Practices, Appendix A (Cumberland County)*. The rainfall depth values for standard design storm frequencies are shown in the table below:

TABLE 1				
24-Hour Rainfall Depths for Cumberland County at Design Storm Frequencies				
Stormwater Management for Maine: Best Management Practices, Appendix A				
Frequency	2-Year	10-Year	25-Year	100-Year
Rainfall Depth	3.0 in	4.7 in	5.5 in	6.7 in

Soil types in the area of the site have been identified using the Natural Resource Conservation Service (NRCS) Web Soil Survey. The soils mapped across most of the site are identified as Windsor series loamy sand soils. These are classified as Hydrologic Group "A". There is a small area of Paxton fine sandy loam soils towards the south end of the site. These soils are classified as Hydrologic Group "C". The Web Soil Survey information is supplemented by a more detailed geotechnical investigation of the site, undertaken by Summit GeoEngineering Services in March 2015. The investigations included a number of borings throughout the site, analysis and description of existing soil textures, and estimated infiltration rates for use in the design of stormwater Best Management Practices (BMPs). The report describes the subsurface conditions at the site as generally topsoil, or pavement overlying fill/reworked native soil, overlying marine fan deposits. The marine fan deposits consist of sandy, well drained soils that can be divided into two distinct layers. Groundwater was observed at elevations between 5.4 feet and 11.4 feet below the surface. Infiltration rates were estimated from grain size analysis results at boring locations B-6 (depth 5-7 feet) and B-8 (depth 10-12 feet). The hydraulic conductivity of the native soil material is stated as 60in/hr. For the purposes of design of stormwater BMPs that include an infiltration component, a conservative infiltration rate of 7.5in/hr has been used.

The existing topography of the site was determined by field survey and the existing vegetative cover was identified by site inspection. The following table includes a list of the surficial soil types that were identified on the project site, along with their associated Hydrologic Soil Group (HSG).

TABLE 2	
Soils	**Hydrologic Soil Group**
Windsor	A
Paxton	C

A stormwater management model has been developed for the project using the base information described above. In the pre-development conditions scenario the site is represented by a single subcatchment area that includes all areas that drain to the wetland located at the foot of the embankment, at the east end of the property. In the post-development conditions scenario the site has been divided further into several small subcatchment areas to allow the effects of localized storage and treatment Best Management Practices (BMPs) to be analyzed. Outflow from the post-development subcatchments is combined at a single design point that represent the same discharge location to the downstream wetland as that analyzed under the pre-development scenario. This allows direct comparison of pre-development and post-development runoff rates and volumes at this location.

The stormwater management system for the project has been designed to effectively capture, detain and treat runoff from developed areas of the site before allowing it to discharge in a non-erosive manner to downstream areas. NRCS Code 378, the Stormwater Management for Maine: Best Management Practices (MEDEP, 2006) and the Maine Erosion and Sedimentation Control Handbook for Construction: Best Management Practices (March 1991) have been used as guidelines in the design of the stormwater system.

VII. PROPOSED BMPS

The stormwater management system for the project has been designed to meet several key objectives. These are:

- Removal of the existing roof drain inflow to the combined sewer system that serves the property;
- Water quality treatment of runoff from developed areas to the maximum extent practical;
- Detention, as necessary to ensure no increase in peak runoff from the site under design storm conditions; and
- The incorporation of Low Impact Design (LID) Best Management Practices (BMPs) to maximize groundwater recharge and ensure that there is no increase in surface runoff volume leaving the property.

The proposed stormwater management BMPs include filtering roof drip strips, two small bioretention cells, and an infiltration trench that will capture, detain and treat runoff in accordance with the design standards described in Stormwater Management for Maine Technical BMPs Manual. The design aims to utilize the high infiltration rates associated with the granular onsite soils to maximize water quality treatment efficiency, promote groundwater recharge and reduce both the peak runoff rate and the volume of surface runoff leaving the property.

The filtering drip strips extend all around the perimeter of the building and will allow the downspouts that are still intact to be disconnected from the combined sewer system. The architectural program calls for excavation of the foundation walls and application of waterproofing and insulation. The addition of new foundation drainage will allow the installation of the drip strip material with a free drainage outlet to the new storm drain system. Runoff from small storm events will infiltrate directly to the underlying soils. The drip strips provide sufficient storage in the void space of the stone material to detain the Water Quality volume for the contributing roof area.

The two new bioretention cells are located on the east side of the new parking area adjacent to the rear entrance to the building. These will make use of existing green space surrounding several large trees that will be retained and incorporated into the project. Runoff from the parking area will drain by sheet flow to the bioretention cells, which are depressed below the surrounding pavement. A pea stone filter is provided at the edge of pavement to provide pre-treatment and removal of large suspended solids. The bioretention cell offers treatment by filtering runoff through a native soil media before allowing it infiltrate to the underlying soils. Underdrain piping is provided as an overflow for excess groundwater during large storm events. A secondary emergency overflow grate is also provided above the storage elevation with an outlet to the downstream storm drain system.

The bioretention cell provides storage and treatment for the Water Quality Volume (WQV) from the contributing area. This is defined as 1.0 inches of runoff from all contributing impervious areas and 0.4 inches of runoff from all landscaped areas.

The infiltration trench is located on the east side of the main access road, just west of the athletic field. A five foot wide grass filter strip is provided between the edge of pavement and the infiltration trench. This will allow pre-treatment and removal of gross solids from runoff entering the BMP from the adjacent paved area. The infiltration trench is designed to capture, treat and discharge runoff from the contributing area to the underlying soils. As in the example of the bioretention cells, an underdrain is provided above the base of the BMP as an overflow in case of large storm events.

The water quantity analysis performed for the development demonstrates that there will be no increase in peak flows at the design point, for design storms of 2-Year, 10-year and 25-year frequencies. Water quality treatment calculations demonstrate that the BMPs are adequately sized in accordance with current stormwater standards.

A maintenance schedule for the new storm water BMPs will ensure that the stormwater management system is kept in good order and continues to function as designed. A copy of the Stormwater System Maintenance Schedule is included in Attachment D of this report.

VIII. STORMWATER QUANTITY ANALYSIS

A. Predevelopment Conditions

Under the predevelopment conditions scenario the site is divided into a single subcatchment area, representing the watershed draining to the wetland located along the eastern property line. A summary of the subcatchment area included in the pre-development model is given in the table as follows:

TABLE 3
PREDEVELOPMENT SITE CONDITIONS

Subarea	Area (square feet)	CN	Time of Concentration (min.)
101	579,629	55	15.5

Full details pre-development subcatchment areas, cover conditions and time of concentration flow paths are described in detail in the supporting HydroCAD documentation included in Attachment C of this report. A Predevelopment Conditions Watershed Plan is included in Attachment A of this report.

B. Post-Development Conditions

Under the post–development conditions scenario, the site is divided into small subcatchment areas to allow the effect of the new stormwater BMPs to be accurately modeled. The total area of analysis remains the same as in the pre-development conditions, and runoff from all areas is combined at a Design Point at the same location as the pre-development discharge point to the receiving wetland.

A summary of the subcatchment areas included in the post-development model is given in the table as follows:

TABLE 4 POST-DEVELOPMENT SITE CONDITIONS			
Subarea	**Area (square feet)**	**CN**	**Time of Concentration (minutes)**
201	537,572	53	15.5
210	15,676	81	6.0
211	7,303	74	6.0
212	9,701	73	6.0
221	9,601	94	6.0
222	4,490	95	6.0
223	4,520	94	6.0
224	6,069	94	6.0

Full details of the post-development subcatchment areas, cover conditions and time of concentration flow paths are described in detail in the supporting HydroCAD documentation included in Attachment C of this report. A Post-Development Conditions Watershed Plan is included in Attachment A of this report.

IX. WATER QUANTITY ANALYSIS SUMMARY

The table below summarizes the peak runoff values and runoff volumes for pre-development and post-development conditions during each of the analyzed design storm events.

TABLE 5 SUMMARY OF PEAK RUNOFF VALUES (CFS) AND RUNOFF VOLUMES (AC-FT)				
Storm Event	**Peak Runoff Rate (cfs)**		**Runoff Volume (ac-ft)**	
	Pre-Development	**Post-Development**	**Pre-Development**	**Post-Development**
2-Year	0.81	**0.43**	0.216	**0.154**
10-Year	7.27	**6.21**	0.926	**0.771**
25-Year	12.10	**10.98**	1.374	**1.187**

X. STORM WATER QUALITY ANALYSIS

A. Water Quality Treatment Measures

The project has been designed in accordance to provide water quality treatment for runoff from the property to the extent practical. There is currently no provision for water quality treatment or detention of runoff from the property. The project will result in a minimal net increase in the paved area at the site (approximately 2,000sf). Runoff from the impervious area associated with the roof of the existing building will also be removed from the combined sewer system and will drain to the stormwater system after treatment in filtering drip strips. The proposed BMPs will provide treatment for over an acre of impervious area at the site, in accordance with current State Stormwater Standards. This will result in a significant benefit to runoff water quality from the site. Water quality computations are provided in Attachment B.

XI. EROSION AND SEDIMENTATION CONTROL

A comprehensive Erosion and Sediment Control Report has been prepared that includes Best Management Practices (BMPs) associated with the proposed construction activities.

The Erosion and Sediment Control Report outlines the required construction measures and techniques that will reduce potential degradation of the water quality at downstream locations. Temporary erosion control measures will be incorporated during construction, and long-term surface stabilization practices have been designed as part of the site development, thus minimizing the potential for erosion and sediment transport. These measures include the constructed BMPs for filtration of runoff from smaller storm events, riprap, permanent seeding and other vegetative stabilization measures. Detailed information on the specific erosion and sedimentation control practices that are to be used on the site are provided on the following plan sheet, which will be included as part of the construction documents for the project.

XII. MAINTENANCE OF FACILITIES

The effectiveness of water quality management provisions and other components of the stormwater management system are dependent on their design, upkeep, and maintenance to assure they meet their intended function over an extended period of time. It is critical that the stormwater management facilities are regularly inspected and that maintenance is performed on an as-needed basis.

A Stormwater Management Inspection and Maintenance Manual has been prepared specifically for the project and is included in Attachment D of this section.

XIII. CONCLUSIONS

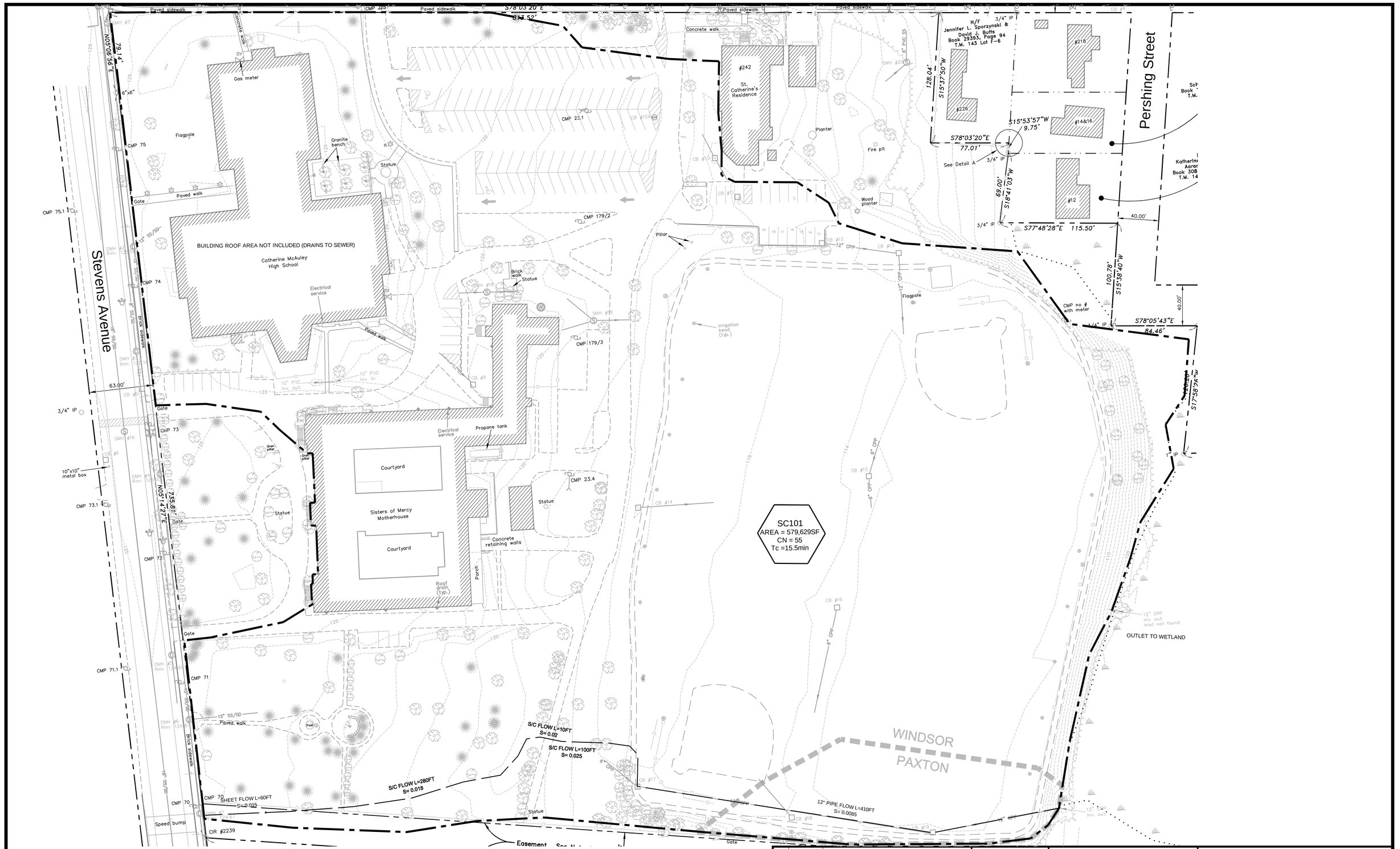
The stormwater management system designed for this project will mitigate impacts of development on stormwater runoff peak discharge rates and provide treatment of non-point source pollutants in the runoff in accordance with current State and local standards. Based on the analysis described herein, it is expected that runoff from the proposed development will not cause adverse impacts to downstream properties.

XIV. ATTACHMENTS

Attachment A – Predevelopment & Post-development Watershed Maps
Attachment B – Water Quality and Wet Pond Calculations
Attachment C – TR-20 Computations (HydroCAD)
Attachment D – Stormwater Operations and Maintenance Manual

ATTACHMENT A

Predevelopment & Post-development Watershed Maps



PRELIMINARY - NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	06.24.15	ISSUED FOR SITE PLAN REVIEW

REVISIONS

STATE OF MAINE
ANDREW D. JOHNSTON
NO. 9994
6-24-15
LICENSED PROFESSIONAL ENGINEER

P.E. ANDREW D. JOHNSTON
LIC. #9994

PROJECT
MOTHERHOUSE SENIOR HOUSING

SHEET TITLE
PRE-DEVELOPMENT WATERSHED PLAN

CLIENT
MOTHERHOUSE ASSOCIATES LP

FST 100 YEARS
FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	ADJ	DATE:	JUNE 2015
DESIGNED:	ADJ	SCALE:	1" = 40'
CHECKED:	ADJ	JOB NO.	SP-M162
FILE NAME:	WSHED-PRE		
SHEET	C 9.0		

NORTH

Stevens Avenue

Pershing Street

Holly Street

Catherine McAuley High School

Sisters of Mercy Motherhouse

St. Catherine's Residence

SC223
AREA = 4520SF
CN = 94
Tc =6.0min

SC224
AREA = 6069SF
CN = 94
Tc =6.0min

SC210
AREA = 15,676SF
CN = 81
Tc =6.0min

SC201
AREA = 537,572SF
CN = 53
Tc =15.5min

SC211
AREA = 7303SF
CN = 74
Tc =6.0min

SC212
AREA = 9701SF
CN = 73
Tc =6.0min

SC222
AREA = 4490SF
CN = 95
Tc =6.0 min

SC221
AREA = 9601SF
CN = 94
Tc =6.0min

INFILTRATION TRENCH

RAIN GARDEN

RAIN GARDEN

DESIGN POINT 1

DRIP STRIP (TYP.)

DRIP STRIP (TYP.)

S/C FLOW L=10FT S= 0.02

S/C FLOW L=100FT S= 0.025

S/C FLOW L=280FT S= 0.018

SHEET FLOW L=60FT S= 0.015

12" PIPE FLOW L=410FT S= 0.0085

N/F Jennifer L. Sporzynski & David J. Butts Book 29393, Page 94 T.M. 143 Lot F-6

N/F Sue Ann Schwabenhausen Book 19772, Page 148 T.M. 143 Lot F-11

N/F Katherine A. Dion & Aaron J. Dion Book 30837, Page 212 T.M. 143 Lot F-10

N/F William E. Neleski, Jr. Book 23212, Page 46 T.M. 142 Lot G-8

N/F Diocesan Bureau of Housing Book 3181, Page 458 T.M. 142 Lot G-7

N/F Diocesan Bureau of Housing Book 3181, Page 458 T.M. 136 Lot E-5

"Deering Pavilion"

N05°06'56"E 79.14'

N05°14'27"E 735.81'

S15°37'50"W 128.04'

S15°53'57"W 9.75'

S78°03'20"E 77.01'

S18°41'03"W 69.00'

S77°48'28"E 115.50'

S15°38'40"W 100.78'

S78°05'43"E 84.46'

S81°22'53"E 69.57'

S74°41'51"E 16.51'

S17°58'26"W 449.53'

S15°17'19"W 449.53'

63.00'

40.00'

40.00'

CMP 75.1

CMP 75

CMP 74

CMP 73.1

CMP 73

CMP 72

CMP 71.1

CMP 71

CMP 70

CMP 23.1

CMP 179/2

CMP 179/3

CMP no # with meter

CMP 3

3/4" IP

Gas meter

Flagpole

Granite bench

Statue

Paved walk

Gate

Concrete walk

Paved sidewalk

Brick sidewalk

Courtyard

Porch

Roof (typ.)

Planter

Fire pit

Wood planter

Electrical service

Brick walk

Irrigation head (typ.)

Pool

Speed bump

10"x10" metal box

CIR #2239

Easement. See Note 4

See Detail A

12" CPP Inv. out: Inlet not found.

#242

#226

#218

#14&16

#12

#34

#20

#10

#9

#15

#16

#17

#18

#19

#13

CB #12

12" CPP

6" PVC SS

6" CPP

8" CPP

15" SS/SD

18" SS/SD

8"W

6"W

DMH #2 Rim

DMH #3 Rim

DMH #6 Rim

DMH #16 Rim

DMH #20 Rim

DMH #10 BURIED

DMH #9

DMH #8

DMH #7

DMH #5

DMH #4

DMH #1

PRELIMINARY - NOT FOR CONSTRUCTION

(IN FEET)
1 inch = 40 ft.

REV	DATE	DESCRIPTION
1	06.24.15	ISSUED FOR SITE PLAN REVIEW

REVISIONS

STATE OF MAINE
ANDREW D. JOHNSTON
NO. 9994
6-24-15
LICENSED PROFESSIONAL ENGINEER

P.E. ANDREW D. JOHNSTON
LIC. #9994

PROJECT
MOTHERHOUSE SENIOR HOUSING

SHEET TITLE
POST-DEVELOPMENT WATERSHED PLAN

CLIENT
MOTHERHOUSE ASSOCIATES LP

FST 100 YEARS

FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	ADJ	DATE:	JUNE 2015
DESIGNED:	ADJ	SCALE:	1" = 40'
CHECKED:	ADJ	JOB NO.	SP-M162
FILE NAME:	WSHED-POST		
SHEET	C 9.1		

R:\SP-M162-McAuely Place - Motherhouse - Portland, ME\Cadd\Permit Set\dwg\WSHED-POST.dwg johnst_a 6/24/2015 4:19 PM

ATTACHMENT B

Water Quality Calculations

605 Stevens Avenue Stormwater Areas

Pre-Development Area Summary

Subcatchment 101

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	74	89	98	98	55	
Area	376618	22142	25724	23810	1860	112860	16615.5	579629.5	153477.5

TOTAL PRE-DEVELOPMENT AREA 579629.5 SF

TOTAL PRE-DEVELOPMENT IMPERVIOUS AREA 153477.5 SF

Post-Development Area Summary

Subcatchment 201

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	74	89	98	98	53	
Area	365759	17506	25724	23810	1860	92620	10293	537572	122279

Subcatchment 210

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	80	91	98	98	81	
Area	4452	0	0	0	0	11224	0	15676	11224
								WQV=	1084

Subcatchment 211

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	80	91	98	98	74	
Area	3004	0	0	0	0	4299	0	7303	4299
								WQV=	458

Subcatchment 212

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	80	91	98	98	73	
Area	4135	0	0	0	0	5566	0	9701	5566
								WQV=	602

Subcatchment 221

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	80	91	98	98	94	
Area	0	1600	0	0	0	0	8000	9600	9600
								WQV=	800

Subcatchment 222

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	80	91	98	98	95	
Area	0	600	0	0	0	0	3890	4490	4490
								WQV=	374

Subcatchment 223

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	80	91	98	98	94	
Area	0	720	0	0	0	0	3800	4520	4520
								WQV=	377

Subcatchment 224

Cover Condition	Grass (good) HSG A	Gravel HSG A	Woods /Grass HSG A	Grass (good) HSG C	Gravel HSG C	Pavement Concrete	Roof	TOTAL	IMPERVIOUS
CN	39	76	32	80	91	98	98	94	
Area	0	1120	0	0	0	0	4949	6069	6069
								WQV=	506

TOTAL POST-DEVELOPMENT AREA	594931	SF
TOTAL POST-DEVELOPMENT IMPERVIOUS AREA	168047	SF
TOTAL TREATED POST-DEVELOPMENT IMPERVIOUS AREA	45768	SF

Stage-Area-Storage for Pond DS-2: Drip Strip

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
115.00	**1,600**	0
115.05	1,600	32
115.10	1,600	64
115.15	1,600	96
115.20	1,600	128
115.25	1,600	160
115.30	1,600	192
115.35	1,600	224
115.40	1,600	256
115.45	1,600	288
115.50	1,600	320
115.55	1,600	352
115.60	1,600	384
115.65	1,600	416
115.70	1,600	448
115.75	1,600	480
115.80	1,600	512
115.85	1,600	544
115.90	1,600	576
115.95	1,600	608
116.00	1,600	640
116.05	1,600	664
116.10	1,600	688
116.15	1,600	712
116.20	1,600	736
116.25	1,600	760
116.30	1,600	784
116.35	1,600	808
116.40	1,600	832
116.45	1,600	856
116.50	1,600	880
116.55	1,600	904
116.60	1,600	928
116.65	1,600	952
116.70	1,600	976
116.75	1,600	1,000
116.80	1,600	1,024
116.85	1,600	1,048
116.90	1,600	1,072
116.95	1,600	1,096
117.00	1,600	1,120
117.05	1,600	1,152
117.10	1,600	1,184
117.15	1,600	1,216
117.20	1,600	1,248
117.25	1,600	1,280
117.30	1,600	1,312
117.35	1,600	1,344
117.40	1,600	1,376
117.45	1,600	1,408
117.50	1,600	1,440
117.55	1,600	1,472
117.60	1,600	1,504
117.65	1,600	1,536
117.70	1,600	1,568
117.75	1,600	1,600
117.80	1,600	1,632
117.85	1,600	1,664
117.90	1,600	1,696
117.95	1,600	1,728
118.00	1,600	1,760
118.05	1,600	1,792
118.10	1,600	1,824
118.15	1,600	1,856
118.20	1,600	1,888
118.25	1,600	1,920
118.30	1,600	1,952
118.35	1,600	1,984
118.40	1,600	2,016
118.45	1,600	2,048
118.50	1,600	2,080
118.55	1,600	2,112
118.60	1,600	2,144
118.65	1,600	2,176
118.70	1,600	2,208
118.75	1,600	2,240
118.80	1,600	2,272
118.85	1,600	2,304
118.90	1,600	2,336
118.95	1,600	2,368
119.00	1,600	2,400
119.05	1,600	2,432
119.10	1,600	2,464
119.15	1,600	2,496
119.20	1,600	2,528
119.25	1,600	2,560
119.30	1,600	2,592
119.35	1,600	2,624
119.40	1,600	2,656
119.45	1,600	2,688
119.50	1,600	2,720
119.55	1,600	2,752
119.60	1,600	2,784
119.65	1,600	2,816
119.70	1,600	2,848
119.75	1,600	2,880
119.80	1,600	2,912
119.85	1,600	2,944
119.90	1,600	2,976
119.95	1,600	3,008
120.00	1,600	**3,040**

Stage-Area-Storage for Pond DS-3: Drip Strip

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
115.00	**1,600**	0
115.05	1,600	32
115.10	1,600	64
115.15	1,600	96
115.20	1,600	128
115.25	1,600	160
115.30	1,600	192
115.35	1,600	224
115.40	1,600	256
115.45	1,600	288
115.50	1,600	320
115.55	1,600	352
115.60	1,600	384
115.65	1,600	416
115.70	1,600	448
115.75	1,600	480
115.80	1,600	512
115.85	1,600	544
115.90	1,600	576
115.95	1,600	608
116.00	1,600	640
116.05	1,600	664
116.10	1,600	688
116.15	1,600	712
116.20	1,600	736
116.25	1,600	760
116.30	1,600	784
116.35	1,600	808
116.40	1,600	832
116.45	1,600	856
116.50	1,600	880
116.55	1,600	904
116.60	1,600	928
116.65	1,600	952
116.70	1,600	976
116.75	1,600	1,000
116.80	1,600	1,024
116.85	1,600	1,048
116.90	1,600	1,072
116.95	1,600	1,096
117.00	1,600	1,120
117.05	1,600	1,152
117.10	1,600	1,184
117.15	1,600	1,216
117.20	1,600	1,248
117.25	1,600	1,280
117.30	1,600	1,312
117.35	1,600	1,344
117.40	1,600	1,376
117.45	1,600	1,408
117.50	1,600	1,440
117.55	1,600	1,472
117.60	1,600	1,504
117.65	1,600	1,536
117.70	1,600	1,568
117.75	1,600	1,600
117.80	1,600	1,632
117.85	1,600	1,664
117.90	1,600	1,696
117.95	1,600	1,728
118.00	1,600	1,760
118.05	1,600	1,792
118.10	1,600	1,824
118.15	1,600	1,856
118.20	1,600	1,888
118.25	1,600	1,920
118.30	1,600	1,952
118.35	1,600	1,984
118.40	1,600	2,016
118.45	1,600	2,048
118.50	1,600	2,080
118.55	1,600	2,112
118.60	1,600	2,144
118.65	1,600	2,176
118.70	1,600	2,208
118.75	1,600	2,240
118.80	1,600	2,272
118.85	1,600	2,304
118.90	1,600	2,336
118.95	1,600	2,368
119.00	1,600	2,400
119.05	1,600	2,432
119.10	1,600	2,464
119.15	1,600	2,496
119.20	1,600	2,528
119.25	1,600	2,560
119.30	1,600	2,592
119.35	1,600	2,624
119.40	1,600	2,656
119.45	1,600	2,688
119.50	1,600	2,720
119.55	1,600	2,752
119.60	1,600	2,784
119.65	1,600	2,816
119.70	1,600	2,848
119.75	1,600	2,880
119.80	1,600	2,912
119.85	1,600	2,944
119.90	1,600	2,976
119.95	1,600	3,008
120.00	1,600	**3,040**

Stage-Area-Storage for Pond DS-4: Drip Strip

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
115.00	**1,600**	0
115.05	1,600	32
115.10	1,600	64
115.15	1,600	96
115.20	1,600	128
115.25	1,600	160
115.30	1,600	192
115.35	1,600	224
115.40	1,600	256
115.45	1,600	288
115.50	1,600	320
115.55	1,600	352
115.60	1,600	384
115.65	1,600	416
115.70	1,600	448
115.75	1,600	480
115.80	1,600	512
115.85	1,600	544
115.90	1,600	576
115.95	1,600	608
116.00	1,600	640
116.05	1,600	664
116.10	1,600	688
116.15	1,600	712
116.20	1,600	736
116.25	1,600	760
116.30	1,600	784
116.35	1,600	808
116.40	1,600	832
116.45	1,600	856
116.50	1,600	880
116.55	1,600	904
116.60	1,600	928
116.65	1,600	952
116.70	1,600	976
116.75	1,600	1,000
116.80	1,600	1,024
116.85	1,600	1,048
116.90	1,600	1,072
116.95	1,600	1,096
117.00	1,600	1,120
117.05	1,600	1,152
117.10	1,600	1,184
117.15	1,600	1,216
117.20	1,600	1,248
117.25	1,600	1,280
117.30	1,600	1,312
117.35	1,600	1,344
117.40	1,600	1,376
117.45	1,600	1,408
117.50	1,600	1,440
117.55	1,600	1,472
117.60	1,600	1,504
117.65	1,600	1,536
117.70	1,600	1,568
117.75	1,600	1,600
117.80	1,600	1,632
117.85	1,600	1,664
117.90	1,600	1,696
117.95	1,600	1,728
118.00	1,600	1,760
118.05	1,600	1,792
118.10	1,600	1,824
118.15	1,600	1,856
118.20	1,600	1,888
118.25	1,600	1,920
118.30	1,600	1,952
118.35	1,600	1,984
118.40	1,600	2,016
118.45	1,600	2,048
118.50	1,600	2,080
118.55	1,600	2,112
118.60	1,600	2,144
118.65	1,600	2,176
118.70	1,600	2,208
118.75	1,600	2,240
118.80	1,600	2,272
118.85	1,600	2,304
118.90	1,600	2,336
118.95	1,600	2,368
119.00	1,600	2,400
119.05	1,600	2,432
119.10	1,600	2,464
119.15	1,600	2,496
119.20	1,600	2,528
119.25	1,600	2,560
119.30	1,600	2,592
119.35	1,600	2,624
119.40	1,600	2,656
119.45	1,600	2,688
119.50	1,600	2,720
119.55	1,600	2,752
119.60	1,600	2,784
119.65	1,600	2,816
119.70	1,600	2,848
119.75	1,600	2,880
119.80	1,600	2,912
119.85	1,600	2,944
119.90	1,600	2,976
119.95	1,600	3,008
120.00	1,600	**3,040**

Stage-Area-Storage for Pond DS1: Drip Strip

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
115.00	**1,600**	0
115.05	1,600	32
115.10	1,600	64
115.15	1,600	96
115.20	1,600	128
115.25	1,600	160
115.30	1,600	192
115.35	1,600	224
115.40	1,600	256
115.45	1,600	288
115.50	1,600	320
115.55	1,600	352
115.60	1,600	384
115.65	1,600	416
115.70	1,600	448
115.75	1,600	480
115.80	1,600	512
115.85	1,600	544
115.90	1,600	576
115.95	1,600	608
116.00	1,600	640
116.05	1,600	664
116.10	1,600	688
116.15	1,600	712
116.20	1,600	736
116.25	1,600	760
116.30	1,600	784
116.35	1,600	808
116.40	1,600	832
116.45	1,600	856
116.50	1,600	880
116.55	1,600	904
116.60	1,600	928
116.65	1,600	952
116.70	1,600	976
116.75	1,600	1,000
116.80	1,600	1,024
116.85	1,600	1,048
116.90	1,600	1,072
116.95	1,600	1,096
117.00	1,600	1,120
117.05	1,600	1,152
117.10	1,600	1,184
117.15	1,600	1,216
117.20	1,600	1,248
117.25	1,600	1,280
117.30	1,600	1,312
117.35	1,600	1,344
117.40	1,600	1,376
117.45	1,600	1,408
117.50	1,600	1,440
117.55	1,600	1,472
117.60	1,600	1,504
117.65	1,600	1,536
117.70	1,600	1,568
117.75	1,600	1,600
117.80	1,600	1,632
117.85	1,600	1,664
117.90	1,600	1,696
117.95	1,600	1,728
118.00	1,600	1,760
118.05	1,600	1,792
118.10	1,600	1,824
118.15	1,600	1,856
118.20	1,600	1,888
118.25	1,600	1,920
118.30	1,600	1,952
118.35	1,600	1,984
118.40	1,600	2,016
118.45	1,600	2,048
118.50	1,600	2,080
118.55	1,600	2,112
118.60	1,600	2,144
118.65	1,600	2,176
118.70	1,600	2,208
118.75	1,600	2,240
118.80	1,600	2,272
118.85	1,600	2,304
118.90	1,600	2,336
118.95	1,600	2,368
119.00	1,600	2,400
119.05	1,600	2,432
119.10	1,600	2,464
119.15	1,600	2,496
119.20	1,600	2,528
119.25	1,600	2,560
119.30	1,600	2,592
119.35	1,600	2,624
119.40	1,600	2,656
119.45	1,600	2,688
119.50	1,600	2,720
119.55	1,600	2,752
119.60	1,600	2,784
119.65	1,600	2,816
119.70	1,600	2,848
119.75	1,600	2,880
119.80	1,600	2,912
119.85	1,600	2,944
119.90	1,600	2,976
119.95	1,600	3,008
120.00	1,600	**3,040**

Stage-Area-Storage for Pond IT-1: Infiltration Trench

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
112.00	**1,250**	0
112.05	1,250	19
112.10	1,250	37
112.15	1,250	56
112.20	1,250	75
112.25	1,250	94
112.30	1,250	112
112.35	1,250	131
112.40	1,250	150
112.45	1,250	169
112.50	1,250	188
112.55	1,250	206
112.60	1,250	225
112.65	1,250	244
112.70	1,250	263
112.75	1,250	281
112.80	1,250	300
112.85	1,250	319
112.90	1,250	338
112.95	1,250	356
113.00	1,250	375
113.05	1,250	394
113.10	1,250	412
113.15	1,250	431
113.20	1,250	450
113.25	1,250	469
113.30	1,250	487
113.35	1,250	506
113.40	1,250	525
113.45	1,250	544
113.50	1,250	563
113.55	1,250	581
113.60	1,250	600
113.65	1,250	619
113.70	1,250	638
113.75	1,250	656
113.80	1,250	675
113.85	1,250	694
113.90	1,250	713
113.95	1,250	731
114.00	1,250	750
114.05	1,250	775
114.10	1,250	800
114.15	1,250	825
114.20	1,250	850
114.25	1,250	875
114.30	1,250	900
114.35	1,250	925
114.40	1,250	950
114.45	1,250	975
114.50	1,250	1,000
114.55	1,250	1,025
114.60	1,250	1,050
114.65	1,250	1,075
114.70	1,250	1,100
114.75	1,250	1,125
114.80	1,250	1,150
114.85	1,250	1,175
114.90	1,250	1,200
114.95	1,250	1,225
115.00	1,250	1,250
115.05	1,250	1,275
115.10	1,250	1,300
115.15	1,250	1,325
115.20	1,250	1,350
115.25	1,250	1,375
115.30	1,250	1,400
115.35	1,250	1,425
115.40	1,250	1,450
115.45	1,250	1,475
115.50	1,250	1,500
115.55	1,250	1,525
115.60	1,250	1,550
115.65	1,250	1,575
115.70	1,250	1,600
115.75	1,250	1,625
115.80	1,250	1,650
115.85	1,250	1,675
115.90	1,250	1,700
115.95	1,250	1,725
116.00	1,250	1,750
116.05	1,250	1,775
116.10	1,250	1,800
116.15	1,250	1,825
116.20	1,250	1,850
116.25	1,250	1,875
116.30	1,250	1,900
116.35	1,250	1,925
116.40	1,250	1,950
116.45	1,250	1,975
116.50	1,250	2,000
116.55	1,250	2,025
116.60	1,250	2,050
116.65	1,250	2,075
116.70	1,250	2,100
116.75	1,250	2,125
116.80	1,250	2,150
116.85	1,250	2,175
116.90	1,250	2,200
116.95	1,250	2,225
117.00	1,250	**2,250**

Stage-Area-Storage for Pond RG-1: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
114.50	460	0
114.55	460	8
114.60	460	15
114.65	460	23
114.70	460	30
114.75	460	38
114.80	460	46
114.85	460	53
114.90	460	61
114.95	460	68
115.00	460	76
115.05	460	83
115.10	460	91
115.15	460	99
115.20	460	106
115.25	460	114
115.30	460	121
115.35	460	129
115.40	460	137
115.45	460	144
115.50	460	152
115.55	460	159
115.60	460	167
115.65	460	175
115.70	460	182
115.75	460	190
115.80	460	197
115.85	460	205
115.90	460	213
115.95	460	220
116.00	460	228
116.05	460	251
116.10	460	274
116.15	460	297
116.20	460	320
116.25	460	343
116.30	460	366
116.35	460	389
116.40	460	412
116.45	460	435
116.50	460	458
116.55	460	481
116.60	460	504
116.65	460	527
116.70	460	550
116.75	460	573
116.80	460	596
116.85	460	619
116.90	460	642
116.95	460	665
117.00	460	688
117.05	464	711
117.10	469	734
117.15	474	758
117.20	478	782
117.25	483	806
117.30	487	830
117.35	491	854
117.40	496	879
117.45	501	904
117.50	505	929
117.55	506	954
117.60	508	980
117.65	510	1,005
117.70	511	1,031
117.75	513	1,056
117.80	514	1,082
117.85	515	1,108
117.90	517	1,133
117.95	519	1,159
118.00	**520**	**1,185**

Stage-Area-Storage for Pond RG-2: Rain Garden

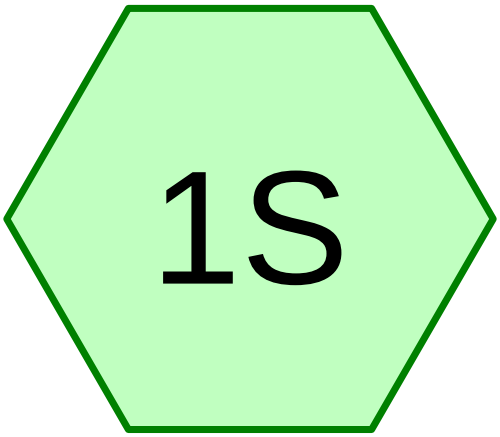
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
114.50	960	0
114.55	960	16
114.60	960	32
114.65	960	48
114.70	960	63
114.75	960	79
114.80	960	95
114.85	960	111
114.90	960	127
114.95	960	143
115.00	960	158
115.05	960	174
115.10	960	190
115.15	960	206
115.20	960	222
115.25	960	238
115.30	960	253
115.35	960	269
115.40	960	285
115.45	960	301
115.50	960	317
115.55	960	333
115.60	960	348
115.65	960	364
115.70	960	380
115.75	960	396
115.80	960	412
115.85	960	428
115.90	960	444
115.95	960	459
116.00	960	475
116.05	960	491
116.10	960	507
116.15	960	523
116.20	960	539
116.25	960	554
116.30	960	570
116.35	960	586
116.40	960	602
116.45	960	618
116.50	960	634
116.55	960	682
116.60	960	730
116.65	960	778
116.70	960	826
116.75	960	874
116.80	960	922
116.85	960	970
116.90	960	1,018
116.95	960	1,066
117.00	960	1,114
117.05	968	1,162
117.10	976	1,210
117.15	984	1,259
117.20	992	1,309
117.25	1,000	1,359
117.30	1,008	1,409
117.35	1,016	1,459
117.40	1,024	1,510
117.45	1,032	1,562
117.50	1,040	1,614
117.55	1,056	1,666
117.60	1,072	1,719
117.65	1,088	1,773
117.70	1,104	1,828
117.75	1,120	1,884
117.80	1,136	1,940
117.85	1,152	1,997
117.90	1,168	2,055
117.95	1,184	2,114
118.00	**1,200**	**2,174**

ATTACHMENT C

TR-20 Computations (HydroCAD)

- **Predevelopment Model**
- **Postdevelopment Model**

Pre-development Calculations



Existing Area to Wetland

Subcat Reach Pond Link

Drainage Diagram for 605 Stevens Ave - Pre-Development
Prepared by FST, Inc., Printed 6/24/2015
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Time span=0.00-40.00 hrs, dt=0.05 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Area to Wetland Runoff Area=579,629 sf 22.03% Impervious Runoff Depth=0.19"
Flow Length=860' Tc=15.5 min CN=55 Runoff=0.81 cfs 0.216 af

Total Runoff Area = 13.306 ac Runoff Volume = 0.216 af Average Runoff Depth = 0.19"
77.97% Pervious = 10.375 ac 22.03% Impervious = 2.932 ac

Summary for Subcatchment 1S: Existing Area to Wetland

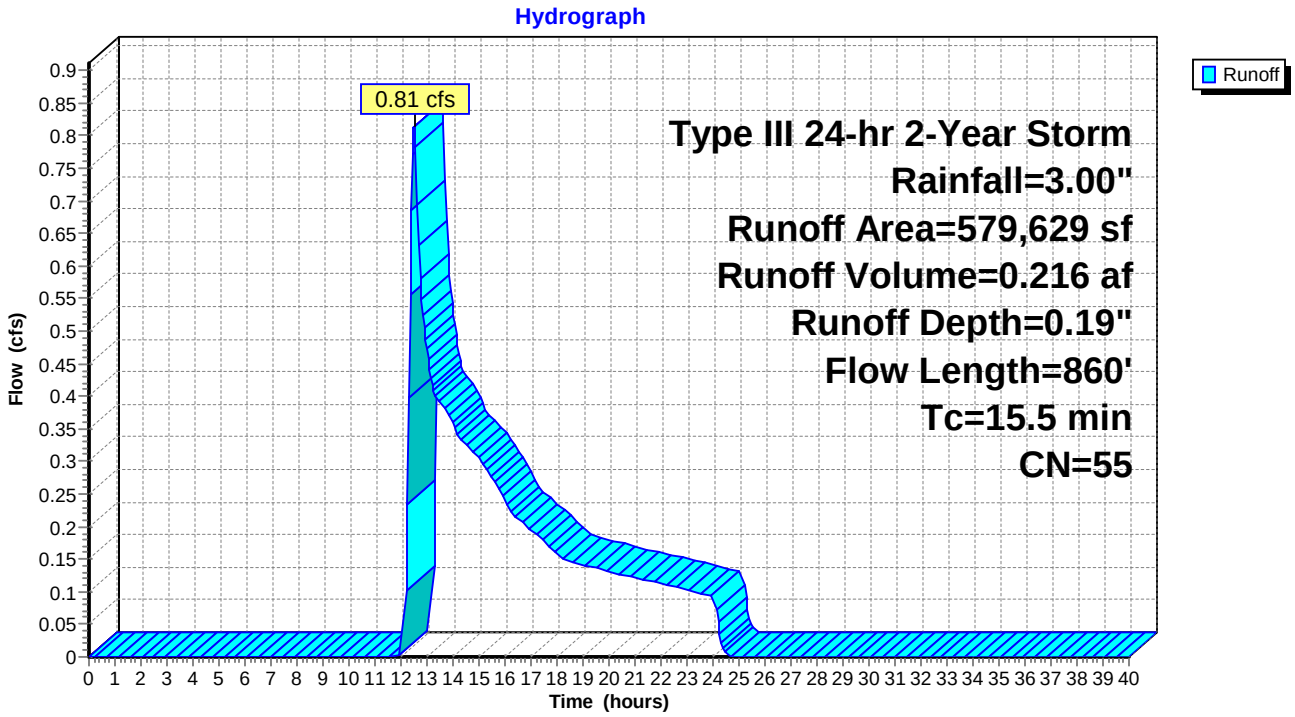
Runoff = 0.81 cfs @ 12.52 hrs, Volume= 0.216 af, Depth= 0.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

	Area (sf)	CN	Description
	378,378	39	>75% Grass cover, Good, HSG A
	22,142	76	Gravel roads, HSG A
	25,724	32	Woods/grass comb., Good, HSG A
	23,810	74	>75% Grass cover, Good, HSG C
	1,860	89	Gravel roads, HSG C
	111,100	98	Paved parking
*	16,615	98	Roof
	579,629	55	Weighted Average
	451,914		Pervious Area
	127,715		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	60	0.0150	0.09		**Sheet Flow, Grass** Grass: Dense n= 0.240 P2= 3.00"
2.2	280	0.0180	2.16		**Shallow Concentrated Flow, Grass** Unpaved Kv= 16.1 fps
0.1	10	0.0200	2.87		**Shallow Concentrated Flow, Paved** Paved Kv= 20.3 fps
0.7	100	0.0250	2.55		**Shallow Concentrated Flow, Grass** Unpaved Kv= 16.1 fps
1.5	410	0.0085	4.53	3.56	**Circular Channel (pipe), Pipe** Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
15.5	860	Total			

Subcatchment 1S: Existing Area to Wetland



Time span=0.00-40.00 hrs, dt=0.05 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Area to Wetland Runoff Area=579,629 sf 22.03% Impervious Runoff Depth=0.83"
Flow Length=860' Tc=15.5 min CN=55 Runoff=7.27 cfs 0.926 af

Total Runoff Area = 13.306 ac Runoff Volume = 0.926 af Average Runoff Depth = 0.83"
77.97% Pervious = 10.375 ac 22.03% Impervious = 2.932 ac

Summary for Subcatchment 1S: Existing Area to Wetland

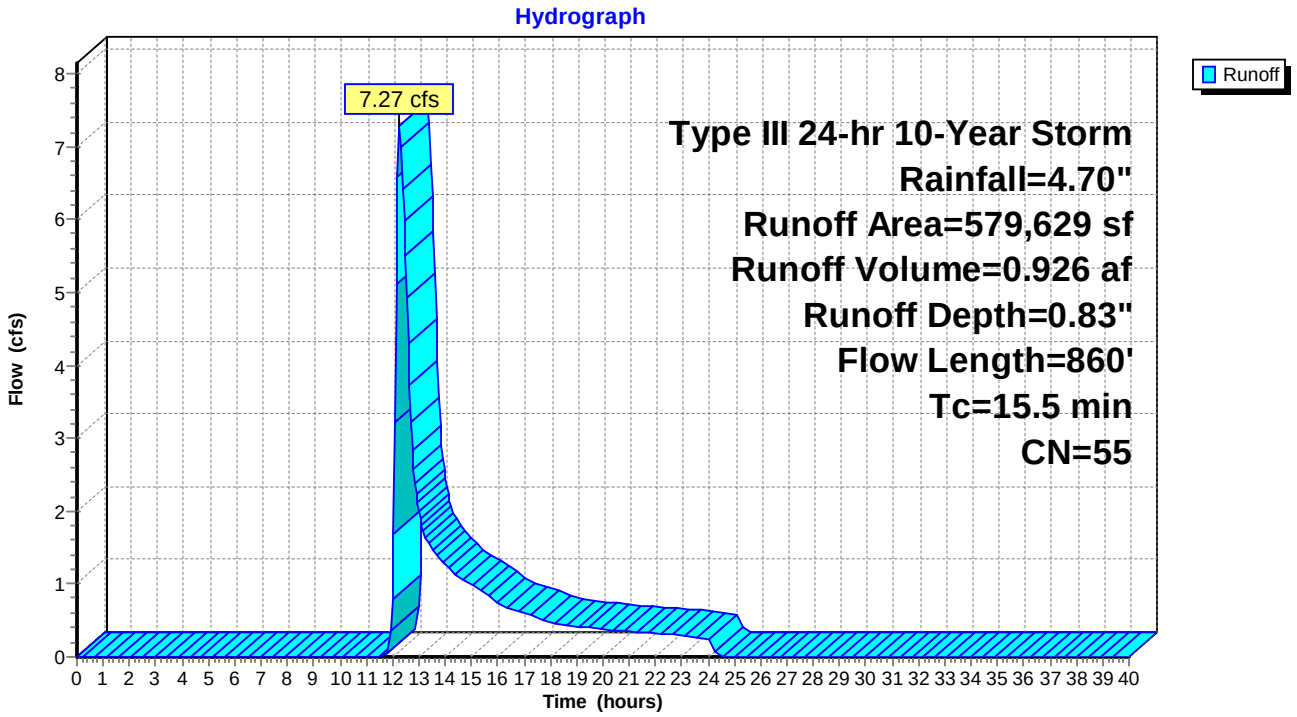
Runoff = 7.27 cfs @ 12.27 hrs, Volume= 0.926 af, Depth= 0.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
	378,378	39	>75% Grass cover, Good, HSG A
	22,142	76	Gravel roads, HSG A
	25,724	32	Woods/grass comb., Good, HSG A
	23,810	74	>75% Grass cover, Good, HSG C
	1,860	89	Gravel roads, HSG C
	111,100	98	Paved parking
*	16,615	98	Roof
	579,629	55	Weighted Average
	451,914		Pervious Area
	127,715		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	60	0.0150	0.09		**Sheet Flow, Grass**
					Grass: Dense n= 0.240 P2= 3.00"
2.2	280	0.0180	2.16		**Shallow Concentrated Flow, Grass**
					Unpaved Kv= 16.1 fps
0.1	10	0.0200	2.87		**Shallow Concentrated Flow, Paved**
					Paved Kv= 20.3 fps
0.7	100	0.0250	2.55		**Shallow Concentrated Flow, Grass**
					Unpaved Kv= 16.1 fps
1.5	410	0.0085	4.53	3.56	**Circular Channel (pipe), Pipe**
					Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
15.5	860	Total			

Subcatchment 1S: Existing Area to Wetland



Time span=0.00-40.00 hrs, dt=0.05 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Area to Wetland Runoff Area=579,629 sf 22.03% Impervious Runoff Depth=1.24"
Flow Length=860' Tc=15.5 min CN=55 Runoff=12.10 cfs 1.374 af

Total Runoff Area = 13.306 ac Runoff Volume = 1.374 af Average Runoff Depth = 1.24"
77.97% Pervious = 10.375 ac 22.03% Impervious = 2.932 ac

Summary for Subcatchment 1S: Existing Area to Wetland

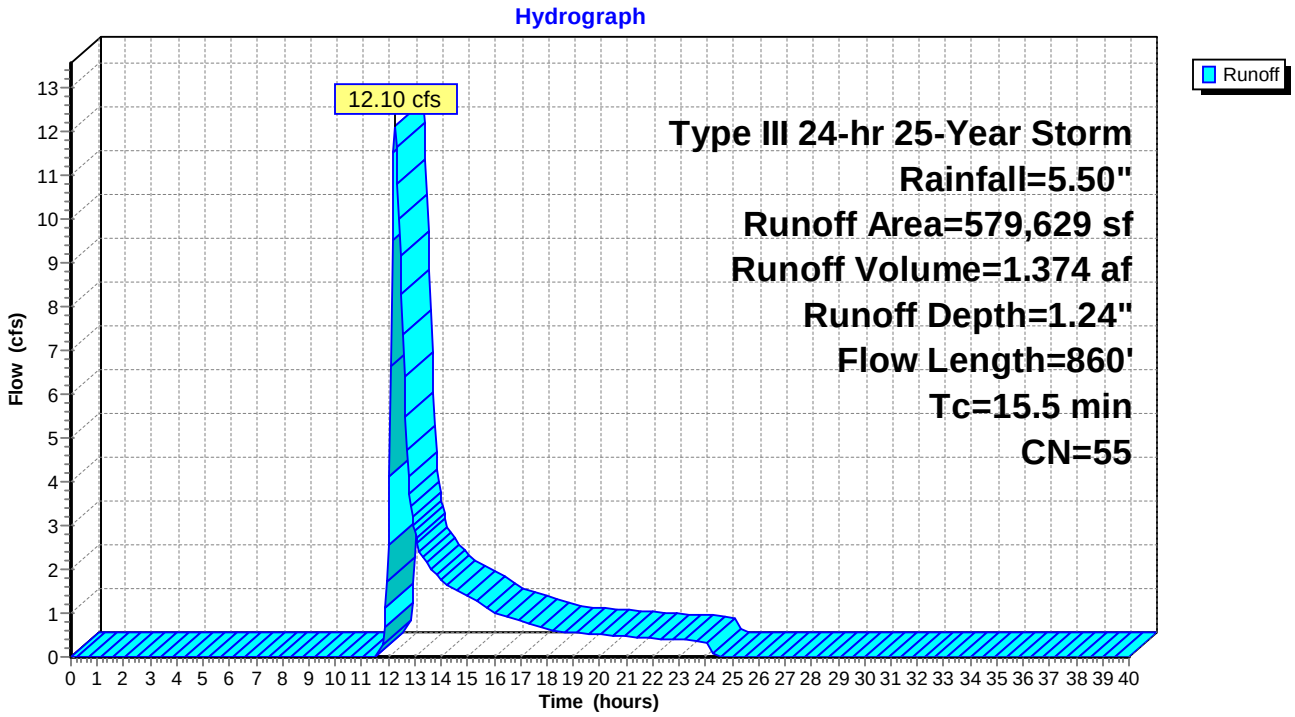
Runoff = 12.10 cfs @ 12.25 hrs, Volume= 1.374 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

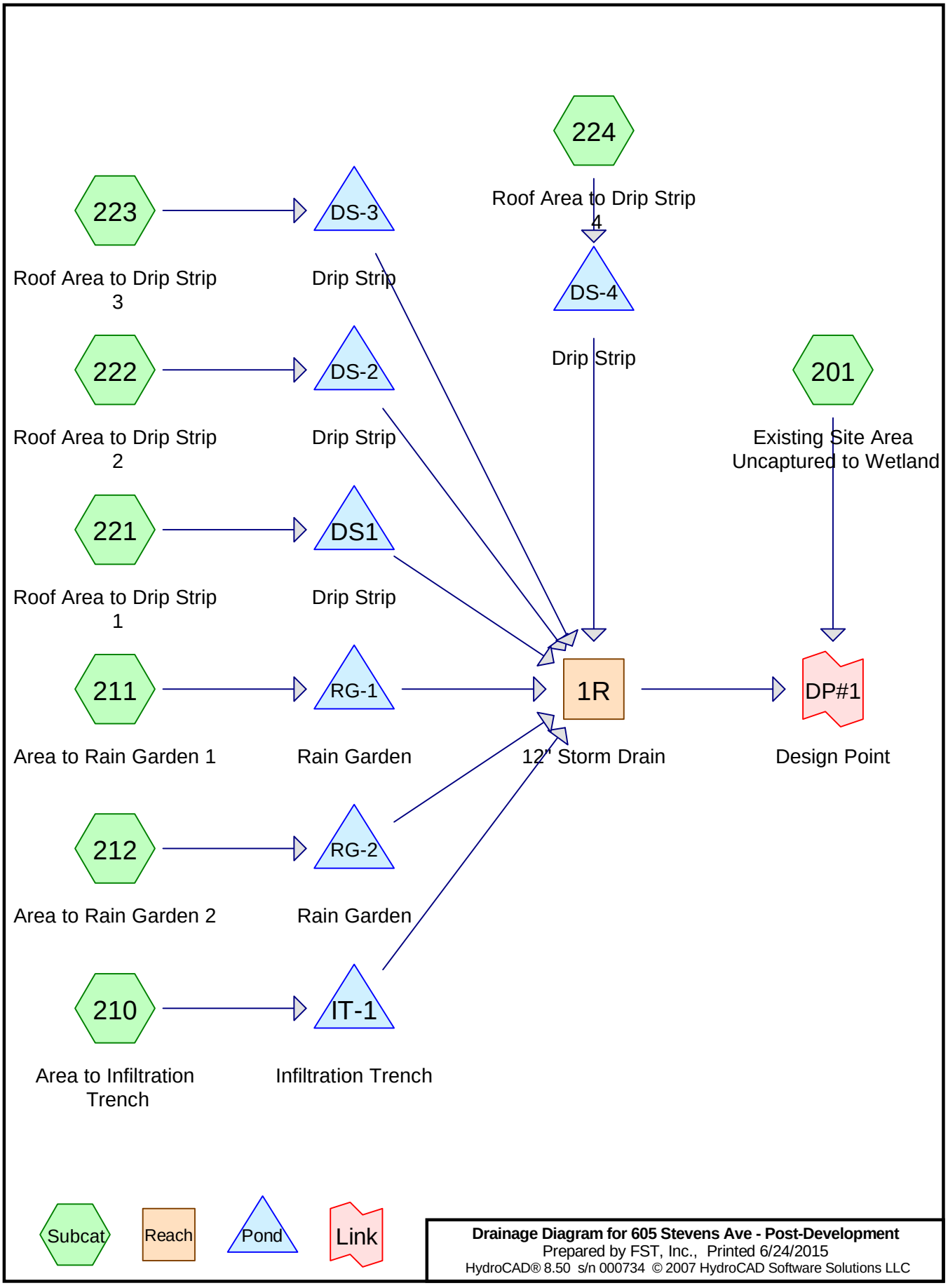
	Area (sf)	CN	Description
	378,378	39	>75% Grass cover, Good, HSG A
	22,142	76	Gravel roads, HSG A
	25,724	32	Woods/grass comb., Good, HSG A
	23,810	74	>75% Grass cover, Good, HSG C
	1,860	89	Gravel roads, HSG C
	111,100	98	Paved parking
*	16,615	98	Roof
	579,629	55	Weighted Average
	451,914		Pervious Area
	127,715		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	60	0.0150	0.09		**Sheet Flow, Grass**
					Grass: Dense n= 0.240 P2= 3.00"
2.2	280	0.0180	2.16		**Shallow Concentrated Flow, Grass**
					Unpaved Kv= 16.1 fps
0.1	10	0.0200	2.87		**Shallow Concentrated Flow, Paved**
					Paved Kv= 20.3 fps
0.7	100	0.0250	2.55		**Shallow Concentrated Flow, Grass**
					Unpaved Kv= 16.1 fps
1.5	410	0.0085	4.53	3.56	**Circular Channel (pipe), Pipe**
					Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
15.5	860	Total			

Subcatchment 1S: Existing Area to Wetland



Post-development Calculations



Drainage Diagram for 605 Stevens Ave - Post-Development
Prepared by FST, Inc., Printed 6/24/2015
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Time span=0.00-40.00 hrs, dt=0.05 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 201: Existing Site Area Runoff Area=537,572 sf 19.14% Impervious Runoff Depth=0.15"
Tc=15.5 min CN=53 Runoff=0.42 cfs 0.153 af

Subcatchment 210: Area to Infiltration Trench Runoff Area=15,676 sf 71.60% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=81 Runoff=0.54 cfs 0.039 af

Subcatchment 211: Area to Rain Garden 1 Runoff Area=7,303 sf 58.87% Impervious Runoff Depth=0.91"
Tc=6.0 min CN=74 Runoff=0.16 cfs 0.013 af

Subcatchment 212: Area to Rain Garden 2 Runoff Area=9,701 sf 57.38% Impervious Runoff Depth=0.86"
Tc=6.0 min CN=73 Runoff=0.20 cfs 0.016 af

Subcatchment 221: Roof Area to Drip Strip 1 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=93 Runoff=0.55 cfs 0.041 af

Subcatchment 222: Roof Area to Drip Strip 2 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=93 Runoff=0.55 cfs 0.041 af

Subcatchment 223: Roof Area to Drip Strip 3 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=93 Runoff=0.55 cfs 0.041 af

Subcatchment 224: Roof Area to Drip Strip 4 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=93 Runoff=0.55 cfs 0.041 af

Reach 1R: 12" Storm Drain Avg. Depth=0.04' Max Vel=1.20 fps Inflow=0.02 cfs 0.000 af
D=12.0" n=0.012 L=440.0' S=0.0107 '/' Capacity=3.99 cfs Outflow=0.01 cfs 0.000 af

Pond DS-2: Drip Strip Peak Elev=115.26' Storage=167 cf Inflow=0.55 cfs 0.041 af
Discarded=0.28 cfs 0.041 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.041 af

Pond DS-3: Drip Strip Peak Elev=115.26' Storage=167 cf Inflow=0.55 cfs 0.041 af
Discarded=0.28 cfs 0.041 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.041 af

Pond DS-4: Drip Strip Peak Elev=115.26' Storage=167 cf Inflow=0.55 cfs 0.041 af
Discarded=0.28 cfs 0.041 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.041 af

Pond DS1: Drip Strip Peak Elev=115.26' Storage=167 cf Inflow=0.55 cfs 0.041 af
Discarded=0.28 cfs 0.041 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.041 af

Pond IT-1: Infiltration Trench Peak Elev=112.57' Storage=214 cf Inflow=0.54 cfs 0.039 af
Discarded=0.22 cfs 0.039 af Primary=0.02 cfs 0.000 af Outflow=0.24 cfs 0.039 af

Pond RG-1: Rain Garden Peak Elev=114.84' Storage=51 cf Inflow=0.16 cfs 0.013 af
Discarded=0.08 cfs 0.013 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.013 af

Pond RG-2: Rain Garden Peak Elev=114.56' Storage=19 cf Inflow=0.20 cfs 0.016 af
Discarded=0.17 cfs 0.016 af Primary=0.00 cfs 0.000 af Outflow=0.17 cfs 0.016 af

Link DP#1: Design Point

Inflow=0.43 cfs 0.154 af
Primary=0.43 cfs 0.154 af

Total Runoff Area = 13.973 ac Runoff Volume = 0.387 af Average Runoff Depth = 0.33"
74.63% Pervious = 10.428 ac 25.37% Impervious = 3.545 ac

Summary for Subcatchment 201: Existing Site Area Uncaptured to Wetland

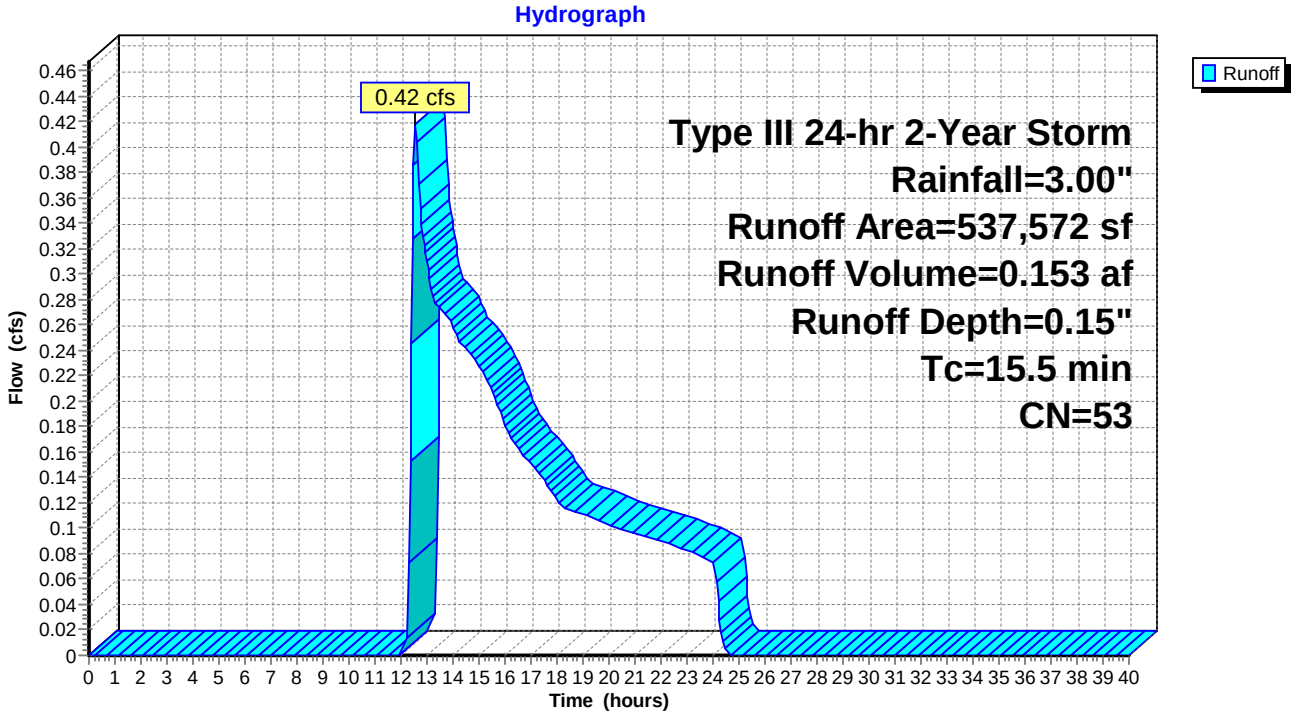
Runoff = 0.42 cfs @ 12.57 hrs, Volume= 0.153 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

	Area (sf)	CN	Description
	365,759	39	>75% Grass cover, Good, HSG A
	17,506	76	Gravel roads, HSG A
	25,724	32	Woods/grass comb., Good, HSG A
	23,810	74	>75% Grass cover, Good, HSG C
	1,860	89	Gravel roads, HSG C
*	92,620	98	Pavement
*	10,293	98	Roofs
	537,572	53	Weighted Average
	434,659		Pervious Area
	102,913		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5					**Direct Entry,**

Subcatchment 201: Existing Site Area Uncaptured to Wetland



Summary for Subcatchment 210: Area to Infiltration Trench

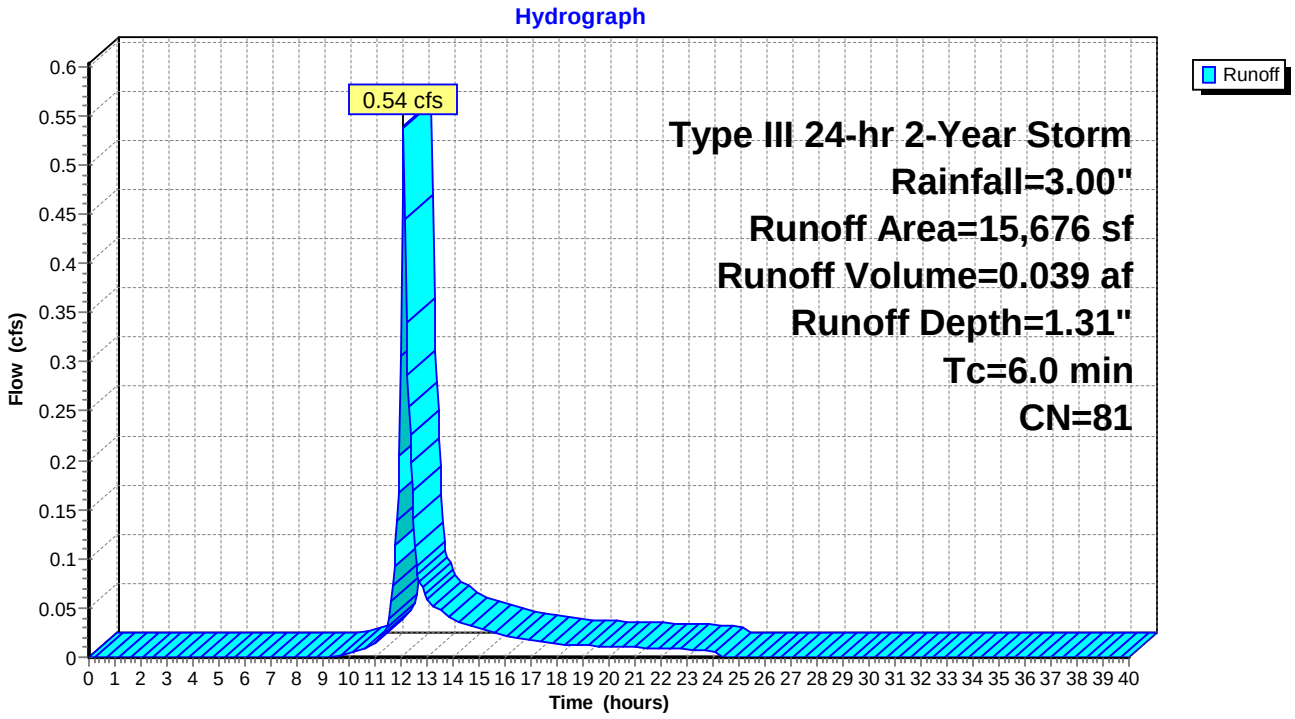
Runoff = 0.54 cfs @ 12.10 hrs, Volume= 0.039 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

Area (sf)	CN	Description
11,224	98	Paved parking & roofs
4,452	39	>75% Grass cover, Good, HSG A
15,676	81	Weighted Average
4,452		Pervious Area
11,224		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 210: Area to Infiltration Trench



Summary for Subcatchment 211: Area to Rain Garden 1

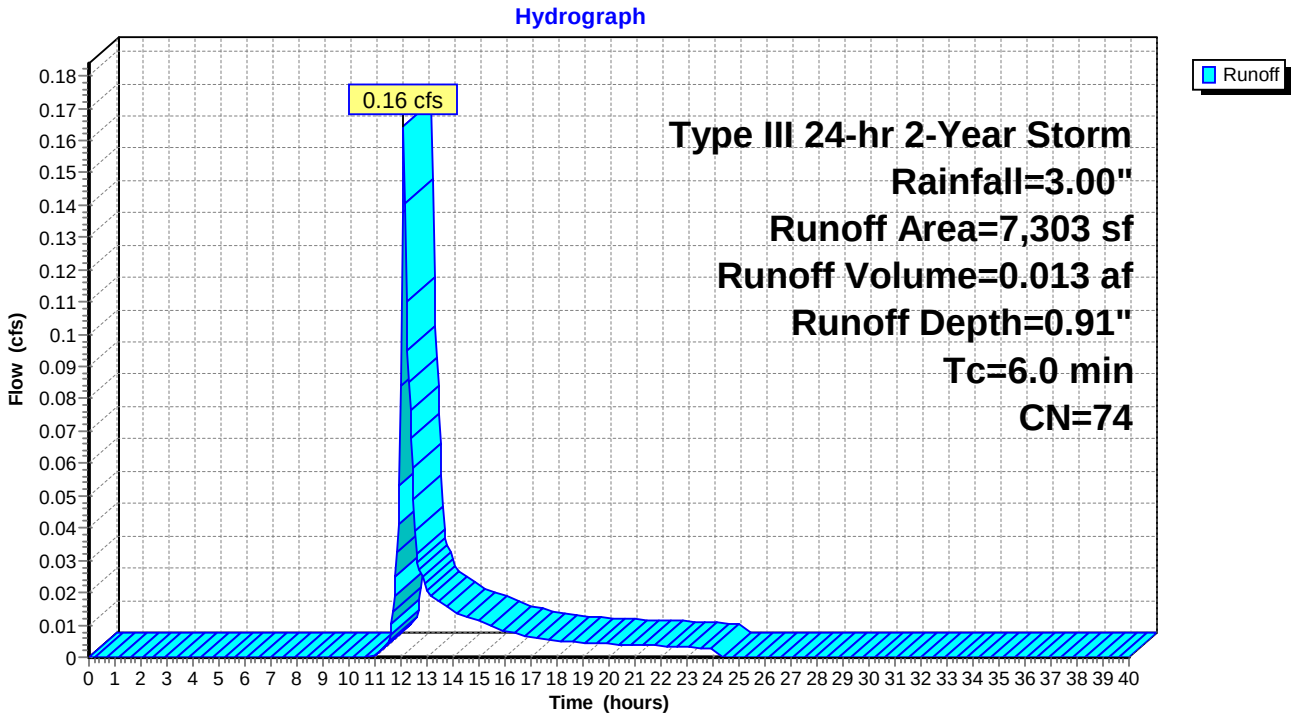
Runoff = 0.16 cfs @ 12.10 hrs, Volume= 0.013 af, Depth= 0.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

Area (sf)	CN	Description
4,299	98	Paved parking & roofs
3,004	39	>75% Grass cover, Good, HSG A
7,303	74	Weighted Average
3,004		Pervious Area
4,299		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 211: Area to Rain Garden 1



Summary for Subcatchment 212: Area to Rain Garden 2

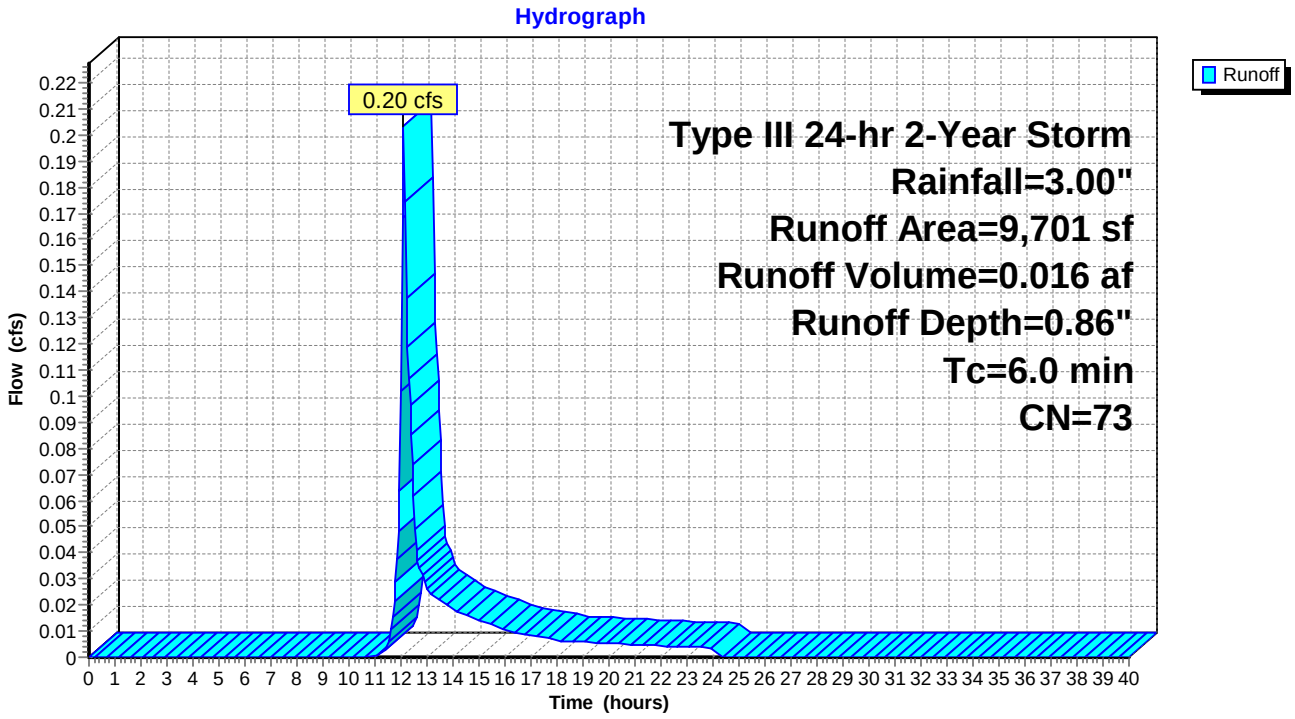
Runoff = 0.20 cfs @ 12.10 hrs, Volume= 0.016 af, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

Area (sf)	CN	Description
5,566	98	Paved parking & roofs
4,135	39	>75% Grass cover, Good, HSG A
9,701	73	Weighted Average
4,135		Pervious Area
5,566		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 212: Area to Rain Garden 2



Summary for Subcatchment 221: Roof Area to Drip Strip 1

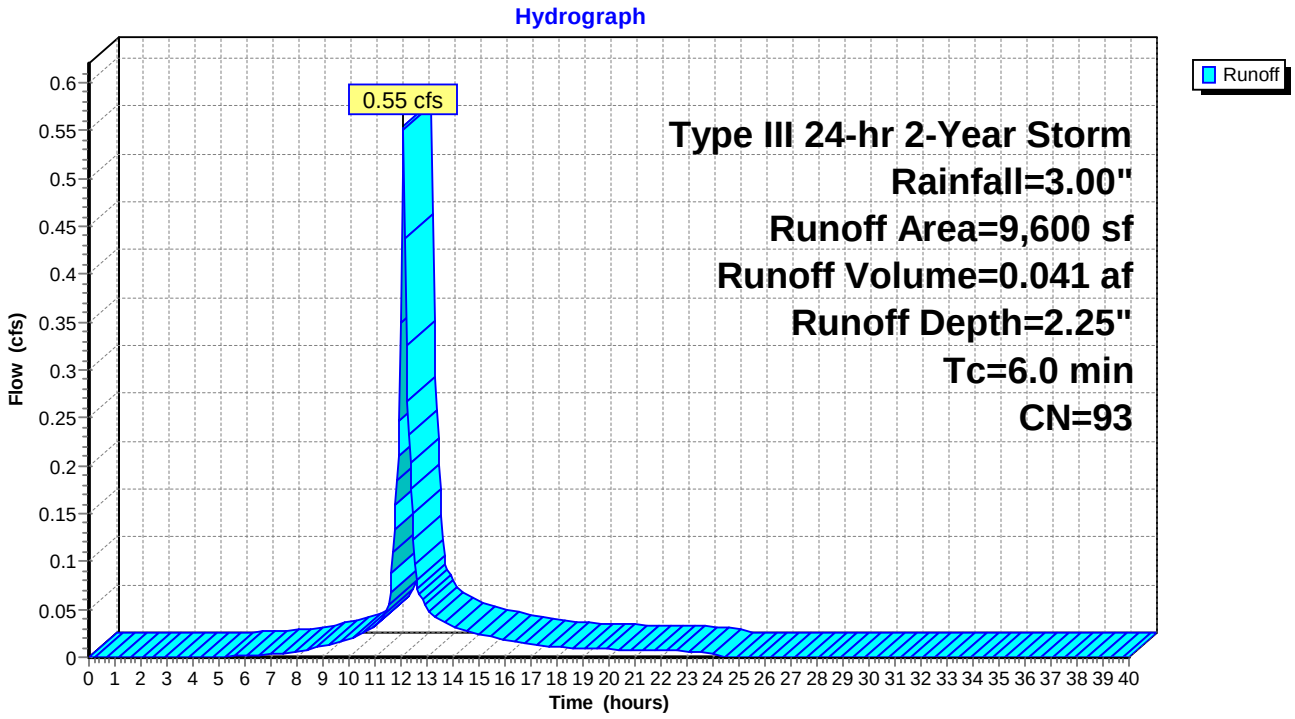
Runoff = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 221: Roof Area to Drip Strip 1



Summary for Subcatchment 222: Roof Area to Drip Strip 2

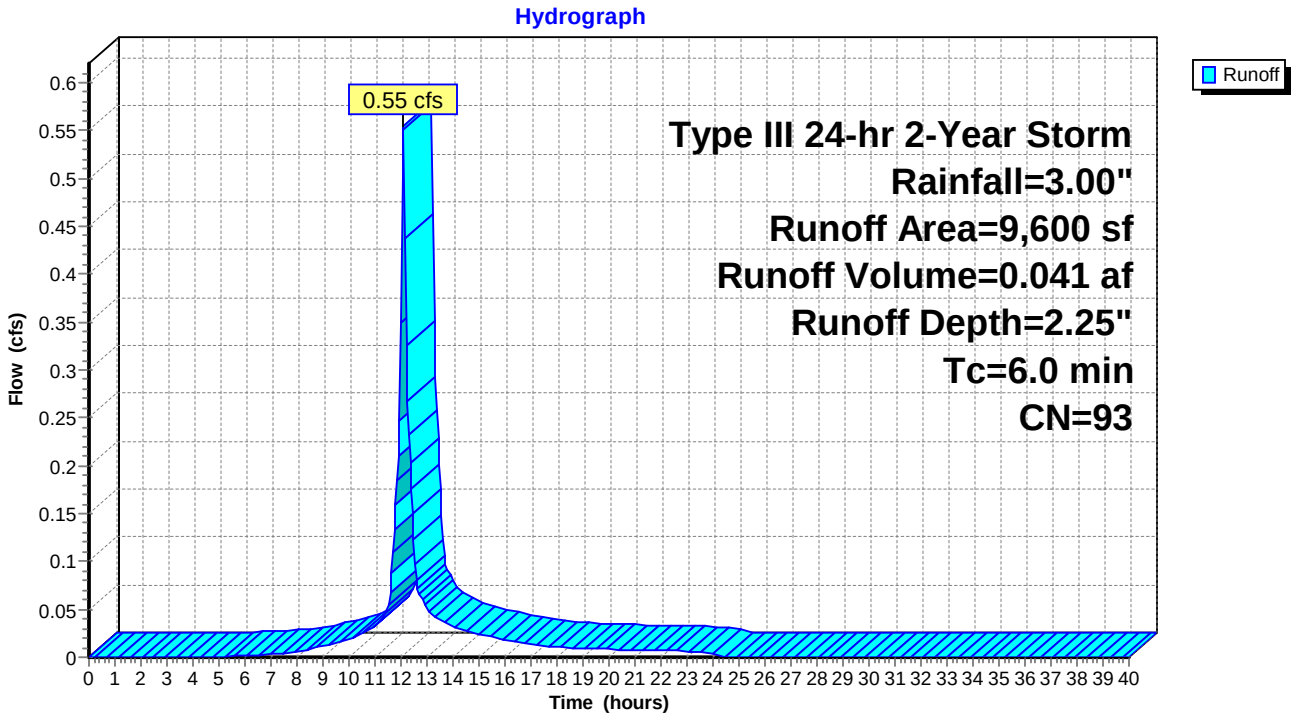
Runoff = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 222: Roof Area to Drip Strip 2



Summary for Subcatchment 223: Roof Area to Drip Strip 3

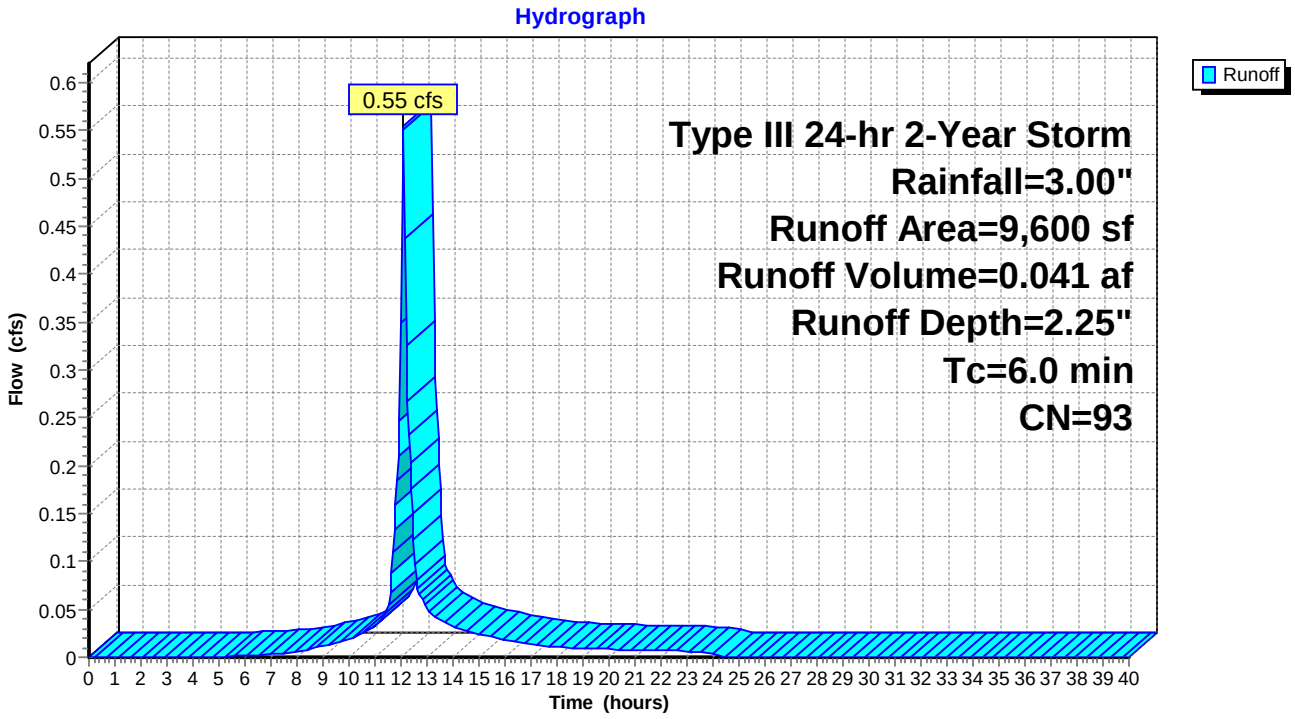
Runoff = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 223: Roof Area to Drip Strip 3



Summary for Subcatchment 224: Roof Area to Drip Strip 4

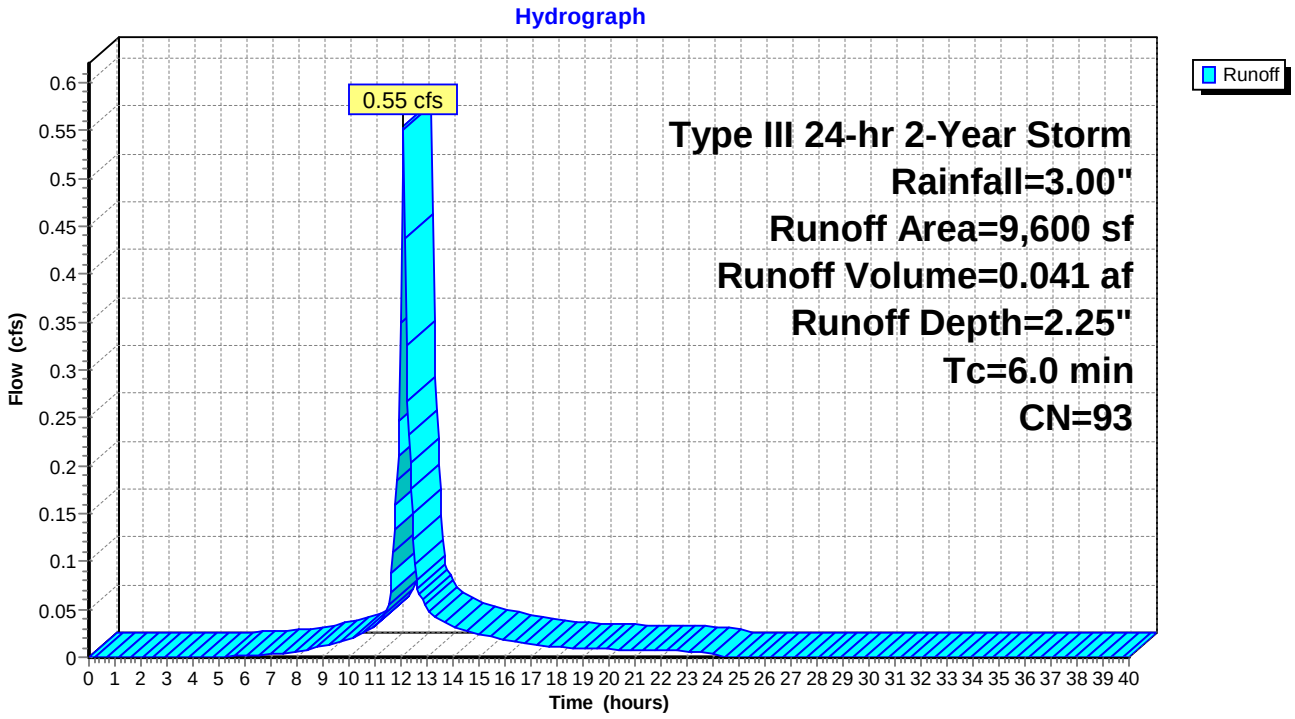
Runoff = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.00"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 224: Roof Area to Drip Strip 4



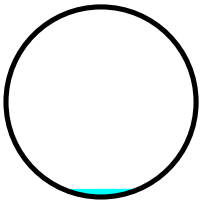
Summary for Reach 1R: 12" Storm Drain

Inflow Area = 1.632 ac, 72.44% Impervious, Inflow Depth = 0.00" for 2-Year Storm event
Inflow = 0.02 cfs @ 12.33 hrs, Volume= 0.000 af
Outflow = 0.01 cfs @ 12.50 hrs, Volume= 0.000 af, Atten= 28%, Lag= 10.3 min

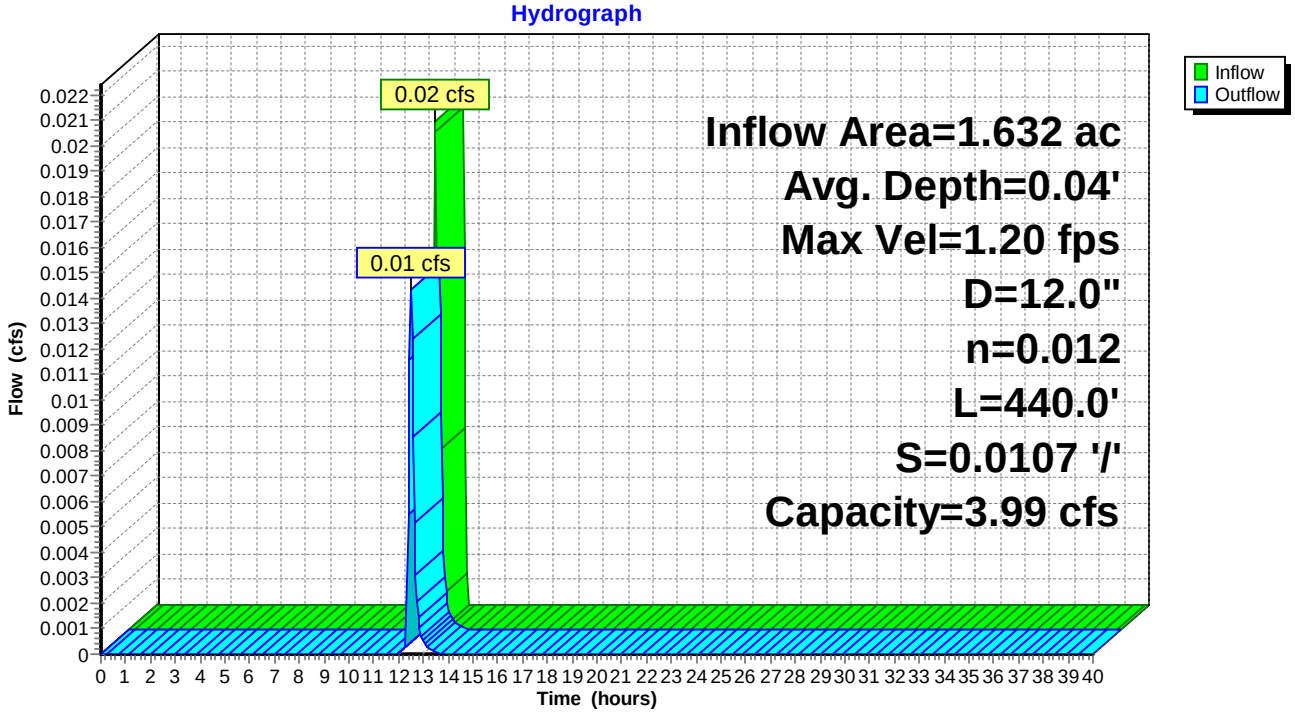
Routing by Stor-Ind+Trans method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.20 fps, Min. Travel Time= 6.1 min
Avg. Velocity = 0.62 fps, Avg. Travel Time= 11.8 min

Peak Storage= 5 cf @ 12.40 hrs, Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 3.99 cfs

12.0" Diameter Pipe, n= 0.012
Length= 440.0' Slope= 0.0107 '/'
Inlet Invert= 111.20', Outlet Invert= 106.50'



Reach 1R: 12" Storm Drain



Summary for Pond DS-2: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 2.25" for 2-Year Storm event
Inflow = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af
Outflow = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af, Atten= 50%, Lag= 0.0 min
Discarded = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.26' @ 12.24 hrs Surf.Area= 1,600 sf Storage= 167 cf

Plug-Flow detention time= 3.6 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 3.6 min (798.5 - 794.9)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

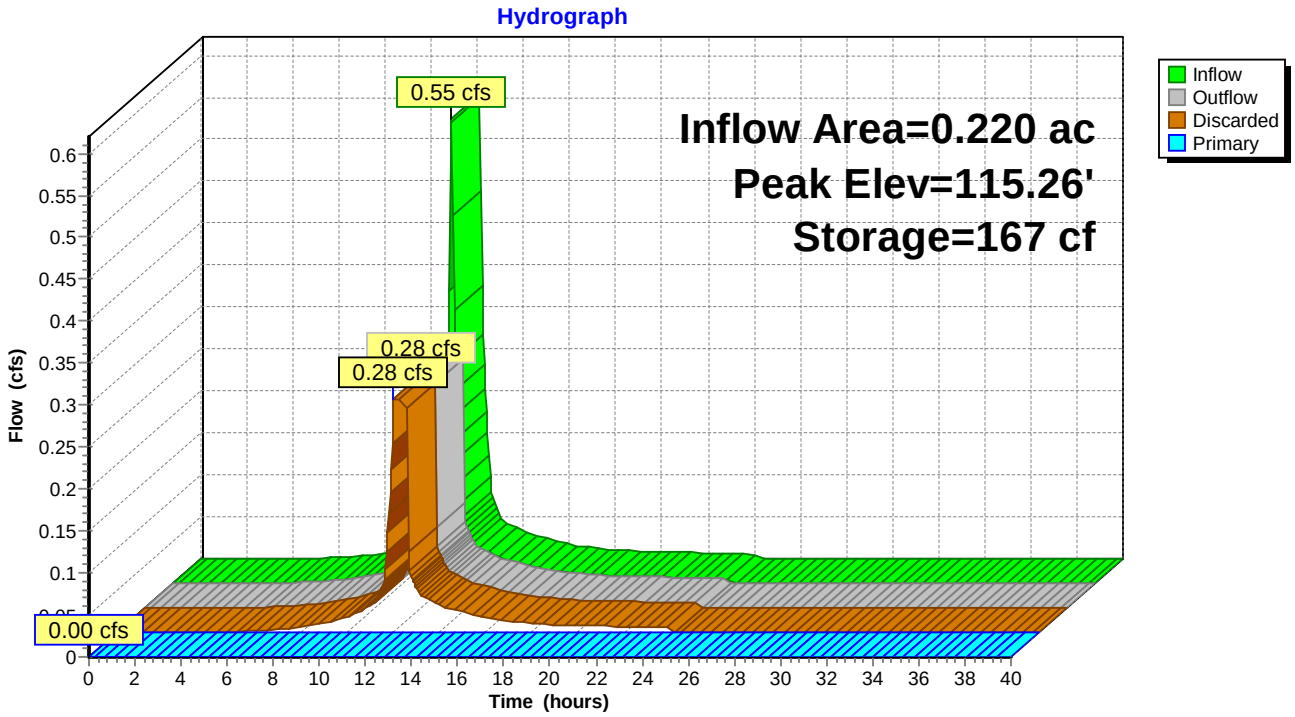
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 12.00 hrs HW=115.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS-2: Drip Strip



Summary for Pond DS-3: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 2.25" for 2-Year Storm event
Inflow = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af
Outflow = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af, Atten= 50%, Lag= 0.0 min
Discarded = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.26' @ 12.24 hrs Surf.Area= 1,600 sf Storage= 167 cf

Plug-Flow detention time= 3.6 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 3.6 min (798.5 - 794.9)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

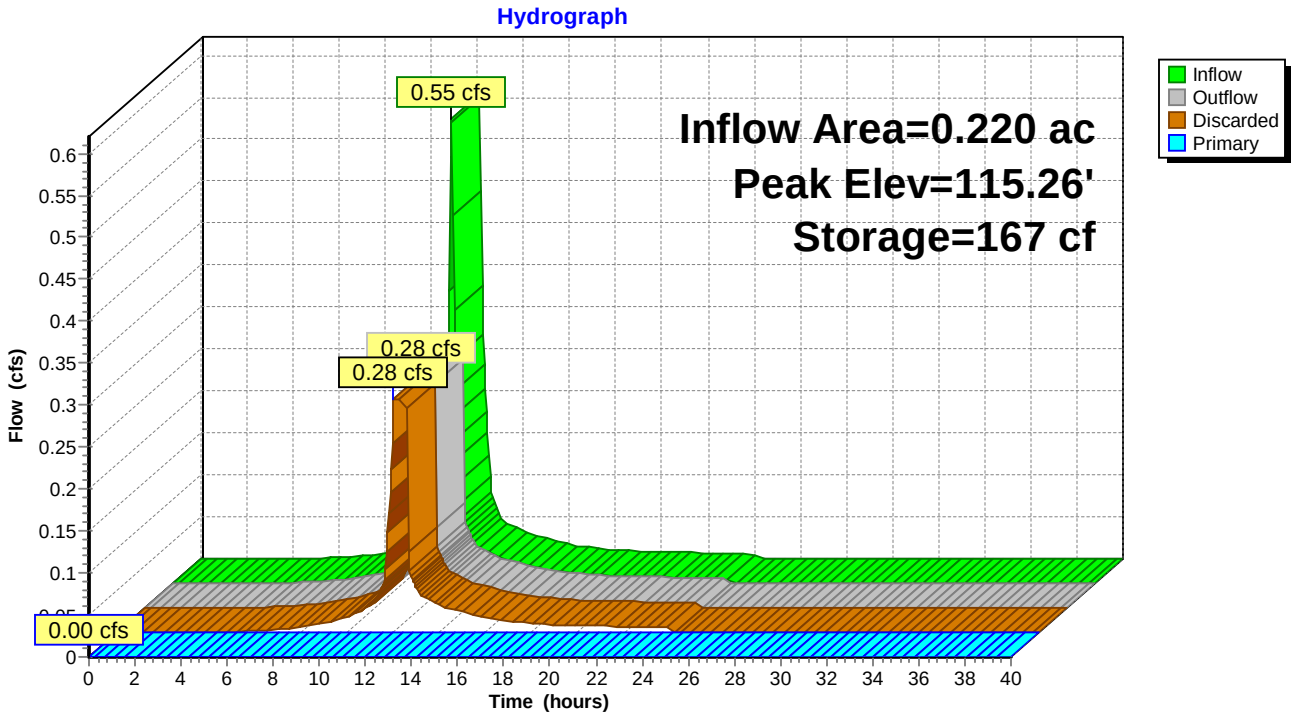
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 12.00 hrs HW=115.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS-3: Drip Strip



Summary for Pond DS-4: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 2.25" for 2-Year Storm event
Inflow = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af
Outflow = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af, Atten= 50%, Lag= 0.0 min
Discarded = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.26' @ 12.24 hrs Surf.Area= 1,600 sf Storage= 167 cf

Plug-Flow detention time= 3.6 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 3.6 min (798.5 - 794.9)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

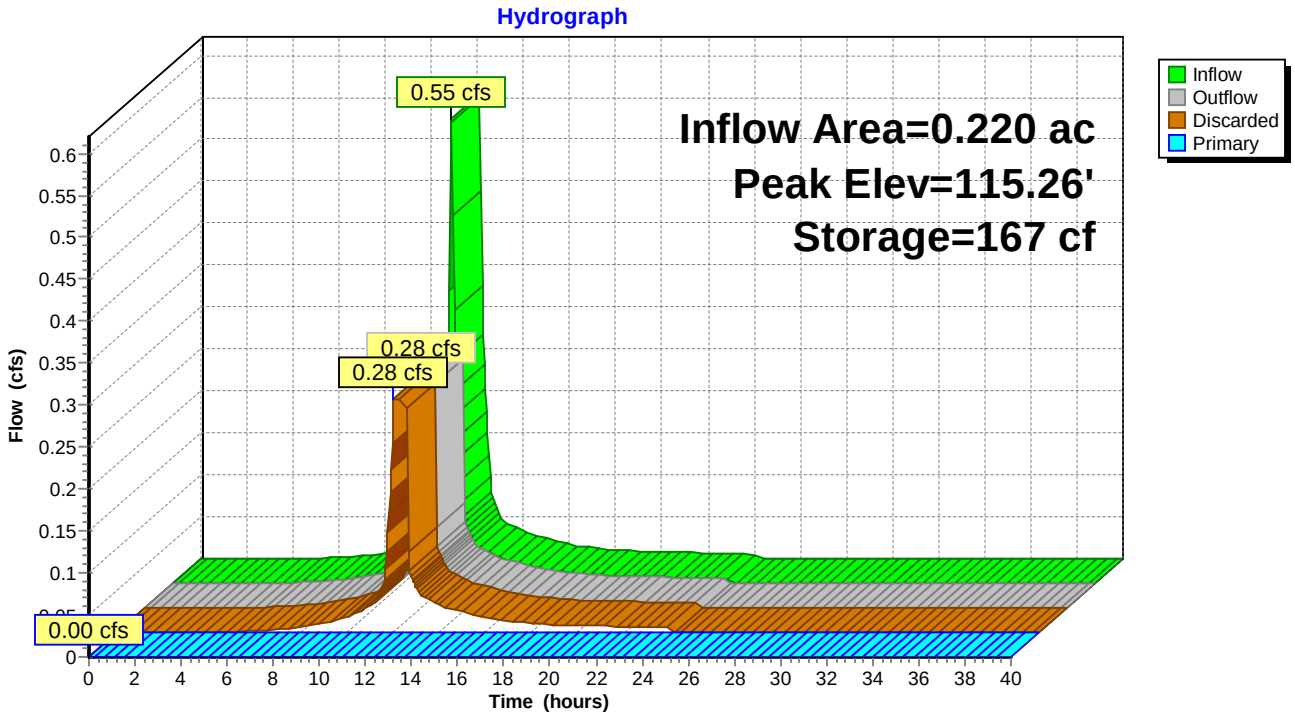
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 12.00 hrs HW=115.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS-4: Drip Strip



Summary for Pond DS1: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 2.25" for 2-Year Storm event
Inflow = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af
Outflow = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af, Atten= 50%, Lag= 0.0 min
Discarded = 0.28 cfs @ 12.00 hrs, Volume= 0.041 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.26' @ 12.24 hrs Surf.Area= 1,600 sf Storage= 167 cf

Plug-Flow detention time= 3.6 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 3.6 min (798.5 - 794.9)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

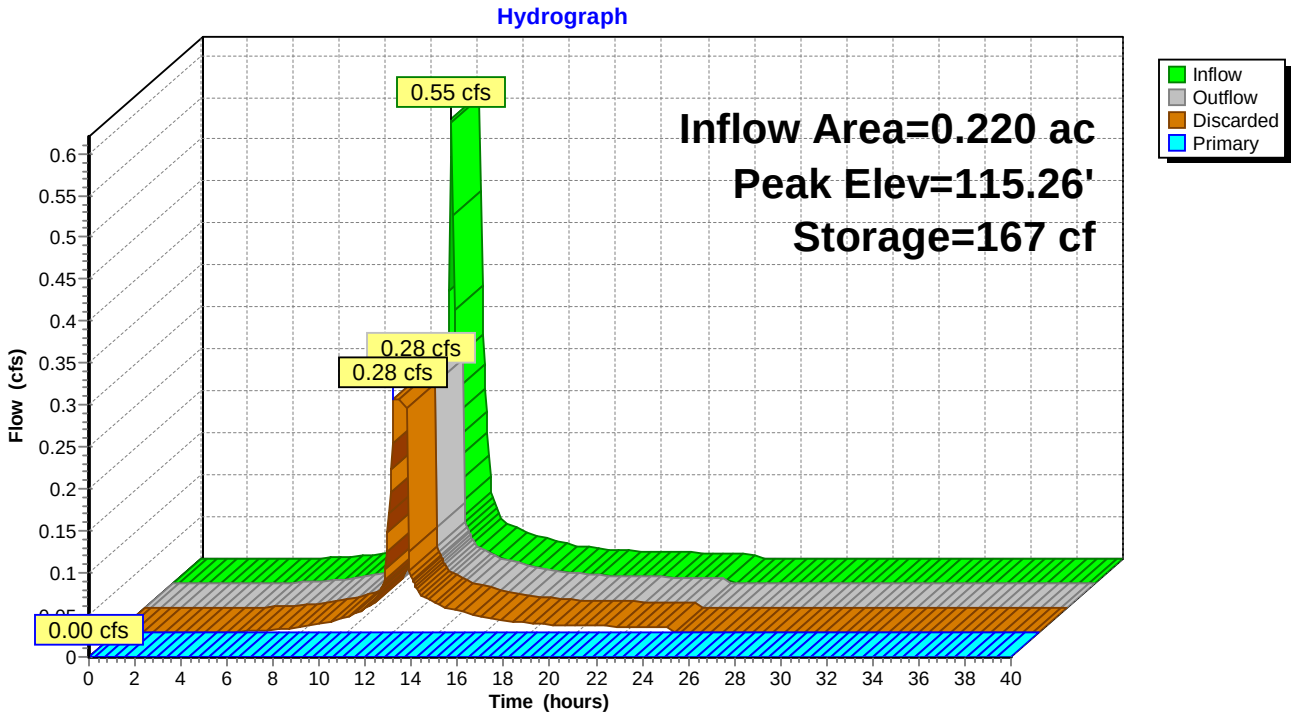
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 12.00 hrs HW=115.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS1: Drip Strip



Summary for Pond IT-1: Infiltration Trench

Inflow Area = 0.360 ac, 71.60% Impervious, Inflow Depth = 1.31" for 2-Year Storm event
Inflow = 0.54 cfs @ 12.10 hrs, Volume= 0.039 af
Outflow = 0.24 cfs @ 12.33 hrs, Volume= 0.039 af, Atten= 56%, Lag= 14.2 min
Discarded = 0.22 cfs @ 12.00 hrs, Volume= 0.039 af
Primary = 0.02 cfs @ 12.33 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 112.57' @ 12.33 hrs Surf.Area= 1,250 sf Storage= 214 cf

Plug-Flow detention time= 5.2 min calculated for 0.039 af (100% of inflow)
Center-of-Mass det. time= 5.2 min (848.0 - 842.8)

Volume	Invert	Avail.Storage	Storage Description
#1	112.00'	2,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

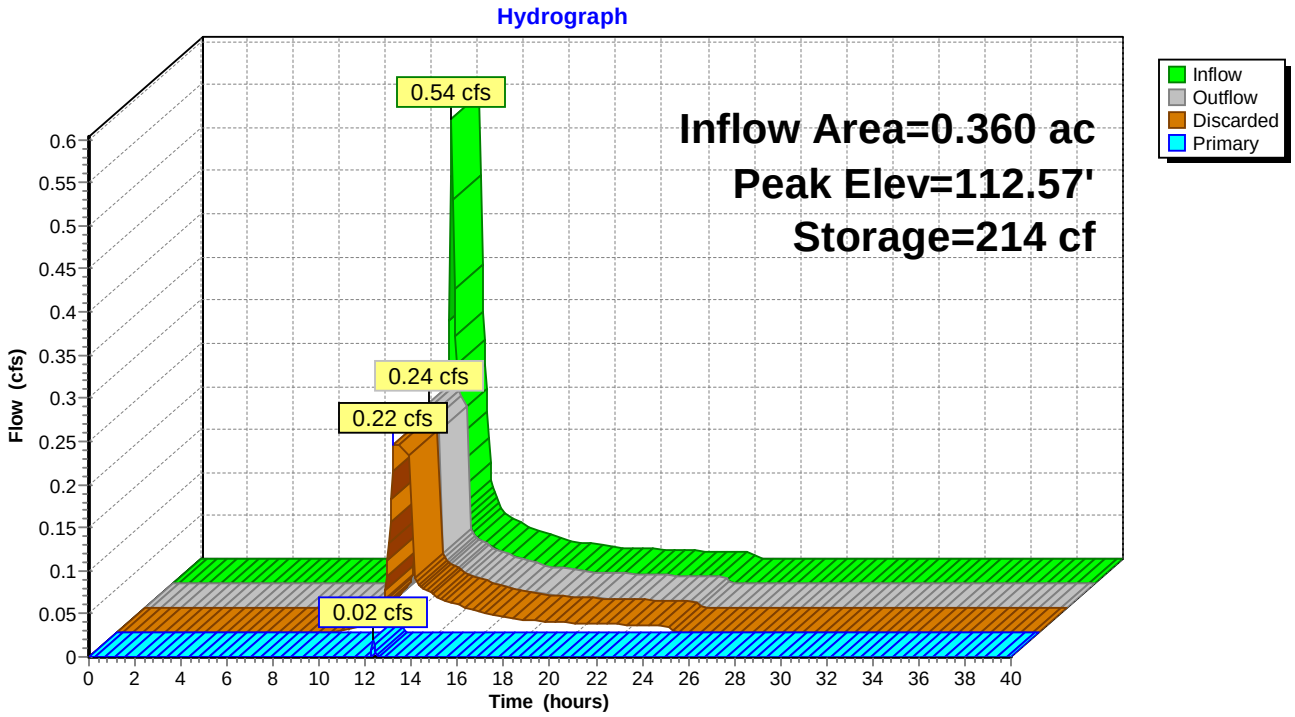
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
112.00	1,250	0.0	0	0
113.00	1,250	30.0	375	375
114.00	1,250	30.0	375	750
115.00	1,250	40.0	500	1,250
116.00	1,250	40.0	500	1,750
117.00	1,250	40.0	500	2,250

Device	Routing	Invert	Outlet Devices
#1	Discarded	112.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	112.50'	**8.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.22 cfs @ 12.00 hrs HW=112.07' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

Primary OutFlow Max=0.02 cfs @ 12.33 hrs HW=112.57' (Free Discharge)
↑—**2=Orifice/Grate** (Orifice Controls 0.02 cfs @ 0.90 fps)

Pond IT-1: Infiltration Trench



Summary for Pond RG-1: Rain Garden

Inflow Area = 0.168 ac, 58.87% Impervious, Inflow Depth = 0.91" for 2-Year Storm event
Inflow = 0.16 cfs @ 12.10 hrs, Volume= 0.013 af
Outflow = 0.08 cfs @ 12.05 hrs, Volume= 0.013 af, Atten= 51%, Lag= 0.0 min
Discarded = 0.08 cfs @ 12.05 hrs, Volume= 0.013 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 114.84' @ 12.33 hrs Surf.Area= 460 sf Storage= 51 cf

Plug-Flow detention time= 3.4 min calculated for 0.013 af (100% of inflow)
Center-of-Mass det. time= 3.4 min (869.7 - 866.3)

Volume	Invert	Avail.Storage	Storage Description
#1	114.50'	1,185 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

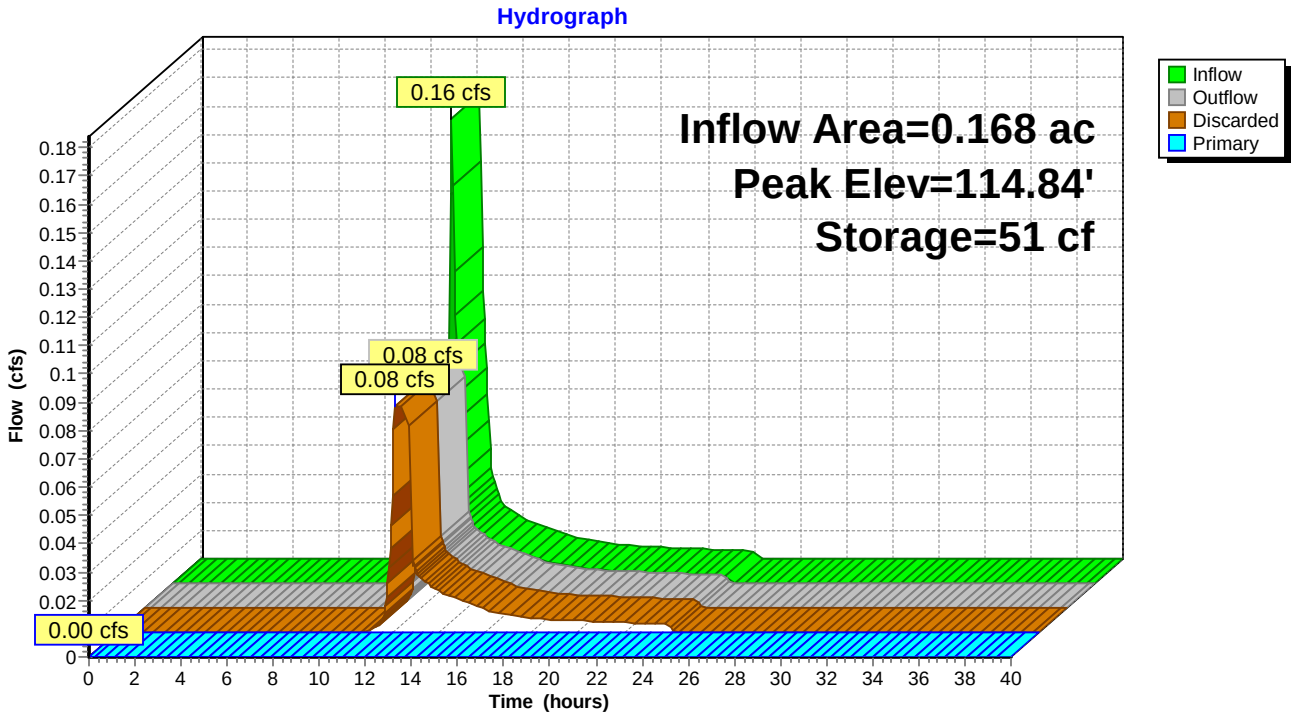
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.50	460	33.0	0	0
115.00	460	33.0	76	76
115.50	460	33.0	76	152
116.00	460	33.0	76	228
116.50	460	100.0	230	458
117.00	460	100.0	230	688
117.50	505	100.0	241	929
118.00	520	100.0	256	1,185

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.50'	**7.500 in/hr Exfiltration over Surface area**
#2	Device 3	115.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	114.50'	**8.0" x 150.0' long Culvert** Ke= 0.500
			Outlet Invert= 111.00' S= 0.0233 '/' Cc= 0.900 n= 0.012
#4	Device 3	117.50'	**10.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.08 cfs @ 12.05 hrs HW=114.57' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=114.50' (Free Discharge)
↑—**3=Culvert** (Controls 0.00 cfs)
  ↑—**2=Orifice/Grate** (Controls 0.00 cfs)
  —**4=Orifice/Grate** (Controls 0.00 cfs)

Pond RG-1: Rain Garden



Summary for Pond RG-2: Rain Garden

Inflow Area = 0.223 ac, 57.38% Impervious, Inflow Depth = 0.86" for 2-Year Storm event
Inflow = 0.20 cfs @ 12.10 hrs, Volume= 0.016 af
Outflow = 0.17 cfs @ 12.10 hrs, Volume= 0.016 af, Atten= 18%, Lag= 0.0 min
Discarded = 0.17 cfs @ 12.10 hrs, Volume= 0.016 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 114.56' @ 12.16 hrs Surf.Area= 960 sf Storage= 19 cf

Plug-Flow detention time= 1.2 min calculated for 0.016 af (100% of inflow)
Center-of-Mass det. time= 1.2 min (870.9 - 869.8)

Volume	Invert	Avail.Storage	Storage Description
#1	114.50'	2,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

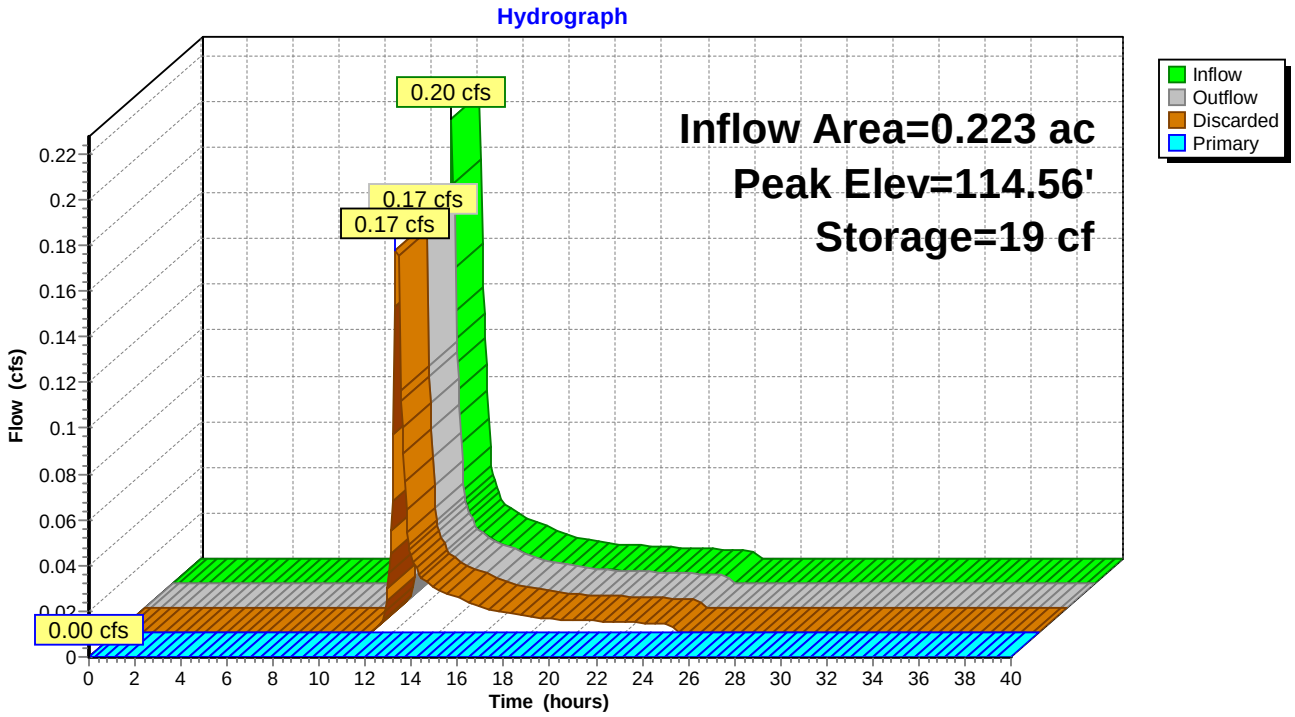
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.50	960	33.0	0	0
115.00	960	33.0	158	158
115.50	960	33.0	158	317
116.00	960	33.0	158	475
116.50	960	33.0	158	634
117.00	960	100.0	480	1,114
117.50	1,040	100.0	500	1,614
118.00	1,200	100.0	560	2,174

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.50'	**7.500 in/hr Exfiltration over Surface area**
#2	Device 3	115.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	114.50'	**8.0" x 150.0' long Culvert** Ke= 0.500
			Outlet Invert= 111.00' S= 0.0233 '/' Cc= 0.900 n= 0.012
#4	Device 3	117.50'	**10.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.17 cfs @ 12.10 hrs HW=114.55' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.17 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=114.50' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)
  ├**2=Orifice/Grate** (Controls 0.00 cfs)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond RG-2: Rain Garden

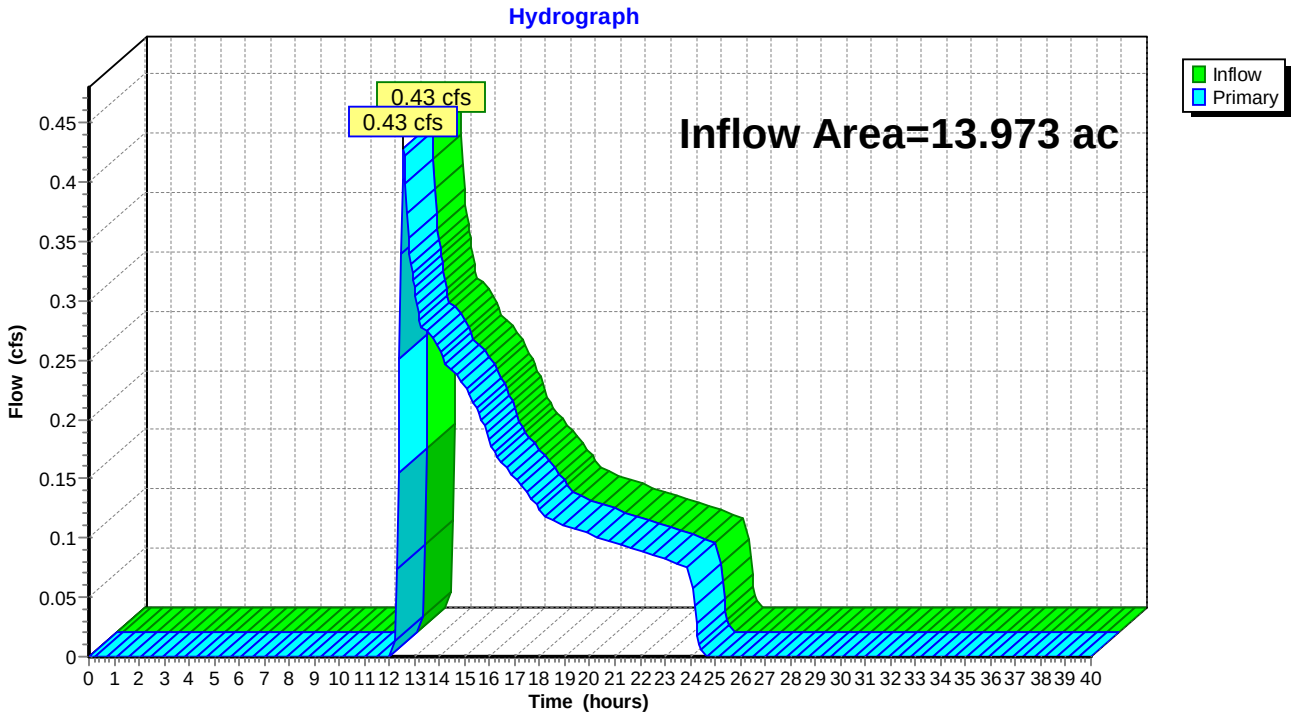


Summary for Link DP#1: Design Point

Inflow Area = 13.973 ac, 25.37% Impervious, Inflow Depth = 0.13" for 2-Year Storm event
Inflow = 0.43 cfs @ 12.57 hrs, Volume= 0.154 af
Primary = 0.43 cfs @ 12.57 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs

Link DP#1: Design Point



Time span=0.00-40.00 hrs, dt=0.05 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 201: Existing Site Area Runoff Area=537,572 sf 19.14% Impervious Runoff Depth=0.73"
Tc=15.5 min CN=53 Runoff=5.35 cfs 0.747 af

Subcatchment 210: Area to Infiltration Trench Runoff Area=15,676 sf 71.60% Impervious Runoff Depth=2.72"
Tc=6.0 min CN=81 Runoff=1.12 cfs 0.082 af

Subcatchment 211: Area to Rain Garden 1 Runoff Area=7,303 sf 58.87% Impervious Runoff Depth=2.13"
Tc=6.0 min CN=74 Runoff=0.41 cfs 0.030 af

Subcatchment 212: Area to Rain Garden 2 Runoff Area=9,701 sf 57.38% Impervious Runoff Depth=2.05"
Tc=6.0 min CN=73 Runoff=0.52 cfs 0.038 af

Subcatchment 221: Roof Area to Drip Strip 1 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=3.90"
Tc=6.0 min CN=93 Runoff=0.93 cfs 0.072 af

Subcatchment 222: Roof Area to Drip Strip 2 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=3.90"
Tc=6.0 min CN=93 Runoff=0.93 cfs 0.072 af

Subcatchment 223: Roof Area to Drip Strip 3 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=3.90"
Tc=6.0 min CN=93 Runoff=0.93 cfs 0.072 af

Subcatchment 224: Roof Area to Drip Strip 4 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=3.90"
Tc=6.0 min CN=93 Runoff=0.93 cfs 0.072 af

Reach 1R: 12" Storm Drain Avg. Depth=0.33' Max Vel=4.14 fps Inflow=0.96 cfs 0.024 af
D=12.0" n=0.012 L=440.0' S=0.0107 '/' Capacity=3.99 cfs Outflow=0.90 cfs 0.024 af

Pond DS-2: Drip Strip Peak Elev=115.86' Storage=548 cf Inflow=0.93 cfs 0.072 af
Discarded=0.28 cfs 0.072 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.072 af

Pond DS-3: Drip Strip Peak Elev=115.86' Storage=548 cf Inflow=0.93 cfs 0.072 af
Discarded=0.28 cfs 0.072 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.072 af

Pond DS-4: Drip Strip Peak Elev=115.86' Storage=548 cf Inflow=0.93 cfs 0.072 af
Discarded=0.28 cfs 0.072 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.072 af

Pond DS1: Drip Strip Peak Elev=115.86' Storage=548 cf Inflow=0.93 cfs 0.072 af
Discarded=0.28 cfs 0.072 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.072 af

Pond IT-1: Infiltration Trench Peak Elev=113.02' Storage=384 cf Inflow=1.12 cfs 0.082 af
Discarded=0.22 cfs 0.065 af Primary=0.72 cfs 0.016 af Outflow=0.94 cfs 0.082 af

Pond RG-1: Rain Garden Peak Elev=115.45' Storage=144 cf Inflow=0.41 cfs 0.030 af
Discarded=0.08 cfs 0.024 af Primary=0.23 cfs 0.006 af Outflow=0.30 cfs 0.030 af

Pond RG-2: Rain Garden Peak Elev=115.21' Storage=223 cf Inflow=0.52 cfs 0.038 af
Discarded=0.17 cfs 0.036 af Primary=0.09 cfs 0.002 af Outflow=0.25 cfs 0.038 af

Link DP#1: Design Point

Inflow=6.21 cfs 0.771 af
Primary=6.21 cfs 0.771 af

Total Runoff Area = 13.973 ac Runoff Volume = 1.183 af Average Runoff Depth = 1.02"
74.63% Pervious = 10.428 ac 25.37% Impervious = 3.545 ac

Summary for Subcatchment 201: Existing Site Area Uncaptured to Wetland

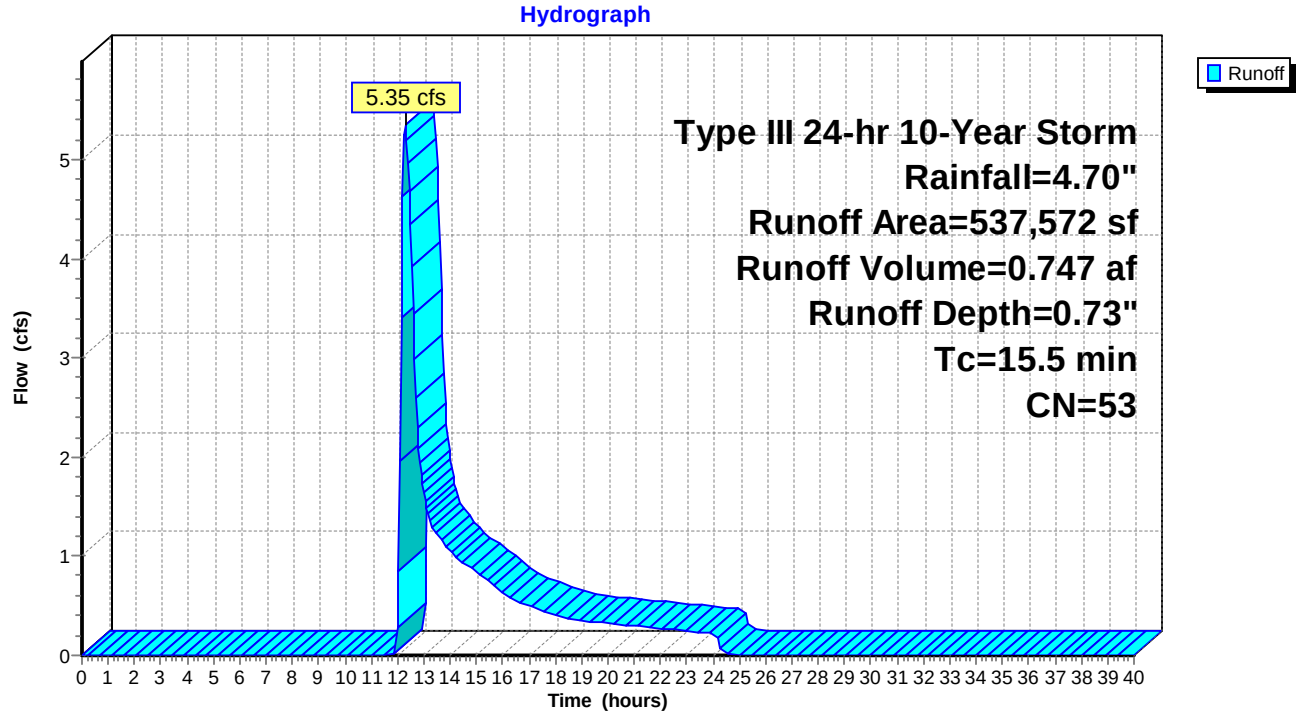
Runoff = 5.35 cfs @ 12.29 hrs, Volume= 0.747 af, Depth= 0.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
	365,759	39	>75% Grass cover, Good, HSG A
	17,506	76	Gravel roads, HSG A
	25,724	32	Woods/grass comb., Good, HSG A
	23,810	74	>75% Grass cover, Good, HSG C
	1,860	89	Gravel roads, HSG C
*	92,620	98	Pavement
*	10,293	98	Roofs
	537,572	53	Weighted Average
	434,659		Pervious Area
	102,913		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5					**Direct Entry,**

Subcatchment 201: Existing Site Area Uncaptured to Wetland



Summary for Subcatchment 210: Area to Infiltration Trench

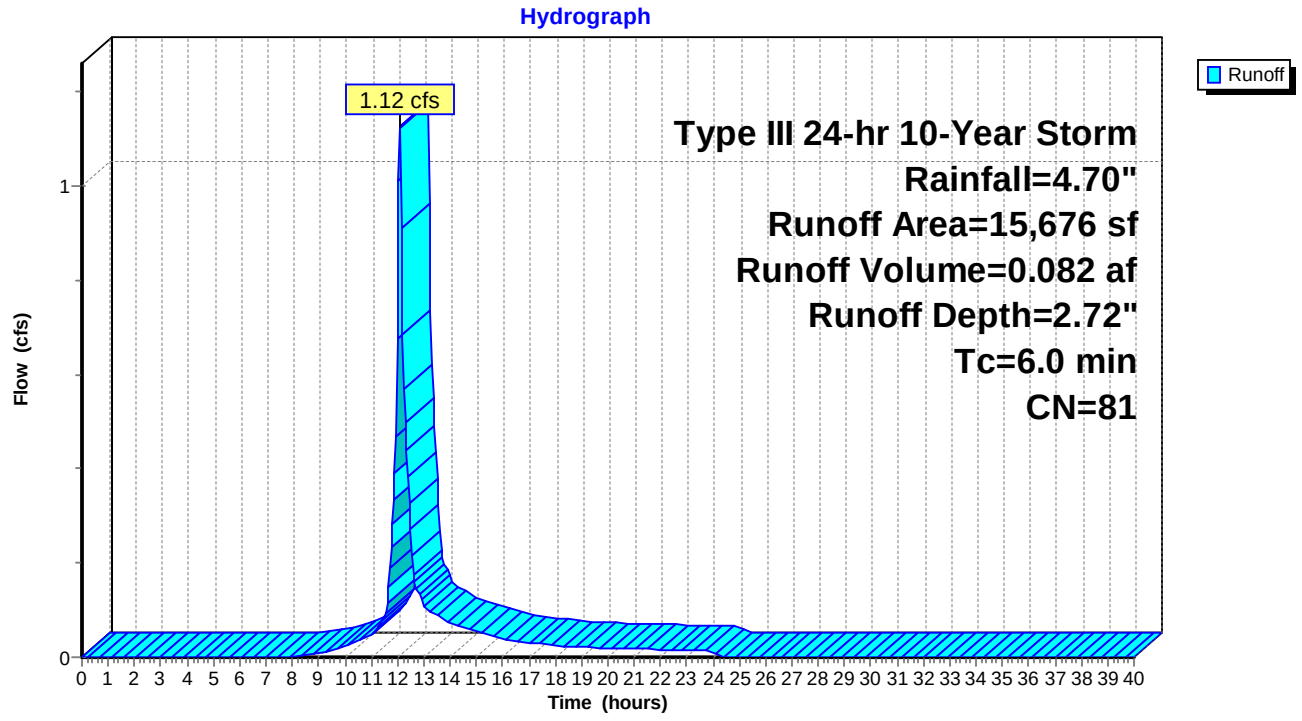
Runoff = 1.12 cfs @ 12.09 hrs, Volume= 0.082 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

Area (sf)	CN	Description
11,224	98	Paved parking & roofs
4,452	39	>75% Grass cover, Good, HSG A
15,676	81	Weighted Average
4,452		Pervious Area
11,224		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 210: Area to Infiltration Trench



Summary for Subcatchment 211: Area to Rain Garden 1

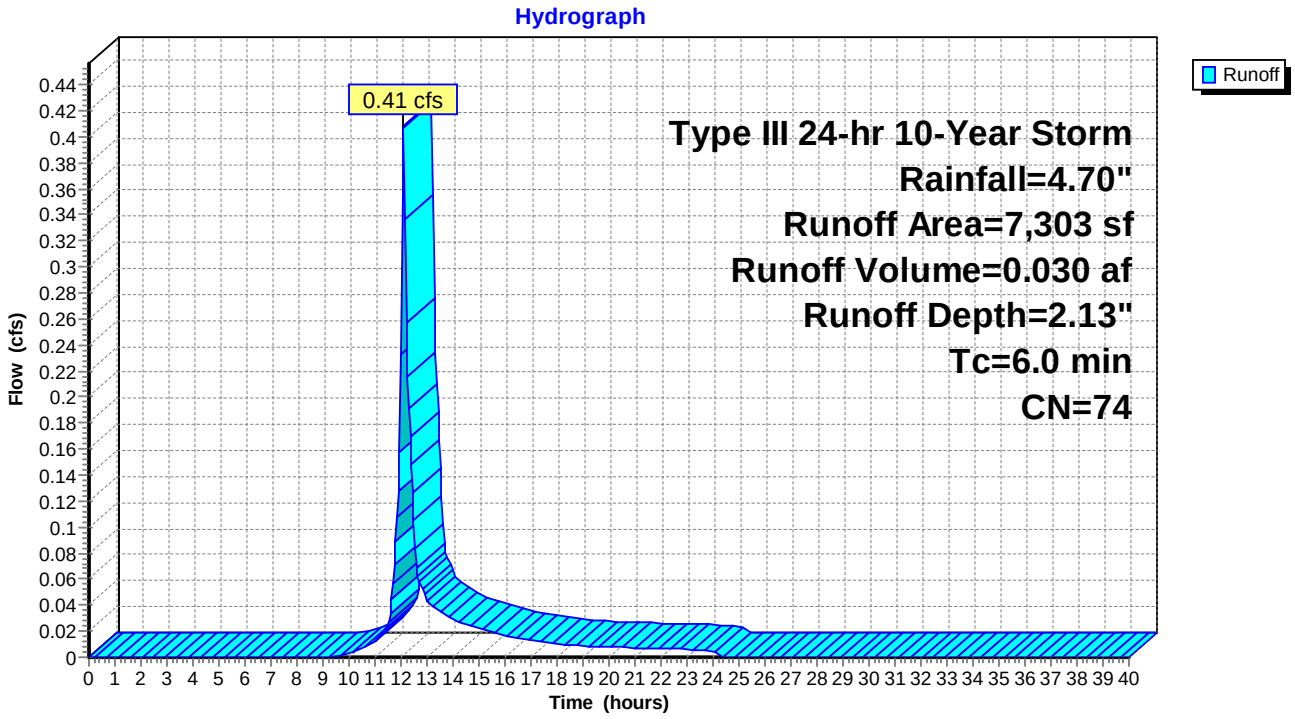
Runoff = 0.41 cfs @ 12.10 hrs, Volume= 0.030 af, Depth= 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

Area (sf)	CN	Description
4,299	98	Paved parking & roofs
3,004	39	>75% Grass cover, Good, HSG A
7,303	74	Weighted Average
3,004		Pervious Area
4,299		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 211: Area to Rain Garden 1



Summary for Subcatchment 212: Area to Rain Garden 2

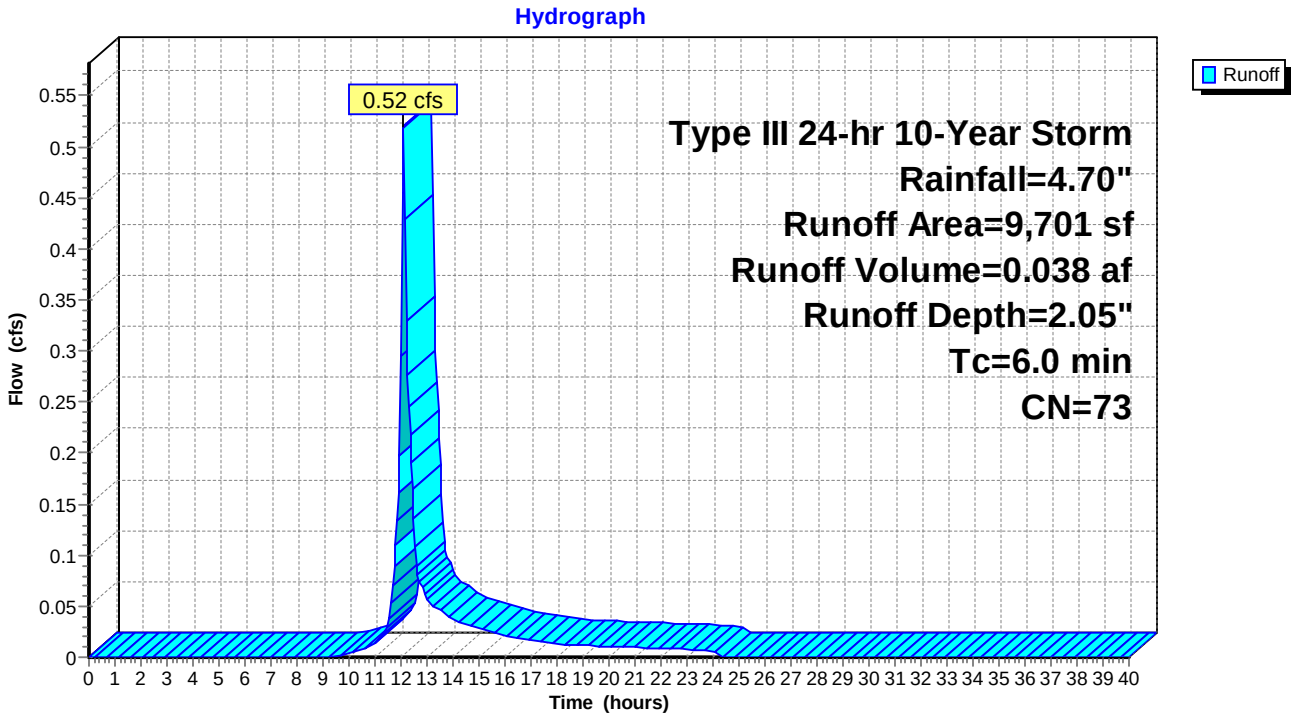
Runoff = 0.52 cfs @ 12.10 hrs, Volume= 0.038 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

Area (sf)	CN	Description
5,566	98	Paved parking & roofs
4,135	39	>75% Grass cover, Good, HSG A
9,701	73	Weighted Average
4,135		Pervious Area
5,566		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 212: Area to Rain Garden 2



Summary for Subcatchment 221: Roof Area to Drip Strip 1

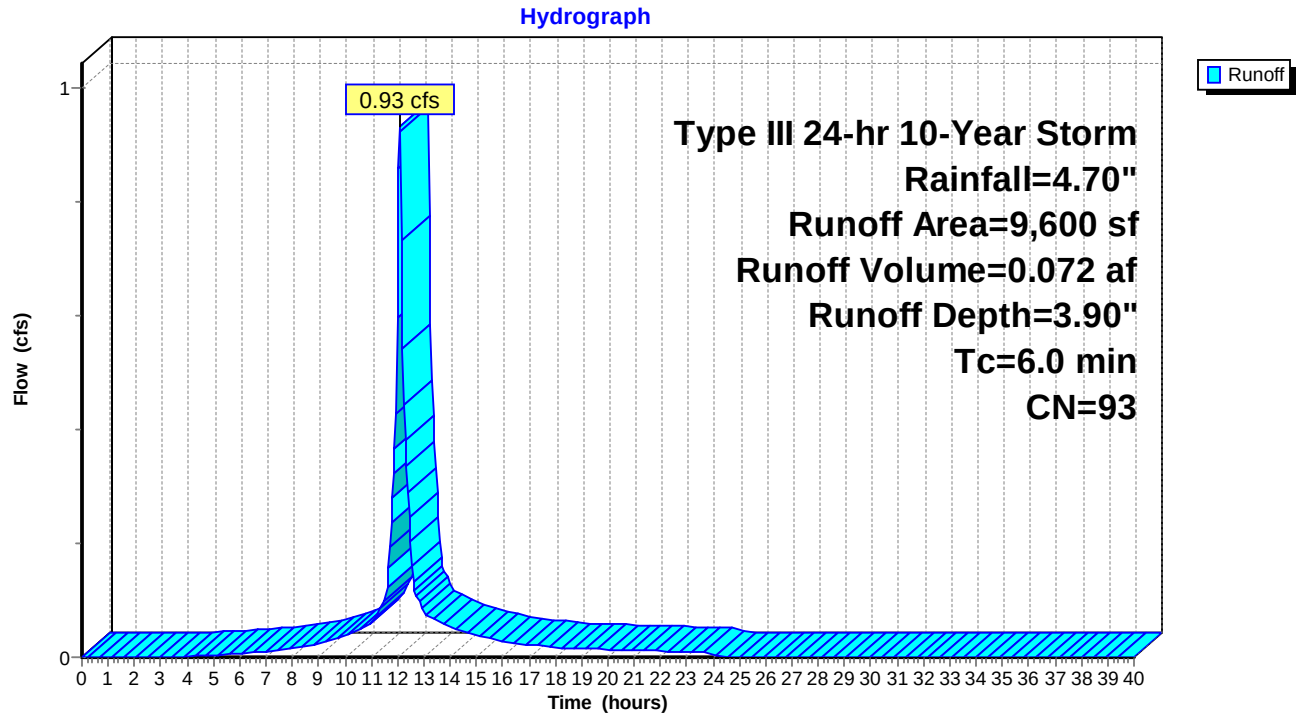
Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 221: Roof Area to Drip Strip 1



Summary for Subcatchment 222: Roof Area to Drip Strip 2

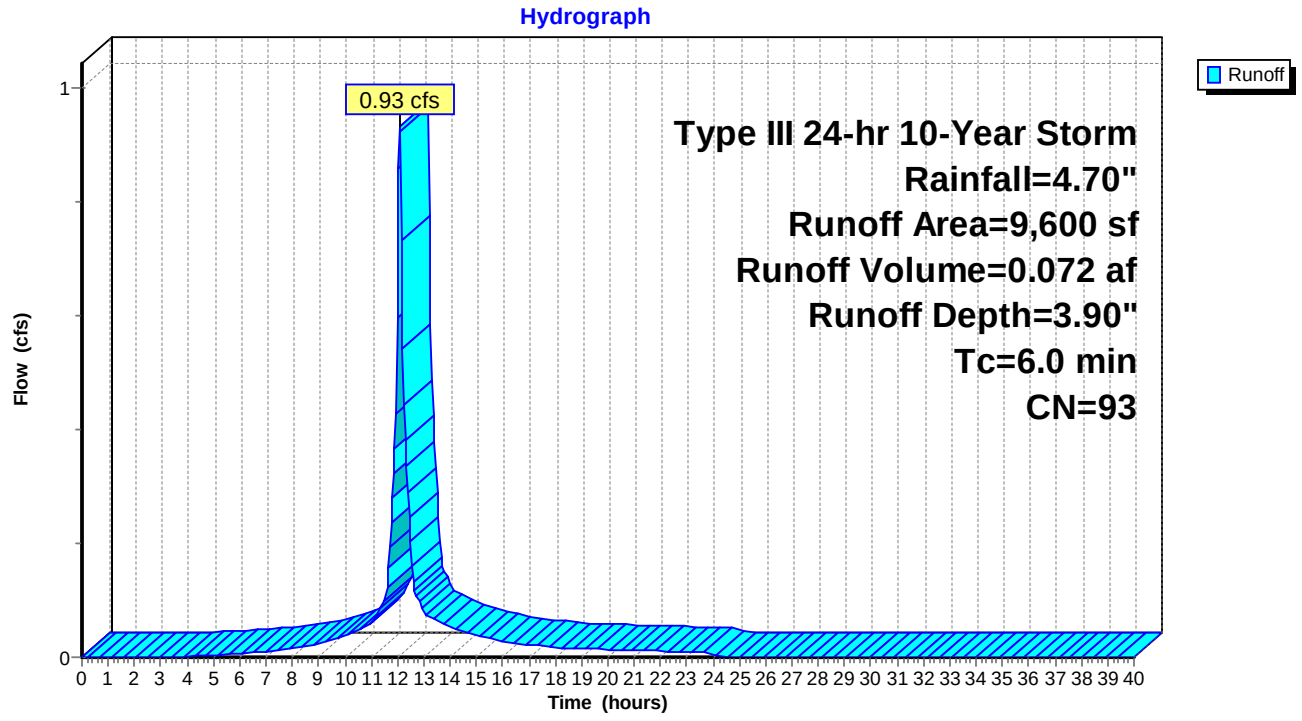
Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 222: Roof Area to Drip Strip 2



Summary for Subcatchment 223: Roof Area to Drip Strip 3

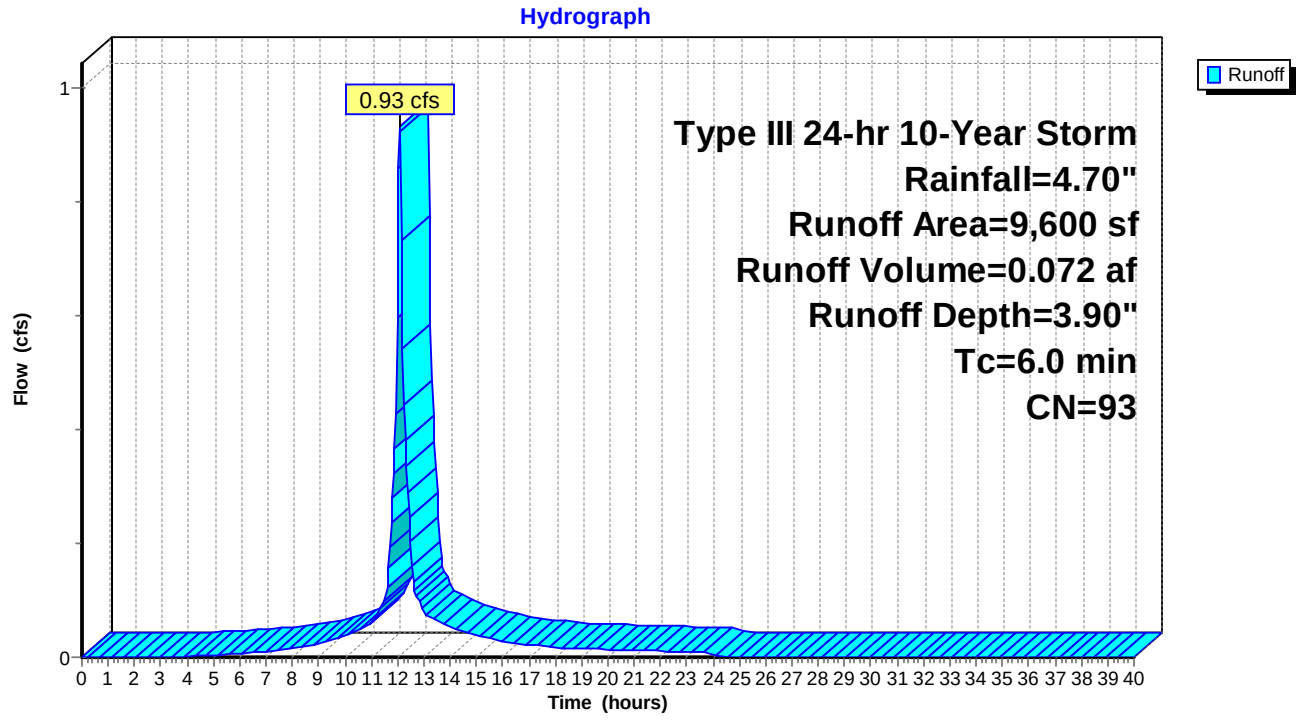
Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 223: Roof Area to Drip Strip 3



Summary for Subcatchment 224: Roof Area to Drip Strip 4

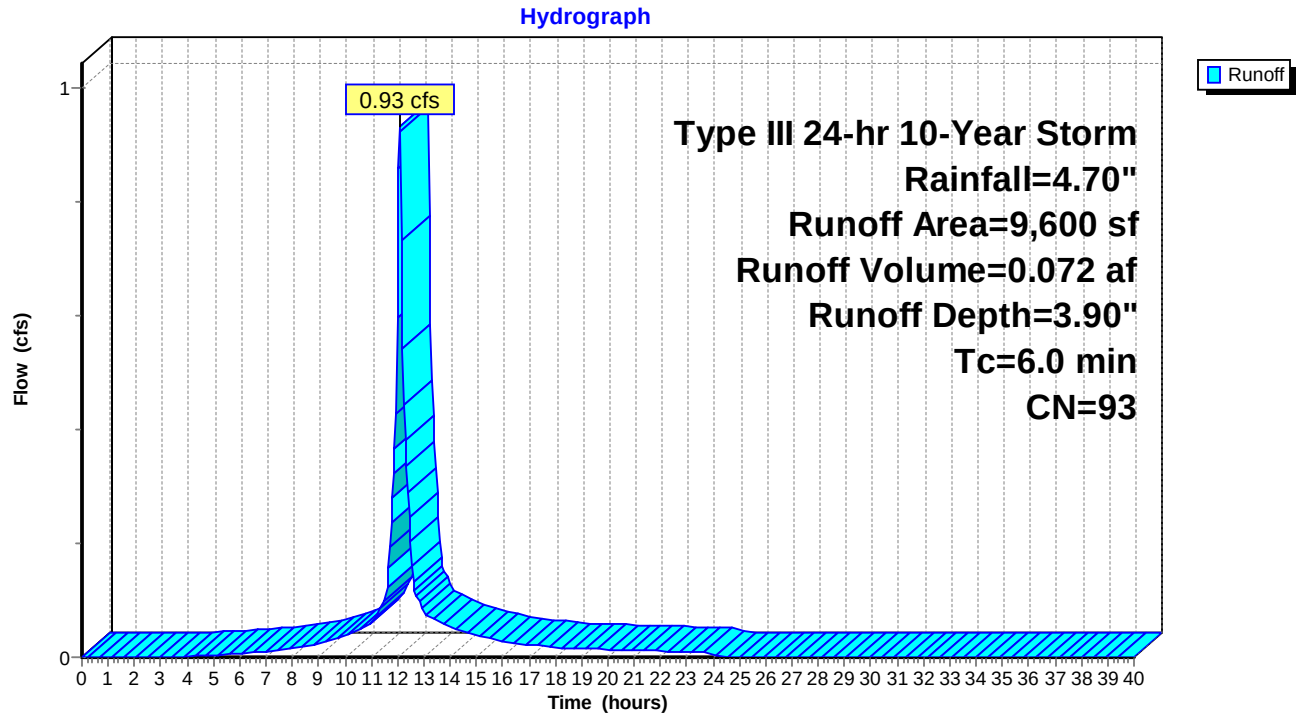
Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.70"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 224: Roof Area to Drip Strip 4



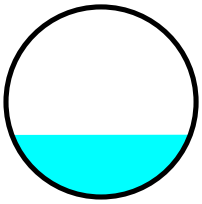
Summary for Reach 1R: 12" Storm Drain

Inflow Area = 1.632 ac, 72.44% Impervious, Inflow Depth = 0.18" for 10-Year Storm event
Inflow = 0.96 cfs @ 12.17 hrs, Volume= 0.024 af
Outflow = 0.90 cfs @ 12.23 hrs, Volume= 0.024 af, Atten= 6%, Lag= 3.6 min

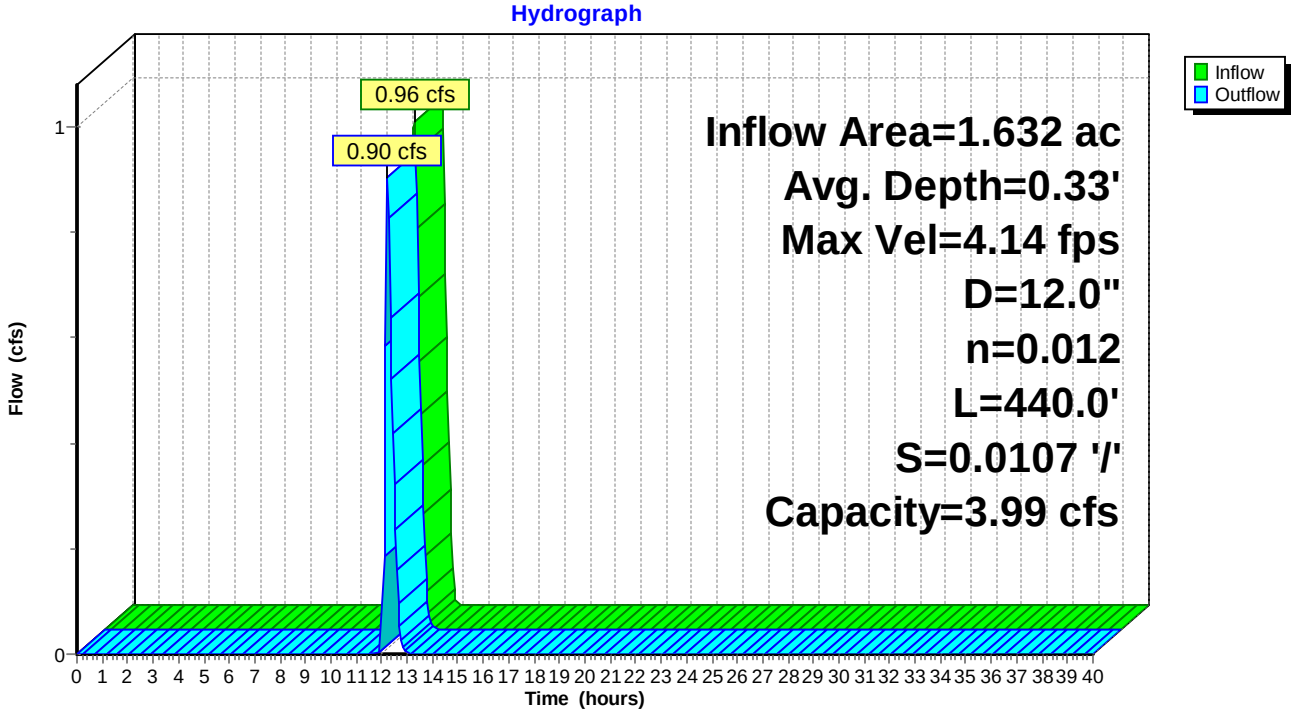
Routing by Stor-Ind+Trans method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.14 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.52 fps, Avg. Travel Time= 4.8 min

Peak Storage= 99 cf @ 12.20 hrs, Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 3.99 cfs

12.0" Diameter Pipe, n= 0.012
Length= 440.0' Slope= 0.0107 '/'
Inlet Invert= 111.20', Outlet Invert= 106.50'



Reach 1R: 12" Storm Drain



Summary for Pond DS-2: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 3.90" for 10-Year Storm event
Inflow = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af
Outflow = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af, Atten= 70%, Lag= 0.0 min
Discarded = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.86' @ 12.41 hrs Surf.Area= 1,600 sf Storage= 548 cf

Plug-Flow detention time= 10.0 min calculated for 0.072 af (100% of inflow)
Center-of-Mass det. time= 10.0 min (790.2 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

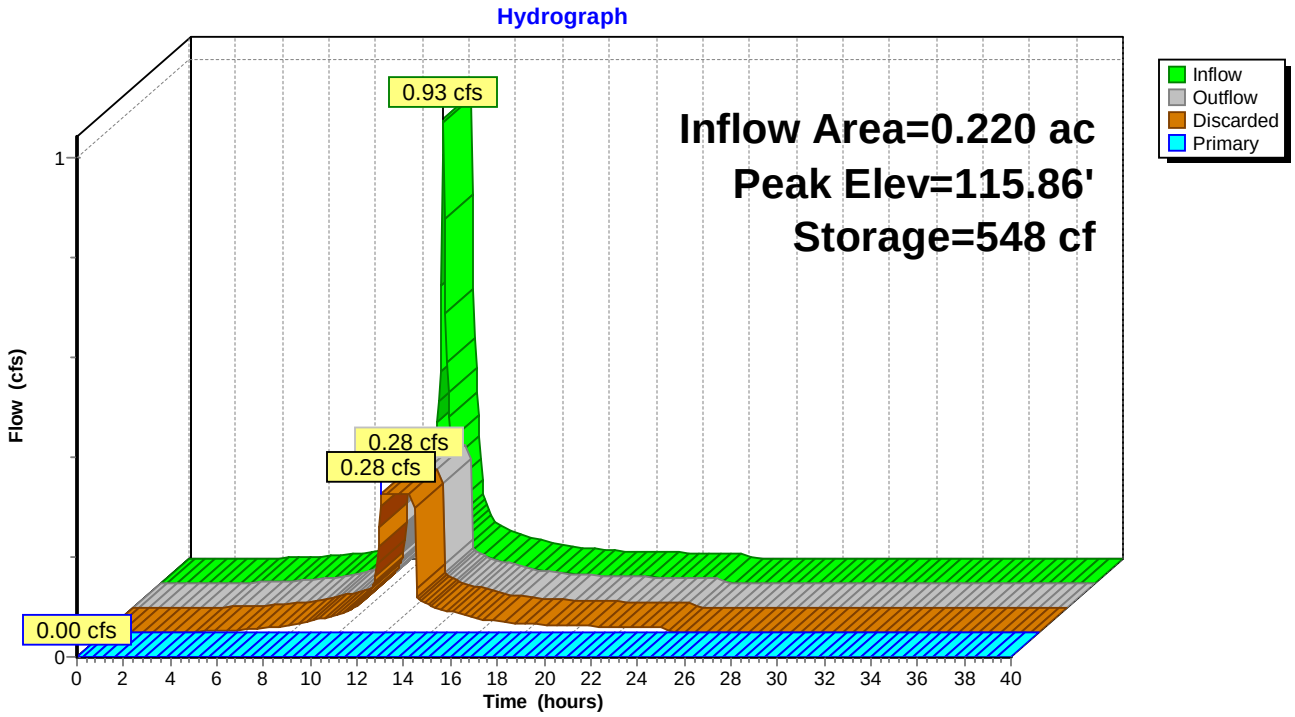
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.85 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS-2: Drip Strip



Summary for Pond DS-3: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 3.90" for 10-Year Storm event
Inflow = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af
Outflow = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af, Atten= 70%, Lag= 0.0 min
Discarded = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.86' @ 12.41 hrs Surf.Area= 1,600 sf Storage= 548 cf

Plug-Flow detention time= 10.0 min calculated for 0.072 af (100% of inflow)
Center-of-Mass det. time= 10.0 min (790.2 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

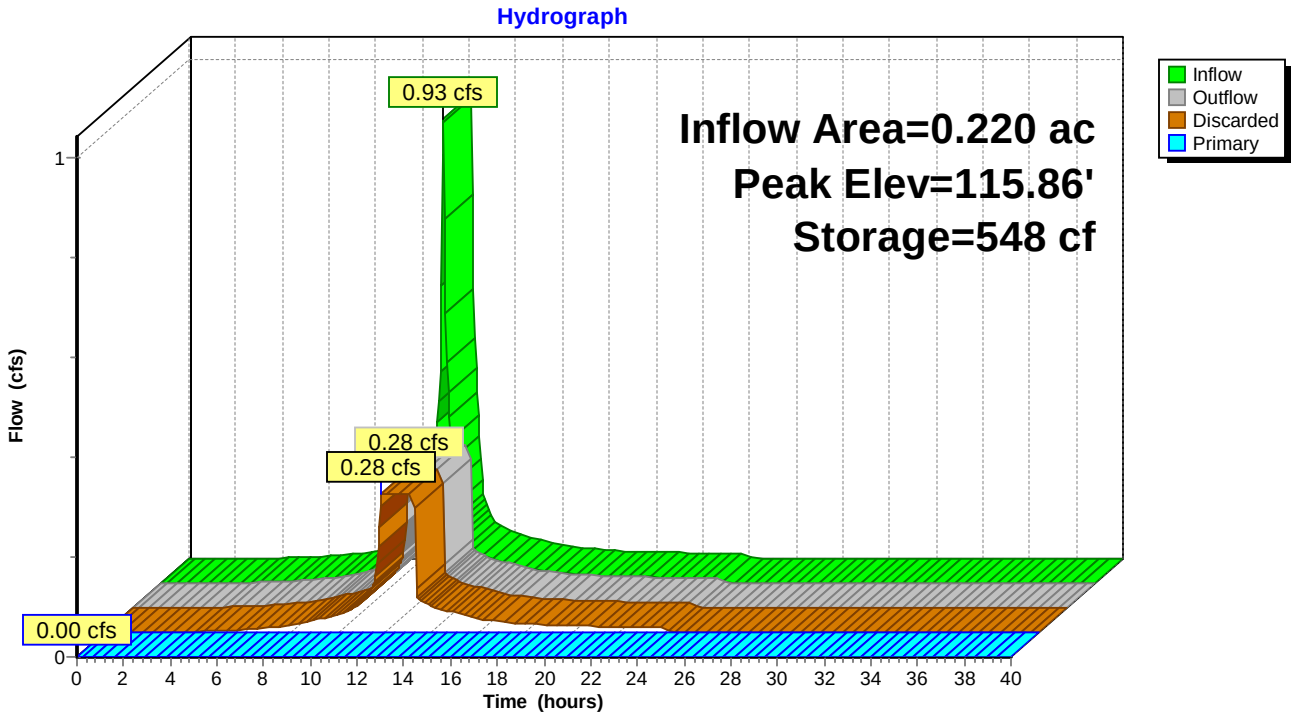
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.85 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS-3: Drip Strip



Summary for Pond DS-4: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 3.90" for 10-Year Storm event
Inflow = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af
Outflow = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af, Atten= 70%, Lag= 0.0 min
Discarded = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.86' @ 12.41 hrs Surf.Area= 1,600 sf Storage= 548 cf

Plug-Flow detention time= 10.0 min calculated for 0.072 af (100% of inflow)
Center-of-Mass det. time= 10.0 min (790.2 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

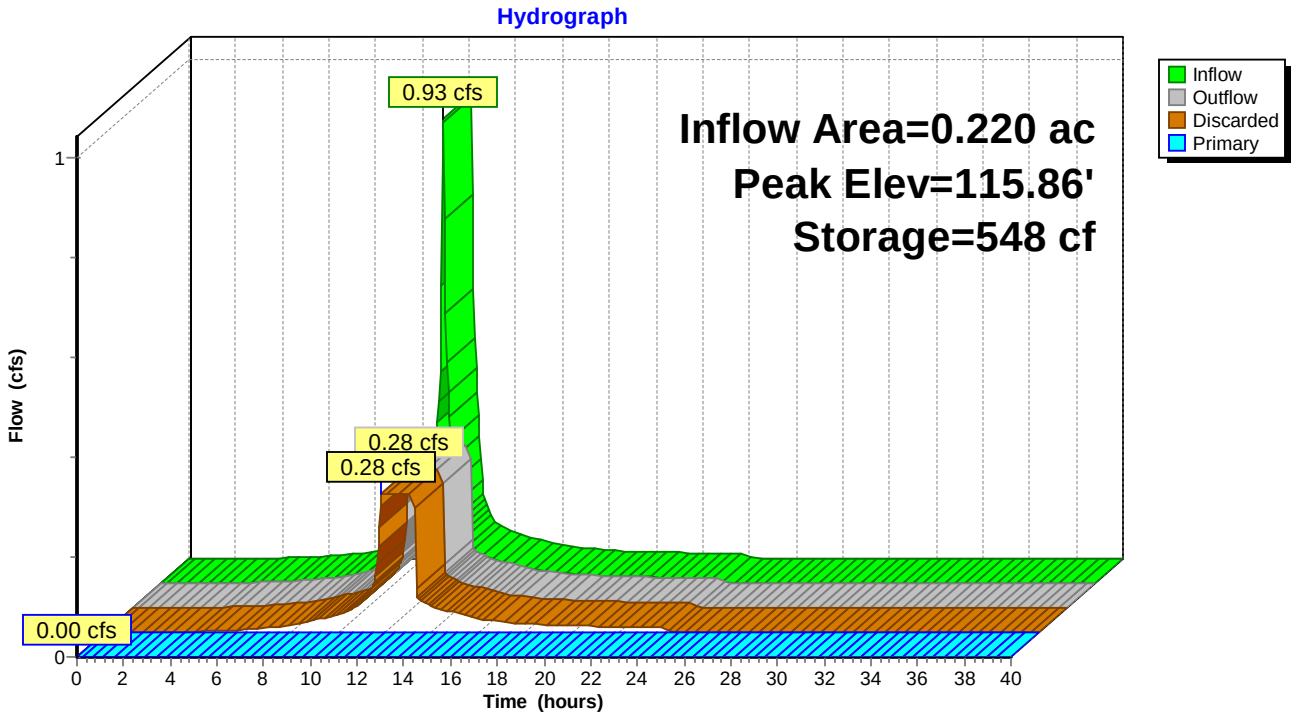
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.85 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS-4: Drip Strip



Summary for Pond DS1: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 3.90" for 10-Year Storm event
Inflow = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af
Outflow = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af, Atten= 70%, Lag= 0.0 min
Discarded = 0.28 cfs @ 11.85 hrs, Volume= 0.072 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.86' @ 12.41 hrs Surf.Area= 1,600 sf Storage= 548 cf

Plug-Flow detention time= 10.0 min calculated for 0.072 af (100% of inflow)
Center-of-Mass det. time= 10.0 min (790.2 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

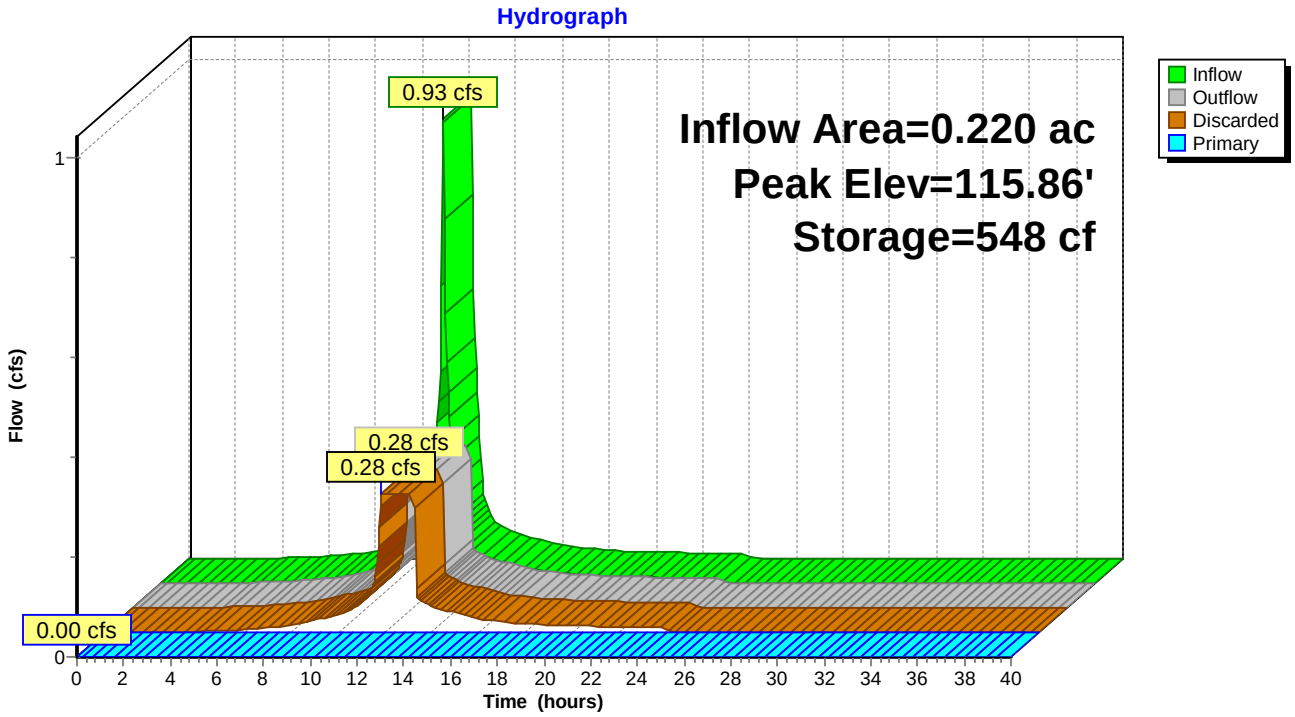
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.85 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DS1: Drip Strip



Summary for Pond IT-1: Infiltration Trench

Inflow Area = 0.360 ac, 71.60% Impervious, Inflow Depth = 2.72" for 10-Year Storm event
Inflow = 1.12 cfs @ 12.09 hrs, Volume= 0.082 af
Outflow = 0.94 cfs @ 12.16 hrs, Volume= 0.082 af, Atten= 16%, Lag= 3.8 min
Discarded = 0.22 cfs @ 11.80 hrs, Volume= 0.065 af
Primary = 0.72 cfs @ 12.16 hrs, Volume= 0.016 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 113.02' @ 12.16 hrs Surf.Area= 1,250 sf Storage= 384 cf

Plug-Flow detention time= 5.4 min calculated for 0.082 af (100% of inflow)
Center-of-Mass det. time= 5.4 min (827.1 - 821.7)

Volume	Invert	Avail.Storage	Storage Description
#1	112.00'	2,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

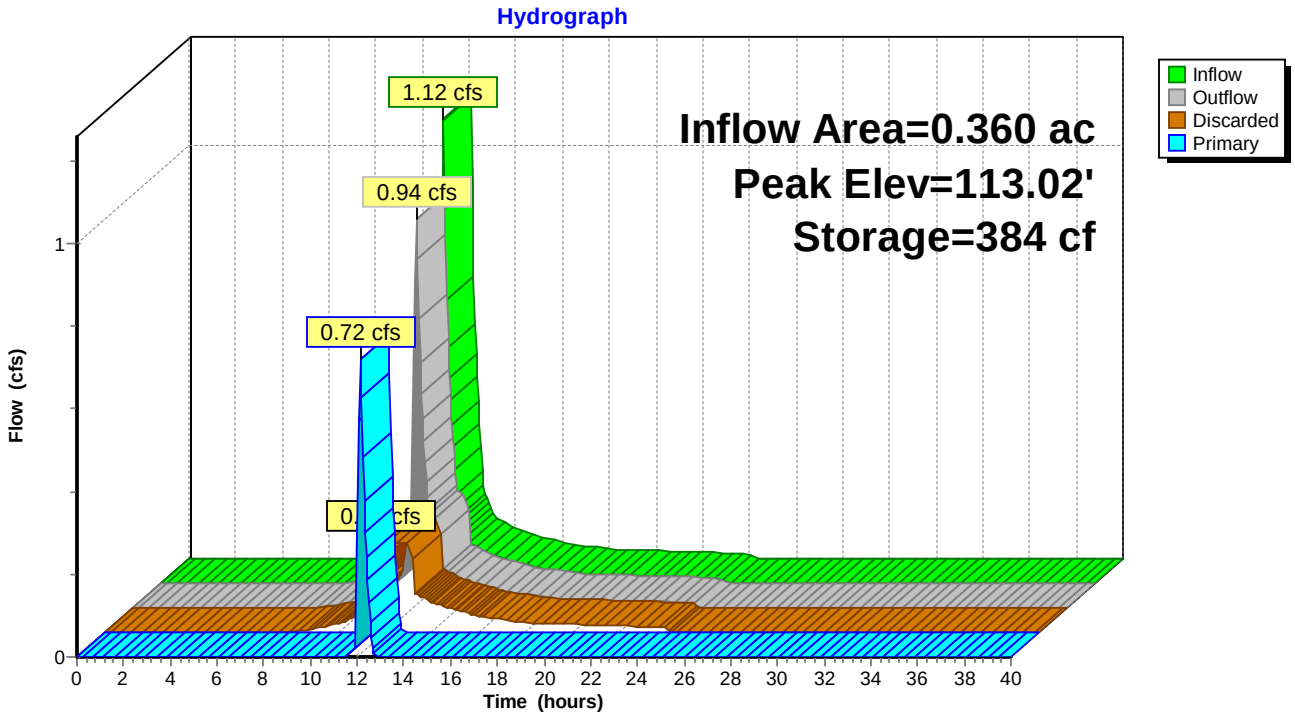
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
112.00	1,250	0.0	0	0
113.00	1,250	30.0	375	375
114.00	1,250	30.0	375	750
115.00	1,250	40.0	500	1,250
116.00	1,250	40.0	500	1,750
117.00	1,250	40.0	500	2,250

Device	Routing	Invert	Outlet Devices
#1	Discarded	112.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	112.50'	**8.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.22 cfs @ 11.80 hrs HW=112.07' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

Primary OutFlow Max=0.71 cfs @ 12.16 hrs HW=113.02' (Free Discharge)
↑—**2=Orifice/Grate** (Orifice Controls 0.71 cfs @ 2.45 fps)

Pond IT-1: Infiltration Trench



Summary for Pond RG-1: Rain Garden

Inflow Area = 0.168 ac, 58.87% Impervious, Inflow Depth = 2.13" for 10-Year Storm event
Inflow = 0.41 cfs @ 12.10 hrs, Volume= 0.030 af
Outflow = 0.30 cfs @ 12.17 hrs, Volume= 0.030 af, Atten= 25%, Lag= 4.7 min
Discarded = 0.08 cfs @ 11.80 hrs, Volume= 0.024 af
Primary = 0.23 cfs @ 12.17 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.45' @ 12.17 hrs Surf.Area= 460 sf Storage= 144 cf

Plug-Flow detention time= 5.5 min calculated for 0.030 af (100% of inflow)
Center-of-Mass det. time= 5.5 min (846.0 - 840.5)

Volume	Invert	Avail.Storage	Storage Description
#1	114.50'	1,185 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

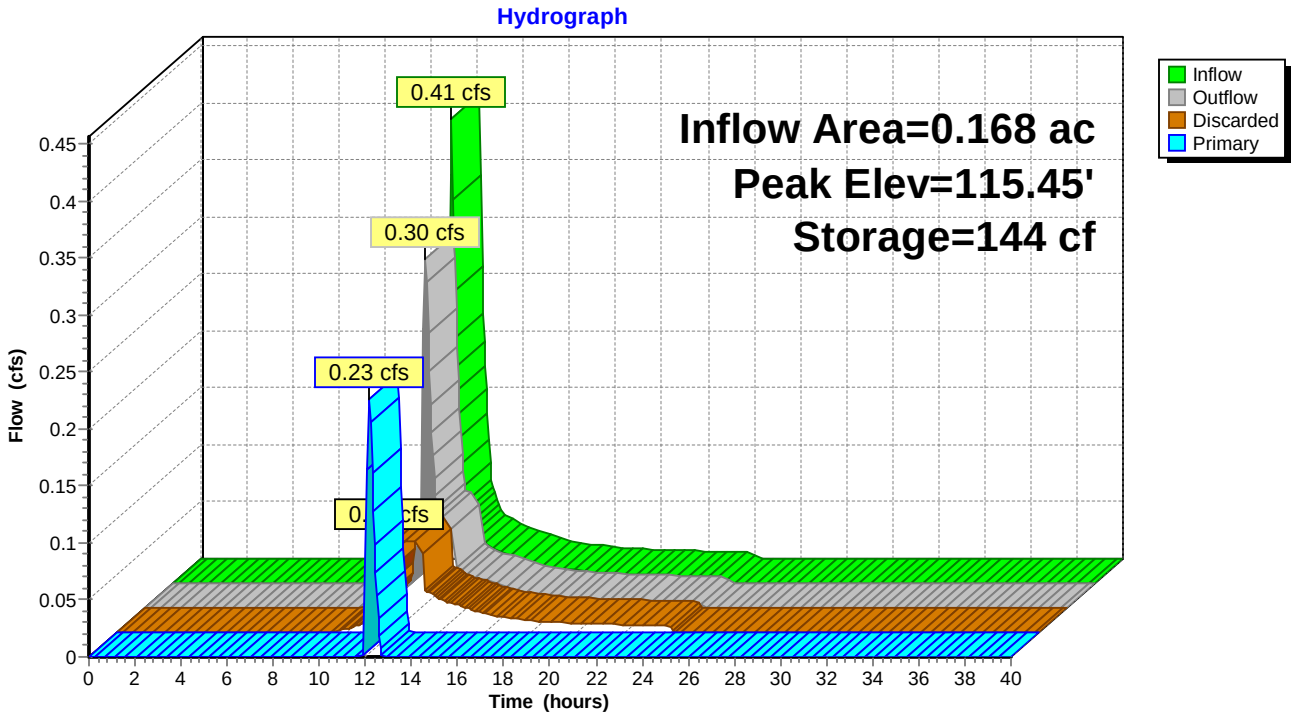
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.50	460	33.0	0	0
115.00	460	33.0	76	76
115.50	460	33.0	76	152
116.00	460	33.0	76	228
116.50	460	100.0	230	458
117.00	460	100.0	230	688
117.50	505	100.0	241	929
118.00	520	100.0	256	1,185

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.50'	**7.500 in/hr Exfiltration over Surface area**
#2	Device 3	115.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	114.50'	**8.0" x 150.0' long Culvert** Ke= 0.500
			Outlet Invert= 111.00' S= 0.0233 '/' Cc= 0.900 n= 0.012
#4	Device 3	117.50'	**10.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.08 cfs @ 11.80 hrs HW=114.54' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.22 cfs @ 12.17 hrs HW=115.44' (Free Discharge)
└**3=Culvert** (Passes 0.22 cfs of 1.31 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.22 cfs @ 2.50 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond RG-1: Rain Garden



Summary for Pond RG-2: Rain Garden

Inflow Area = 0.223 ac, 57.38% Impervious, Inflow Depth = 2.05" for 10-Year Storm event
Inflow = 0.52 cfs @ 12.10 hrs, Volume= 0.038 af
Outflow = 0.25 cfs @ 12.29 hrs, Volume= 0.038 af, Atten= 51%, Lag= 11.8 min
Discarded = 0.17 cfs @ 11.95 hrs, Volume= 0.036 af
Primary = 0.09 cfs @ 12.29 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.21' @ 12.29 hrs Surf.Area= 960 sf Storage= 223 cf

Plug-Flow detention time= 6.0 min calculated for 0.038 af (100% of inflow)
Center-of-Mass det. time= 6.0 min (849.2 - 843.1)

Volume	Invert	Avail.Storage	Storage Description
#1	114.50'	2,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

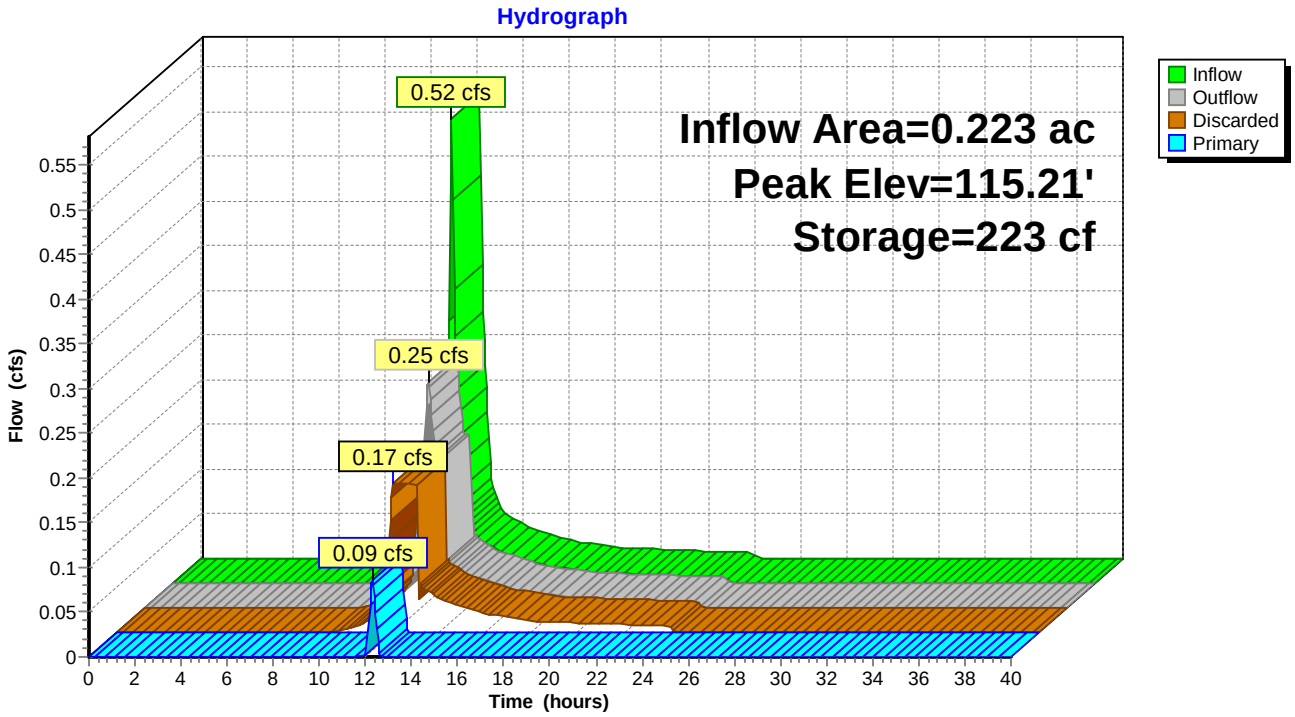
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.50	960	33.0	0	0
115.00	960	33.0	158	158
115.50	960	33.0	158	317
116.00	960	33.0	158	475
116.50	960	33.0	158	634
117.00	960	100.0	480	1,114
117.50	1,040	100.0	500	1,614
118.00	1,200	100.0	560	2,174

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.50'	**7.500 in/hr Exfiltration over Surface area**
#2	Device 3	115.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	114.50'	**8.0" x 150.0' long Culvert** Ke= 0.500
			Outlet Invert= 111.00' S= 0.0233 '/' Cc= 0.900 n= 0.012
#4	Device 3	117.50'	**10.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.17 cfs @ 11.95 hrs HW=114.54' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.17 cfs)

Primary OutFlow Max=0.09 cfs @ 12.29 hrs HW=115.20' (Free Discharge)
└**3=Culvert** (Passes 0.09 cfs of 1.02 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.09 cfs @ 1.54 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond RG-2: Rain Garden

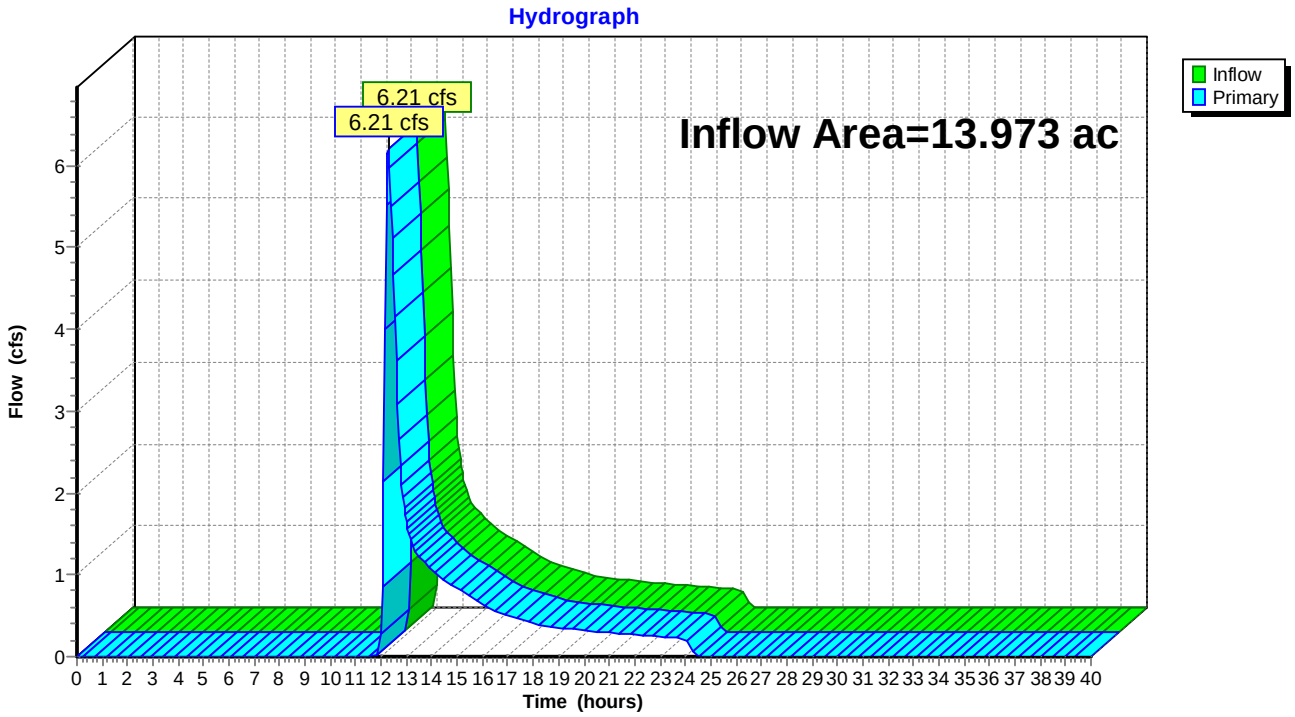


Summary for Link DP#1: Design Point

Inflow Area = 13.973 ac, 25.37% Impervious, Inflow Depth = 0.66" for 10-Year Storm event
Inflow = 6.21 cfs @ 12.27 hrs, Volume= 0.771 af
Primary = 6.21 cfs @ 12.27 hrs, Volume= 0.771 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs

Link DP#1: Design Point



Time span=0.00-40.00 hrs, dt=0.05 hrs, 801 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 201: Existing Site Area Runoff Area=537,572 sf 19.14% Impervious Runoff Depth=1.10"
Tc=15.5 min CN=53 Runoff=9.49 cfs 1.134 af

Subcatchment 210: Area to Infiltration Trench Runoff Area=15,676 sf 71.60% Impervious Runoff Depth=3.43"
Tc=6.0 min CN=81 Runoff=1.41 cfs 0.103 af

Subcatchment 211: Area to Rain Garden 1 Runoff Area=7,303 sf 58.87% Impervious Runoff Depth=2.77"
Tc=6.0 min CN=74 Runoff=0.53 cfs 0.039 af

Subcatchment 212: Area to Rain Garden 2 Runoff Area=9,701 sf 57.38% Impervious Runoff Depth=2.68"
Tc=6.0 min CN=73 Runoff=0.68 cfs 0.050 af

Subcatchment 221: Roof Area to Drip Strip 1 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=4.69"
Tc=6.0 min CN=93 Runoff=1.11 cfs 0.086 af

Subcatchment 222: Roof Area to Drip Strip 2 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=4.69"
Tc=6.0 min CN=93 Runoff=1.11 cfs 0.086 af

Subcatchment 223: Roof Area to Drip Strip 3 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=4.69"
Tc=6.0 min CN=93 Runoff=1.11 cfs 0.086 af

Subcatchment 224: Roof Area to Drip Strip 4 Runoff Area=9,600 sf 79.17% Impervious Runoff Depth=4.69"
Tc=6.0 min CN=93 Runoff=1.11 cfs 0.086 af

Reach 1R: 12" Storm Drain Avg. Depth=0.44' Max Vel=4.82 fps Inflow=1.65 cfs 0.053 af
D=12.0" n=0.012 L=440.0' S=0.0107 '/' Capacity=3.99 cfs Outflow=1.59 cfs 0.053 af

Pond DS-2: Drip Strip Peak Elev=116.10' Storage=689 cf Inflow=1.11 cfs 0.086 af
Discarded=0.28 cfs 0.083 af Primary=0.17 cfs 0.003 af Outflow=0.45 cfs 0.086 af

Pond DS-3: Drip Strip Peak Elev=116.10' Storage=689 cf Inflow=1.11 cfs 0.086 af
Discarded=0.28 cfs 0.083 af Primary=0.17 cfs 0.003 af Outflow=0.45 cfs 0.086 af

Pond DS-4: Drip Strip Peak Elev=116.10' Storage=689 cf Inflow=1.11 cfs 0.086 af
Discarded=0.28 cfs 0.083 af Primary=0.17 cfs 0.003 af Outflow=0.45 cfs 0.086 af

Pond DS1: Drip Strip Peak Elev=116.10' Storage=689 cf Inflow=1.11 cfs 0.086 af
Discarded=0.28 cfs 0.083 af Primary=0.17 cfs 0.003 af Outflow=0.45 cfs 0.086 af

Pond IT-1: Infiltration Trench Peak Elev=113.18' Storage=442 cf Inflow=1.41 cfs 0.103 af
Discarded=0.22 cfs 0.077 af Primary=0.99 cfs 0.026 af Outflow=1.21 cfs 0.103 af

Pond RG-1: Rain Garden Peak Elev=115.73' Storage=187 cf Inflow=0.53 cfs 0.039 af
Discarded=0.08 cfs 0.029 af Primary=0.32 cfs 0.010 af Outflow=0.40 cfs 0.039 af

Pond RG-2: Rain Garden Peak Elev=115.43' Storage=294 cf Inflow=0.68 cfs 0.050 af
Discarded=0.17 cfs 0.043 af Primary=0.21 cfs 0.006 af Outflow=0.38 cfs 0.050 af

Link DP#1: Design Point

Inflow=10.98 cfs 1.187 af
Primary=10.98 cfs 1.187 af

Total Runoff Area = 13.973 ac Runoff Volume = 1.670 af Average Runoff Depth = 1.43"
74.63% Pervious = 10.428 ac 25.37% Impervious = 3.545 ac

Summary for Subcatchment 201: Existing Site Area Uncaptured to Wetland

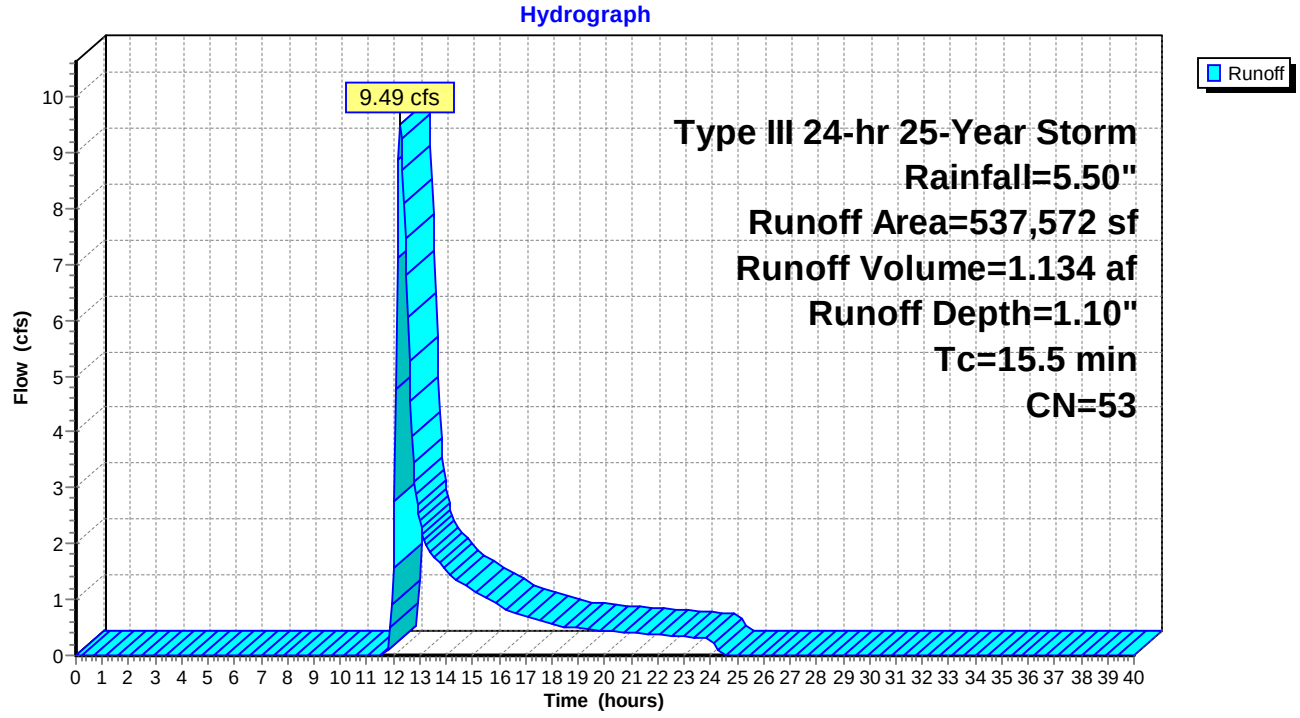
Runoff = 9.49 cfs @ 12.26 hrs, Volume= 1.134 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

	Area (sf)	CN	Description
	365,759	39	>75% Grass cover, Good, HSG A
	17,506	76	Gravel roads, HSG A
	25,724	32	Woods/grass comb., Good, HSG A
	23,810	74	>75% Grass cover, Good, HSG C
	1,860	89	Gravel roads, HSG C
*	92,620	98	Pavement
*	10,293	98	Roofs
	537,572	53	Weighted Average
	434,659		Pervious Area
	102,913		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5					**Direct Entry,**

Subcatchment 201: Existing Site Area Uncaptured to Wetland



Summary for Subcatchment 210: Area to Infiltration Trench

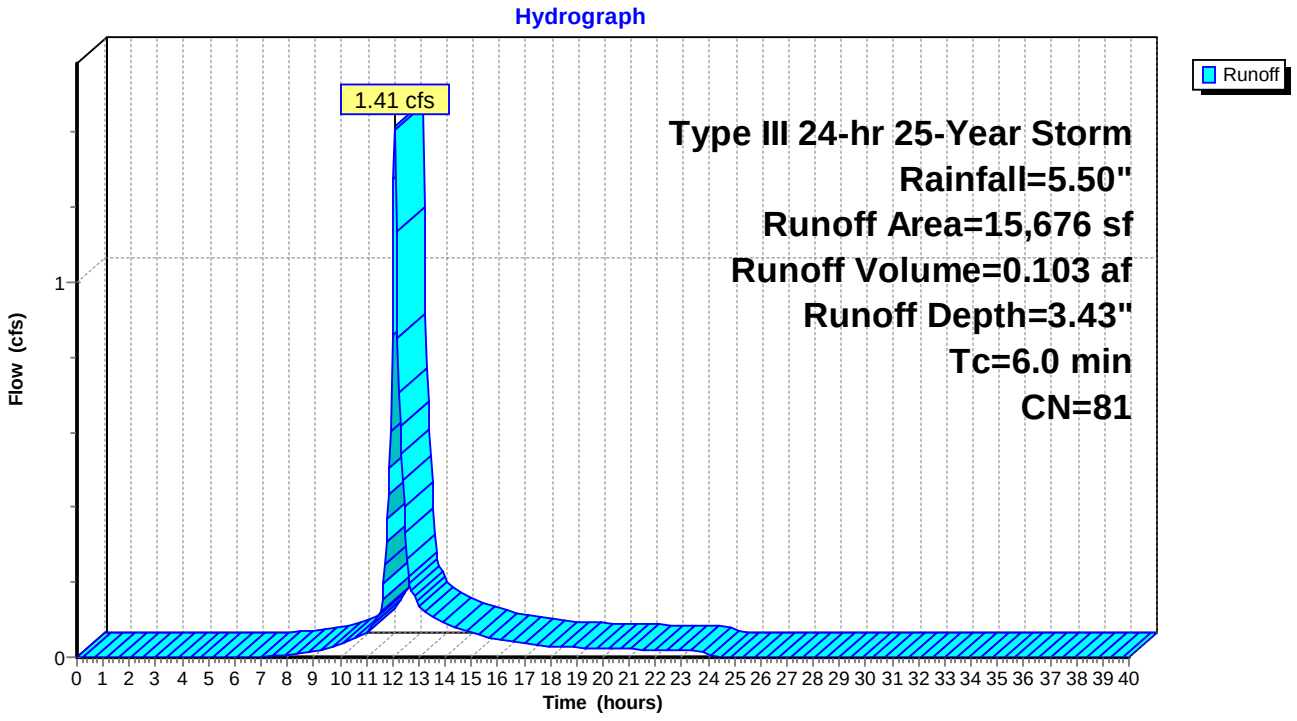
Runoff = 1.41 cfs @ 12.09 hrs, Volume= 0.103 af, Depth= 3.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

Area (sf)	CN	Description
11,224	98	Paved parking & roofs
4,452	39	>75% Grass cover, Good, HSG A
15,676	81	Weighted Average
4,452		Pervious Area
11,224		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 210: Area to Infiltration Trench



Summary for Subcatchment 211: Area to Rain Garden 1

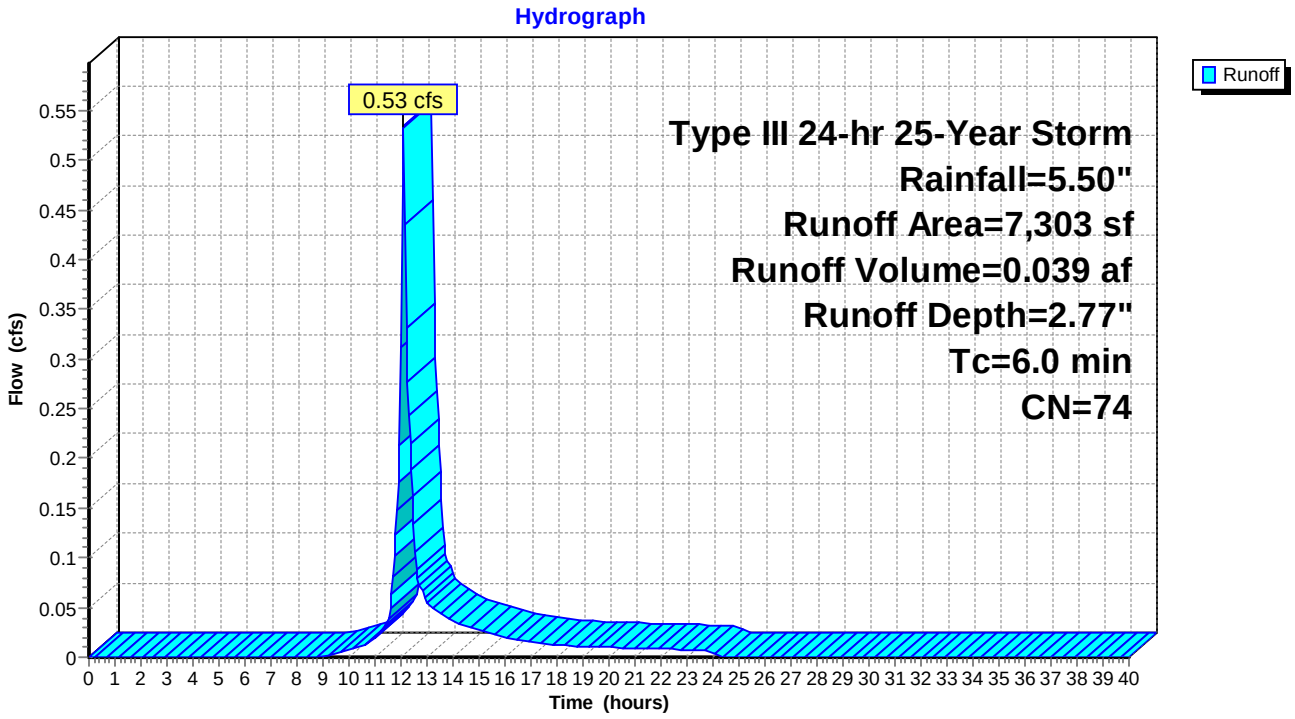
Runoff = 0.53 cfs @ 12.09 hrs, Volume= 0.039 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

Area (sf)	CN	Description
4,299	98	Paved parking & roofs
3,004	39	>75% Grass cover, Good, HSG A
7,303	74	Weighted Average
3,004		Pervious Area
4,299		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 211: Area to Rain Garden 1



Summary for Subcatchment 212: Area to Rain Garden 2

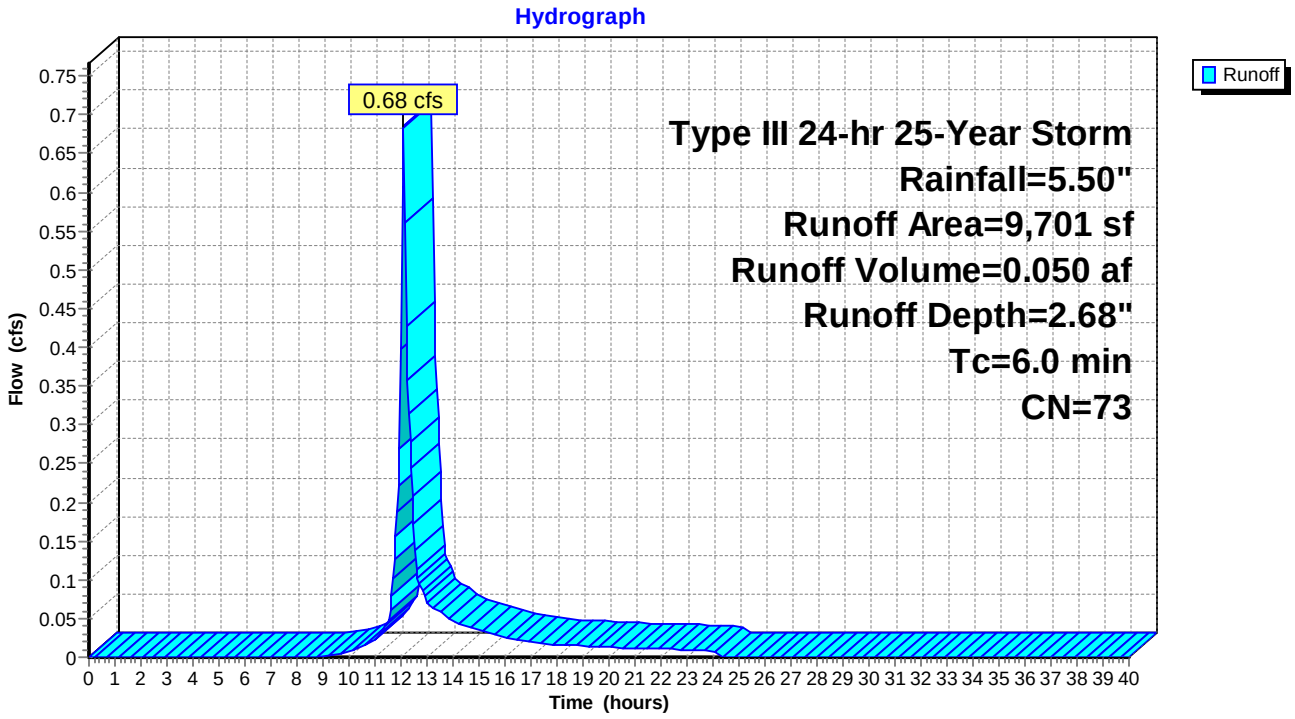
Runoff = 0.68 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 2.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

Area (sf)	CN	Description
5,566	98	Paved parking & roofs
4,135	39	>75% Grass cover, Good, HSG A
9,701	73	Weighted Average
4,135		Pervious Area
5,566		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 212: Area to Rain Garden 2



Summary for Subcatchment 221: Roof Area to Drip Strip 1

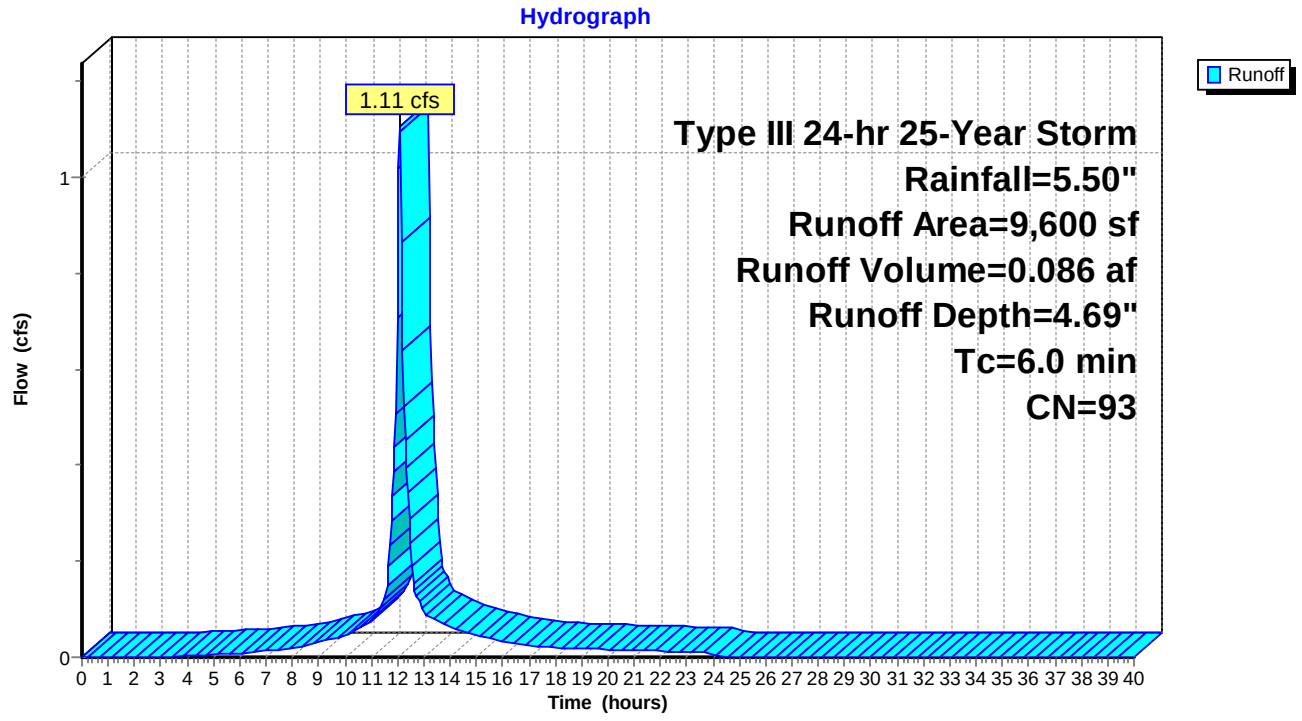
Runoff = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af, Depth= 4.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 221: Roof Area to Drip Strip 1



Summary for Subcatchment 222: Roof Area to Drip Strip 2

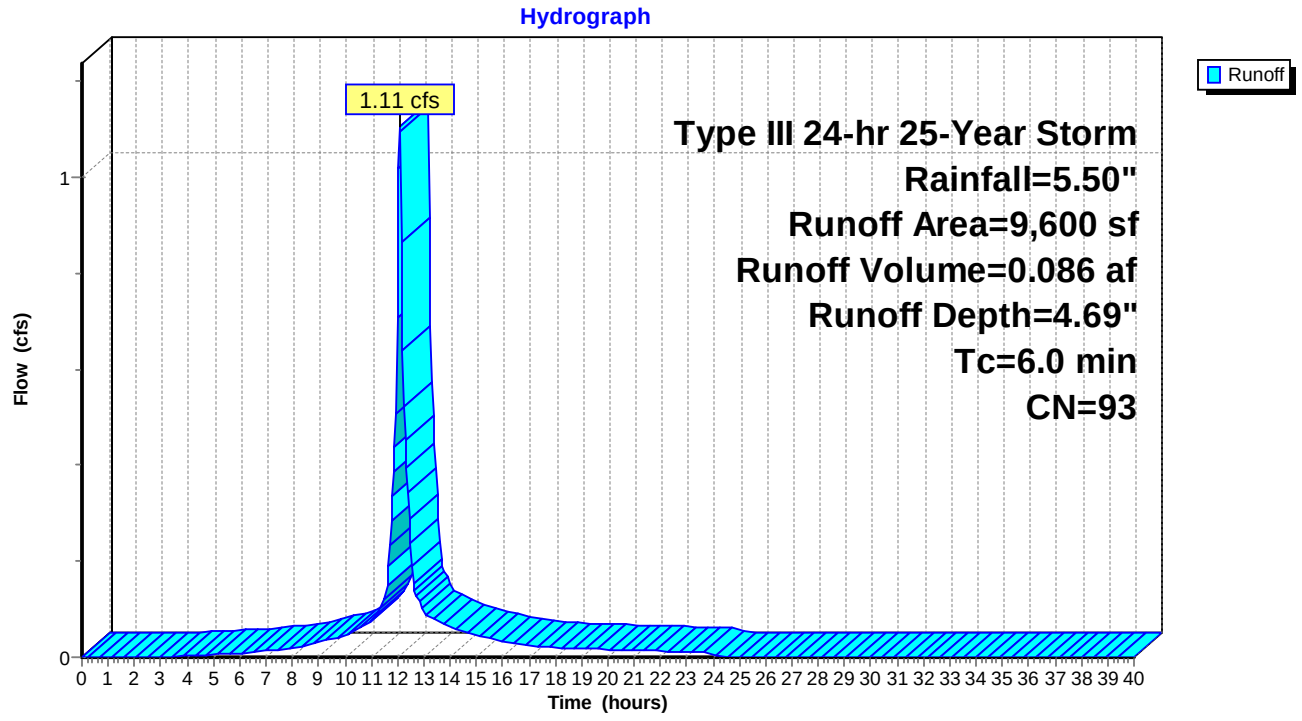
Runoff = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af, Depth= 4.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 222: Roof Area to Drip Strip 2



Summary for Subcatchment 223: Roof Area to Drip Strip 3

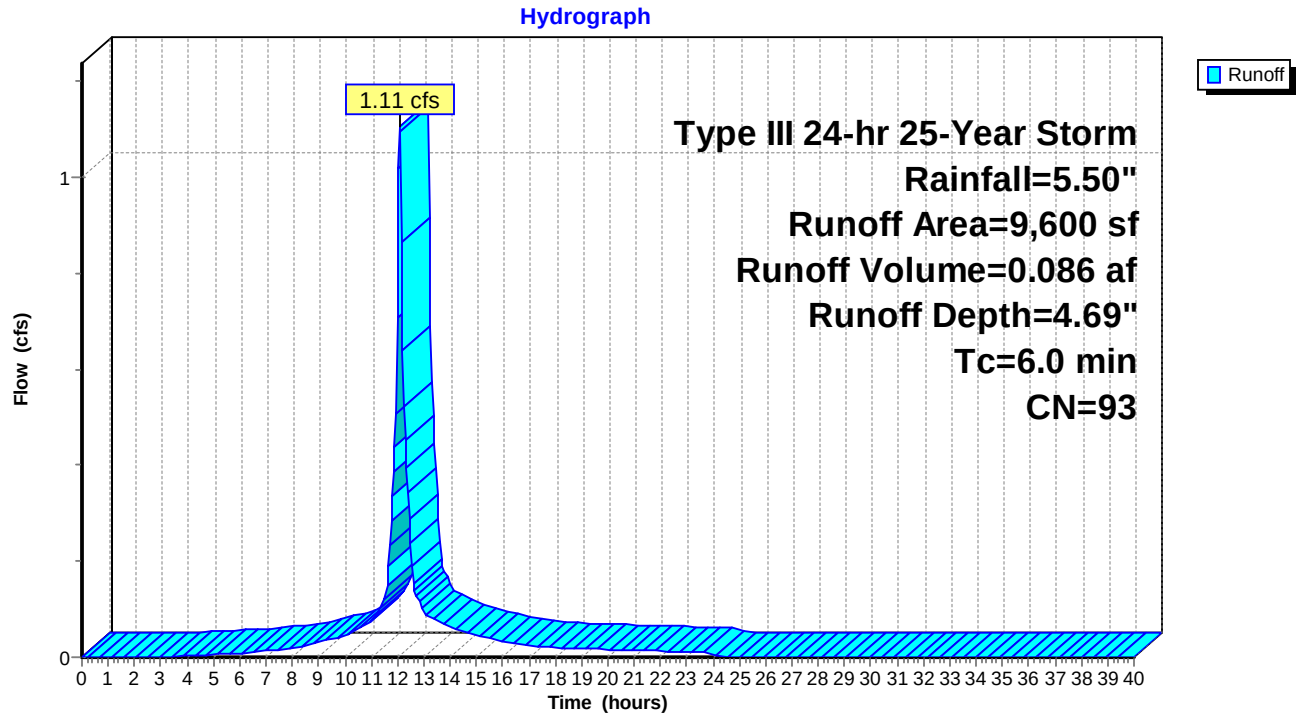
Runoff = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af, Depth= 4.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 223: Roof Area to Drip Strip 3



Summary for Subcatchment 224: Roof Area to Drip Strip 4

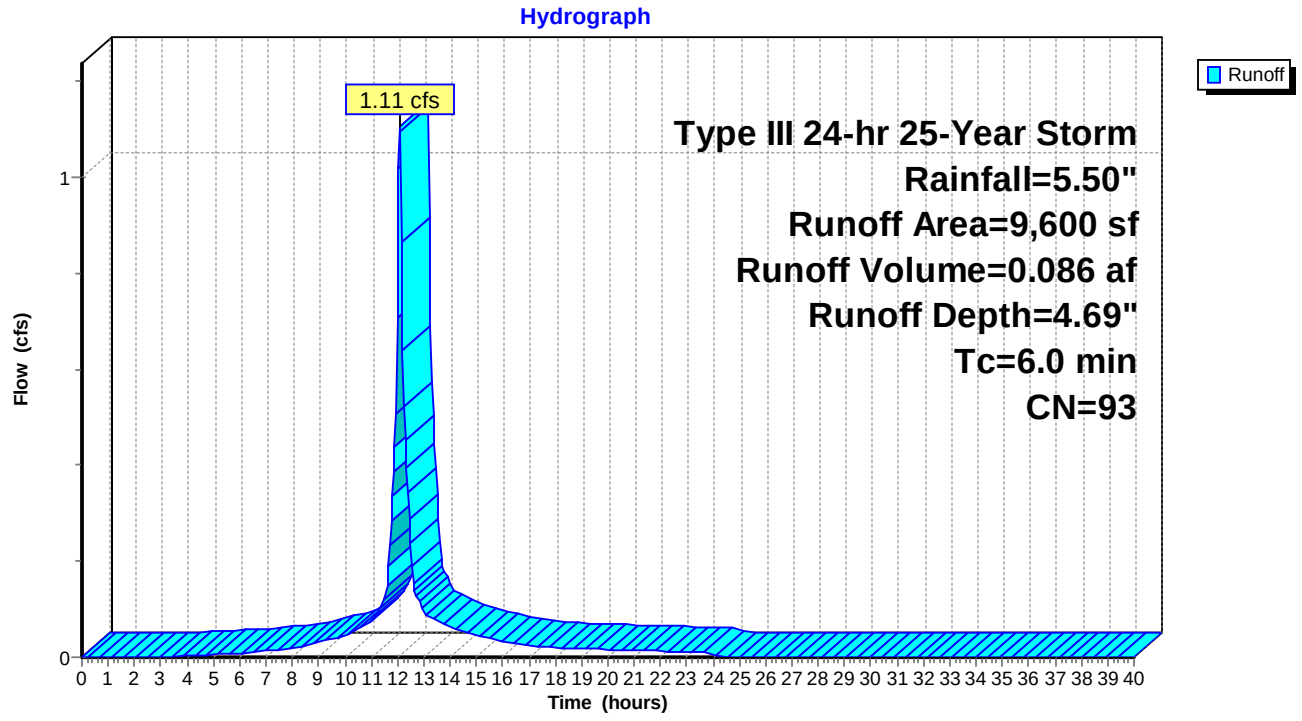
Runoff = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af, Depth= 4.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.50"

	Area (sf)	CN	Description
*	7,600	98	Roofs
*	2,000	76	Drip stone, HSG A
	9,600	93	Weighted Average
	2,000		Pervious Area
	7,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum Tc**

Subcatchment 224: Roof Area to Drip Strip 4



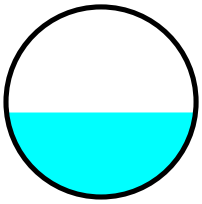
Summary for Reach 1R: 12" Storm Drain

Inflow Area = 1.632 ac, 72.44% Impervious, Inflow Depth = 0.39" for 25-Year Storm event
Inflow = 1.65 cfs @ 12.28 hrs, Volume= 0.053 af
Outflow = 1.59 cfs @ 12.33 hrs, Volume= 0.053 af, Atten= 3%, Lag= 2.7 min

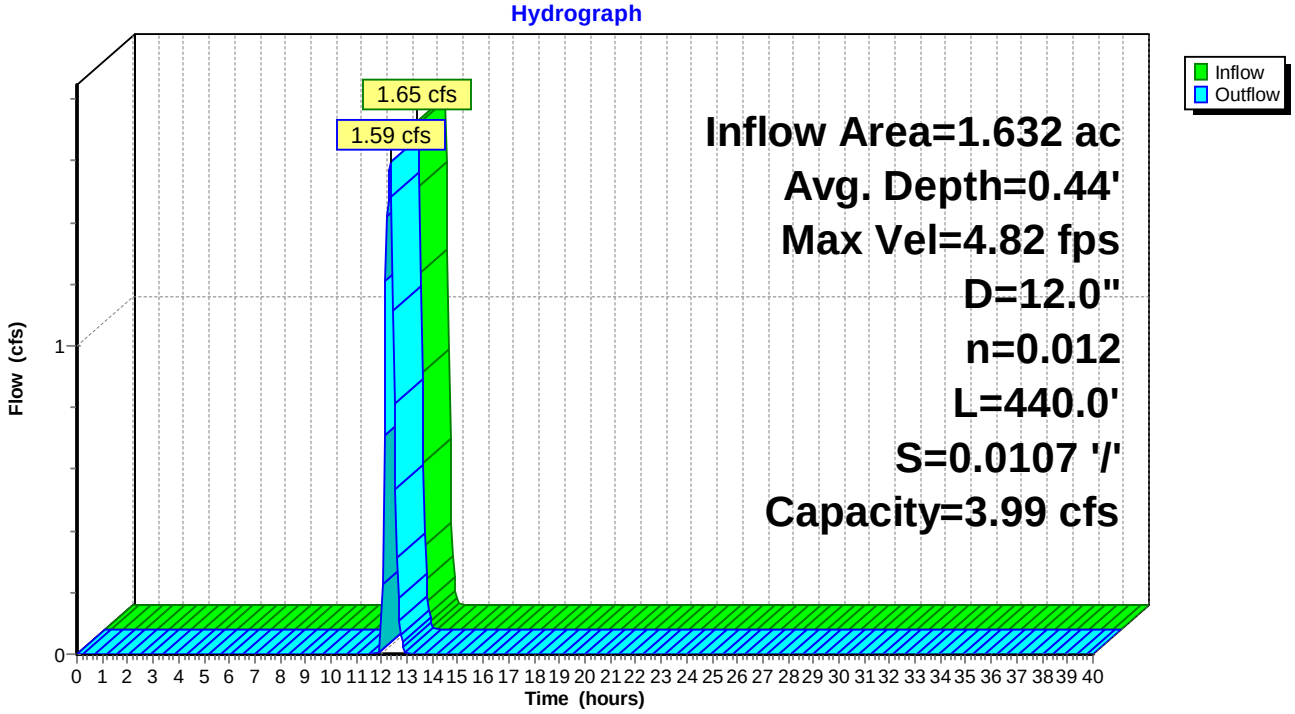
Routing by Stor-Ind+Trans method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.82 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 1.79 fps, Avg. Travel Time= 4.1 min

Peak Storage= 149 cf @ 12.30 hrs, Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 3.99 cfs

12.0" Diameter Pipe, n= 0.012
Length= 440.0' Slope= 0.0107 '/'
Inlet Invert= 111.20', Outlet Invert= 106.50'



Reach 1R: 12" Storm Drain



Summary for Pond DS-2: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 4.69" for 25-Year Storm event
Inflow = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af
Outflow = 0.45 cfs @ 12.32 hrs, Volume= 0.086 af, Atten= 60%, Lag= 13.8 min
Discarded = 0.28 cfs @ 11.80 hrs, Volume= 0.083 af
Primary = 0.17 cfs @ 12.32 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 116.10' @ 12.32 hrs Surf.Area= 1,600 sf Storage= 689 cf

Plug-Flow detention time= 11.9 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 11.9 min (787.4 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

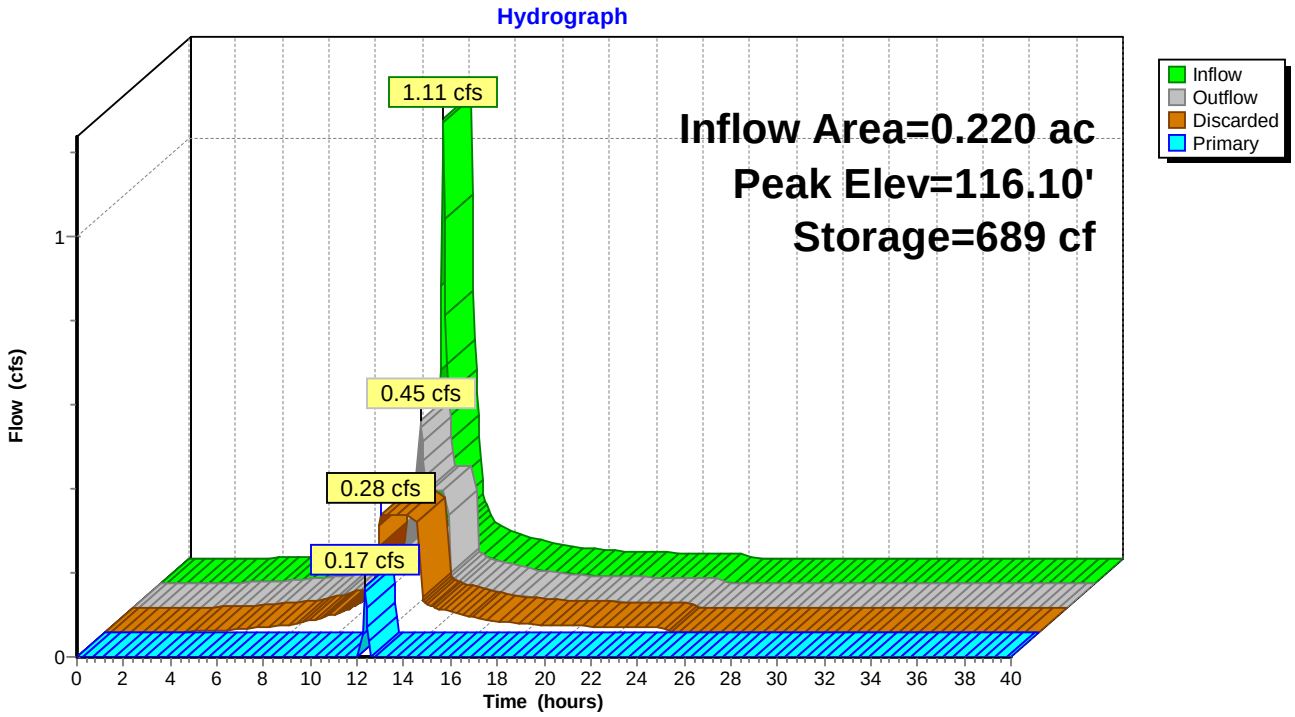
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.80 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.16 cfs @ 12.32 hrs HW=116.10' (Free Discharge)
↑—**2=Orifice/Grate** (Weir Controls 0.16 cfs @ 1.03 fps)

Pond DS-2: Drip Strip



Summary for Pond DS-3: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 4.69" for 25-Year Storm event
Inflow = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af
Outflow = 0.45 cfs @ 12.32 hrs, Volume= 0.086 af, Atten= 60%, Lag= 13.8 min
Discarded = 0.28 cfs @ 11.80 hrs, Volume= 0.083 af
Primary = 0.17 cfs @ 12.32 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 116.10' @ 12.32 hrs Surf.Area= 1,600 sf Storage= 689 cf

Plug-Flow detention time= 11.9 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 11.9 min (787.4 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

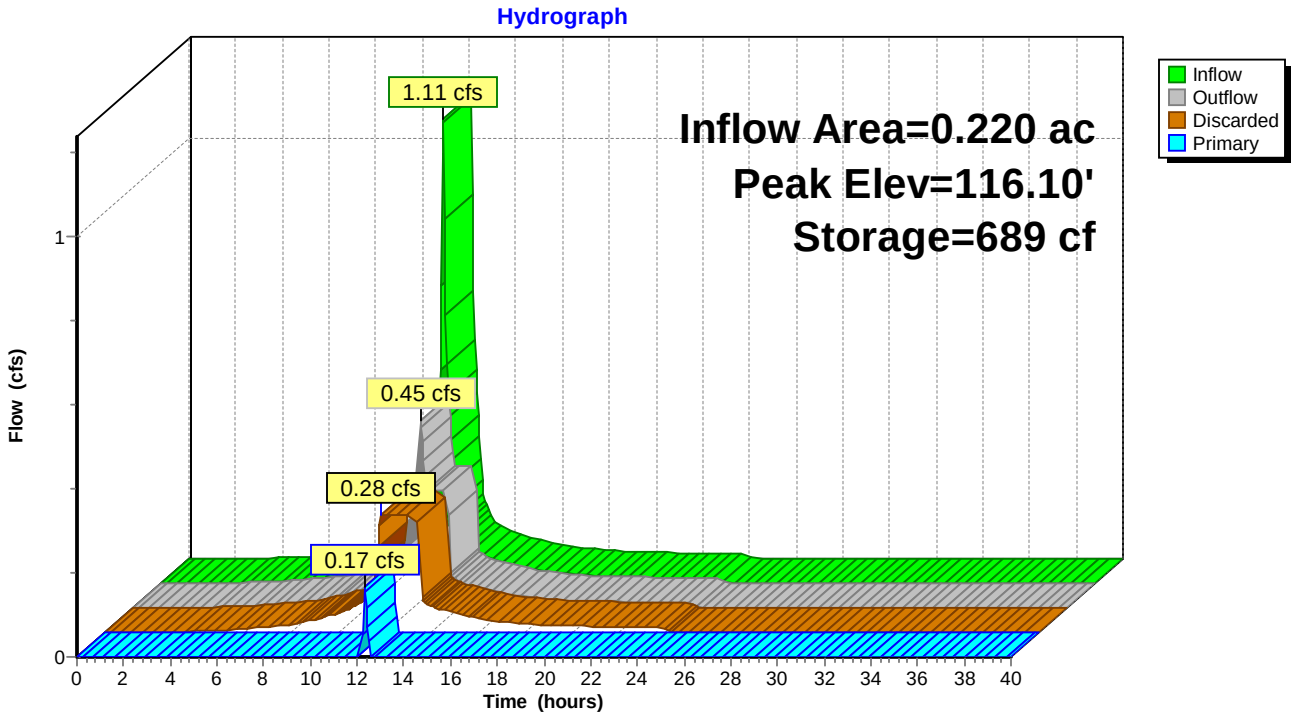
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.80 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.16 cfs @ 12.32 hrs HW=116.10' (Free Discharge)
↑—**2=Orifice/Grate** (Weir Controls 0.16 cfs @ 1.03 fps)

Pond DS-3: Drip Strip



Summary for Pond DS-4: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 4.69" for 25-Year Storm event
Inflow = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af
Outflow = 0.45 cfs @ 12.32 hrs, Volume= 0.086 af, Atten= 60%, Lag= 13.8 min
Discarded = 0.28 cfs @ 11.80 hrs, Volume= 0.083 af
Primary = 0.17 cfs @ 12.32 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 116.10' @ 12.32 hrs Surf.Area= 1,600 sf Storage= 689 cf

Plug-Flow detention time= 11.9 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 11.9 min (787.4 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

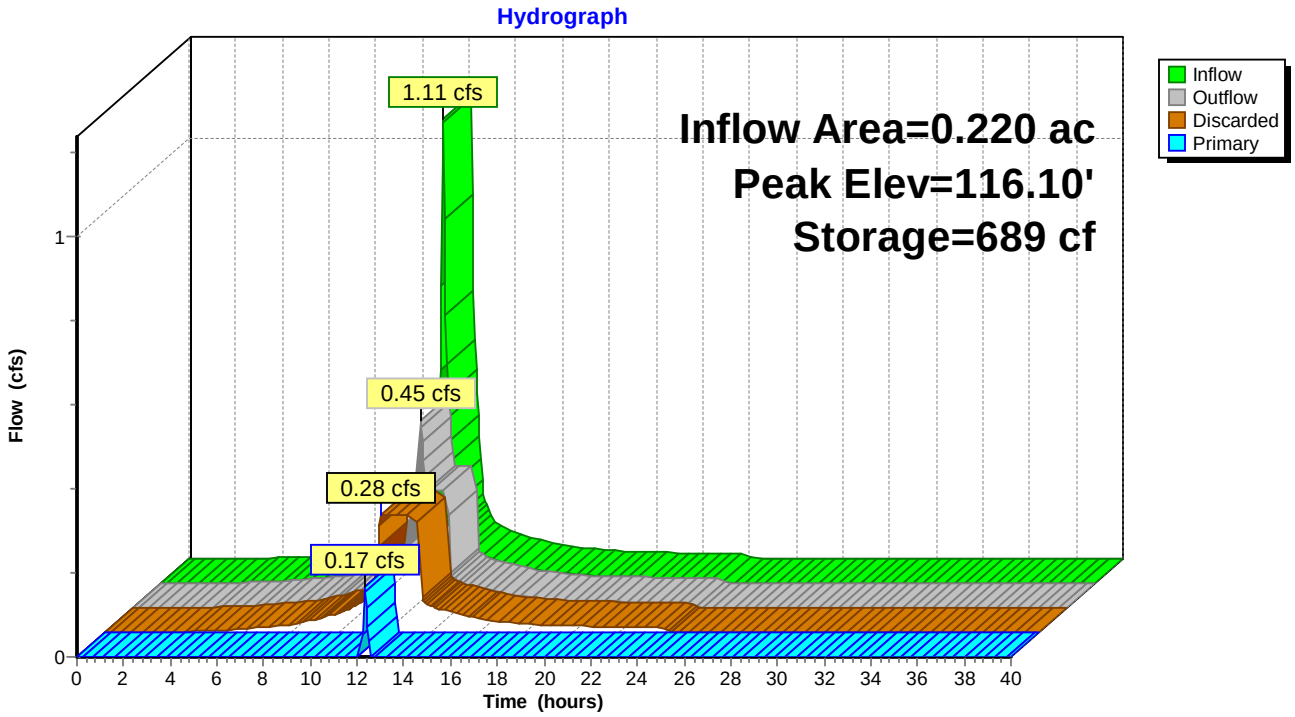
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.80 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.16 cfs @ 12.32 hrs HW=116.10' (Free Discharge)
↑—**2=Orifice/Grate** (Weir Controls 0.16 cfs @ 1.03 fps)

Pond DS-4: Drip Strip



Summary for Pond DS1: Drip Strip

Inflow Area = 0.220 ac, 79.17% Impervious, Inflow Depth = 4.69" for 25-Year Storm event
Inflow = 1.11 cfs @ 12.09 hrs, Volume= 0.086 af
Outflow = 0.45 cfs @ 12.32 hrs, Volume= 0.086 af, Atten= 60%, Lag= 13.8 min
Discarded = 0.28 cfs @ 11.80 hrs, Volume= 0.083 af
Primary = 0.17 cfs @ 12.32 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 116.10' @ 12.32 hrs Surf.Area= 1,600 sf Storage= 689 cf

Plug-Flow detention time= 11.9 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 11.9 min (787.4 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	3,040 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

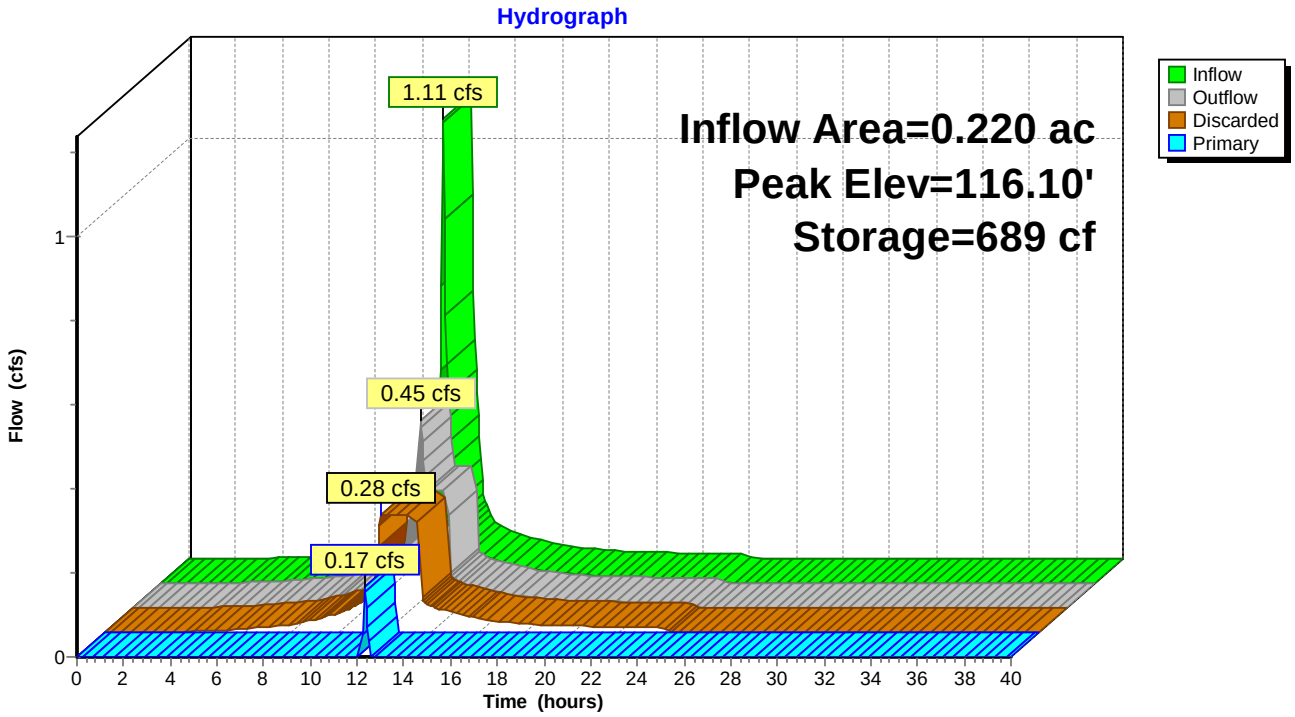
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	1,600	0.0	0	0
116.00	1,600	40.0	640	640
117.00	1,600	30.0	480	1,120
118.00	1,600	40.0	640	1,760
119.00	1,600	40.0	640	2,400
120.00	1,600	40.0	640	3,040

Device	Routing	Invert	Outlet Devices
#1	Discarded	115.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	116.00'	**6.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.28 cfs @ 11.80 hrs HW=115.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.16 cfs @ 12.32 hrs HW=116.10' (Free Discharge)
↑—**2=Orifice/Grate** (Weir Controls 0.16 cfs @ 1.03 fps)

Pond DS1: Drip Strip



Summary for Pond IT-1: Infiltration Trench

Inflow Area = 0.360 ac, 71.60% Impervious, Inflow Depth = 3.43" for 25-Year Storm event
Inflow = 1.41 cfs @ 12.09 hrs, Volume= 0.103 af
Outflow = 1.21 cfs @ 12.14 hrs, Volume= 0.103 af, Atten= 15%, Lag= 3.1 min
Discarded = 0.22 cfs @ 11.70 hrs, Volume= 0.077 af
Primary = 0.99 cfs @ 12.14 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 113.18' @ 12.14 hrs Surf.Area= 1,250 sf Storage= 442 cf

Plug-Flow detention time= 5.4 min calculated for 0.103 af (100% of inflow)
Center-of-Mass det. time= 5.3 min (820.4 - 815.1)

Volume	Invert	Avail.Storage	Storage Description
#1	112.00'	2,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

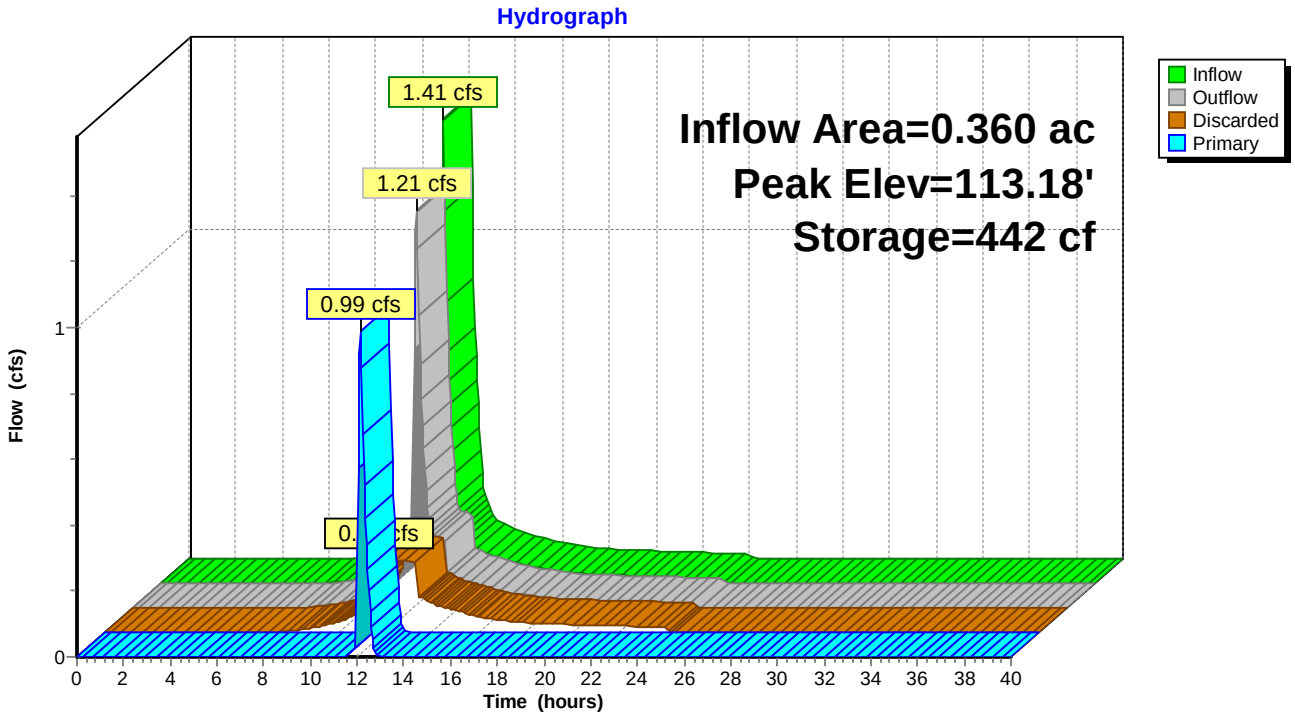
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
112.00	1,250	0.0	0	0
113.00	1,250	30.0	375	375
114.00	1,250	30.0	375	750
115.00	1,250	40.0	500	1,250
116.00	1,250	40.0	500	1,750
117.00	1,250	40.0	500	2,250

Device	Routing	Invert	Outlet Devices
#1	Discarded	112.00'	**7.500 in/hr Exfiltration over Surface area**
#2	Primary	112.50'	**8.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.22 cfs @ 11.70 hrs HW=112.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

Primary OutFlow Max=0.98 cfs @ 12.14 hrs HW=113.17' (Free Discharge)
↑—**2=Orifice/Grate** (Orifice Controls 0.98 cfs @ 2.80 fps)

Pond IT-1: Infiltration Trench



Summary for Pond RG-1: Rain Garden

Inflow Area = 0.168 ac, 58.87% Impervious, Inflow Depth = 2.77" for 25-Year Storm event
Inflow = 0.53 cfs @ 12.09 hrs, Volume= 0.039 af
Outflow = 0.40 cfs @ 12.17 hrs, Volume= 0.039 af, Atten= 26%, Lag= 4.7 min
Discarded = 0.08 cfs @ 11.75 hrs, Volume= 0.029 af
Primary = 0.32 cfs @ 12.17 hrs, Volume= 0.010 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.73' @ 12.17 hrs Surf.Area= 460 sf Storage= 187 cf

Plug-Flow detention time= 5.7 min calculated for 0.039 af (100% of inflow)
Center-of-Mass det. time= 5.7 min (838.5 - 832.8)

Volume	Invert	Avail.Storage	Storage Description
#1	114.50'	1,185 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

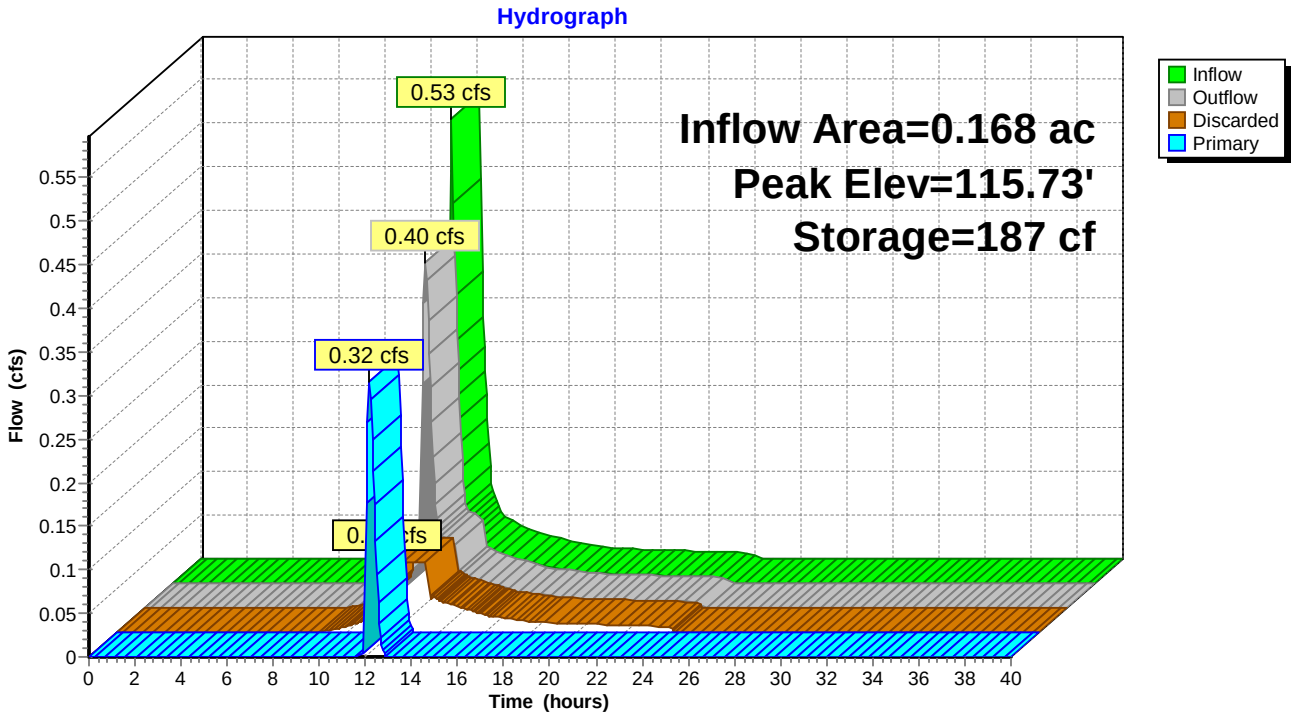
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.50	460	33.0	0	0
115.00	460	33.0	76	76
115.50	460	33.0	76	152
116.00	460	33.0	76	228
116.50	460	100.0	230	458
117.00	460	100.0	230	688
117.50	505	100.0	241	929
118.00	520	100.0	256	1,185

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.50'	**7.500 in/hr Exfiltration over Surface area**
#2	Device 3	115.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	114.50'	**8.0" x 150.0' long Culvert** Ke= 0.500
			Outlet Invert= 111.00' S= 0.0233 '/' Cc= 0.900 n= 0.012
#4	Device 3	117.50'	**10.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.08 cfs @ 11.75 hrs HW=114.55' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.31 cfs @ 12.17 hrs HW=115.71' (Free Discharge)
└**3=Culvert** (Passes 0.31 cfs of 1.57 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.31 cfs @ 3.55 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond RG-1: Rain Garden



Summary for Pond RG-2: Rain Garden

Inflow Area = 0.223 ac, 57.38% Impervious, Inflow Depth = 2.68" for 25-Year Storm event
Inflow = 0.68 cfs @ 12.09 hrs, Volume= 0.050 af
Outflow = 0.38 cfs @ 12.24 hrs, Volume= 0.050 af, Atten= 44%, Lag= 8.6 min
Discarded = 0.17 cfs @ 11.85 hrs, Volume= 0.043 af
Primary = 0.21 cfs @ 12.24 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 115.43' @ 12.24 hrs Surf.Area= 960 sf Storage= 294 cf

Plug-Flow detention time= 6.4 min calculated for 0.050 af (100% of inflow)
Center-of-Mass det. time= 6.4 min (841.7 - 835.3)

Volume	Invert	Avail.Storage	Storage Description
#1	114.50'	2,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

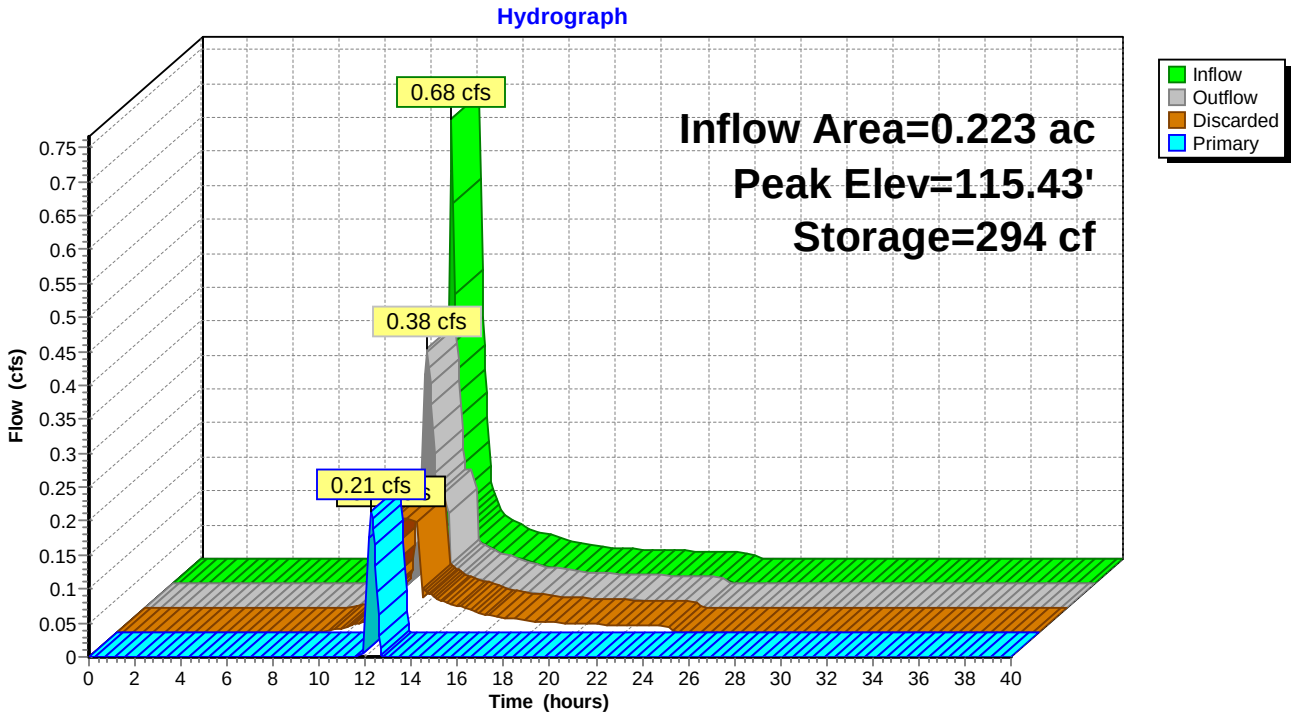
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.50	960	33.0	0	0
115.00	960	33.0	158	158
115.50	960	33.0	158	317
116.00	960	33.0	158	475
116.50	960	33.0	158	634
117.00	960	100.0	480	1,114
117.50	1,040	100.0	500	1,614
118.00	1,200	100.0	560	2,174

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.50'	**7.500 in/hr Exfiltration over Surface area**
#2	Device 3	115.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	114.50'	**8.0" x 150.0' long Culvert** Ke= 0.500
			Outlet Invert= 111.00' S= 0.0233 '/' Cc= 0.900 n= 0.012
#4	Device 3	117.50'	**10.0" Horiz. Orifice/Grate** Limited to weir flow C= 0.600

Discarded OutFlow Max=0.17 cfs @ 11.85 hrs HW=114.54' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.17 cfs)

Primary OutFlow Max=0.21 cfs @ 12.24 hrs HW=115.42' (Free Discharge)
└**3=Culvert** (Passes 0.21 cfs of 1.29 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.21 cfs @ 2.44 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond RG-2: Rain Garden

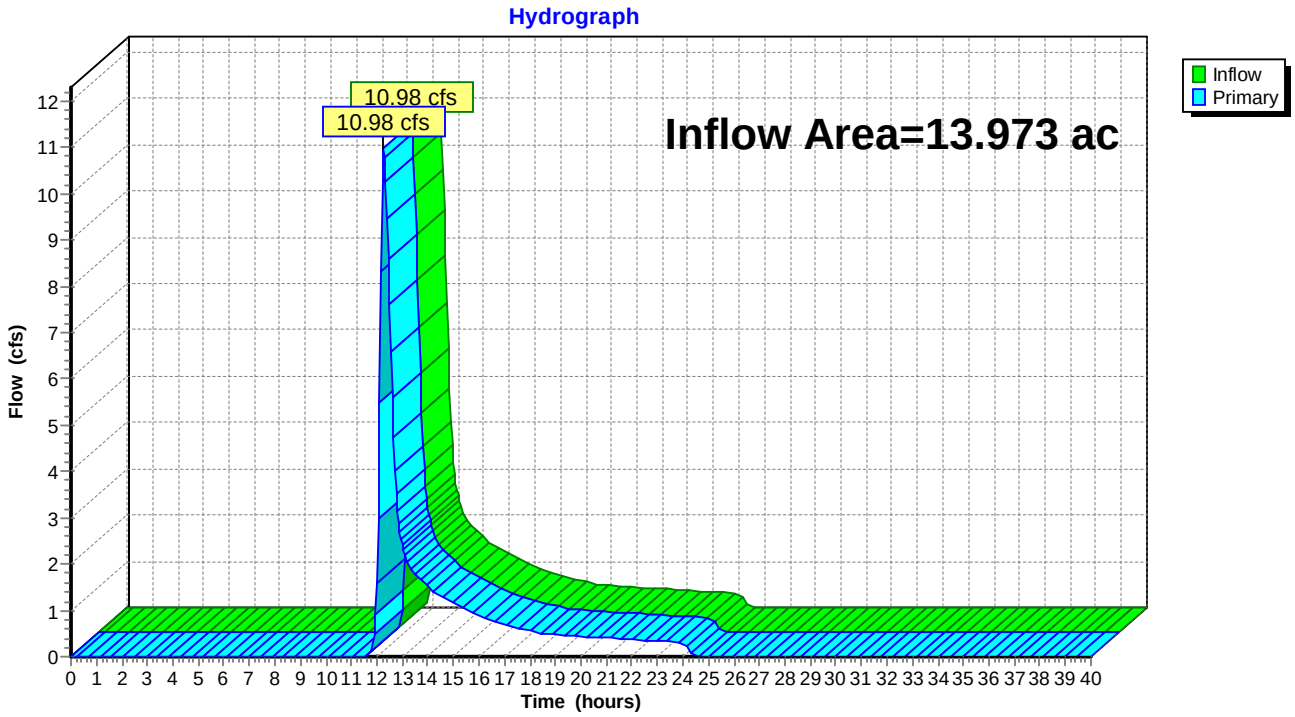


Summary for Link DP#1: Design Point

Inflow Area = 13.973 ac, 25.37% Impervious, Inflow Depth = 1.02" for 25-Year Storm event
Inflow = 10.98 cfs @ 12.27 hrs, Volume= 1.187 af
Primary = 10.98 cfs @ 12.27 hrs, Volume= 1.187 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs

Link DP#1: Design Point



ATTACHMENT D

Stormwater Operations and Maintenance Manual

OPERATIONS AND MAINTENANCE MANUAL FOR STORMWATER MANAGEMENT AND RELATED STORMWATER FACILITIES

MOTHERHOUSE SENIOR HOUSING
605 STEVENS AVENUE
PORTLAND, MAINE

PREPARED FOR:

MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET
SUITE 414
PORTLAND ME 04101

PREPARED BY

FAY, SPOFFORD & THORNDIKE, INC.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, MAINE 04106
(207) 775-1121

JUNE 2015

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APPENDICES

Appendix A – Sample Inspection Logs

Appendix B – Permits for Project

Appendix C – Summary Checklist for Inspection and Maintenance

I. INTRODUCTION

Relatively complex stormwater management facilities are commonly installed in development projects including, commercial facilities, and many other developments. The complexity and goals of these systems vary with the nature of the receiving water, as well as the type of development. Runoff from developed areas of the project, including rooftops, paved, or lawn areas typically contain materials that can impact the receiving waters. Source control and the installation of wet ponds, infiltration galleries, and proprietary water quality units such as Filterra® and StormTreat™ units are often combined with pretreatment measures or vegetated buffer strips and other best management practices are also among the options that can significantly reduce the non-point pollution discharge from the developed area. These measures are particularly important to projects in the watersheds of sensitive water bodies, or projects with potential impacts to groundwater. With the increased cost of land and development, there is an increased tendency to construct portions of the stormwater management systems underground.

The effectiveness of water quality management provisions and other components of the stormwater management system are dependent on their design, upkeep, and maintenance to assure they meet their intended function over an extended period of years. It is critical that the stormwater management facilities are regularly inspected, and that maintenance is performed on an as-needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that collect and transport the flow to the ponds, infiltration galleries, and other treatment measures. Thus, maintenance should be directed to the total system, not just the pond or primary stormwater management facility.

The purpose of this document is to define, in detail, the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended when they were designed. Subsequent sections identify individual maintenance items; give a brief commentary of the function and need for the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program for operation and maintenance. Certain facilities, specifically the potential water quality volume storage or treatment measures such as infiltration, Filterra®, and StormTreat® are not intended to be placed in service until the tributary catchment area has the permanent cover in place and any contributing turf areas have achieved a 90% catch of vegetation (i.e. established).

A. GUIDELINES OVERVIEW

A summary of the individual components of stormwater management facilities for this project has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer on the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

This report includes the Operation and Maintenance requirements for any potential BMP identified in the Stormwater Management Report for this project. Many of these will not be required for the final stormwater management option selected for this project.

B. RESPONSIBLE PARTY

The responsible party for operation and maintenance of the stormwater and other site infrastructure is Motherhouse Associates, LP.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

· City of Portland Level III Site Plan Review

A copy of the permits and Stormwater Management Report should be appended to this manual as Appendix B. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained FST for civil engineering for the Motherhouse project. FST has prepared the design for the stormwater management facilities and may be contacted at:

FST
778 Main Street, Suite 8
South Portland, Maine 04106
(207) 775-1121

It is recommended the preparer of the plan be contacted with any particular questions on the design intent or similar issues.

The applicable plans and design documents, which apply to the project, are:

1. Civil Site Plans Prepared by FST
2. The Erosion Control/Sedimentation Control Plan for the project
3. The Stormwater Management Plan for the project

A copy of these documents should be retained with this manual.

The proposed design includes inlets, stormwater conveyance lines, bioswales, underdrained treatment swales, a wet detention pond, manholes, diversion structures, outlet control structures, and backwater isolation valves.

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management system. These O&M procedures will complement scheduled sweeping of the parking deck which are anticipated to occur at least twice per year. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff.

A. STORMWATER INLETS

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets may include catch basins, open culverts, culverts with bar screens, roof scuppers, plaza scuppers, trench drains, and field inlets. Inlets exist throughout the system.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Landscape services
- Building maintenance areas
- Grounds maintenance

The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets on parking decks or plaza areas. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the building.

Frequency: All inlets should be inspected on a quarterly basis, and after/during significant storm events.

Maintenance/Inspection Responsibility:

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/inspections of the inlets and tributary drainage system.

Comments: Maintenance of inlets is critical on this project.

POORLY STABILIZED INLET ALLOWS ENTRANCE OF DEBRIS AND REDUCED CAPACITY

STABILIZED INLETS REDUCE DEBRIS ACCUMULATION AND MAINTAIN DESIGN CAPACITY

B. TRIBUTARY DRAINAGE SYSTEM

Preface: The stormwater conveyance system will be principally overland flow discharging to piped drain systems. Most of the sediment is carried by the drainage system is intended to be trapped near the inlets or in pretreatment devices. Maintenance of this system can play a major role in the long-term maintenance costs and the effectiveness of the pond system.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that its carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with debris. The inlet catch basins are normally equipped with sumps and hooded outlets which will remove gross floatables and large sediment particles from the flow stream.

The level of sediment in the sumps should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

In some projects most of the stormwater is carried in open swales, channels, or ditches. These conveyance channels may be rip rapped or vegetated, depending on the gradient and expected flow velocities. These facilities must be inspected to insure debris or sedimentation does not reduce their carrying capacity. Excess vegetative growth must also be noted. The surface protection for the channels, either stone or vegetation, must be inspected to insure its integrity. Any areas subject to erosion should be noted.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sedimentation to any downstream detention pond, or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. If a filter bag has been designated for the inlet silt or other deleterious materials, can significantly reduce

capacity and the bags should be removed with the sediment and replaced. Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the retail center. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline is observed, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed. The tidal influence can aggregate sedimentation since there are periods of no flow. Backwater valves and connection points are intended to reduce this occurrence.

Frequency: The piped drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps and pipelines will depend on the rate of accumulation.

Maintenance/Inspection Responsibility:

Special Services: The owner will contract with an independent agent for cleaning of replacement of catch basins, sumps, and pipelines. Remedial source control measures may be performed by the owner or an outside service depending upon the nature of the particular situation.

Comments: Maintenance of inlets of utmost importance to the project to avoid unintended roof loading, ice accumulation, and cleanliness of the floors of the building.

A WELL-STABILIZED VEGETATED SWALE SHOWS LITTLE SIGNS OF EROSIVE VELOCITIES OR FLOWS. THIS SWALE ALSO FUNCTIONS AS A POND SPILLWAY

C. BIORETENTION CELLS

Preface: Bioretention cells offer efficient and effective treatment of runoff from small contributing pavement and impervious areas. They can be integrated into existing landscaping and are generally low-maintenance BMPs. It is, however, still important to monitor these areas for sediment build up an erosion to assure that capacity remains to accomplish the intended water quality function.

Inspection: Inspections of bioretention cells should be undertaken on an annual basis by a qualified stormwater professional. Sediment build up or erosion of the cell should be identified, as should any evidence of standing water, or prolonged saturation.

Maintenance: Routine maintenance will include inspection of soils and plantings, removal of dead vegetation and any accumulated sediments. Should the cell show signs of reduced drainage capacity it may be necessary to rototill or remove the top soil layer.

Frequency: Inspections should be undertaken at a minimum on a bi-annual basis.

Maintenance/Inspection Responsibility:

Special Services: The owner will contract with an independent stormwater system maintenance Contractor to undertake maintenance inspections of these BMPs.

D. DRIP EDGE FILTERS

Preface: Roof drip edge filters perform two critical functions. They control erosion by accepting roof runoff on a stable, highly pervious surface, and then store and infiltrate the runoff to underlying soils, or an underdrain system.

Inspection/Monitoring: The surface of the drip edge should be inspected periodically for debris accumulation and function.

Maintenance: Periodic maintenance of the drip edge will include removal of debris and fine sediment that may accumulate in the surface stone. Occasional raking or smoothing of the surface may be required.

Frequency: Inspections of the drip edge stone should be undertaken at a minimum on a bi-annual basis.

Maintenance/Inspection Responsibility:

Special Services: The owner will contract with an independent stormwater system maintenance Contractor to undertake maintenance inspections of these BMPs.

E. INFILTRATION TRENCH

Preface: The infiltration trench performs in a similar manner to the roof drip edge filters. However, due to the proximity of grass areas and the source of runoff to this area (from pavement as opposed to roof), it will be more susceptible to failure. Therefore, inspections of the infiltration trench should be more frequent and rigorous.

Inspection: The surface stone of the infiltration trench is the most critical inspection area. Debris or fine material accumulating in the surface should be removed immediately to prevent it from migrating lower into the stone section and clogging the trench.

Frequency: The surface of the infiltration trench will need to be inspected on a quarterly basis so that prompt action can be taken to remove any accumulated debris or sediment.

Maintenance/Inspection Responsibility:

Special Services: The owner will contract with an independent stormwater system maintenance Contractor to undertake maintenance inspections of these BMPs.

F. LITTER

Litter should be removed as a matter of course by workers and a part of the grounds maintenance contract.

G. SUMMARY CHECKLIST

The above described inspection and maintenance items have been summarized on a checklist attached hereto as Appendix C.

IV. PROGRAM ADMINISTRATION

A. GENERAL

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities.

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs, or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

6. A qualified post construction inspector shall be retained by the Owner. His duties shall include preparing schedules for the Owner's maintenance, summarizing the results of this maintenance and preparing an annual report on the operation, maintenance, and repair of the stormwater system which must be copied to the Town. (The Owner shall be responsible for retaining a separate entity to perform maintenance which cannot be performed by the management of building and property grounds.) This person shall also participate in troubleshooting of the stormwater management system if a problem develops.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. RECORD KEEPING

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Appendix B.

C. CONTRACT SERVICES

In some instances or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases, the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

APPENDIX A

Sample Inspection Logs

MOTHERHOUSE ASSOCIATES, LP
PORTLAND MAINE

STORMWATER MANAGEMENT
WATER QUALITY STORAGE OR WET POND
ANNUAL INSPECTION & MAINTENANCE LOG

FACILITY:		**YEAR:**	
LOCATION:		**CONTRACTOR:**	
FUNCTION:		**INSPECTOR:**	
DATE OF INSPECTION:			
ITEM IDENTIFICATION	**DESCRIPTION OF CONDITIONS**	**MAINTENANCE ACCOMPLISHED**	**DATE OF MAINTENANCE**
GENERAL COMMENTS:			

SAMPLE

MOTHERHOUSE ASSOCIATES, LP
PORTLAND MAINE

STORMWATER MANAGEMENT BMP
MONTHLY INSPECTION & MAINTENANCE LOG

FACILITY:			YEAR:			
LOCATION:			CONTRACTOR:			
FUNCTION:						
				OVERFLOW WEIR		
MONTH	DAY	INSPECTOR	WATER DEPTH	CLEAR	DEBRIS	WEIR CONDITION
JANUARY						
FEBRUARY						
MARCH						
APRIL						
MAY						
JUNE						
JULY						
AUGUST						
SEPTEMBER						
OCTOBER						
NOVEMBER						
DECEMBER						
LIST SPECIAL MAINTENANCE UNDERTAKEN:						

MOTHERHOUSE ASSOCIATES, LP
PORTLAND MAINE

STORMWATER MANAGEMENT BMP
SEMI-ANNUAL INSPECTION & MAINTENANCE LOG

SEMI-ANNUAL INSPECT 1.2	FACILITY:
DATE:	LOCATION:
INSPECTOR:	FUNCTION:
BMP CONDITION:	
OUTLET CONDITION	

DEBRIS PRESENT	EST. DEPTH SED.	REMOVED? Y/N	EST. VOL. CY	WHERE DISPOSED OF	STRUCTURAL CONDITION

CONTROL STRUCTURE:
DESCRIBE CONDITIONS FOUND & MAINTENANCE ACCOMPLISHED:

APPENDIX B

Permits for Project

(To be Added at a Subsequent Time)

APPENDIX C

Summary Checklist
Inspection and Maintenance

Stormwater Management System Maintenance Program Summary Checklist						
Item	**Commentary**	**Frequency**				
		Monthly	**Quarterly**	**Semi-Annual**	**Annual**	**Long Term**
Stormwater Inlets	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.		X		X Clearing	
Tributary Drainage System	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Bioretention Cells	Inspect outlet control structure, remove dead vegetation, check for erosion, or evidence of standing water.			X		
Drip Edge Filters	Observe surface stone, rake, and remove debris as necessary.			X		
Infiltration Trench	Observe surface stone for accumulation of debris or sediment – remove immediately. Check groundwater level using inspection ports or cleanouts.		X		X	
Litter	Litter should be removed daily.					
Pavement Sweeping	Pavements should be swept at least twice annually, once in Spring			X		

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS

July 8, 2015

Ms. Jean Fraser, Planner
City of Portland
389 Congress St
Portland, ME 04101

RE: Motherhouse Staff Review-Errico Comments

Dear Jean,

On behalf of Motherhouse Apartments LP we are providing the following responses to the Staff Memo from Tom Errico on July 1, 2015. Please consider the following:
Comment:

1. *The traffic impact study notes that the project will generate 18 AM peak hour and 22 PM peak hour trips. I need to review this in more detail but given the volumes estimated, the project would not be expected to have a significant impact on traffic conditions in the area.*
   Response: No comment needed.

2. *As noted in the traffic impact study, there are no identified High Crash Locations in the project area.*
   Response: No comment needed.

3. *The High School Parking lot layout is being modified. Dimensional details for the proposed layout should be provided.*
   Response: We will add the dimensional details for the restriping of the McAuley parking lot on the Site Plan. The intent is that all parking lot striping will meet City Standards.

4. *The modified driveway at Walton Street seems very wide with 15-foot entry and exit lanes. The applicant should provide information in support of the driveway design*.
   Response: The entrance and exist lanes are widened to accommodate anticipated school bus, service and emergency vehicles entering and exiting the site. The median island restricts truck maneuvering into and out of the site. We will provide turning templates for the intersection and adjust the width accordingly, if it is possible to reduce the width we will do so.

5. *The aisle width (22 feet) adjacent to the 8 parking spaces on the one-way egress road near Stevens Avenue does not meet City standards. Information in support of a formal technical standard waiver request shall be provided.*
   Response: As indicated in Tom's comment above, the access aisle is one way and will provide minimal traffic from the property existing onto Stevens Avenue. The existing drive at Stevens Ave is approximately 14 feet wide at the intersection and restricted by an existing historic fence and gate, then widens at the existing parking area and continuing into the site. The parking is existing and the intent is to utilize the existing spaces. Due to the low volume of traffic and small number of parking spaces (8), we believe the 22- foot width is justified. We are also bound by NPS Guidelines relating to the Historic Tax Credits for the Motherhouse, and National

Park Service standards indicate that, when using historic tax credits, the portions of sites viewed from a public way should be kept in as close condition as possible to the historic layout while allowing for a new use.

6. *The applicant should provide dimensional details for the area on the north side of the building where the 5 and 10 space parking areas are located.*
   Response: We will provide requested details on a revised Site Plan. The intent is for the parking spaces and drive aisles to meet City Standards.

7. *The applicant should review landscaping and other features as it relates to providing safe sight distance when existing the site onto Stevens Avenue. I am particularly concerned about safety for pedestrians on the sidewalk.*
   Response: Existing site features at this intersection include a wrought iron fence, privet hedge, and other assorted landscaping. We will review the existing fencing, gates, and landscaping with site distances and provide documentation to the visibility and safety of pedestrian circulation in this area.

8. *A crosswalk is located at the egress driveway on Stevens Avenue and will need to be upgraded to meet accessibility standards. I would also like to review the location of the crosswalk to determine optimal placement.*
   Response: Tom E. refers to an existing mid-block crosswalk that will be maintained, but does not currently meet accessibility standards on either side of Stevens Avenue. We will add a note to the plans indicating final location will be coordinated with City staff and will ensure it is designed to meet all ADA requirements.

9. *A detail should be provided for the sidewalk ramp at the driveway on Walton Street to ensure that it is fully accessible.*
   Response: A detail will be added to the site detail sheet that ensures the sidewalk ramp is fully accessible.

10. *The project is proposing three driveways and exceeds City standards. I support a waiver from this standard given that two of the driveways are one-way and the third driveway functions as a shared driveway with the High School.*
    Response: No comment needed. A formal waiver from this standard will be requested.

11. *The applicant should provide documentation that supports the parking supply being provided. The applicant shall conduct parking surveys (or obtain previously conducted surveys) at similar sites that are located off-peninsula. The applicant shall coordinate the methods of the survey with City staff.*
    Response: The parking supply indicated on the plan describes a total of 73 spaces, with uses allocated between the Motherhouse tenants and the existing office use in the Smith Wing. We anticipate that a total of 62 spaces will be utilized by the tenants, and 11 spaces will be used by visitors or the McAuley Staff utilizing the adjacent Smith Wing. We believe the ratio of 0.70 spaces/ DU is consistent with the needs of the senior population in the Motherhouse and in line with other on and off peninsula senior housing projects in the Portland area. See attached Parking Demand memo from Maine Traffic Solutions.

I hope this helps to move the traffic comments forward, as always we appreciate working closely with Staff and anticipate full discussion of these items with you and the Board. Please do not hesitate to contact me if you have other comments or need additional information.

Regards,
CARROLL ASSOCIATES

Patrick Carroll, Principal

CC: Kevin Bunker
Matt Teare
Rick Licht
Diane Morabito

Att.

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

SUMMARY MEMORANDUM

TO: Mr. Matthew D. Teare
Director of Development
Sea Coast Management Company
30 Governors Way
Topsham, Maine 04086

DATE: July 8, 2015

RE: Parking Analysis for Motherhouse Senior Housing off Stevens Avenue in Portland

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This summary memorandum for the Motherhouse Senior Housing is written in response to Tom Errico's July 1st email request for:

> "the applicant should provide documentation that supports the parking supply being provided. The applicant shall conduct parking surveys (or obtain previously conducted surveys) at similar sites that are located off-peninsula. The applicant shall coordinate the methods with the City staff".

Motherhouse Senior Housing will provide 88 dwelling units, 66 of which will be affordable with 22 at market rate. The plan provides 73 parking spaces, which consist of 62 spaces dedicated to the dwelling units and 11 additional for guest and McAuley use.

The Institute of Transportation (ITE) "Trip Generation, 4th Edition" report, published in 2010, lists the average peak parking demand as 0.59 vehicles per dwelling unit for land use code 252 – senior housing attached. The range of ITE results is 0.45 to 0.67 vehicles per dwelling unit. Hence, the proposed parking at 62/88 = 0.70 exceeds the ITE peak demand recorded with 11 additional spaces being provided on top of the 0.70.

In addition to the above ITE data, we also have information from several other projects. At the Osprey Circle LIHTC project in South Portland, which is a fairly car dependent location, there are 48 dwelling units. Only 32 residents have vehicles which equates to a similar 0.67 rate.

The applicant has found at both Ocean View in Falmouth and Highlands in Topsham that only 60 to 70 % of residents have cars. This again is covered by the 0.70 rate we are using for Motherhouse Senior Housing, which we expect to be conservative given the urban location and the public transit and walking options that are provided by the Motherhouse.

Lastly, we would like to point out that there are reductions allowed in off-street parking requirement for both affordable housing and historic structures, which both apply to Motherhouse Senior Housing, as noted as follows:

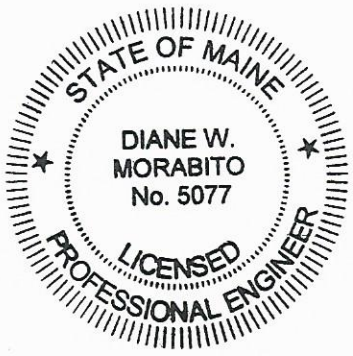
(b) Incentives for affordable housing- parking reductions:

For each affordable housing unit for rent or sale within an eligible project under the Affordable Housing Ordinance established in 14-488(b) of this article, no more than one (1) parking space shall be required. The planning board may establish a parking requirement for affordable housing units for rent or sale within an eligible project that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure.

(d) Exception for historic structures:

No parking in excess of that existing on or servicing the lot as of March 15, 1999 shall be required for any structure under Article IX of this chapter, as a contributing structure in a local or National Register historical district, or as a locally designated or National Register landmark building; however, parking may not be decreased from that existing on or servicing the lot on March 15, 1999 except to the extent necessary to meet the requirements of the Americans with Disabilities Act.

Given the historic nature of the site and the urban location, we are providing what we believe to be more than adequate parking without being excessive. As always, please do not hesitate to contact me if you or the City of Portland have any questions regarding this parking analysis.



Sincerely,

Diane W. Morabito

Diane W. Morabito, P.E. PTOE
President

cc: Rick Licht, Licht Environmental Design, LLC
Tom Errico, TY Lin International
Jean Fraser, City of Portland
Pat Carroll, Carroll Associates
Kevin Bunker, Developers Collaborative

MOTHERHOUSE
SENIOR HOUSING

605 Stevens Ave. | Portland, Maine

MAP 136, LOT E-6

APPLICATION FOR:

Site Plan Review

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:

FAY SPOFFORD & THORNDIKE
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

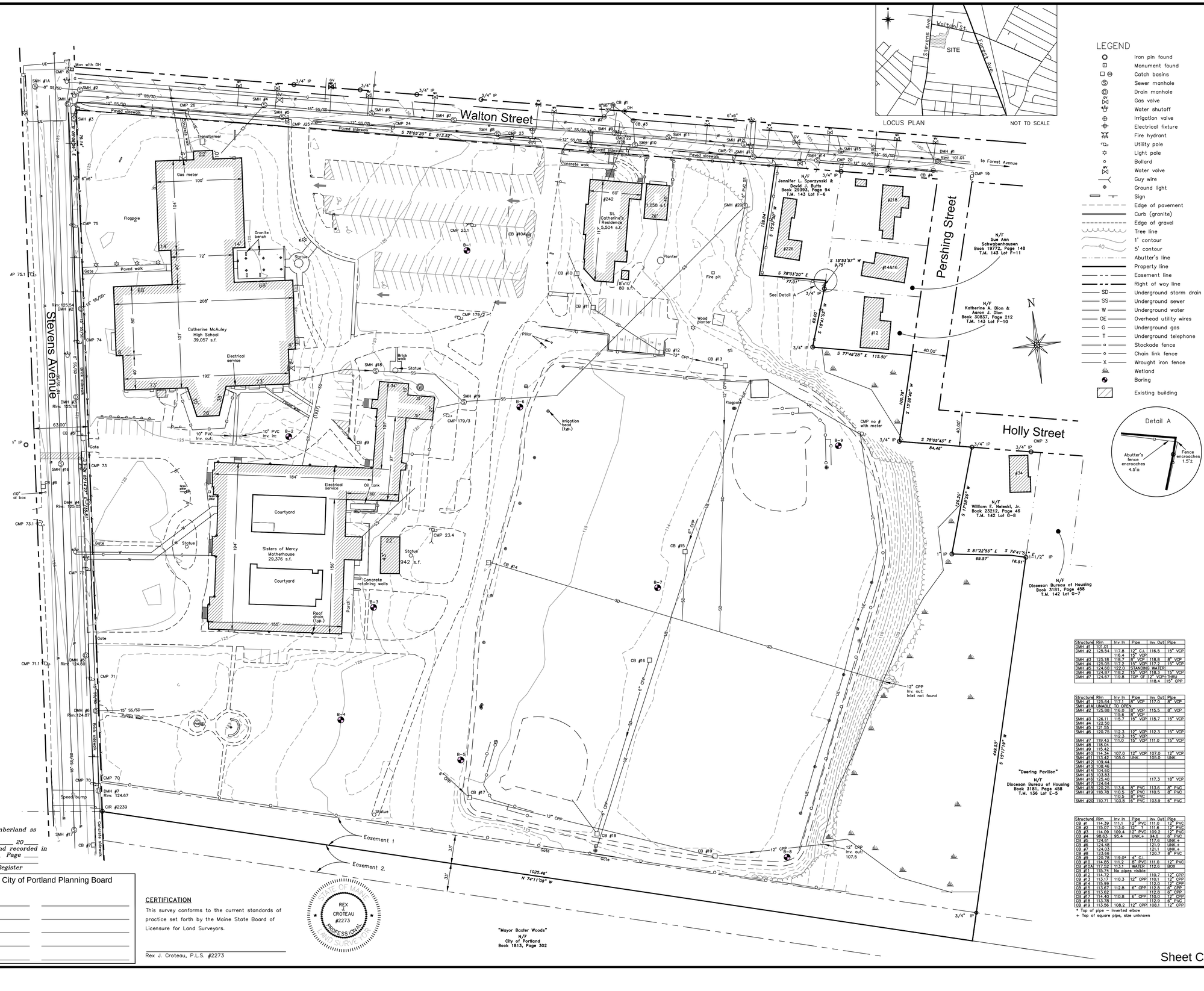
Owner / Applicant:

MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET, SUITE 414
PORTLAND, ME 04101
207.772.7673
rlicht@securespeed.net

LOCATION MAP N.T.S

Index of Drawings:

G1	TITLE / COVER SHEET
C1	EXISTING CONDITIONS
C2	OVERALL SUBDIVISION PLAN
C3	SECTIONAL SUBDIVISION PLAT
C4.0	SITE PLAN
C5.0	UTILITY PLAN
C6.0	GRADING, DRAINAGE & EROSION CONTROL PLAN
L1.0	TREE PRESERVATION PLAN
L2.0	LANDSCAPE & LIGHTING PLAN
L3.0	LANDSCAPE DETAILS
C7.0	UTILITY DETAILS
C7.1	SITE DETAILS
C8.0	STORMWATER & EROSION CONTROL DETAILS
C8.1	EROSION CONTROL NOTES
C9.0	PRE-DEVELOPMENT WATERSHED PLAN
C9.1	POST-DEVELOPENT WATERSHED PLAN
A1.01	GROUND FLOOR PLAN
A1.02	FIRST FLOOR PLAN
A1.03	SECOND FLOOR PLAN
A1.04	THIRD FLOOR PLAN
A1.05	FOURTH FLOOR PLAN
A2.01	SOUTH ELEVATION
A2.02	WEST ELEVATION
A2.03	EAST ELEVATION
A2.04	NORTH ELEVATION
A2.05	ELEVATIONS



LOCUS PLAN — NOT TO SCALE

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	101.01				
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	117.5	15" VCP	117.2	18" VCP
DMH #5	124.60	122.0	STANDING WATER		
DMH #6	124.57	118.2	15" VCP	118.3	15" VCP
DMH #7	124.67	119.8	TOP OF 12" VCP+Thiru		
				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	8" 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" C.I.	112.9	12" PVC
CB #3	114.09	109.4	12" PVC	109.2	12" PVC
CB #4	98.63	95.4	UNK.+	94.6	6" 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	6" CPP	112.8	6" CPP
CB #16	113.62			112.8	6" 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.

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.

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7) Standard Boundary Survey made for Amy Mulkerin by Titcomb Associates, dated July 14, 1987, not recorded.

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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

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 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		

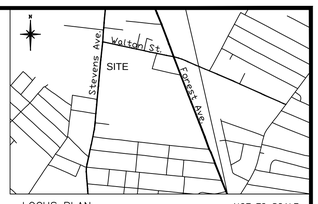
Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

Sheet C1

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

Parcel ID (BASED ON 06-24-)	Gross Acreage (Ac.)	R5A ESTIMATED NRA DEDUCTS per § 14-47 as AMENDED 06-15-15	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
		Deducts:				
Lot 1 St. Catherines	2.36					
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

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.

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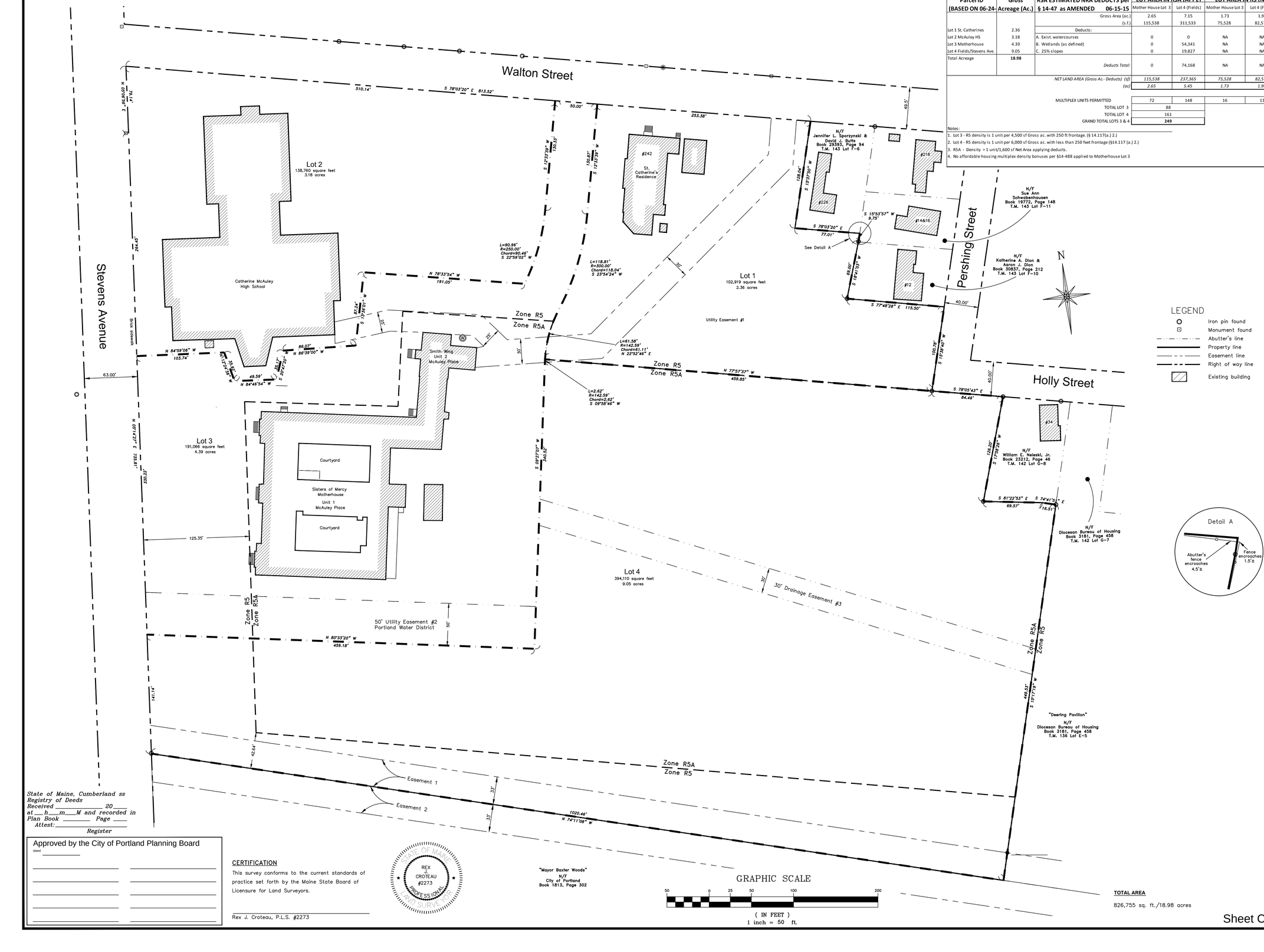
3) No record evidence of an easement for utility poles on the property was found.

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



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

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

TOTAL AREA
826,755 sq. ft./18.98 acres

Sheet C2

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		
202096–2006.dwg			
FILE#	8538		

Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

BUILDING DATA

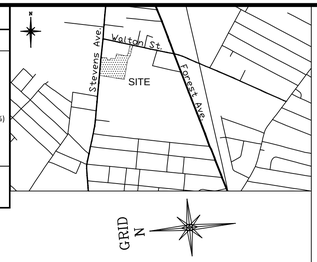
AREAS	MOTHERHOUSE	SMITH WING	TOTAL
UNITS PROPOSED	88	NA	88
BUILDING FOOTPRINT (SF)	24,065	6,612	30,677
TOTAL FLOOR AREA (SF)	102,241	NA	NA

NOTES:
1. NO CHANGE IN EXIST. FOOTPRINT PROPOSED FOR MOTHERHOUSE REDEVELOPMENT.
2. TOTAL FLOOR AREA DOES NOT INCLUDE ATTIC OR CHAPEL.

SITE DATA TABLE

STANDARD	REQUIRED		PROVIDED
	R5	R5A	
MIN. LOT AREA	9000 SF	2 AC	4.35 AC
MIN. FRONTAGE (FT)	50	50	380.2
MIN. YD. DIMENSIONS (FT.)			
A. FRONT YD.	20	25	130.4
B. REAR YD.	20	25	80
C. SIDE YD.	14	16	36.4
MAX. LOT COVERAGE	40%	30%	30,677 SF (16.0%)
MIN. LOT WIDTH (FT.)	90	60	304
MAX. STRUCTURE HEIGHT (FT.)	35	55	58 (EXISTING)
MIN. OPEN SPACE (SF/DU)	300 (PRUD) (2.)	200	373
(SF)		17,600	32,863

NOTES:
1. R5 LOT AREA/DU = 4500 SF WITH 250 FT. FRONTAGE & 6000 SF. WITH <250 FT. FRONTAGE
2. NO OPEN SPACE REQUIREMENT R5 FOR NON-PRUD MULTIPLEX.



LEGEND

- Iron marker – found
- Property line (locus)
- Property line (abutter)
- Right of way line
- Zoning line
- R5A Zone Setback line
- Easement line
- Chain link fence
- Board fence
- Edge of pavement
- Edge of gravel
- Curb
- Sign
- Lamp or light pole
- Utility pole
- Water shutoff
- Gas valve
- Fire hydrant
- Sewer manhole
- Drain manhole
- SS — Sewer line
- SD — Storm drain
- W — Underground water line
- G — Underground gas line
- N/F — Now or formerly of
- 1234/567 — Deed reference (Book/Page)
- Existing building
- Proposed Drive/Parking

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) 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.

4) 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.

5) This Plat for Lot 3 – of of the Motherhouse Senior Apartments has been prepared pursuant to the City of Portland Land Use Code Article IV, Subdivisions, § 14–495(h.) Sectional Recordings, for the re-development of the former St. Joseph's Convent (the Motherhouse) into 88 senior apartments .

6) The "Motherhouse" and connected "Smith Wing" are collectively to be established as a condominium under the Maine Condominium Act, Title 33 Chapter 31 Maine Revised Statutes entitled McAuley Place, the Motherhouse being Unit 1 and the Smith Wing being Unit 2 of said condominium. Approval of this plat creates an 88 unit subdivision of Unit 1 only and does not proposed to subdivide Unit 2.

7) Lot 3 is shown on the approved 4 lot subdivision plat entitled "605 Stevens Avenue", made for Sea Coast at Baxter Woods Associates, LLC prepared by Titcomb Associates, Plan Sheet C2 dated June 24, 2015 and recorded in the CCRD Plan Bk_____ Page_____ on Date_____. All relevant conditions of that plan and approval shall apply to Lot 3.

8) Approval of this Sectional Plat includes by reference the accompanying Site Plans entitled 'Motherhouse Senior Living, prepared by Carroll Associates, et al, dated _____ and approved by the Portland Planning Board on _____.

9) Lot 3 lies within the R5 Residential and R5A Residential zones.

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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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.

10) Plan of Catherine McAuley High School & St. Joseph's Convent made for 605 Stevens Avenue Senior Apartments by Titcomb Associates dated June 24, 2015.

EASEMENTS and ENCUMBRANCES

1) No record evidence of an easement for utility poles on the property was found.

AREA

191,066 sq. ft./4.39 acres

OWNERS OF RECORD

Tax Assessment Map 136, Lot E-6
St. Joseph's Convent and Hospital

Book 486, Page 322	Book 698, Page 427
Book 494, Page 178	Book 821, Page 57
Book 496, Page 71	Book 1649, Page 160
Book 479, Page 327	Book 1652, Page 357
Book 563, Page 275	Book 4067, Page 310
Book 698, Page 426	

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 _____

SCALE IN FEET
30 0 30 60
1" = 30'

PLAN OF LOT 3

Sectional Subdivisional Plat
Motherhouse - 88 Units

Stevens Avenue — Portland, Maine

MADE FOR

Motherhouse Associates LP

100 Commercial Street–Suite 414 — Portland, Maine

JOB# 202096.1	DATE: June 24, 2015	SCALE: 1" = 30'
BOOK# 525, 578		
202096–2015–MH.dwg		
FILE# 8538		

Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

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

Sheet C3

NOTES:

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.

2. EXISTING CONDITIONS BASED ON TOPOGRAPHIC SURVEY COMPLETED BY OWEN HASKELL, INC. MAY 7, 2013. FIELD CONDITIONS MAY VARY SLIGHTLY FROM WHAT IS DEPICTED ON THE PLANS.

3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION. ANY UNUSUAL CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ATTENTION OF THE OWNER.

4. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.

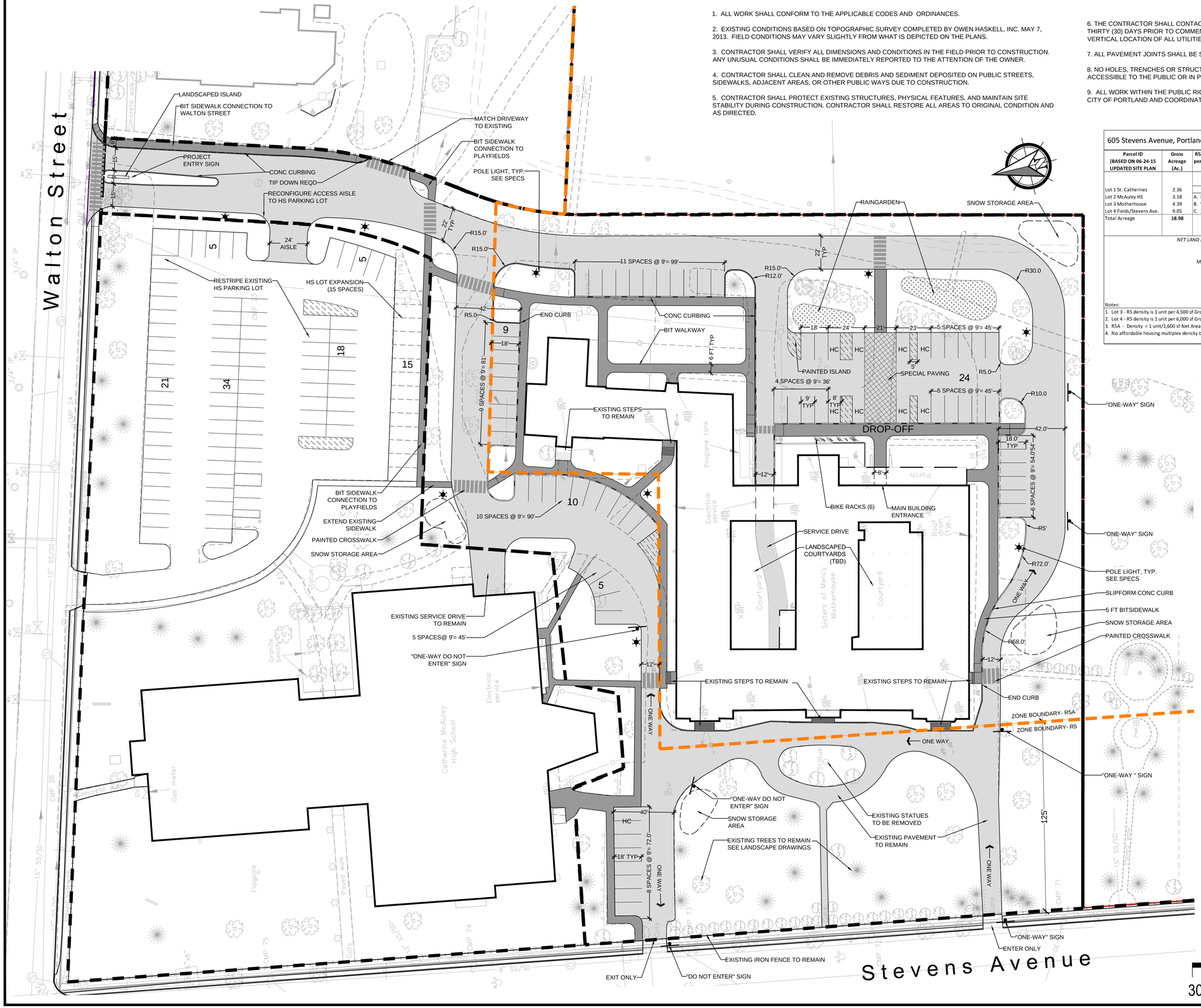
5. CONTRACTOR SHALL PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED.

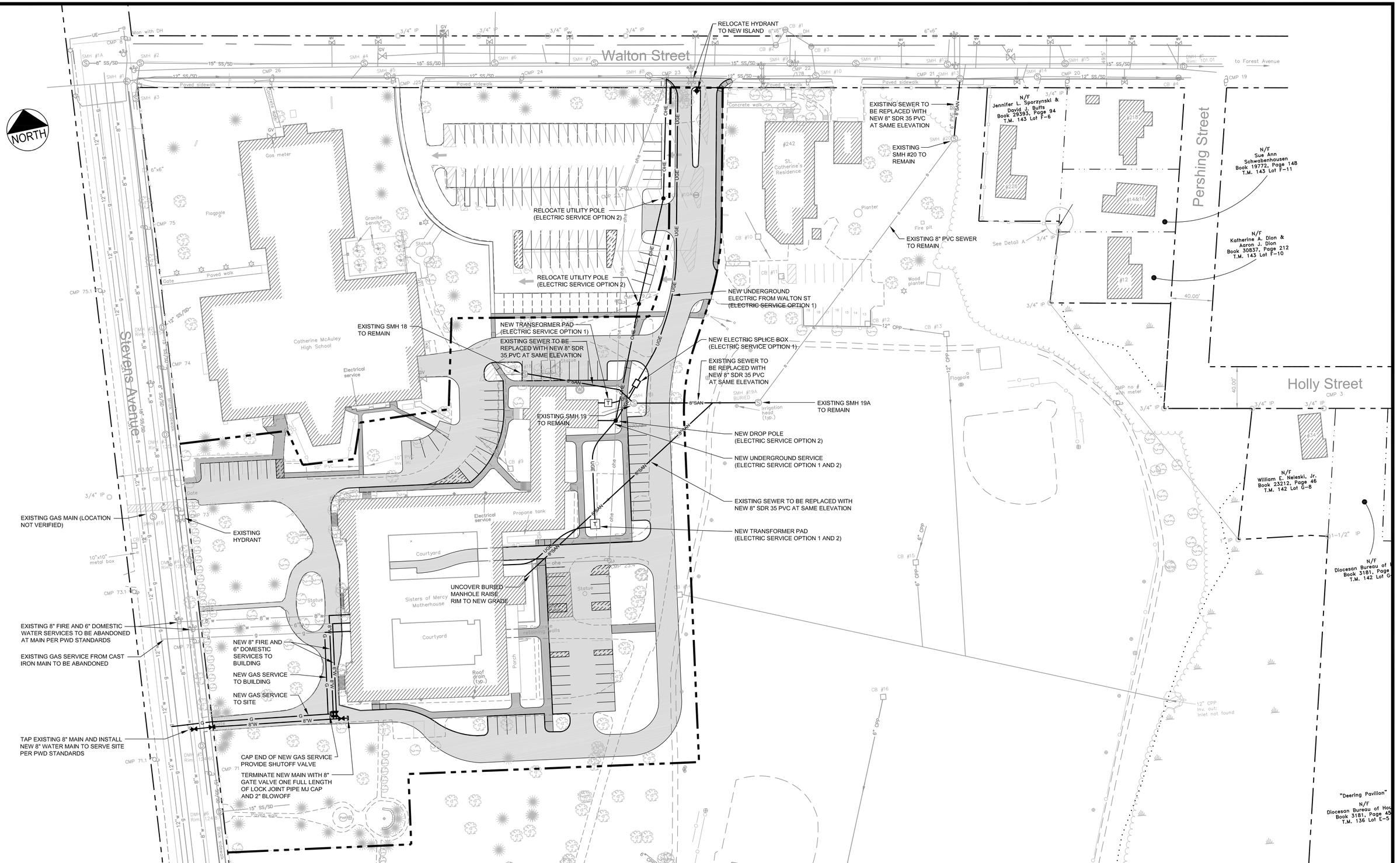
6. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.

7. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

8. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.

9. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A STREET - OPENING PERMIT FROM THE CITY OF PORTLAND AND COORDINATION WITH THE DEPARTMENT OF PUBLIC SERVICES.


Walton Street
LANDSCAPED ISLAND
BIT SIDEWALK CONNECTION TO WALTON STREET
PROJECT ENTRY SIGN
CONC CURBING
TIP DOWN REQD
RECONFIGURE ACCESS AISLE TO HS PARKING LOT
MATCH DRIVEWAY TO EXISTING
BIT SIDEWALK CONNECTION TO PLAYFIELDS
POLE LIGHT, TYP. SEE SPECS
RAINGARDEN
SNOW STORAGE AREA
24' AISLE
RESTRIPE EXISTING HS PARKING LOT
HS LOT EXPANSION (15 SPACES)
11 SPACES @ 9'= 99'
END CURB
CONC CURBING
BIT WALKWAY
6 FT TYP
9 SPACES @ 9'= 81'
PAINTED ISLAND
4 SPACES @ 9'= 36'
SPECIAL PAVING
5 SPACES @ 9'= 45'
DROP-OFF
"ONE-WAY" SIGN
EXISTING STEPS TO REMAIN
10 SPACES @ 9'= 90'
BIT SIDEWALK CONNECTION TO PLAYFIELDS
EXTEND EXISTING SIDEWALK
PAINTED CROSSWALK
SNOW STORAGE AREA
BIKE RACKS (6)
MAIN BUILDING ENTRANCE
SERVICE DRIVE
LANDSCAPED COURTYARDS (TBD)
6 SPACES @ 9'= 54.0'54'
R5'
R72.0'
ONE WAY
POLE LIGHT, TYP. SEE SPECS
SLIPFORM CONC CURB
5 FT BITSIDEWALK
SNOW STORAGE AREA
PAINTED CROSSWALK
R68.0'
EXISTING SERVICE DRIVE TO REMAIN
5 SPACES@ 9'= 45'
"ONE-WAY DO NOT ENTER" SIGN
EXISTING STEPS TO REMAIN
END CURB
ZONE BOUNDARY- R5A
ZONE BOUNDARY- R5
"ONE-WAY " SIGN
ONE WAY
"ONE-WAY DO NOT ENTER" SIGN
SNOW STORAGE AREA
EXISTING STATUES TO BE REMOVED
EXISTING PAVEMENT TO REMAIN
EXISTING TREES TO REMAIN SEE LANDSCAPE DRAWINGS
40'
HC
18' TYP
8 SPACES @ 9'= 72.0'
125'
"ONE-WAY" SIGN
ENTER ONLY
EXIT ONLY
"DO NOT ENTER" SIGN
EXISTING IRON FENCE TO REMAIN
Stevens Avenue
Catherine McAuley High School
Sisters of Mercy Motherhouse
Courtyard
Courtyard
Porch
Porch
Electrical service
Propane tank
Roof drain (typ.)
Granite bench
Flagpole
Gas meter
Concrete walk
Paved walk
Statue
Statue
Pool
Pool
Pool


NORTH
Walton Street
Stevens Avenue
Pershing Street
Holly Street
to Forest Avenue
RELOCATE HYDRANT TO NEW ISLAND
EXISTING SEWER TO BE REPLACED WITH NEW 8" SDR 35 PVC AT SAME ELEVATION
EXISTING SMH #20 TO REMAIN
N/F Jennifer L. Sporzynski & David J. Butts Book 29393, Page 94 T.M. 143 Lot F-6
N/F Sue Ann Schwabenhausen Book 19772, Page 148 T.M. 143 Lot F-11
N/F Katherine A. Dion & Aaron J. Dion Book 30837, Page 212 T.M. 143 Lot F-10
EXISTING 8" PVC SEWER TO REMAIN
RELOCATE UTILITY POLE (ELECTRIC SERVICE OPTION 2)
RELOCATE UTILITY POLE (ELECTRIC SERVICE OPTION 2)
NEW UNDERGROUND ELECTRIC FROM WALTON ST (ELECTRIC SERVICE OPTION 1)
EXISTING SMH 18 TO REMAIN
NEW TRANSFORMER PAD (ELECTRIC SERVICE OPTION 1)
EXISTING SEWER TO BE REPLACED WITH NEW 8" SDR 35 PVC AT SAME ELEVATION
NEW ELECTRIC SPLICE BOX (ELECTRIC SERVICE OPTION 1)
EXISTING SEWER TO BE REPLACED WITH NEW 8" SDR 35 PVC AT SAME ELEVATION
EXISTING SMH 19A TO REMAIN
EXISTING SMH 19 TO REMAIN
NEW DROP POLE (ELECTRIC SERVICE OPTION 2)
NEW UNDERGROUND SERVICE (ELECTRIC SERVICE OPTION 1 AND 2)
EXISTING SEWER TO BE REPLACED WITH NEW 8" SDR 35 PVC AT SAME ELEVATION
NEW TRANSFORMER PAD (ELECTRIC SERVICE OPTION 1 AND 2)
UNCOVER BURIED MANHOLE RAISE RIM TO NEW GRADE
EXISTING GAS MAIN (LOCATION NOT VERIFIED)
EXISTING HYDRANT
EXISTING 8" FIRE AND 6" DOMESTIC WATER SERVICES TO BE ABANDONED AT MAIN PER PWD STANDARDS
EXISTING GAS SERVICE FROM CAST IRON MAIN TO BE ABANDONED
NEW 8" FIRE AND 6" DOMESTIC SERVICES TO BUILDING
NEW GAS SERVICE TO BUILDING
NEW GAS SERVICE TO SITE
TAP EXISTING 8" MAIN AND INSTALL NEW 8" WATER MAIN TO SERVE SITE PER PWD STANDARDS
CAP END OF NEW GAS SERVICE PROVIDE SHUTOFF VALVE
TERMINATE NEW MAIN WITH 8" GATE VALVE ONE FULL LENGTH OF LOCK JOINT PIPE MJ CAP AND 2" BLOWOFF
Catherine McAuley High School
St. Catherine's Residence
Sisters of Mercy Motherhouse
Courtyard
Courtyard
Porch
Roof drain (typ.)
Propane tank
Electrical service
Gas meter
Flagpole
Granite bench
Statue
Statue
Paved walk
Gate
Gate
Planter
Fire pit
Wood planter
Irrigation head (typ.)
Flagpole
CMP no # with meter
"Deering Pavilion"
N/F Diocesan Bureau of Hou
Book 3181, Page 45
T.M. 136 Lot E-5
N/F Diocesan Bureau of
Book 3181, Page
T.M. 142 Lot G
40.00'
63.00'
See Detail A
Paved sidewalk
Concrete walk
Granite curb
Granite curb inlet
Granite curb inlet with double grate
Precast concrete curb inlet
Precast concrete curb inlet with double grate
Precast concrete manhole
Precast concrete manhole with double grate
Drain manhole
Drain manhole with double grate
Drain inlet
Drain inlet with double grate
Utility pole
Electrical manhole
Electrical manhole with double grate
Electrical handhole
Electrical handhole with double grate
Telephone manhole
Telephone manhole with double grate
Telephone handhole
Telephone handhole with double grate
Traffic signal manhole
Traffic signal manhole with double grate
Traffic signal handhole
Traffic signal handhole with double grate
Traffic signal pull box
Traffic signal pull box with double grate
Sign
Bollard
Hydrant
Water valve
Water shut off
Water meter
Water manhole
Water manhole with double grate
Gas valve
Gas meter
Gas manhole
Gas manhole with double grate
Monitoring well
Sewer manhole
Sewer manhole with double grate
Sewer cleanout
Sewer vent
Sewer ejector
Sewer ejector with double grate
Sewer lift station
Sewer lift station with double grate
Sewer force main
Sewer gravity main
Storm drain manhole
Storm drain manhole with double grate
Storm drain cleanout
Storm drain vent
Storm drain ejector
Storm drain ejector with double grate
Storm drain lift station
Storm drain lift station with double grate
Storm drain force main
Storm drain gravity main
Underground electric
Overhead electric
Underground telephone
Overhead telephone
Underground cable TV
Overhead cable TV
Underground traffic signal
Overhead traffic signal
Underground fiber optic
Overhead fiber optic
Underground gas
Underground water
Underground steam
Underground chilled water
Underground hot water
Underground compressed air
Underground vacuum
Underground fuel
Underground oil
Underground irrigation
Underground fire protection
Underground unknown
Underground abandoned
Underground proposed
Underground existing
Overhead existing
Overhead proposed
Underground duct bank
Underground duct bank with concrete encasement
Underground duct bank with concrete encasement and steel reinforcement
Underground duct bank with concrete encasement and steel reinforcement and fiber optic
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown and abandoned
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown and abandoned and proposed
Underground duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown and abandoned and proposed and existing
Overhead duct bank
Overhead duct bank with concrete encasement
Overhead duct bank with concrete encasement and steel reinforcement
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water
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Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air
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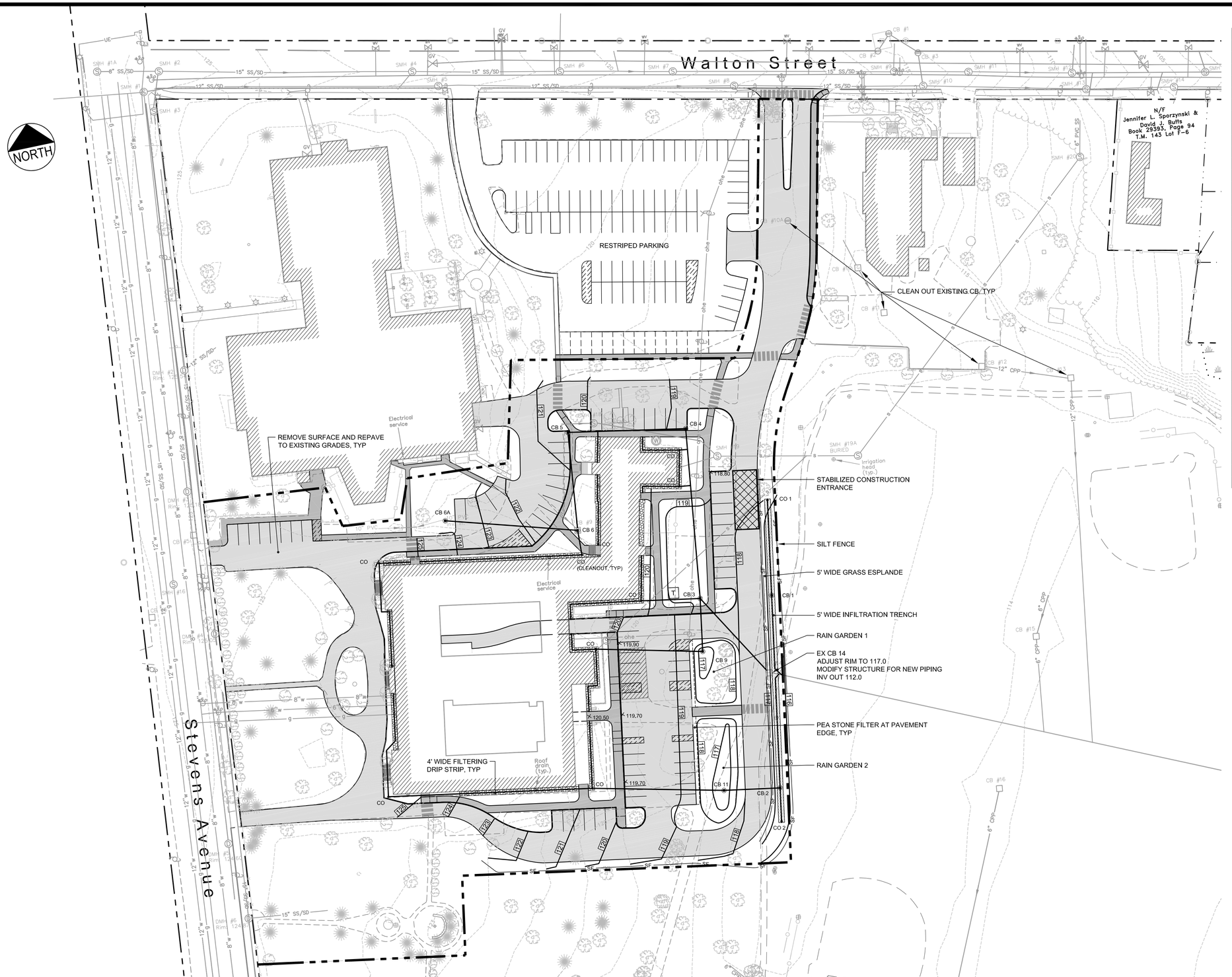
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown and abandoned
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown and abandoned and proposed
Overhead duct bank with concrete encasement and steel reinforcement and fiber optic and electric and telephone and cable TV and traffic signal and gas and water and steam and chilled water and hot water and compressed air and vacuum and fuel and oil and irrigation and fire protection and unknown and abandoned and proposed and existing



MOTHERHOUSE DRAIN SCHEDULE						
STRUCTURE	RIM	INV IN	DIR	INV OUT	SUMP	SIZE
NEW CB 11	117.50	114.68	W	113.50	111.50	2'ID
NEW CB 2	116.50	113.20	W	112.98	110.50	2'ID
		113.02	S			
NEW CB 6A	122.50	N/A	N/A	117.00	116.50	2'ID
NEW CB 6	120.00	115.96	W	115.50	114.00	2'ID
		115.90	S			
NEW CB 5	120.40	114.86	S	114.66	111.66	4'ID
NEW CB 4	118.50	113.66	W	113.56	110.56	4'ID
NEW CB 9	117.50	114.68	W	114.50	112.50	2'ID
NEW CB 3	118.50	112.70	N	112.60	109.60	4'ID
		114.14	S			
		115.00	W			
NEW CB 1	116.50	112.86	SE	112.82	110.50	2'ID
EX CB 14	117.00	112.09	NW	112.00	109 (EX)	4'ID
		112.50	S			
		112.50	N			
PIPE FROM	PIPE TO	LENGTH	SLOPE	US INV	DS INV	SIZE
CO 12	NEW CB 11	110	0.012	116.00	114.68	6"PVC
NEW CB 11	NEW CB 2	20	0.015	113.50	113.20	8"PVC
CO 7	NEW CB 6	20	0.005	116.00	115.90	6"PVC
NEW CB 6A	NEW CB 6	104	0.01	117.00	115.96	8"PVC
NEW CB 6	NEW CB 5	80	0.008	115.50	114.86	8"PVC
NEW CB 5	NEW CB 4	100	0.01	114.66	113.66	8"PVC
NEW CB 4	NEW CB 3	143	0.006	113.56	112.70	10"HDPE
CO 10	NEW CB 9	88	0.015	116.00	114.68	6"PVC
NEW CB 9	NEW CB 3	45	0.008	114.50	114.14	8"PVC
NEW CB 3	EX CB 14	85	0.006	112.60	112.09	12"HDPE
NEW CB 2	EX CB 14	96	0.005	112.98	112.50	8"PVC PERF
NEW CB 1	EX CB 14	65	0.005	112.82	112.50	8"PVC PERF

(IN FEET)
1 inch = 40 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	06.24.15	ISSUED FOR SITE PLAN REVIEW

REVISIONS

STATE OF MAINE
ANDREW D JOHNSTON
NO. 9994
6-24-15
LICENSED
PROFESSIONAL ENGINEER

P.E. ANDREW D. JOHNSTON
LIC. #9994

PROJECT
MOTHERHOUSE
SENIOR HOUSING

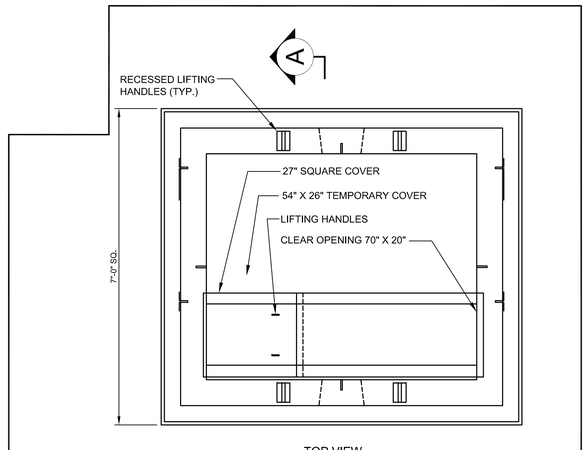
SHEET TITLE
GRADING, DRAINAGE AND
EROSOIN CONTROL PLAN

CLIENT
MOTHERHOUSE
ASSOCIATES LP

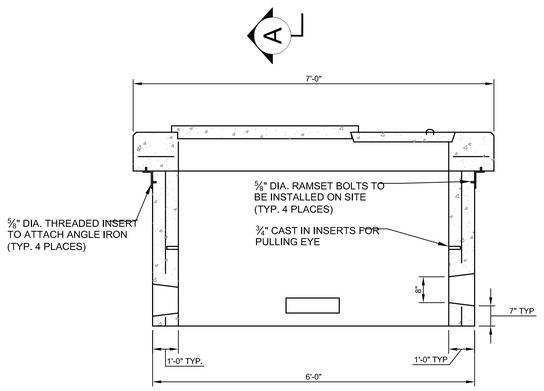
FST 100 YEARS
FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	DED	DATE:	JUNE 2015
DESIGNED:	ADJ	SCALE:	1" = 40'
CHECKED:	ADJ	JOB NO.	SP-M162
FILE NAME:	SP-M162 GRADING		
SHEET	C6.0		

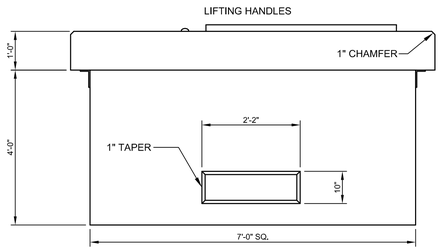
R:\SP-M162-McAuely Place - Motherhouse - Portland, ME\Cadd\Permit Set\dwg\SP-M162 GRADING.dwg davis_d 6/24/2015 3:45 PM



TOP VIEW



SECTION A-A



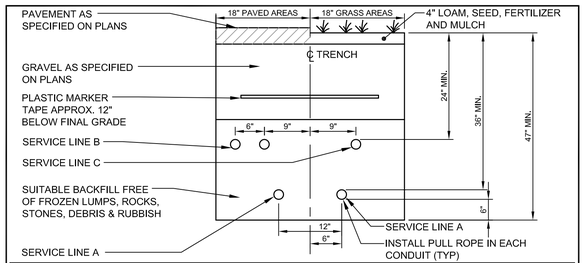
FRONT VIEW

DESIGN NOTES:

1. CONCRETE 4,000 PSI AT 28 DAYS.
2. REINFORCING #4 BARS AT 6" O.C. EACH WAY.
3. DUCT OPENINGS SHOWN ARE TYPICAL AND CAN BE MODIFIED PER REQUEST.
4. CENTRAL MAINE POWER COMPANY SPECIFICATION.
5. TEMPORARY COVER HAS (2) ⅝" THREADED LIFTING INSERTS CAST IN.

NOTE:
CONFIRM TRANSFORMER PAD SIZES WITH OWNER. DIVISION 2 CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE TRANSFORMER PAD.

A 7'-0" TRANSFORMER PAD
N.T.S.

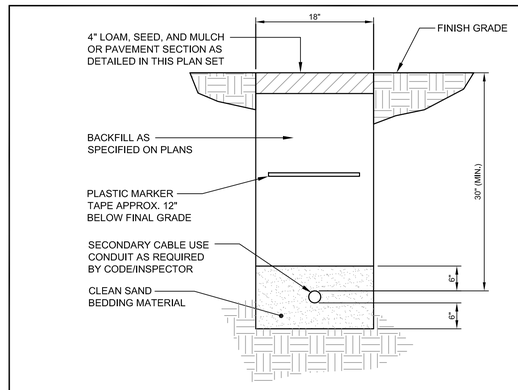


CONDUIT TYPE

SERVICE	CONDUIT SIZE	GRASS AREAS	PAVED AREAS	UTILITY	REMARKS
A	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	RIGID GALVANIZED STEEL, ASTM A120	POWER	SEE NOTE 1
B	4"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120	TELEPHONE	SEE NOTE 1
C	2"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120	COMMUNICATION	

NOTES:
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10' ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. SEE SITE ELECTRICAL PLAN (SHEET C-7A) FOR LOCATION AND NUMBER OF CONDUITS.

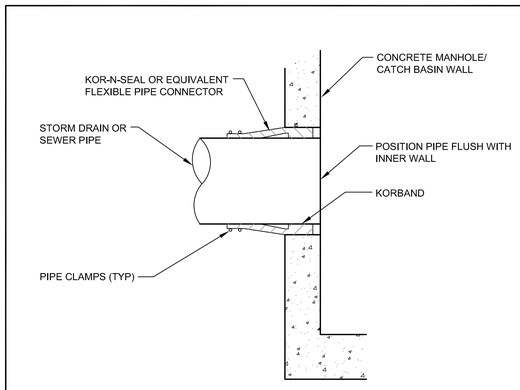
B UTILITY TRENCH - PRIMARY ELECTRIC, TELEPHONE & COMMUNICATIONS
N.T.S.



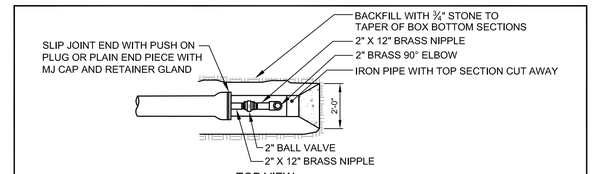
C SECONDARY ELECTRICAL TRENCH DETAIL
N.T.S.

NOTE:
GAS LINE TO BE INSTALLED BY OTHERS. SITE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND BACKFILL OF THE GAS LINE AND PLACEMENT OF THE WARNING TAPES AND TRACER.

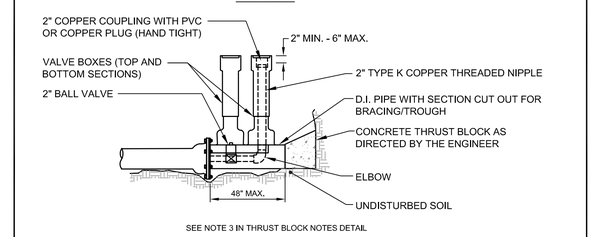
E GAS SERVICE TRENCH SECTION
N.T.S.



F PIPE CONNECTION TO PRECAST CONCRETE SANITARY SEWER AND STORM DRAINAGE STRUCTURES
N.T.S.

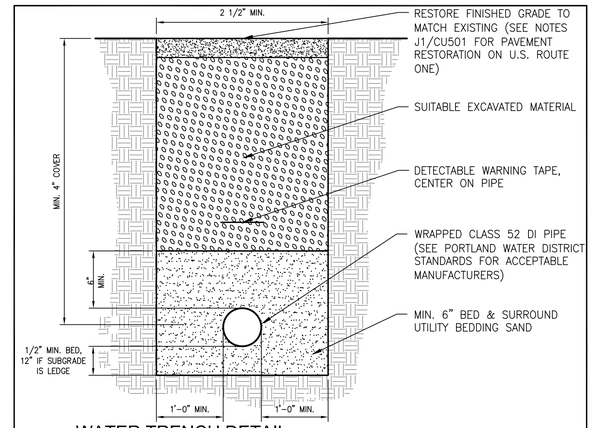


TOP VIEW

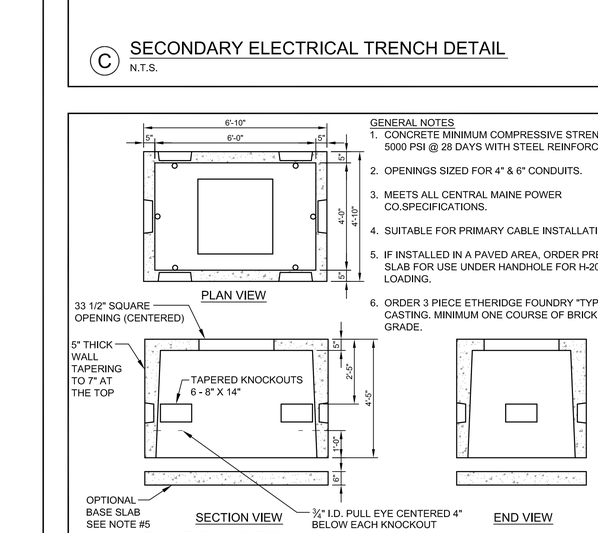


SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

H WATER MAIN BLOWOFF DETAIL
N.T.S.



I WATER TRENCH DETAIL
N.T.S.



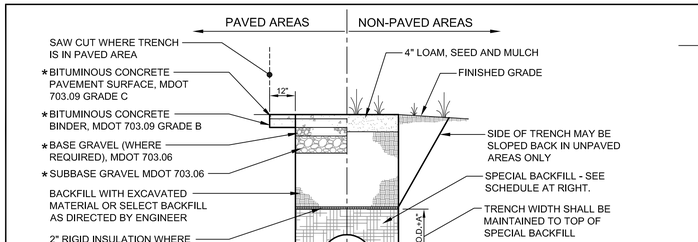
PLAN VIEW

SECTION VIEW

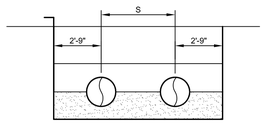
END VIEW

GENERAL NOTES
1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 5000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT
2. OPENINGS SIZED FOR 4" & 6" CONDUITS.
3. MEETS ALL CENTRAL MAINE POWER CO.SPECIFICATIONS.
4. SUITABLE FOR PRIMARY CABLE INSTALLATIONS.
5. IF INSTALLED IN A PAVED AREA, ORDER PRECAST SLAB FOR USE UNDER HANDHOLE FOR H-20 LOADING.
6. ORDER 3 PIECE ETHERIDGE FOUNDRY "TYPE B" CASTING. MINIMUM ONE COURSE OF BRICK TO GRADE.

D SPLICE BOX DETAIL
N.T.S.



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



SCHEDULE OF BACKFILL

TYPE OF PIPE	BEDDING MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFILL COVER 'A' (IN)	SELECT BACKFILL
PVC	¾" CRUSHED STONE	GRANULAR AASHTO M145 A-3 OR BETTER	6	GRANULAR AASHTO M145 A-3 OR BETTER
HDPE	¾" CRUSHED STONE	GRANULAR AASHTO M145 A-3 OR BETTER	6	GRANULAR AASHTO M145 A-3 OR BETTER

G TYPICAL SEWER AND STORM DRAIN TRENCH SECTION
N.T.S.

PRELIMINARY - NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	06.24.15	ISSUED FOR SITE PLAN REVIEW

REVISIONS

STATE OF MAINE · ANDREW D JOHNSTON · NO. 9994 · 6-24-15 · LICENSED PROFESSIONAL ENGINEER

P.E. ANDREW D. JOHNSTON
LIC. #9994

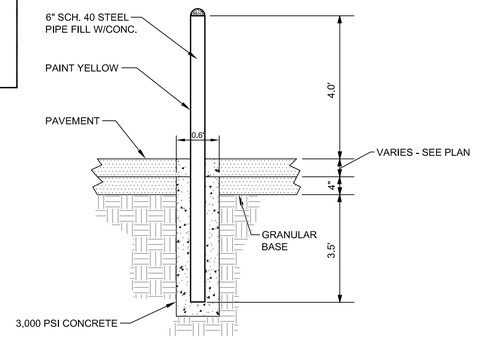
PROJECT
MOTHERHOUSE SENIOR HOUSING

SHEET TITLE
UTILITY DETAILS

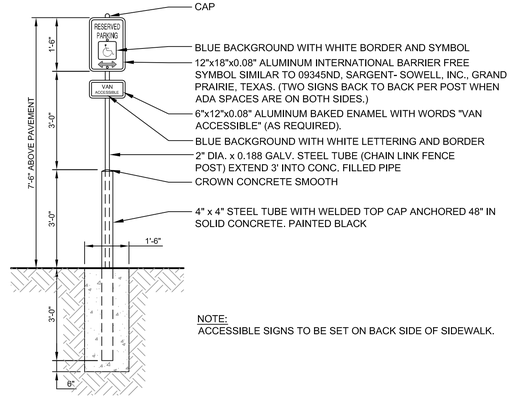
CLIENT
MOTHERHOUSE ASSOCIATES LP

FST 100 YEARS
FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	DED	DATE:	JUNE 2015
DESIGNED:	ADJ	SCALE:	AS NOTED
CHECKED:	ADJ	JOB NO.	SP-M162
FILE NAME:	SP-M162 DETAILS		
SHEET	C7.0		

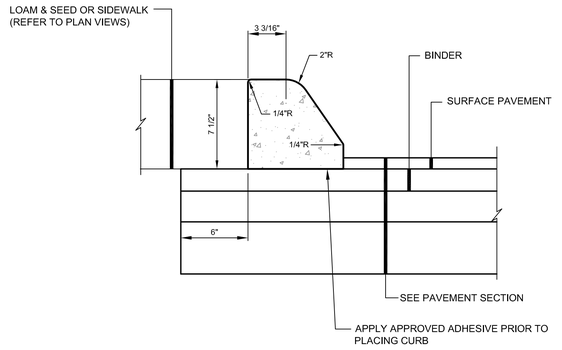


A PIPE BOLLARD DETAIL
N.T.S.



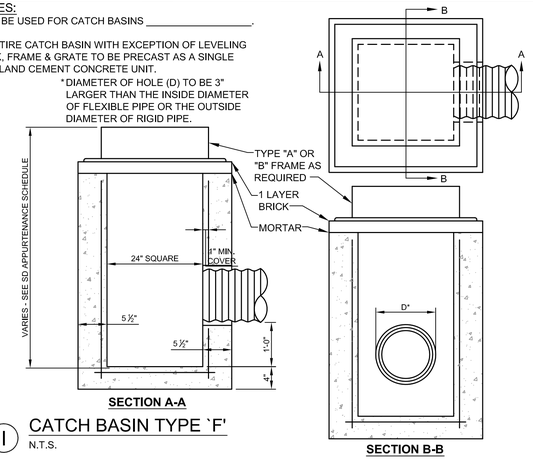
NOTE:
ACCESSIBLE SIGNS TO BE SET ON BACK SIDE OF SIDEWALK.

C BARRIER FREE PARKING SIGN
N.T.S.



F STANDARD DUTY SLIPFORM CONCRETE CURB
N.T.S.

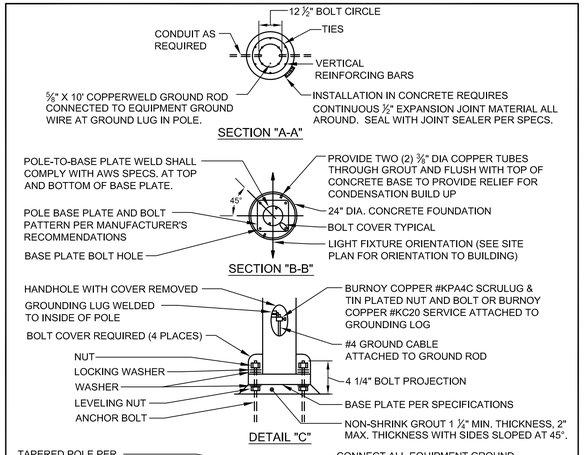
NOTES:
1. TO BE USED FOR CATCH BASINS _____.
2. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK, FRAME & GRATE TO BE PRECAST AS A SINGLE PORTLAND CEMENT CONCRETE UNIT.
   * DIAMETER OF HOLE (D) TO BE 3" LARGER THAN THE INSIDE DIAMETER OF FLEXIBLE PIPE OR THE OUTSIDE DIAMETER OF RIGID PIPE.



SECTION A-A

SECTION B-B

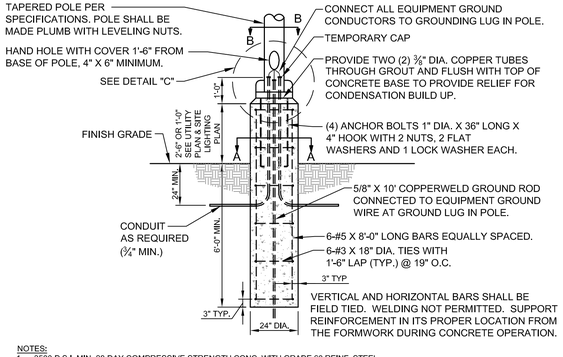
I CATCH BASIN TYPE `F'
N.T.S.



SECTION "A-A"

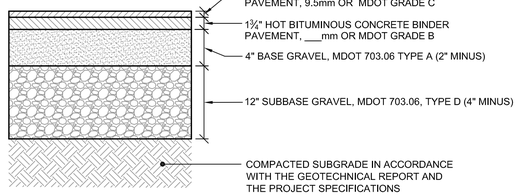
SECTION "B-B"

DETAIL "C"



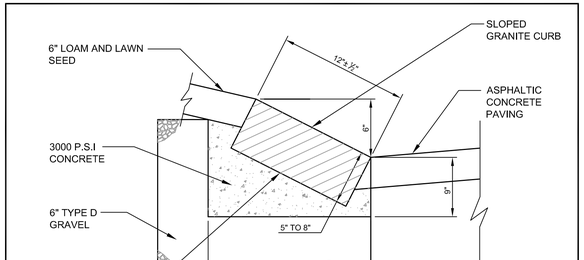
NOTES:
1. 3500 P.S.I. MIN. 28 DAY COMPRESSIVE STRENGTH CONC. WITH GRADE 60 REINF. STEEL.
2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
3. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
4. FOUNDATION SHALL HAVE A MINIMUM ALLOWABLE END BEARING OF 2000 PSF.
5. FOUNDATION HAS BEEN DESIGNED FOR A COHESIVE SOIL BASED ON A MINIMUM COHESIVE VALUE OF 1000 PSF.
6. FOUNDATION HAS BEEN DESIGNED FOR A GRANULAR SOIL BASED ON A MINIMUM LATERAL SOIL PRESSURE OF 1000 PSF.
7. UTILIZING AASHTO FIGURE 1.8.2C(4) OF "EMBEDMENT OF POSTS WITH OVERTURNING LOADS".
8. DETAIL FOR MAX. 39' POLE WITH MAX. FIXTURE EPA 4.6 S.F.
9. CONFIRM ANCHOR BOLT PLACEMENT AND PATTERN WITH LIGHT POLE MANUFACTURER BEFORE PREPARING FOUNDATION.
10. EXCAVATION WILL LIKELY BE BELOW WATER TABLE - DO NOT LEAVE EXCAVATION OPEN FOR EXTENDED PERIODS.

B TYPICAL PARKING LOT LIGHTING POLE FOUNDATION
N.T.S.



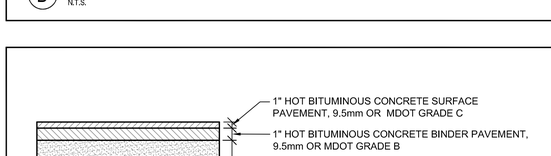
NOTES:
1. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION.
3. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT.

STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
D N.T.S.



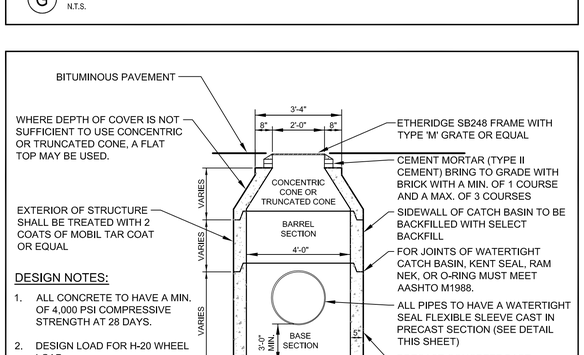
1. SLOPED GRANITE CURB TO MEET MDOT STANDARD SPECIFICATIONS
2. MAXIMUM DISTANCE BETWEEN CURB SECTIONS IS 1.5"
3. JOINTS SHALL BE MORTARED
4. SET CURB AT 1:2 SLOPE

G SLOPED GRANITE CURB DETAIL
N.T.S.



NOTES:
1. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION.
3. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT.

SIDEWALK BITUMINOUS CONCRETE PAVEMENT SECTION
E N.T.S.



DESIGN NOTES:
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF..

ALL CATCH BASIN OUTLET PIPES TO BE EQUIPPED WITH EITHER CASCO TRAP OR SNOUT (SEE DETAILS)

H 4'-0" PRECAST CATCH BASIN DETAIL
N.T.S.

PRELIMINARY - NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	06.24.15	ISSUED FOR SITE PLAN REVIEW

REVISIONS

STATE OF MAINE — ANDREW D. JOHNSTON — NO. 9994 — 6-24-15 — LICENSED PROFESSIONAL ENGINEER

P.E, ANDREW D. JOHNSTON
LIC. #9994

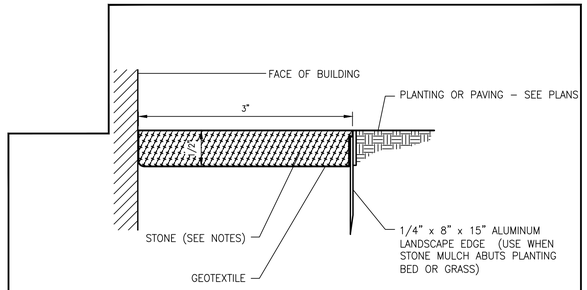
PROJECT: MOTHERHOUSE SENIOR HOUSING

SHEET TITLE: SITE DETAILS

CLIENT: MOTHERHOUSE ASSOCIATES LP

FST — 100 YEARS
FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

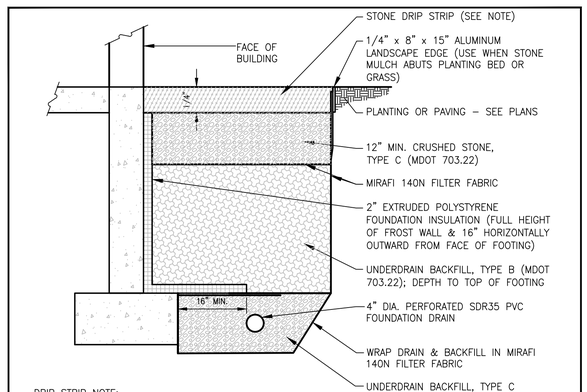
DRAWN:	DED	DATE:	JUNE 2015
DESIGNED:	ADJ	SCALE:	AS NOTED
CHECKED:	ADJ	JOB NO.	SP-M162
FILE NAME:	SP-M162 DETAILS		
SHEET	C7.1		



NOTES:

1. STONE MULCH AT MAIN ENTRANCE TO BE ROUNDED RIVER STONE, 6" IN DIAMETER MAXIMUM TO 2" DIAMETER MINIMUM, WASHED AND FREE OF FOREIGN OR ORGANIC MATERIALS.
2. STONE FOR ALL OTHER DRIP STRIPS TO BE 1/2" CRUSHED, WASHED AND FREE OF FOREIGN OR ORGANIC MATERIALS.

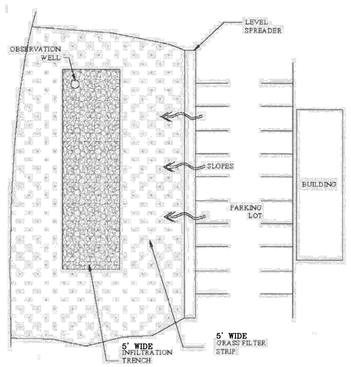
(A) DRIP EDGE FINISH DETAIL
N.T.S.



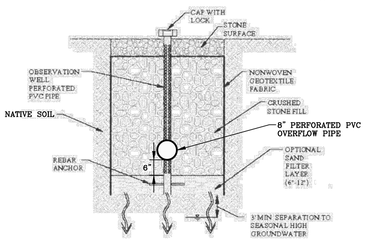
DRIP STRIP NOTE:

STONE FOR ALL DRIP STRIPS TO BE 1/2" CRUSHED, WASHED AND FREE OF FOREIGN OR ORGANIC MATERIALS.

(B) DRIP EDGE DETAIL
N.T.S.

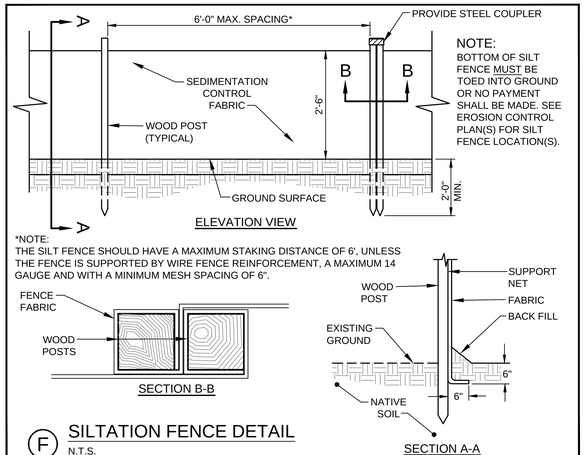


PLAN VIEW



NOTE:
CRUSHED STONE FILL SHALL BE CLEAN, WASHED QUARRY STONE MEETING MAINE DOT SPECIFICATION 703.31

(D) INFILTRATION TRENCH
N.T.S.



ELEVATION VIEW

NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND OR NO PAYMENT SHALL BE MADE. SEE EROSION CONTROL PLAN(S) FOR SILT FENCE LOCATION(S).

*NOTE:
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6', UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT, A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".

SECTION B-B

SECTION A-A

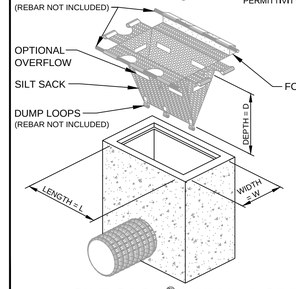
(F) SILTATION FENCE DETAIL
N.T.S.

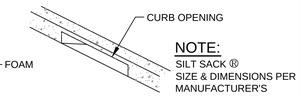
NOTE: THE SILT SACK ® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

HIGH-FLOW SILT SACK ® (FOR USE IN LOW POINTS/SAGS)
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

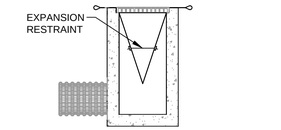
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491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

1" REBAR FOR BAG REMOVAL FROM INLET (REBAR NOT INCLUDED)





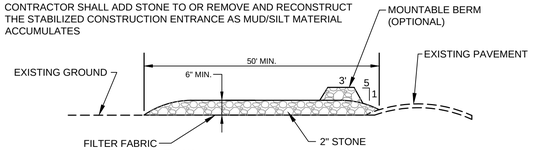
NOTE:
SILT SACK ® SIZE & DIMENSIONS PER MANUFACTURER'S SPECIFICATIONS.



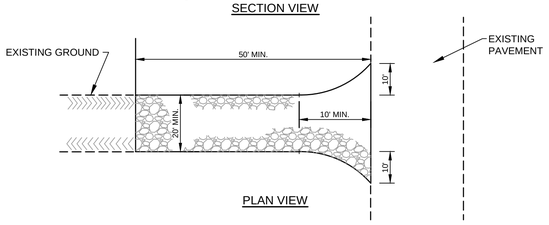
SIDE VIEW INSTALLATION DETAIL

(H) SILT SACK ® DETAIL & SPECIFICATIONS
N.T.S.

NOTE:
CONTRACTOR SHALL ADD STONE TO OR REMOVE AND RECONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES



SECTION VIEW



PLAN VIEW

(G) STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.

SPECIFICATIONS AND REQUIREMENTS FOR DEWATERING

THIS PROJECT WILL REQUIRE THE DISCHARGE OF CONSTRUCTION DEWATERING AND TURBID LADEN RUNOFF, FROM THE REMEDIAL CONSTRUCTION OF THE EXISTING STORMWATER BASIN, TO BE DIRECTED AND DISCHARGED THROUGH A DIRTBAG, WITHIN A DEWATERING SUMP. THIS DESCRIPTION ALSO CONTAINS APPENDED MATERIALS DESCRIBING THE DIRTBAGS REFERRED TO IN THIS NARRATIVE.

DEWATERING OF THE REMEDIAL CONSTRUCTION OF THE EXISTING BASIN SHALL BE ACCOMPLISHED USING THE FOLLOWING MEASURES:

- THE PUMPING OF WATER WITHIN THE POND TO A DIRTBAG (PATENTED PRODUCT BY ACF ENVIRONMENTAL PRODUCTS) WITH RELEASE THROUGH A VEGETATED BUFFER AT LEAST 100 FEET UPGRADIENT OF A WETLAND DURING THE REMEDIAL CONSTRUCTION OF THE EXISTING BASIN.

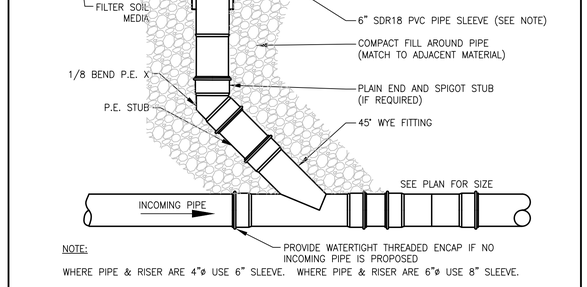
REQUIREMENTS FOR DIRTBAGS:

AT ALL TIMES THERE MUST BE AN UNUSED DIRTBAG AVAILABLE FOR EMERGENCY USE.

AT ALL TIMES (AFTER INITIAL SITE PREPARATION), THE CONTRACTOR SHALL HAVE ONE DIRTBAG ACTIVE OR READY FOR USE. THE DIRTBAGS SHALL BE FIELD LOCATED BY THE CONTRACTOR BUT ARE NOT TO BE INSTALLED WITHIN 100 FEET OF THE WETLANDS. THE DIRTBAG SHALL BE INSTALLED ON A PREPARED SUBGRADE. THIS SUBGRADE SHALL CONSIST OF THE INSTALLATION OF A LAYER OF MIRAFI 140N, AND 18 INCHES OF 3/4 INCH CRUSHED STONE. THE PLAN DIMENSION OF THE CRUSHED STONE PAD SHALL EXCEED THE PLAN AREA OF THE DIRTBAG BY AT LEAST TWO FEET IN ALL DIRECTIONS. THE DIRTBAG SHALL NOT BE INSTALLED ON AN UNDERLYING SLOPE OF GREATER THAN 15 PERCENT.

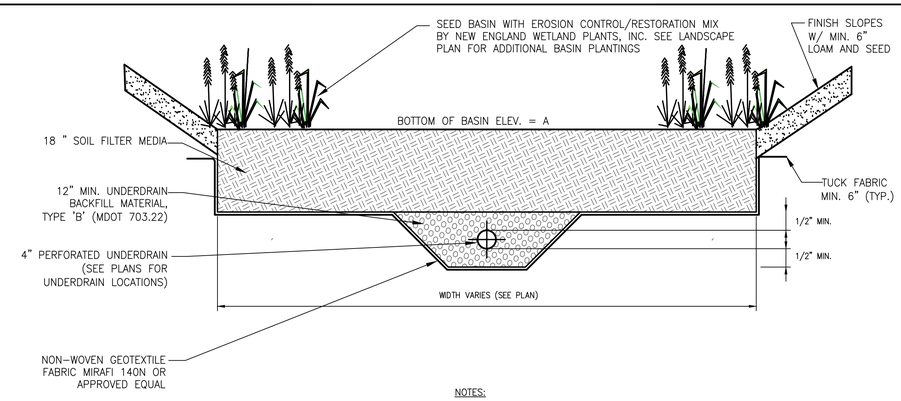
CONSTRUCTION DEWATERING OPERATIONS:

ALL CONSTRUCTION-DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. IT SHALL BE THE SITE CONTRACTOR WHO IS RESPONSIBLE FOR SELECTING THE SITE FOR THE DIRTBAG, THE SELECTION OF THE USE OF THE DIRTBAG OR THE SEDIMENTATION BASIN FOR DIRECTING DEWATERING, EXCEPT THAT THE OWNER MAY DIRECT THE SITE CONTRACTOR TO ALTER THE SELECTED OPERATION IF TURBID DISCHARGE TO A WETLAND IS OBSERVED.



NOTE:
WHERE PIPE & RISER ARE 4"ø USE 6" SLEEVE. WHERE PIPE & RISER ARE 6"ø USE 8" SLEEVE.

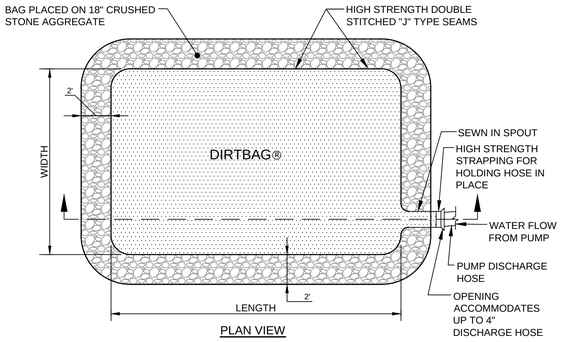
(C) PVC CLEANOUT DETAIL
N.T.S.



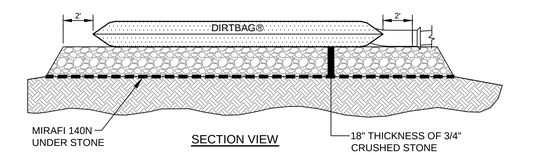
NOTES:

FILTER SOIL MATERIAL FOR BIORETENTION AREAS SHALL COMPRISE OF NATIVE LOAMY SAND SOIL MATERIAL

(E) BIORETENTION CELL
N.T.S.



PLAN VIEW



SECTION VIEW

(I) DIRTBAG® DETAIL AND SPECIFICATIONS
N.T.S.

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REVISIONS

STATE OF MAINE — ANDREW D. JOHNSTON — NO. 9994 — 6-24-15 — LICENSED PROFESSIONAL ENGINEER

P.E. ANDREW D. JOHNSTON
LIC. #9994

PROJECT
MOTHERHOUSE SENIOR HOUSING

SHEET TITLE
STORMWATER AND EROSION CONTROL DETAILS

CLIENT
MOTHERHOUSE ASSOCIATES LP

FST 100 YEARS
FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

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FILE NAME:	SP-M162 DETAILS		
SHEET	C8.0		

TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, SILTATION FENCE, CATCH BASIN INLET BARRIERS, CATCH BASIN SEDIMENT COLLECTION BAGS, EROSION CONTROL BLANKET, AND TEMPORARY SEEDING AND MULCHING AS REQUIRED. PERMANENT DEVICES INCLUDE PAVEMENT AND PERMANENT VEGETATION.

GENERAL

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

1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2003, OR AS CURRENTLY REVISED OR U.S. ENVIRONMENTAL PROTECTION AGENCY PUBLICATION 832/R-92-005 (SEPTEMBER, 1992) STORM WATER MANAGEMENT FOR CONSTRUCTION, CHAPTER 3, WHICHEVER IS MORE STRINGENT.

2. ANY ADDITIONAL EROSION AND SEDIMENTATION CONTROL DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERSONNEL AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.

3. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.

4. ANY SOIL OR DEBRIS TRACKED ONTO ABUTTING PAVED AREAS OR STREETS SHALL BE REMOVED IMMEDIATELY

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/ REPLACEMENT/ MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF ACCEPTABLE PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

A. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

B. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.

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

B. EROSION AND SEDIMENTATION CONTROL MEASURES

1. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. IT IS THE INTENT THAT SILT FENCE BE INSTALLED DOWN GRADIENT OF ALL DISTURBED AREAS OF THE SITE. SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS WILL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE SILT BARRIERS. THIS SEDIMENT WILL BE SPREAD AND STABILIZED IN AREAS OF THE SITE NOT SUBJECT TO EROSION. SILT FENCE SHALL BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, THEY WILL BE REPLACED WITH A TEMPORARY CRUSHED STONE CHECK DAM.

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

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

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

5. ANY SUITABLE TOPSOIL WILL BE STRIPPED AND STOCKPILED FOR REUSE IN FINAL GRADING. TOPSOIL WILL BE STOCKPILED IN A MANNER SUCH THAT NATURAL DRAINAGE IS NOT OBSTRUCTED AND NO OFF-SITE SEDIMENT DAMAGE WILL RESULT.

7. TEMPORARY STABILIZATION SHALL BE CONDUCTED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS, PRIOR TO ANY RAIN EVENT, AND PRIOR TO ANY WORK SHUT DOWN LASTING MORE THAN ONE DAY. TEMPORARY STABILIZATION INCLUDES SEED, MULCH, OR OTHER NON-ERODABLE COVER.

8. PERMANENT SEEDING SPECIFICATION SHALL BE AS SHOWN ON THE LANDSCAPE PLAN. LATE SEASON SEEDING SHALL BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1SHALL BE SEEDED WITH AROOSTOOK RYE OR MULCHED AT RATES PREVIOUSLY SPECIFIED. SEE WINTER CONDITIONS NOTES FOR SEEDING STABILIZATION AFTER NOVEMBER 1.

A. APPLY TOPSOIL TO A MINIMUM DEPTH OF 4 INCHES. MIX TOPSOIL WITH THE SUBSOIL TO A MINIMUM DEPTH OF 6 INCHES.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND GRANULAR, COMMERCIAL-GRADE, 10-10-10 (N-P2O5-K2O) FERTILIZER AT A RATE OF 800 LBS PER ACRE (18.4 LBS PER 1,000 SQUARE FEET).

C. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRES, AND ANCHOR AS NECESSARY.

13. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 15%. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

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

C. WINTER CONDITIONS - NO WINTER SITE CONSTRUCTION IS PROPOSED ON THIS PROJECT.

D. HOUSEKEEPING

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

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

4. DEBRIS AND OTHER MATERIAL. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER, MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. COMPLY WITH THE REQUIREMENTS OF SECTION 01570, CONSTRUCTION WASTE MANAGEMENT, FOR REMOVAL AND DISPOSAL OF CONSTRUCTION DEBRIS AND WASTE.

6. TRENCH OR FOUNDATION DE-WATERING. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED AREAS THAT ARE SPECIFICALLY DESIGNATED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFER DAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE.

E. INSPECTION AND MAINTENANCE

1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORM WATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE A WEEK AND BEFORE AND AFTER A STORM EVENT, PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORM WATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT AND ANY DEP OR MUNICIPAL COMPANION DOCUMENTS, MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES (BMPS) NEED TO BE MODIFIED OF IF ADDITIONAL BMPS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

2. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME AND QUALIFICATIONS OF THE PERSON PERFORMING THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPS THAT NEED TO BE MAINTAINED, LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF THE INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

F. CONSTRUCTION SCHEDULE & SEQUENCE

1. INSTALL TEMPORARY EROSION CONTROL MEASURES IN THE VICINITY OF THE CONSTRUCTION AREA, INCLUDING A STABILIZED CONSTRUCTION ENTRANCE AT LOCATIONS DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, SEDIMENT BARRIERS, AND SILT FENCE.

2. REMOVE EXISTING PAVEMENT AND STRUCTURES AS SHOWN, STOCKPILE REUSABLE MATERIAL, AND DISPOSE OF UNUSABLE AND/OR SURPLUS MATERIAL. INSTALL UNDERGROUND UTILITIES AND INSTALL NEW BASE GRAVEL IN PARKING AREAS AND DRIVES.

3. EXCAVATE AROUND FOUNDATIONS FOR BUILDING IMPROVEMENTS AND DRIP EDGE INSTALLATION.

4. CONSTRUCT OTHER SITE IMPROVEMENTS, INCLUDING PAVEMENT, SIDEWALKS.

5. INSTALL LANDSCAPING AND HARDSCAPE AROUND BUILDINGS.

6. FOLLOWING PERMANENT STABILIZATION OF THE SITE, REMOVE TEMPORARY EROSION CONTROL MEASURES.

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REVISIONS

STATE OF MAINE
ANDREW D JOHNSTON
NO. 9994
6-24-15
LICENSED PROFESSIONAL ENGINEER

P.E. ANDREW D. JOHNSTON
LIC. #9994

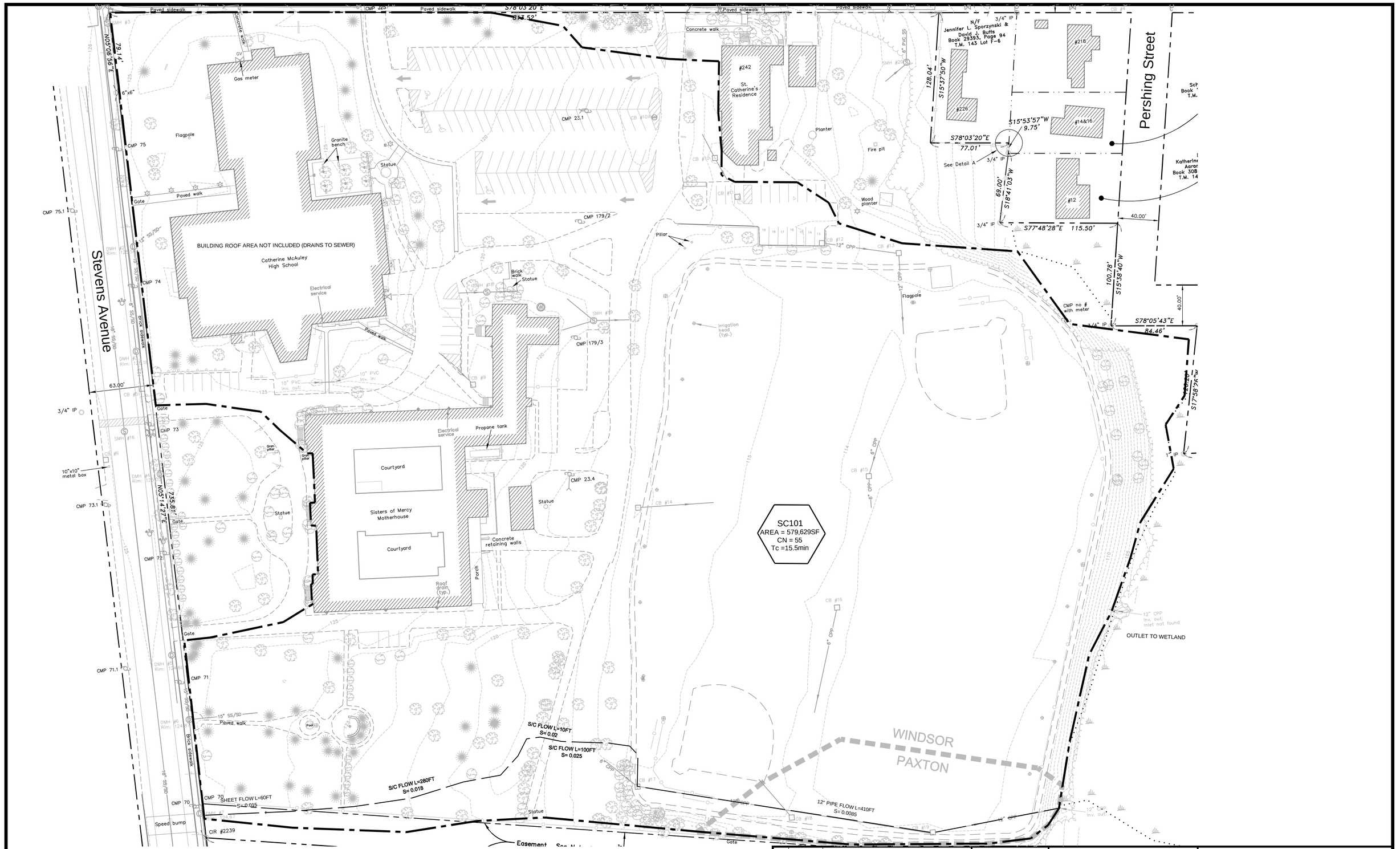
PROJECT
MOTHERHOUSE
SENIOR HOUSING

SHEET TITLE
EROSION CONTROL NOTES

CLIENT
MOTHERHOUSE
ASSOCIATES LP

FST 100 YEARS
FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	DED	DATE:	JUNE 2015
DESIGNED:	ADJ	SCALE:	AS NOTED
CHECKED:	ADJ	JOB NO.	SP-M162
FILE NAME:	SP-M162 DETAILS		
SHEET	C8.1		



PRELIMINARY - NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	06.24.15	ISSUED FOR SITE PLAN REVIEW

REVISIONS

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PROJECT
MOTHERHOUSE SENIOR HOUSING

SHEET TITLE
PRE-DEVELOPMENT WATERSHED PLAN

CLIENT
MOTHERHOUSE ASSOCIATES LP

FST 100 YEARS
FAY, SPOFFORD & THORNDIKE
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	ADJ	DATE:	JUNE 2015
DESIGNED:	ADJ	SCALE:	1" = 40'
CHECKED:	ADJ	JOB NO.	SP-M162
FILE NAME:	WSHED-PRE		
SHEET	C 9.0		

NORTH

Stevens Avenue

Pershing Street

Holly Street

Catherine McAuley High School

Sisters of Mercy Motherhouse

St. Catherine's Residence

SC223
AREA = 4520SF
CN = 94
Tc =6.0min

SC224
AREA = 6069SF
CN = 94
Tc =6.0min

SC210
AREA = 15,676SF
CN = 81
Tc =6.0min

SC201
AREA = 537,572SF
CN = 53
Tc =15.5min

SC211
AREA = 7303SF
CN = 74
Tc =6.0min

SC212
AREA = 9701SF
CN = 73
Tc =6.0min

SC222
AREA = 4490SF
CN = 95
Tc =6.0 min

SC221
AREA = 9601SF
CN = 94
Tc =6.0min

INFILTRATION TRENCH

RAIN GARDEN

RAIN GARDEN

DESIGN POINT 1

DRIP STRIP (TYP.)

DRIP STRIP (TYP.)

S/C FLOW L=10FT S= 0.02

S/C FLOW L=100FT S= 0.025

S/C FLOW L=280FT S= 0.018

SHEET FLOW L=60FT S= 0.015

12" PIPE FLOW L=410FT S= 0.0085

N/F Jennifer L. Sporzynski & David J. Butts Book 29393, Page 94 T.M. 143 Lot F-6

N/F Sue Ann Schwabenhausen Book 19772, Page 148 T.M. 143 Lot F-11

N/F Katherine A. Dion & Aaron J. Dion Book 30837, Page 212 T.M. 143 Lot F-10

N/F William E. Neleski, Jr. Book 23212, Page 46 T.M. 142 Lot G-8

N/F Diocesan Bureau of Housing Book 3181, Page 458 T.M. 142 Lot G-7

N/F Diocesan Bureau of Housing Book 3181, Page 458 T.M. 136 Lot E-5

"Deering Pavilion"

N05°06'56"E 79.14'

N05°14'27"E 735.81'

S15°37'50"W 128.04'

S15°53'57"W 9.75'

S78°03'20"E 77.01'

S18°41'03"W 69.00'

S77°48'28"E 115.50'

S15°38'40"W 100.78'

S78°05'43"E 84.46'

S81°22'53"E 69.57'

S74°41'51"E 16.51'

S17°58'26"W 449.53'

S15°17'19"W 449.53'

63.00'

40.00'

40.00'

CMP 75.1

CMP 75

CMP 74

CMP 73.1

CMP 73

CMP 72

CMP 71.1

CMP 71

CMP 70

CMP 23.1

CMP 179/2

CMP 179/3

CMP no # with meter

CMP 3

3/4" IP

Gas meter

Flagpole

Granite bench

Statue

Paved walk

Gate

Concrete walk

Paved sidewalk

Brick sidewalk

Courtyard

Porch

Roof (typ.)

Planter

Fire pit

Wood planter

Electrical service

Brick walk

Irrigation head (typ.)

Pool

Speed bump

10"x10" metal box

CIR #2239

Easement. See Note 4

See Detail A

12" CPP Inv. out: Inlet not found.

#242

#226

#218

#14&16

#12

#34

#20

#10

#9

#15

#16

#17

#18

#19

#13

CB #12

12" CPP

6" PVC SS

6" CPP

8" CPP

15" SS/SD

18" SS/SD

8"W

6"W

DMH #2 Rim

DMH #3 Rim

DMH #6 Rim

DMH #16 Rim

DMH #20 Rim

DMH #10 BURIED

DMH #9

DMH #8

DMH #7

DMH #5

DMH #4

DMH #1

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(IN FEET)
1 inch = 40 ft.

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POST-DEVELOPMENT WATERSHED PLAN

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SHEET	C 9.1		

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EROSION AND SEDIMENTATION CONTROL REPORT

MOTHERHOUSE SENIOR HOUSING
605 STEVENS AVENUE
PORTLAND, MAINE

Prepared for:

MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET
SUITE 414
PORTLAND ME 04101

Prepared by:

FAY, SPOFFORD &THORNDIKE
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, MAINE 04106
(207) 775-1121

JUNE 2015

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Attachments

A – Sample Certification and Inspection Forms

EROSION AND SEDIMENTATION CONTROL REPORT

I. INTRODUCTION

Fay, Spofford & Thorndike (FST) has been retained as a consultant to Motherhouse Associates, LP for the preparation of site designs and assistance in site permitting for the redevelopment of the existing Sisters of Mercy Motherhouse site, located at 605 Stevens Avenue in the City of Portland, Maine. The project will include re-use of the existing building at the site, and the renovation and reconfiguration of existing access, parking, stormwater, and utility infrastructure.

II. EXISTING SITE CONDITIONS

The project site is part of an existing land parcel located at 605 Stevens Avenue in the City of Portland, and has frontage on Stevens Avenue and Walton Street. The overall parcel area is approximately 19 acres, and includes Catherine McAuley High School in addition to the Motherhouse building and the associated site improvements. The Motherhouse lot will be subdivided from the overall parcel as part of this project.

In addition to the Motherhouse building, the project site includes the entrance driveway onto Walton Street, a ceremonial entrance and exit onto Stevens Avenue, paved parking areas, landscaping and utility infrastructure that serves the building.

Surface water runoff from the site drains in a generally easterly direction towards a wetland area at the foot of the embankment, adjacent to the eastern property line. There is limited stormwater infrastructure and no existing provision is made for detention or water quality treatment. In addition, the existing building roof drains are currently connected to the combined sewer system serving the site. Approximately half of the downspouts from the existing roofs are broken at, or above ground level and discharge directly to the adjacent ground. The site is located in Flood Zone X (areas outside the 500-year flood zone), according to FEMA Flood Insurance Rate Map, Community Panel Number 230051 0007C.

The Natural Resource Conservation Service (NRCS) Web Soil Survey identifies predominant subsurface soils at the site as Windsor loamy sands. Summit GeoEngineering Services conducted geotechnical investigations at the project site, including nine test borings. The investigations confirmed the general Web Soil Survey mapping, indicating well drained, granular soils. Groundwater was observed at depths greater than five feet and up to eleven feet across the site.

There are no existing areas of erosion on the site. The existing conditions are shown on the site survey and existing conditions plans.

III. Overview of Soil Erosion and Sedimentation Concerns

The primary concern relating to soil erosion and sediment control at the site is the containment of soil materials from the limited areas that will be exposed during the site work activities, and protection of the stormwater management BMPs during construction. The susceptibility of soils to erosion is indicated on a relative “K” scale of values over a range of 0.02 to 0.69. The “K” value is frequently used with the universal soil loss equation. The higher values are indicative of the more erodible soils. The majority of the project area consists of made land with pavements and building slabs covering most of the work site. There are limited areas of existing landscaping that will be disturbed as part of this project and these are all underlain by Windsor loamy sand soils. The relative K values of the underlying material would be as follows:

Soil Name	Soil Description	K Value
Windsor	Somewhat excessively drained (0 to 8%)	0.15

Based on a review of the K values, the onsite soils in the area are moderately susceptible to erosion after the cover material is stripped.

The primary emphasis of the erosion and sedimentation control plan to be implemented for this project is as follows:

- Temporary Measures: Planning the project to have erosion resistant measures in place with measures to prevent erosion from occurring.
- The plan includes measures to intercept and convey runoff to temporary sediment control devices as the construction of the project occurs.
- Stabilization of areas denuded to underlying parent material to minimize the period of soil exposure.
- Stabilization of drainage paths to avoid rill and gully erosion.
- The use of on-site measures to capture sediment (hay bales/silt fence, etc.) before it is conveyed to sediment sumps.

IV. DESCRIPTION AND LOCATION OF LIMITS OF ALL PROPOSED EARTH MOVEMENTS

The construction of the project will disturb limited areas of the existing site. The main building footprint will be untouched, and large areas of existing pavement will be milled and overlaid as opposed to completely removed. Where the surface pavement is in poor condition it will be removed, the base gravels regraded and the area repaved. This activity will result in limited exposure of erodible materials. In limited areas of the site, the existing surface cover will be changed from landscaping to pavement, or from pavement to landscaping to achieve the new design layout. This activity will result in exposure of topsoil, or native soil materials that will require erosion controls to be installed. The plans that accompany this application show the work and grading limits for the project. A summary of post development conditions is provided earlier in this narrative. The grading plan depicts the limits of earthwork attendant with reshaping the project site.

The earth moving will include trenching for new underground utility services, removal of existing deteriorated pavement materials, and minor excavation for the roadway curbing and sidewalk improvements associated with the project.

V. EXISTING AND PROPOSED DRAINAGE FEATURES

The existing drainage at the site drains by sheet flow from areas around the building towards the playing fields and the associated underdrain and surface drainage system. The proposed redevelopment of the site does not propose any significant changes to the existing drainage patterns. However, several small, Low Impact Development (LID) BMPs are proposed to capture, detain and treat runoff from existing and proposed impervious areas before draining to the same receiving stormwater system. This will lead to an improvement in water quality treatment for impervious areas of the site, and a reduction in both peak runoff and the volume of runoff to the receiving system. The existing inlet structures will be retained and the associated piping will be replaced at the same locations to ensure infiltration into the system is minimized.

VI. CRITICAL AREAS

The critical areas of the site include protection of the downstream storm drain infrastructure, new stormwater BMPs, the receiving wetland, and adjacent streets and properties.

VII. EROSION/SEDIMENTATION CONTROL DEVICES

As part of the site development, the Contractor will be obligated to implement the following erosion and sediment control devices. These devices shall be installed as indicated on the plans or as described within this report. For further reference on these devices, see the *Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices dated March 2003*. The Contractor will also be obligated to follow the SMP that has been prepared for the site. This gives details of requirements for soil handling measures, storage, isolation and testing of any contaminated soils, and dust control measures.

1. Siltation fence shall be installed down slope of any disturbed areas to trap runoff borne sediments. The silt fence shall be installed per the detail provided in the plan set and inspected immediately after each rainfall and at least daily during prolonged rainfall. The Contractor shall make repairs immediately if there are any signs of erosion or sedimentation below the fence line. If such erosion is observed, the Contractor shall take proactive action to identify the cause of the erosion and take action to avoid its reoccurrence. Typically, this requires that stabilization measures be undertaken. Proper placement of stakes and keying the bottom of the fabric into the ground is critical to the fence's effectiveness. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence, the barrier shall be replaced with a stone check dam and measures taken to avoid the concentration of flows not intended to be directed to the silt fence.
2. Silt fence shall be installed along the downgradient side of construction work areas, with locations being adjusted along with the construction phasing areas.
3. Temporary sediment sumps will provide sedimentation control for stormwater runoff from disturbed areas during construction until stabilization has been achieved.
4. A construction entrance will be constructed at all access points onto the site to prevent tracking of soil onto adjacent local roads and streets and the existing parking lot.
5. Stone sediment traps or a premanufactured SiltSack™ and a sediment bag will be installed at catch basin inlets to prevent silt from entering the storm drain system. Installation details are provided in the plan set on the erosion control detail sheets.
6. Dirtbags™ will be required to be on site and available for construction dewatering. The Contractor will be required to provide four Dirtbags™ with one prepared for operation prior to commencing any trenching operations.
7. Silt logs are an option for stone check dams and may be substituted provided the devices are well anchored.
8. Sorbent booms are intended to capture oils and the asphalt sheen from paved surfaces and shall be installed in all catch basins before pavement is installed.

VIII. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES

The following are planned as temporary erosion/sedimentation control measures during construction:

1. The primary and most effective soil erosion and sediment control measure is proactive work scheduling to minimize exposure of erodible soils. The Contractor will make every effort to promptly stabilize and disturbed areas on the site. This will limit exposure of native soils and fill materials and provide a stable surface with minimal erosion potential.
2. Crushed stone-stabilized construction entrances shall be placed at any construction access points to disturbed work areas from adjacent pavement. Construction entrances shown on the drawings should be considered illustrative and will need to be adjusted as appropriate

and located at any area where there is the potential for tracking of mud and debris onto existing roads or driveways. Stone stabilized construction entrances will require the stone to be removed and replaced, as it becomes covered or filled with mud and material tracked by vehicles exiting the site.

3. Siltation fence shall be installed along the downgradient side of the proposed improvement areas. The silt fence will remain in place and properly maintained until the site is acceptably stabilized. Silt fence needs to be checked to insure the bottom is properly keyed in and inspected after significant rains. Wood chips from clearing are often used on the construction site of the silt fence to provide an extra margin of safety and security for the silt fence. This practice is encouraged, provided the chips are removed when the fence is removed.

4. Dirtbags™ shall be installed in accordance with the details in the plan set. The Dirtbags'™ function on the project is to receive any water pumped from excavations during construction. A Dirtbag™ shall be installed and prepared for operation prior to any trenching on site. When Dirtbags™ are observed to be at 50% capacity, they shall be cleaned or replaced. Stone under the Dirtbag™ shall be removed and replaced concurrently with the replacement of the Dirtbag™.

5. Temporary stockpiles of common excavation will be protected with silt fence barriers and temporary mulch, as appropriate:

6. Stone check dams, silt logs, or hay bale barriers will be installed at any evident concentrated flow discharge points during construction and earthwork operations

7. Silt fencing with a maximum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence should be properly anchored a minimum of 6" per the plan detail and backfilled. Any silt fence identified by the owner or reviewing agencies as not being properly installed during construction shall be immediately repaired in accordance with the installation details.

8. Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers or a premanufactured SiltSack™ as distributed by A. H. Harris Company, Portland, Maine. Stone sediment barrier installation details are provided in the plan set. The barriers or SiltSacks™ shall be inspected after each rainfall and repairs made as necessary, including the removal of sediment. Sediment shall be removed and the barrier or SiltSack™ restored to its original dimensions when the sediment has accumulated to one-half the design depth of the barrier. Sediment shall be removed from SiltSacks™ as necessary. Inlet protection shall be removed when the tributary drainage area has been stabilized.

9. All slopes steeper than 4:1 shall receive erosion control blanket. All blanket shall be 100% biodegradable, consisting of a coir fiber matrix in a double (top and bottom) jute fabric net (north American Green©, Bionet®, C125BN, or approved equal.

10. Areas of visible erosion and the temporary sediment sumps shall be stabilized with crushed stone. The size of the stone shall be determined by the contractor's designated representative in consultation with the Owner.

11. All catch basins which receive runoff from current or paved areas being constructed as part of this project shall have a sorbent boom installed prior to placing the basin in operation installing binder pavement, or overlays.

IX. SPECIAL MEASURES FOR SUMMER CONSTRUCTION

The summer period is generally optimum for construction in Maine, but it is also the period when intense short duration storms are most common, making denuded areas very susceptible to erosion, when dust control needs to be the most stringent, and when the potential to establish vegetation is often restricted by moisture deficit. During these periods, the Contractor must:

Implement a program to apply dust control measures on a daily basis except those days where the precipitation exceeds 0.25 inch. This program shall extend to and include adjacent streets.

1. Spray any mulches with water after anchoring to dampen the soil and encourage early growth. Spraying may be required several times. Temporary seed may be required until the late summer seeding season.

2. Cover stockpiles of fine-grained materials, or excavated soils which are susceptible to erosion. To protect from the intense, short-duration storms which are more prevalent in the summer months.

3. Take additional steps needed, including watering, or covering excavated materials to control fugitive dust emissions to minimize reductions in visibility and the airborne disbursement of fine-grained soils. This is particularly important given the potential presence of soil contaminants, and the proximity of along the adjacent streets and properties.

These measures may also be required in the spring and fall during the drier periods of these seasons.

X. PERMANENT EROSION CONTROL MEASURES

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. The drainage conveyance systems have been designed to intercept and convey the 25-year storm.

2. All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.), will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas where the finish grade slope is greater than 10 percent. Native topsoil shall be stockpiled and temporarily stabilized with seed and mulch and reused for final restoration when it is of sufficient quality.

3. Catch basins shall be provided with sediment sumps for all outlet pipes that are 12” in diameter or greater or where winter sand use is contemplated. A sediment collection shall be installed in all basins.

XI. TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES

The following construction sequence shall be required to insure the effectiveness of the erosion and sedimentation control measures is optimized.

The following construction sequence is required:

1. Install construction entrances.
2. Install safety and construction fence to secure the site for demolition.
3. Install inlet protection at catch basins within the site.

4. Install all siltation fence and perimeter controls.
5. Conduct demolition activities including salvage of materials that can be used for site work aggregate.
6. Construct activities on the site to optimize the handling of materials and restrict the denuded areas to the time stipulated.
7. Install underground utilities and storm drain piping.
8. Construct parking lots and drives in segments which will comply with the limitations for denuded areas of the plan.
9. Install solvent catch basin logs or booms.
10. Install binder pavement.
11. Install curbs.
12. Landscape (loam and seed).
13. Install surface pavements.
14. Install striping, signage, and miscellaneous site improvements.
15. Review and punch the site.
16. Remove any temporary erosion control measures.

It is anticipated that site work will be complete and the site will be fully stabilized before the onset of winter. However, should site activities continue after November 1st, the General Contractor shall schedule a meeting with the Owner, a representative of City of Portland DPS and Owner's representatives to review the site for conformance with the plan and to review the need for additional erosion control measures. This meeting shall be scheduled at least 10 days prior to October 1st. The Owner may elect to provide the Contractor with a punch list for measures to be completed to satisfy this erosion control plan before the interim shutdown. The Owner's punch list shall not obviate the Contractor's responsibility for compliance with the erosion control requirements of the project or permits.

XII. CONTRACTING PROCEDURE

The project will be constructed by a General Contractor under contract to the Owner/Applicant. The Contractor shall submit a schedule for the completion of the work, which will satisfy the following criteria:

1. The above construction sequence should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to prevent the extent of the exposed areas as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt fence and construction entrances in place before large areas of land are denuded.
2. The work shall be conducted in sections which will:
    a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days.
    b) Stabilize disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading and temporarily stabilized within 7 days of initial disturbance or before a predicted storm event of over ½" of rain.
    c) Incorporate planned inlets and drainage system as early as possible into the construction phase.

4. The area of denuded, non-stabilized construction shall be limited to the minimum area practicable. An area shall be considered to be denuded until the subbase gravel is installed in parking areas, or the areas of future loam and seed have been loamed, seeded, and mulched, or stabilized with erosion control blanket.

5. The schedule shall be subject to the approval of the Owner.

7. The Contractor must maintain an accurate set of record drawings indicating the date when an area is first denuded, the date of temporary stabilization, and the date of final stabilization. On October 1 of any calendar year, the Contractor shall submit a detailed plan for stabilizing the site for the winter and a description of what activities are planned during the winter.

8. The Contractor must install any added measures which may be necessary to control erosion/sedimentation and fugitive dust emissions from the site, with adjustments made dependent upon forecasted and actual site and weather conditions.

XIII. PROVISIONS FOR MAINTENANCE OF THE EROSION/SEDIMENTATION CONTROL FEATURES

The project will be contracted by the Owner. The Contractor shall prepare a list and designate by name, address and telephone number all individuals who will be responsible for implementation, inspection, and maintenance of all erosion control measures identified within this section and as contained in the Erosion and Sedimentation Control Plan of the contract drawings. Specific responsibilities of the inspector(s) will include:

1. Execution of the Contractor/Subcontractor Certification contained in Attachment B by any and all parties responsible for erosion control measures on the site.

2. Assuring and certifying the Owner's construction sequence is in conformance with the specified schedule of this section. A weekly certification stating compliance, any deviations, and corrective measures necessary to comply with the erosion control requirements of this section shall be prepared and signed by the inspector(s).

3. In addition to the weekly certifications, the inspector(s) shall maintain written reports recording construction activities on site which include:

   · Dates when major grading activities occur in a particular areas.

   · Dates when major construction activities cease in a particular area, either temporarily or permanently.

   · Dates when an area is stabilized.

4. Inspection of this project work site on a weekly basis and after each significant rainfall event (0.5 inch or more within any consecutive 24-hour period) during construction until permanent erosion control measures have been properly installed and the site has been stabilized. Inspection of the project work site shall include:

   · Identification of proper erosion control measure installation in accordance with the erosion control detail sheet or as specified in this section.

   · Determine whether each erosion control measure is properly operating. If not, identify damage to the control device and determine remedial measures.

   · Identify areas which appear vulnerable to erosion and determine additional erosion control measures which should be used to improve conditions.

   · Inspect areas of recent seeding to determine percent catch of grass. A minimum catch of 90 percent is required prior to removal of erosion control measures.

- All erosion controls shall be removed within 30 days of permanent stabilization except for mulch and netting not detrimental to the project. Removals shall include but not be limited to all silt fence, hay bales, inlet protection, and stone check dams.

- Accumulated silt/sediment should be removed when the depth of sediment reaches 50 percent of the barrier height. Accumulated silt/sediment should be removed from behind silt fencing when the depth of the sediment reaches 6 inches.

- Silt sacks should be removed and replaced at least every three months and at any time where the weekly inspection reveals that siltation has significantly retarded the rate of flow through the silt sack.

5. If inspection of the site indicates a change should be made to the erosion control plan, to either improve effectiveness or correct a site-specific deficiency, the inspector shall immediately implement the corrective measure and notify the Owner of the change.

All certifications, inspection forms, and written reports prepared by the inspector(s) shall be filed with the Owner, and the Permit File contained on the project site. All written certifications, inspection forms, and written reports must be filed within one (1) week of the inspection date.

The Contractor has sole responsibility for complying with the erosion/sediment control report, including control of fugitive dust, and shall be responsible for any monetary penalties resulting from failure to comply with these standards.

The contract specifications for erosion and sedimentation control have additional requirements and are appended to this narrative.

Once construction has been completed, long-term maintenance of the stormwater management system will be the responsibility of the applicant. Operation and maintenance items with a list of maintenance requirements and frequency are listed in the Stormwater Management Report for this project.

XIV. PRECONSTRUCTION CONFERENCE

Prior to any construction at the site, representatives of the Contractor, the Architect, the Owner, and the site design engineer shall meet to discuss the scheduling of the site construction and the designation of the responsible parties for implementing the plan. The Contractor shall be responsible for scheduling the meeting. Prior to the meeting, the Contractor will prepare a detailed schedule and a marked-up site plan indicating areas and components of the work and key dates showing date of disturbance and completion of the work. The Contractor shall conduct a meeting with employees and sub-contractors to review the erosion control plan, the construction techniques which will be employed to implement the plan, and provide a list of attendees and items discussed at the meeting to the Owner. Three copies of the schedule, the Contractor's meeting minutes, and marked-up site plan shall be provided to the Owner.

XV. ATTACHMENTS

Attachment A –Sample Erosion Control Compliance Certification and Inspection Forms

XVI. PLAN REFERENCES

Grading, Drainage and Erosion Control Plan

ATTACHMENT A

Sample Erosion Control Compliance Certification and Inspection Forms

CONTRACTOR/SUBCONTRACTOR CERTIFICATION

PROJECT INFORMATION

Project Name: Motherhouse Senior Housing

Address: 605 Stevens Avenue, Portland, Maine

CONTRACTOR/SUBCONTRACTOR INFORMATION

Firm Name:

Address:

Telephone:

Type of Firm:

CERTIFICATION STATEMENT

"I certify under penalty of law that I understand the terms and conditions of the Maine Construction General Permit (MCGP) permit that authorizes the stormwater discharges associated with construction activity from the project site identified as part of this certification."

_____
Signature

_____
Typed Name

_____
Title

_____
Date

SOIL EROSION AND SEDIMENT CONTROL

INSPECTION REPORT

PROJECT INFORMATION

Project Name: Motherhouse Senior Housing

Address: 605 Stevens Avenue, Portland, Maine

INSPECTOR INFORMATION

Inspector Name: _____

Firm: _____

Title: _____

Qualifications: _____

INSPECTION SUMMARY

Date of Inspection: _____

Major Observations: _____

_____

_____

_____

THE FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN WITH THE FOLLOWING EXCEPTIONS:

_____

_____

_____

_____

ACTIONS NECESSARY TO BRING FACILITY INTO COMPLIANCE:

_____

_____

REQUIRED MODIFICATIONS TO STORMWATER POLLUTION PREVENTION PLAN (MUST BE IMPLEMENTED WITHIN 7 DAYS OF INSPECTION):

_____

_____

_____

_____

CERTIFICATION STATEMENT:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the systems, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of find and imprisonment for knowing violations."

_____

Signature

_____

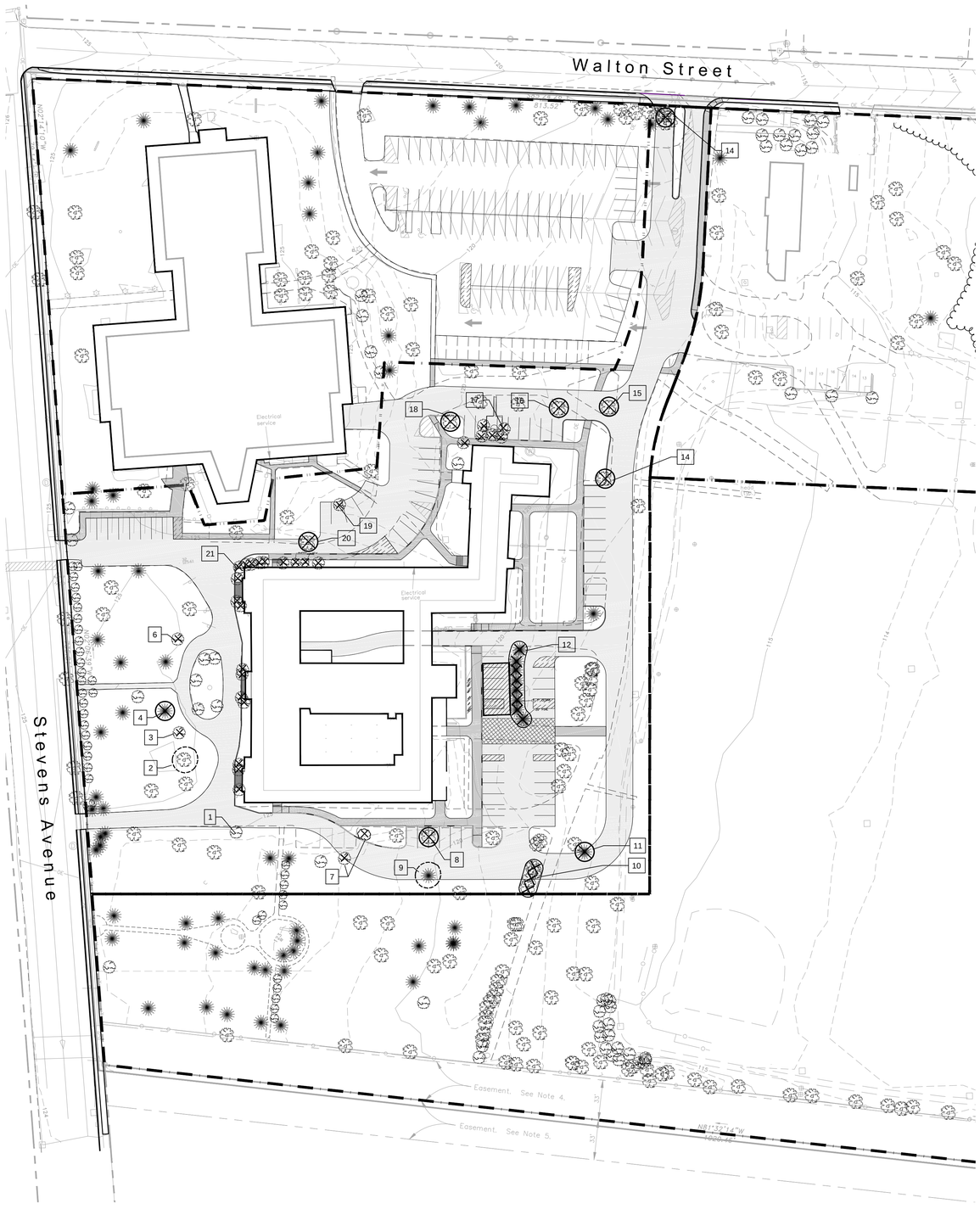
Typed Name

_____

Title

_____

Date



TREE REMOVAL ANALYSIS

SYM	NOTES	SIZE / TYPE	REMOVE Y / N
1	SCRAPPY HONEYSUCKLE - MAY WANT TO REMOVE	8" DEC	Y
2	PRUNE	4" V	N
3	DEAD SHRUB W/ INVASIVES GROWING IN IT	5" DEC	Y
4	SPRUCE IN BAD SHAPE	10" CON	Y
6	SHRUB IN POOR CONDITION W/ INVASIVES GROWING IN IT	5" DEC	Y
7	SHRUBS TO BE REMOVED	DEC	Y
8	OAK TREE TO BE REMOVED FOR DEVELOPMENT	28" DEC	Y
9	SPRUCE TO BE REMOVED AND RELOACATED	3" CON	Y
10	(3) OAK TO BE REMOVED FOR DEVELOPMENT	18",18",12" DEC	Y
11	HEMLOCK TO BE REMOVED FOR DEVELOPMENT	10"	Y
12	(8) EVERGREEN TREES TO BE REMOVED (1 PINE, 7 CEDAR)	(1) 20", (7) 7"	Y
14	MAPLE IN POOR SHAPE TO BE REMOVED FOR DEVELOPMENT	24" DEC	Y
15	NORWAY MAPLE W/ SOME TRUNK ROT TO BE REMOVED FOR DEVELOPMENT	15" DEC	Y
16	NORWAY MAPLE TO BE REMOVED	24" DEC	Y
17	6 SHRUBS TO BE REMOVED (5 YEWS, 1 LILAC)	5' HT +/-	Y
18	CRABAPPLE TO BE REMOVED	5" DEC	Y
19	LILAC SHRUB TO BE RMOVED	5' HT +/-	Y
20	PURPLE NORWAY MAPLE	26" DEC	Y
21	(19 SHRUBS) REMOVE ALL FOUNDATION PLANTING SHRUBS, MOSTLY YEWS	3-4' HT	Y
22	5 DECIDUOUS OAK TREES TO BE REMOVED	12", 12",12", 20",14"	Y

LEGEND:

(EXISTING)
- PROPERTY LINE
- DECIDUOUS TREE
- EVERGREEN TREE
- SHRUBS
- EDGE OF PAVING
- BUILDING OUTLINE
- POLE LIGHT
- FIRE HYDRANT
- DRAIN MH
- SEWER MH
- UTILITY POLE
- SIGN
- CATCH BASIN
- CAST IRON FENCE
- CHAIN LINK FENCE

(PROPOSED)
- PROPERTY LINE
- ZONE BOUNDARY
- DECIDUOUS TREE
- EVERGREEN TREE
- SHRUBS
- BIT CONC (ROADWAY)
- BIT CONC (SIDEWALK)
- SPECIAL PAVING
- RAINGARDEN
- GROUNDCOVER
- EDGE OF PAVING
- CURB
- CROSSWALK STRIPING
- POLE LIGHT
- TRAFFIC SIGNAGE

(TREE REMOVAL)
- TREE TO BE REMOVED
- GROUP OF TREES TO BE REMOVED
- SHRUB TO BE REMOVED
- TREE TO BE PRUNED OR RELOCATED

SCALE: 1"= 50'

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

APPLICANT:

MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET
SUITE 414
PORTLAND, ME 04101
207.772.7673

Project: MOTHERHOUSE SENIOR HOUSING

Revisions	Date	Description

Scale: 1" = 50'
Approved By: P.C
Drawn By: E.K.

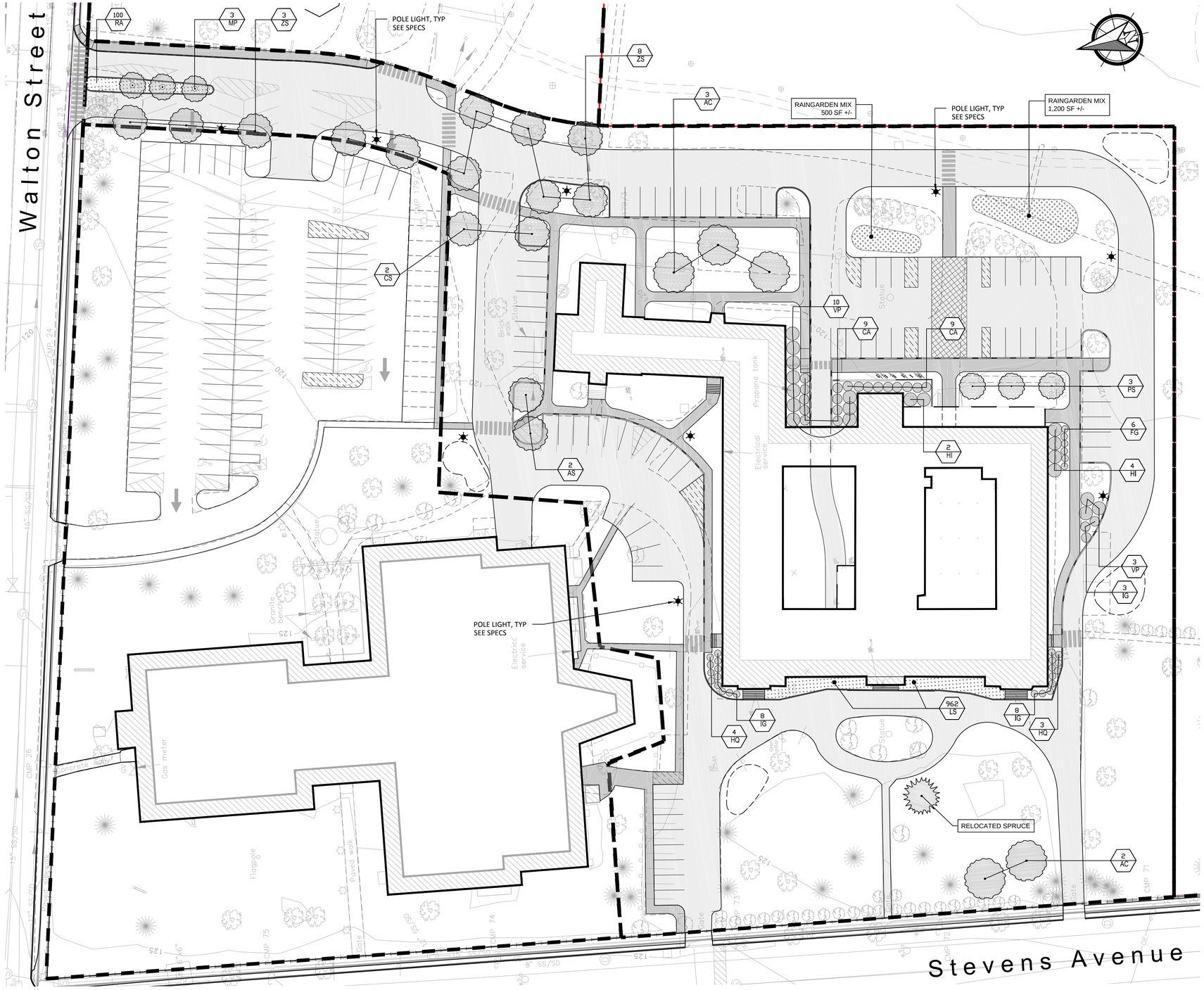
TREE PRESERVATION PLAN

Phase: PERMITTING

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

Date: J UNE 24, 2015

Sheet No: L1.0



NOTES:

1. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF WATERING AND MAINTENANCE.
2. CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE WORK SHOWN ON THE PLAN. ANY DISCREPANCY BETWEEN THE QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED ON THE PLAN SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL RENUMERATION. ANY DESCREPANCIES SHALL BE CLARIFIED WITH THE LANDSCAPE ARCHITECT PRIOR TO ORDERING PLANT MATERIAL.
3. ALL MATERIALS SHALL CONFORM TO SPECIFICATIONS OF THE AMERICAN STANDARDS FOR NURSERY STOCK (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS THE ORIGINAL GRADES BEFORE DIGGING.
5. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
6. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AT THE NURSERY AND AT THE SITE.
7. ALL PLANT BEDS SHALL MEET MINIMUM TOPSOIL REQUIREMENTS (SEE SPECIFICATIONS).
8. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL GRUBBING, BED PREPARATION, AND FINISH GRADING HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
9. ALL PLANTS BEDS AND TREE WELLS SHALL HAVE A MINIMUM OF 3" OF UNIFORMLY DISTRIBUTED, DARK, SHREDDED BARK MULCH.
10. CONTRACTOR SHALL SUBMIT SOIL SAMPLE AND TEST OF TOPSOIL TO LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. SOIL ADMIXTURE SHALL BE ADDED TO EXISTING SOIL (BY CONTRACTOR) IF DEEMED NECESSARY BY SOIL TEST RESULTS.
11. ROUGH GRADING AND BED PREPARATION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANT INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR TO REQUIRED SITE VISIT.
12. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. ALL ROOT WRAPPING AND CONTAINER MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING.
13. ALL BROAD LEAF EVERGREEN PLANTS SHALL BE SPRAYED WITH AN ANTIDESSICANT AT THE BEGINNING OF THEIR FIRST WINTER.
14. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
15. CONTRACTOR SHALL STAKE TREES IF DEEMED NECESSARY BY THE LANDSCAPE ARCHITECT.
16. THE LANDSCAPE CONTRACTOR SHALL PROVIDE PREPARED SOIL PLANTING MIX AS PER THE CONTRACT SPECIFICATIONS.
17. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE PLANT LIST AND PLANTING SPECIFICATIONS FOR SEASONAL REQUIREMENTS AND OTHER RESTRICTIONS RELATED TO THE TIME AND SEASON OF PLANTING.

LEGEND:

(EXISTING)

- PROPERTY LINE
- DECIDUOUS TREE
- EVERGREEN TREE
- SHRUBS
- EDGE OF PAVING
- BUILDING OUTLINE
- POLE LIGHT
- FIRE HYDRANT
- DRAIN MH
- SEWER MH
- UTILITY POLE
- SIGN
- CATCH BASIN
- CAST IRON FENCE
- CHAIN LINK FENCE

(PROPOSED)

- PROPERTY LINE
- ZONE BOUNDARY
- DECIDUOUS TREE
- EVERGREEN TREE
- SHRUBS
- BIT CONC (ROADWAY)
- BIT CONC (SIDEWALK)
- SPECIAL PAVING
- RAINGARDEN
- GROUNDCOVER
- EDGE OF PAVING
- CURB
- CROSSWALK STRIPING
- POLE LIGHT
- TRAFFIC SIGNAGE

30' 15' 0' 30' 60' 120'

PLANT LIST - TREES

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
X	AR	*Acer rubrum*	Red Maple	3" -3 ½" CAL.	B&B
X	AS	*Acer saccharum 'Green Mountain'*	Green Mountain Sugar Maple	3"-3 ½" CAL.	B&B
X	AC	*Aesculus x carnea 'Briotii'*	Red Horsechestnut	3"-3 ½" CAL.	B&B
X	AG	*Amelanchier x grandiflora 'Autumn Brilliance'*	Serviceberry	6'-7' HT.	MULTI STEMMED CLUMP
X	CS	*Catalpa speciosa*	Northern Catalpa	3"-3 ½" CAL.	B&B
X	MP	*Malus 'Prairiefire'*	Flowering Crabapple	2"-2 ½" CAL.	B&B
X	PA	*Platanus x acerifolia*	London Planetree	3"-3 ½" CAL.	B&B
X	PS	*Prunus sargentii*	Sargent Cherry	2"-3" CAL.	B&B
X	ZS	*Zelcova serrata ' Green Vase'*	Zelcova	3"-3 1/2" CAL.	B&B

PLANT LIST SHRUBS, GROUNDCOVERS, GRASSES

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	
X	CA	*clethra alnifolia ' September Beauty'*	Sweet Pepperbush	# 7	CONT	
X	FG	*Fothergilla gardenii*	Dwarf Fothergilla	# 7	CONT	
X	HI	*Hamamelis intermedia 'Arnold Promise'*	Witchhazel	4-5'	B&B	
X	HQ	*hydrangea quercifolia 'Ruby Slipper''*	Oakleaf Hydrangea	# 5	CONT	
X	IG	*Ilex Galabra 'Densa'*	Densa Inkberry	# 7	CONT	
X	LS	*liriope spicata*	Creeping Liriope	1 qt	CONT	12" O.C.
X	MD	*microbiota decussata*	Siberian Carpet Cypress	#3	CONT	24" O.C.
X	RA	*rhus aromatica 'Gro-Low'*	Fragrant Sumac	#2	CONT	24" O.C.
X	VP	*Viburnum p.t. 'Shasta'*	Shasta Doublefire Viburnum	4-5'	B&B	

PLANT LIST - RAIN GARDEN MIX

QUANTITY	SYB.	*BOTANICAL NAME*	COMMON NAME	Wet	Moist	Mesic	Dry	Size
36		*andropogon scoparius*	*Little Bluestem*			X	X	# 3
26		*deschampsia cespitosa*	*Tufted Hair Grass*		X	X		# 3
18		*cornus sericea 'farrow'*	Arctic Fire Dogwood	X	X	X		# 5
18		*vaccinium corybosum*	Highbush Blueberry		X	X		# 5
60		*iris versicolor*	Blue Flag Iris	X	X			# 1
60		*aster novae-angliae*	New England Aster		X	X	X	# 1
30		*eupatorium fistulosum*	Joe Pye Weed		X	X		# 1
60		*rudbeckia fulgida*	black-eyed susan		X	X		# 1
60		*echinacea purpurea*	Purple Coneflower		X	X		# 1

APPLICANT:

MOTHERHOUSE ASSOCIATES LP
100 COMMERCIAL STREET
SUITE 414
PORTLAND, ME 04101
207.772.7673

Project: **MOTHERHOUSE SENIOR HOUSING**

Description | Date | Revisions

Scale: 1" = 30'
Approved By: P.C
Drawn By: E.K.

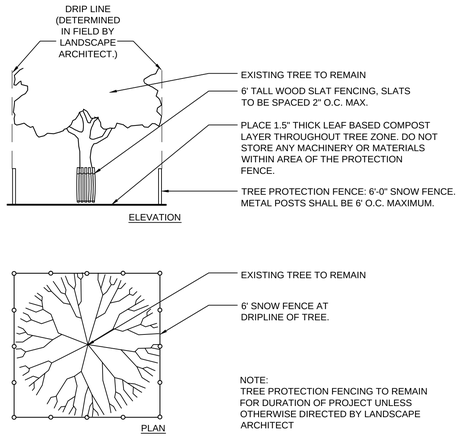
LANDSCAPE & LIGHTING PLAN

Phase: PERMITTING

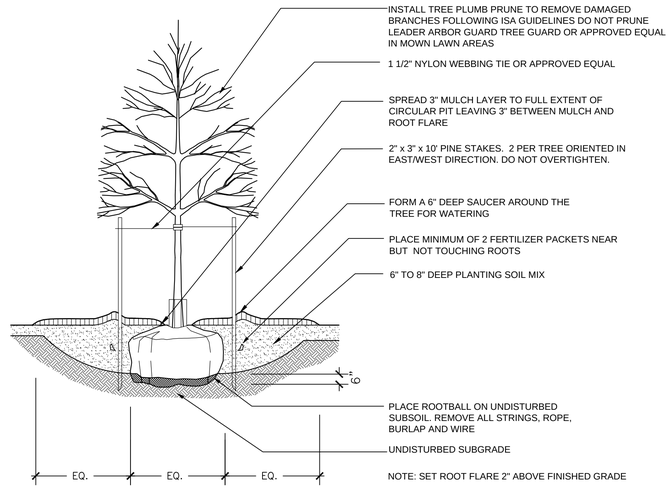
CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

Date: J UNE 24, 2015

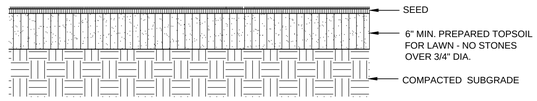
Sheet No: L2.0



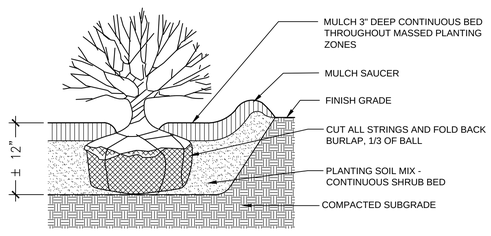
1 TREE PROTECTION
SCALE: N.T.S



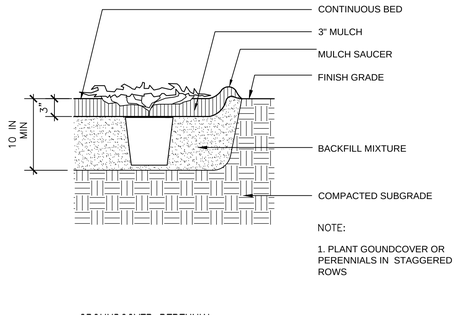
2 TREE PLANTING
SCALE:1"=1'-0"



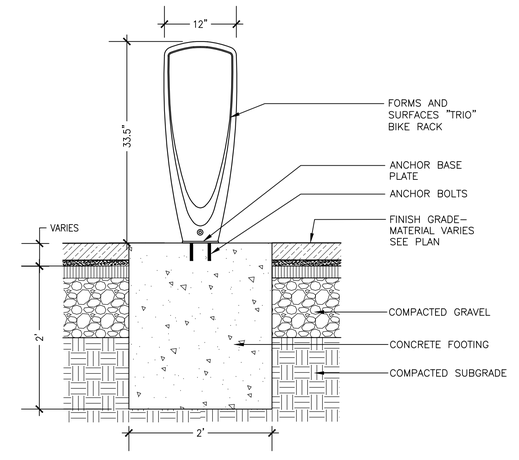
3 LAWN
SCALE:1"=1'-0"



4 SHRUB PLANTING
SCALE:1"=1'-0"



5 GROUNDCOVER PLANTING
SCALE:1"=1'-0"



6 BIKE RACK
SCALE:1"=1'-0"

APPLICANT:

MOTHERHOUSE
ASSOCIATES LP
100 COMMERCIAL STREET
SUITE 414
PORTLAND, ME 04101
207.772.7673

Project:
MOTHERHOUSE SENIOR HOUSING

Description | Date | Revisions

Scale: AS NOTED
Approved By: P.C
Drawn By: E.K.

LANDSCAPE DETAILS

Phase:
PERMITTING

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

Date:
J UNE 24, 2015

Sheet No:
L3.0

PLANNING BOARD REPORT
PORTLAND, MAINE

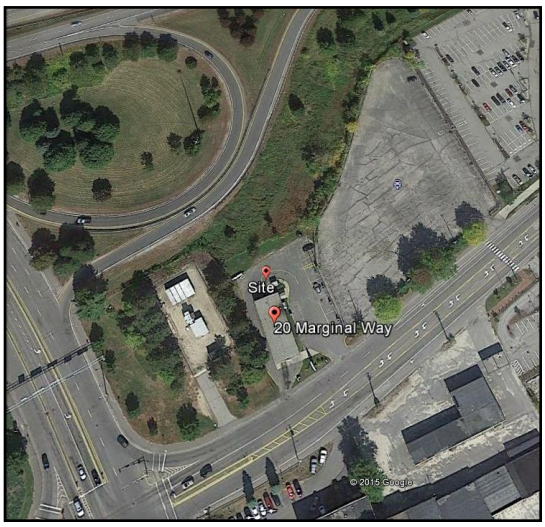
Bank/Office Building with Bank Drive-through, 20 Marginal Way
Level III Conditional Use and (Level II) Site Plan
Bangor Savings Bank, Applicant
Project #: 2015-080
CBL 113 A025001

Submitted to: Portland Planning Board Public Hearing Date: July 14th, 2015	Prepared by: Jean Fraser, Planner Date: July 10th, 2015

I. INTRODUCTION

Bangor Savings Bank has applied for conditional use and site plan approval for a three story (7,284 sq ft floorspace) bank and office building, including a drive-through for the bank at the rear of the building. The lot at 20 Marginal Way is 17,862 sq ft and located within the B-7 zone. The proposal includes 24 parking spaces and landscaping.

The Board saw this proposal at a conceptual stage when reviewing the Bank's request for a text amendment to the B7 drive-through conditions. In June the City Council approved the text amendments which support the proposal by allowing this smaller scale of floorspace in the development.



Staff have brought the associated site plan and conditional use application direct to a Hearing as the proposal is similar in all key respects to the proposal presented during the meetings on the text amendments and the applicant met with staff to resolve design details during that review.

This use requires a conditional use permit to be approved by the Planning Board and to meet the requirements of the B-7 Conditional Use standards (§14-296(a)1(c)) as well as the B7 Design Standards.

II. REQUIRED REVIEWS

Applicant's Proposal	*Applicable Standards*
New structure of 7,284 sq ft	Level II Site Plan
Bank Drive-through in B7 zone	Level III Conditional Use in the B7 zone (§14-296(a)1(c))

III. WAIVER REQUESTS

Note: the applicant originally requested a waiver from Parking Lot Landscaping but now intends to meet the Ordinance requirements. (See section IX C ii)

Applicant's Proposal	*Applicable Standards*
Driveway Separation: The proposed drive access does not meet separation standards in relation to the PO access.	*Technical Manual Section 1.7.1.7 Location and spacing of driveways* specifies minimum spacing of driveways. Staff support this waiver.
Bicycle Parking Dimensional Standards: the proposed bike racks are closer to the building than specified by the standards due to limited site area, but the required spaces will be accessible from the non-building side.	*Technical Manual Section 1.15.2 Placement of off street bicycle parking racks* requires a 24" separation form a building to allow access. The proposal provides 12" but does not count the parking spaces on that side towards the total required and the waiver is supported by staff.
Building Signage: the Master Signage Plan (Plan P12) proposes more signs than allowed by the standards and incorporates materials that are not mentioned in the standards.	*B7 Mixed Use Urban District Zone Design Principles and Standard E-16: Signage* specifies the number of building signs allowed and associated technical specifications. Staff support the waiver for materials but not for the number of proposed signs.

Glass Transparency: the applicant is requesting a waiver from the B7 Design Standards because of the need to take account of the solar gain on the south facing large windows	*B7 Mixed Use Urban District Zone Design Principles and Standard E-13: Transparency* specifies that windows that have daylighting application on all levels of the façade shall use glass with a visible transmittance (VT) value of .7 or greater, which looks clear. . . . Opaque, heavily tinted or reflective glass shall not be used at the pedestrian level unless it can be demonstrated that the building program precludes the use of transparent glass. Staff needs more information and a sample before a recommendation can be made. A condition of approval regarding the window design is suggested. See Design Review comments (Att. 6).

IV. PROJECT DATA

SUBJECT	*DATA*
Existing Zoning	B- 7
Existing Use	Car Wash
Proposed Use	Bank , offices and bank drive-through (new building)
Parcel Size	17,862 sq ft
Impervious Surface Area **--Existing** **--Proposed** **--Net Change**	 15,579 sq ft 15,976 sq ft +397sq ft
Total Disturbed Area	Approx 85,000 sq ft
Building Footprint **--Existing** **--Proposed** **--Net Change**	 2,706 sq ft 2,100 sq ft (606 sq ft)
Building Floor Area **--Existing** **--Proposed** **--Net Change**	 2,706 sq ft 7,284 sq ft +4,578 sq ft
Parking Spaces **-Existing** **-Proposed** **# handicapped**	 9 24 2
Bicycle parking Spaces **-Existing** **-Proposed**	 0 2
Estimated cost of the project	$1,800,000

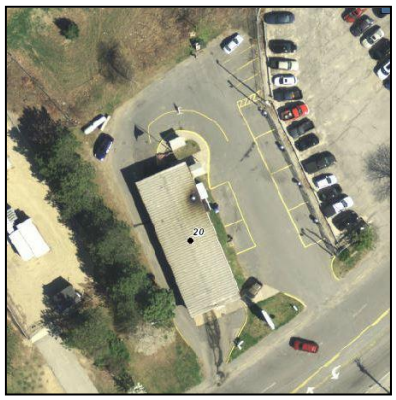
V. BACKGROUND AND EXISTING CONDITIONS

Zoning

The applicant has requested and received a text amendment to the B7 Conditional Use requirements that apply to this proposal to allow bank drive-throughs in buildings with a smaller floor area than 20,000 sq ft. The Planning Board reviewed the text amendments in early 2015. During that review the applicant submitted detailed site plan proposals and associated renderings and details, although at the time staff clearly indicated that a detailed site plan review had not been undertaken (for example, in respect of architectural design, lighting, landscaping etc). The amended text added requirements for "...storefront windows, entries, and interior public space oriented to and visible from the street, with front entry access facing the street and directly accessible from the public sidewalk" which need to be addressed in the site plan.

Existing conditions

The existing site is a busy car wash housed in a single-story building (approx. 2700 sq ft). The owner obtained traffic generation information in mid-2014 (see Attachment F) that indicated that this use generates up to 118 trips/hour during the peak hour.



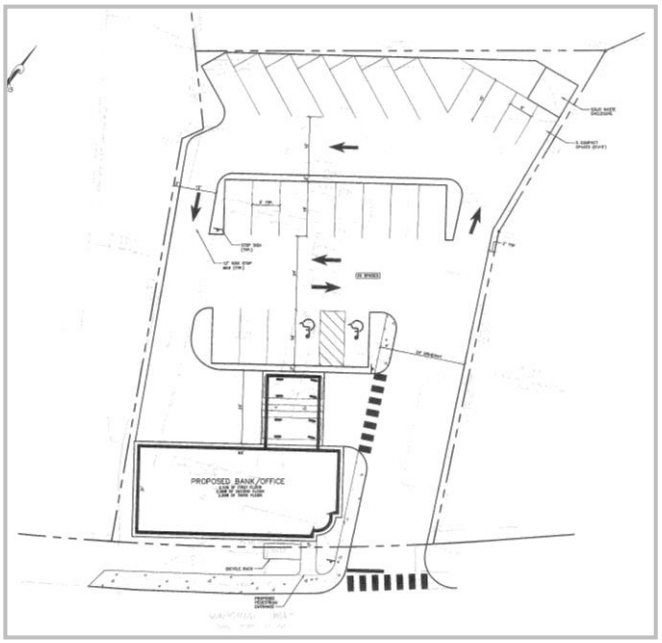
To the east the site abuts the Post Office site (an expanse of paved area/parking) which is separated by a chain link fence. To the west is an area of mature conifers that is part of a site owed by Central Maine Power, with the north boundary along MDOT and that buffers the Rt I-295 interchange.

VI. PROPOSED DEVELOPMENT

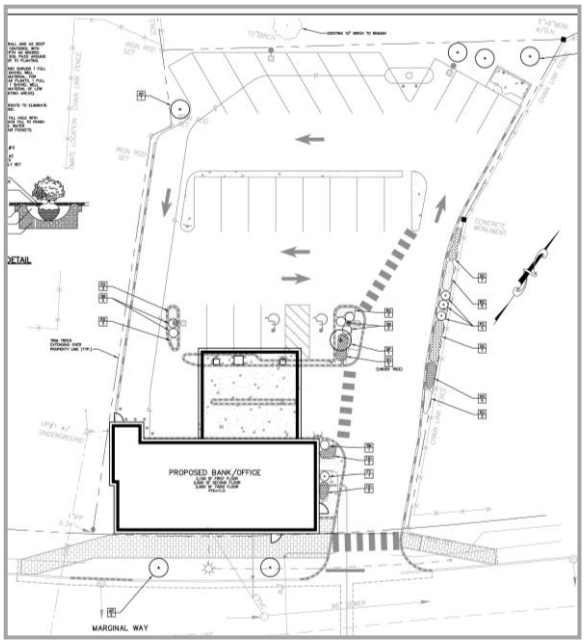
The proposals are described in Attachments A, B, C and D and illustrated in the attached Plan Set. The existing car wash is proposed to be demolished and replaced with:

- A new three story mainly brick bank/office building using high quality materials;
- Strong and attractive interface with Marginal Way, including elements identified by and integrated with the Marginal Way Improvement Plan;
- Double drive-through located behind the building with any stacking away from Marginal Way;
- Inclusion of "green" initiatives such as the prominent solar panels and Electric Vehicle Charging Stations.

Since the development of the Concept Plan for the zoning amendments, the applicant has worked with staff to improve the elevation design, door entrances facing Marginal Way, pedestrian accommodations, landscaping and treatment along the frontage, as shown in a comparison of the plans below:



ZONING CONCEPT



CURRENT FINAL PROPOSAL
(Landscape Plan in Plan P10)

The final elevations are shown in architectural format and renderings (with and without signage) in Plans P12 and P13, with details in Plans P14 and P15. The extracts below give an indication of the design and this is discussed in greater detail in section IX C iv below Design Review:

From Marginal Way

From I-295 and interchange

VII. PUBLIC COMMENT

A notice of this Hearing was sent to 49 property owners within 500 feet and interested citizens, and appeared in the July 3rd / 6th, 2015 editions of the *Portland Press-Herald*. A Neighborhood Meeting is not required for this project and the Planning Division has not received any public comments since the two letters of support that were received during the text amendment review.

VIII. RIGHT, TITLE AND INTEREST AND FINANCIAL/TECHNICAL CAPACITY

The owner of the property has entered into a term sheet for the lease of the site to Bangor Savings Bank; this is included in Attachment E.

IX. STAFF REVIEW

A. ZONING ASSESSMENT

The proposal is a conditional use in the B7 zone and meets all of the B7 dimensional requirements and the parking requirements of Division 20.

The B7 zone includes a particular requirement (14-332.2.c) for the submission of a parking analysis and for the Planning Board to establish the parking requirement for the project. The applicant has submitted a parking analysis (Attachment J) which supports the proposed parking at 24 spaces. Staff support the proposed parking and a suggested condition of approval allows the Board to document that this is the established requirement.

B. CONDITIONAL USE REVIEW

The applicant has submitted an analysis of how the proposal meets the B7 Conditional Use Standards (Attachment C) and staff confirm that the project meets the requirements of the amended standards as follows:

Sec.14-296. Conditional uses.

(a) The following uses shall be permitted as conditional uses in the B-7 zone as provided in section 14-474 (conditional uses), provided that, notwithstanding section 14-474 (a) or any other provision of this code, the planning board shall be substituted for the board of appeals as the reviewing authority:

1. Commercial use:

a. Meeting, convention and exhibition halls limited to a total of twenty-five thousand (25,000) gross square feet of interior floor area.

b. Wholesaling, providing that the wholesale operation is associated with an onsite retail establishment and that the wholesaling component of the facility occupies a building gross floor area of less than fifteen thousand (15,000) square feet.

c. Drive-up banking provided that:

i. The drive-up is accessory to a banking service occupying a minimum floor area of four thousand (4,000) square feet; and

ii. The drive-up is attached to or included within a building with a minimum floor area of twenty thousand (20,000) square feet, except that for lots of less than 20,000 square feet and in existence as of March 9, 2005, a drive-up may be included in a building of less than 20,000 sq ft.

iii. The drive-up facility is attached or included within a building and/or addition meeting the minimum height of four stores in the Bayside Height District A and three stories in the Bayside Height Districts B and C. For the purposes of this conditional use, the minimum height exceptions contained in Section 14-298 (h) 5, 7, and 8 shall not apply.

Staff comment: The proposal meets the standards as it is in Bayside Height District B which requires a 3- story building at this site.

iv. The first floor of the building shall include banking or other retail storefront uses with storefront windows, entries, and interior public space oriented to and visible from the street, with front entry access facing the street and directly accessible from the public sidewalk; and

Staff comment: The applicant has revised the proposals a number of times to meet this requirement. The lowest floor (see Plan P15) includes a coffee shop and lobby along the large front windows that face directly onto the sidewalk, and the entrance doors have been located to face the street and be directly accessible from the sidewalk.

iv. All drive-up features, such as automated teller machines and service windows, shall not extend nearer than twenty-five (25) feet to the street right-of-way line; and

Staff comment: All of these features are at least 30 feet from the street ROW line, and in addition are located behind the building and so generally not viewed from the public domain.

v. The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular or pedestrian circulation or creating hazards to vehicular or pedestrian circulation on adjoining streets; and

vi. Drive-up vehicle circulation shall not be located between the building and any adjacent public streets; and

Staff comment: The proposed vehicle circulation takes the drive-through customers around the rearmost drive and then down the west side to enter the drive-through from the west. This provides stacking area along the west boundary of the site and ensures that it is not near Marginal Way nor across any pedestrian routes.

vi. The drive-up shall be limited to two vehicle drive-up lanes; and

Staff comment: The proposed drive-through comprises two vehicle lanes.

vii. The location of any drive-up shall be limited to the geographic area between Somerset/Kennebec Streets/ I-295/Franklin Street/Forest Avenue.

Staff comment: The proposal is located within the area identified for bank drive-throughs, as shown below.

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: The traffic generation for the proposed use is a reduction from the previous use (Attachment 2) and the parking layout and circulation area is not substantially greater that would normally occur at surrounding uses.

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.

C. DEVELOPMENT REVIEW (SITE PLAN STANDARDS in Section 14-526)

The applicant has provided a comprehensive application and additional information and revisions in response to staff comments. The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations, and meets the standards except in a few cases where suggested conditions are recommended to fully address site plan standards.

i. Transportation Standards

Impact on Surrounding Street system, Access and Circulation

The applicant has provided a Traffic Analysis (Attachment F) which has been reviewed by Tom Errico, Traffic Engineering reviewer (Attachment 2); the final comments are:

- *The applicant has revised the site circulation roadway widths (they have been narrowed slightly) to accommodate suggested landscaping enhancements and I find conditions to be acceptable. Jeff Tarling has requested the possible widening of the 2 foot raised concrete island to 3-feet with a reduction of the one-way circulatory roadway width from 19 feet to 18 feet. I am supportive of this change, if deemed necessary. I also find the pedestrian facility system to be acceptable given users and site operations.*

- *The applicant has designed the frontage of the project along Marginal Way according to our suggestions and I find it to be acceptable. I would note that this frontage area should be considered an interim streetscape plan as it may change following recommendations identified through the Bayside Transportation Master Plan process. I would note that the project has a net reduction in vehicle traffic (as compared to the former car wash) and therefore contributions to the Marginal Way Master Plan fund is not required.*

- *The proposed driveway does not meet City separation standards with the adjacent Post Office Parking Lot Driveway. I support a waiver from the City's Technical standards as it is preferred that the driveway separation from Forest Avenue be maximized.*

Parking: The Site Plan (Plan P4) shows 24 spaces on the plan, which is slightly over the zoning requirement of 19-20 spaces. As mentioned above under Zoning in IX A, the Planning Board determine the parking requirement for B7 projects and the applicant has submitted a Parking Analysis that supports the provision of 24 spaces (Attachment J). The parking provision is considered by the applicant to be of paramount importance because the new building will be intensively used for various bank office functions.

TDM: The scale of the proposal does not trigger the requirement for a TDM Plan.

ii. Environmental Quality Standards

Landscape Preservation, Buffers and Parking Lot Landscaping
The site has limited areas for landscaping and the applicant had originally requested a waiver for parking lot landscaping (with contribution to the Tree Fund instead. Staff do not support the waiver because screening of parking is also part of the B7 Design Standards, and because of the absence of landscaping along the eastern boundary (where the view towards the proposed parking is clearest from the sidewalk and street).

Staff met with the applicant and suggested that there was scope for a number of smaller spaces for planting so that cumulatively the landscape would meet the ordinance requirements which state:

> *(ii) Parking Lot Landscaping:*
> *Developments with five (5) or more parking spaces shall include at least two (2) trees (or one (1) tree and three (3) shrubs) per five (5) parking spaces planted in landscaped islands to screen shade and break up parking. Trees and shrubs in parking lots may be in informal groups, straight rows, or concentrated in clusters as detailed in Section 4 of the Technical Manual....*

The final Landscape Plan (Plan P10) has been prepared by a Landscape Architect and includes many improvements, although the City Arborist remains of the view that more could be done (Attachment 3):

> *The proposed Bangor Savings Bank landscape plan for Marginal Way is acceptable with the condition that ONE tree is planted in the rear right side traffic island and vegetation is added to the proposed rear curbing area.*
>
> *The attached photos demonstrate that ornamental grasses can grow in restricted spaces, this is an MDOT project called Hagis Parkway / Route One in Scarborough where they successfully use*
> *beach grass in a high salt area with good results. The overall Bangor Savings Bank project has much less than average landscape percentage due to lot orientation and circulation patterns, however a simple planting of low maintenance beach grass would work, thus is a recommended condition of approval.*

Tom Errico, Traffic Engineering reviewer, has confirmed that the rear drive aisle could be narrowed from 19' to 18' to provide an extra foot in the curbed area for the suggested planting (Attachment 2).

A suggested condition of approval is included to reflect Mr. Tarling's recommendation.

Street Trees
It should be noted that the street trees, brick sidewalk, and design of the frontage area is welcome as it includes some of the Marginal Way Improvement Plan elements and is integrated with the future plans for that stretch of Marginal Way.

Water quality; Stormwater Management; Erosion Control:
The project has been reviewed by Dave Senus, consultant Peer Engineering Reviewer who provided detailed comments in June, 2015. The applicant has fully addressed those comments with the exception of a Construction Management Plan, which staff consider is not a concern at this location (Attachment 1).

iii. Public Infrastructure and Community Safety Standards (1)

Consistency with Master Plans
The project has incorporated the staff recommendations regarding the frontage so that it contributes to the Marginal Way Improvement Plan. The proposal includes a new street light to match the streetlights in this part of Bayside.

Public Safety and Fire Prevention
The proposals are generally acceptable in relation to the CPTED standards which encourage natural surveillance, access control, and territorial reinforcement. The windows and the rear deck of the building provide some surveillance, but the lighting levels in and around the drive-through are low and staff recommend further consideration to maximize security there.

The Fire Department has confirmed that the proposals meet conditions in respect of access, hydrants, and construction (Attachment 5).

Public Utilities
The applicant sent letters to the Portland Water District and Portland Department of Public Services in May in respect of the water supply and sewerage capacity. Confirmation of capacity has not yet been received and a suggested condition of approval has been included requiring these be received before the issuance of a building permit.

iv. Site Design Standards

Historic Resources: Not applicable.

Exterior Lighting: The applicant has submitted a photometric plan at Plan P11. The plan omits some of the information required (such as the specs for the lights to confirm they are full cut-off) and shows levels considerably above the Technical Standards for trespass along the eastern boundary. While this boundary is not "sensitive" at this time, the high lighting levels could impact a future development or use.

As mentioned above under "Public Safety", the area of the drive-through is not overlooked from the sidewalk and increased lighting levels should be incorporated here to improve security. Staff recommend a condition that requires a revised lighting plan with further details and revised levels to meet these concerns.

B7 Design Standards: the applicant has been working with the Planning Division's Urban Designer Caitlin Cameron to address the extensive B7 Design Guidelines and Standards. Ms. Cameron's final comments are included as Attachment 6 and confirm that most of the associate requirements have been met. The outstanding issues are:

- Building Signage (see submission in Attachment H and Plan P12)
- Transparency and tinting of the glass, particularly along the south facing frontage next to the sidewalk (see submitted info in Attachment I)
- Landscaping to screen parking (see Plan P9 Landscape Plan and discussion above under Site Plan)

Staff recommends a condition of approval that requires the applicant to work with staff to resolve the window design including transparency, color, and size to meet the intent of the B-7 Design Principles and Standards.

X. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed bank and office building with bank drive-through at 20 Marginal Way. The proposals would transform a single story car wash on a constrained site into a high quality development that is more appropriate to Bayside. The applicant has worked to meet or exceed the relevant standards. In addition, this project will contribute to the Marginal Way Improvement Plan and features "green" elements such as the solar panels.

XI. 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 July 14, 2015 for application #2015-080 (20 Marginal Way) relevant to Portland's Technical and Design Standards, the B7 Design Guidelines and Standards and other regulations, and the testimony presented at the Planning Board hearing:

1. Driveway Separation
   The Planning Board (**waives/does not waive**) Technical Design Standard Section 1.7.1.7 *Location and spacing of driveways* to allow the proposed driveway to be located as shown on Site Plan Plan 4.

2. Bicycle parking dimensional standards
   The Planning Board (**waives/does not waive**) Technical Design Standard Section 1.15.2 which specifies a minimum of 24 inches between the bike rack and the building wall, to allow a separation of 12 inches, subject to the required bicycle parking being met on the non-building side of the rack.

3. Building Signage:
   The Planning Board (**waives/does not waive**) *B7 Mixed Use Urban District Zone Design Principles and Standard E-16: Signage* to allow a total of ___ signs at the pedestrian level and ___ signs at upper levels, and to allow ___materials, to address the unique circumstances of the site and the user.
   {Planning Board to determine}

4. Glass Transparency:
   The Planning Board (**waives/does not waive**) *B7 Mixed Use Urban District Zone Design Principles and Standard E-13: Transparency* to allow a waiver from the specified VT value, but that the scale of the waiver be determined by the City's Urban Designer based on further information and discussions regarding ways to meet the objectives of the standard.

B. 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 July 14, 2015 for application #2015-080 (Conditional Use and Site Plan) (20 Marginal Way), 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 a bank drive-through associated with the new Bangor Savings Bank at 20 Marginal Way in the B-7 zone **does / does not** meet the standards of § 14-474 and the standards of §14-296(a)1(c) for the B-7 zone.

C. 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 July 14, 2015 for application #2015-080 (Conditional Use and Site Plan) (20 Marginal Way), 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:

i. That this approval is subject to the Zoning Text Amendments relating the bank drive-throughs in the B7 zone, as recently approved by the City Council, taking effect without delays such as an appeal; and

ii. That the Planning Board has established that the required level of parking is 24 parking spaces; and

iii. That the applicant shall reconsider the window design, including transparency, color, and size, in consultation with the City's Urban Designer, to meet the intent of the B-7 Design Principles and Standards. The final design to be reviewed and approved by the Planning Authority prior to the issuance of a building permit; and

iv. That the applicant shall submit a revised Landscape Plan, for review and approval by the City Arborist and the Planning Authority prior to the issuance of a building permit, that adds one tree to be planted in the rear right side traffic island and adds vegetation to the proposed rear curbing area to address the City Arborist comments dated 7.2.2015; and

v. That the developer/contractor/subcontractor must comply with conditions of the construction stormwater management plan and sediment and erosion control plan submitted May 2015 based on City standards and state guidelines. The owner/operator of the approved stormwater management system and all assigns shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements; and

vi. That the applicant shall submit a copy of the ability to serve (water supply and wastewater) letters prior to the issuance of a building permit; and

vii. That the applicant shall address the Department of Public Services comments dated 7.2.2015 to revise the notes on the Site Plan prior to the issuance of a building permit; and

viii. That the applicant shall submit, for review and approval by the Planning Authority prior to the issuance of a building permit, a revised photometric plan for the rear parking lot area that includes the lighting fixture specification, reduces trespass along the eastern boundary to meet Technical Standards, and increases the lighting levels in the vicinity of the drive-through; and

ix. That separate permits are also required for all new signs, including those on the building, and for HVAC systems, which require submission of dBA levels to confirm compliance with the maximum sound limits of the ordinance.

ATTACHMENTS:

Report Attachments
1. Peer Engineer Review comments 6.10.2015 and 7.6.2015
2. Traffic Engineering Review comments 7.1.2015
3. City Arborist comments 7.2.2015
4. DPS (David Margolis-Pineo) comments 7.2.2015
5. Fire Department comments 7.8.2015
6. Urban Design comments 7.8.2015

Public Comments
(none)

Applicant's Submittal
A. Cover letter
B. Site Plan Application
C. Conditional Use Application
D. Project Description
E. Right, title & Interest (lease)
F. Traffic Analysis
G. Erosion Control and Stormwater Plans
H. Master Sign Narrative and Plans
I. Glass Transparency Information
J. Parking Demand Analysis

Plans
P1. Survey
P2. Cover sheet
P3. Demolition Plan
P4. Site and Utility Plan
P5. Grading plan
P6. Details
P7. Details
P8. Details
P9. Landscape Plan
P10. Photometric Plan
P11. Proposed Signage
P12. Elevations – renderings
P13. Elevations - architectural
P14. Ground floor plan showing coffee shop

COMMITMENT & INTEGRITY
DRIVE RESULTS

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MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, PE
DATE: June 10, 2015
RE: Bangor Savings Bank, Preliminary Level III Site Plan Application

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Woodard & Curran has reviewed the Preliminary Level III Site Plan Application for the proposed Bangor Savings Bank located at 20 Marginal Way in Portland, Maine. The project involves the construction of a three story, 2,100 SF bank/office building with a double drive thru.

Documents Reviewed by Woodard & Curran

- Preliminary Level III Site Plan Application and attachments, dated May 13, 2015, prepared by Gorrill Palmer, on behalf of Bangor Savings Bank.
- Engineering Plans, Sheets C002, C101, C102, & C401, dated May 13, 2015, prepared by Gorrill Palmer, on behalf of Bangor Savings Bank.
- Boundary & Topographic Survey, dated March 24, 2015, prepared by Owen Haskell, Inc., on behalf of Gorrill Palmer.

Comments

1) The Cover Sheet to the Engineering Plan set indicates that Sheets C402 & C403 contain additional details; however, we have not received these sheets at this time. Woodard & Curran will conduct a review of the proposed details upon receipt of the additional sheets.
2) Note 5 on Sheet C002 states that the General Contractor shall submit a Construction Management Plan to the City of Portland prior to demolition; the Applicant should note that a Construction Management Plan is required to be submitted as part of the Final Site Plan Application, per the General Written Submissions Checklist. If requested by the Applicant, Planning Staff and the Planning Board may allow for the construction management plan to be submitted for review and approval prior to the issuance of a building permit (as a condition of the Site Plan approval).
3) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standard: A plan has been provided to address 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; however, it does not appear that details of the proposed erosion and sediment control measures have been provided at this time.
   b) General Standards: The project will result in an increase in impervious area of approximately 207 square feet. As such, the project is not required to include any specific stormwater management features for stormwater quality control. We encourage the Applicant to review the City's Stormwater Service Charge Credit Manual (available online) to evaluate whether they may want to incorporate stormwater quality treatment measures that qualify for a future Stormwater Service Charge credit.
   c) Flooding Standard: The project will result in an increase in impervious area of approximately 207 square feet. As such, the project is not required to include any specific stormwater management features to control the rate or quantity of stormwater runoff from the site.

4) The Applicant has noted that letters have been sent to the Portland Water District and Portland Public Services requesting confirmation of their ability to serve the project and that responses will be forwarded to the City upon receipt.
5) The edge of pavement line at the rear parking area has many angles to define the edge of the angled parking spaces and the adjacent, abutting features. We recommend a more linear edge of pavement line for ease of construction and for winter plowing and site maintenance operations.
6) The Applicant has noted that a lighting plan and catalog cuts of the proposed lighting will be provided in the final submission.

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MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, PE
DATE: July 6, 2015
RE: Bangor Savings Bank, Level III Site Plan Application

Woodard & Curran has reviewed the response to comments for the Final Level III Site Plan Application for the proposed Bangor Savings Bank located at 20 Marginal Way in Portland, Maine. The project involves the construction of a three story, 2,100 SF bank/office building with a double drive thru.

Documents Reviewed by Woodard & Curran

- Response to Comments Letter dated June 29, 2015, prepared by Gorrill Palmer, on behalf of Bangor Savings Bank.
- Engineering Plans, Sheets C001, C002, C101, C102, C401, C402, C403 Rev dated June 29, 2015, prepared by Gorrill Palmer, on behalf of Bangor Savings Bank.

Comments

1) The Applicant had previously noted that letters had been sent to the Portland Water District and Portland Public Services requesting confirmation of their ability to serve the project, and that responses will be forwarded to the City upon receipt. We have not reviewed responses confirming ability to serve the proposed development.
2) All previous review comments have been adequately addressed.

Att. 2

From: Tom Errico <thomas.errico@tylin.com>
To: Jean Fraser <JF@portlandmaine.gov>
CC: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@port...
Date: 7/1/2015 2:45 PM
Subject: 20 Marginal Way - Final Traffic Comments

Hi Jean - I have reviewed the final site plan and find it to be acceptable with the following comments.

* The applicant has revised the site circulation roadway widths (they have been narrowed slightly) to accommodate suggested landscaping enhancements and I find conditions to be acceptable. Jeff Tarling has requested the possible widening of the 2 foot raised concrete island to 3-feet with a reduction of the one-way circulatory roadway width from 19 feet to 18 feet. I am supportive of this change, if deemed necessary. I also find the pedestrian facility system to be acceptable given users and site operations.

* The applicant has designed the frontage of the project along Marginal Way according to our suggestions and I find it to be acceptable. I would note that this frontage area should be considered an interim streetscape plan as it may change following recommendations identified through the Bayside Transportation Master Plan process. I would note that the project has a net reduction in vehicle traffic (as compared to the former car wash) and therefore contributions to the Marginal Way Master Plan fund is not required.

* The proposed driveway does not meet City separation standards with the adjacent Post Office Parking Lot Driveway. I support a waiver from the City's Technical standards as it is preferred that the driveway separation from Forest Avenue be maximized.

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
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207.781.4721 (main)
207.347.4354 (direct)
207.400.0719 (mobile)
207.781.4753 (fax)
thomas.errico@tylin.com<mailto:thomas.errico@tylin.com>
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"One Vision, One Company"

Please consider the environment before printing.

Att. 3

From: Jeff Tarling
To: Errico Thomas; Jean Fraser
CC: Barbara Barhydt; Caitlin Cameron; David Margolis-Pineo
Date: 7/2/2015 4:09 PM
Subject: Re: Fwd: 2970 Bangor Savings - Marginal Way
Attachments: Beachgrass.JPG; BGisland.JPG

Jean -

The proposed 2970 Bangor Savings Bank landscape plan for Marginal Way is acceptable with the condition that ONE tree is planted in the rear right side traffic island and vegetation is added to the proposed rear curbing area.

The attached photos demonstrate that ornamental grasses can grow in restricted spaces, this is an MDOT project called Hagis Parkway / Route One in Scarborough where they successfully use beach grass in a high salt area with good results. The overall Bangor Savings Bank project has much less then average landscape percentage due to lot orientation and circulation patterns, however a simple planting of low maintenance beach grass would work, thus is a recommended condition of approval.

Thanks,

Jeff Tarling
City Arborist

ONLY
1YF 993

COLD STONE
Tim Hortons

Att. 4

From: David Margolis-Pineo
To: Jean Fraser
CC: Barbara Barhydt; Tom Errico
Date: 7/2/2015 11:48 AM
Subject: 20 Marginal Way

Jean,

July 2, 2015

To: Jean Fraser
Barbara Barhydt
From: David Margolis-Pineo
Re: 20 Marginal Way (2015-080) – Bangor Savings Drive Thru

The Department of Public Services has the following final comments on the proposed project mentioned above.

1. Revise note on Sheet C101 which currently states “Plug or remove existing san sewer” to read, “Remove or grout fill sewer to be abandoned within the road right of way.”

We have no further comments.

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2015-080

Date: 7/8/2015

Comments Submitted by: Keith Gautreau/Fire on 6/2/2015

Premises Identification
The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.
If the building entry faces a different street, both the street name and number should be large enough to read from the street.
Address numbers must be a minimum of 4 inches high.
The number should be in Arabic numerals rather than spelled out (for example, “130” instead of “One Hundred and Thirty’).
Color: Addresses should be in a color that contrasts with the background.
Whenever possible, should be illuminated.

Comments Submitted by: Keith Gautreau/Fire on 6/2/2015

Hydrants
2009 NFPA 1 18.3 Water Supplies and Fire Hydrants
-Fire Department Connections shall not be located where large diameter hose may block egress.
2.Fire Vehicle Access

1.)Largest Fire Department Vehicle must be able to navigate through the parking lot to access building.
2.)Fire Department Access shall have an unobstructed vertical clearance of not less than 13 ft 6 in.

Comments Submitted by: Keith Gautreau/Fire on 6/2/2015

Construction Management Plan
Streets must maintain a 20’ width for Fire Department access at all times.
Fire Hydrants shall not be blocked or enclosed by fencing. A 3’ foot clearance must be kept at all times around the fire hydrant.
If gates are locked, a Portland Fire Department Knox padlock must be purchased by the applicant to allow access for the Fire Department.
The Construction Company’ emergency contact information shall be posted on the property in case of an after hours emergency.
All construction shall comply with 2009 NFPA 1 Chapter 16 Safeguards During Building Construction, Alteration, and Demolition Operations.
Any cutting and welding done will require a Hot Work Permit from Fire Department.

Comments Submitted by: Keith Gautreau/Fire on 7/8/2015

The final plans have met the conditions in regards to access, hydrants, construction.

Planning and Urban Development Department
Planning Division

Subject: B7 Design Review – 20 Marginal Way

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, July 8, 2015

On Wednesday, July 8, a design review according to the *City of Portland Design Manual* Standards was performed for the new construction proposal for redevelopment at 20 Marginal Way. The revisions were reviewed by Caitlin Cameron, Urban Designer, and Jean Fraser, Planner, Planning Division of the Department of Planning & Urban Development. The project was reviewed against the B-*7 Mixed Use Urban District Zone Design Principles & Standards* (Appendix 4 of the Design Manual).

Design Review Criteria:
The project must meet all *B-7 Design Principles & Standards*.

Findings of the Design Review:
Overall the proposal meets the B-7 Design Guidelines with the exception of the signage guidelines for which the applicant is seeking waivers. The building is of a scale and orientation conducive to an urban, multi-modal, and on-peninsula site. The ground level provides an active frontage with storefront and street-facing entries. The project also provides a sustainable design employing solar panels.

The proposed design currently **does not pass** all of the criteria of the *B7 Design Guidelines*. Refer to comments below regarding **waiver requests** and design elements which do not meet the standards - Staff recommends **condition of approval** wherein the window design issues including transparency, color, and size, be resolved with City staff including the Urban Designer to meet the intent of the B-7 Design Principles and Standards.

Principle A: Urban Design
A-5: Pedestrian Environment – *Development on public streets or public spaces shall . . . enhance the pedestrian environment through the use of elements at the first floor such as fully functioning entries oriented to the street; active windows and storefronts; awnings and weather protection; appropriately scaled streetlights; trees and landscaping; . . .*

- The project places an **active door and storefront** facing Marginal Way and **contributes to the street wall. The sidewalk is placed adjacent to the building** as recommended by staff. The applicant recessed the entries in order to accommodate the outward door swing into the public right-of-way. **A canopy is used to emphasize the entry** points of the building.

A-7: Building Orientation – *The primary facades and entrances of buildings shall be oriented to streets, major pedestrian routes, or open spaces in order enhance the pedestrian-oriented environment. The primary facades and entrances of buildings shall not be oriented toward parking lots.*

- The project is **oriented towards the street creating a street wall** and includes **street-facing entries** at the sidewalk.

Principle C: Parking, Loading and Service Areas

C-6: Surface Lots – *Areas devoted to surface parking shall be screened from public rights of way and significant views through the use of design elements such as plantings, fencing, grade changes, and/or walls. A landscaped border shall be created around all surface parking lots. Any parking lot containing ten (10) or more parking spaces shall include one (1) or more landscaped islands within the interior of the lot. There shall be at least one (1) island for every twenty (20) spaces.*

- Staff suggests landscaping choices that are tall enough to **provide adequate screening from neighboring properties and views of parking from the street. Staff does not support a waiver request** from the landscaping requirement from an urban design standpoint.

Principle E: Architectural Design

E-12: Materials – *Facades visible from public rights of way shall use natural and authentic building materials that are expected to last at least 50 years. Predominant materials shall be brick, stone, precast concrete and other masonry products, wood, glass, and high quality metals such as steel, titanium and copper. . . . Materials such as thin gauge metal panels, exterior insulation and finish systems (EIFS), panelized "thin brick," vinyl siding, or stucco on Styrofoam or a similar backing shall not be used on facades visible from the public rights of way. Fiber-cement clapboard and shingles may be used. Fiber cement panels shall only be used on portions of the building not visible from public rights of way. Public spaces shall be constructed of permanent, durable materials such as concrete, brick or stone.*

- **The building material palette** is similar to the recent commercial buildings on Marginal Way and **meets the design standard** – brick, composite panels, and storefront.

E-7: Windows – *The first floor transparency (minimum visible transmittance (VT) of .7 or greater) along public streets and the trail shall be equal to at least 50% of the wall area between the height of 2 and 9 feet. The first floor windows and storefronts shall be transparent with active uses visible behind them. Opaque glass shall not be allowed at the first floor level [See Standard E-13 Transparency]. Upper floors of all new buildings shall have at least 15% to 40% transparency of wall surface requirements. If it can be demonstrated that the building program precludes windows along first floor street frontages, then other surface details shall be used in accordance with Standard E-4 Articulation.*

- **Proposed glass has a VLT of .56 which is lower than the allowed .7. A sample is required** before staff can assess whether the transparency is adequate.
- **Spandrel glass (opaque) is proposed** for the upper portion of the ground floor storefront which is **not allowed by the Standard**. **See comments below.**

E-8: Storefronts - *Storefront glass shall be transparent in accordance with Standard E-13: Transparency, and shall not be blocked with opaque glass, or other means.*

- **Proposed transparency does not meet the Standard.**
- **Spandrel glass (opaque) is proposed** for the upper portion of the ground floor storefront **which is not allowed by the Standard. Staff does not support the use of spandrel glass in this project. Staff recommends that the ground floor windows be reduced in height** (and the canopy subsequently lowered) and the area where spandrel glass is proposed be eliminated. Reducing the amount of glazing will also reduce the solar gain in the façade.

E-13: Transparency – *Windows that have daylighting application on all levels of the façade shall use glass with a visible transmittance (VT) value of .7 or greater, which looks clear. . . . Opaque, heavily tinted or reflective glass shall not be used at the pedestrian level unless it can be demonstrated that the building program precludes the use of transparent glass.*

- **Proposed glass has a VLT of .56 which is lower than the allowed .7. A sample is required** before staff can assess whether the transparency is adequate.
- **Proposed glass has a green tint** which is not allowed by the Standard**. Glazing should look clear. A sample is required** before staff can assess whether the color is adequate**.**
- **Spandrel glass (opaque) is proposed** for the upper portion of the ground floor storefront which is **not allowed by the Standard**. **See comments above.**

E-16: Signage – *A master signage plan shall be required for all new construction as part of the site plan review process. Signage on new buildings shall be related to, and an integral part of, the design of the building. The master sign plan shall allow adaptability for changing tenants and uses over time. See Appendix 4 for additional signage standards.*

- **Applicant is proposing a signage master plan that does not meet the Design Standards and will require waivers for the following:**
    - **Illuminated plastic sign letters -** Given the precedent of waivers granted in B-7 for plastic illuminated letters, **staff supports the waiver request** for allowing this sign design.
    - **Number of upper level signs -** The guidelines limit the number of upper story signs to two (2) and the applicant is requesting three (3). **Staff defers to the Planning Board** on the appropriateness of additional signs. If the Planning Board does not support the waiver request, staff recommends the two upper level signs on the building's short faces which will be visible to vehicular traffic.
    - **Number of pedestrian level signs –** The guidelines limit the number of pedestrian level signs to one (1) and the applicant is requesting two (2). **Staff defers to the Planning Board** on the appropriateness of additional signs. If the Planning Board does not support the waiver request, staff recommends the pedestrian level sign facing Marginal Way.

Att. A

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

June 29, 2015

Ms. Jean Fraser
Planner
City of Portland Planning Division
389 Congress Street
Portland, Maine 04101

Subject: Bangor Savings Bank
Applicant: Bangor Savings Bank
Letter of Correspondence #1

Dear Jean,

As you are aware, Bangor Savings Bank is under Level III Site Plans Review for its proposed facility at 20 Marginal Way in Portland. As you are also aware, the project has gone to the City Council and received approval of a text amendment, allowing a bank drive thru in a building less than 20,000 sf as a conditional use. Throughout the process, there have been numerous conversations between the project team and City Staff. At this time, we are providing the City with revised plans based upon the comments received from City Staff. This letter is provided to summarize the changes to the plans and respond to comments received from staff in an email from you dated June 8, 2015. For ease of review, the comments are provided followed by our response.

Comment: *Re Landscaping: We would like to see landscaping (mostly trees) along the east side of the drive (along the existing chain link fence), along the rear boundary and in the parking lot islands. In order to free up more land for these planted areas we have the following suggestions that are OK with the Traffic Engineering reviewer:*

- *Narrow the drive for the whole of its 2-way length to 22 feet in width (also OK from the Fire Dept viewpoint);*
- *Reduce the paved area in "middle" area near the handicapped spaces and 2 way access to central parking;*
- *Have compact parking spaces (for employees, so low turnover) along the entire rear "angled" row of parking (a waiver for the larger % of compact spaces is supported);*

Response: These items were further discussed with City Staff at a meeting on June 17, 2015. It was agreed that a portion of the access drive would be reduced to allow the planting of smaller items, such as daylilies, along the east side of the drive. Ornamental Pear trees were placed along the rear of the site where space was available. The parking spaces associated with the barrier free spaces were also shifted slightly to allow a larger end island for planting of additional day lilies.

Comment: *Re Pedestrian Safety:*

- *The crosswalk in front of the exiting ATM vehicles is OK except that the tactile strips are not necessary - and the side nearest the handicapped parking needs to be integrated into an extended pedestrian route that serves more of the parking lot and better serves the handicap spaces- enlargement/addition of islands (to include trees and ped routes) and additional striping is needed;*
- *Cars entering the central parking aisle near the handicap parking need some "warning" of possible peds crossing before they turn into that area - so the design should ensure that the ped crossing (to be added in some way) is visible to entering drivers, or otherwise slow up drivers at that point.*

Response: The tactile strips within the sidewalks were removed from the plan. Additional crosswalk striping was added from the barrier free island to the rear parking area, to extend the pedestrian route. This island was also enlarged for additional plantings. As mentioned, an additional painted crosswalk was added to provide additional warning of possible pedestrians.

Comment: *Marginal Way Improvements: I am waiting for reviewers to confirm re the area along the front of the building-the location of the curb, the material for the sidewalk (technically should be brick), the number of trees (Jeff Tarling recommends another one) and the need for a streetlight are all part of the mix, but the plan for the Marginal Way Improvements at this location has not been finalized so the internal discussion is "what should be implemented as part of this project?" (or maybe a contribution instead) given the anticipated improvements to be done later on by the City. Leaving improvements to a later date does not fit well with the zoning requirements for pedestrian orientation, so we are trying to find a common-sense balance. Hence I am not able to send final review comments at this time but wanted you to be aware of the current thinking.*

Response: As discussed at the June 17th meeting, the revised plans include all of the requested improvements requested by Staff along the Marginal Way right of way. These improvements include the following:

- Incorporation of an 8' brick sidewalk
- The addition of an ornamental street light with conduit for future connection
- The specification of the street trees as Karpick Red Maple, as requested by Mr. Tarling.
- Reduction of new granite curb along the frontage.

Other improvements, in addition to those listed above, have been made to the plans, subsequent to the original submission include the following:

- The addition of sloped concrete curb along the edge of east and west side of the parking lot.
- The addition of a propane tank to serve the project.
- Modifications to the site signage package.
- As well as minor revisions to coordinate with building plans.
- A revised lighting plan is also included for your review

Updated building elevations will be forwarded under separate cover.

We appreciate the Planning Authority's review of the project to date and look forward to meeting with the Planning Board to present the proposal and address any questions. If you require any additional information, please don't hesitate to contact our office.

Sincerely,
Gorrill Palmer

Douglas Reynolds, PE
Project Manager

Enclosures: Site Plans

cc: David Latulippe, Jason Donovan

Att. B

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

May 13, 2015

Barbara Barhydt
Development Review Manager
City of Portland Planning Division
389 Congress Street
Portland, Maine 04101

Subject: Bangor Savings Bank
Applicant: Bangor Savings Bank
Level III Site Plan Application

Dear Barbara,

On behalf of Bangor Savings Bank we are pleased to submit the enclosed Level III Site Plan Application for the proposed construction of a three story, 2,100 sf footprint bank/office building with a double drive thru at 20 Marginal Way in Portland. On April 14, 2015 the Planning Board voted to send a text change application from the Applicant to the City Council for review. The change would allow a bank drive thru in a building less than 20,000 sf as a conditional use. Since the conditional use requires planning board approval, a Level III application has been submitted.

Enclosed you will find a Preliminary Level III Site Plan Application package and set of plans illustrating the proposal. We appreciate the Planning Authority's consideration of our proposal and look forward to meeting with City staff, as necessary, and with the Planning Board to present the proposal and address any questions. If you require any additional information, please don't hesitate to contact our office.

Sincerely,
Gorrill Palmer

Douglas Reynolds, PE
Project Manager

Enclosures: Level III Site Plan Application
Site Plans

cc: David Latulippe, Jason Donovan

DER/jwa/U:\2970 - Marginal Way Portland\P Applications\Local\Site Plan application\Cover letter 4-7-15.doc

APPLICATION

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: AGENT FOR APPLICANT — Date: 5-13-15

I have provided digital copies and sent them on: — Date: 5-13-15

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.

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: April 23, 2014

PROJECT NAME: Bangor Savings Bank

PROPOSED DEVELOPMENT ADDRESS:

20 Marginal Way, Portland, Maine

PROJECT DESCRIPTION:

Proposed approx. 2,100 sf footprint, 3 story bank/office building with double bank drive thru.

CHART/BLOCK/LOT: 113-A-25

PRELIMINARY PLAN 5-13-15 (date)
FINAL PLAN _____ (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Wendy Durrah Business Name, if applicable: Bangor Savings Bank Address: 99 Franklin Street City/State : Bangor, ME Zip Code: 04401	**Applicant Contact Information** Work # 207-541-2715 Home# Cell # Fax# e-mail: wendy.durrah@bangor.com
Owner – (if different from Applicant) Name: Northern Pride Auto Wash Address: P.O. Box 2147 City/State : So. Portland, Me Zip Code: 04116	**Owner Contact Information** Work # 207-776-5565 Home# Cell # Fax# e-mail: wdesena@maine.rr.com
Agent/ Representative Name: Gorrill Palmer Address: P.O. Box 1237 Gray, ME 04039 City/State : Zip Code:	**Agent/Representative Contact information** Work # 207-657-6910 Cell # 207-329-5584 e-mail: dreynolds@gorrillpalmer.com
Billing Information Name: Jason Donovan, Bangor Savings Bank Address: 99 Franklin Street City/State : Bangor, Me Zip Code: 04401	**Billing Information** Work # Cell # Fax# e-mail: jason.donovan@bangor.com

Engineer	Engineer Contact Information
Name: Gorrill Palmer P.O. Box 1237 Address: Gray, ME 04039 City/State : Zip Code:	Work # 207-657-6910 Cell # 207-329-5584 Fax# e-mail: dreynolds@gorrillpalmer.com
Surveyor	**Surveyor Contact Information**
Name: Owen Haskell, Inc. Address: 390 U.S. Route 1 City/State : Falmouth, ME Zip Code: 04105	Work # 207-774-0424 Cell # Fax# e-mail:
Architect	**Architect Contact Information**
Name: Address: City/State : Zip Code:	Work # Cell # Fax# e-mail:
Attorney	**Attorney Contact Information**
Name: Address: City/State : Zip Code:	Work # Cell # Fax# e-mail:

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)
___ Stormwater Quality ($250)
___ 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 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 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:**
Agent for Applicant	5-13-15

PROJECT DATA

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

Total Area of Site	17,862	sq. ft.
Proposed Total Disturbed Area of the Site	17,862	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)	15,769	sq. ft.
Impervious Area (Total Proposed)	15,976	sq. ft.
Building Ground Floor Area and Total Floor Area		
Building Footprint (Total Existing)	2,706	sq. ft.
Building Footprint (Total Proposed)	2,100	sq. ft.
Building Floor Area (Total Existing)	2,706	sq. ft.
Building Floor Area (Total Proposed)	7,284	sq. ft.
Zoning		
Existing	B-7	
Proposed, if applicable		
Land Use		
Existing	Commercial	
Proposed	Commercial	
Residential, If applicable		
# of Residential Units (Total Existing)		
# of Residential Units (Total Proposed)		
# of Lots (Total Proposed)		
# of Affordable Housing Units (Total Proposed)		
Proposed Bedroom Mix		
# of Efficiency Units (Total Proposed)		
# of One-Bedroom Units (Total Proposed)		
# of Two-Bedroom Units (Total Proposed)		
# of Three-Bedroom Units (Total Proposed)		
Parking Spaces		
# of Parking Spaces (Total Existing)	9	
# of Parking Spaces (Total Proposed)	24	
# of Handicapped Spaces (Total Proposed)	2	
Bicycle Parking Spaces		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	2	
Estimated Cost of Project	$1,800,000	

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
x		1	Completed Application form
x		1	Application fees
x		1	Written description of project
x		1	Evidence of right, title and interest
N/A		1	Evidence of state and/or federal approvals, if applicable
x		1	Written assessment of proposed project's compliance with applicable zoning requirements
x		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
x		1	Written requests for waivers from site plan or technical standards, if applicable.
x		1	Evidence of financial and technical capacity
x		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
x		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
x		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
x		Proposed grading and contours;	
x		Existing structures with distances from property line;	
x		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
x		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
x		Preliminary infrastructure improvements;	
x		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
N/A		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
N/A		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
x		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
x		Exterior building elevations.	

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
		1	* Completed Application form
		1	* Application fees
		1	* Written description of project
		1	* Evidence of right, title and interest
		1	* Evidence of state and/or federal permits
		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
		1	* Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site
		1	* Evidence of financial and technical capacity
		1	Construction Management Plan
		1	A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.
		1	Written summary of significant natural features located on the site (Section 14-526 (b) (a))
		1	Stormwater management plan and stormwater calculations
		1	Written summary of project's consistency with related city master plans
		1	Evidence of utility capacity to serve
		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)**
		1	* Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
		1	**Final Site Plans including the following:**
			Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);
			Existing and proposed structures on parcels abutting site;
			All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;
			Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;
			Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;
			Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;
			Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;
			Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;
			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;
			Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);
			Location and proposed alteration to any watercourse;
			A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;
			Proposed buffers and preservation measures for wetlands;
			Existing soil conditions and location of test pits and test borings;
			Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;
			A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;
			Grading plan;
			Ground water protection measures;
			Existing and proposed sewer mains and connections;

- Continued on next page -

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

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

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Date: 5-5-15

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: 20 Marginal Way

Chart Block Lot Number: 113-A-25

Proposed Use: Bank/Office

Previous Use: Car Wash

Existing Sanitary Flows: _____GPD

Existing Process Flows: _____GPD

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

Existing San Sewer in front of parcel in Marginal Way

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

(Clearly, indicate the proposed connections, on the submitted plans)

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8699

Owner/Developer Name: Bangor Savings Bank

Owner/Developer Address: 99 Franklin Street, Bangor, Maine

Phone: 207-541-2715 Fax: E-mail: wendy.durrah@bangor.com

Engineering Consultant Name: Gorrill Palmer

Engineering Consultant Address: P.O. Box 1237, Gray, Me 04039

Phone: 207-657-6910 Fax: E-mail: dreynolds@gorrillpalmer.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: 160 GPD

Peaking Factor/ Peak Times: 288 GPD Peak

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

Handbook of Subsurface Wastewater Disposal in Maine

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

(Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet)

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *http://www.osha.gov/oshstats/sicser.html*

Peaking Factor/Peak Process Times: _____

(Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps)

(Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided below, or attached, as a separate sheet)

Notes, Comments or Calculation

From State of Maine Subsurface Wastewater Disposal Rules:
Table 4C
Employees at place of employment with no showers = 12 GPD/Employee
Assume 24 employees in a 24 hour period
Design Flow = 24x12 GPD = 288 GPD

Bangor
Savings Bank

You matter more.

April 20, 2015

Re: Bangor Savings Bank
20 Marginal Way
Portland, Maine

To Whom It May Concern:

Jason Donovan authorizes Gorrill Palmer to execute land development permit applications on behalf of Bangor Savings Bank for the referenced project.

If you have any questions or if I can be of any further assistance, please contact me at 207-949-4027.

Very truly yours,

Jason Donovan
VP, Facilities Manager
Bangor Savings Bank

ATTACHMENT 2
FINANCIAL CAPACITY

Bangor
Savings Bank

You matter more.

May 5, 2015

Portland Planning Board

Re: Proposed Redevelopment of 20 Marginal Way, Portland, Maine

To Whom It May Concern:

Bangor Savings Bank has previously completed bank branch and office developments within Portland and throughout the State of Maine and has the technical expertise and financial capacity to complete the proposed redevelopment of 20 Marginal Way, Portland, Maine. Bangor Savings Bank has ample, liquid funding resources available to self-fund this project.

Sincerely,

Bruce G. Nickerson, CPA
Executive Vice President,
Chief Financial Officer and
Treasurer

ATTACHMENT 5
UTILITIES

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Date: 5-5-15

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: 20 Marginal Way

Chart Block Lot Number: 113-A-25

Proposed Use: Bank/Office

Previous Use: Car Wash

Existing Sanitary Flows: _____GPD

Existing Process Flows: _____GPD

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

Existing San Sewer in front of parcel in Marginal Way

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

(Clearly, indicate the proposed connections, on the submitted plans)

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8699

Owner/Developer Name: Bangor Savings Bank

Owner/Developer Address: 99 Franklin Street, Bangor, Maine

Phone: 207-541-2715 Fax: _____ E-mail: wendy.durrah@bangor.com

Engineering Consultant Name: Gorrill Palmer

Engineering Consultant Address: P.O. Box 1237, Gray, Me 04039

Phone: 207-657-6910 Fax: _____ E-mail: dreynolds@gorrillpalmer.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: 160 GPD

Peaking Factor/ Peak Times: 288 GPD Peak

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

Handbook of Subsurface Wastewater Disposal in Maine

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

(Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet)

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *http://www.osha.gov/oshstats/sicser.html*

Peaking Factor/Peak Process Times: _____

(Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps)

(Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided below, or attached, as a separate sheet)

Notes, Comments or Calculation

From State of Maine Subsurface Wastewater Disposal Rules:
Table 4C
Employees at place of employment with no showers = 12 GPD/Employee
Assume 24 employees in a 24 hour period
Design Flow = 24x12 GPD = 288 GPD

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

May 13, 2015

Ms. Glissen Havu
Portland Water District
225 Douglas Street
Portland, Maine 04104

Re: Proposed Bangor Savings bank
20 Marginal Way, Portland
Letter of Ability to Serve

Dear Glissen:

Bangor Savings Bank has retained Gorrill Palmer to prepare plans and permit applications for a proposed Bank/Office building at 20 Marginal Way in Portland. The site is shown on Assessor's chart/block/lot number 113-A-25, is approximately 17,862 square feet in size and is located in the B-7 zone. Refer to Figure 1 – Location Map following this page for the project location. The project requires a site plan permit from the City of Portland. As required by the reviewing authorities, we are writing to request a letter indicating the ability of the Portland Water District to serve this project. A preliminary utility plan is enclosed for your review.

Project Description

Bangor Savings Bank is proposing a three story 2,100 square foot footprint banking and office building. The building will be sprinklered for fire protection. The project is a redevelopment of the existing site. The existing building will be demolished in order to construct the proposed project.

Existing Service

An existing 8" water main is located in Marginal Way. A 2" water service provides water to the existing site. The site is currently developed with the Northern Pride Car Wash and Detailing Center.

Anticipated Flows

The anticipated water demand for the development was computed using the Maine Subsurface Waste Water Disposal Rules Table 4C for Employees at place of employment with no showers. Based on the publication Water Supply and Pollution Control, Third Edition, by Clark, Viessman and Hammer, Chapter 4, Section 5; the peak daily use can be considered to about 180% of the average daily use.

Using information supplied by the Applicant, the building is anticipated to have 24 employees over a 24 hour period. From Table 4C:

(12 GPD/employee) x (24 employees) = 288 GPD

The table below is a summary of the water demand that is anticipated for the development.

Anticipated Wastewater Generation		
	Average Daily Wastewater Generation (gpd)	Peak Daily Wastewater Generation (gpd)
Proposed bank/office structure	160	288
Total	**160**	**288**

The proposed building will be sprinklered with a proposed 6" fire service line connected to the 8" water main in Marginal Way.

Ability to Serve

In support of the applications to the reviewing authorities, we are writing to request a letter indicating the ability of the Portland Water District to serve the proposed project. In addition, we are interested in receiving:

- An estimate for any work the Water District would perform within the right-of-way.
- Information as to any easements that the District may require on-site.
- Any results of hydrant tests in the vicinity of the site.
- Any other information that you believe would be useful as this project proceeds.

Please contact me if you have any questions relative to this matter.

Sincerely,

Gorrill Palmer

James Attianese

Copy:

JWA/jwa/U:\2970 - Marginal Way Portland\H Utilities\Havu_5-5-15.doc

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

May 13, 2015

Mr. Bill Bennett
Pine Tree Waste
87 Pleasant Hill Road
Scarborough, ME 04074

Subject: Bangor Savings Bank
Portland, Maine
Ability to Serve Letter

Dear Bill:

Gorrill Palmer has been retained by Bangor savings bank to prepare plans and permit applications for the construction of a proposed 2,100 s.f., three story bank/office building, associated parking, and infrastructure off Marginal Way in Portland, Maine. Figure 1 attached to this letter is a location map reflecting the proposed site location for your review.

As required by the reviewing authorities, we are writing to request a letter indicating the ability of Pine Tree Waste to serve this project. Using typical solid waste generation rates it is anticipated that the construction of the new development could result in the following quantities:

- Demolition – Approximately 27 c.y.
- Construction Waste – Approximately 49 c.y.
- Commercial Solid Waste, Non-Recyclable – 18 c.y. per month
- Commercial Solid Waste, Recyclable – 15 c.y. per month

Based on information provided previously by your company, construction waste and universal waste can be handled by Pine Tree Waste and would be transported to the Juniper Ridge Facility in Old Town. This facility is licensed by the MDEP to accept construction debris. It is our understanding that Pine Tree Waste would be able to provide the necessary containers for use on-site to collect the construction debris and universal waste and can also transport the waste to Old Town.

We are writing to request the ability of Pine Tree Waste to serve this project for the collection and transport of the solid and universal waste to an approved location.

If you have any questions, please contact this office. An acknowledgement statement is presented below for your signature. Gorrill Palmer looks forward to your response on this matter.

Sincerely,

Gorrill Palmer

James Attianese

JWA/jwa/U:\2970 - Marginal Way Portland\H Utilities\Bennett 5-5-15 solid waste.doc

I have reviewed the contents of this letter and find that the representations made regarding Pine Tree Waste are accurate, and that Pine Tree Waste can provide services relative to transport and disposal of generated wastes from the proposed development to the facilities outlined above.

_____

Bill Bennett, Pine Tree Waste

_____

Date

ATTACHMENT 6
NFPA CODE SUMMARY

CODE REVIEW – BANGOR SAVINGS BANK MARGINAL WAY

CLASSIFICATION	IBC 2009 EDITION	NFPA 101 2009 EDITION	CONCLUSION
USE GROUP	BUSINESS GROUP B	NEW BUSINESS OCCUPANCIES	BUSINESS GROUP B NEW BUSINESS OCCUPANCIES
CONSTRUCTION TYPE	TYPE IIB	TYPE II 000	TYPE IIB / TYPE II 000
HEIGHT AND AREA SEPRATIONS	BUILDING HEIGHT 75 FEET FOUR STORIES ABOVE GRADE AREA PER FLOOR 23,000 SF		BUILDING HEIGHT 75 FEET FOUR STORIES ABOVE GRADE AREA PER FLOOR 23,000 SF
REQUIREMENTS FOR AUTOMATIC SPRINKLER SYSTEMS	AUTOMATIC SPRINKLER SYSTEMS PROVIDED	AUTOMATIC SPRINKLER SYSTEMS PROVIDED	AUTOMATIC SPRINKLER SYSTEMS PROVIDED

EGRESS			
OCCUPANT LOAD	BUSINESS USE 100 GROSS FIRST STORY = 22 SECOND STORY = 28 THIRD STORY = 28 MECHANICAL USE 300 GROSS PENTHOUSE = 3 TOTAL BUILDING = 81	BUSINESS USE 100 GROSS FIRST STORY = 22 SECOND STORY = 28 THIRD STORY = 28 MECHANICAL USE 300 GROSS PENTHOUSE = 3 TOTAL BUILDING = 81	BUSINESS USE 100 GROSS FIRST STORY = 22 SECOND STORY = 28 THIRD STORY = 28 MECHANICAL USE 300 GROSS PENTHOUSE = 3 TOTAL BUILDING = 81
MEANS OF EGRESS	MINIMUM NUMBER OF EXITS PER STORY TWO PENTHOUSE CONSIDERED APART OF THE STORY BELOW.	MINIMUM NUMBER OF EXITS PER STORY TWO, EXCEPT FOR MECHANICAL EQUIPMENT ROOM STORY A SINGLE MEANS OF EXIT.	MINIMUM NUMBER OF EXITS PER STORY TWO, EXCEPT FOR MECHANICAL EQUIPMENT ROOM STORY A SINGLE MEANS OF EXIT.
LOCATIONS OF MEANS OF EGRESS	LOCATED AT A DISTANCE FROM ONE ANOTHER NOT LESS THAN ONE-THIRD THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING.	LOCATED AT A DISTANCE FROM ONE ANOTHER NOT LESS THAN ONE-THIRD THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING.	LOCATED AT A DISTANCE FROM ONE ANOTHER NOT LESS THAN ONE-THIRD THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING.

TRAVEL DISTANCE TO EXITS	MAXIMUM 300 FEET	MAXIMUM 300 FEET	MAXIMUM 300 FEET
COMMON PATH OF TRAVEL	MAXIMUM 100 FEET	MAXIMUM 100 FEET, EXCEPT FOR MECHANICAL EQUIPMENT ROOM STORY IS 50 FEET.	MAXIMUM 100 FEET, EXCEPT FOR MECHANICAL EQUIPMENT ROOM STORY IS 50 FEET.
DEAD END CORRIDORS	MAXIMUM 50 FEET	MAXIMUM 50 FEET	MAXIMUM 50 FEET

FIRE RESISTANCE RATINGS BASED ON TYPE VB/V 000 CONSTRUCTION

	IBC 2009 EDITION	NFPA 101 2009 EDITION	CONCLUSION
PRIMARY STRUCTURAL FRAME	0	0	0
BEARING WALL EXTERIOR	0	0	0
BEARING WALL INTERIOR	0	0	0
NONBEARING WALLS AND PARTIONS EXTERIOR	0	0	0
NONBEARING WALLS AND PARTIONS INTERIOR	0	0	0
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0	0	0
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0	0	0
CORRIDOR FIRE-RESISTANCE RATING	0	0	0
SHAFTS CONNECTING LESS THEN FOUR STORIES	1	1	1
SHAFTS CONNECTING FOUR OR MORE STORIES	2	2	2
EXIT ENCLOSURES CONNECTING LESS THEN FOUR STORIES	1	1	1
EXIT ENCLOSURES CONNECTING FOUR OR MORE STORIES	2	2	2

Att. C

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

May 13, 2015

Barbara Barhydt
Development Review Manager
City of Portland Planning Division
389 Congress Street
Portland, Maine 04101

Subject: Bangor Savings Bank
Applicant: Bangor Savings Bank
Conditional Use Application

Dear Barbara,

On behalf of Bangor Savings Bank we are pleased to submit the enclosed Conditional Use Application for the proposed construction of a three story, 2,100 sf footprint bank/office building with a double drive thru at 20 Marginal Way in Portland. On April 14, 2015 the Planning Board voted to send a text change application from the Applicant to the City Council for review. The change would allow a bank drive thru in a building less than 20,000 sf as a conditional use. This application is for the proposed double drive thru at 20 Marginal Way which would be considered a conditional use subsequent to the text change.

Enclosed you will find a Conditional Use Application package and set of plans illustrating the proposal. We appreciate the Planning Authority's consideration of our proposal and look forward to meeting with City staff, as necessary, and with the Planning Board to present the proposal and address any questions. If you require any additional information, please don't hesitate to contact our office.

Sincerely,
Gorrill Palmer

Douglas Reynolds, PE
Project Manager

Enclosures: Conditional Use Application
Site Plans

cc: David Latulippe, Jason Donovan

DER/jwa/U:\2970 - Marginal Way Portland\P Applications\Local\Site Plan application\conditional use\Cover letter 5-12-15.doc

Conditional Use for Planning Board Review
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 Conditional Use where the Planning Board is listed as the reviewing authority rather than the Zoning Board of Appeals. 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.

A. Conditional Use: Standards and Criteria – Section 14-474 and Zone Related Criteria
Conditional uses are listed in the Zoning Ordinance for each zone and these proposed uses must address the criteria contained in Section 14-474 in the written application. In addition to the criteria in Section 14-474, each application must address any applicable conditional use standards contained in the applicable zone and the proposed specific use. The Zoning Ordinance specifies when the Planning Board is designated as the reviewing authority rather than the Zoning Board of Appeals. This application is for Planning Board reviews only.

Upon showing that a proposed use is a conditional use under this article, a conditional use permit shall be granted unless the Board determines that:

a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and

c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

B. Site Plan Application: <u>Please submit the Conditional Use Application in addition to the applicable Site Plan Application.</u>

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.

PROJECT NAME: Bangor Savings Bank

PROPOSED DEVELOPMENT ADDRESS:

20 Marginal Way

ASSESSOR'S CHART/BLOCK/LOT (s): 113-A-25 **Applicable Zone:** B-7

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Wendy Durrah Business Name, if applicable: Bangor Savings Bank Address: 99 Franklin Street City/State : Bangor, Me Zip Code: 04401	**Applicant Contact Information** Work # 207-541-2715 Home# Cell # Fax# e-mail: wendy.durrah@bangor.com
Owner – (if different from Applicant) Name: Northern Pride Auto Wash Address: P.O. Box 2147 City/State : So. Portland, Me Zip Code: 04116	**Owner Contact Information** Work # 207-776-5565 Home# Cell # Fax# e-mail: wdesena@maine.rr.com
Billing Information Name: Jason Donovan, Bangor Savings Bank Address: 99 Franklin Street City/State : Bangor, Me Zip Code: 04401	**Billing Information** Work # Cell # Fax# e-mail: jason.donovan@bangor.com

RIGHT, TITLE OR INTEREST:

Lease, see narrative

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

VICINITY MAP: (Please attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use.)

EXISTING USE: Describe the existing use of the subject property.

Car Wash

PROPOSED USE: Describe the proposed use of the subject property

Bank with double drive thru and office space

TYPE OF CONDITIONAL USE PROPOSED (Refer To Specific Provisions Of Land Use Code Authorizing The Proposed Conditional Use).

Banking with drive thru, Chapter 14, Division 17, Section 14-296

See narrative for discussion of zoning text change to allow drive through for building less than 20,000 sf

SITE PLAN: Submit a separate site plan application for the proposal that provides a site plan for the property, showing existing and proposed improvements, which meets the submission requirements of the applicable level of site plan review.

CONDITIONAL USE STANDARDS AND CONDITIONS – 14-474

Address the following criteria in your written application and any applicable conditional use standards contained in the zoning code for the specific use. Upon showing that a proposed use is a conditional use under this article, a conditional use permit shall be granted unless the Board determines that:

a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and

c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

CONDITIONAL USE AUTHORIZED BY: SECTION 14- 296

Address any specific conditional use standards for the specific use contained in the zoning code in the written submission.

APPLICATION FEES:

(Payment may be made by Credit Card, Cash or Check payable to the City of Portland.)

X Conditional Use Review ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($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.**
3. **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:

Applicant Checklist	Planner Checklist	# of Copies	
x		1	Application form that is completed and signed.
x		1	Cover letter stating the nature of the project.
x		1	Evidence of right, title and interest.
x		1	Written Submittals that address the conditional use standards of Sec. 14-474.
x		1	Written submittals that address any applicable standards of review contained in the zoning code for the specific use.
x		1	A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet and containing the information required for the applicable level of site plan review.
x		1	An accompanying site plan application, as applicable.

APPLICANT SIGNATURE:

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

This application is for a Conditional Use 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:**
AGENT FOR Applicant	5-13-15

Bangor
Savings Bank

You matter more.

April 20, 2015

Re: Bangor Savings Bank
20 Marginal Way
Portland, Maine

To Whom It May Concern:

Jason Donovan authorizes Gorrill Palmer to execute land development permit applications on behalf of Bangor Savings Bank for the referenced project.

If you have any questions or if I can be of any further assistance, please contact me at 207-949-4027.

Very truly yours,

Jason Donovan
VP, Facilities Manager
Bangor Savings Bank

Conditional Use Narrative

The following narrative presents the information required for the Preliminary Level III Site plan application.

Applicable Standards:

Section 14-296.1.C.ii of the Land Use Code states that a drive up attached to a bank requires a minimum floor area of 20,000 sf. in the B7 zone and is considered a conditional use. A text change application has been submitted to the City and is under review of the City Council for a change to the Land Use Ordinance allowing a bank with less than 20,000 sf to have drive up windows as a conditional use in the B7 zone.

The applicable standards of review in the B7 zone and the project's conformance are as follows.

14-296.1.C.i - *The drive-up is accessory to a banking service occupying a minimum floor area of 4,000 sf.*

The total proposed floor area is 7,708 sf.

14-296.1.C.ii - *The drive-up is attached to or included within a building with a minimum floor area of twenty thousand (20,000) square feet.*

A proposed text change has been filed which will allow a bank use with less than 20,000 sf to be approved as a conditional use.

14-296.1.C.iii - *All drive-up features, such as automated teller machines and service windows, shall not extend nearer than twenty-five (25) feet to the street right-of-way line*

The proposed drive-up is located a minimum of 31 feet from the street right-of-way line.

14-296.1.C.iv - *The site must have adequate stacking capacity for vehicles waiting to use these service features without impeding vehicular or pedestrian circulation or creating hazards to vehicular or pedestrian circulation on adjoining streets.*

The site has stacking capacity within the parking lot to adequately handle the anticipated usage without impeding vehicular or pedestrian circulation on adjoining streets.

14-296.1.C.v - *Drive-up vehicle circulation shall not be located between the building and any adjacent public streets.*

The drive-up circulation is behind the building and therefore not adjacent to public streets.

14-296.1.C.vi – *The drive-up shall be limited to two vehicle drive-up lanes.*

Two vehicle lanes are proposed.

14-296.1.C.vii - *The location of any drive-up shall be limited to the geographic area between Somerset Street/I-295/Franklin Arterial/Forest Avenue.*

The proposed project is within the required geographic area.

Conditional Use Standards Section 14-474:

The following addresses the conditional use standards contained in Section 14-474 of the Land Use Code.

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 substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone.*

The traffic generated will be consistent with other banks in the area. Section 7 of the site plan application contains a traffic report for the project. The site contains the required parking spaces and has utilized compact spaces in order to reduce the expanse of pavement.

14-474.C.2.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.*

The proposed bank is not anticipated to create noise, glare, dust, emissions to the air, or odor greater than other banks in the area. A letter has been sent to the Portland Public Services as part of the site plan application requesting their ability to serve the project for sewage disposal. A lighting plan will be submitted in the final site plan application depicting full cut off lighting to avoid impacting abutting properties. A letter has been sent to Pine Tree Waste requesting their ability to serve the project for waste disposal. The dumpster will be stored within a fenced enclosure which will reduce the possibility of litter.

14-474.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.

The parking and dumpster enclosure are at the rear of the building and will not have an adverse impact on surrounding properties. Signage will conform to City sign regulations and will be submitted for review as part of the final site plan application. No material storage is anticipated.

CJ Developers, Inc.
35 Primrose Lane
Freeport, Maine 04032

September 30, 2014

Northern Pride Auto Wash
c/o Joe Malone
Malone Commercial Brokers
5 Moulton Street
Portland, ME 04101

RE: Letter of Intent re Lease of Property Located at
20 Marginal Way, Portland, ME

Dear Joe:

This Letter of Intent sets forth the terms and conditions under which CJ Developers, Inc. on behalf of Bangor Savings Bank and/or assigns ("Tenant") is willing to enter into a lease with Northern Pride Car Wash ("Landlord") for the 0.41 ± acre parcel with improvements thereon located at 20 Marginal Way (the "Leased Premises").

Tenant: Bangor Savings Banks

Landlord: Northern Pride Car Wash

Leased Premises: 0.41 +/- acre parcel with improvements thereon located at 20 Marginal Way Portland, Maine. The Leased Premises includes the carwash building located thereon (the "Building") and any improvements.

Initial Term: Twenty (20) years from Rent Commencement Date (as hereinafter defined).

Renewal Terms: Three (3), ten (10) year renewal terms.

NNN Rent: [redacted]

Delivery Condition: Tenant will accept the Leased Premises in AS-IS condition without any work by Landlord. Landlord shall remove all chemicals associated with the car wash operation and deliver the Lease Premises free site being clean environmentally under State of Maine General.

Rent Commencement Date: Five months after all permits and approvals are received for the construction of a branch bank with drive through..

Real Estate Taxes and Utilities: Tenant shall be responsible for all real estate taxes and utilities with respect to the Leased Premises.

Repair and Maintenance Obligations: Tenant shall be responsible for repairing and maintaining all interior, exterior and structural portions of the Building, including without limitation all electric, plumbing, and mechanical systems serving the Leased Premises.

Insurance: Tenant shall be responsible for maintaining property and casualty insurance on the Building. Tenant shall maintain commercially reasonable liability insurance on Leased Premises indemnifying Landlord from all harm.

Security Deposit: No security deposit.

Brokerage Commission: Landlord shall be responsible for all brokerage commissions relate to the Lease.

Contingencies: Tenant's obligations under the Lease will be contingent upon the following:

(i) Tenant being satisfied with its due diligence investigation of the Leased Premises, such due diligence investigation to be completed within 75 days from signing of this Letter of Intent.

(ii) Tenant obtaining approval to enter into a Lease Agreement from the Bangor Savings Bank Board of Directors within 75 days from signing of this Letter of Intent.

(iii) Tenant obtaining all necessary state and local permits and approvals for the construction of a new building including a drive thru no later than [redacted] from execution of the Lease Agreement. Tenant to diligently pursue such permits and approvals in good faith;

Lease Agreement: Parties shall negotiate in good faith to execute a Lease Agreement within

[redacted] of the full execution of this Letter of Intent.

Offer Expiration This Letter of Intent will expire on October 8, 2014 at 5:00 p.m. if not executed by Landlord prior to then.

Exclusivity: Upon acceptance of this Non-Binding Letter of Intent, Landlord agrees to take the Leased Premises off the market and not enter into any discussions with other third parties regarding the acquisition or leasing of its property. Notwithstanding anything contained herein to the contrary, this provisions shall be binding on the Landlord.

Binding Effect: This Letter is intended to be confirmation of interest between the parties in pursuing negotiations for a definitive agreement based on the terms hereof and, shall not constitute a binding agreement between the parties hereto. No agreement shall be binding unless and until each party has reviewed and approved (in its sole discretion) a definitive written agreement incorporating all the terms, conditions, and obligations of the parties, and has duly executed and delivered such agreement.

CJ Developers, Inc.

By: Donald Catalfamo

SEEN & AGREED

Northern Pride Auto Wash, Landlord

By: _____

Its: _____

Print Name: William De Sena

NARRATIVE

Att. D

Project Narrative

The following narrative presents the information required for the Preliminary Level III Site plan application.

Project Description:

The site is located adjacent to the northeast corner of the intersection of Marginal Way and Forest Avenue in Portland. The existing site is currently occupied by Northern Pride Car Wash and Detailing Center. The Car Wash is located approximately 250' from the above referenced intersection. There are currently two curb cuts for the car wash site. The existing easterly driveway for the car wash is located at the beginning of a two way left turn lane within Marginal Way.

Bangor Savings Bank intends to demolish the existing building and construct a 2,100 sf footprint branch with 2 drive-thru lanes. The structure would also include two additional stories of approximately 2,800 sf each for use as office space. One curb cut is proposed adjacent to the easterly property line. Based on the City of Portland zoning map, the property is zoned B-7, Mixed Development District Zone. On April 14, 2015 the Planning Board voted to send a text change application from the Applicant to the City Council for review. The change would allow a bank drive thru in a building less than 20,000 as a conditional use. A conditional use permit application has been filed with this preliminary site plan application in anticipation of the text change approval.

Right, Title and Interest:

Bangor Savings Bank intends to lease the parcel from the current owner. Attachment 1 contains a notice of intent to lease for the subject parcel.

State and Federal Permits:

No state or federal permits are required for this project. The project disturbs less than one acre and results in an impervious area of less than one acre.

Zoning Assessment:

The project is located in the B-7 zone. A bank and office space is a permitted use within the zone. The project proposes a double drive through for the bank. The zoning ordinance lists a bank drive through as a conditional use for banks greater than 20,000 sf of floor area. Since the proposed project has a floor area less than 20,000 sf, an application for a text change to the zoning was submitted to the City. On April 14, 2015 the Planning Board voted to send a text change application from the Applicant to the City Council for review. The change would allow a bank drive thru in a building less than 20,000 sf as a conditional use. A conditional use permit application has been filed with this preliminary site plan application in anticipation of the text change approval.

Easements or Other Burdens:

There are no existing or proposed easements on-site.

Proposed Waivers:

The following waivers are requested:

- The applicant requests a waiver from the dimensional requirements for bicycle parking. The City technical standards show a minimum distance for a bike rack from a building to be 24". Due to limited site area, the applicant is proposing to place the bike racks 12" from the building. The 12" dimension will allow for bicycle parking on one side of the bike racks rather than the two sides available with a 24" spacing. The required number of bicycle spaces for this project is 3. The applicant meets the requirement of three spaces by providing three racks with a single bike per rack.
- Due to limited site area the applicant requests a waiver pursuant to 14-526.b.2.b.ii.e *Where site constraints prevent implementation of all or a portion of required parking lot landscaping, as*

determined by the Reviewing Authority, the requirements may be all or partially waived and the applicant shall contribute an amount proportionate to the cost of required parking lot trees to the City of Portland Tree Fund.

Evidence of Financial and Technical Capacity:
Bangor Savings Bank has constructed numerous banks throughout Maine and has hired Professional Engineers and Architects to prepare construction plans for this project, therefore the Applicant possesses sufficient technical capacity. Attachment 2 contains evidence of the financial capacity for this project.

Construction Management Plan:
A construction management plan will be prepared by the General Contractor prior to demolition work at the site as noted on the demolition plan and site plan contained within the plan set. The management plan will address the anticipated start and end date of the project, discuss the construction sequence, and provide a pedestrian circulation plan. The management plan will be submitted to the City Planning Division prior to demolition work.

Traffic:
Attachment 3 contains the Traffic Report for this project.

Significant Natural Features:
The project site is currently developed with a car wash and associated parking and drive aisles. The parcel size is 17,862 sf with an existing non-vegetated area of 15,769 sf. The remainder of the site is landscaped or grass. No significant natural features are present on-site. There are no wetlands on-site.

Stormwater:
Section 14-526.b.3.b of the Land Use Ordinance states that all development other than Level I residential shall comply with Section 5 of the Technical Manual including Basic, General, and Flooding standards as applicable to prevent and control the release of pollutants to waterbodies, watercourses, wetlands and groundwater, and reduce adverse impacts associated with increases or changes in flow, soil erosion and sedimentation.

Section 5.II.c of the Technical Manual states that Level II and III site plans shall be required to submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including Basic, General and Flooding standards.

The **Basic Standard** is met by the Erosion and Sedimentation Control Report submitted with this application.

General Standards: The project site is not tributary to an Urban Impaired Stream. Section 5.III.4.B.1 States when general Standards must be met for areas not tributary to Urban Impaired Streams: A project disturbing one acre or more and resulting in any of the following must meet the general standards:

> 5.III.4.B.1.b - Other stream, coastal and freshwater wetland watersheds. One acre or more of impervious area, or 5 acres or more of developed area, in any other stream, coastal, or wetland watershed.

Section 5.III.4.B.3.e contains requirements for redevelopment; Stormwater Management Law project including

redevelopment. For a project requiring a Stormwater Management Law permit that includes redevelopment of impervious area that was in existence as of November 16, 2005 (the effective date of Chapter 500 revisions), the redevelopment of that impervious area is not required to meet General standards provided the department determines that the new use of the existing impervious area is not likely to increase stormwater impacts resulting from the proposed project's stormwater runoff beyond the level of impact already caused by the runoff from the existing impervious area. The requirements of Appendix D must still be met, if applicable.

The proposed project will disturb a maximum of 17,862 sf (0.41 acres) and is a redevelopment of an existing developed site. The proposed bank and associated parking will not increase the stormwater impacts beyond the level of the existing car wash. As discussed with Dave Margolis-Pineo of the City of Portland, the Applicant proposes to maintain the current runoff characteristics by having a portion of the site draining forward to the Marginal Way stormdrain system and the remainder of the site draining to the rear where it will sheet flow through vegetation before crossing the rear property line.

Since the proposed impervious and developed area are less than the Chapter 500 thresholds and the project is a redevelopment which will not increase stormwater impacts, the General Standards have been met.

Since the disturbed area is less than one acre, neither a Construction General Permit nor MDEP Stormwater Permit are required.

Flooding Standard: Section 5.III.4.E states: If required, the flooding standard applies in addition to the basic standards, general standards, phosphorus standards and urban impaired stream standards.

When the flooding standard must be met. If a project results in three acres or more of impervious area or 20 acres or more of developed area, requires review pursuant to the Site Law, or is a Site Law modification of any size, the flooding standard must be met.

The project proposes 0.37 acres of impervious area and 0.41 acres of developed area. The proposed project will result in an insignificant increase in impervious area on-site (0.005 acres). The current impervious area is approximately 15,769 square feet. The proposed project will result in approximately 15,976 sf (0.37 acres) of impervious area. The project results in an insignificant increase in impervious area, therefore there is no increase in the runoff from the site as a result of development.

Since the proposed impervious and developed area are less than the Chapter 500 thresholds and there is no increase in runoff, the Flooding Standard is met.

Conclusion: The proposed project results in a redevelopment of an existing car wash site and will not increase the stormwater impacts from the site. The disturbed area of 0.41 acres and the proposed impervious area of 0.37 acres are well below the Chapter 500 standards included in Chapter 5 of the Portland Technical Standards. As discussed with Dave Margolis-Pineo the runoff from the site will enter the Marginal Way stormdrain or sheet flow to the rear of the site. The proposed project will not have an adverse impact due to the stormwater runoff from the site.

Master Plan:

The proposal aligns with the relevant goals and objectives of the City's Master Plan for Marginal Way. The building is located adjacent to the Right-of-Way with parking located to the rear of the site. As shown on the Master Plan for the area, the sidewalk is proposed adjacent to the building with an esplanade adjacent to Marginal Way. One access drive to the site is proposed as shown on the Master Plan, and the building is three stories tall.

Utility Capacity:

Attachment 5 contains letters sent to the Portland Water District and Portland Public Services requesting confirmation of their ability to serve the project. Responses will be forwarded to the City upon receipt.

Solid Waste Management:

An enclosed dumpster pad is shown on the proposed plans. The project is anticipated to produce the following quantities of solid waste.

- Demolition – Approximately 27 c.y.
- Construction Waste – Approximately 49 c.y.
- Commercial Solid Waste, Non-Recyclable – 18 c.y. per month

Commercial Solid Waste, Recyclable – 15 c.y. per month

Attachment 5 contains a letter sent to Pine Tree Waste requesting their ability to serve the project. The response from Pine Tree Waste will be forwarded to the City upon receipt.

NFPA:

A code summary is included in Attachment 6. An existing fire hydrant is located approximately 180 feet from the Marginal Way Right-Of-Way.

Design Standards:

The development is in conformance with the design standards of Section 14-526 of the City Land Use Code as noted below. Waiver requests from the standards are also noted below.

14-526 a Transportation Standards – See Traffic Report contained in Attachment 3. The required offstreet parking is shown on the plans. Three bicycle parking spaces are shown on the plan. A waiver from the dimensional requirements of the bicycle parking spaces is requested. Due to limited site area snow will not be stored on-site and will be removed by the snow removal contractor as noted on the site plan.

14-526 b Environmental Quality Standards – The site is currently developed and there are no significant natural features on-site. The dumpster is screened from view by the proposed enclosure, and mechanical systems will be roof mounted and screened from view. Due to limited site area, a waiver from the parking lot landscaping requirements is requested as noted in the waiver request noted previously. Stormwater management is discussed above.

14-526 c Public Infrastructure and Community Safety Standards – The orientation of the building, parking, and access drive is in conformance with the City Master Plan. The site is within 180 feet of an existing fire hydrant. The proposed electric service is underground and the applicant has contacted the Portland Water District and the Department of Public services to obtain ability to serve letters for water service and wastewater service. The proposed utility connections are shown on the Site and Utility plan of the plan set.

14-526 d Site Design Standards – The proposed building location and height is in conformance with the Marginal Way master plan. Attachment 7 contains the proposed building elevations. All site lighting will be full cut off and will not impact adjoining properties. A lighting plan and catalog cuts of the proposed lighting will be provided in the final submission. HVAC units shall comply with applicable state and federal emission requirements. Signage will comply with City of Portland regulations. The signage information will be submitted at a later date.

HVAC Verification:

The actual HVAC units are to be determined. All units used on the project will comply with all applicable state and federal emissions standards.

Boundary Survey

A boundary survey is included within the plan set.

Plan Set

A plan set containing the required information is included with this application.

Att. E

JM's 5/27/15 & 5/28/15 & 5/29/15 changes to SMOOTH 05.22.15

TERM SHEET

Between

Bangor Savings Bank, as Tenant

And

Northern Pride Auto Wash, as Landlord

SUMMARY INFORMATION

Premises Address:	20 Marginal Way Portland, Maine
Land:	The parcel of land owned by Landlord upon which Tenant shall construct improvements to be located thereon being more particularly portrayed on Exhibit A and bounded and described in Exhibit A-1 attached hereto and made a part hereof by reference (the "Leased Premises").
Building:	The building to be built by Tenant will consist of (i) 7,500 square feet of building on the Land (the "Building"), (ii) the drive-thru canopy structure (the "Drive-thru Canopy") attached to the Building, and (iii) the two (2) drive lanes servicing the Drive-thru Canopy; the space, the Drive-thru Canopy and the drive lanes are outlined on the conceptual site plan attached as Exhibit B (the "Site Plan") (the "Improvements").
Commencement Date:	6/3, 2015.
Expiration Date:	[redacted] years next following the Occupancy and Rent Commencement Date.
Extensions:	[redacted] Ten (10) year extensions, provided Tenant provides written notice to Landlord not less than Two Hundred Seventy (270) days prior to the expiration of the initial term or applicable extension term. If Tenant fails to exercise any such extension, Landlord will give a Thirty (30) day written notice to Tenant during which Tenant may then exercise such applicable extension, all to afford an inadvertent failure to notify Landlord of the exercise of the extension.

Right of First Refusal:	During the term of the Lease, including any extensions provided Tenant is not then in default beyond any applicable grace or cure period, Tenant shall have a right of first refusal to purchase the Leased Premises as follows: Landlord shall have the right to list and show the Leased Premises for sale at any time during the Lease (or any extension). If Landlord wishes to sell the Leased Premises Landlord shall give to Tenant a notice in writing specifying the terms and conditions upon which another party desires to purchase the Leased Premises and Landlord shall provide Tenant with a certified copy of any executed purchase and sale contract evidencing said terms and conditions. In this notice Landlord shall offer to sell the said Leased Premises to Tenant upon said terms and conditions. If, within ten (10) days after receipt of such notice, Tenant desires to purchase the Leased Premises on the same terms and conditions it shall provide timely written notice to Landlord of such intention and the parties shall then proceed to close the transaction. If Tenant rejects the offer, or if Tenant does not respond to said notice within the 10 days period, then Landlord shall be free to sell to any person upon terms and conditions no more favorable than those specified in said notice. If a sale is to be made on terms and conditions other than so specified then the right to purchase shall again be offered to Tenant as set forth above. However, this right of first refusal shall expire upon the sale of the Leased Premises to a third party in a transaction complying with this provision.
Tenant Deposits:	There shall be no security deposits.
Conditions of Lease:	This Lease is conditioned upon both of the following: a. Final Approval by Tenant's Board by July 15, 2015; and, b. Obtaining all necessary approvals and permits.
Landlord Contact:	Address: Northern Pride Auto Wash c/o Mr. William Desena 1849 Sunset Ridge Drive The Villages, FL 32162
Tenant Contact:	Bangor Savings Bank Real Estate Management Department 99 Franklin Street P.O. Box 930 Bangor, ME 04402-0930 Attention: Robert Montgomery-Rice, Senior Vice President

GROUND LEASE

1. BASIC PROVISIONS ("Basic Provisions").

1.1 Parties. This Lease ("Lease") dated, for reference purposes only, June 3, 2015, is made by and between **Bangor Savings Bank,** a Maine financial institution ("Tenant") and **Northern Pride Auto Wash,** a Maine corporation (or assigns) ("Landlord"), (collectively the "Parties," or individually a "Party").

1.2 Conditions of Lease. Notwithstanding any provision herein, this Lease shall become an obligation of the Tenant only if its Board grants final approval of this Lease by July 15, 2015 and when all necessary permits and approvals have been obtained.

1.3 Land. The parcel of land owned by Landlord upon which Tenant shall construct the Building and Improvements, being more particularly bounded and described in Exhibit A attached hereto and made a part hereof by reference (the "Leased Premises").

1.4 Building. Consisting of (i) a building with a footprint of approximately 2,108 square feet(the "Building") to be constructed by Tenant on the Leased Premises, (ii) the drive-thru canopy structure (the "Drive-thru Canopy") attached to the Building, and (iii) the two (2) drive lanes servicing the Drive-thru Canopy; the space, the Drive-thru Canopy and the drive lanes are outlined on the conceptual site plan attached as Exhibit B as same may be modified based on the final site plan approval by the City of Portland and to be attached and initialed by Landlord and Tenant, if modified (the "Site Plan") (the "Improvements").

1.5 Demolition. During the "Construction Term" defined at 1.6 (a), Tenant will demolish the current building on the Leased Premises at its sole cost and expense as part of the construction project, and shall be obligated to construct the building described in section1.4 above

1.6 Terms. There shall be two Terms to this Lease as follows:

(a) *Construction Term.* The Construction Term shall commence on the first date following the date on which the building permit is issued and continue until the same date of the month four (4) calendar months following.

(b) *Occupancy and Rent Commencement Date.* Occupancy may commence and Rent shall commence on the earlier of December 1, 2015 or the date the Occupancy Permit issues. Rent shall commence whether or not an Occupancy Permit has been issued if the earlier event is December 1, 2015. If occupancy commences on other than the first day of the month then rent shall be prorated for the number of days in that month. The Terms of this Lease shall commence on the Occupancy and Rent Commencement Date and shall terminate on the last day of the Two Hundred Forty (240) full months (20 years) following the Occupancy and Rent Commencement Date. Provided Tenant is not in default, Tenant shall have the option to extend this Lease for Five (5) successive Ten (10) year terms, each pursuant to the provisions of Section 3.2.

Tenant agrees to execute such documents as Landlord may reasonably request to evidence such waiver. An affidavit filed by Landlord in the Cumberland County Registry of Deeds certifying that Tenant's Right of First Offer has been waived or has been deemed to be waived as provided herein may be relied upon by any third party as to the accuracy and truthfulness of the statement set forth herein and such third party may rely upon such affidavit.

39. BINDING EFFECT.

This lease shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns.

"Landlord"

Witness

William Ve Senn
Its Authorized Member

"Tenant"

Bangor Savings Bank

Witness

By:

Its President and CEO

Att. F

ATTACHMENT 3

TRAFFIC

Traffic Impact Study
Proposed Bangor Savings Bank
Marginal Way
Portland, Maine
May 2015

Index

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Appendix A
Site Location Diagram
Turning Movement Diagrams

Appendix B
Capacity Analyses Results

Appendix C
Trip Generation calculations
Sebago Tech Memo
MaineDOT Crash Data
Site Plan

Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

Gorrill-Palmer (GP) was retained by Bangor Savings Bank to examine the traffic impacts associated with a proposed three story 7,708 square foot Bangor Savings Bank building with two drive-through lanes to be located on the northwesterly side of Marginal Way in Portland. The site is currently occupied by the Northern Pride Auto Wash, which will be closed and demolished as part of this development. The site is currently served by two driveways. The westerly driveway will be removed and the easterly driveway will remain to serve the proposed bank. A site location map is included as Figure 1 in Appendix A.

Based on the results of the study, our office finds the following:

1. The proposed development is forecast to generate 61 and 84 trip ends for the weekday AM and PM peak hours of the generator, respectively. However, the existing Northern Pride Auto Wash generates 106 and 118 trip ends for the weekday AM and PM peak hours, respectively, for which credit can be taken. Therefore, this project will result in a **decrease** of 45 and 34 trip ends in the weekday AM and PM peak hours for the cart wash, respectively. Since there is not a net traffic increase of 100 peak hour trip ends, a MaineDOT traffic movement permit will not be required.

2. The level of service analyses show that the proposed project will have a minimal impact on traffic flow in the vicinity of the site.

3. GP reviewed the MaineDOT crash data for the years 2012 – 2014. Based on the published history, the roadway segment where the site drive is located is not classified as a high crash location.

4. The proposed project will result in the closure of one of the two driveways currently serving the site. The available sight distances at the remaining easterly driveway exceed local and MaineDOT sight distance requirements. GP recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

5. The proposed Bangor Savings site has been designed to facilitate pedestrian circulation and safety.

Based on these findings, it is the opinion of GP that the existing street system can accommodate the traffic generated by the redevelopment of this site.

I. *Proposed Site*

The site is currently occupied by the Northern Pride Auto Wash, which will be closed and demolished as part of this development. The site is currently served by two driveways. The westerly driveway will be removed and the easterly driveway will remain to serve the proposed bank. A site location map is included as Figure 1 in Appendix A.

Proposed for the site is a three story 7,708 square foot Bangor Savings Bank building with two drive-through lanes. The lower level of the building will be a retail branch with two drive thru lanes and the upper two floors will be offices for bank management.

II. *Background Traffic Conditions*

GP based the study on the following information:

- A proposed site plan prepared by GP dated May 2015.
- Crash information for 2012-2014 provided by the Maine Department of Transportation (MaineDOT).
- Post development traffic volumes for the Federated property project in Bayside furnished by FST for the following intersections
    - State, Kennebec and Marginal
    - Marginal and Preble
- Memorandum from Bradley Lyon of Sebago Technics entitled "Trip Generation for 20 Marginal Way, Portland, Maine"

Predevelopment Traffic Volumes

Federated Properties

The Bayside area development proposed by Federated Properties was recently approved by the City of Portland. FST furnished their projected post development traffic volumes to GP which were utilized as the predevelopment volumes for the proposed Bangor Saving Bank Project.

III. *Trip Generation*

Proposed for the site is a three story 7,708 sf Bangor Savings Bank building. The ground floor of the building will be a 2,108 sf retail bank with two drive-through lanes. The upper two floors will be bank offices consisting of 2,800 sf each. The existing Northern Pride car wash currently on the site will be demolished.

In order to determine the need for a MaineDOT Traffic Movement Permit, GP has estimated the trip ends generated by the current use of the site as well as the proposed bank and office building using the Institute of Transportation Engineers (ITE) publication Trip Generation. A trip end is defined as an in or out, thus a round trip is equal to two trip ends. These calculations presented below show there is

a net decrease in trip ends during the AM and PM peak hours of the proposed bank building compared to the car wash. Since there is not a net traffic increase of 100 peak hour trip ends, a MaineDOT traffic movement permit will not be required.

Trips associated with the Northern Pride car wash- GP utilized a memorandum from Bradley Lyons of Sebago Technics to William DeSena dated August 29, 2014 to estimate the trip ends associated with the car wash. A copy of this memo is included in the Appendix to this report. The memo analyzed the trip generation associated with the car wash using sales data for weekdays in January, April and December and on a Sunday in April of 2013. The data showed a weekday average of 106 AM and 118 and PM trip ends during the peak hours for the car wash for the data compiled.

Trip Estimate for the Proposed Bank- For the purposes of this analysis, GP has estimated the trips generated by the proposed bank using Land Use Code 912, Drive-In Bank of the 9th Edition of the Institute of Transportation Engineers publication, Trip Generation. A summary of the resulting trip generation estimate is presented below. The trip generation calculations are included in Appendix C.

Trip Generation – Net Increase for Proposed Bangor Savings Bank (*Trip Ends) During the Peak hour of the Generator

Time Period	Car Wash	Bangor Savings Bank	Net Increase
Daily	1076	432	-644
Weekday AM Peak Hr of Generator	106	61	-45
Weekday PM Peak Hr of Generator	118	84	-34
Saturday Peak Hr of Generator	116	57	-59

*A trip end is either a trip into or out of the site. Thus a round trip equals two trip ends.

These results show that the peak hours of the proposed project will generate less than currently occurs during the peak hours of the existing car wash.

The peak hour of the adjacent street traffic on Marginal Way generally occurs from 7:30 to 8:30 AM and again from 4:30 to 5:30 PM. A comparison of the existing and proposed uses during the peak hour of the adjacent street traffic is summarized below:

Trip Generation – Net Increase for Proposed Bangor Savings Bank (*Trip Ends) During the Peak Hour of Adjacent Street Traffic

Time Period	Car Wash	Bangor Savings Bank	Net Increase
Daily	1076	432	-644
Weekday AM Peak Hr of Adj Street	85	43	-42
Weekday PM Peak Hr of Adj Street	98	84	-14
Saturday Peak Hr of Adj Street	116	57	-59

These results show that during the peak hour of the adjacent street traffic the proposed project will generate less than currently occurs during the peak hour of the adjacent street traffic for the existing car wash.

IV. *Trip Distribution*

GP has estimated the trip distribution based on the information published by ITE which is summarized below.

Land Use	AM Peak	PM Peak
Retail Bank		
Entering	60%	50%
Exiting	40%	50%
Office		
Entering	90%	15%
Exiting	10%	85%

V. *Trip Composition*

GP has utilized the following trip composition based on information obtained from the ITE publication, *Trip Generation Handbook* for Land Use Codes 715 and 912, Single Tenant Office Building and Drive-In Bank respectively. The percentages were compiled for the AM and PM peak hours as follows:

Trip Composition for Proposed Bangor Savings Bank

Trip Type	AM Peak Hour				PM Peak Hour			
	Office		Bank		Office		Bank	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Primary	18	2	3	2	2	23	7	8
Pass-by	0	0	7	5	0	0	15	15
Diverted	0	0	3	2	0	0	7	7
Total	18	2	13	9	2	23	29	30

VI. *Trip Assignment*

The trip assignment for the proposed site is based on existing traffic patterns. Trip assignment is shown on Figure 3 in Appendix A. Since the Northern Pride car wash was operational when the traffic counts were completed for Federated Properties we have assumed the development traffic was already in the traffic stream at the adjacent intersections.

VII. 2016 Post Development Traffic

The anticipated year 2016 predevelopment traffic shown on Figure 2 of Appendix A has been combined with the trips forecast for the development shown on Figure 3 of Appendix A to yield the 2016 postdevelopment traffic shown on Figure 4 of Appendix A.

VIII. *Study Area*

Since the proposed project is forecast to generate less trips than the car wash during both the adjacent street as well as the overall peak hours, the study area for the project is limited to the site driveway onto Marginal Way.

IX. *Capacity Analyses*

The capacity analyses were performed using the Synchro / Simtraffic computer software, with an average of five runs. Levels of service rankings are similar to the academic ranking system where an 'A' represents little control delay and an 'F' represents significant delay. A level of service 'D' or above is desired at a signalized intersection. At an unsignalized intersection, if the level of service falls below a 'D', an evaluation should be made to determine if further mitigation is warranted.

The following table summarizes the relationship between control delay and level of service for an unsignalized intersection:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

Site Driveway / Marginal Way

The results of the capacity analyses for the site driveway for the AM and PM peak hours of adjacent street traffic are summarized as follows. The detailed analyses are included in Appendix B.

Level of Service Summary

Approach	Peak Hour	
	AM Post	PM Post
Site Drive / Marginal Way		
Site Drive - SB	A	B
Marginal - NE	A	A
Marginal - SW	A	A

As can be seen from the results, the each of the approaches of the site driveway intersection are forecast to operate at acceptable levels of service.

X. *Crash Data*

In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define High Crash Locations (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:

2. A minimum of eight crashes over the same three-year period.

The following summarizes the crash history for the roadway segment where the site driveway is located.

MaineDOT Crash Data for 2012-2014: Road Segments

Nodes	Street	From	To	# of Collisions	CRF	HCL?
60346-18999	Marginal Way	Forest Ave	Hanover St	2	0.31	No

Based on the published history provided by MaineDOT, the roadway segment where the site driveway is located is not classified as a high crash location.

XI. *Sight Line Analysis*

The Maine Department of Transportation (MaineDOT) and the City of Portland have guidelines for sight distances at roadways. The sight line standards for MaineDOT and the City of Portland are as follows:

Sight Distance Requirements

Speed (mph)	MaineDOT (ft)	City of Portland (ft)
25	200	367
30	250	440
35	305	513
40	360	587
45	425	660
50	495	773

GP has evaluated the available sight lines at the proposed site driveway on Marginal Way in accordance with MaineDOT and City of Portland standards.

The MaineDOT standards are as follows:

Roadway observation point:	10 feet off major street travelway
Height of eye at roadway:	3 ½ feet above ground
Height of approaching vehicle:	4 ¼ feet above road surface

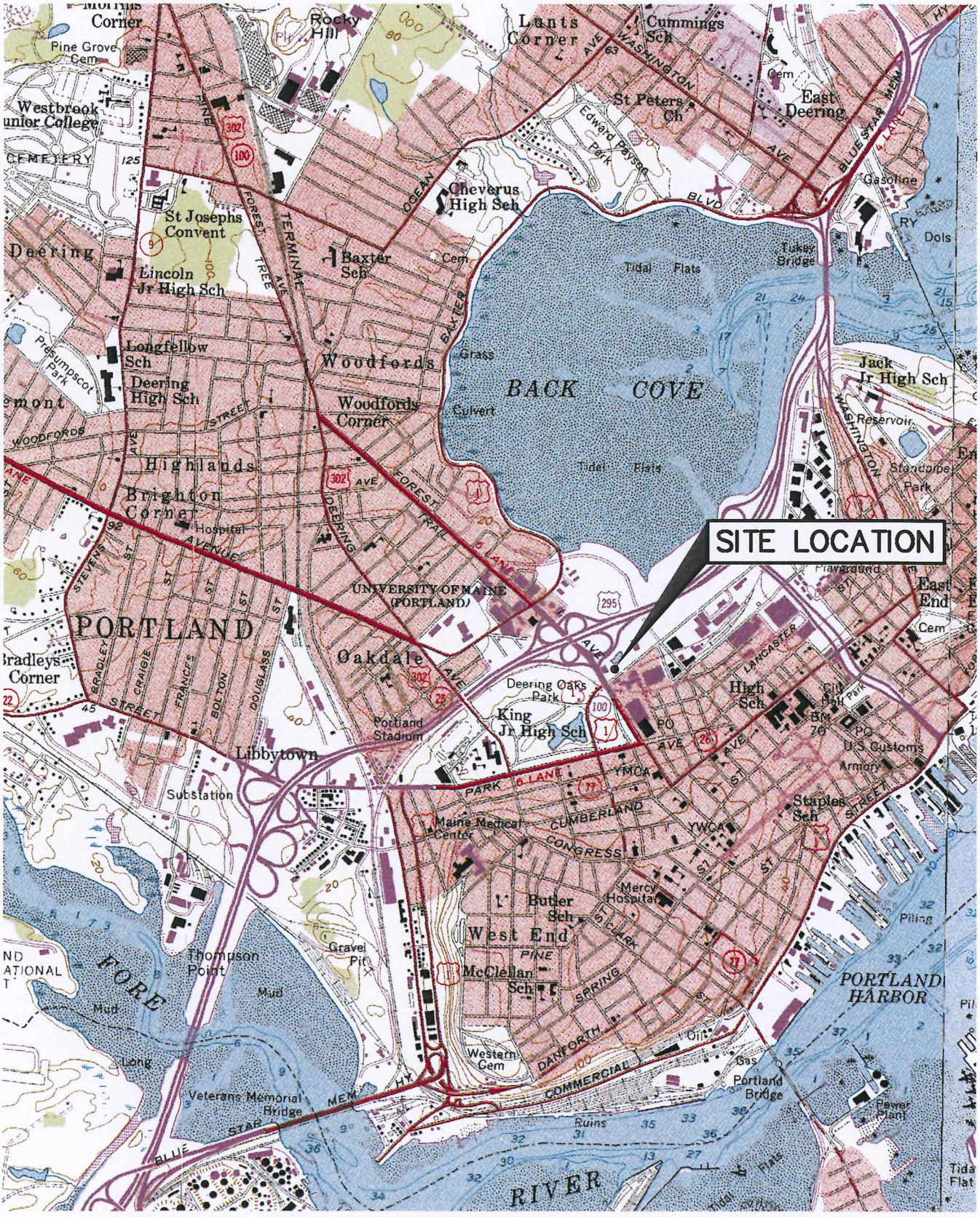
The posted speed limit on Marginal Way in the site vicinity is 35 mph. Based on a site review, the sight distance looking to the right is to Forest Avenue, and the sight distance exceeds 550 feet looking to the left. Therefore, the available sight distances are acceptable.

GP recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

XII. *Pedestrian Circulation*

The proposed Bangor Savings site has been designed to facilitate pedestrian circulation and safety. The building has been brought to the front of the lot to facilitate pedestrian access to the front of the building. The building will also be fronted by a sidewalk to facilitate convenient pedestrian access to the building. Furthermore, the existing car wash has two curb cuts on Marginal Way. The proposed Bangor Saving Bank project will eliminate one of the existing curb cuts to improve pedestrian safety.

APPENDIX A



U.S.G.S. Location Map

Bangor Savings Bank - Portland, Maine

U.S.G.S. Portland-East, Maine-7.5 Minute Series (Topographic)

Design: JWA	Date: may 2015	GORRILL PALMER	Figure 1
Draft: CG	Job No.: 2970		
Checked: AMP	Scale: None		
File Name: 2970-LOCATION.dwg			

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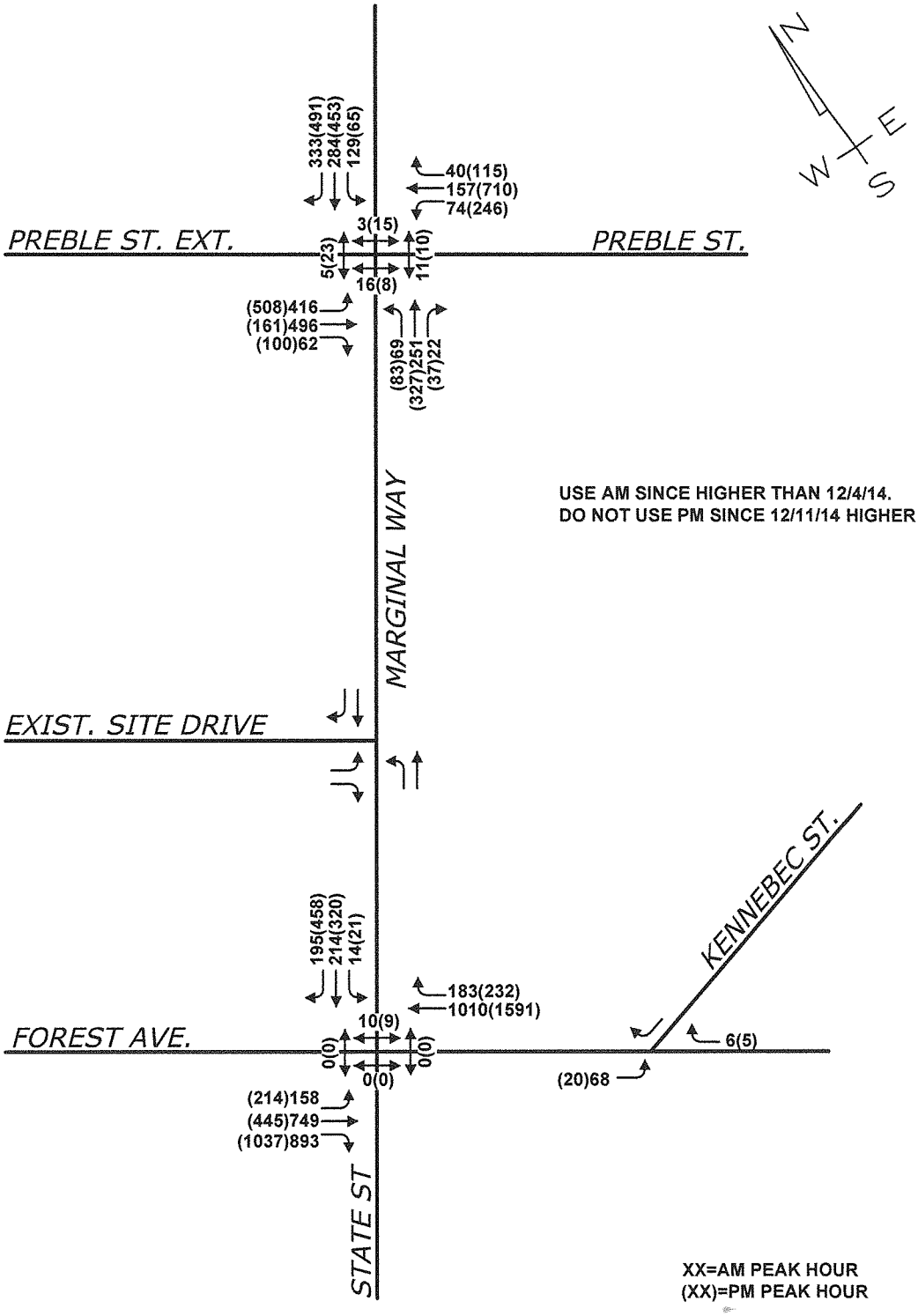
2016 Predevelopment Volumes

Figure No. 2



PROPOSED BANGOR SAVINGS, PORTLAND, MAINE

Design: TLG
Draft: DB
Checked: -
Scale: NONE
Date: APR 2015
File Name: 2970-TRAFF.dwg

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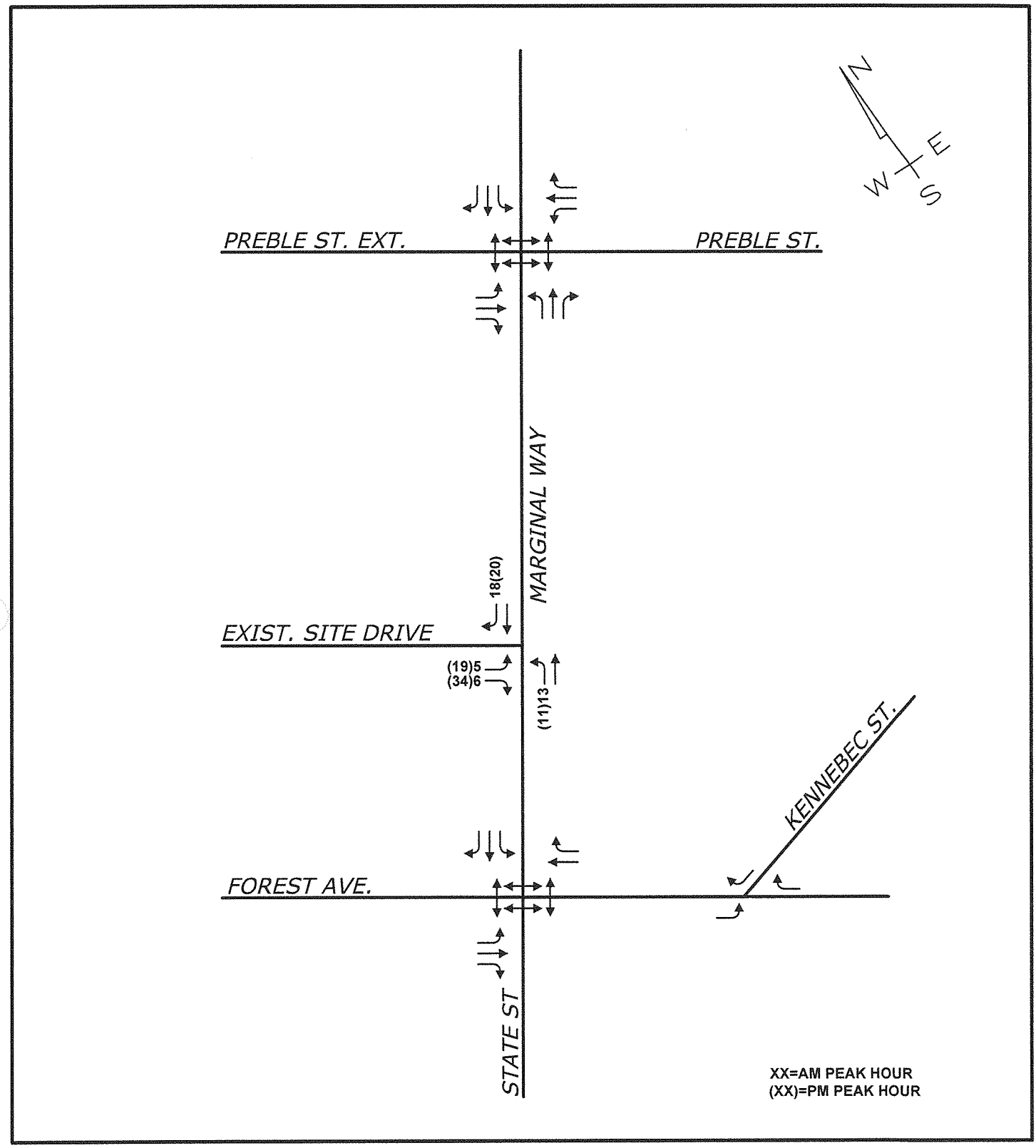
Development Volumes

Figure No. 3



PROPOSED BANGOR SAVINGS, PORTLAND, MAINE

Design: TLG
Draft: DB
Checked: -
Scale: NONE
Date: APR 2015
File Name: 2970-TRAFF.dwg

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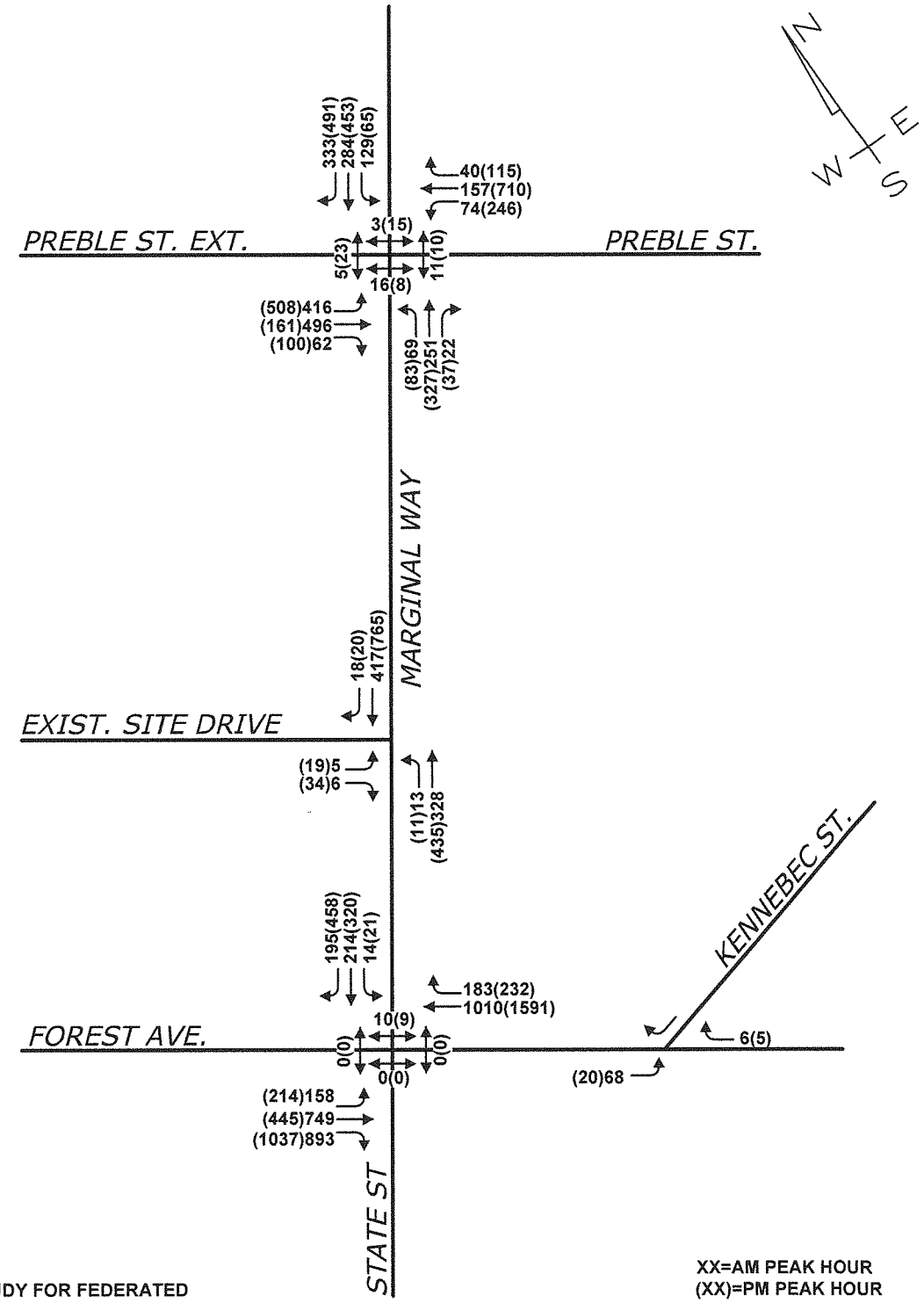
2016 Postdevelopment Volumes

Figure No. 4



SOURCE:
TRAFFIC IMPACT STUDY FOR FEDERATED PROPERTIES FURNISHED BY FST.

XX=AM PEAK HOUR
(XX)=PM PEAK HOUR

PROPOSED BANGOR SAVINGS, PORTLAND, MAINE

Design: TLG Scale: NONE
Draft: DB Date: APR 2015
Checked: - File Name: 2970-TRAFF.dwg

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APPENDIX B

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	811	853	785	777	739	792
Vehs Exited	809	856	785	777	738	793
Starting Vehs	6	7	7	2	5	5
Ending Vehs	8	4	7	2	6	5
Travel Distance (mi)	124	132	120	120	114	122
Travel Time (hr)	4.5	4.8	4.4	4.3	4.1	4.4
Total Delay (hr)	0.3	0.3	0.3	0.2	0.2	0.2
Total Stops	29	18	16	13	9	17
Fuel Used (gal)	3.9	4.1	3.8	3.7	3.4	3.8

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	811	853	785	777	739	792
Vehs Exited	809	856	785	777	738	793
Starting Vehs	6	7	7	2	5	5
Ending Vehs	8	4	7	2	6	5
Travel Distance (mi)	124	132	120	120	114	122
Travel Time (hr)	4.5	4.8	4.4	4.3	4.1	4.4
Total Delay (hr)	0.3	0.3	0.3	0.2	0.2	0.2
Total Stops	29	18	16	13	9	17
Fuel Used (gal)	3.9	4.1	3.8	3.7	3.4	3.8

3: Site Drive & Marginal Way Performance by approach

Approach	SB	NE	SW	All
Denied Del/Veh (s)	0.1	0.4	0.3	0.4
Total Del/Veh (s)	5.0	0.4	0.5	0.5

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	0.7

Intersection: 3: Site Drive & Marginal Way

Movement	SB	NE
Directions Served	LR	L
Maximum Queue (ft)	24	31
Average Queue (ft)	7	5
95th Queue (ft)	25	25
Link Distance (ft)	243	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1316	1377	1264	1211	1229	1279
Vehs Exited	1321	1381	1263	1212	1230	1281
Starting Vehs	10	10	8	5	5	7
Ending Vehs	5	6	9	4	4	5
Travel Distance (mi)	202	212	194	186	189	196
Travel Time (hr)	7.7	8.2	7.4	7.0	7.1	7.5
Total Delay (hr)	0.7	0.9	0.7	0.6	0.7	0.7
Total Stops	55	62	58	55	52	57
Fuel Used (gal)	6.6	6.9	6.4	6.0	6.1	6.4

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1316	1377	1264	1211	1229	1279
Vehs Exited	1321	1381	1263	1212	1230	1281
Starting Vehs	10	10	8	5	5	7
Ending Vehs	5	6	9	4	4	5
Travel Distance (mi)	202	212	194	186	189	196
Travel Time (hr)	7.7	8.2	7.4	7.0	7.1	7.5
Total Delay (hr)	0.7	0.9	0.7	0.6	0.7	0.7
Total Stops	55	62	58	55	52	57
Fuel Used (gal)	6.6	6.9	6.4	6.0	6.1	6.4

3: Site Drive & Marginal Way Performance by approach

Approach	SB	NE	SW	All
Denied Del/Veh (s)	0.1	0.4	0.7	0.6
Total Del/Veh (s)	12.2	0.4	0.8	1.1

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	1.5

Intersection: 3: Site Drive & Marginal Way

Movement	SB	NE
Directions Served	LR	L
Maximum Queue (ft)	66	36
Average Queue (ft)	23	6
95th Queue (ft)	50	26
Link Distance (ft)	243	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Network Summary

Network wide Queuing Penalty: 0

APPENDIX C

JN:	2970	Gorrill-Palmer Consulting Engineers, Inc.
Project Description:	Bangor Savings Bank	P.O. Box 1237
Project Location:	Marginal Way, Portland	15 Shaker Road
Date:	5/4/2015	Gray, Maine 04039

Single Tenant Office Building
Land Use Code (LUC) 715

Gross Floor Area (ft^2): 5,600

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	T = 11.65 (X)	65	50%	50%	33	32
AM Peak Hour	T = 1.80 (X)	10	90%	10%	9	1
PM Peak Hour	T = 1.74 (X)	10	15%	85%	2	8

* Percentages rounded to nearest 5%

Fitted Curve

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	Ln (T) = 0.60 Ln (X) + 4.30	207	50%	50%	104	103
AM Peak Hour	T = 1.67(X) + 21.93	31	90%	10%	28	3
PM Peak Hour	T = 1.52 (X) + 34.60	43	15%	85%	6	37

* Percentages rounded to nearest 5%

AVERAGE

Time Period	Trip Ends	Directional Split *		Directional Distribution	
		IN	OUT	IN	OUT
Weekday	**136**	50%	50%	68	68
AM Peak Adjacent Street	**21**	90%	10%	18	2
PM Peak Adjacent Street	**27**	15%	85%	4	23

JN: 2970
Project Description: Bangor Savings
Project Location: Marginal Way Portland
Date: 5/4/2015

Gorrill-Palmer Consulting Engineers, Inc.
P.O. Box 1237
15 Shaker Road
Gray, Maine 04039

Drive-in Bank-9th Edition
Land Use Code (LUC) 912

Gross Floor Area (ft^2): 2,108

Time Period	ITE Trip Rate	Trip Ends	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 148.15 (X)	312	50%	50%	156	156	0.59
AM Peak Adjacent Street	T = 12.08 (X)	25	55%	45%	14	11	---
PM Peak Adjacent Street	T = 24.30 (X)	51	50%	50%	26	25	---
AM Peak Hour of Generator	T = 17.57 (X)	37	50%	50%	19	18	0.51
PM Peak Hour of Generator	T = 26.69 (X)	56	50%	50%	28	28	---
Saturday	T =86.32 (X)	182	50%	50%	91	91	0.52
Saturday Peak Hour of Gen.	T = 26.31 (X)	55	50%	50%	28	27	---

* Percentages rounded to nearest 5%

Number of Drive-in Lanes: 2

Time Period	ITE Trip Rate	Trip Ends	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 139.25 (X)	279	50%	50%	140	139	0.52
AM Peak Adjacent Street	T = 9.29(X)	19	60%	40%	11	8	---
PM Peak Adjacent Street	T = 33.24 (X)	66	50%	50%	33	33	---
AM Peak Hour of Generator	T = 21.64 (X)	43	50%	50%	22	21	---
PM Peak Hour of Generator	T = 29.05 (X)	58	50%	50%	29	29	0.55
Saturday	Not Given	0	50%	50%	0	0	---
Saturday Peak Hour of Gen.	T = 28.78 (X)	58	50%	50%	29	29	---

* Percentages rounded to nearest 5%

AVERAGE

Time Period	Trip Ends	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT
Weekday	296	50%	50%	148	148
AM Peak Adjacent Street	22	58%	42%	13	9
PM Peak Adjacent Street	59	50%	50%	29	30
AM Peak Hour of Generator	40	50%	50%	20	20
PM Peak Hour of Generator	57	50%	50%	29	28
Saturday Peak Hour of Gen.	57	50%	50%	28	29

Site Generated Trip Ends

AM Peak Hour
TOTAL ENTERING TRIPS = 79
TOTAL EXITING TRIPS = 124

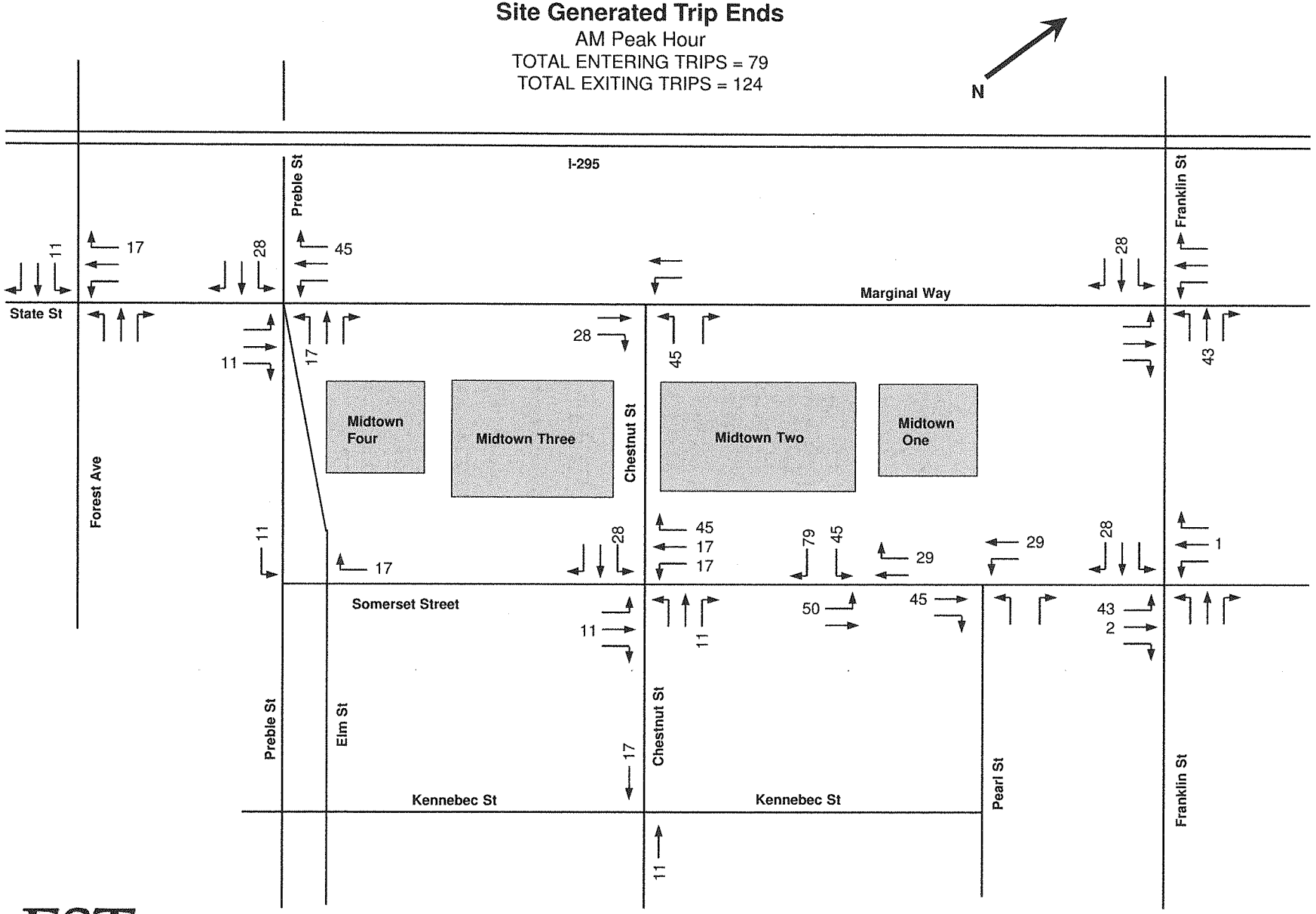


Figure 2
Not to Scale

Site Generated Trip Ends

PM Peak Hour
TOTAL ENTERING TRIPS = 184
TOTAL EXITING TRIPS = 165

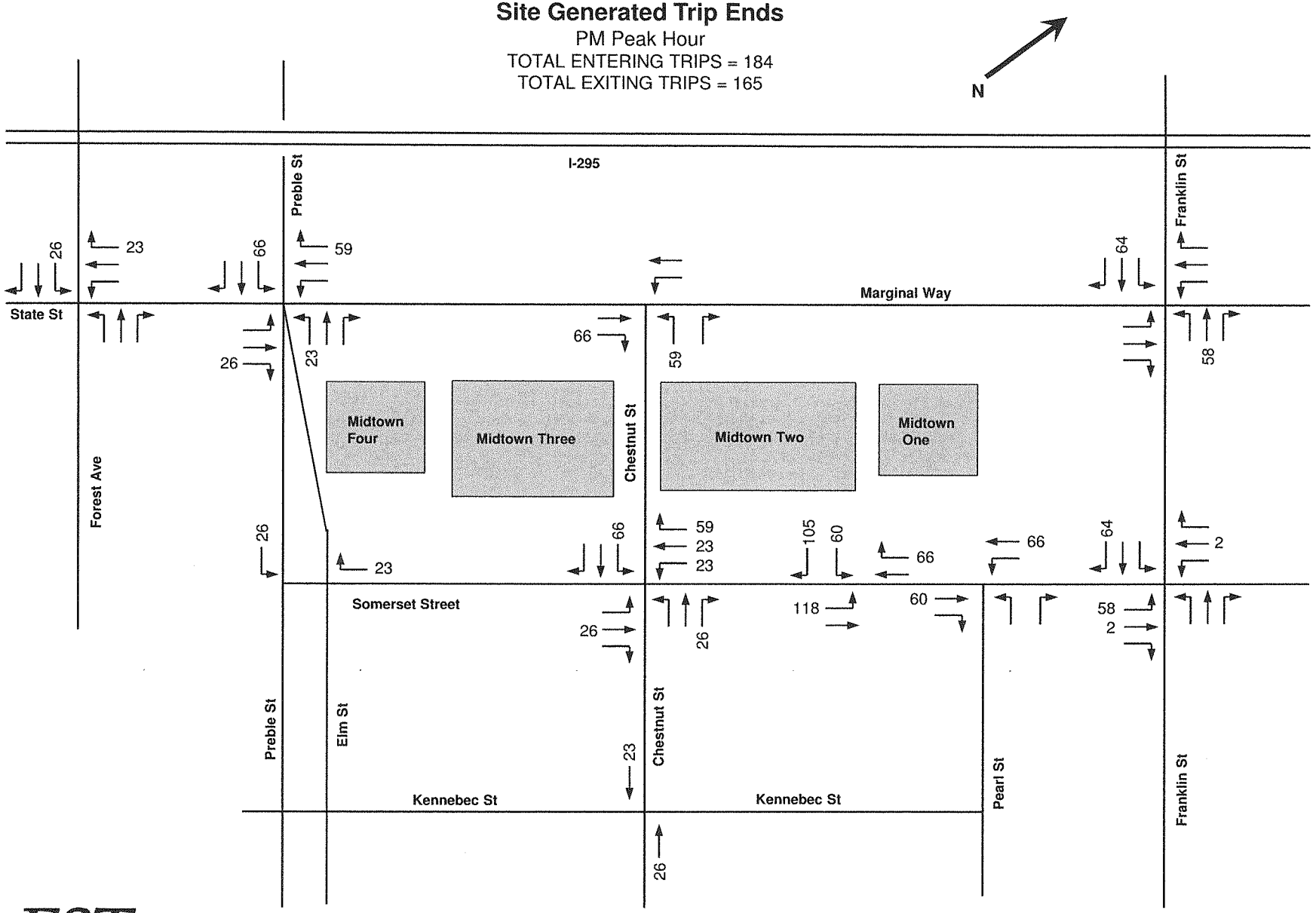


Figure 3
Not to Scale

Post-Development Turning Movement Counts

AM Peak Hour

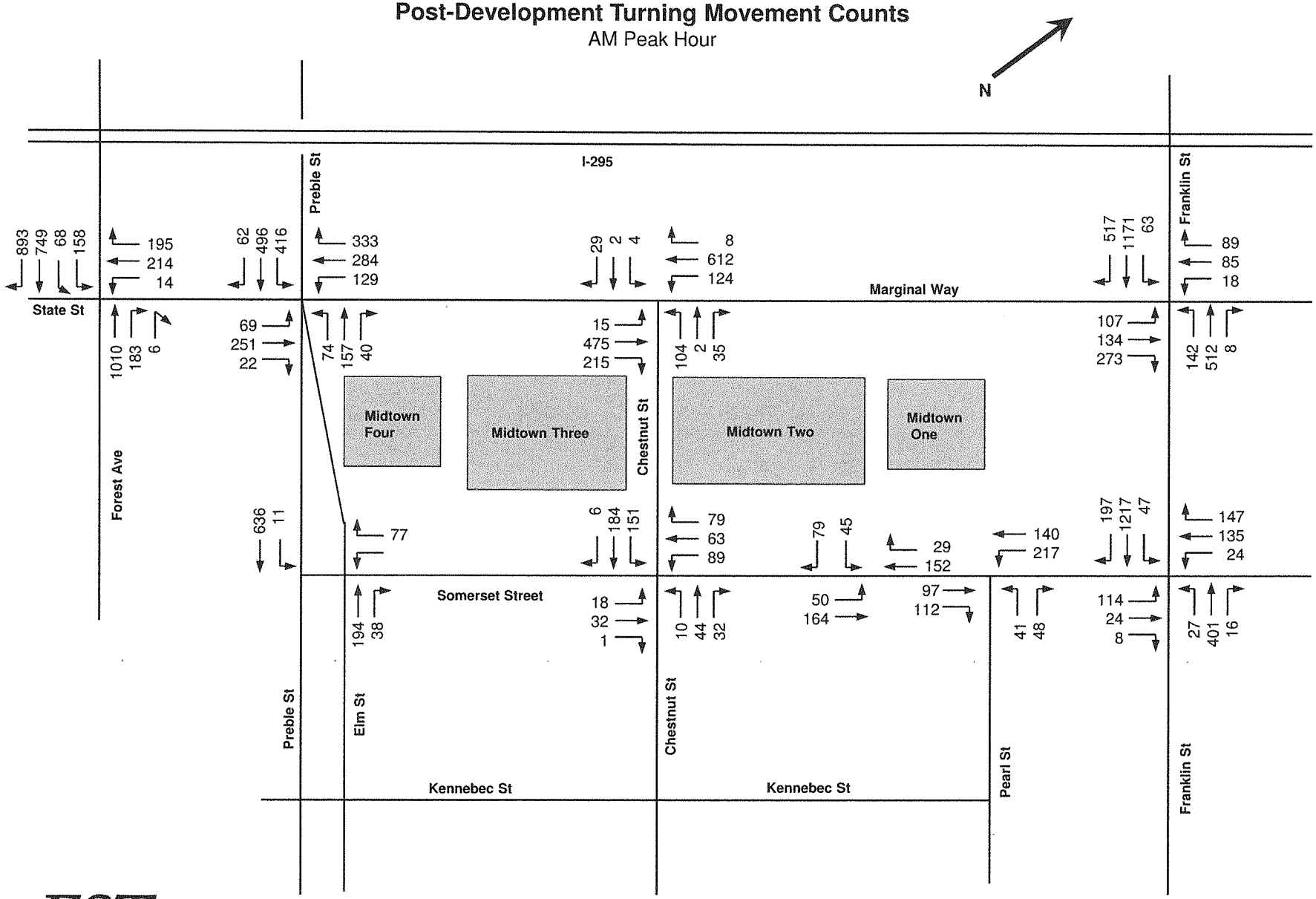


Figure 4
Not to Scale

Post-Development Turning Movement Counts

PM Peak Hour

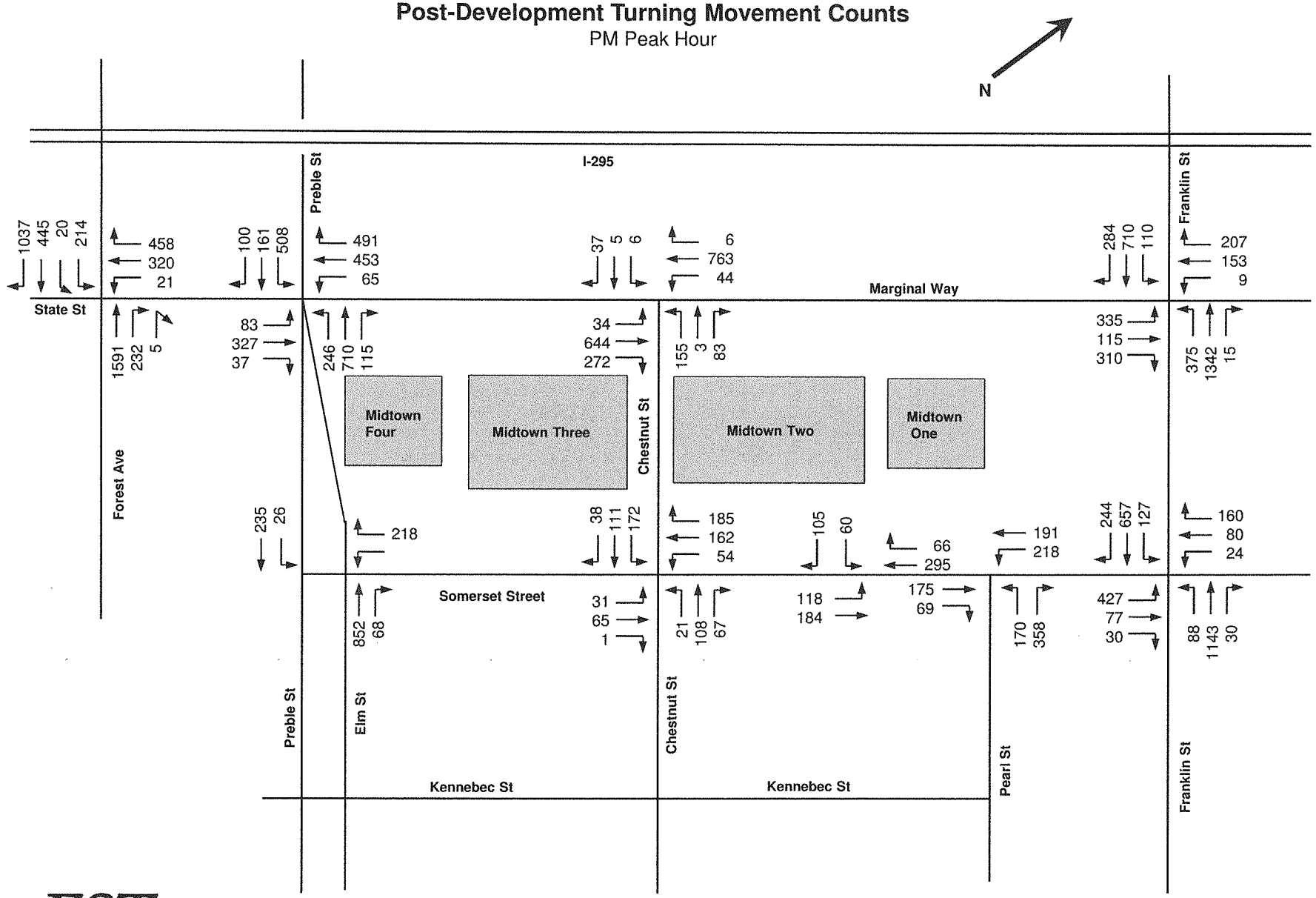


Figure 5
Not to Scale

SEBAGO
TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

Memorandum

To: **William DeSena**

From: **Bradley R. Lyon, P.E., PTOE,**
Senior Transportation Engineer

Job #: **14313**

Date: **August 29, 2014**

Subject: **Trip Generation Calculations for**
20 Marginal Way, Portland, Maine

STATE OF MAINE
BRADLEY R. LYON
No. 12632
LICENSED
PROFESSIONAL ENGINEER

8/29/14

The purpose of this memorandum is to calculate what the peak hour trip generation is on 20 Marginal Way in Portland, Maine for the existing 2,500 sf "Northern Pride" automated car wash and compare it to the following three proposed land uses:

- 2,500 sf Dunkin Donuts w/Drive Thru
- 2,500 sf Generic Coffee Shop w/Drive Thru
- 2,500 sf Drive-In Bank w/1 Drive Thru Lane

Existing 2,500 sf "Northern Pride" Automated Car Wash

The latest edition, 8th, of the Institute of Transportation Engineers (ITE) Trip Generation Manual was referenced using Land Use Code 948, Automated Car Wash in an attempt to estimate peak hour traffic. Analysis of the land use found that only 2 observations were available, therefore existing sales data was requested. Existing hourly sales data was provided to us for weekdays in January, April and December of 2013 and a Sunday in April of 2013. The results, as well as the calculated weekday average are as follows:

75 John Roberts Road - Suite 1A, South Portland, ME 04106-6963 • 207.200.2100 • Fax: 207.856.2206

Table 1
"Northern Pride Auto Wash" Sales Data

Time Period	Wed., Dec. 11, 2013	Tues., Jan. 8, 2013	Thurs., Jan. 10, 2013	Tues., April 20, 2013	Sat., Feb. 23, 2013	Sun., April 7, 2013	Weekday Average
07:30 AM – 08:00 AM	18	22	20	20	24	19	20
08:00 AM – 09:00 AM	49	36	36	57	43	43	45
09:00 AM – 10:00 AM	71	37	46	56	54	42	**53**
10:00 AM – 11:00 AM	52	46	51	55	43	46	51
11:00 AM – 12:00 PM	48	51	57	51	42	52	52
12:00 PM – 1:00 PM	69	57	59	51	**58**	56	**59**
1:00 PM – 2:00 PM	60	51	54	46	43	56	53
2:00 PM – 3:00 PM	45	55	58	43	52	43	50
3:00 PM – 4:00 PM	61	58	64	44	47	53	57
4:00 PM – 5:00 PM	49	52	54	52	54	**60**	52
5:00 PM- 6:00 PM	34	60	45	44	47	45	46

Given this data, it was determined that the existing weekday AM Peak Hour was from 9:00 AM to 10:00 AM, generating **106 trips** (53 sales * 2 (entering and exiting vehicles)) and the existing weekday PM Peak Hour was from 12:00 PM to 1:00 PM, generating **118 trips** (weekday average of 59 sales * 2 (entering and exiting vehicles)). The Saturday Peak Hour occurred from 12:00 PM to 1:00 PM on February 23, 2013 with **116 trips** (58 sales * 2 (entering and exiting vehicles)). The Sunday Peak Hour occurred from 4:00 PM to 5:00 PM on April 7th, 2013 with **120 trips** (60 sales * 2 (entering and exiting vehicles)). A summary of this can be found in Table 2 below:

Table 2
Proposed Trip Generation based on Sales Data
"Northern Pride Auto Wash"

	Total Trips
Weekday AM Peak Hour of Generator	**106**
Weekday PM Peak Hour of Generator	**118**
Saturday Peak Hour of Generator	**116**
Sunday Peak Hour of Generator	**120**

Proposed 2,500 sf Dunkin Donuts w/Drive Thru

Dunkin Donuts stores are unique in their trip generating characteristics and as such a special study was conducted in 2005 by Gorrill - Palmer Engineers (G-P) to better define these relationships, since MaineDOT determined that standard ITE data did not seem to provide reasonable estimates. The G-P Study outlined three means of more accurately forecasting trip generation by these facilities based on their location and the traffic volumes in the vicinity of the sites. We used these methodologies to arrive at the following results, which have been averaged to determine the AM Peak Hour of the generator. It should be noted that the Annual Average Daily Traffic in front of the site was recorded by MaineDOT in 2010 to be 8,050 vehicles per day. In addition, the AM peak hour is generally considered to be 8% of the average daily traffic, which in this case would be 644 vehicles.

Trip Gen by Store Size	=	0.0536*(2,500 S.F.) + 142.75	=	276.75 trips
Trip Gen by AADT	=	0.0081*(8,050 AADT) + 139.36	=	204.57 trips
Trip Gen by AM Peak Hr	=	0.1061*(644 vehicles) + 144.49	=	212.82 trips
Average			=	**231 trips**

The above figure will place this Project in the "over 200" Traffic Movement Permit category. However, Dunkin Donuts stores have only a 15% Primary (or new) Trip production rate, (i.e. most patrons are already on the roadway network and stop in on their way by). Very few are new trips to the roadway. In this case the 231 Dunkin Donuts trips will only represent about 35 new trips or approximately 18 new trips in and 17 new trips out of the site. Given the presence of an existing shared left turn lane on Marginal Way, offsite improvements should be minimal but the extent of improvements wouldn't be able to be determined until a "Scoping Meeting" is held with MaineDOT. The application fees to the state for permit of this level are $2,000 plus our engineering costs to produce the application and perform a formal traffic study of the area.

Proposed 2,500 sf Generic Coffee Shop w/Drive Thru

Similar to the trip generation estimate for the existing "Northern Pride" automated car wash, the proposed 2,500 sf Generic Coffee Shop w/Drive Thru was estimated using the 8th Edition of the ITE Trip Generation Manual. Land Use Code 940 Bread/Donut/Bagel Shop with Drive-Through Window was used. Data was only available for the peak hour of adjacent street traffic, one hour between 7 and 9 AM and one hour between 4 and 6 PM. The results are as follows:

Table 3
Proposed Trip Generation by Square Feet
Land Use Code 940, Bread/Donut/Bagel Shop with Drive-Through Window

By Square Feet	Square Feet	Rate (Trips / 1,000 sf)	Total Trips
Weekday Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 AM	2,500	36.92	**92**
Weekday Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 PM	2,500	19.56	**49**

Given this information a Traffic Movement Permit would not be required from the MaineDOT due to the fact that the development would generate less than 100 peak hour trips.

Proposed 2,500 sf Drive-In Bank w/1 Drive Thru Lane

Similar to the trip generation estimate for the existing "Northern Pride" automated car wash and the Generic Coffee Shop, the proposed 2,500 sf Drive-In Bank w/1 Drive Thru Lane was estimated using the 8th Edition of the ITE Trip Generation Manual. Land Use Code 912 Drive-in Bank was used by using rates per 1,000 square feet of gross floor area averaged with rates by drive-in lanes. The results are as follows:

Table 4
Proposed Trip Generation by Square Feet
Land Use Code 912 Drive-in Bank

By Square Feet	Square Feet	Rate (Trips / 1,000 sf)	Total Trips
Weekday AM Peak Hour of Generator	2,500	17.31	**43**
Weekday PM Peak Hour of Generator	2,500	26.69	**67**
Saturday Peak Hour of Generator	2,500	26.53	**66**
Sunday Peak Hour of Generator	2,500	4.78	**12**

Table 5
Proposed Trip Generation by Drive-In Lane
Land Use Code 912 Drive-in Bank

By Drive-In Lane	Drive-In Lanes	Rate (Trips / Drive-In Lane)	Total Trips
Weekday AM Peak Hour of Generator	1	21.64	**22**
Weekday PM Peak Hour of Generator	1	29.05	**29**
Saturday Peak Hour of Generator	1	29.88	**30**
Sunday Peak Hour of Generator	1	N/A	**N/A**

Table 6
Proposed Trip Generation Total Average
Land Use Code 912 Drive-in Bank

By Drive-In Lane	Trips by Square Foot	Trips by Drive-In Lane	Average Trips
Weekday AM Peak Hour of Generator	43	22	**33**
Weekday PM Peak Hour of Generator	67	29	**48**
Saturday Peak Hour of Generator	66	30	**48**
Sunday Peak Hour of Generator	12	N/A	**12**

Given this information a Traffic Movement Permit would not be required from the MaineDOT due to the fact that the development would generate less than 100 peak hour trips.

Conclusion

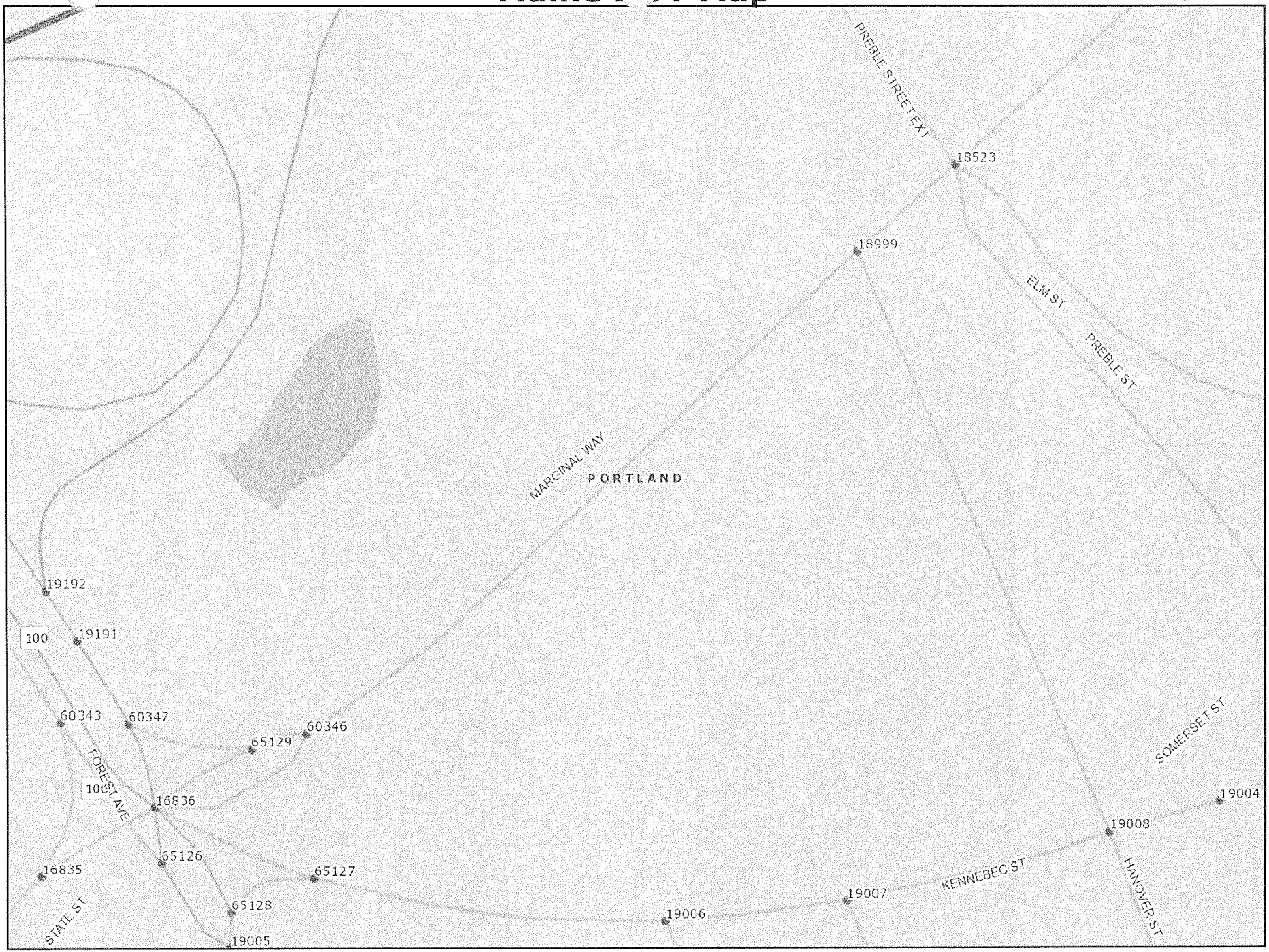
In conclusion, the trip generation for each of the uses is as follows:

Table 7
Overall Trip Generation Comparison

	Existing 2,500 sf Automated Car Wash	2,500 sf Dunkin Donuts	2,500 sf Generic Coffee Shop	2,500 sf Drive-In Bank
AM Peak Hour of Generator	106	231	92	33
PM Peak Hour of Generator	118	N/A	49	48
Saturday Peak Hour of Generator	116	N/A	N/A	48
Sunday Peak Hour of Generator	120	N/A	N/A	12
Traffic Movement Permit Required?	N/A	Yes (200+ Trips)	No	No

Given the above information, it is our opinion that a Traffic Movement Permit would only be required for the Dunkin Donuts which would generate 231 AM Peak Hour trips, putting it into the 200+ Traffic Movement Permit category. The remaining two uses all generate below 100 peak hour trips and therefore would not require a Traffic Movement Permit.

Maine DOT Map



Map Generated on Tuesday, May 05, 2015 10:18:32 AM ***Map Scale 1:1489***

The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch. Road names used on this map may not match official road names.

Maine Department Of Transportation - Tra 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

Marginal

REPORT PARAMETERS

Year 2012, Start Month 1 through Year 2014 End Month: 12

Route: **0560477**	Start Node: **16836**	Start Offset: **0**	☐ Exclude First Node
	End Node: **18523**	End Offset: **0**	☐ Exclude Last Node
Route: **3201880**	Start Node: **60346**	Start Offset: **0**	☑ Exclude First Node
	End Node: **16836**	End Offset: **0**	☑ 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
P16836	0560477 - 0	Int of FOREST AV KENNEBEC ST MARGINAL WY STATE S	9	54	0	0	3	11	40	25.9	12.807	1.41	0.98	1.43
												Statewide Crash Rate:	0.66	
A60346	0560477 - 0.03	Non Int MARGINAL WY	2	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.14	
18999	0560477 - 0.16	Int of HANOVER ST MARGINAL WY	2	5	0	0	0	3	2	60.0	4.102	0.41	0.37	1.09
												Statewide Crash Rate:	0.14	
18523	0560477 - 0.18	Int of ELM ST, MARGINAL WY, PREBLE ST, PREBLE ST EX	9	25	0	0	1	6	17	29.2	9.923	0.84	1.03	0.00
												Statewide Crash Rate:	0.66	
A65129	3201880 - 0.01	Int of CUT MARGINAL WY	2	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.14	
Study Years:	3.00	**NODE TOTALS:**		84	0	0	4	20	59	28.6	26.832	1.04	0.79	1.32

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
16836	60346	3115192	0 - 0.03	0560477 - 0	0.03	2	0	0	0	0	0	0	0.0	0.00016	0.00	770.05	0.00
Int of FOREST AV KENNEBEC ST MARGINAL WY STATE ST EXT				RD INV 05 60477											Statewide Crash Rate: 190.05		
60346	18999	3115193	0 - 0.13	0560477 - 0.03	0.13	2	2	0	0	0	1	1	50.0	0.00468	142.59	454.26	0.00
Non Int MARGINAL WY				RD INV 05 60477											Statewide Crash Rate: 190.05		
18523	18999	3106676	0 - 0.02	0560477 - 0.16	0.02	2	1	0	0	0	1	0	100.0	0.00071	472.50	725.73	0.00
Int of ELM ST, MARGINAL WY, PREBLE ST, PREBLE ST EXT				RD INV 05 60477											Statewide Crash Rate: 190.05		
60346	65129	3123766	0 - 0.01	3201880 - 0	0.01	2	0	0	0	0	0	0	0.0	0.00031	0.00	817.46	0.00
Non Int MARGINAL WY				RD INV 3201880											Statewide Crash Rate: 190.05		
65129	16836	3139747	0 - 0.02	3201880 - 0.01	0.02	2	0	0	0	0	0	0	0.0	0.00028	0.00	819.99	0.00
Int of CUT MARGINAL WY				RD INV 3201880											Statewide Crash Rate: 190.05		
Study Years: 3.00				**Section Totals:**	0.21		3	0	0	0	2	1	66.7	0.00613	163.16	424.75	0.38
				Grand Totals:	0.21		87	0	0	4	22	60	29.9	0.00613	4731.57	588.58	8.04

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
16836	60346	3115192	0 - 0.03	0560477 - 0	0	0	0	0	0	0				
60346	18999	3115193	0 - 0.13	0560477 - 0.03	2	0	0	0	1	1	2012-26376	04/11/2012	0.06	PD
											2012-29895	06/07/2012	0.13	C
18523	18999	3106676	0 - 0.02	0560477 - 0.16	1	0	0	0	1	0	2014-32637	11/25/2014	0.17	C
60346	65129	3123766	0 - 0.01	3201880 - 0	0	0	0	0	0	0				
65129	16836	3139747	0 - 0.02	3201880 - 0.01	0	0	0	0	0	0				
				Totals:	3	0	0	0	2	1				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM												
	Hour of Day																								
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	1	0	0	0	0	0	0	0	2	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	8
MONDAY	0	0	0	0	0	0	0	0	1	1	0	1	1	2	1	1	0	1	1	0	1	0	0	0	0	11
TUESDAY	0	0	0	0	0	0	0	1	2	1	1	0	1	2	1	2	4	2	1	2	0	0	0	0	0	20
WEDNESDAY	0	0	0	0	0	0	0	1	2	1	0	2	2	0	1	0	2	2	3	2	1	0	0	0	0	19
THURSDAY	0	1	0	0	0	0	0	1	0	0	0	1	2	2	2	2	2	2	2	0	0	0	0	1	0	18
FRIDAY	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	8
SATURDAY	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	3
Totals	1	1	0	0	0	0	0	3	8	5	3	5	7	7	6	6	10	7	8	5	2	2	0	1	0	**87**

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	115
2-(Sport) Utility Vehicle	28
3-Passenger Van	4
4-Cargo Van (10K lbs or Less)	2
5-Pickup	12
6-Motor Home	0
7-School Bus	0
8-Transit Bus	2
9-Motor Coach	1
10-Other Bus	0
11-Motorcycle	1
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	1
17-Medium/Heavy Trucks (More than 10,000 lbs)	2
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	3

Unit Type	Total
23-Bicyclist	2
24-Witness	7
25-Other	3
Total	**183**

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	56	31	1	0	0	0	88
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	10	6	0	0	0	0	16
Ran Red Light	1	3	0	0	0	0	4
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	1	1	0	0	0	0	2
Disregarded Other Road Markings	2	1	0	0	0	0	3
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	1	3	0	0	0	0	4
Improper Turn	2	4	0	0	0	0	6
Improper Backing	1	0	0	0	0	0	1
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	1	0	0	0	0	1
Followed Too Closely	5	22	2	0	0	0	29
Failed to Keep in Proper Lane	2	2	0	0	0	0	4
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	2	7	0	0	0	0	9
Unknown	1	0	0	0	0	0	1
Total	**84**	**81**	**3**	**0**	**0**	**0**	**168**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	84	78	3	0	0	5	170
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	2	0	0	0	0	2
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	1
Total	**84**	**81**	**3**	**0**	**0**	**5**	**173**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	1	0	0	0	0	1
10-14	0	0	0	0	0	0
15-19	8	0	0	0	0	8
20-24	16	0	0	0	0	16
25-29	28	0	0	0	0	28
30-39	37	0	0	0	0	37
40-49	23	0	0	0	0	23
50-59	27	0	0	0	0	27
60-69	19	0	0	0	0	19
70-79	7	0	0	0	0	7
80-Over	2	0	0	0	0	2
Unknown	3	2	0	3	0	8
Total	**171**	**2**	**0**	**3**	**0**	**176**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total
1-Overturn / Rollover	0
2-Fire / Explosion	0
3-Immersion	0
4-Jackknife	0
5-Cargo / Equipment Loss Or Shift	0
6-Fell / Jumped from Motor Vehicle	0
7-Thrown or Falling Object	0
8-Other Non-Collision	0
9-Pedestrian	0
10-Pedalcycle	1
11-Railway Vehicle - Train, Engine	0
12-Animal	0
13-Motor Vehicle in Transport	156
14-Parked Motor Vehicle	0
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0
16-Work Zone / Maintenance Equipment	0
17-Other Non-Fixed Object	0
18-Impact Attenuator / Crash Cushion	0
19-Bridge Overhead Structure	0
20-Bridge Pier or Support	0
21-Bridge Rail	0
22-Cable Barrier	0
23-Culvert	0
24-Curb	0
25-Ditch	0
26-Embankment	0
27-Guardrail Face	0
28-Guardrail End	0
29-Concrete Traffic Barrier	0
30-Other Traffic Barrier	0
31-Tree (Standing)	0
32-Utility Pole / Light Support	0
33-Traffic Sign Support	0
34-Traffic Signal Support	0
35-Fence	0
36-Mailbox	0
37-Other Post Pole or Support	0
38-Other Fixed Object (wall, building, tunnel, etc.)	0
39-Unknown	12
40-Gate or Cable	0
41-Pressure Ridge	0
Total	**169**

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	70
2-Traffic Signals (Flashing)	1
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	1
6-Yield Sign	11
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	3
14-Other	1
Total	**87**

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	4	4
C	22	23
PD	60	0
Total	**86**	**27**

Road Character

Road Grade	Total
1-Level	87
2-On Grade	0
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	**87**

Light

Light Condition	Total
1-Daylight	62
2-Dawn	0
3-Dusk	6
4-Dark - Lighted	19
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**87**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2012	2013	2014	Total
JANUARY	0	1	1	2
FEBRUARY	7	5	4	16
MARCH	3	0	4	7
APRIL	3	1	4	8
MAY	3	2	4	9
JUNE	2	2	1	5
JULY	0	1	3	4
AUGUST	4	1	4	9
SEPTEMBER	1	2	4	7
OCTOBER	1	1	1	3
NOVEMBER	3	4	3	10
DECEMBER	3	1	3	7
Total	**30**	**21**	**36**	**87**

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	1	0	23	19	25	1	0	0	0	0	0	0	0	69
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	1	2	9	0	0	0	0	0	0	0	0	12
Pedestrians	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	1	1	0	0	0	0	0	0	0	0	2
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**1**	**0**	**24**	**25**	**35**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**87**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	12	0	0	0	0	0	0	0	0	0	2	14
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	44	0	0	0	0	0	0	0	0	0	1	45
Dusk	2	0	0	0	0	0	0	0	0	0	0	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	1	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	8	0	0	0	0	0	0	0	0	0	3	11
Dusk	1	0	0	0	0	0	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	3	3
Dusk	0	0	0	0	0	0	0	0	0	0	3	3
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	2	0	0	0	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	3	0	0	0	3
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**68**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**87**

Att. G

ATTACHMENT 4

EROSION AND SEDIMENTATION CONTROL

EROSION AND SEDIMENTATION CONTROL
BASIC STANDARDS

1.1 Overview

This Exhibit demonstrates the developer has made adequate provision for controlling erosion and sedimentation.

1.2 Introduction

Gorrill Palmer has been retained by Bangor Savings Bank to prepare an Erosion and Sedimentation Control Report for a proposed bank/office building at 20 Marginal Way in Portland, Maine. The redevelopment of the site is anticipated to include a 2,100 sf footprint three story building and 24 space parking lot. Figure 1 is a map showing the project location. Gorrill Palmer has prepared an Erosion and Sedimentation Control Plan for the proposed development. This narrative contains the general erosion and sedimentation control measures, which are appropriate for the construction of the project.

1.3 Narrative

1.3.1 Existing Conditions and Soil Types

The site is approximately 17,862 sf in size and is currently developed with a car wash. Abutting land uses include:

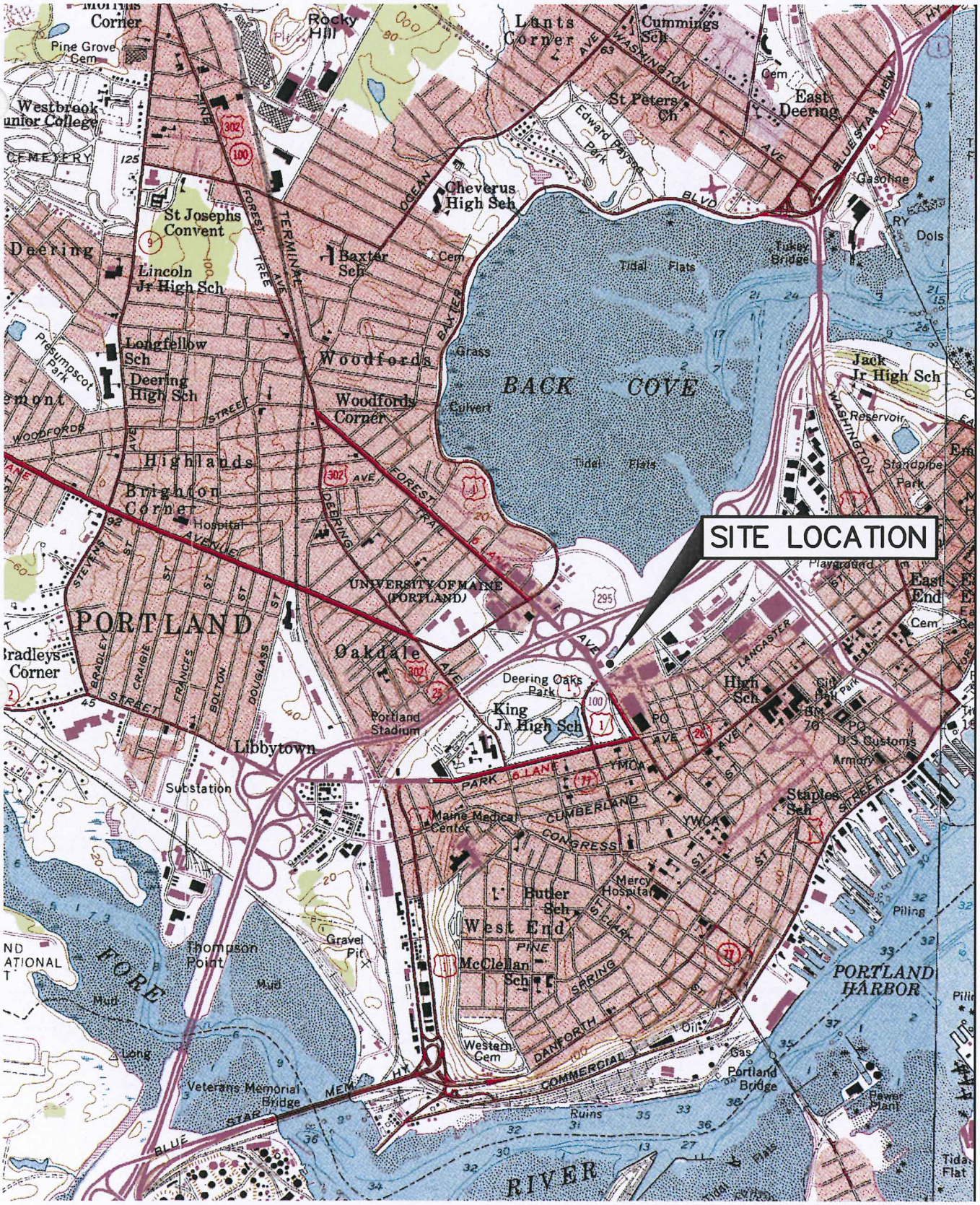
- North – I-295
- East - Commercial
- South - Commercial
- West — CMP station/Forest Ave

The front of the existing site slopes towards Marginal Way with a slope of approximately 1%. The rear of the site slopes toward the I-295 Right-of-Way with a slope of approximately 1.5 %.

The Medium Intensity Soil Survey for Cumberland County as prepared by the Natural Resources Conservation Service was utilized in identifying the on-site soils. The soil report for this vicinity follows this page. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. The higher values are indicative of the more erodible soils. The following table lists the soils found on site and their K values:

K VALUE		
Type	Subsurface	Substratum
Cut and Fill	-	-

The existing soils do not have listed K values and will be considered susceptible to erosion.



U.S.G.S. Location Map

Bangor Savings Bank - Portland, Maine

U.S.G.S. Portland-East, Maine-7.5 Minute Series (Topographic)

Design: JWA	Date: may 2015	GORRILL PALMER	Figure 1
Draft: CG	Job No.: 2970		
Checked: AMP	Scale: None		
File Name: 2970-LOCATION.dwg			

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207.657.6910

Custom Soil Resource Report
Soil Map

Map Scale: 1:700 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 9, Sep 13, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2013—Aug 11, 2013

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cumberland County and Part of Oxford County, Maine (ME005)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	1.1	100.0%
Totals for Area of Interest		**1.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

1.3.2 Existing Erosion Problems

Gorrill Palmer is not aware of any existing erosion problems onsite.

1.3.3 Critical Areas

The construction will take place within the existing development footprint, and is not anticipated to impact any critical areas.

1.3.4 Protected Natural Resources

The site has been previously developed and does not contain wetlands. Based upon the FEMA maps, the site is not located within a Zone A 100-year floodplain.

1.3.5 Erosion Control Measures and Site Stabilization

The primary emphasis of the erosion/sedimentation control plan, which will be implemented for this project, is as follows:

- Development of a careful construction sequence.
- Rapid revegetation of denuded areas to minimize the period of soil exposure.
- Rapid stabilization of drainage paths to avoid rill and gully erosion.
- The use of on-site measures to capture sediment (hay bales/ stone check dams/silt fence, etc.)

The following temporary and permanent erosion and sediment control devices will be implemented as part of the site development. These devices shall be installed as indicated on the plans or as described within this report. For further reference, see the latest edition of the Maine Erosion and Sediment Control BMPS.

A. Dewatering

Water from construction trench dewatering shall pass first through a filter bag or secondary containment structure (e.g. hay bale 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 50 feet of a protected natural resource.

B. 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 damages and/or unestablished spots. Established vegetative cover means a minimum of 90% of areas vegetated with vigorous growth.

C. Temporary Erosion Control Measures

The following measures are planned as temporary erosion/sedimentation control measures during construction:

1. Crushed stone-stabilized construction entrance shall be placed at the entrance along Marginal Way.

2. Siltation fence or wood waste compost berms shall be installed downstream of any disturbed areas to trap runoff- borne sediments until grass areas are revegetated. The silt fence and/or wood waste compost berms shall be installed per the details provided in this package and inspected at least once a week and before and immediately after a storm event of 0.5 inches or greater, and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence or berm line. 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. Wood waste compost berms are not to be used adjacent to wetland areas that are not to be disturbed.

3. Straw or hay mulch including hydroseeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and October 15th on slopes of less then 15 percent shall be anchored by applying water; mulch placed on slopes of equal to or steeper than 15 percent shall be covered by a fabric netting and anchored with staples in accordance with manufacturer's recommendation. Fabric netting and staples shall be used on disturbed areas within 50' of lakes, streams, and wetlands regardless of the upstream slope. Mulch placed between October 15th and April 15th on slopes equal to or steeper than 8 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Slopes steeper than 3:1 and equal to or flatter than 2:1, which are to be revegetated, shall receive curlex blankets by American Excelsior or equal. Slopes steeper than 2:1 shall receive riprap as noted on the plans. The mulch application rate for both temporary and permanent seeding is 75 lbs per 1000 sf as identified in Attachment A of this section. Mulch shall not be placed over snow.

4. Temporary stockpiles of stumps, grubbings, or common excavation will be protected as follows:

a) Temporary stockpiles shall not be located within 50 feet of any wetlands which will not be disturbed and shall be located away from drainage swales.

b) Stockpiles shall be stabilized within 7 days by either temporarily seeding the stockpile by a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch, such as hay, straw, or erosion control mix.

c) Stockpiles shall be surrounded by sedimentation barrier at the time of formation.

5. All denuded areas that are within 50 feet of an undisturbed wetland, which have been rough graded and are not located within a building pad, parking area, or access drive subbase area, shall receive mulch or erosion control mesh fabric within 48 hours of initial disturbance of soil. All areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window. In other areas, the time period may be extended to 7 days.

6. For work, which is conducted between October 15th and April 15th of any calendar year, all denuded areas, shall be covered with hay mulch or erosion control mix, applied at twice the normal application rate and anchored with a fabric netting. The time period for applying mulch shall be limited to 2 days for all areas.

7. Marginal way shall be swept to control mud and dust as necessary.

8. During grubbing operations stone check dams shall be installed at any evident concentrated flow discharge points and as directed on the Erosion Control Plans.

9. Silt fencing with a minimum stake spacing of 6 feet shall be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence shall be anchored.

10. Wood waste compost/bark berms may be used in lieu of siltation fencing. Berms shall be removed and spread in a layer not to exceed 3" thick once upstream areas are completed and a 90% catch of vegetation is attained.

11. Water and/or calcium chloride shall be furnished and applied in accordance with MDOT specifications – Section 637 – Dust Control.

12. Loam and seed is intended to serve, as the primary permanent revegetative measure for all denuded areas not provided with other erosion control measures, such as riprap. Application rates are provided in Attachment A of this section. Seeding shall not occur over snow.

D. Permanent Erosion Control Measures

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.) will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas as noted in **Temporary Erosion Control Measures** paragraph 3 of this report. All areas within 50 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window. Native topsoil shall be stockpiled and reused for final restoration when it is of sufficient quality.

1.4 Implementation Schedule

The following construction sequence shall be required to insure the effectiveness of the erosion and sedimentation control measures are optimized:

It is anticipated that construction of the project will commence in the Summer of 2015 and be completed by Spring of 2016.

Note: For all grading activities, the contractor shall exercise extreme caution not to overexpose the site, this shall be accomplished by limiting the disturbed area.

1. Install stabilized construction entrance at the intersection of the access drive and Marginal Way.
2. Install perimeter silt fence and/or wood waste berms prior to commencement of demolition.
3. Perform demolition of existing site elements.
4. Foundation preparation area shall be excavated for installation of the building foundation. Building work will be on going through the remainder of the project.
5. Commence installation of drainage appurtenances.
6. Commence earthwork and grading to subgrade.
7. Commence installation of water and sewer lines.
8. Continue earthwork and grading to subgrade as necessary for construction.
9. Complete installation of underground utilities to within 5' of the buildings.
10. Install light pole foundations and light poles.
11. Complete remaining earthwork operations.
12. Install sub-base and base gravel within parking fields, walkways, and all driveways.
13. Install curbing in parking fields, driveways, and along the streets as needed.

14. Install base course paving for access drive and parking area as well as concrete surfaces.

15. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.

16. Install surface course paving for access drive and parking areas. Stripe per plan.

17. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.

18. Touch up loam and seed.

Note: All denuded areas not subject to final paving, riprap, or gravel shall be revegetated.

Prior to construction of the project, the contractor shall submit to the owner a schedule for the completion of the work, which will satisfy the following criteria:

1. The above construction sequence should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to reduce the extent of the exposed areas as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt fence and construction entrances in place before large areas of land are denuded.

2. The work shall be conducted in sections which shall:

   a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days.

   b) Revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event; or temporarily stabilized within 48 hours of initial disturbance of soil for areas within 50 feet of an undisturbed wetland and 7 days for all other areas. Areas within 50 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window.

   c) Incorporate planned inlets and drainage system as early as possible into the construction phase. The ditches shall be immediately lined or revegetated as soon as their installation is complete.

1.5 Erosion, Sedimentation and Stabilization Control Plan

The Erosion Control information is included in the plan set.

1.6 Details and Specifications

The Erosion Control details and specifications are included in the plan set.

1.7 Winter Stabilization Plan

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 riprap 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, riprap or gravel base on a road.

Winter excavation and earthwork shall be completed such that any area left exposed can be controlled by the contractor. 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 areas shall be considered to be denuded until the subbase gravel is installed in roadway/parking 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 shall 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 shall 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 per acre) or with a four-inch layer of woodwaste erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpile shall not be placed (even covered with hay or straw) within 50 feet from any natural resources.

2. Natural Resource Protection

Any areas within 50 feet from any natural resources, if not stabilized with a minimum of 75% mature vegetation catch, shall be mulched by December 1 and anchored with plastic netting or protected with erosion control mats. During winter construction, a double line of sediment barriers (i.e. silt fence backed with hay bales or erosion control mix) shall be placed between any natural resource and the disturbed area. Projects crossing the natural resource shall be protected a minimum distance of 50 feet on either side from the resource. Existing projects not stabilized by December 1 shall be protected with the second line of sediment barrier to ensure functionality during the spring thaw and rains.

3. Sediment Barriers

During frozen conditions, sediment barriers shall consist of woodwaste filter berms as frozen soil prevents the proper installation of hay bales and sediment silt fences.

4. Mulching

An area shall be considered 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 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. 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 with straw or hay at a rate of 150 lb. per

1,000 square feet (3 tons/acre) and adequately anchored that ground surface is not visible though the mulch.

Between the dates of November 1 and April 15, all mulch shall be anchored by peg line, mulch netting, asphalt emulsion chemical, or wood cellulose fiber. When ground surface is not visible through the mulch then cover is sufficient. After November 1st, mulch and anchoring of all bare soil shall occur at the end of each final grading workday.

5. 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 than 3% for slopes exposed to direct winds and for all other slopes greater that 8%. Erosion control blankets shall be used in lieu of mulch in all drainage ways with slopes greater than 8%. Erosion control mix can be used to substitute erosion control blankets on all slopes except ditches.

6. Seeding

Between the dates of October 15 and April 1st, 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. If the date is after November 1st and if the exposed area has been loamed, 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 selected to 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 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.

Standards for Timely Stabilization of Construction Sites During Winter

1. Standard for the timely stabilization of ditches and channels -- The applicant shall construct and stabilize all stone-lined ditches and channels on the site by November 15. The applicant shall construct and stabilize all grass-lined ditches and channels on the site by September 1.

2. Standard for the timely stabilization of disturbed slopes -- The applicant shall construct and stabilize stone-covered slopes by November 15. The applicant shall seed and mulch all slopes to be vegetated by September 1. The department shall consider any area having a grade greater than 15% to be a slope.

3. Standard for the timely stabilization of disturbed soils -- By September 15 the applicant shall seed and mulch all disturbed soils on areas having a slope less than 15%. If the applicant fails to stabilize these soils by this date, then the applicant shall take one of the following actions to stabilize the soil for late fall and winter.

1.8 Maintenance of facilities

The stormwater facilities will be maintained by the Applicant, Bangor Savings Bank or their assigned heirs. The contract documents will require the contractor to designate a person responsible for maintenance of the sedimentation control features during construction as required by the Erosion Control Report. Long-term operation/maintenance recommended for the stormwater facilities is presented below.

The responsible party may contract with such professionals, as may be necessary in order to comply with this provision and may rely on the advice of such professionals in carrying out its duty hereunder, provided, that the following operation and maintenance procedures are hereby established as a minimum for compliance with this section. A maintenance log of the inspections shall be kept by the responsible party.

Inspection and Maintenance Frequency and Corrective Measures:
The following areas, facilities, and measures will be inspected and the identified deficiencies will be corrected. Clean-out must include the removal and legal disposal of any accumulated sediments and debris.

Vegetated Areas:
Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. The facilities will be inspected after major storms and any identified deficiencies will be corrected.

Roadways and Parking Surfaces: Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Repair potholes and other roadway obstructions and hazards. Plowing and sanding of paved areas shall be performed as necessary to maintain vehicular traffic safety.

Housekeeping

The following procedures are hereby established as a minimum for compliance with this section. For further information on the procedures listed below, refer to MDEP Chapter 500 rules – Appendix C.

Spill Prevention:
Appropriate spill prevention, containment, and response planning/implementation shall be used to prevent pollutants from being discharged from materials on site.

Groundwater Protection:
During construction, hazardous materials with the potential to contaminate groundwater shall not be stored or handled in areas of the site which drain to an infiltration area.

Fugitive Sediment and Dust:
Appropriate measures shall be taken to ensure that activities do not result in noticeable erosion of the soils and water and/or calcium chloride shall be used to ensure that activities do not result in fugitive dust emissions during or after construction.

Debris and Other Materials:
Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

Trench or Foundation De-watering:
Water collected through the process of trenching and/or de-watering must be removed from the ponded area, and must be spread through natural wooded buffers or other areas that are specifically designed to collect the maximum amount of sediment possible.

Non-stormwater Discharges:
Identify and prevent contamination by non-stormwater discharges.

Conclusion

The Applicant has provided temporary and permanent erosion control measures as well as specifying a sequence of construction as measures to minimize erosion and sedimentation.

Attachments

Attachment A - Seeding Plan

Attachment B - Inspection Report

ATTACHMENT A
Seeding Plan

SEEDING PLAN

Project: Bangor Savings Bank

Site Location: Portland, ME

☐ Permanent Seeding ☒ Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: _____# / acres, OR 138 # /M Sq. Ft.
3. Fertilize with _____ pounds of _____ N-P-K/ac. OR 13.8 pounds of 10-10-10 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:

   50% Winter Rye

   50% Annual Rye

6. Mulching instructions: Apply at the rate of _____per acre, OR 75 pounds per M. Sq. Ft.

	Amount	Unit # Tons. Etc.
7. TOTAL LIME	138	#/1000 sq. ft.
8. TOTAL FERTILIZER	13.8	#/1000 sq. ft.
9. TOTAL SEED	1.03	#/1000 sq. ft.
10. TOTAL MULCH	75	#/1000 sq. ft.
11. TOTAL other materials, seeds, etc.		
12. REMARKS		

Spring seeding is recommended; however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

SEEDING PLAN

Project: Bangor Savings Bank

Site Location: Portland, ME

☒ Permanent Seeding ☐ Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: _____# / acres, OR 138 # /M Sq. Ft.
3. Fertilize with _____ pounds of _____ N-P-K/ac. OR 18.4 pounds of 10-20-20 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:

   40% Creeping Red Fescue

   30% Charger II Perennial Ryegrass

   20% KenBlue Kentucky Bluegrass

   10% Tiffany Chewings Fescue
6. Mulching instructions: Apply at the rate of _____per acre, OR 75 pounds per M. Sq. Ft.

	Amount	Unit # Tons. Etc.
7. TOTAL LIME	138	#/1000 sq. ft.
8. TOTAL FERTILIZER	18.4	#/1000 sq. ft.
9. TOTAL SEED	1.03	#/1000 sq. ft.
10. TOTAL MULCH	75	#/1000 sq. ft.
11. TOTAL other materials, seeds, etc.		
12. REMARKS		

Spring seeding is recommended, however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

ATTACHMENT B
Inspection Report

STORMWATER POLLUTION PREVENTION PLAN

INSPECTION REPORT

PROJECT INFORMATION

Project Name: Bangor Savings Bank

Address: 20 Marginal Way
Portland, Maine

CONTRACTOR/SUBCONTRACTOR INFORMATION

Inspector Name: _____

Firm: _____

Title: _____

Qualifications: _____

INSPECTION SUMMARY

Date of Inspection: _____

Major Observations: _____

_____

_____

_____

THE FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN WITH THE FOLLOWING EXCEPTIONS:

_____

_____

_____

_____

_____

Master Signage Plan

Bangor Savings Bank and Office Building

20 Marginal Way, Portland, Maine

In accordance with Portland Downtown Urban Design Guidelines for the B-7 Mixed Use Urban District, attached is the Master Signage Plan for the proposed Bangor Savings Bank and Office Building for 20 Marginal Way, Portland, Maine. The Mater Signage Plan adheres to the Guidelines as follows:

B. Design:

- The design of signage is respectful of the building and has been carefully designed to fit the given facades complementing the building's architectural features.

- The design of signage is oriented and scaled to reflect the scale and character of movement of people around the building, with an emphasis primarily on the pedestrian and slow-moving traffic. To emphasize the two pedestrian entrances into the building an architectural overhang will be installed over both entrances. Back halo-illuminated signs will be installed on each overhang to inform pedestrians along Marginal Way and from the rear parking lot to the appropriate entrance.

- The size of the proposed signs is compatible with the scale of the overall building.

- The size relates comfortably in size and scale to the pedestrians moving about in the vicinity.

- The signage is simple and limited to the primary tenant of the property.

- The lettering typefaces and words are simple, easy to read, and scaled appropriately for both the signs and the building.

- The colors on the signage have been selected to complement the character and color pattern of the building.

- The illumination of the signs is very compatible and consistent with the character of illumination already existing on the surrounding buildings and on existing appropriate signs in the vicinity. The proposed upper wall signs are internally illuminated block letters which is the style of signs for the vast majority of wall signs along Marginal Way, including but not limited to Gorham Savings Bank, Drummond Woodson, Planet Fitness, Walgreens, WinxNet, Trader Joes, Eastern Mountain Sports and West Marine. The signs over the pedestrian entrances are back halo-illuminated signs which is a character of illumination appropriate for pedestrian areas.

C. Placement

- The placement of the signage on all building elevations has been carefully considered, taking into account the scale, character and design of the building.

- The placement of the signage does not visually obscure any architecturally significant features of the building.

D. Number of Signs

- Building signs are limited to one per building street frontage for each tenant. Bangor Savings will occupy the retail bank branch on the 1st floor of the building and the 2nd and 3rd floors with banking service offices. In keeping with the above guideline, maintaining a simple signage message, Bangor Savings has decided not to uniquely sign the service office uses. Bangor Savings is proposing wall signs on each of three street frontages (Marginal Way, Forest Avenue and I-295).

- The signs have a common pattern and character.

- Standard E-16 limits the number of upper level signs to two and one sign per storefront at the Pedestrian level. Since the proposed building occupies the entire Marginal Way frontage except for the entrance drive and the building is located on the front property line there is no room for a pylon sign. Bangor Savings is requesting a third upper level sign to be located on the Marginal Way elevation in place of a pylon sign. To properly inform pedestrians of the two pedestrian entrances, Bangor Savings is requesting a second pedestrian level sign to be located above the Marginal Way entrance door.

- The total sign area proposed in the Master Signage Plan is approximately 50% of the sign area allowed for the proposed building.

Att. I

From: David Latulippe <ddlatulip@aol.com>
To: <JF@portlandmaine.gov>
CC: <dcm.danmiller@gmail.com>, <jason.donovan@bangor.com>
Date: 7/8/2015 10:57 AM
Subject: Fwd: Bangor Savings Bank - Marginal Way
Attachments: image003.jpg; Sidewalk Rendering 6-28-15.JPG

Jean,

We have investigated the transparency of the proposed glazing for the Bangor Savings project. In accordance with the B-7 Design Principles, Bangor Savings has aggressively incorporated "green" design and sustainable technology into the architectural design. The proposed glazing is very comparable to the Intermed building which has the Apothecary by Design on the first floor which is very visible and provides an active streetscape feel. The front of the Bangor Savings building faces south which is ideal for the solar panels being installed on the roof but subjects the façade to solar heat gain. In order to meet the transparency standard, the AC system would have to be substantially increased resulting in significantly higher energy consumption. This is an example of where the standards conflicts.

The proposed storefront exceeds the design standards in quantity of glass and is located directly in front to the proposed new 8 foot wide brick sidewalk. The attached rendering portrays how pedestrian oriented the façade of the building will be. Bangor Savings' strong preference is to install the high performance glass and maintain the current energy efficient design. We request a waiver to the transparency standard, similar to the one granted to the Intermed building.

Should you have any questions or need any additional information, please do not hesitate to contact me.

Sincerely,

David Latulippe

-----Original Message-----
From: Johnson, Troy <tjohnson@sigcoinc.com>
To: 'David Latulippe' <ddlatulip@aol.com>; dcm.danmiller <dcm.danmiller@gmail.com>
Sent: Wed, Jul 8, 2015 9:59 am
Subject: Bangor Savings Bank - Marginal Way

Hi David,

Confirming our telephone conversation:

The Intermed building is glazed with product similar to the proposed BSB product, but the BSB product is much higher performing.

The vision glass on Intermed has a VLT of 61%, with a SHGC of 0.45.

The proposed vision glass for BSB has a VLT of 56%, with a SHGC or 0.32.

Simply put, the proposed glass for BSB allows approximately 30% less solar heat gain, while reducing the visible light transmitted by only 5%.

Please let me know if you would like to discuss this further or if you require additional product literature or

samples.

Thank you,

Troy

Troy Johnson, CSI, CCPR

Vice President Sales

48 Spiller Drive

Westbrook, ME 04092

Tel 207-775-2691

www.sigcoinc.com

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

July 9, 2015

Ms. Jean Fraser, Planner
City of Portland Planning Division
389 Congress Street
Portland, Maine 04101

Subject: **Bangor Savings Bank**
Applicant: Bangor Savings Bank
Letter of Correspondence #2

Dear Jean,

It is our understanding from your conversations with David Latulippe that you are requesting the applicant present a parking requirement analysis for this project.

It is our understanding that the request is based upon the requirements of Section 14-332.1 which provides specific provisions for off street parking for specific zones. Section 14-332.1.i states "*B-7, Mixed Development District Zone: Off-street parking for all projects regardless of size, shall be governed by 14-332.2(c) of this article.*" Further Section 14-332.2.c, states "*…the planning board shall establish the parking requirement for such structures. The parking requirement shall be determined based upon a parking analysis submitted by the applicant and upon the recommendation of the city transportation engineer.*"

We propose to evaluate three different methods for determining parking demand to serve as the parking analysis. The three methods are presented below:

City of Portland Requirements in Other Zones

In other zones within the City of Portland a bank has been considered an office use with the service area considered retail. Based upon these uses the parking requirement would be the following:

Use	Parking Required/ s.f.	Building (s.f.)	Required Spaces
Retail	1 sp/ 200 s.f.	1,090	6
Office	1 sp/ 400 s.f.	6,616	17
	Total	**7,708**	**23**

Based upon the table above, 23 parking spaces would be required for this project within other zones of the City.

Institute of Transportation Engineers – Parking Generation – Use Evaluation

The Institute of Transportation Engineers publication Parking Generation, 4th Edition, presents information regarding parking demand studies that have been conducted across the country for various land use types in both urban and suburban settings. Parking Generation estimates demand based on both the "average peak condition", as well as the 85th percentile. Based on the 4th Edition, an evaluation of the parking demand by use is presented below:

Use	Average Peak Parking Demand (Spaces / 1,000 GFA)	Building (s.f.)	Required Spaces
Bank	4.00 spaces per 1,000 sf	1,090	5
Office	2.84 spaces per 1,000 sf	6,616	19
	Total	**7,708**	**23**

Use	85th Percentile Parking Demand (Spaces / 1,000 GFA)	Building (s.f.)	Required Spaces
Bank	5.67 spaces per 1,000 sf	1,090	7
Office	3.45 spaces per 1,000 sf	6,616	23
	Total	**7,708**	**30**

It is noted that the average size of the study sites for the office use was 136,000 sf which is considerably larger than proposed for this project.

Institute of Transportation Engineers – Parking Generation – Occupancy Evaluation

The 4th Edition also provides information regarding parking demand for office uses based on employee count. While the proposed development consists of both an office use as well as a bank branch, parking demand based on total occupancy provides a reasonable approximation of the overall parking demand for the purpose of this evaluation as the office use is approximately 85% of the overall area. Based on the building code, the maximum occupancy of the structure would be 81. This is an empirical evaluation as it relates to the building code, and is not representative of a normal level of occupancy. Based on discussions with the Bank, as well as the Architect, the average occupancy for the structure (employees plus customers) would be on the order of 30 individuals. Based on the 4th Edition, an evaluation of the parking demand based on occupancy is presented below:

Use	Average Peak Parking Demand (Space/Employee)	Average Occupancy	Required Spaces
Office	0.83 spaces per 1,000 sf	30	**25**

Use	85th Percentile Parking Demand (Space/Employee)	Average Occupancy	Required Spaces
Office	0.98 spaces per 1,000 sf	30	**30**

Using these various methodologies, the average peak demand would be 26 spaces. Given the urban setting for this facility, and the availability of alternative modes of transportation, Bangor Savings Bank believes that 24 spaces will provide them an adequate number of spaces to operate this facility. It is noted that the proposal of 24 spaces satisfies the City of Portland Ordinance if this facility were located

in a different zone. Bangor Savings Bank recognizes that during periods of peak occupancy, other measures such as a greater emphasis on utilizing public transportation and off-site public parking may be necessary to satisfy the full peak parking need.

Please let us know if you require any additional information, or have any questions.

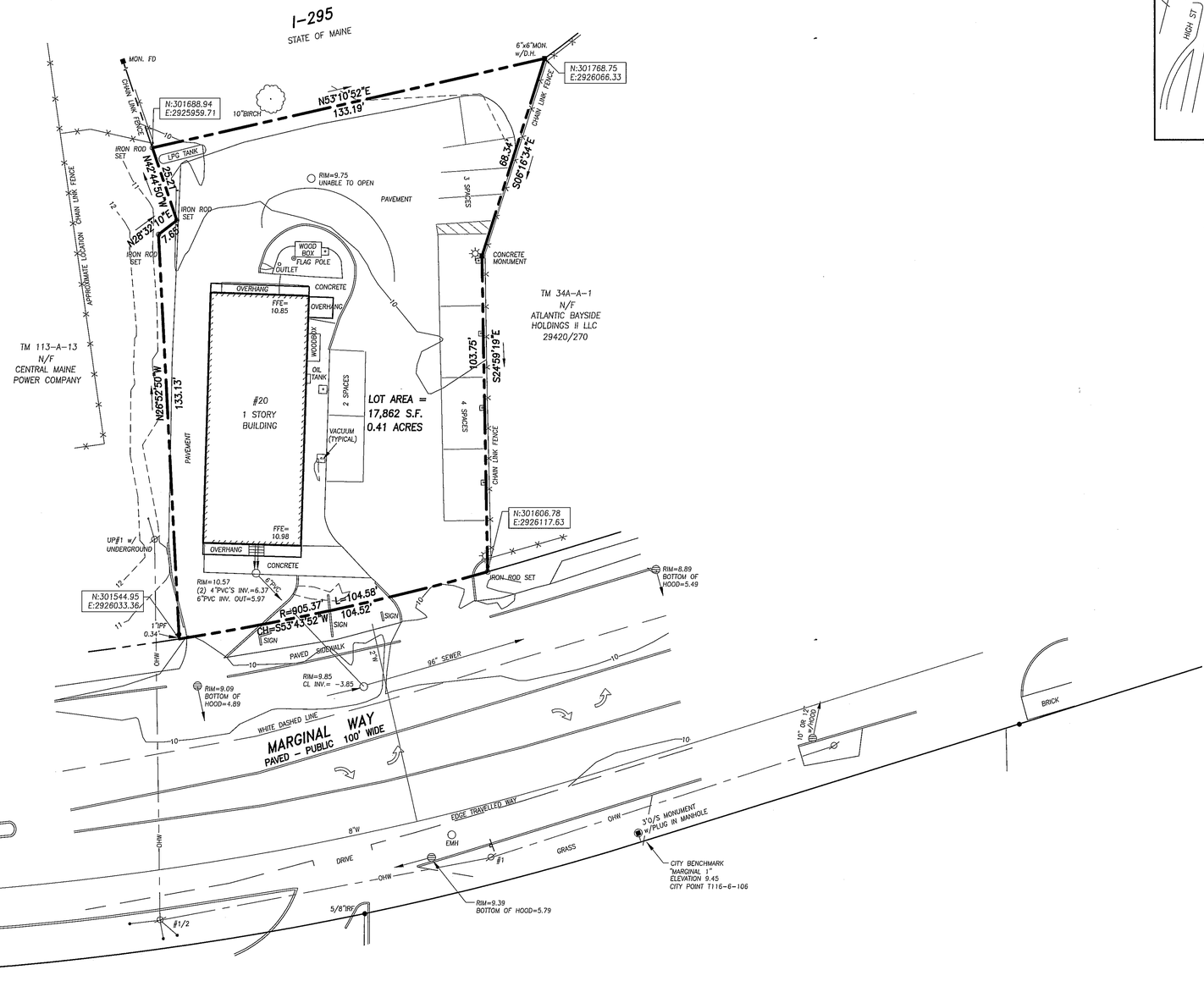
Sincerely,

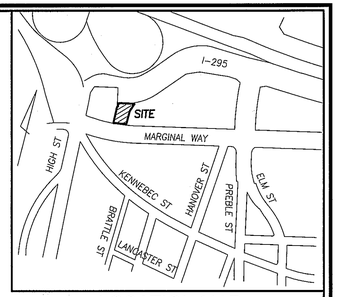
Gorrill Palmer

Alton Palmer, PE
Principal

cc: David Latulippe, Jason Donovan

AMP/der/U:\2970 - Marginal Way Portland\P Applications\Local\Site Plan application\ Fraser 7-9-15.doc





LOCATION MAP

N.T.S.

LEGEND

●	IRON PIPE OR ROD FOUND
■	MONUMENT FOUND
○	CAPPED IRON ROD SET
⌀	UTILITY POLE
○	MANHOLE
⊜	CATCH BASIN
☼	LIGHT POLE
	DECIDUOUS TREE
-x-x-	FENCE
═══	CURB
—OHW—	OVERHEAD WIRES
— W —	WATER LINE
10	1' CONTOUR
N/F	NOW OR FORMERLY
000/000	DEED BOOK AND PAGE
FFE	FINISHED FLOOR ELEVATION

UTILITY NOTE

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

GRAPHIC SCALE

0 10' 20' 40' 80'

PLAN REFERENCES

1. "PLAN OF PROPERTY AND TOPOGRAPHY IN PORTLAND, MAINE MADE FOR UNITED STATES POSTAL SERVICE" DATED APRIL 24, 1974 BY H.L. & E.C. JORDAN-SURVEYORS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 101 PAGE 32.

2. "PLAN OF LOT, FOREST AVE. SUBSTATION" BY CENTRAL MAINE POWER COMPANY DATED AUGUST 2, 1973.

3. "MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP, STATE HIGHWAY "295" PORTLAND CUMBERLAND COUNTY FEDERAL AID PROJECT NO. I-295-3(28)-3(30)" S.H.C. FILE NO. 3-185 RECORDED IN C.C.R.D. PLAN BOOK 112 PAGE 62.

4. CITY OF PORTLAND BLUE SHEET FOR MARGINAL WAY.

5. "BOUNDARY SURVEY OF 20 MARGINAL WAY, PORTLAND, MAINE MADE FOR WILLIAM DESENA" OCT. 29, 2012 BY OWEN HASKELL, INC.

GENERAL NOTES

1. OWNER OF RECORD: NORTHERN PRIDE AUTO WASH, P.O. BOX 2147, SOUTH PORTLAND, MAINE 04116 C.C.R.D. BOOK 9621 PAGE 212.

2. PROPERTY IS SHOWN AS LOT 25 ON CITY OF PORTLAND'S ASSESSORS MAP 113 BLOCK A.

3. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATES MAINE WEST NAD83. CITY POINTS T116-6-106 AND T116-5-104 USED FOR CONTROL.

4. ELEVATIONS BASED ON CITY DATUM. CITY BENCHMARK: "MARGINAL 1" 3 FT. OFFSET MONUMENT IN FRONT OF CENTURY TIRE ELEVATION = 9.45'

5. PROPERTY IS LOCATED IN THE CITY OF PORTLAND B7 ZONE.

CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.

3/24/15
DATE

JOHN W. SWAN, PLS NO. 1038

STATE OF MAINE · JOHN W. SWAN · NO. 1038 · PROFESSIONAL · LAND SURVEYOR

BOUNDARY & TOPOGRAPHIC SURVEY
AT
20 MARGINAL WAY, PORTLAND, MAINE
MADE FOR
GORRILL-PALMER CONSULTING ENGINEERS, INC.
15 SHAKER ROAD, GRAY, MAINE

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	MARCH 24, 2015	2015-032P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 20'	1

Plan 2

BANGOR SAVINGS BANK

MARGINAL WAY
PORTLAND, MAINE

PROJECT PARCEL SITE
PORTLAND ASSESSOR'S
MAP & LOT NUMBERS

MAP	LOT
113-A	25

Applicant:

BANGOR SAVINGS BANK
99 FRANKLIN STREET, BANGOR ME 04401
CLIENT PHONE #: (207) 541-2715

LOCATION MAP
N.T.S.

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	BUILDING	
	RIGHT OF WAY	
	PROPERTY LINE	
	BUILDING SETBACK	
	ZONE LINE	
	WETLAND BOUNDARY	
	GUIDE RAIL	
	EDGE OF PAVEMENT	
	EDGE OF GRAVEL DRIVE	
100	GRADING CONTOUR LINE	100
X 226.4	SPOT ELEVATION	100.31
	TREELINE	
	TREES & HEDGES	
	POLE WITH LIGHT FIXTURE(S)	
	UTILITY POLE	
	FREESTANDING SIGN	
	PAINTED DIRECTIONAL TRAFFIC ARROW	
OE	OVERHEAD ELECTRIC/TELEPHONE	OHE/T
UE	UNDERGROUND ELECTRIC/TELEPHONE	UGE/T
W	WATER LINE	8"W
D	STORM DRAIN LINE	8"SD
	CULVERT	8"CULVERT
	HYDRANT	
WV	WATER GATE VALVE	
	WATER SHUT OFF VALVE	
	MANHOLE	
	CATCH BASIN	
	TEST PIT	
	IRON ROD (SET)	
	IRON ROD (FOUND)	
	MONUMENT	
	RIPRAP	
	SILT FENCE - PERIMETER	
	STONE SEDIMENT BARRIER	
X	FENCE	
N	WELL	

GENERAL NOTES

1. TOPOGRAPHIC DATA AND EXISTING CONDITIONS WAS PREPARED BY OWEN HASKELL OF FALMOUTH, MAINE ON MARCH 24, 2015

2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

3. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTIONS OF THE OWNER, THE CITY OF PORTLAND OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.

4. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

5. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, AND/OR CITY OF PORTLAND SPECIFICATIONS.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF A SITE PLAN APPROVAL FROM THE CITY OF PORTLAND. THE CONSTRUCTION WILL BE GOVERNED BY THE CITY OF PORTLAND ZONING ORDINANCE WHICH IS AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.

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.

LAYOUT NOTES

1. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB.

2. OFFSETS TO CATCH BASINS AND MANHOLES ARE TO THE CENTER OF THE FRAME.

3. PIPE LENGTH EQUALS THE CENTER TO CENTER DISTANCES BETWEEN CATCH BASINS AND/OR MANHOLES MINUS ONE-HALF OF THE DIAMETER OF EACH CATCH BASIN OR MANHOLE.

4. PROPERTY LINE AND R.O.W. MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE, BY A MAINE LICENSED LAND SURVEYOR.

5. PROPOSED RIGHT OF WAY MONUMENTS AND PROPERTY LINE PINS SHALL BE INSTALLED UNDER THE DIRECTION OF A MAINE LICENSED LAND SURVEYOR.

6. CURB RADII UNLESS OTHERWISE NOTED ON THE PLAN SHALL BE A MINIMUM OF 3'.

UTILITY NOTES

1. ALL WATER UTILITY MATERIALS AND INSTALLATION METHODS SHALL CONFORM TO PORTLAND WATER DISTRICT STANDARDS. ALL WATER DISTRIBUTION PIPING SHALL BE CLASS 52 DUCTILE IRON PIPE, DOUBLE CEMENT LINED AND BITUMINOUS COATED CONFORMING TO AWWA/ANSI C104/A21.4. DISINFECTION OF WATER LINES SHALL CONFORM TO AWWA STANDARD C651, LATEST REVISION.

2. THE LOCATION OF THE PROPOSED UNDERGROUND ELECTRICAL SERVICE IS APPROXIMATE AND THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION WITH CENTRAL MAINE POWER COMPANY.

3. THRUST BLOCKS OR LOCKING RETAINER GLANDS SHALL BE PLACED ON THE WATER DISTRIBUTION LINES AT ALL BENDS, TEES, VALVES, CHANGES IN DIRECTION, ETC. THE THRUST BLOCKS OR LOCKING RETAINER GLANDS SHALL MEET THE REQUIREMENTS OF THE PORTLAND WATER DISTRICT STANDARDS.

4. TEST PITS AT ALL UTILITY CROSSINGS SHALL BE COMPLETED TWO WEEKS IN ADVANCE OF THE START OF CONSTRUCTION OR ORDERING OF MATERIALS. TEST PIT INFORMATION SHALL BE PROMPTLY PROVIDED TO ENGINEER FOR REVIEW.

GRADING AND DRAINAGE NOTES

1. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS SECTION 603-- PIPE CULVERTS AND STORM DRAINS, LATEST REVISION WITH THE EXCEPTION THAT THE ONLY ACCEPTABLE TYPES OF PIPE ARE AS FOLLOWS:

REINFORCED CONCRETE PIPE, CLASS III
POLYVINYL-CHLORIDE (PVC) PIPE
SMOOTH BORE POLYETHYLENE - ADS OR HANCOR

2. TOPSOIL STRIPPED IN AREAS OF CONSTRUCTION THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED ON SITE AT A LOCATION TO BE DESIGNATED BY THE OWNER. UNSUITABLE SOIL SHALL BE SEPARATED, REMOVED AND DISPOSED OF AT AN APPROVED DISPOSAL LOCATION OFF SITE.

3. 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.

EROSION CONTROL NOTES

1. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.

2. PRIOR TO BEGINNING ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE CONSTRUCTION ENTRANCE.

3. ALL GROUND AREAS DISTURBED FOR CONSTRUCTION WILL BE GRADED, LOAMED AND SEEDED AS SOON AS POSSIBLE. PERMANENT SEED MIXTURE SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL NOTES INCLUDED ON SHEET C405.

4. PRIOR TO PAVING, THE CONTRACTOR SHALL FLUSH SEDIMENT FROM ALL STORM DRAIN LINES, REMOVE ACCUMULATED SEDIMENT FROM SUMPS AND INVERTS AND PROPERLY DISPOSE OF.

5. ALL CATCH BASINS WITH OUTLET PIPES 18" DIAMETER OR LESS SHALL BE PROVIDED WITH A "SNOUT" SEDIMENTATION HOOD PER DETAIL.

6. SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES.

7. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCE AS IT BECOMES SATURATED WITH MUD TO ENSURE THAT IT WORKS AS PLANNED DURING CONSTRUCTION.

8. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO IT FOR LATER USE IN LANDSCAPING OPERATIONS.

9. EROSION CONTROL NOTES ACCOMPANY THIS PLAN SET AND ARE CONTAINED ON DRAWING C405 OF THIS PLAN SET.

10. THE MAINTENANCE SCHEDULE FOR THE CATCH BASIN SEDIMENT SUMPS IS CONTAINED IN THE EROSION CONTROL NOTES INCLUDED ON SHEET C405.

11. THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION/SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS BASED UPON ANY THIRD PARTY REVIEW (ie MDEP) MAY RESULT IN MONETARY PENALTIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.

12. ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED, UNLESS OTHERWISE DIRECTED BY THE OWNER.

13. ALL DISTURBED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL PRIOR TO PERMANENT SEEDING.

UTILITIES

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PORTLAND, MAINE 04102
(207) 761-8300
CONTACT: GLISSEN HAVU

SEWER:

DEPARTMENT OF PUBLIC SERVICES
55 PORTLAND STREET
PORTLAND, MAINE 04101-2991
(207) 874-8832
CONTACT: FRANK BRANCELY

ELECTRIC:

CENTRAL MAINE POWER
162 CANCO ROAD
PORTLAND, MAINE 04103
(207) 828-2882
CONTACT: JAMES COUGH

TELEPHONE:

VERIZON
5 DAVIS FARM ROAD
PORTLAND, MAINE 04103
(207) 797-1842
CONTACT: TROY MACDONALD

CABLE:

TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE 04102
(207) 253-2222

INDEX

C001	COVER SHEET, GENERAL NOTES, & LEGEND
-	EXISTING CONDITIONS PLAN
C002	DEMOLITION PLAN
C101	SITE AND UTILITY PLAN
C102	GRADING, DRAINAGE & EROSION CONTROL PLAN
C401	DETAILS 1
C402	DETAILS 2
C403	DETAILS 3

CALL BEFORE YOU DIG
1-888-344-7233

PERMITS

TYPE OF PERMIT	GOVERNING BODY	STATUS
PRELIMINARY SITE PLAN APPLICATION/CONDITIONAL USE APPLICATION	CITY OF PORTLAND PLANNING DEPARTMENT 389 CONGRESS STREET PORTLAND, MAINE 04101 (207) 874-8719	SUBMITTED: 5/13/2015

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
DOUGLAS E. REYNOLDS
No. 9998
LICENSED
PROFESSIONAL ENGINEER
6/29/15

Rev.	Date	Revision
-	-	-

Issued For	Date	By
RESPONSE TO CITY COMMENTS	6/29/15	DER
PRICING	6/05/15	AMP
SITE PLAN REVIEW	5/13/15	AMP
CLIENT REVIEW	4/13/15	AMP

Design: JWA | Draft: CG | Date: DEC 2014
Checked: DER | Scale: NTS | Job No.: 2970
File Name: 2970-COVER.dwg

This plan shall not be modified without written permission from Gorrill-Palmer Consulting Engineers, Inc.(GPCEI). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GPCEI.

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207.657.6910

Drawing Name: Cover Sheet, General Notes, and Legend
Project: Bangor Savings Bank
20 Marginal Way, Portland, Maine
Client: Bangor Savings Bank
99 Franklin Street, Bangor, Maine 04401

Drawing No. C001

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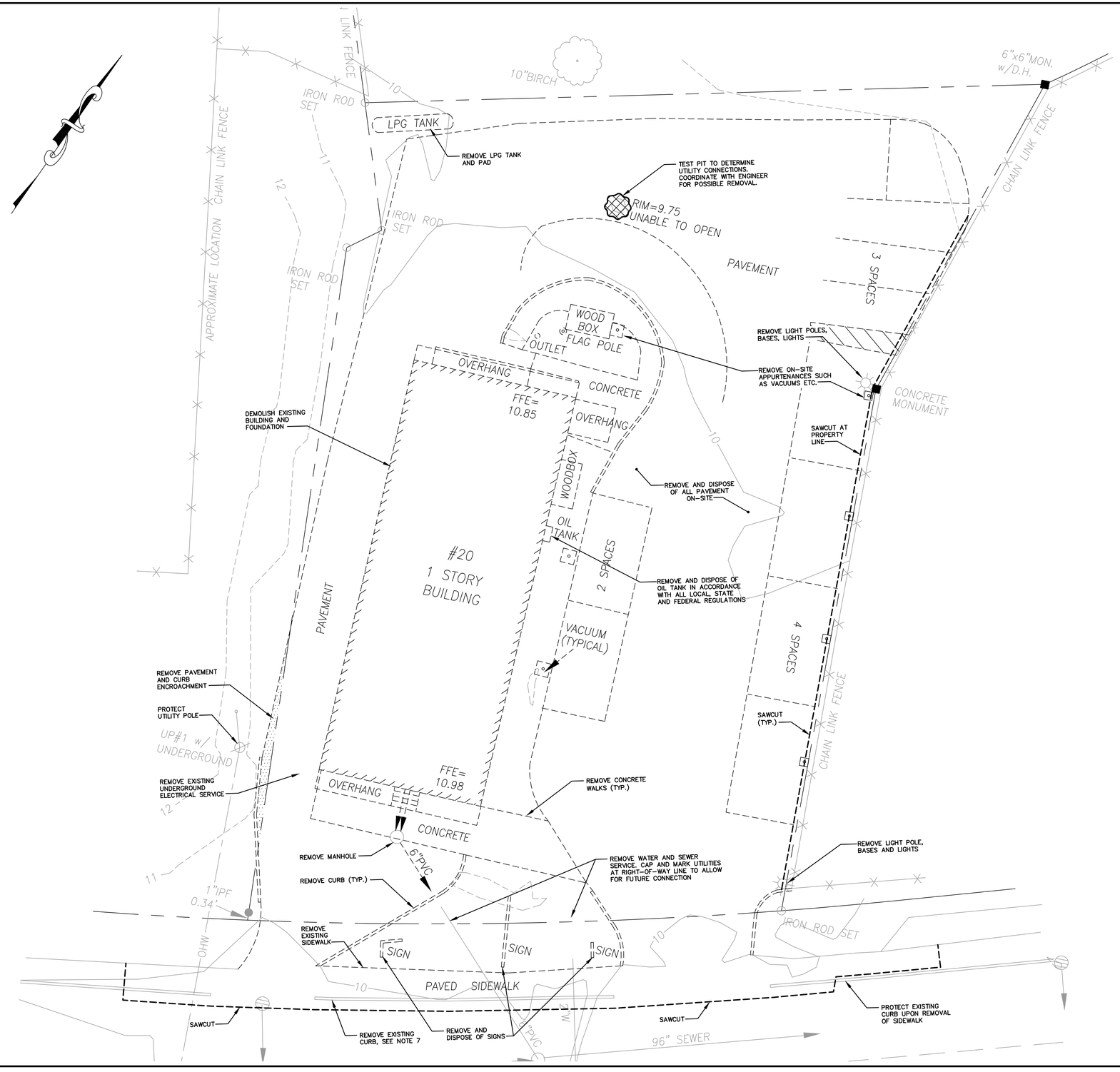

NOTES:

Plan 3

1. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTES SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.

2. CONTRACTOR SHALL COORDINATE WITH CENTRAL MAINE POWER FOR TERMINATION OF ELECTRIC SERVICE FROM EXISTING BUILDING.

3. CONTRACTOR SHALL COORDINATE WITH THE PORTLAND WATER DISTRICT FOR THE SHUT OFF OF WATER SERVICE TO THE EXISTING BUILDINGS.

4. DEMOLITION SHALL OCCUR SUCH THAT RECYCLING OF WASTE OCCURS TO THE MAXIMUM EXTENT PRACTICABLE; INCLUDING BUT NOT LIMITED TO: STONE, BRICK, CONCRETE, STEEL, WOOD AND PAVEMENT.

5. PRIOR TO DEMOLITION, A CONSTRUCTION MANAGEMENT PLAN PREPARED BY THE GENERAL CONTRACTOR SHALL BE SUBMITTED TO THE CITY OF PORTLAND PLANNING DIVISION FOR REVIEW. THE CONSTRUCTION MANGEMENT PLAN SHALL ADDRESS THE FOLLOWING:

   - ANTICIPATED PROJECT START DATE
   - ANTICIPATED PROJECT END DATE
   - CONSTRUCTION SEQUENCE
   - PEDESTRIAN CIRCULATION PLAN

6. COORDINATE WITH PROPANE SUPPLIER PRIOR TO PROPANE TANK REMOVAL.

7. EXISTING CURBING IN THE RIGHT-OF-WAY IS THE PROPERTY OF THE CITY OF PORTLAND. ANY REMOVED GRANITE CURBING SHALL BE TRANSPORTED TO THE CITY STOCKYARD ON OUTER CONGRESS STREET.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

10 0 5 10 20
1 inch = 10 ft.

STATE OF MAINE
DOUGLAS E. REYNOLDS
No. 9998
LICENSED PROFESSIONAL ENGINEER
6/29/15

Rev.	Date	Revision
–	–	–

Issued For	Date	By
RESPONSE TO CITY COMMENTS	6/29/15	DER
PRICING	6/05/15	AMP
SITE PLAN REVIEW	5/13/15	AMP
CLIENT REVIEW	4/13/15	AMP

Design: AMP	Draft: CG	Date: DEC 2014
Checked: AMP	Scale: 1"=10'	Job No.: 2970
File Name: 2970-DEMOLITION.dwg		

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207.657.6910

Drawing Name: **Demolition Plan**

Project: **Bangor Savings Bank**
20 Marginal Way, Portland, Maine

Client: **Bangor Savings Bank**
99 Franklin Street, Bangor, Maine 04401

Drawing No. C002

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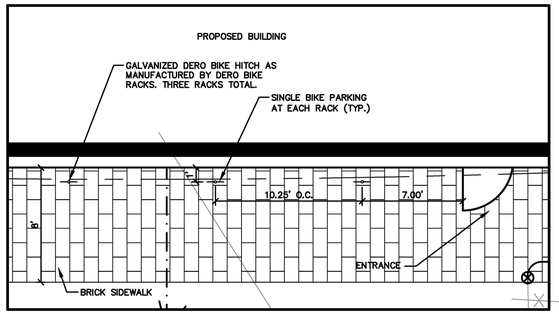
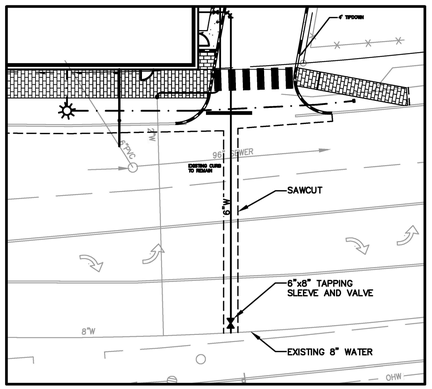
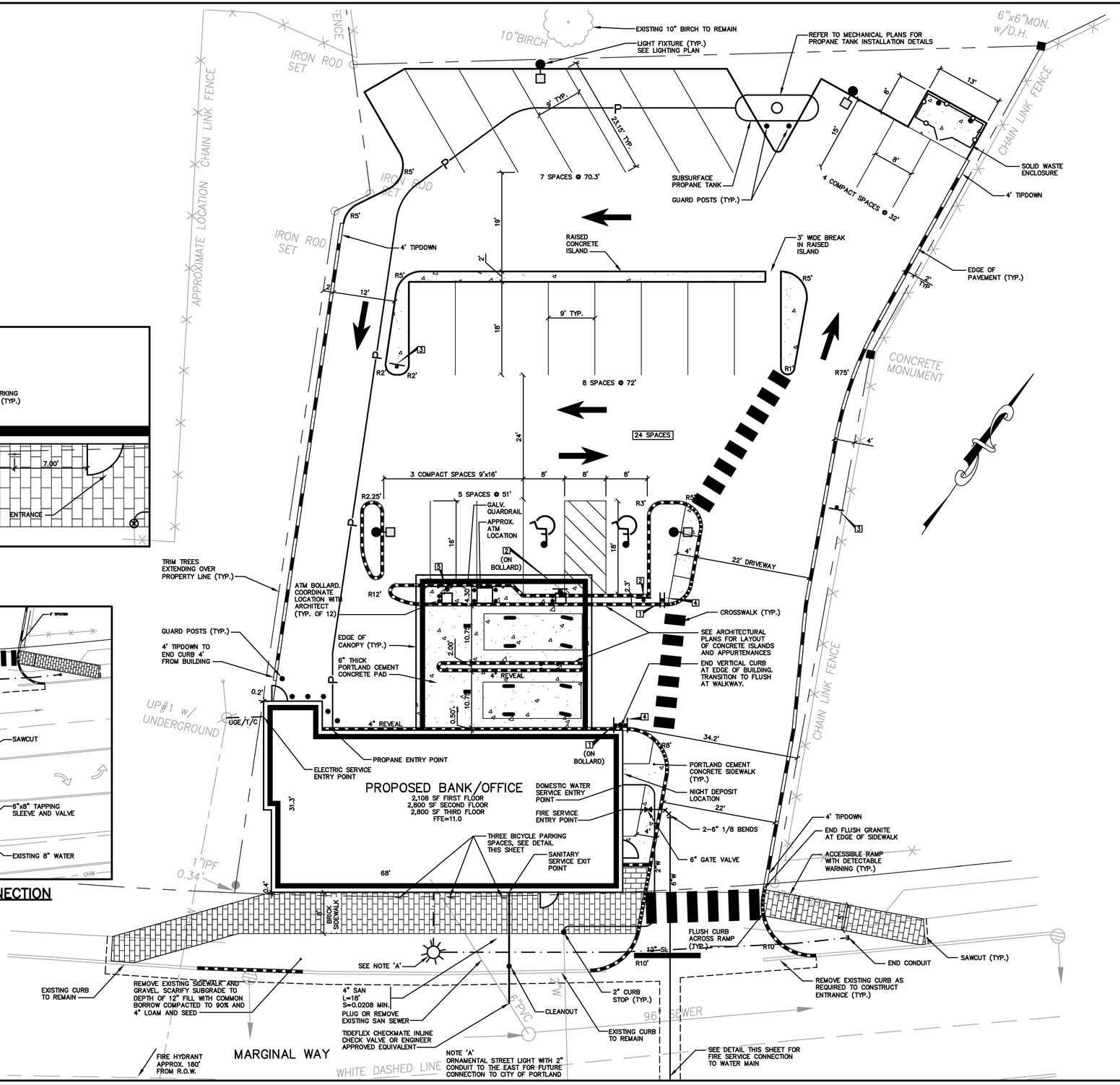
Plan 4



BICYCLE PARKING
1"=5'



FIRE SERVICE CONNECTION
1"=20'



SPACE AND BULK STANDARDS

B7 ZONE	REQUIRED	PROVIDED
MIN. LOT SIZE	NONE	17,862 S.F.
MIN. FRONTAGE	NONE	104.58'
YARD DIMENSIONS		
FRONT	NONE	0'
SIDE	NONE	2'
REAR	NONE	1'
MAX. BUILDING SETBACK FROM STREET LINE		
FRONT	10'**	2.5'
MAX. LOT COVERAGE	100%	18%
MAX. BUILDING HEIGHT	105'	APPROX. 36'
MIN. BUILDING HEIGHT	3 STORY *	3 STORY

* BASED ON INTERMEDIATE URBAN HEIGHT DISTRICT (B)

** MAX STREET SETBACK MAY BE GREATER THAN 10' PROVIDED AT LEAST 75% OF BUILDING FRONT IS WITHIN 10', AND A PEDESTRIAN ACCESS IS LOCATED ALONG THE FRONT AND NO PARKING IS LOCATED BETWEEN FRONT OF BLDG AND STREET.

SITE DATA

BUILDING AREA

USE	
RETAIL *	1,090 S.F.
OFFICE	6,616 S.F.
TOTAL	7,708 S.F.

PARKING	REQUIRED	PROVIDED
NEW STRUCTURE		
TOTAL PARKING		
OFFICE (1 SP / 400 S.F.)	17	17
RETAIL * (1 SP / 200 S.F.)	6	7
TOTAL	23	24
BARRIER FREE	1	2

* BASED UPON PREVIOUS DISCUSSIONS WITH CITY STAFF ON A SIMILAR PROJECT, THE BANK TRANSACTION AREA WOULD BE CONSIDERED RETAIL SPACE, AS BANK USE AND PARKING REQUIREMENTS ARE NOT DEFINED WITHIN THE MUNICIPAL ORDINANCE.

PAVEMENT LEGEND

ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:

- PORTLAND CEMENT CONCRETE
- BRICK SIDEWALK

CURBING LEGEND

- VERTICAL GRANITE CURB
- VERTICAL GRANITE CURB–FLUSH
- SLOPED GRANITE CURB
- SLIPFORM CAPE COD CURB

SIGN LEGEND

R1-1 30"x 30"	R7-8 12"x 18"			
STOP	RESERVED PARKING VAN ACCESSIBLE	DRIVE THRU ↑	CUSTOMER PARKING ←	DO NOT ENTER	ELECTRIC VEHICLE CHARGING STATION
1	2	3	4	5	

STRIPING LEGEND

SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.

12"SL – 12" WIDTH STOP LINE

NOTES:

1. ELECTRICAL SERVICE SHALL BE COORDINATED WITH CMP.
2. EXISTING CURBING IN THE RIGHT-OF-WAY IS THE PROPERTY OF THE CITY OF PORTLAND. ANY REMOVED GRANITE CURBING SHALL BE TRANSPORTED TO THE CITY STOCKYARD ON OUTER CONGRESS STREET.
3. PRIOR TO DEMOLITION, A CONSTRUCTION MANAGEMENT PLAN PREPARED BY THE GENERAL CONTRACTOR SHALL BE SUBMITTED TO THE CITY OF PORTLAND PLANNING DIVISION FOR REVIEW. THE CONSTRUCTION MANGEMENT PLAN SHALL ADDRESS THE FOLLOWING:
   - ANTICIPATED PROJECT START DATE
   - ANTICIPATED PROJECT END DATE
   - CONSTRUCTION SEQUENCE
   - PEDESTRIAN CIRCULATION PLAN
4. COORDINATE LOCATION OF UTILITY SERVICE ENTRY POINTS WITH ARCITECTURAL PLANS.
5. SNOW SHALL BE REMOVED FROM THE SITE BY THE SNOW REMOVAL CONTRACTOR AND DISPOSED OF ACCORDING TO APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

10 0 5 10 20
1 inch = 10 ft.

STATE OF MAINE — DOUGLAS E. REYNOLDS No. 6988 — LICENSED PROFESSIONAL ENGINEER

Rev.	Date	Revision
–	–	–

Issued For	Date	By
REMOVED PLANTINGS	7/01/15	DER
RESPONSE TO CITY COMMENTS	6/29/15	DER
PRICING	6/05/15	AMP
SITE PLAN REVIEW	5/13/15	AMP
CLIENT REVIEW	4/13/15	AMP

Design: JWA | Draft: CG | Date: DEC 2014
Checked: AMP | Scale: 1"=10' | Job No.: 2970
File Name: 2970-SP.dwg

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Drawing Name: **Site and Utility Plan**
Project: **Bangor Savings Bank**
20 Marginal Way, Portland, Maine
Client: **Bangor Savings Bank**
99 Franklin Street, Bangor, Maine 04401

Drawing No. **C101**

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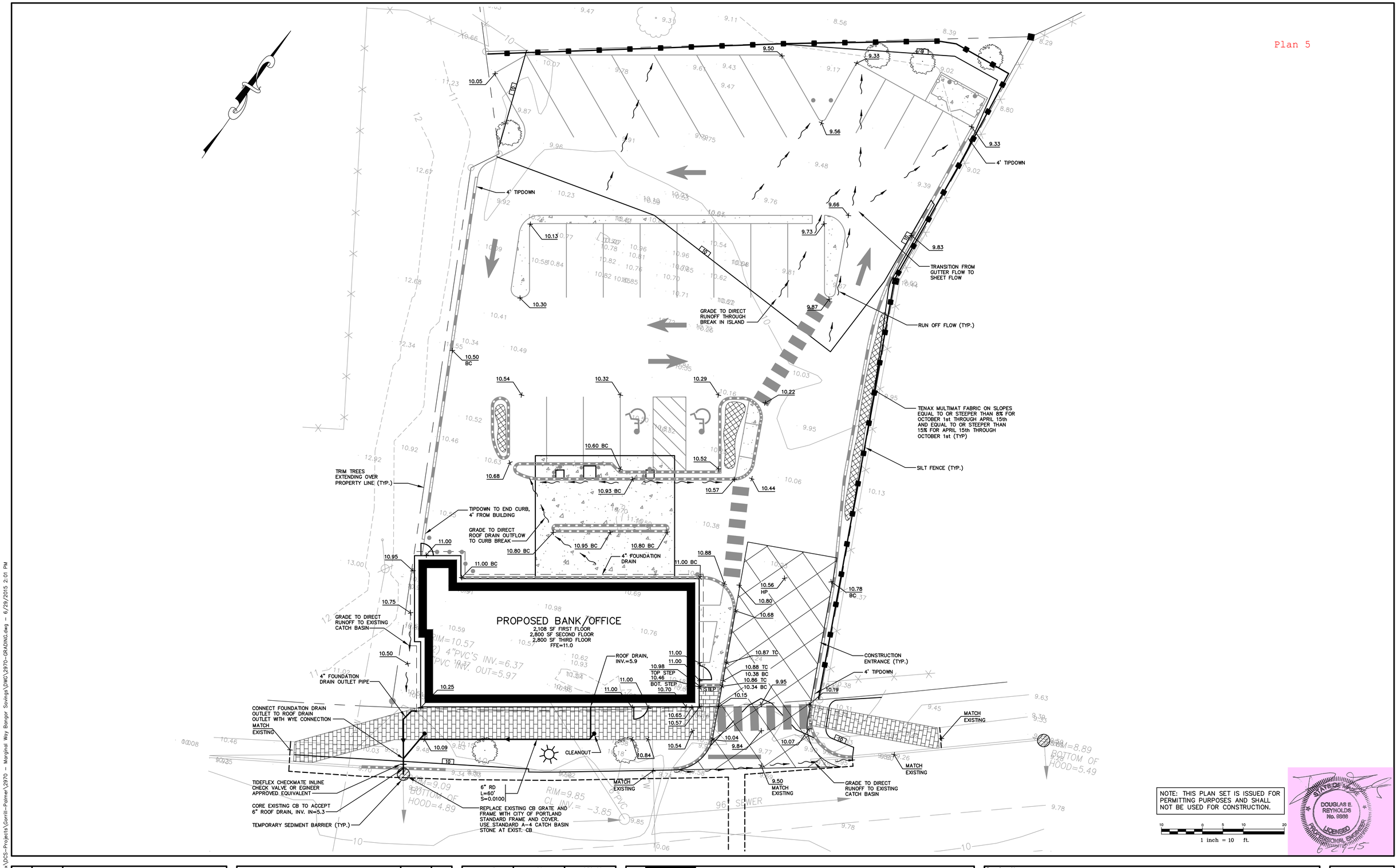
Plan 5



NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

1 inch = 10 ft.

STATE OF MAINE DOUGLAS E. REYNOLDS No. 9868 LICENSED PROFESSIONAL ENGINEER 6-27-15

Rev.	Date	Revision
–	–	–

Issued For	Date	By
RESPONSE TO CITY COMMENTS	6/29/15	DER
PRICING	6/05/15	AMP
SITE PLAN REVIEW	5/13/15	AMP
CLIENT REVIEW	4/13/15	AMP

Design: AMP	Draft: CG	Date: DEC 2014
Checked: AMP	Scale: 1"=10'	Job No.: 2970
File Name: 2970-GRADING.dwg		

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207.657.6910

Drawing Name: **Grading, Drainage, and Erosion Control Plan**

Project: **Bangor Savings Bank**
20 Marginal Way, Portland, Maine

Client: **Bangor Savings Bank**
99 Franklin Street, Bangor, Maine 04401

Drawing No. C102

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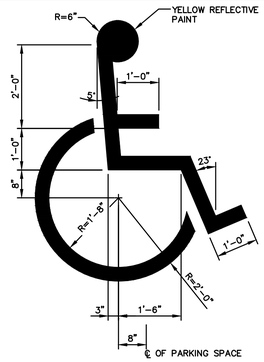
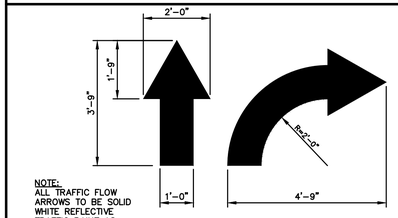


INTERNATIONAL BARRIER FREE SYMBOL

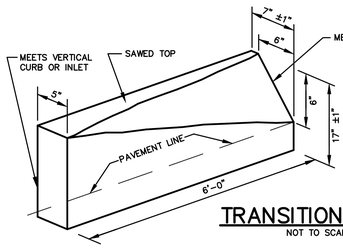
NOT TO SCALE



NOTE:
ALL TRAFFIC FLOW ARROWS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS.

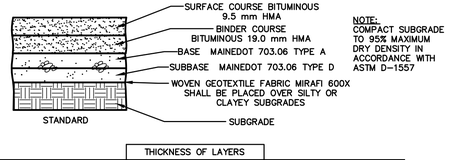
TRAFFIC FLOW ARROWS

NOT TO SCALE



TRANSITION CURB

NOT TO SCALE

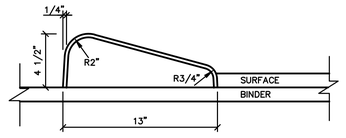


NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

THICKNESS OF LAYERS	
STANDARD	LAYERS
1 1/4"	SURFACE COURSE BITUMINOUS 9.5mm HMA
2 1/4"	BINDER COURSE BITUMINOUS SUPERPAVE 19.0mm HMA
6"	AGGREGATE BASE GRAVEL MAINE DOT 703.06 TYPE A
12"	AGGREGATE SUBBASE GRAVEL MAINEDOT 703.06 TYPE D

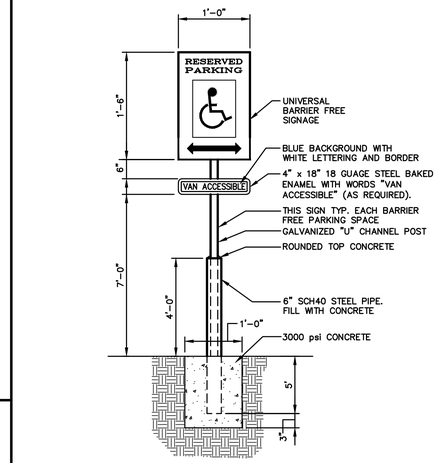
BITUMINOUS PAVEMENT SECTION

NOT TO SCALE



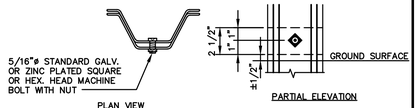
SLIPFORM CAPE COD CURB

NOT TO SCALE

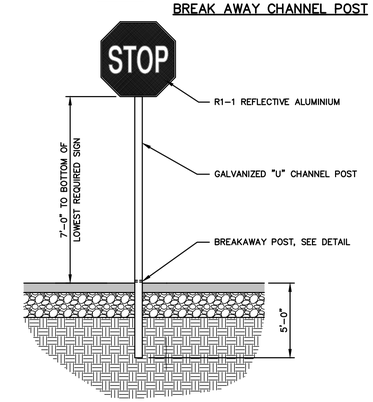


BARRIER FREE PARKING SIGN

NOT TO SCALE

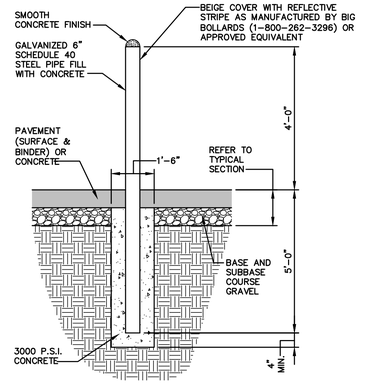


BREAK AWAY CHANNEL POST



STOP SIGN

NOT TO SCALE

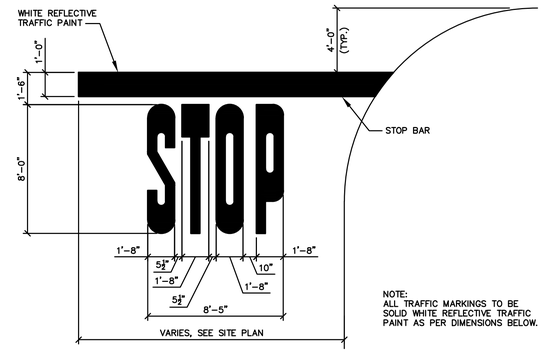


GUARD POST

(DUMPSTER ENCLOSURE, IN PARKING LOT ADJACENT TO COLUMN, AND REAR BUILDING ENTRANCE ONLY)

NOT TO SCALE

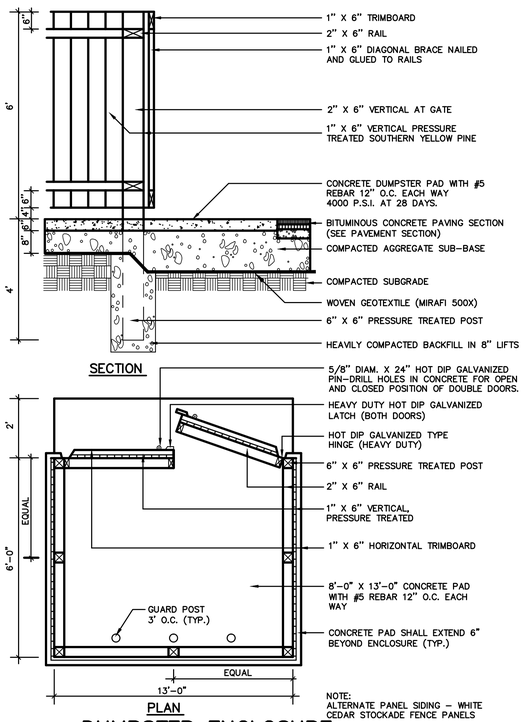
Plan 6



NOTE:
ALL TRAFFIC MARKINGS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS BELOW.

PAVEMENT MARKINGS

NOT TO SCALE

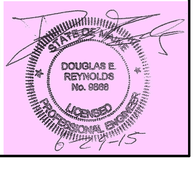


NOTE:
ALTERNATE PANEL SIDING – WHITE CEDAR STOCKADE FENCE PANELS

DUMPSTER ENCLOSURE

NOT TO SCALE

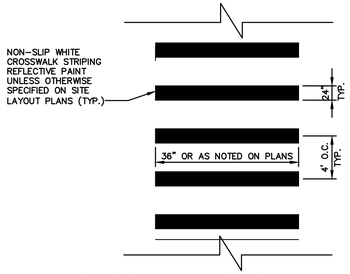
NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



NOTE:
ALL TRAFFIC FLOW ARROWS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS.

TRAFFIC FLOW ARROWS

NOT TO SCALE



CROSSWALK STRIPING

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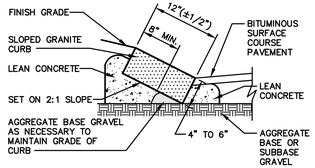
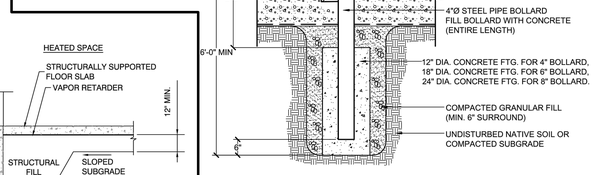
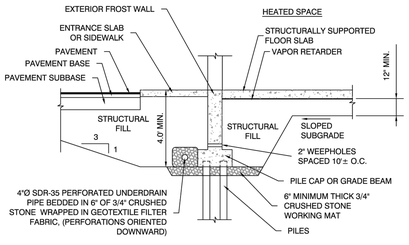




ATM BOLLARD

NOT TO SCALE



UNDERDRAIN DETAIL

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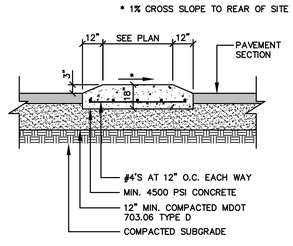
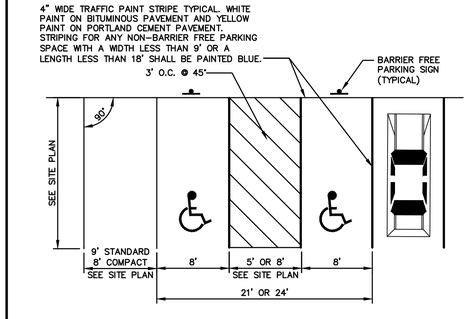


RAISED CONCRETE ISLAND

NOT TO SCALE



PARKING SPACE DIMENSIONS

NOT TO SCALE

Rev.	Date	Revision
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Issued For	Date	By
RESPONSE TO CITY COMMENTS	6/29/15	DER
PRICING	6/05/15	AMP
SITE PLAN REVIEW	5/13/15	AMP
CLIENT REVIEW	4/13/15	AMP

Design: AMP	Draft: CG	Date: DEC 2014
Checked: AMP	Scale: 1"=10'	Job No.: 2970
File Name: 2970-DETAILS.dwg		

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207.657.6910

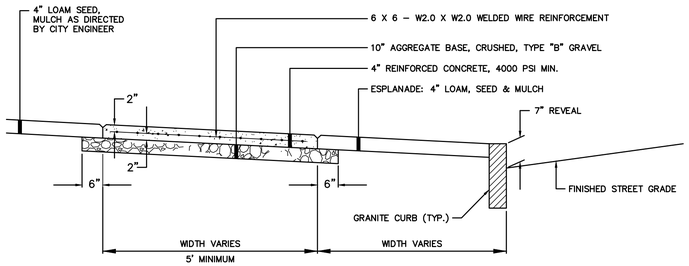
Drawing Name: **Details 1**

Project: **Bangor Savings Bank**
20 Marginal Way, Portland, Maine

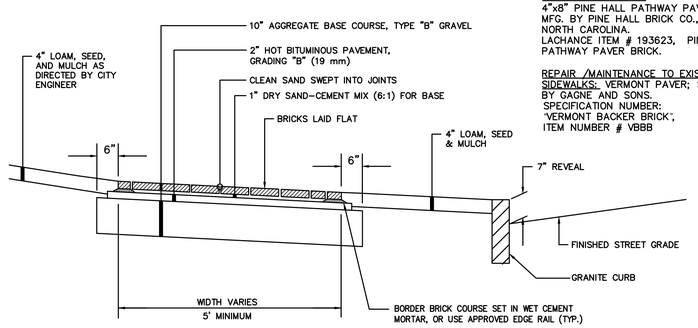
Client: **Bangor Savings Bank**
99 Franklin Street, Bangor, Maine 04401

Drawing No. *C401*

C:\Users\CADD\Dropbox\DCS-Projects\Gorrill-Palmer\2970 – Marginal Way Bangor Savings\DWG\2970-DETAILS.dwg – 6/29/2015 2:01 PM



REINFORCED CONCRETE SIDEWALK
NOT TO SCALE

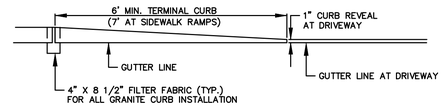


BRICKS TO BE USED:

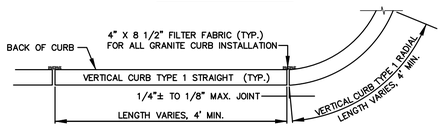
NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA.
LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER; SUPPLIED BY CAGNE AND SONS.
SPECIFICATION NUMBER:
"VERMONT BACKER BRICK",
ITEM NUMBER # VBBB

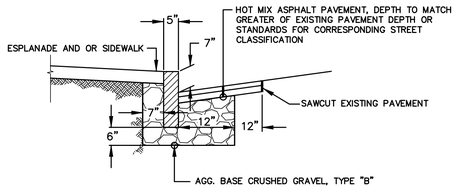
BRICK SIDEWALK WITH BITUMINOUS BASE
NOT TO SCALE



TERMINAL CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



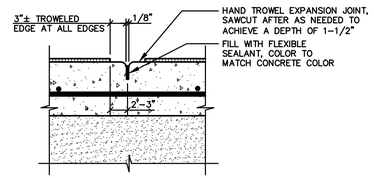
VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS
NOT TO SCALE

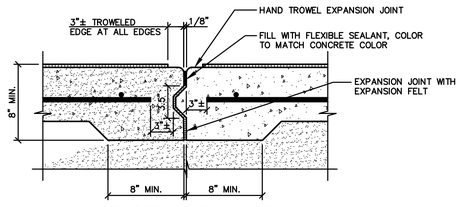
NOTES:
1. SEE SITE PLAN FOR LOCATION OF CONCRETE DRIVE–THRU.

2. #5 DIAGONAL BARS SHALL BE PLACED AT ALL OPENINGS.

3. THE SITE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SHOWING THE LOCATION OF CONTROL AND CONSTRUCTION JOINTS TO THE ENGINEER FOR REVIEW PRIOR TO REPLACEMENT OF CONCRETE.

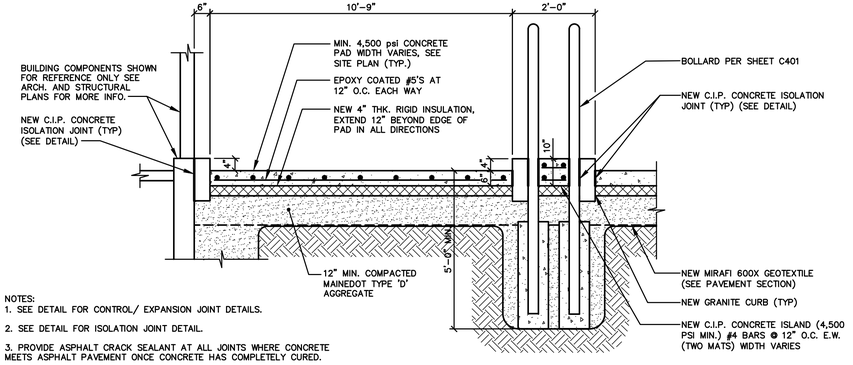


CONTROL JOINT



CONSTRUCTION JOINT

NEW C.I.P. CONCRETE CONTROL/CONSTRUCTION JOINT
NOT TO SCALE



NOTES:
1. SEE DETAIL FOR CONTROL/ EXPANSION JOINT DETAILS.

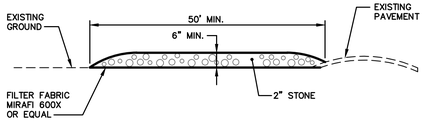
2. SEE DETAIL FOR ISOLATION JOINT DETAIL.

3. PROVIDE ASPHALT CRACK SEALANT AT ALL JOINTS WHERE CONCRETE MEETS ASPHALT PAVEMENT ONCE CONCRETE HAS COMPLETELY CURED.

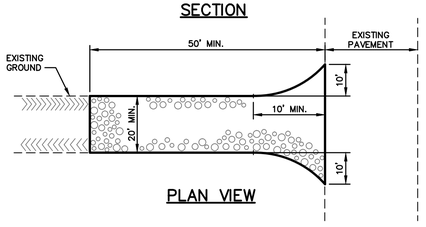
4. CONTRACTOR TO VERIFY COLOR TO MEET ALL APPLICABLE LOCAL CODES.

DRIVE–THRU SECTION
NOT TO SCALE

NOTE: CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

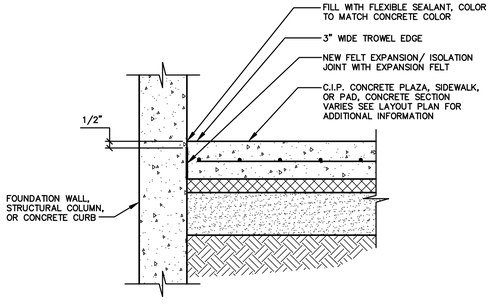


SECTION

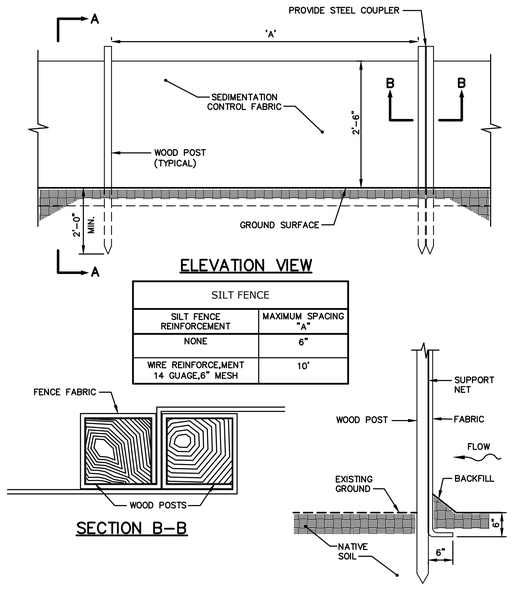


PLAN VIEW

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



NEW C.I.P. CONCRETE ISOLATION JOINT
NOT TO SCALE



ELEVATION VIEW

SILT FENCE	
SILT FENCE REINFORCEMENT	MAXIMUM SPACING "A"
NONE	6'
WIRE REINFORCE,MENT 14 GUAGE,6" MESH	10'

SECTION B–B

SECTION A–A

SILTATION FENCE
NOT TO SCALE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
DOUGLAS E. REYNOLDS
No. 9988
LICENSED
PROFESSIONAL ENGINEER
6/29/15

Rev.	Date	Revision
–	–	–

Issued For	Date	By
RESPONSE TO CITY COMMENTS	6/29/15	DER
PRICING	6/05/15	AMP
SITE PLAN REVIEW	5/13/15	AMP
CLIENT REVIEW	4/13/15	AMP

Design: AMP	Draft: CG	Date: DEC 2014
Checked: AMP	Scale: 1"=10'	Job No.: 2970
File Name: 2970–DETAILS.dwg		

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207.657.6910

Drawing Name: **Details 2**

Project: **Bangor Savings Bank**
20 Marginal Way, Portland, Maine

Client: **Bangor Savings Bank**
99 Franklin Street, Bangor, Maine 04401

Drawing No. C402

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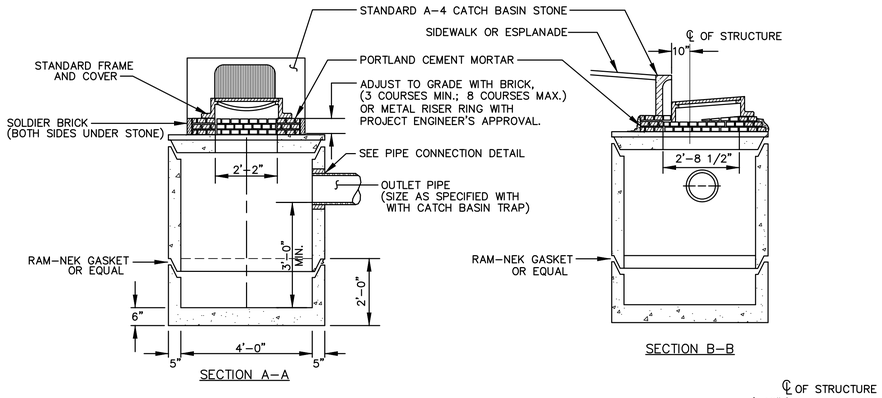
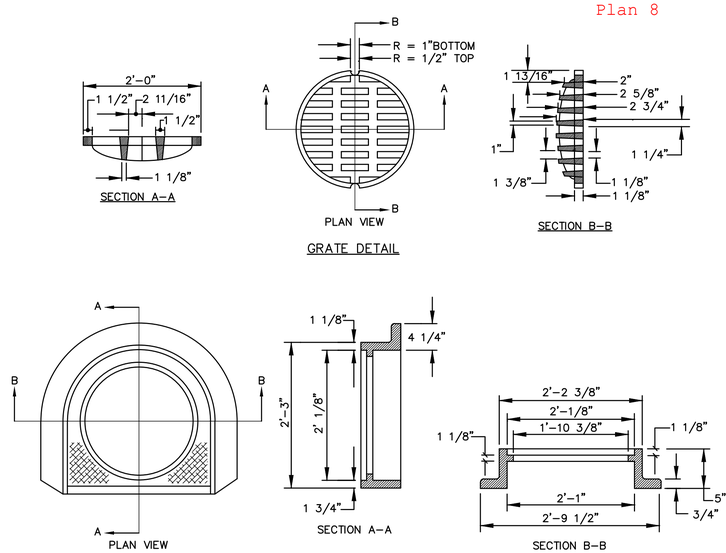
Plan 8



EXISTING CATCH BASIN IS EXPECTED TO REMAIN. DETAIL IS FOR REQUIRED BRICKS, COVER, FRAME, AND STONE

PRECAST CONCRETE CATCH BASIN – TYPE "E"

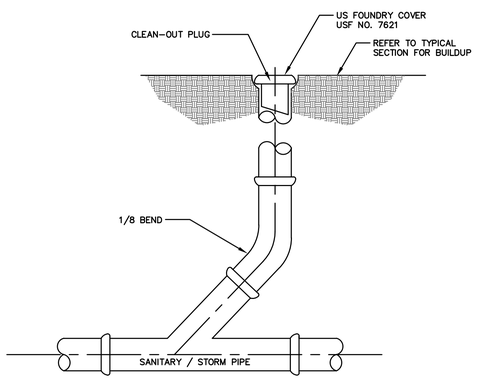
NOT TO SCALE



EXISTING CATCH BASIN IS EXPECTED TO REMAIN. DETAIL IS FOR REQUIRED BRICKS, COVER, FRAME, AND STONE

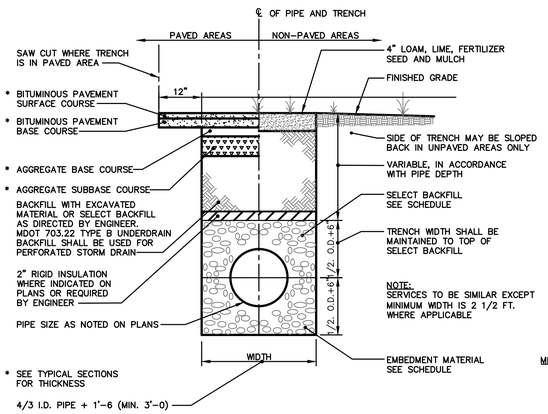
CATCH BASIN FRAME & GRATE

NOT TO SCALE



CLEANOUT

NOT TO SCALE



SCHEDULE OF TRENCH BACKFILL

TYPE OF PIPE	EMBEDMENT MATERIAL	SELECT BACKFILL	SELECT BACKFILL ON CITY PROPERTY
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL	3/4" CRUSHED STONE, 12" ABOVE TOP OF PIPE
PVC-SDR 35 HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL	3/4" CRUSHED STONE, 12" ABOVE TOP OF PIPE
PERFORATED PVC-SDR35 HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	3/4" CRUSHED STONE, 12" ABOVE TOP OF PIPE

NOTE:
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES, 12" BELOW FINISH GRADE.
3. RIBBED CORRUGATED POLYETHYLENE PIPE MATERIAL, SMOOTH WALL INTERIOR, IS NOT PERMITTED WITHIN CITY PROPERTY, EXCEPT FOR UNDERDRAIN.

MINIMUM COVER	PIPE
2'-0"	DRAIN (1)
5'-5"	WATER
5'-0"	SEWER

(1) COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION.

TRENCH SECTION

NOT TO SCALE

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.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
DOUGLAS E. REYNOLDS
No. 9998
LICENSED PROFESSIONAL ENGINEER
6/29/15

Rev.	Date	Revision
–	–	–

Issued For	Date	By
RESPONSE TO CITY COMMENTS	6/29/15	DER
PRICING	6/05/15	AMP
SITE PLAN REVIEW	5/13/15	AMP
CLIENT REVIEW	4/13/15	AMP

Design: AMP	Draft: CG	Date: DEC 2014
Checked: AMP	Scale: 1"=10'	Job No.: 2970
File Name: 2970-DETAILS.dwg		

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Drawing Name: **Details 3**

Project: **Bangor Savings Bank**
20 Marginal Way, Portland, Maine

Client: **Bangor Savings Bank**
99 Franklin Street, Bangor, Maine 04401

Drawing No. C403

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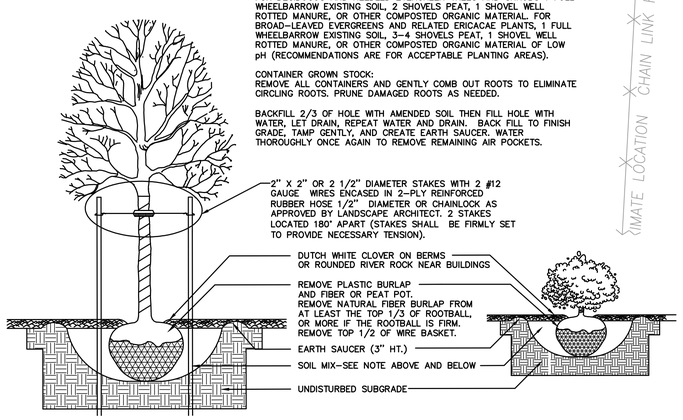
GENERAL PLANTING NOTES:

DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH ROOT FLARE AT GROUND LEVEL. CORRECT HOLE DEPTH AS NEEDED. NOTE: MANY BALLED & BURLAPPED PLANTS HAVE SOIL PILED AROUND THE ROOT FLARE WHICH SHOULD BE REMOVED PRIOR TO PLANTING.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS 1 FULL WHEELBARROW EXISTING SOIL, 2 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL. FOR BROAD-LEAVED EVERGREENS AND RELATED ERICACAE PLANTS, 1 FULL WHEELBARROW EXISTING SOIL, 3-4 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH (RECOMMENDATIONS ARE FOR ACCEPTABLE PLANTING AREAS).

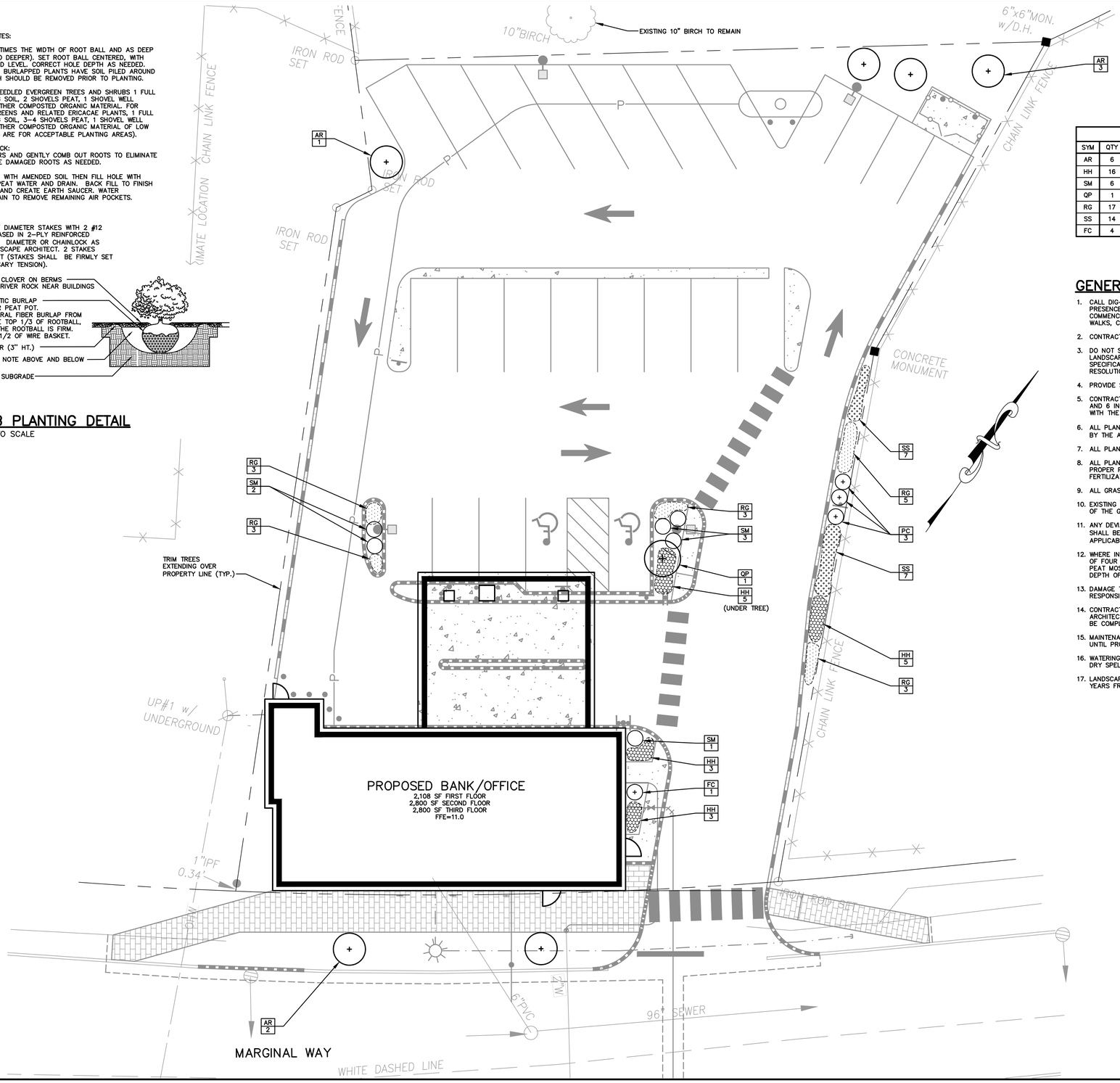
CONTAINER GROWN STOCK:
REMOVE ALL CONTAINERS AND GENTLY COMB OUT ROOTS TO ELIMINATE CIRCLING ROOTS. PRUNE DAMAGED ROOTS AS NEEDED.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.



TREE AND SHRUB PLANTING DETAIL

NOT TO SCALE



PLANT SPECIES LIST

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
AR	6	ACER RUBRUM 'KARPICK'	RED MAPLE	2 1/2"	CALIPER
HH	16	HEMEROCALLIS 'BELLS OF GOLD'	BELLSOFGOLD DAYLILLY	1 GAL.	–
SM	6	SPIREA 'MAGIC CARPET'	MAGIC CARPET SPIREA	3 GAL.	CONTAINER
QP	1	QUERCUS PALUSTRIS 'GREEN PILLAR'	GREEN PILLAR PIN OAK	2"	CALIPER
RG	17	RUDBECKIA FULGIDA 'GOLDSTURM'	GOLDSTURM BLACK EYED SUSAN	1 GAL.	–
SS	14	SEDUM SPECTABILE 'BRILLIANT'	BRILLIANT SEDUM	1 GAL.	–
FC	4	FORSYTHIA 'COURTASOL'	GOLD TIDE FORSYTHIA	3 GAL.	CONTAINER

GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, PLANT QUANTITIES, DETAILS, NOTES AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. CONTRACTOR SHALL FURNISH AND PLACE 12 INCHES OF LOAM IN ALL SHRUB BEDS, 30 INCHES IN ALL TREE PITS, AND 6 INCHES UNDER ALL TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
6. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN".
7. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
10. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DAMAGE TO EXISTING SITE IMPROVEMENTS DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
14. CONTRACTOR SHALL COORDINATE INSPECTION OF PLANT MATERIAL AND LOCATIONS WITH PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ALL PLANT MATERIAL SHALL BE ON-SITE AND PLACED BEFORE INSPECTION CAN BE COMPLETED. A MINIMUM OF 48 HOUR NOTIFICATION SHALL BE REQUIRED.
15. MAINTENANCE REQUIREMENTS: PRUNE DEAD OR DAMAGED BRANCHES, MAINTAIN GUY POSTS AND WATER AS REQUIRED UNTIL PROJECT COMPLETION AND ACCEPTANCE BY OWNER.
16. WATERING: ALL PLANTINGS SHALL BE THOROUGHLY WATERED UPON INSTALLATION, AND THEN WEEKLY WHENEVER ANY DRY SPELLS OCCUR, UNTIL ACCEPTANCE BY OWNER.
17. LANDSCAPE CONTRACTOR OR PLANT SUPPLIER SHALL GUARANTEE PLANTS AND PROVIDE REPLACEMENTS FOR TWO YEARS FROM INSTALLATION.

Lucky Rock LLC
www.luckyrockdesign.com 207.318.9322
373 Hussey Hill Road - Vassalboro, Maine 04989

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

10 0 5 10 20
1 inch = 10 ft.

LICENSED LANDSCAPE ARCHITECT
BETSY A. POULIN
No. 2949
STATE OF MAINE

Rev.	Date	Revision

Issued For	Date	By
RESPONSE TO CITY COMMENTS	7/02/15	DER

Design: – | Draft: CG | Date: DEC 2014
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File Name: 2970-LANDSCAPE.dwg

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207.657.6910

Drawing Name: Landscape Plan
Project: Bangor Savings Bank, 20 Marginal Way, Portland, Maine
Client: Bangor Savings Bank, 99 Franklin Street, Bangor, Maine 04401

Drawing No. L101

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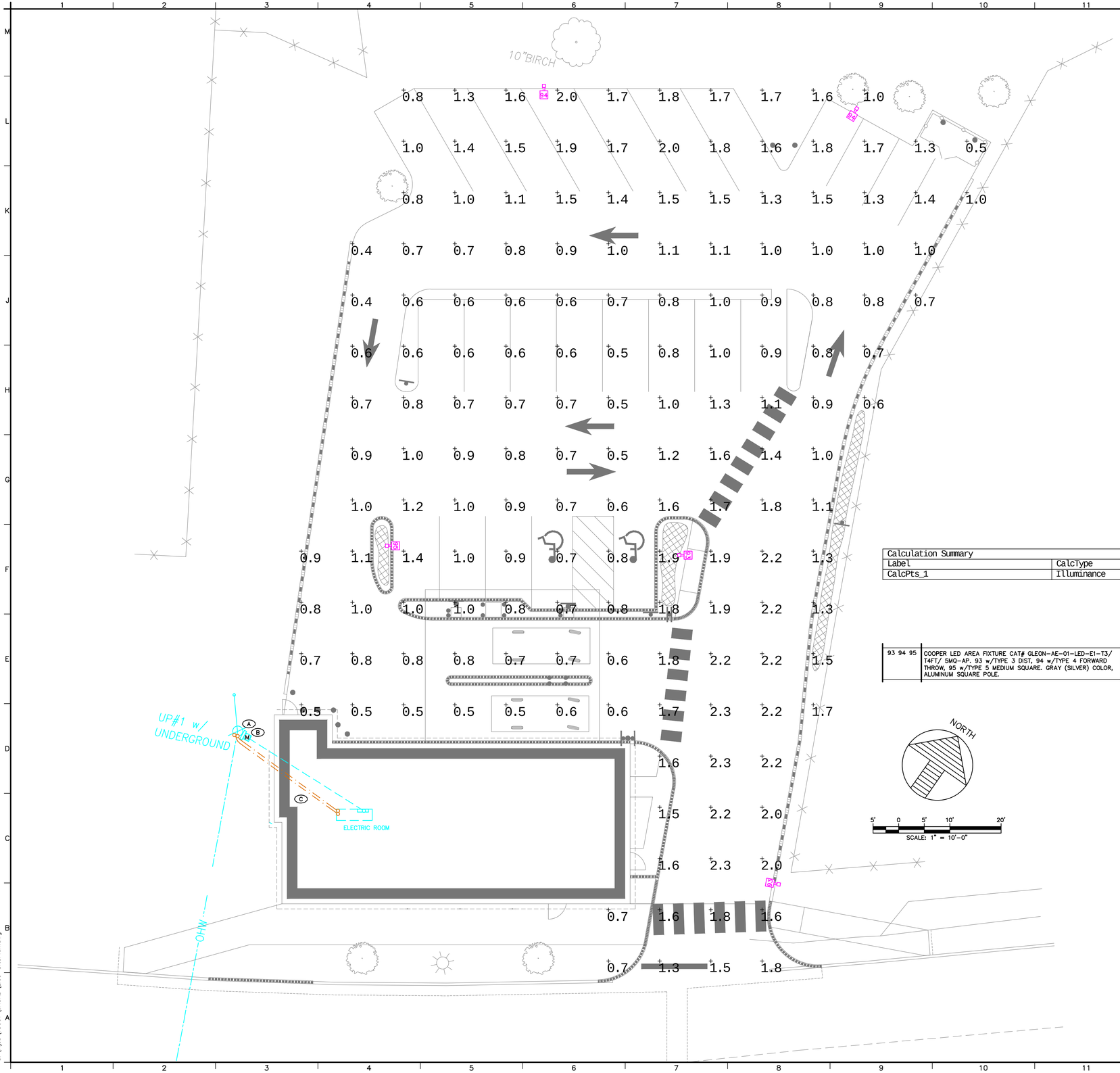

KEYED NOTES

- (A) PROVIDE CONDUIT RISER, CONDUCTORS AND WEATHERHEAD ON EXISTING POLE PER CMP STANDARDS. CMP TO MAKE CONNECTIONS.
- (B) PROVIDE METER SOCKET PER CMP STANDARDS.
- (C) PROVIDE 1-2" AND 1-4" CONDUIT FOR COMMUNICATIONS. STUB UP 6" INTO ELECTRIC ROOM.

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
CalcPts_1	Illuminance	Fc	1.16	2.3	0.4

93 94 95	COOPER LED AREA FIXTURE CAT# GLEON-AE-01-LED-E1-T3/ T4FT/ SMQ-AP. 93 w/TYPE 3 DIST, 94 w/TYPE 4 FORWARD THROW, 95 w/TYPE 5 MEDIUM SQUARE. GRAY (SILVER) COLOR, ALUMINUM SQUARE POLE.	UNIV	POLE MOUNT 20' AFG, WITH 2' BASE	LED INCLUDED

Plan 10

Hewett & Whitney
ENGINEERS DESIGNERS
ELECTRICAL & MECHANICAL SYSTEMS
161 MAIN STREET WINTHROP, MAINE
Tel 207•377•6969 Fax 207•377•7584

PLOT DATE: Jun 29, 2015

NO.	DATE	DESCRIPTION

ISSUE FOR PERMITTING
06.29.15

TAC Architectural Group Inc.

STATE OF MAINE
COLIN C. HEWETT
8374
REGISTERED PROFESSIONAL ENGINEER
Colin C. Hewett
06-29-15

BSB - MARGINAL WAY

PORTLAND, MAINE

PROJECT NO:	1502
CAD DWG FILE:	Elec-SitePlan.dwg
DRAWN BY:	ELH/CCH
CHK'D BY:	CCH
COPYRIGHT:	2015

SHEET TITLE

ELECTRICAL SITE PHOTOMETRIC PLAN

ES101

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MARGINAL WAY ELEVATION

Ⓐ INTERNALLY ILLUMINATED WALL LETTERS - *EAST ELEVATION*
NO SCALE

Ⓑ BACK HALO-ILLUMINATED WALL LETTERS - *EAST ELEVATION*
NO SCALE

Plan 11

Neokraft Signs Inc.
686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
http://www.neokraft.com

Custom Sign Fabrication

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Bangor Savings Bank CL022742

Location:	20 Marginal Way	
	Portland, ME	
Drawing No.:	1 of 5	
Drawn by:	PL	Rep.: PL
Date:	06.09.2015	
Lead No.:	CL022742	
Gen Ref.:		

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B2 BACK HALO-ILLUMINATED WALL LETTERS - *NORTH ELEVATION*
NO SCALE

Neokraft SIGNS

Neokraft Signs Inc.
686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
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Bangor Savings Bank CL022742

Location:	20 Marginal Way	
	Portland, ME	
Drawing No.:	2 of 5	
Drawn by:	PL	Rep.: PL
Date:	06.09.2015	
Lead No.:	CL022742	
Gen Ref.:		

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© INTERNALLY ILLUMINATED WALL LETTERS - *SOUTH ELEVATION*
NO SCALE

Neokraft SIGNS

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686 Main Street
Lewiston, Maine 04240
Telephone: 207.782.9654
Facsimile: 207.782.0009
1.800.339.2258
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Bangor Savings Bank CL022742

Location:	20 Marginal Way	
	Portland, ME	
Drawing No.:	3 of 5	
Drawn by:	PL	Rep.: PL
Date:	06.09.2015	
Lead No.:	CL022742	
Gen Ref.:		

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Ⓓ INTERNALLY ILLUMINATED WALL LETTERS - *WEST (I-295) ELEVATION*
NO SCALE

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Bangor Savings Bank CL022742

Location:	20 Marginal Way	
	Portland, ME	
Drawing No.:	4 of 5	
Drawn by:	PL	Rep.: PL
Date:	06.09.2015	
Lead No.:	CL022742	
Gen Ref.:		

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VIEW FROM THE EAST

VIEW FROM THE WEST

PERSPECTIVE VIEWS

NO SCALE

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Bangor Savings Bank CL022742

Location:	20 Marginal Way	
	Portland, ME	
Drawing No.:	5 of 5	
Drawn by:	PL	Rep.: PL
Date:	06.09.2015	
Lead No.:	CL022742	
Gen Ref.:		

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Master Signage Plan

Bangor Savings Bank and Office Building

20 Marginal Way, Portland, Maine

In accordance with Portland Downtown Urban Design Guidelines for the B-7 Mixed Use Urban District, attached is the Master Signage Plan for the proposed Bangor Savings Bank and Office Building for 20 Marginal Way, Portland, Maine. The Mater Signage Plan adheres to the Guidelines as follows:

B. Design:

- The design of signage is respectful of the building and has been carefully designed to fit the given facades complementing the building's architectural features.

- The design of signage is oriented and scaled to reflect the scale and character of movement of people around the building, with an emphasis primarily on the pedestrian and slow-moving traffic. To emphasize the two pedestrian entrances into the building an architectural overhang will be installed over both entrances. Back halo-illuminated signs will be installed on each overhang to inform pedestrians along Marginal Way and from the rear parking lot to the appropriate entrance.

- The size of the proposed signs is compatible with the scale of the overall building.

- The size relates comfortably in size and scale to the pedestrians moving about in the vicinity.

- The signage is simple and limited to the primary tenant of the property.

- The lettering typefaces and words are simple, easy to read, and scaled appropriately for both the signs and the building.

- The colors on the signage have been selected to complement the character and color pattern of the building.

- The illumination of the signs is very compatible and consistent with the character of illumination already existing on the surrounding buildings and on existing appropriate signs in the vicinity. The proposed upper wall signs are internally illuminated block letters which is the style of signs for the vast majority of wall signs along Marginal Way, including but not limited to Gorham Savings Bank, Drummond Woodson, Planet Fitness, Walgreens, WinxNet, Trader Joes, Eastern Mountain Sports and West Marine. The signs over the pedestrian entrances are back halo-illuminated signs which is a character of illumination appropriate for pedestrian areas.

C. Placement

- The placement of the signage on all building elevations has been carefully considered, taking into account the scale, character and design of the building.

- The placement of the signage does not visually obscure any architecturally significant features of the building.

D. Number of Signs

- Building signs are limited to one per building street frontage for each tenant. Bangor Savings will occupy the retail bank branch on the 1st floor of the building and the 2nd and 3rd floors with banking service offices. In keeping with the above guideline, maintaining a simple signage message, Bangor Savings has decided not to uniquely sign the service office uses. Bangor Savings is proposing wall signs on each of three street frontages (Marginal Way, Forest Avenue and I-295).

- The signs have a common pattern and character.

- Standard E-16 limits the number of upper level signs to two and one sign per storefront at the Pedestrian level. Since the proposed building occupies the entire Marginal Way frontage except for the entrance drive and the building is located on the front property line there is no room for a pylon sign. Bangor Savings is requesting a third upper level sign to be located on the Marginal Way elevation in place of a pylon sign. To properly inform pedestrians of the two pedestrian entrances, Bangor Savings is requesting a second pedestrian level sign to be located above the Marginal Way entrance door.

- The total sign area proposed in the Master Signage Plan is approximately 50% of the sign area allowed for the proposed building.

Elevations
Bangor Savings Bank
20 Marginal Way, Portland, Maine

Marginal Way and East Elevation

Marginal Way and West Elevation

Rear and West Elevation

Rear and East Elevation

Pedestrian Oriented Streetscape Along Marginal Way Frontage

A1 FRONT ELEVATION
1/4" = 1'-0"

Plan 13

NO.	DATE	DESCRIPTION
0	03.31.15	SCHEMATIC DESIGN

ISSUED FOR CONSTRUCTION
07.10.15

TAC Architectural Group Inc.

LICENSED ARCHITECT Daniel C. Mills No. 3617 STATE OF MAINE
NOT FOR CONSTRUCTION
06.05.15

BSB - MARGINAL WAY

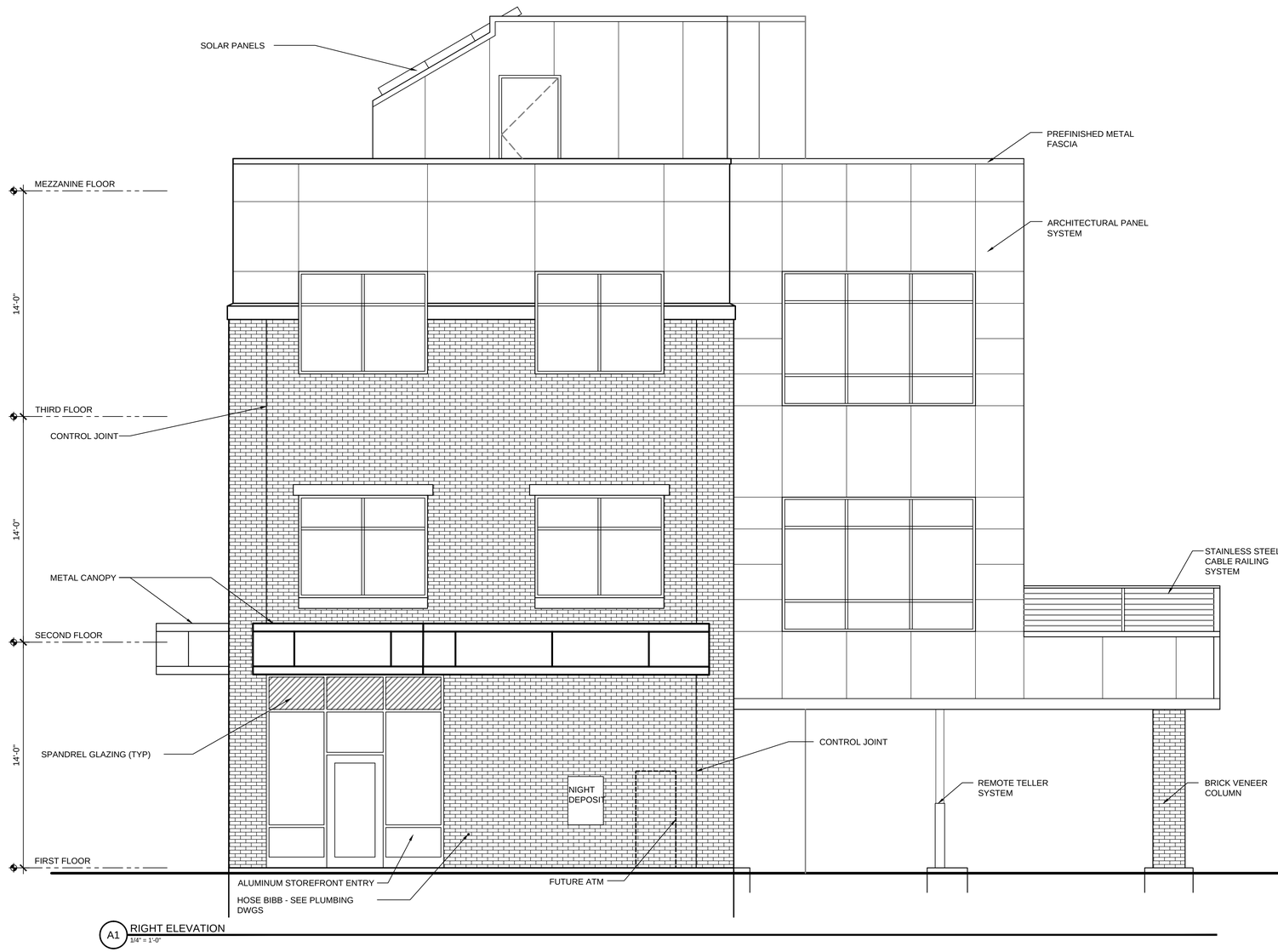
PORTLAND, MAINE

PROJECT NO:	14--007
CAD DWG FILE:	AE201 EXTERIOR ELEVATIONS.DWG
DRAWN BY:	CRJ
CHK'D BY:	DCM
COPYRIGHT:	2015

SHEET TITLE

EXTERIOR ELEVATIONS

AE201



A1 RIGHT ELEVATION
1/4" = 1'-0"

NO.	DATE	DESCRIPTION
0	03.31.15	SCHEMATIC DESIGN

ISSUED FOR CONSTRUCTION
07.10.15

TAC Architectural Group Inc.

LICENSED ARCHITECT Daniel C. Mills No. 3617 STATE OF MAINE
NOT FOR CONSTRUCTION
06.05.15

BSB - MARGINAL WAY

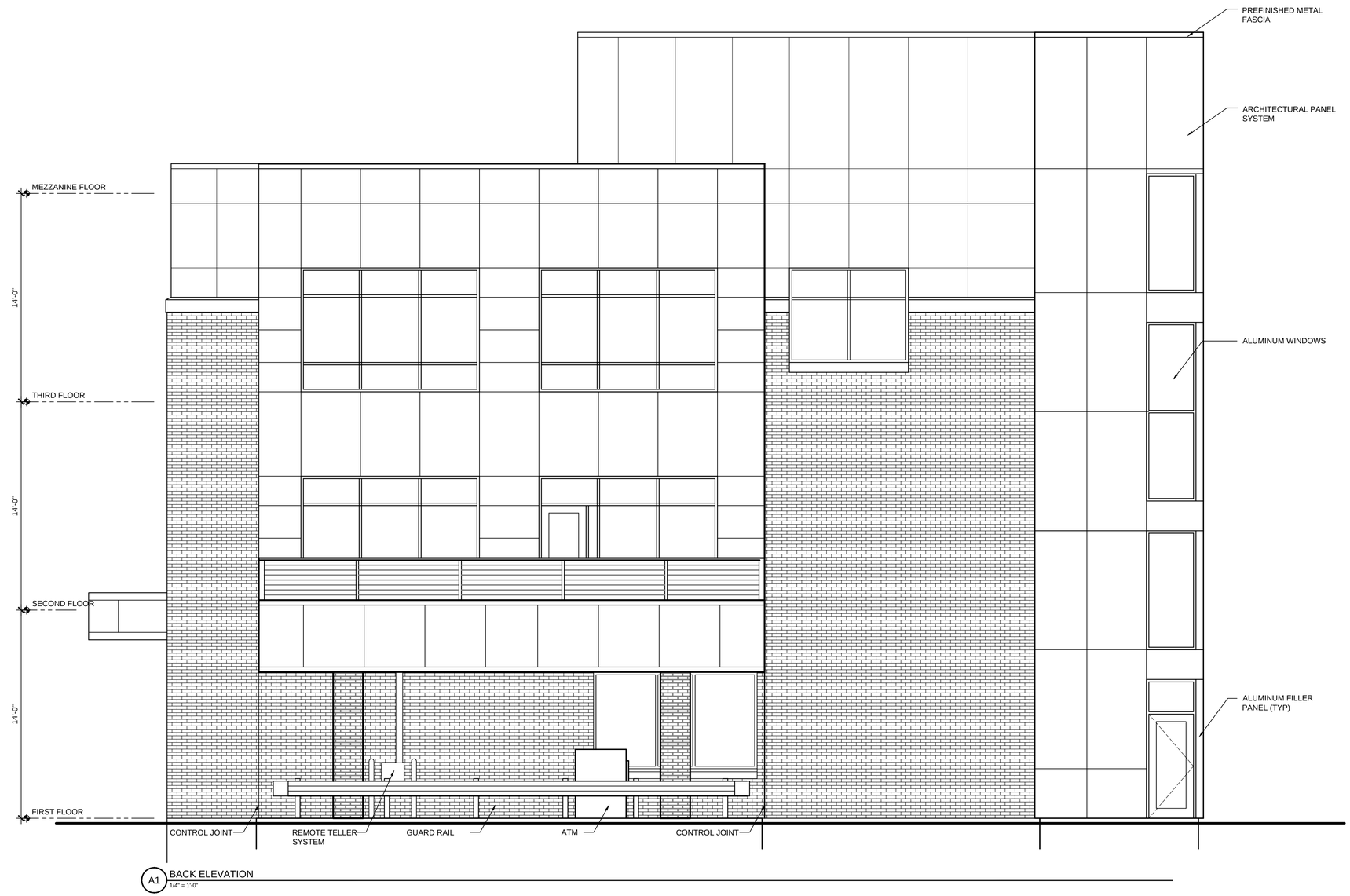
PORTLAND, MAINE

PROJECT NO:	14–007
CAD DWG FILE:	AE202 EXTERIOR ELEVATIONS.DWG
DRAWN BY:	CRJ
CHK'D BY:	DCM
COPYRIGHT:	2015

SHEET TITLE

EXTERIOR ELEVATIONS

AE202



A1 BACK ELEVATION
1/4" = 1'-0"

NO.	DATE	DESCRIPTION
0	03.31.15	SCHEMATIC DESIGN

ISSUED FOR CONSTRUCTION
07.10.15

TAC Architectural Group Inc.

LICENSED ARCHITECT Daniel C. Milne No. 3617 STATE OF MAINE
NOT FOR CONSTRUCT
06.05.15

BSB - MARGINAL WAY

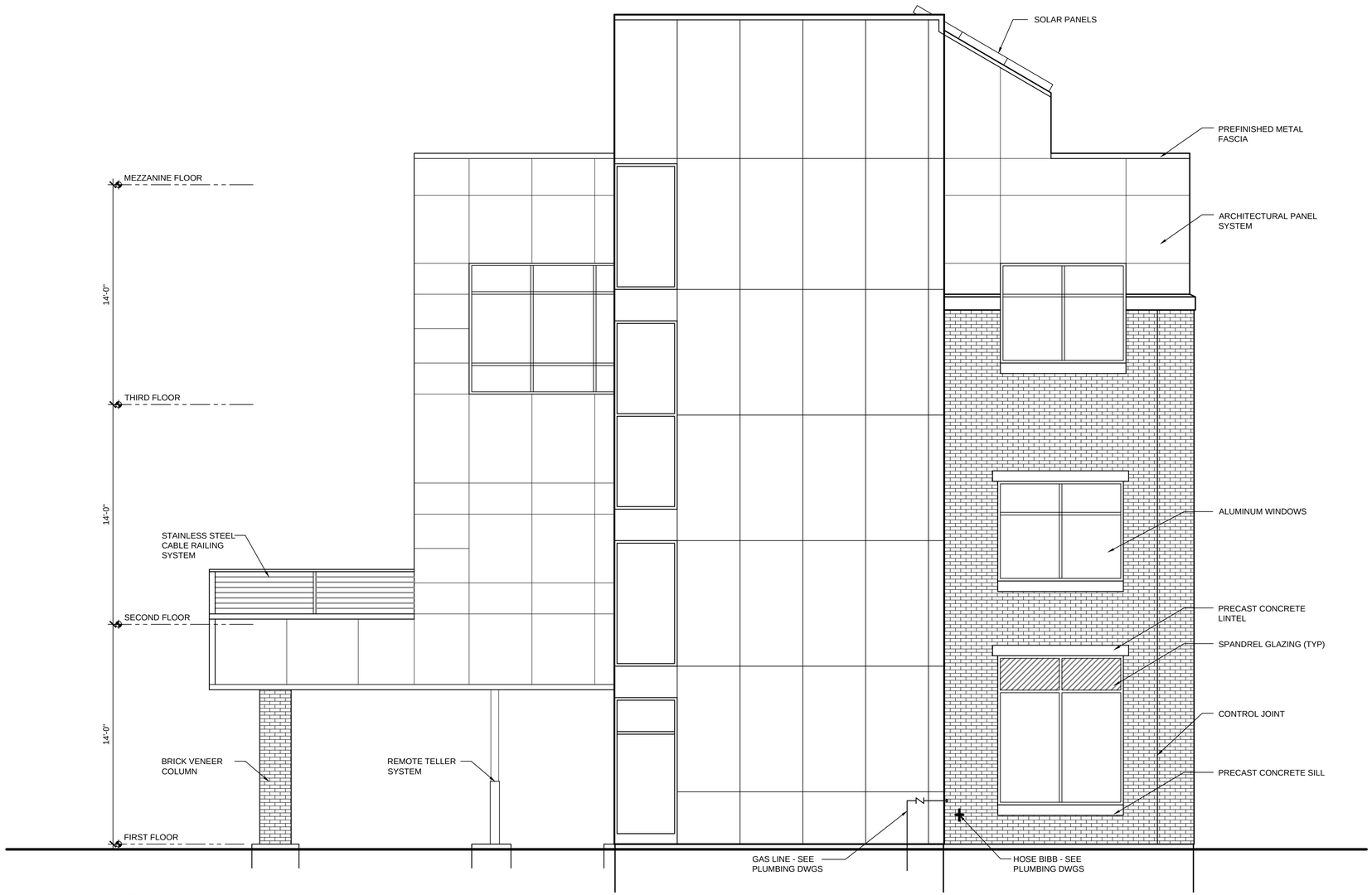
PORTLAND, MAINE

PROJECT NO:	14-007
CAD DWG FILE:	AE203 EXTERIOR ELEVATIONS.DWG
DRAWN BY:	CRJ
CHK'D BY:	DCM
COPYRIGHT:	2015

SHEET TITLE

EXTERIOR ELEVATIONS

AE203



A1 LEFT ELEVATION
1/4" = 1'-0"

NO.	DATE	DESCRIPTION
0	03.31.15	SCHEMATIC DESIGN

ISSUED FOR CONSTRUCTION
07.10.15

TAC Architectural Group Inc.

LICENSED ARCHITECT Daniel C. Mills No. 5617 STATE OF MAINE
NOT FOR CONSTRUCTION
06.05.15

BSB - MARGINAL WAY

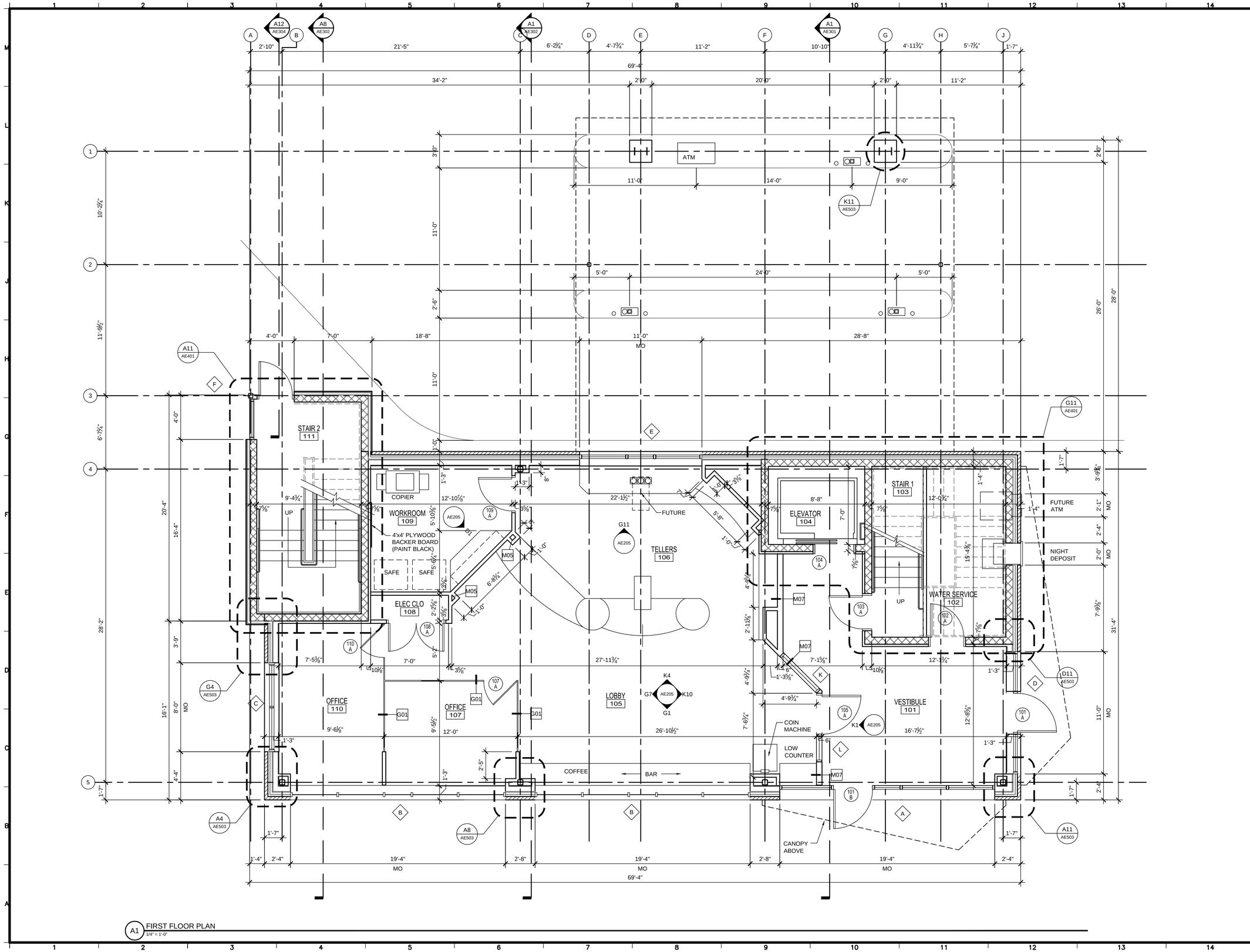
PORTLAND, MAINE

PROJECT NO:	14–007
CAD DWG FILE:	AE204 EXTERIOR ELEVATIONS.DWG
DRAWN BY:	CRJ
CHK'D BY:	DCM
COPYRIGHT:	2015

SHEET TITLE

EXTERIOR ELEVATIONS

AE204



A1 FIRST FLOOR PLAN
1/4" = 1'-0"

Plan 14

NO.	DATE	DESCRIPTION
0	03.31.15	SCHEMATIC DESIGN

ISSUED FOR CONSTRUCTION
07.10.15

TAC Architectural Group Inc.

LICENSED ARCHITECT
Daniel C. Miller
No. 3617
STATE OF MAINE
NOT FOR CONSTRUCTION
06.05.15

BSB - MARGINAL WAY

PORTLAND, MAINE

PROJECT NO:	14-007
CAD DWG FILE:	AE101 FIRST FLOOR PLAN.DWG
DRAWN BY:	CRJ
CHK'D BY:	DCM
COPYRIGHT:	2015

SHEET TITLE

FIRST FLOOR PLAN

AE101

PLANNING BOARD REPORT
PORTLAND, MAINE

Jewish Community Center and Preschool/Daycare 1342 Congress Street

Conditional Use & Level III Site Plan Review

Jewish Community Alliance of Southern Maine, Applicant

Project # 2015-058

CBL: 191 B-16 & 17

Submitted to: Portland Planning Board Public Hearing Date: July 14, 2015	Prepared by: Jean Fraser, Planner Date: July 10, 2015

I. INTRODUCTION

The Jewish Community Alliance of Southern Maine, as represented by Bradlee Mezquita of Tighe & Bond, has submitted a final Level III Site Plan and Conditional Use application for the construction of a single story 19,300 sq ft neighborhood center (defined as a "Place of Assembly") and preschool/daycare on the site of the existing St. Patrick's Catholic Church next to Westgate Shopping Center and extending back to Lassall Street behind residential properties.

The Planning Board considered this project at a Workshop on May 19, 2015 and since then the applicants have developed a comprehensive final submission that includes agreements with neighbors and addresses all of the traffic, parking and stormwater management concerns.

The existing church was closed in 2013 and its removal is a requirement in the terms of the sale (P&S Agreement in Attachment D) from the Roman Catholic Bishop of Portland. It will be demolished and a new building constructed. The existing church is not designated an historic landmark nor is within an historic district, so the demolition is not part of the current review.

The two acre site is located in the R5 residential zone where both "Places of Assembly" and "Day care facilities" are conditional uses, although in this case the Planning Board is the reviewing authority for the "Places of Assembly" aspect of the proposal, and the Zoning Board of Appeals (ZBA) has approved the preschool/daycare element of the project (Attachment 8).

Applicant: Jewish Community Alliance of Southern Maine
Consultants: Bradlee Mezquita of Tighe & Bond

II. REQUIRED REVIEWS

Applicant's Proposal	*Applicable Standards*
New structure of 19, 300 sq ft	Level III Site Plan
Place of Assembly (Neighborhood Center) of 10,000 sq ft or less	Institutional Conditional Use in the R5 zone [14.118 (b) 3] (Planning Board review)
Day care facilities	Other Conditional Use in the R5 zone [14.118 (c) 3] (Zoning Board of Appeals review)

III. WAIVERS:

Waiver	*Standard*
Soil survey: The applicant requests a waiver for completing a soil survey, as they have undertaken soil borings as part of an earlier environmental assessment.	*Technical Manual Section 7 Soil* Survey *Standards* requires soil surveys for all Level III site plan applications. Staff support a waiver of this requirement.
Driveway Width: The applicant requests a waiver from the 24 feet width requirement to provide 22.7 foot wide drive for one section near Congress Street where it is opposite the abutters existing parking, some of which is on the applicant's property.	*Technical Manual Section 1.7.1.3* specifies that driveway access is preferred to be 24 feet wide, and a minimum of 20 feet. Staff support this waiver (Att 2)

IV. PROJECT DATA

SUBJECT	*DATA*
Existing Zoning	R-5 Residential
Existing Use	Vacant church
Proposed Use	Place of Assembly and Day Care (new building)
Parcel Size	2 acres (91,146 sq ft)
Impervious Surface Area **--Existing** **--Proposed** **--Net Change**	 36,810 sq ft 48,310 sq ft 11,500 sq ft
Total Disturbed Area	Approx 85,000 sq ft
Building Footprint **--Existing** **--Proposed** **--Net Change**	(both are single story buildings) 14,960 sq ft 19,300 sq ft 4,340 sq ft
Parking Spaces **-Existing** **-Proposed** **# handicapped**	 13 50 2
Bicycle parking Spaces **-Existing** **-Proposed**	 0 3
Estimated cost of the project	TBD

V. EXISTING CONDITIONS

The parcel is in the R5 zone and located between the Westgate Shopping center (B2 zone) to the west and the 1330 Dental offices to the east, on the south side of Congress Street. The paved area alongside the dental building is part of the site and includes one of the existing access drives, which would be enhanced for the proposed neighborhood center. The Congress Street sidewalk is in good condition (Att 4), but the area of the drive access is not clearly defined and the proposal will remove the row of five (5) trees along the side. There is other existing peripheral vegetation that is also proposed to be removed.

The existing St Patrick's Catholic Church faces Congress Street with a looped drop off drive to the door.

The Westgate Plaza parking lot hugs the western edge of the site, and there is a shared access driveway that links the Plaza and the rear part of the church site. The owners of the Plaza have formalized the previous shared use in a signed easement (Att J).

The site is triangular in shape with the southern corner on Lassall Street. It includes a large area of grass at the rear (with some edge vegetation) and is bounded on the east by 5 properties: a commercial dental office and four residential buildings that front Lassall Street. Two of the residential owners are concerned about the fencing of the grassed area that connects to Lassall Street (see right and PC 1 and 4).

V. PROPOSED DEVELOPMENT

The applicant proposes to demolish the existing church building and construct a new single story building with a larger footprint (19,300 sq ft) to accommodate a neighborhood center and daycare facility (described in Attachment A and shown in Plans P2 to P16).

The neighborhood center is at the front of the building and falls under the ordinance definition (14-47) of a neighborhood center:

> *Neighborhood Center: A building or portion of a building used for recreational, artistic, social, educational, health, culture, or similar activities and services, usually owned and operated by a public or nonprofit group or agency. A neighborhood center is 10,000 square feet or less.*

The floor plan helps to understand how the site will work in terms of pedestrian and vehicle access, and play areas for the children. A detailed and slightly revised floorplan is in Attachment K, but this colored version helps to clarify the combination of uses: (Congress Street is to the right):

- Orange: Approx 4000 sq ft assembly area
- Blue: Offices
- Green: Day care

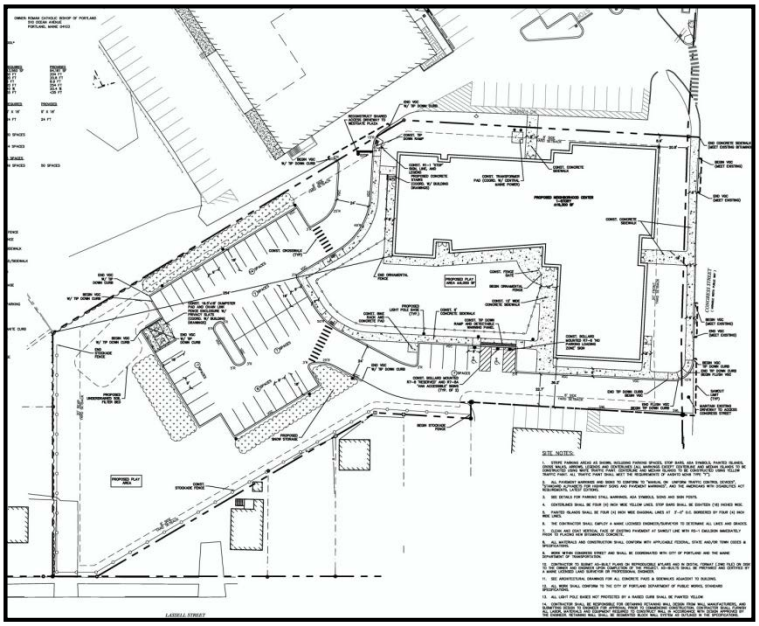
The Site Plan below (and in Plans P5 and P6) includes:

- Two drives (drop off loop at front removed)
- Parking lot for 50 vehicles
- Two play areas, both fenced
- Lighting in the rear part of the site
- Snow storage around parking lot
- Stormwater management
- Stockade fence along the two sides of the rear boundary

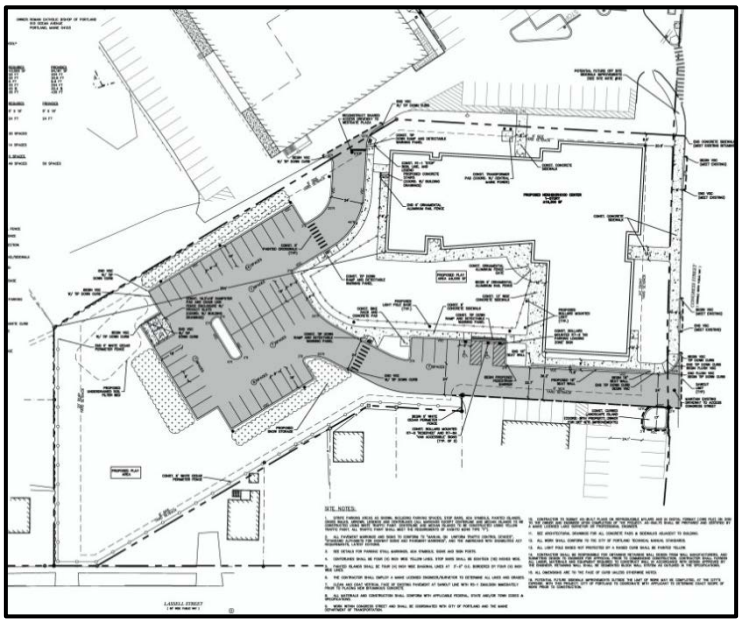
Added since the Workshop: (see comparison of plans below)

- 17 foot wide curbed landscaped island to delineate the driveway off of Congress Street
- Incorporated a barrier along west side of the main drive to prevent cars stopping to drop off
- Additional planting
- Revised lighting to reduce trespass
- Revised stormwater management and treatment
- Revised the elevations

The applicant has also arranged for 3 easements to facilitate the development and the stormwater agreements have also been submitted (Attachments J, M and N).



As presented to Workshop



Final for hearing (see also Plan P6)

VI. PUBLIC COMMENT AND WORKSHOP DISCUSSIONS

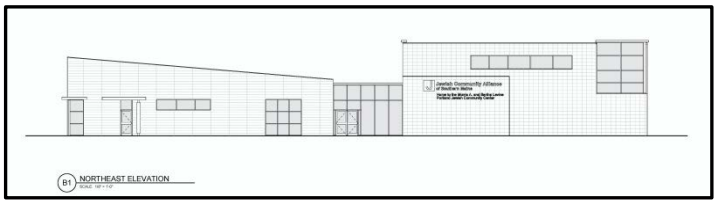
Workshop on May 19, 2015
The preliminary site plan submission was considered by the Board to be somewhat weak because a number of issues did not appear to have been addressed, including traffic and parking safety in respect of the daycare use; how the parking demand would be addressed; and information on the scale and compatibility of the design. The applicant has submitted a final application that is very comprehensive although the design element may still be an issue.

Public comments
A total of 147 notices of this Hearing were sent to property owners within 500 feet and to interested citizens, and the notice was published in the July 3rd / 6th, 2015 editions of the *Portland Press-Herald*. A Neighborhood Meeting is required for this project and was held on May 5, 2015 and attended by 16 people; the notes of the meeting are included at Attachment I. As of the time of completing this Report, the Planning office has received a total of 5 public comments (Attached as PC1- PC5), of which the last two are since the Workshop. PC1 and PC4 are from Patricia Bernard who is the closest neighbor, backs onto the area nearest to the day care entrance and has a number of concerns. These are discussed within the site plan review section of this report.

The letter from the Libbytown Neighborhood Association (PC 5) raises concerns regarding the design of the new building as it faces Congress Street. There are no design standards that apply to this R5 location and the proposed front and east elevations are shown below:

AS PRESENTED AT WORKSHOP:

AS PRESENTED FOR HEARING:
(extract from Plan P2)



The applicant was requested to clarify the thinking behind the design and submitted the following (Attachment O):

We are very appreciative with the feedback provided us from the Libbytown Neighborhood Association in their letter to the Jewish Community Alliance of Southern Maine dated June 30, 2015. With respect to the concern raised regarding the elevation of the front façade of the community hall, and the desire for additional embellishment, we offer the following. The form of the community hall is being carefully designed to consider the appropriate scale at both a vehicular and pedestrian level on the north corner of the site while responding to internal program demands. Its architectural expression is principally achieved through its cladding and fenestration materials and layout as well as the graphic nature of the building's sign, all of which are being constantly refined through the design process. The exterior elevations submitted as part of the Planning Board submission graphically represent these qualities but don't offer the experiential perception of perspective and the relationship of this form to its context – the surrounding neighborhood and adjacent structures. We are glad to continue to update interested parties as we progress in this endeavor and are confident that this building's expression will be an enhancement to the community.

VII. RIGHT, TITLE AND INTEREST AND FINANCIAL/TECHNICAL CAPACITY

Right, Title and Interest

The owner of the property is the Roman Catholic Bishop of Portland and a Purchase and Sale Agreement between the owner and the applicant was submitted (Attachment D). The applicant was requested to secure the rights to access from the Westgate Plaza owners prior to the hearing because the project would not be possible without it, and that was submitted in Attachment J. The City's legal Department reviewed this easement and finds it acceptable while noting the limitations on the easement running with the land (outlined in Paragraph 5) means that the easement will no longer be in effect if the ownership or use of the property changes substantially (Attachment 6).

Financial Capacity

A letter from Key Bank dated April 2, 2015 was submitted as evidence of financial capacity (Attachment E).

VIII. STAFF REVIEW

A. ZONING ASSESSMENT

The site is located in the R5 residential zone and the submitted site plan includes a zoning assessment in respect of dimensions, and the proposal meets these zoning requirements. The daycare is a conditional use in this zone (14-118) and was reviewed by the ZBA on May 21, 2015 and found to be in compliance with the standards (Attachment 7).

B. CONDITIONAL USE REVIEW

The site was previously a religious place of assembly and is now proposed as a neighborhood center with a large daycare facility. The daycare use is a ZBA conditional use review. The proposed neighborhood center is approximately 6500 sq ft (according to the data on the overall site plan (Plan P5) and comprises an assembly room of about 4000 sq ft and offices and conference rooms in the wing nearest Congress Street. The applicant's cover letter addresses the conditional use standards (Attachment A).

Per 14-118 (b) 3, the Planning Board is the reviewing authority for the Neighborhood Center which is classified as a Place of Assembly, as defined:

> *Place of assembly: A building or portion of a building used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly. This definition shall not include buildings or portions of buildings used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly where fifteen (15) or fewer people, not including the permanent residents of a single family dwelling, assemble.*

The ordinance standards and staff comments are listed below (ordinance text is in *italics*):

> Sec. 14-118. 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:*
>
> *(b) 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:*

3. Places of assembly;

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 comment: The proposal is replacing a religious place of assembly with a neighborhood center place of assembly with no expansion.

b. The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter; and

Staff comment: The proposal does not displace any residential uses.

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 comment: The daycare facility is not considered an institutional use and therefore there is just the neighborhood center to be considered.

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; and

Staff comment: The applicant has submitted a Level III Site Plan application which is being reviewed concurrently.

The following standards 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: The site is in the R5 zone which allows schools, hospitals, colleges and universities, most of which would have greater traffic generation and parking requirements than the proposed use. It is located immediately adjacent to the B2 zone, which allows a range of business uses (eg restaurants, theatres and performance halls) as well as the institutional uses allowed in the R5 zone.

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 proposed "place of assembly" creates different impacts as compared to the former church, in that the daycare would be operating every day and the hours and frequency of evening use are not identified in the submissions. It is therefore possible that there could be some noise impacts on the immediate neighbors (4 immediate properties in total with some multifamily) since the parking, access and building entrances are nearer to these residents. However, it is unlikely that the proposed "place of assembly" use would create more noise than a school, hospital, or college/university, which are allowed uses in the R5 zone.

If the Planning Board believes that noise may be a potential concern associated with this conditional use, staff suggest a condition of approval that defines the hours of operation to limit noise issues in the late evening. The B-1 zone, which acts as a transitional zone between residential and commercial uses, currently limits the hours of operation for retail and restaurant uses to 6:00 am to 11:00pm and could be used as a model for this project. The lighting would need to be designed to avoid any impacts on abutters and that would be addressed in the site plan review.

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 place of assembly use is similar to the former church, with gatherings generally occurring at off-peak hours and with potentially less traffic (due to the proposed assembly room areas being smaller - see details in the Traffic Memo in Attachment F). Larger gatherings will be accommodated with on-site parking, the agreed parking during off peak times at the abutting dental offices, and shared-use parking at the adjacent shopping center, with similar or fewer impacts than those associated with surrounding uses or other allowable uses in the zone.

C. DEVELOPMENT REVIEW (SITE PLAN STANDARDS in Section 14-526)

The applicant has provided a comprehensive application, with additional information and easement/agreements as necessary to facilitate the project (Attachments A to O and Plans P1 to P16. The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations.

A. *Transportation Standards*

Impact on Surrounding Street system and Access and Circulation

The proposed neighborhood center and daycare would utilize the two main existing drives which currently serve about a dozen parking spaces. The proposed site plan (Plan P5 and Plan P6) shows that these drives would be providing access to 50 space parking spaces, which would be used regularly for dropping off and picking up children from the daycare use.

At the Workshop there were a number of questions regarding the traffic generated by the daycare use and whether it was safe relative to Congress Street, plus other concerns about pedestrian safety. Since then the applicant has met with Tom Errico, Traffic engineering Reviewer, and submitted additional information to address all of the issues raised at the Workshop as described in detail in their cover letter (page 3 & 4 of Attachment A).

Tom Errico, the Traffic Engineering Reviewer, has confirmed that his comments have been addressed in full (Attachment 2) :

- *Maine Traffic Resources conducted a Trip Generation Analysis for the project and concludes that the proposed Jewish Community Center will generate less traffic as compared to St Patrick's Church. The applicant should provide an estimated comparison between the former Church use and the proposed project during the weekday AM and PM peak hours. My general sense in that during the AM peak hour the net change may not be significant given weekday morning Church services. During the weekday PM peak hour, I suspect the Church did not have regular weekday activities, while the proposed use will add traffic in conjunction with the day-care use.*

Status: The applicant has submitted updated trip generation information and is estimating an increase of 50 to 60 additional PM peak hours trips as compared to the former St. Patrick's Church. The applicant has noted that this estimate is likely high given existing facility conditions, which I agree with given my site observations. I find the trip generation estimate to be reasonable and I have no further comment.

- *I find driveway conditions along Congress Street to be improved with the elimination of existing driveways.*

Status: I have no further comment.

- *The driveway entering the site from Congress Street is noted as having a width of 22.7 feet. This width (in the area where parking maneuvers occur) does not meet City standards and thus a formal waiver should be requested by the applicant.*

Status: I find the proposed driveway width to be acceptable given that most vehicles will be passenger cars and that a secondary driveway via the Westgate Shopping Center will be provided. I support this waiver request.

- *A detectible warning panel is not required at the site driveway on Congress Street.*

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

- *I would suggest a tip-down curb entering the driveway on Congress Street, as currently provided.*

Status: The curb ramp layout should be revised so that the ramp flare does not impact accessibility along the sidewalk route. Having a tip-down design will help to address this issue.

- *I find the vehicular connection to Westgate Shopping Center to be an excellent access management strategy that will allow traffic from the Community Center to utilize the traffic signal at Stevens Avenue. I would note that this connection can also serve traffic from the abutting medical office building and traffic from Lassell Street. Accordingly, I would suggest that access use rights be provided. While I would prefer that the connection to the Westgate Shopping Center to be more direct, given the potential for vehicle/pedestrian conflict, the proposed plan appears acceptable. The applicant should provide a response on this issue and how they see traffic circulation interacting with site activity.*

Status: An agreement has been provided and I have no further comment.

- *The applicant shall consider the formal delineation of the driveway along the medical office property boundary, when entering from Congress Street.*

Status: The site plan has been revised and I find conditions to be acceptable.

- *The applicant should provide specifics about how the Daycare pick-up and drop-off activity will be managed from traffic perspective.*

Status: The applicant has provided the requested information and I have no further comment.

- *I'm concerned that the ITE data is not a good source for estimating traffic for the proposed project. I would suggest that the applicant conduct traffic counts/surveys at existing facilities to better estimate traffic levels. I would also like to get a better understanding on historic traffic activity at St. Patrick's Church. I recognize that traffic volumes are not likely to be available, but information on daily services and other event details would be helpful for my review and understanding of project impacts. The applicant should attempt to provide specific church service information, if available.*

Status: As noted above the applicant has provided a reasonable estimate and I have no further comment.

- *The pick-up and drop-off of daycare and others will need to be carefully managed. Accordingly, the applicant should provide specific details on how this process will take place. This should include what building entrances will be used, sidewalk facilities between parking spaces and the noted entrance, etc. I would note that the pick-up/drop-off program must be managed such that vehicles are not parking along the driveway off Congress Street.*

Status: I have reviewed existing JCA activity at their current Portland site and I have recommended that a barrier be constructed that prevents pedestrians from accessing the building entrance near Congress Street. The applicant has revised the site plan to include a 18" sitting wall along the curb. While the height of the wall in mountable by pedestrians, I do believe the physical presence of the wall will deter drop-off and pick-up activity near Congress Street. Accordingly, I find conditions to be acceptable.

Parking: The Site Plan (Plan P5) shows 50 spaces on the plan and this meets the zoning requirement of 49 spaces that is based on:

- 30 spaces for the neighborhood center – based on 1 parking space for each 150 sq ft of floor area used for the neighborhood center, which the Zoning Administrator advises applies to the assembly room/ multipurpose rooms only (4375 sq ft);
- 14 spaces for the day care - based on 1 space for each of the 14 day care staff members; and
- 5 spaces for the office component- based on 2000 sq ft of offices and 1 space per 400 sq ft.

The on-site provision did not address the demand for special events, and the applicant has provided additional information on the expected parking demand (Attachment A and F) and secured a parking license for about 40+ parking spaces in the dental offices parking lot immediately abutting the site and accessible from the same drive (Attachment N).

Mr Errico has confirmed (Attachment 2):

- *The applicant shall provide a Parking Supply analysis that documents parking needs both under a typical weekday scenario and during Community Center events.*

Status: The applicant has provided an analysis of event parking demand and estimates a need for approximately 50 vehicles. I find this estimate to be generally reasonable and given agreements for use of abutting parking lots, I find the projects parking supply to be acceptable. I have no further comment.

B. ***Environmental Quality Standards***

Landscape Preservation, Buffers and Parking Lot Landscaping

The Demolition Plan in Plan P4 shows the proposed removal of the 5 trees alongside the drive by the dental offices, and a considerable area of vegetation around the back of the site is also removed including near Lassall Street. A further 12 conifer trees are removed along the west boundary, which will become snow storage and parking area. The City Arborist expressed concern about the loss of the trees and also suggested the incorporation of a landscaped island at Congress Street (Attachment 5)

The Landscape Plan (Plan P16) was revised to include additional planting and a 17 foot wide landscaped island between the parking in the dental offices site and the widened drive into the neighborhood center.

At the time of completing this report the City Arborist has not provided final comments and these will be circulated to the Board at the hearing. The creation of the new island is welcomed.

The nearest neighbor (Pat Bernard, see PC 4) is concerned about the height of the stockade fence but is on vacation and there has not been an opportunity to discuss this with her. The applicant has noted her concern in their response letter (Attachment O) and are open to lowering the fence, as is the City Arborist. A suggested condition of approval addresses this unresolved issue of boundary treatment for the nearest neighbor.

Water quality; Stormwater Management; Erosion control:

The proposal creates an additional 11,500 sq ft of impervious surface and includes an improved stormwater management and treatment system comprising Stormtech chambers and an underdrained soil filter bed. The applicant submitted a Drainage Study as part of the original submission and revised it prior to the Workshop in response to the Peer Engineer Dave Senus's comments. At that time there were three outstanding issues (roof discharge; upgrade and responsibility for the southern outfall, and planting plan for the rain garden) and these have now been addressed to the satisfaction of the Peer Engineering Reviewer (Attachment 1).

The final arrangements involve a temporary easement with the abutter and a stormwater agreement with the abutter as well as the applicant, and these have been drafted and are included in Attachment M. A suggested condition of approval requires these to be executed prior to the issuance of a building permit.

C. ***Public Infrastructure and Community Safety Standards (1)***

Consistency with Master Plans and Public Safety and Fire Prevention

The proposals are generally acceptable in relation to these standards; the Fire Department has reviewed the fire truck turning templates and considers the access satisfactory (Attachment 4).

Public Utilities

The capacity to serve letters have been submitted in respect of all utilities except wastewater disposal (Attachment G); a suggested condition of approval relates to that being submitted prior to the issuance of a building permit.

D. ***Site Design Standards***

(note: there are no design standards that apply to this site)

Historic Resources:
One of the public comments (PC 2) has suggested that the existing building has historic value and should not be demolished. The City's Historic Preservation Program Manager has been consulted and she confirmed that this question was raised with her in the past and at that time she researched the building/architecture and determined that it did not meet the criteria for historic designation.
The church that is selling the property has made it a requirement of the sale that the building be demolished. Whether it should be designated historic is a decision for the Historic Preservation Program Manager and the Historic Preservation Board.

Exterior Lighting:
The lighting plan has been revised since the Workshop to address earlier concerns regarding trespass (Plan P15). At the Workshop staff had requested further lighting information regarding the area along the improved access drive from Congress Street (at the Congress Street end) and on the front of the building by the entrance from the sidewalk, as the earlier plan did not show any lighting for these areas. Staff requested additional information to evaluate the existing lighting in these areas and whether some additional lighting should be added to address safety and security in those areas. This has not been received, so a suggested condition requests this information.

Noise and Vibration:
There are no anticipated impacts, but the ordinance standards have been reinforced in a suggested condition of approval.

IX. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed day care center and neighborhood center as proposed by Jewish Community Alliance of Southern Maine. The suggested conditions of approval are largely minor, although staff request guidance from the Board regarding a possilbe conditional use condition regarding the hours of use for the neighborhood center element of the project (see discussion in VIII B).

VIII. MOTIONS FOR THE BOARD TO CONSIDER

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on March 24, 2015 for application #2014-054 (Conditional Use) and #2013-248 (Site Plan) (709-713 Congress Street), relevant to Portland's Technical and Design Standards and other regulations; and the testimony presented at the Planning Board hearing:

1. ***Driveway width:***
   The Planning Board (**waives/does not waive**) Technical Design Standard Section *1.7.1.3* to allow the proposed driveway to be 22.7 feet wide for one section near Congress Street as shown on the Site Plan in Plan P6;

2. ***Soil survey***
   The Planning Board (**waives/does not waive**) Technical Design Standard Section 7 *Soil Survey Standards* that require a soil survey as the applicant has previously taken soil borings as part of an earlier environmental assessment.

B. 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 July 14, 2015 for application #2014-058 (Conditional Use and Site Plan) (1342 Congress Street), 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 place of assembly at 1342 Congress Street as described in the application **does / does not** meet the standards of Section 14-474 and the standards of Section 14.118 (b) 3 for the R5 zone, subject to the following conditions:

i. The Jewish Neighborhood Center shall be limited to hours of operation from 6:00 am to 11:00 pm.

C. SITE PLAN

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 July 14, 2015 for application #2014-058 (Conditional Use and Site Plan) (1342 Congress Street), relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing:

The Planning Board finds that the plan **is / is not** in conformance with the site plan standards of the land use code, subject to the following conditions:

i. That the recorded easement with Charter Westgate, regarding use of the shared drive, shall be submitted to the Planning Authority prior to the issuance of a building permit; and

ii. That the Parking License (for use of the abutting dental offices lot) and the Drainage Improvements and Temporary Construction Easement (abutters to south) shall be executed and submitted to the Planning Authority prior to the issuance of a building permit; and

iii. That the applicant revise the curb ramp layout at Congress Street in accordance with the comments of Tom Errico dated June 26, 2015, with revised plans to be reviewed and approved by the Planning Authority prior to the issuance of a building permit; and

iv. That the height of the boundary fence along the eastern boundary and associated buffer treatment be the subject of further discussion with the City Arborist, Planning Authority and nearest neighbor (P Bernard) and any agreed revisions be shown on a revised Site Plan/Landscape Plan for final approval prior to the issuance of a building permit; and

v. That the final comments of the Department of Public Services shall be addressed to the satisfaction of the Planning Authority prior to the issuance of a building permit; and

vi. That the outstanding utility letter be submitted to the Planning Authority prior to the issuance of a building permit; and

vii. The developer/contractor/subcontractor must comply with conditions of the submitted and approved stormwater management plan and sediment and erosion control plan and associated inspection and maintenance manual, based on City standards and state guidelines. The owner/operator of the approved stormwater management system and all assigns shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements. The two maintenance agreements (one for the applicants site and one for the abutters site) for the stormwater drainage system shall be submitted, signed and recorded with a copy to the Planning Division and Department of Public Services prior to the issuance of a building permit; and

viii. That additional lighting information shall be submitted in respect of the widened drive access and building entrance nearest to Congress Street to show that the site lighting meets the City Technical Standards, and any deficiencies shall be addressed in a revised lighting plan for review and approval prior to the issuance of a building permit; and

ix. That all heating, ventilation and air conditioning shall be screened and located away from abutting residential properties.

[Attachments on next page]

ATTACHMENTS:

Report attachments

1. Peer Engineering Reviewer, Dave Senus comments
2. Traffic Eng. Reviewer Tom Errico comments
3. Dept of Public Services comments
4. Fire Dept. Keith Gautreau comments
5. City Arborist comments 5.15.2015
6. Legal Dept comments re Plaza easement
7. ZBA Determination re Day Care Cond. Use

Public Comments

PC 1 P Barnard
PC 2 P Jeffrey
PC 3 P Jeffrey
PC 4 P Bernard
PC 5 Libbytown Neighborhood Association

Applicants submittal

A. Tighe & Bond cover letter 6.24.2015
B. Final Site Plan application
C. Final Conditional use application (Places of Assembly)
D. P&S Agreement
E. Letter of financial capacity (Key Bank) 4.2.2015
F. Traffic Analysis 3.19.2015; 3.13.2015 and 6.4.2015
G. Utility letters
H. Fire Dept Checklist & Wastewater application

Applicants submittal, con't

I. Neighborhood Meeting documents
J. Charter Westgate Easement Agreement
K. Floor Plan
L. Drainage Study
M. Stormwater agreements
N. Parking license re dental lot
O. Response to public comments 7.8.2015

Plans

P1. Survey
P2. Exterior elevations
P3. Cover Page
P4. Existing Conditions and Demolition Plan
P5. Overall site Plan
P6. Site plan
P7. Grading, Drainage and Erosion Control Plan
P8. Utilities Plan
P9. Erosion Control Notes and Details
P10. P13. Details
P14. Offsite Drainage
P15. Site Lighting Plan
P16. Landscape Plan

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Att. 1

MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, P.E.
DATE: July 6, 2015
RE: 1342 Congress Street Neighborhood Center, Final Level III Site Plan Application

---

Woodard & Curran has reviewed the response to comments and Final Level III Site Plan Application submittal for the for the proposed Neighborhood Center at 1342 Congress Street. The project involves the construction of a 19,300 SF building with associated site improvements that include a surface parking lot, stormwater management system, utilities, site lighting, and landscaping. The project will disturb approximately 85,000 SF and result in 12,500 SF of additional impervious area.

Documents Reviewed by Woodard & Curran

- Response to Comments letter dated June 24, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.
- Revised Drainage Study for the Proposed Neighborhood Center located at 1342 Congress Street, revision date June 23, 2015, prepared by Tighe & Bond on behalf of the Jewish Community Alliance of Southern Maine.
- Engineering Plans, Sheets C-1 through C-10, rev dated June 23, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.

Comments

1. The Applicant has noted that they are currently working on completing a Temporary Construction Agreement with the abutting landowner at 60 Willow Lane for the installation of permanent stormwater conveyance features on the abutter's property, to be owned and maintained by the abutter, and will submit this agreement to the Planning Board prior to the meeting.
2. All previous review comments provided by Woodard & Curran have been adequately addressed.

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MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, P.E.
DATE: April 22, 2015
RE: 1342 Congress Street Neighborhood Center, Preliminary Level III Site Plan Application

---

Woodard & Curran has reviewed the Preliminary Level III Site Plan Application for the proposed Neighborhood Center located at 1342 Congress Street in Portland, Maine. The project involves the construction of a 19,300 SF building with associated site improvements that include a surface parking lot, stormwater management system, utilities, site lighting, and landscaping. The project will disturb approximately 85,000 SF and result in 12,500 SF of additional impervious area.

Documents Reviewed by Woodard & Curran

- Preliminary Level III Site Plan Application and attachments, dated April 3, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.
- Engineering Plans, Sheets C-1 through C-9, dated April 3, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.

Comments

1) The project will disturb more than one acre of area and will therefore require filing a notice of intent to comply with the Maine Construction General Permit with the MaineDEP.
2) The application is preliminary. As such, additional documents will be submitted for the final application, including letters from utilities confirming capacity to serve the proposed development and a Construction Management Plan. Woodard & Curran will perform a review of the Final Application upon receipt of those documents.
3) 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: Plans, notes, and details have been provided to address 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.
    b) General Standards: The project will result in a net increase in impervious area of approximately 12,500 square feet. As such, the project is required to include stormwater management features for water quality control. The Applicant is proposing an underdrained soil filter to meet the General Standards. The following comments should be addressed:
        i) The Applicant has requested a waiver from the requirement for pre-treatment of runoff directed to filter BMPs due to topographic and geometric constraints of the site. Pre-treatment is particularly important for filter systems to ensure that sediment does not clog the filter and impede its function. It appears that there is ample space on the southern portion of the site to provide the MaineDEP recommended forebay area. We recommend that the applicant include a sediment forebay at the inlet point to the filter.
        ii) The Applicant should provide calculations demonstrating that an area equivalent to 95% of the new impervious area will be treated by the Underdrained Soil Filter system in accordance with the General Standards.
        iii) Per Chapter 7.1 of Volume III of the MaineDEP Stormwater BMP Manual, the Applicant should provide appropriate sizing calculations, including treatment volumes, filter area, and peak water quality storage depths, for the proposed Underdrained Soil Filter system.
    c) Flooding Standard: The project will result in net increase in impervious area of approximately 12,500 square feet.. As such, the project is required to include stormwater management features to

control the rate of stormwater runoff from the site. The Applicant has provided HydroCAD Reports to demonstrate compliance with the Flooding Standard. The following comments should be addressed:

i) Without site-specific soil infiltration testing data, the HydroCAD model cannot include the discarding of flow by means of infiltration within the soil filter area.
ii) Future submittals should include details for the outlet control structures associated with the soil filter and the StormTech Chamber system, including orifices and weirs.
iii) Future submittals should identify key elevations for the StormTech Chamber detail matching to the elevations utilized in the HydroCAD model.
iv) The Pre-Development Watershed Plan (WS-1) indicates that runoff from the existing building roof is part of catchments WS-1 and WS-2; however, runoff from some of these roof areas is collected in downspouts that enter into the ground and which do not appear to flow to PA-1 and PA-2. The Applicant should determine the discharge location for the building's roof downspouts and re-evaluate the catchment areas and stormwater model based on their findings.
v) The Applicant has proposed to discharge the majority of the site's drainage to a new outfall located at the southwest edge of the site, adjacent to an existing drainage ditch that flows across a residential property located south of the site. Although the pre/post stormwater analysis is intended to show that the flow at this study point will not increase in the 2, 10 and 25 year storm event conditions, there will be a new outfall with a concentrated discharge at this location. We recommend that the Applicant work with the adjacent property owner to determine if there are existing concerns over drainage in this area, and based on input from that property owner, determine if improvements can or should be made to the drainage ditch as part of this project.

4) The Long Term Operations & Maintenance Plan for stormwater management systems should include a reference to Chapter 32 of the City of Portland Code of Ordinances related to annual reporting requirements.
5) The proposed Underdrained Soil Filter Bed detail refers to a Rain Garden Planting Plan for proposed plantings; however, it does not appear that this plan has been provided at this time.
6) The proposed Vertical Granite Curb, Concrete Sidewalk, and Utility Trench details should be revised to comply with the City of Portland Technical Manual for work within the City Right-of-Way.

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MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, P.E.
DATE: May 13, 2015
RE: 1342 Congress Street Neighborhood Center, Preliminary Level III Site Plan Application

---

Woodard & Curran has reviewed the Preliminary Level III Site Plan Application response to comments submittal for the for the proposed Neighborhood Center at 1342 Congress Street. The project involves the construction of a 19,300 SF building with associated site improvements that include a surface parking lot, stormwater management system, utilities, site lighting, and landscaping. The project will disturb approximately 85,000 SF and result in 12,500 SF of additional impervious area.

Documents Reviewed by Woodard & Curran

- Response to Comments Memorandum dated May 8, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.
- Revised Drainage Study for the Proposed Neighborhood Center located at 1342 Congress Street, revision date May 5, 2015, prepared by Tighe & Bond on behalf of the Jewish Community Alliance of Southern Maine.
- Engineering Plans, Sheets C-2A through C-9, rev dated May 8, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.

Comments (Previous review comment with update in **bold)**

1) The project will disturb more than one acre of area and will therefore require filing a notice of intent to comply with the Maine Construction General Permit with the MaineDEP.
   Acknowledged by Applicant.
2) The application is preliminary. As such, additional documents will be submitted for the final application, including letters from utilities confirming capacity to serve the proposed development and a Construction Management Plan. Woodard & Curran will perform a review of the Final Application upon receipt of those documents.
   Acknowledged by Applicant.
3) 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: Plans, notes, and details have been provided to address 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.
      Acknowledged by Applicant.
   b) General Standards: The project will result in a net increase in impervious area of approximately 12,500 square feet. As such, the project is required to include stormwater management features for water quality control. The Applicant is proposing an underdrained soil filter to meet the General Standards. The following comments should be addressed:
      i) The Applicant has requested a waiver from the requirement for pre-treatment of runoff directed to filter BMPs due to topographic and geometric constraints of the site. Pre-treatment is particularly important for filter systems to ensure that sediment does not clog the filter and impede its function. It appears that there is ample space on the southern portion of the site to provide the MaineDEP recommended forebay area. We recommend that the applicant include a sediment forebay at the inlet point to the filter.
         Comment adequately addressed - A sediment forebay has been added to design.

ii) The Applicant should provide calculations demonstrating that an area equivalent to 95% of the new impervious area will be treated by the Underdrained Soil Filter system in accordance with the General Standards.
Comment adequately addressed – Calculations have been provided. An adequate area will be treated and the soil filter system is designed to detain and treat the water quality volume in accordance with the General Standards.

iii) Per Chapter 7.1 of Volume III of the MaineDEP Stormwater BMP Manual, the Applicant should provide appropriate sizing calculations, including treatment volumes, filter area, and peak water quality storage depths, for the proposed Underdrained Soil Filter system.
Comment adequately addressed – Calculations have been provided.

c) Flooding Standard: The project will result in net increase in impervious area of approximately 12,500 square feet.. As such, the project is required to include stormwater management features to control the rate of stormwater runoff from the site. The Applicant has provided HydroCAD Reports to demonstrate compliance with the Flooding Standard. The following comments should be addressed:

i) Without site-specific soil infiltration testing data, the HydroCAD model cannot include the discarding of flow by means of infiltration within the soil filter area.
Comment adequately addressed – Model has been revised.

ii) Future submittals should include details for the outlet control structures associated with the soil filter and the StormTech Chamber system, including orifices and weirs.
Comment adequately addressed – Details provided.

iii) Future submittals should identify key elevations for the StormTech Chamber detail matching to the elevations utilized in the HydroCAD model.
Comment adequately addressed – Details provided.

iv) The Pre-Development Watershed Plan (WS-1) indicates that runoff from the existing building roof is part of catchments WS-1 and WS-2; however, runoff from some of these roof areas is collected in downspouts that enter into the ground and which do not appear to flow to PA-1 and PA-2. The Applicant should determine the discharge location for the building's roof downspouts and re-evaluate the catchment areas and stormwater model based on their findings.
The Applicant's engineer has stated that they are actively working with the Owner to determine the outlet locations of the roof drains. As part of the future, final submittal, the Applicant will revise the Pre- Development Watershed Plan (WS-1) and drainage design (if needed) to account for updated roof drainage information.

v) The Applicant has proposed to discharge the majority of the site's drainage to a new outfall located at the southwest edge of the site, adjacent to an existing drainage ditch that flows across a residential property located south of the site. Although the pre/post stormwater analysis is intended to show that the flow at this study point will not increase in the 2, 10 and 25 year storm event conditions, there will be a new outfall with a concentrated discharge at this location. We recommend that the Applicant work with the adjacent property owner to determine if there are existing concerns over drainage in this area, and based on input from that property owner, determine if improvements can or should be made to the drainage ditch as part of this project.
The
The Applicant has acknowledged that they will work with the adjacent property owner to determine if there are any existing concerns over drainage in this area and determine if improvements are necessary. Information regarding these discussions/decisions should be provided with the final submittal.

4) Sheet C-2b depicts snow storage along the east edge of the rear parking lot, adjacent to several residential properties. The grading plan (C-3) indicates that runoff from this area would potentially flow onto these properties. The Applicant should limit snow storage in this area and should revisit the

proposed grading to ensure that runoff from the project property is not directed onto these abutting residential lots.

Comment adequately addressed - The grading plan has been revised to provide for a shallow swale on the project property.

5) The Long Term Operations & Maintenance Plan for stormwater management systems should include a reference to Chapter 32 of the City of Portland Code of Ordinances related to annual reporting requirements.

   Comment adequately addressed – Annual reporting requirements per Chapter 32 added to O&M Plan.

6) The proposed Underdrained Soil Filter Bed detail refers to a Rain Garden Planting Plan for proposed plantings; however, it does not appear that this plan has been provided at this time.

   The Applicant has acknowledged that the Landscape Plan, Sheet L-1, will be updated to include an appropriate planting plan for the Underdrained Soil Filter with the Final Site Plan Submission.

7) The proposed Vertical Granite Curb, Concrete Sidewalk, and Utility Trench details should be revised to comply with the City of Portland Technical Manual for work within the City Right-of-Way.

   Comment adequately addressed – Details provided.

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MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, P.E.
DATE: May 1, 2015
RE: 1342 Congress Street Neighborhood Center, Preliminary Level III Site Plan Application

---

Woodard & Curran has reviewed the Preliminary Level III Site Plan Application for the proposed Neighborhood Center located at 1342 Congress Street in Portland, Maine. The project involves the construction of a 19,300 SF building with associated site improvements that include a surface parking lot, stormwater management system, utilities, site lighting, and landscaping. The project will disturb approximately 85,000 SF and result in 12,500 SF of additional impervious area.

Documents Reviewed by Woodard & Curran

- Preliminary Level III Site Plan Application and attachments, dated April 3, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.
- Engineering Plans, Sheets C-1 through C-9, dated April 3, 2015, prepared by Tighe & Bond, on behalf of the Jewish Community Alliance of Southern Maine.

Comments

1) The project will disturb more than one acre of area and will therefore require filing a notice of intent to comply with the Maine Construction General Permit with the MaineDEP.
2) The application is preliminary. As such, additional documents will be submitted for the final application, including letters from utilities confirming capacity to serve the proposed development and a Construction Management Plan. Woodard & Curran will perform a review of the Final Application upon receipt of those documents.
3) 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: Plans, notes, and details have been provided to address 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.
   b) General Standards: The project will result in a net increase in impervious area of approximately 12,500 square feet. As such, the project is required to include stormwater management features for water quality control. The Applicant is proposing an underdrained soil filter to meet the General Standards. The following comments should be addressed:
      i) The Applicant has requested a waiver from the requirement for pre-treatment of runoff directed to filter BMPs due to topographic and geometric constraints of the site. Pre-treatment is particularly important for filter systems to ensure that sediment does not clog the filter and impede its function. It appears that there is ample space on the southern portion of the site to provide the MaineDEP recommended forebay area. We recommend that the applicant include a sediment forebay at the inlet point to the filter.
      ii) The Applicant should provide calculations demonstrating that an area equivalent to 95% of the new impervious area will be treated by the Underdrained Soil Filter system in accordance with the General Standards.
      iii) Per Chapter 7.1 of Volume III of the MaineDEP Stormwater BMP Manual, the Applicant should provide appropriate sizing calculations, including treatment volumes, filter area, and peak water quality storage depths, for the proposed Underdrained Soil Filter system.
   c) Flooding Standard: The project will result in net increase in impervious area of approximately 12,500 square feet.. As such, the project is required to include stormwater management features to

control the rate of stormwater runoff from the site. The Applicant has provided HydroCAD Reports to demonstrate compliance with the Flooding Standard. The following comments should be addressed:

i) Without site-specific soil infiltration testing data, the HydroCAD model cannot include the discarding of flow by means of infiltration within the soil filter area.
ii) Future submittals should include details for the outlet control structures associated with the soil filter and the StormTech Chamber system, including orifices and weirs.
iii) Future submittals should identify key elevations for the StormTech Chamber detail matching to the elevations utilized in the HydroCAD model.
iv) The Pre-Development Watershed Plan (WS-1) indicates that runoff from the existing building roof is part of catchments WS-1 and WS-2; however, runoff from some of these roof areas is collected in downspouts that enter into the ground and which do not appear to flow to PA-1 and PA-2. The Applicant should determine the discharge location for the building's roof downspouts and re-evaluate the catchment areas and stormwater model based on their findings.
v) The Applicant has proposed to discharge the majority of the site's drainage to a new outfall located at the southwest edge of the site, adjacent to an existing drainage ditch that flows across a residential property located south of the site. Although the pre/post stormwater analysis is intended to show that the flow at this study point will not increase in the 2, 10 and 25 year storm event conditions, there will be a new outfall with a concentrated discharge at this location. We recommend that the Applicant work with the adjacent property owner to determine if there are existing concerns over drainage in this area, and based on input from that property owner, determine if improvements can or should be made to the drainage ditch as part of this project.

4) Sheet C-2b depicts snow storage along the east edge of the rear parking lot, adjacent to several residential properties. The grading plan (C-3) indicates that runoff from this area would potentially flow onto these properties. The Applicant should limit snow storage in this area and should revisit the proposed grading to ensure that runoff from the project property is not directed onto these abutting residential lots.
5) The Long Term Operations & Maintenance Plan for stormwater management systems should include a reference to Chapter 32 of the City of Portland Code of Ordinances related to annual reporting requirements.
6) The proposed Underdrained Soil Filter Bed detail refers to a Rain Garden Planting Plan for proposed plantings; however, it does not appear that this plan has been provided at this time.
7) The proposed Vertical Granite Curb, Concrete Sidewalk, and Utility Trench details should be revised to comply with the City of Portland Technical Manual for work within the City Right-of-Way.

Att. 2

From: Tom Errico <thomas.errico@tylin.com>
To: Jean Fraser <JF@portlandmaine.gov>
CC: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@port...
Date: 6/26/2015 10:38 AM
Subject: Jewish Community Center - Final Traffic Comments

Jean - I have reviewed the revised application materials and the following represents a status update on my previous comments.

* Maine Traffic Resources conducted a Trip Generation Analysis for the project and concludes that the proposed Jewish Community Center will generate less traffic as compared to St Patrick's Church. The applicant should provide an estimated comparison between the former Church use and the proposed project during the weekday AM and PM peak hours. My general sense in that during the AM peak hour the net change may not be significant given weekday morning Church services. During the weekday PM peak hour, I suspect the Church did not have regular weekday activities, while the proposed use will add traffic in conjunction with the day-care use.
Status: The applicant has submitted updated trip generation information and is estimating an increase of 50 to 60 additional PM peak hours trips as compared to the former St. Patrick's Church. The applicant has noted that this estimate is likely high given existing facility conditions, which I agree with given my site observations. I find the trip generation estimate to be reasonable and I have no further comment.

* I find driveway conditions along Congress Street to be improved with the elimination of existing driveways.
Status: I have no further comment.

* The driveway entering the site from Congress Street is noted as having a width of 22.7 feet. This width (in the area where parking maneuvers occur) does not meet City standards and thus a formal waiver should be requested by the applicant.
Status: I find the proposed driveway width to be acceptable given that most vehicles will be passenger cars and that a secondary driveway via the Westgate Shopping Center will be provided. I support this waiver request.

* A detectible warning panel is not required at the site driveway on Congress Street.
Status: The plans have been revised and I have no further comment.

* I would suggest a tip-down curb entering the driveway on Congress Street, as currently provided.
Status: The curb ramp layout should be revised so that the ramp flare does not impact accessibility along the sidewalk route. Having a tip-down design will help to address this issue.

* The applicant shall provide a Parking Supply analysis that documents parking needs both under a typical weekday scenario and during Community Center events.
Status: The applicant has provided an analysis of event parking demand and estimates a need for approximately 50 vehicles. I find this estimate to be generally reasonable and given agreements for use of abutting parking lots, I find the projects parking supply to be acceptable. I have no further comment.

* I find the vehicular connection to Westgate Shopping Center to be an excellent access management strategy that will allow traffic from the Community Center to utilize the traffic signal at Stevens Avenue. I would note that this connection can also serve traffic from the abutting medical office building and traffic from Lassell Street. Accordingly, I would suggest that access use rights be provided.

While I would prefer that the connection to the Westgate Shopping Center to be more direct, given the potential for vehicle/pedestrian conflict, the proposed plan appears acceptable. The applicant should provide a response on this issue and how they see traffic circulation interacting with site activity.
Status: An agreement has been provided and I have no further comment.

* The applicant shall consider the formal delineation of the driveway along the medical office property boundary, when entering from Congress Street.
Status: The site plan has been revised and I find conditions to be acceptable.

* The applicant should provide specifics about how the Daycare pick-up and drop-off activity will be managed from traffic perspective.
Status: The applicant has provided the requested information and I have no further comment.

* I'm concerned that the ITE data is not a good source for estimating traffic for the proposed project. I would suggest that the applicant conduct traffic counts/surveys at existing facilities to better estimate traffic levels. I would also like to get a better understanding on historic traffic activity at St. Patrick's Church. I recognize that traffic volumes are not likely to be available, but information on daily services and other event details would be helpful for my review and understanding of project impacts. The applicant should attempt to provide specific church service information, if available.
Status: As noted above the applicant has provided a reasonable estimate and I have no further comment.

* The pick-up and drop-off of daycare and others will need to be carefully managed. Accordingly, the applicant should provide specific details on how this process will take place. This should include what building entrances will be used, sidewalk facilities between parking spaces and the noted entrance, etc. I would note that the pick-up/drop-off program must be managed such that vehicles are not parking along the driveway off Congress Street.
Status: I have reviewed existing JCA activity at their current Portland site and I have recommended that a barrier be constructed that prevents pedestrians from accessing the building entrance near Congress Street. The applicant has revised the site plan to include a 18" sitting wall along the curb. While the height of the wall in mountable by pedestrians, I do believe the physical presence of the wall will deter drop-off and pick-up activity near Congress Street. Accordingly, I find conditions to be acceptable.

Please contact me 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<mailto:thomas.errico@tylin.com>
Visit us online at www.tylin.com<http://www.tylin.com>
Twitter | Facebook | LinkedIn | YouTube

"One Vision, One Company"

Please consider the environment before printing.

From: Tom Errico <thomas.errico@tylin.com>
To: Jean Fraser <JF@portlandmaine.gov>
CC: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@port...
Date: 5/13/2015 1:41 PM
Subject: Jewish Community Center

Jean - I have reviewed updated trip generation information provided by the applicant and have the following additional comments.

* I'm concerned that the ITE data is not a good source for estimating traffic for the proposed project. I would suggest that the applicant conduct traffic counts/surveys at existing facilities to better estimate traffic levels. I would also like to get a better understanding on historic traffic activity at St. Patrick's Church. I recognize that traffic volumes are not likely to be available, but information on daily services and other event details would be helpful for my review and understanding of project impacts. The applicant should attempt to provide specific church service information, if available.

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If you have any questions, please contact me.

Best regards,

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207.781.4753 (fax)
thomas.errico@tylin.com<mailto:thomas.errico@tylin.com>
Visit us online at www.tylin.com<http://www.tylin.com>
Twitter | Facebook | LinkedIn | YouTube

"One Vision, One Company"

Please consider the environment before printing.

From: Tom Errico <thomas.errico@tylin.com>
To: Jean Fraser <JF@portlandmaine.gov>
CC: "Margolis-Pineo, David" <DMP@portlandmaine.gov>, Katherine Earley <KAS@p...
Date: 4/29/2015 1:34 PM
Subject: 1342 Congress Street/Jewish Community Center -- Preliminary Traffic Comments

Jean - I have reviewed the application materials and the following summarizes my preliminary traffic comments.

* Maine Traffic Resources conducted a Trip Generation Analysis for the project and concludes that the proposed Jewish Community Center will generate less traffic as compared to St Patrick's Church. The applicant should provide an estimated comparison between the former Church use and the proposed project during the weekday AM and PM peak hours. My general sense in that during the AM peak hour the net change may not be significant given weekday morning Church services. During the weekday PM peak hour, I suspect the Church did not have regular weekday activities, while the proposed use will add traffic in conjunction with the day-care use.

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* The applicant shall consider the formal delineation of the driveway along the medical office property boundary, when entering from Congress Street.

* The applicant should provide specifics about how the Daycare pick-up and drop-off activity will be managed from traffic perspective.

Please contact me if you have any questions.

Best regards,

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[T.Y. Lin International]T.Y. Lin International
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NOT FINAL- AWATING FINAL COMMENTS

May 15, 2015

Memo To: Barbara Barhydt
Jean Fraser
From: David Margolis-Pineo
Re: Review Comments for the Neighborhood Center – 1342 Congress St (2015-058)

The Department of Public Services has the following comments.

1. Applicant is required to submit a site survey plan stamped by a licensed surveyor.
2. The City requires that all catchbasins have a three foot sump minimum. The proposed four foot sump is acceptable.
3. All drawing are required to be stamped by a PE.
4. The City would like the applicant to consider that granite tip-downs be use instead of radius curbing at the driveway access. ADA panels are not required at this location.
5. Please modify note 12 on sheet C-2B to read, "All work shall conform to the City of Portland Technical Manual standards."
6. The catchbasin outlet control device referred to as "The Snout" is an acceptable alternative to the Casco Trap.
7. Please show and construct the proposed concrete sidewalk within the street right of way with the back of the sidewalk against the property line. This will result in an approximate eight foot wide sidewalk along the applicant's property. The City would like to discuss with the applicant, the possibility of completing the sidewalk to the West of the applicant's property in concrete at the City's expense.
8. Only sanitary wasted is allowed to be discharged to the City's sewer. No roof, site drainage or any other non-contaminated water is allowed.
9. Please provide a detail of the proposed grease trap. Please see Portland Technical Manual.

We have no further comments at this time.

From: David Margolis-Pineo
To: Tom Errico
CC: Barbara Barhydt; Helen Donaldson; Jean Fraser
Date: 5/6/2015 1:44 PM
Subject: Sidewalk material Policy

Bishop St is asphalt.

1242 Congress St is concrete. It appears in good condition (Google earth) We will not require concrete unless more than 50% is disturbed.

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2015-058

Date: 7/9/2015

Comments Submitted by: Keith Gautreau/Fire on 5/6/2015

Premises Identification
The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.
If the building entry faces a different street, both the street name and number should be large enough to read from the street.
Address numbers must be a minimum of 4 inches high.
The number should be in Arabic numerals rather than spelled out (for example, “130” instead of “One Hundred and Thirty’).
Color: Addresses should be in a color that contrasts with the background.
Whenever possible, should be illuminated.
Provide additional address signs at entrances to the property when the building address is not legible from the public street.

Comments Submitted by: Keith Gautreau/Fire on 5/6/2015

Building
The new building shall not affect the egress or required Fire Department access for the neighboring building.
Hydrants
2009 NFPA 1 18.3 Water Supplies and Fire Hydrants
-Fire Department Connections shall not be located where large diameter hose may block egress.

Comments Submitted by: Keith Gautreau/Fire on 5/6/2015

2.Fire Vehicle Access

1.)Largest Fire Department Vehicle must be able to navigate through the parking lot to access building.
2.)Fire Department Access shall have an unobstructed vertical clearance of not less than 13 ft 6 in.

Comments Submitted by: Keith Gautreau/Fire on 5/6/2015

1.)A Life Safety Evacuation Plan shall be submitted with the Building Permit detailing the exiting and waiting area for occupants.

Construction Management Plan
Streets must maintain a 20’ width for Fire Department access at all times.
Fire Hydrants shall not be blocked or enclosed by fencing. A 3’ foot clearance must be kept at all times around the fire hydrant.
If gates are locked, a Portland Fire Department Knox padlock must be purchased by the applicant to allow access for the Fire Department.
The Construction Company’ emergency contact information shall be posted on the property in case of an after hours emergency.
All construction shall comply with 2009 NFPA 1 Chapter 16 Safeguards During Building Construction, Alteration, and Demolition Operations.
Any cutting and welding done will require a Hot Work Permit from Fire Department.

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2015-058

Date: 7/9/2015

Comments Submitted by: Keith Gautreau/Fire on 5/6/2015

All construction and installation shall comply with 2009 NFPA 1, 2009 NFPA 101.

All construction and installation shall comply with City of Portland Fire Department Building Regulations.
http://www.portlandmaine.gov/fireprevention/fdrulesandregulations.pdf

All construction and installation shall comply with City Code Chapter 10.
http://www.portlandmaine.gov/citycode/chapter010.pdf

Comments Submitted by: Keith Gautreau/Fire on 7/8/2015

The final plans have met the condtions in regards to access, water supply and construction.

From: Keith Gautreau
To: Errico Thomas; Jean Fraser
Date: 5/12/2015 11:17 AM
Subject: Re: 1342 Congress- Neigh Center 2015-058

Hi Jean,
I am good with the turning radius plan that has been provided. It's not my area of expertise but I agree that would be a significant safety issue with cars stopping on Congress St. (especially during rush hour)

Thanks,
Keith

Keith Gautreau, Acting Asst. Chief
Fire Prevention/Community Outreach
Portland Fire Department
380 Congress Street
Portland, ME 04101
(207)874-8400
kng@portlandmaine.gov

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2015-058

Date: 5/6/2015

Comments Submitted by: Keith Gautreau/Fire on 5/6/2015

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Color: Addresses should be in a color that contrasts with the background.
Whenever possible, should be illuminated.
Provide additional address signs at entrances to the property when the building address is not legible from the public street.

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2015-058

Date: 5/6/2015

Comments Submitted by: Keith Gautreau/Fire on 5/6/2015

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The new building shall not affect the egress or required Fire Department access for the neighboring building.
Hydrants
2009 NFPA 1 18.3 Water Supplies and Fire Hydrants
-Fire Department Connections shall not be located where large diameter hose may block egress.

Att. 5

NOT FINAL COMMENTS- applicant has sought to address these in final Landscape Plan

From: Jeff Tarling
To: Jean Fraser
CC: David Margolis-Pineo
Date: 5/15/2015 10:48 AM
Subject: Congress Street Jewish Center

Hi Jean -

I have reviewed the proposed landscape plan for the Jewish Neighborhood Center on Congress Street and offer the following recommendations:

Looking at the back property line and the graphic showing a proposed fence, which is recommended, wanted to request a fence spec. My first thought is that the fence should be wooden 6' in height or something equal.

The project removes several mature trees on the side entranceway and does not appear to replace them. Looking at the space it appears to be wide enough that several, 3 - 4 small trees such as Magnolia, Dogwood or Cherry could be successfully planted back in this location. We have also seen good use of the several upright Oak varieties that stay very narrow but with height that could help replace the lost trees, see: http://www.jfschmidt.com/pdfs/regalprinceoak.pdf
Improving this space should be a priority. Also noted that a small center landscaped island near the entranceway could be used to improve or define the drive into the site.

Overall the rest of the landscape plan appears to meet our landscape & tree standards with recommended varieties and plant sizes.

Thanks

Jeff Tarling
City Arborist

Att. 6

From: Jennifer Thompson
To: Fraser, Jean
Date: 7/9/2015 6:01 AM
Subject: Re: Fwd: Easements/agreements RE: Proposed Neighborhood Center - 1342 Congress Street

Hi Jean - I've looked at the access easement and it appears to do what it is supposed to - namely providing non-exclusive rights of access over the portion of the driveway owned by the abutter. I just note the limitations on it running with the land outlined in Paragraph 5. I don't think that necessarily affects this application but it should be noted that the easement will no longer be in effect if the ownership or use of the property changes substantially.

CITY OF PORTLAND, MAINE
ZONING BOARD OF APPEALS

ZONING BOARD APPEAL
DECISION

To: City Clerk
From: Ann Machado, Zoning Administrator
Date: June 4, 2015
RE: Action taken by the Zoning Board of Appeals on May 21, 2015

Members Present: Sara Moppin (chair), Kent Avery (secretary), William Getz, and Donna Katsiaficas.

Members Absent: Chip Gavin and Gordon Smith

1. **Old Business:**
   A. Conditional Use Appeal:
   1342-1348 Congress Street, Jewish Community Alliance of Southern Maine, buyer, Tax Map 191, Block B, Lots 016 & 017, R-5 Residential Zone: The applicant is seeking a Conditional Use Appeal under section 14-118(c)(3) to operate a daycare/preschool for up to 68 students and an afterschool program for up to 20 students in part of the proposed building. Representing the appeal is Steve Brinn from the Jewish Community Alliance of Southern Maine. ***The Board of Appeals voted 5-0 to grant the appeal for a period of two (2) years.***

2. **Adjournment**

Enclosure:
Decision for Agenda from May 21, 2015
One DVD
CC: Michael Sauschuck, Acting City Manager
Jeff Levine, AICP, Director Planning & Urban Development
Alex Jaegerman, Planning Division
Mary Davis, Housing and Neighborhood Services Division

CITY OF PORTLAND, MAINE
ZONING BOARD OF APPEALS

R-5 Residential Zone Day Care Facility:

Conditional Use Appeal

DECISION

Date of public hearing: May 21, 2015;

Name and address of applicant: Jewish Community Alliance of Southern Maine
57 Ashmont Street
Portland, ME 04103
MARY COSTIGAN, ESQ. - BERNSTEIN SHUR
DAN PEARL

Location of property under appeal: 1342-1348 Congress Street
GREG HALSEY

For the Record:

Names and addresses of witnesses (proponents, opponents and others):

Exhibits admitted (e.g. renderings, reports, etc.):

Findings of Fact and Conclusions of Law:

The applicant, Jewish Community Alliance of Southern Maine, is requesting approval of Conditional Use for a daycare/preschool facility per § 14-118(c)(3) for up to 68 students and an afterschool program for up to 20 students in part of a proposed building at 1342-1348 Congress Street.

A. Conditional Use Standards pursuant to Portland City Code §14-118(c)(3):

Day care facilities or home babysitting services not authorized as a home occupation under section 14-410, are permitted as conditional uses, provided that:

1. The facility is located in a principal structure that has not been used as a residence in whole or in part within the (5) years immediately preceding the application;

Satisfied 5 Not Satisfied 0

Reason and supporting facts:

APPLICATION + TESTIMONY REFLECT THAT A NEW BLDG IS BEING CONSTRUCTED

2. The structure is subject to Site Plan review;

Satisfied 5 Not Satisfied 0

Reason and supporting facts:

ANN MACHADO CONFIRMED

3. Outdoor play areas shall be screened and buffered from surrounding residences with landscaping and/or fencing to minimize visual and noise impacts;

Satisfied 5 Not Satisfied 0

Reason and supporting facts:

APPLICATION + TESTIMONY REFLECTS ADEQUATE SCREENING - FENCE + SHRUBBERY

4. Solid waste shall be stored in covered containers. Such containers shall be screened on all four (4) sides;

Satisfied 5 Not Satisfied 0

Reason and supporting facts:

APPLICATION + TESTIMONY REFLECTS THAT A DUMPSTER WILL BE SCREENED BY FENCING.

B. Conditional Use Standards pursuant to Portland City Code §14-474(c)(2):

The Board shall not authorize issuance of a conditional use permit unless there has been 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

3. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

Satisfied 5 Not Satisfied 0

Reason and supporting facts: APPLICATION + TESTIMONY @ PARCEL IS SURROUNDED BY DENTAL OFFICE + SHOPPING CENTER NEW BLDG. WILL IMPROVE CONDITIONS OVER THE @ PRIOR BLDG.

Conclusion: (check one)

X Option 1: The Board finds that all of the standards (1 through 4) described in section A above have been satisfied and that all of the standards (1 through 3) described in section B above have been satisfied, and therefore GRANTS the application, FOR A PERIOD OF 2 YEARS.

5-0 IN FAVOR

___ Option 2: The Board finds that while all of the standards (1 through 4) described in section A above have been satisfied, and that while all standards (1 through 3) described in section B above are satisfied, certain additional conditions must be imposed to minimize adverse effects on other property in the neighborhood, and therefore GRANTS the application SUBJECT TO THE FOLLOWING CONDITIONS:

___ Option 3: The Board finds that not all of the standards (1 through 4) described in section A above have been satisfied and/or that not all of the standards (1 through 3) described in section B have been satisfied, and therefore DENIES the application.

Dated: May 21, 2015

Board Chair

From: Jean Fraser
To: Bernard, Patricia
Date: 5/11/2015 12:42 PM
Subject: Revised plans and PB Workshop for Neigh Center, Congress St
Attachments: J0094-C-3-GRADING, DRAINAGE, AND EROSION CONTROL PLAN-5-8-15.pdf; J0094-C-2B-SITE PLAN-5-8-15.pdf; floor plan (1).pdf

Pat,

Staff have raised a number of concerns with the applicant (including those that you mentioned to me) and the applicant has just sent revised plans- I attach the key ones that might affect your property.

I also wanted to check the you had received a postcard from my administrative colleagues advising you that the PB workshop is scheduled for Tuesday , May 19th late afternoon. (A workshop is for the Board to better understand the project and hear from neighbors- the Board does not make a decision at that meeting)

I am preparing a PB Memo that goes up on the city's website on Friday (5.15.15); I will be including the comments you have sent so far in the memo, but if you want to send additional comments (for inclusion in that Memo) please get them to me by the end of Thursday.

If you send written comments to me after the Memo goes out but before noon on the Tuesday (day of the meeting), I will print them and circulate to the Planning Board before the meeting.

In any case, you can speak at the Workshop during the "public comments" section.

Please do not hesitate to contact me with any questions, and please forward these plans to anyone who is interested and they can also send me public comments and/or speak at the meeting.

thank you
Jean

Jean Fraser, Planner
City of Portland
874 8728
>>> Patricia Bernard <mainemama@hotmail.com> 4/27/2015 4:25 PM >>>
Even though it's a concern, the grading info is all Greek to me. I liked the landscaping and it looks like it would soften the lines of the building. I hope the tree planned for in back of my yard is interesting/unique enough to draw your eyes to it and not the stockade fence. Now that I'm retired I hope to work on straightening out the chaos that's my back yard.

Can I share this info with my neighbors? djbheah is my son who grew up here and likes to know what's happening.

Thanks again, obviously I got the emails ok.

From: mainemama@hotmail.com
To: djbheah@yahoo.com
Subject: RE: 4 add'l plans for Neigh Center, Congress St
Date: Mon, 27 Apr 2015 20:12:48 +0000

From: mainemama@hotmail.com
To: djbheah@yahoo.com
Subject: FW: 4 add'l plans for Neigh Center, Congress St
Date: Mon, 27 Apr 2015 19:58:35 +0000

Date: Mon, 27 Apr 2015 11:53:47 -0400
From: JF@portlandmaine.gov
To: mainemama@hotmail.com
Subject: 4 add'l plans for Neigh Center, Congress St

Pat,

Attached to this e-mail are:
Grading and Drainage plan
Landscape Plan
Elevations
I would appreciate it if you could let me know that you got these OK.

Please do not hesitate to contact me with any further questions or comments; when it gets nearer to the date of the Planning Board workshop I can clarify the timetable for any comments you might like to bring to the attention of the Board members at that meeting.

thank you
Jean

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

PC2

From: Jean Fraser
To: jeffery, paul
Date: 5/11/2015 10:45 AM
Subject: Re: Fw: st patricks church

Paul

Thank you for following up.

Yes, I have spoken with the Historic Preservation Program Manager. I understand that this question was raised with her in the past and she researched the building/architecture and determined that it did not meet the criteria for historic designation.

The Historic Preservation Program Manager is Deb Andrews at DGA@portlandmaine.gov

The church that is selling the property has made it a requirement of the sale that the building be demolished. While some may feel this is regrettable, it is not a Site Plan/conditional Use review issue and the Planning Board would not have a remit regarding its retention.

thank you
Jean

Jean Fraser, Planner
City of Portland
874 8728
>>> paul jeffery <pj6481@yahoo.com> 5/8/2015 8:45 PM >>>
hi jean
have you heard from the
citys historic preservation manager
PLEASE ADVISE
PAUL

On Friday, May 1, 2015 3:50 PM, Jean Fraser <JF@portlandmaine.gov> wrote:

Paul

Thank you for your comments.

I have forwarded your comments to the City's Historic Preservation Program Manager and am awaiting her advice on this and whether there is information supporting your suggestion that the existing building is of historic architectural importance.

I will get back to you as soon as possible; this will not be going to the first Planning Board meeting for several weeks. Your comments would be included in the packet that goes to the Planning Board (and on to the city's web site) on the Friday before the meeting.

thank you
Jean

Jean Fraser, Planner
City of Portland
874 8728
>>> paul jeffery <pj6481@yahoo.com> 5/1/2015 3:08 PM >>>

On Friday, May 1, 2015 3:05 PM, paul jeffery <pj6481@yahoo.com> wrote:

On Thursday, April 30, 2015 8:44 PM, paul jeffery <pj6481@yahoo.com> wrote:

IM AM NOT IN FAVOR OF CURRENT PROPSAL FOR THE REUSE OF ST PATS

MY REASONS

ITS PART OF PORTLAND 1960S ERA BUILDING DESIGNS
ITS UNION STATION!!!

PC 3

From: paul jeffery <pj6481@yahoo.com>
To: Jean Fraser <JF@portlandmaine.gov>
Date: 5/18/2015 10:39 PM
Subject: Re: Planning Board mtg tomorrow 1342 Congress St (Jewish Neigh Center)

HI JEANPLEASE ADD THE FOLLOWINGCOMMENTSUM IT UPI FIND HARD TO BELIEVETHAT THIS BUILDINGDOES NOT FIT INTO THE HISTORY OF PORTLAND1960S ERA OF A GROWING PORTLAND NEIGHBORHOOD??????????????????????IN THE END IT WILL BE TALKED ABOUT LIKE UNION STATIONIT IN SOME WAYS IT LOOKS LIKE UNION STATIONJUST USE YOUR IMAGINTION
JEAN THANK U FOR YOUR TIME ON THIS MATTER
#####PLEASE ADVISE####
PAUL JEFFERY

PC 4

From: Patricia Bernard <mainemama@hotmail.com>
To: Jean Fraser <jf@portlandmaine.gov>
Date: 6/30/2015 5:57 PM
Subject: RE: Final submissions for Jewish Community Center at 1342 Congress Street

Thanks for getting back to me.

I had assumed that since they were having child care over there, they wouldn't let us drive around their building. If we can still do that then it's not a problem. Do you know if when my grandchildren visit we could use the playground?

I have totally lost control of my yard, the invasive vines and other stuff are winning and spreads over to their property and I can't stop it. The other issue is that when my neighbors put up their stockade fence, we lost a lot of sunlight in the back and another one would make gardening, what little I do, impossible.

(Note- Ms Bernard has raised a number of questions about the congestion and other issues but it appears the height of the fence is the one most directly of concern. J Fraser, Planner)

PC 5

Libbytown Neighborhood Association
c/o 11 Stevens Ave
Portland, ME 04102

June 30, 2015

Jewish Community Alliance of Southern Maine
57 Ashmont Street
Portland, ME 04103

Re.: Future Jewish Community Center
1342 Congress Street
Portland, ME

Dear JCA:

The Libbytown Neighborhood Association (LNA) has very much enjoyed reviewing the plans for your proposed building at 1342 Congress Street. We would like to welcome you to the neighborhood and we thank you for choosing Libbytown.

As you may know, our neighborhood is rich in families but lacking in many services, amenities and gathering places for residents. We are so excited to have your organization move to the neighborhood and are largely thrilled with the plans you have shared! We love that there will be a local option for families looking for daycare for children, and a place for youth and adults to be physically active in their own community. We are also pleased that the new facility will likely be a busy place nearly every day of the week.

As an organization, LNA supports development that encourages walking and use of public transit within the neighborhood. The Jewish Community Center will likely be a very popular walking destination for local residents. It is also convenient to two METRO bus lines. We are pleased to see that many pedestrian-friendly features have been incorporated into your design:

- The parking lot is at the rear of the building. This placement preserves the existing building setback line, provides visual interest at a human scale on Congress Street, maintains a buffer between cars and pedestrians, and generally enhances the pedestrian experience in ways a parking lot at the sidewalk cannot.

- Parking is not greatly expanded, as there is adequate unused parking next door at Westgate.
- We are especially glad you are keeping the existing trees and adding additional trees, and preserving most of the green space in both the front and the rear of the property. Trees shade pedestrians, and also make the street feel smaller and thus help calm traffic.

One of the concerns we do have is that the front facade at the gymnasium, as presently drawn, is a large, blank box (Harriman Associates, Drawing A201, undated). We see on the revised exterior elevations dated June 24, 2015 that some additional embellishment has been added, but we hope for additional enhancement as well. We understand these are preliminary drawings and we hope that as the plans develop, some sort of visually-stimulating feature – perhaps a mural, or mosaic, or even large banners – will be integrated to enliven this blank area. We want to keep our streetscape interesting, fun and engaging to those who are walking by at a slower pace than quickly moving autos.

The LNA has been working hard to establish a community garden in the area, and are indeed excited to see that you are including some edible plants in your landscape design (lowbush blueberries). We would encourage you to replace other plantings with even more edibles as well. For example, replacing the dogwood tree with an apple tree or cherry tree. Additionally, work nationwide has focused on increasing children's access to vegetable gardening and we would encourage building this into the plan for the daycare facility as well.

Finally, we request that your Congress Street entrances be ADA accessible. Not all who require an accessible entrance will be driving; many will be using METRO and will need an accessible sidewalk between the METRO stops and the Community Center building, and then an accessible entrance on Congress Street. This is not only a necessity for those in a wheelchair, either temporarily or permanently, but also those using baby strollers, carts, wheeled bags, canes, walkers, etc..

Thank you for reading this letter, and for moving to the neighborhood. We look forward to our future partnerships.

Sincerely,

The Libbytown Neighborhood Association

CC: City of Portland
Planning and Urban Development Department

Att. A

J-0096-1
June 24, 2015

Ms. Jean Fraser, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: **Final Site Plan Development Review and Conditional Use Applications**
Proposed Neighborhood Center – 1342 Congress Street

Dear Ms. Fraser:

On behalf of the Jewish Community Alliance of Southern Maine we are pleased to submit the following information relative to a Final Site Plan Development Review and Conditional Use Application:

Level III Site Plan Development Review Application

- Level III Final Site Plan Development Review Application form
  - *Application Fee paid with Preliminary Site Plan Application submitted on April 4, 2015.*
- ALTA/ASCM Land Title Survey, dated December 31, 2014
- Site Plans, last revised June 24, 2015
- Drainage Study, last revised June 24, 2015
- Site Plan Review Checklist Attachments

Conditional Use Review Application

- Conditional Use Review Application form
  - *Application Fee paid with Conditional Use Application submitted on April 4, 2015.*

In addition to the electronic submission, a hardcopy of the complete submission package will be sent to the Building Inspections Office as required.

Project Description

The proposed project will be constructed on a previously developed parcel identified as Map 191 B-16 & 17, which is located in the R-5 Residential Zoning District. Prior to closing in 2013, the land was in use by St Patrick's Catholic Church.

The proposed project consists of the construction of a (1) story, 19,300 SF Neighborhood Center and preschool/daycare center with associated site improvements that include a surface parking lot, stormwater management system, utilities, site lighting, and landscaping. The existing building and associated site features will be demolished in accordance with conditions set forth by the seller. The proposed project will disturb approximately 85,000 SF of the site and result in 12,500 SF of additional impervious area. The proposed stormwater management system has been designed in accordance with the City of Portland Technical Manual and serves to minimize the impacts of the additional impervious area. A Drainage Study has been enclosed with this submission.

The existing project site has a shared access driveway with Westgate Shopping Center, which will be re-constructed as part of the proposed project. The Owner of Westgate Shopping Center, Charter Westgate, LLC, has executed a formal Access Easement Agreement with Applicant, which is included with this submission.

Conditional Use Standards

On February 25, 2015, the Applicant met with the City of Portland Staff for a pre-application meeting. Based on feedback from the City it was determined that the proposed uses are permitted in the R-5 Residential Zone as Conditional Uses, as set forth in Section 14-118 of the Land Use Code. Said conditional uses in Section 14-118 include places of assembly, preschools and daycare centers. Places of assembly include neighborhood centers which are 10,000 square feet or less and used for recreational, artistic, social, educational, health, culture, or similar activities and services, usually owned and operated by a public or nonprofit group or agency. A portion of the proposed building that is less than 10,000 SF will be used as a neighborhood center by the Jewish Community Alliance for recreational, artistic, social, education and cultural activities. .

The remaining portion of the proposed building will be will be used as a pre-school/daycare center. In accordance with the Land Use Code, the Zoning Board of Appeals has the authority to grant a conditional use permit for the preschool/daycare use. On May 21, 2015, the ZBA granted JCA's application for a conditional use permit for the preschool/daycare center. The Board also granted an extension of the initial 6-month term of the permit for a period of 2 years, due to the need for additional time to close on the property, demolish the existing building and construct the new building. We request the same time period for a conditional use permit for the neighborhood center.

The following addresses the Standards for set forth by Section 14-474(3)(c)(2) of the City of Portland Land Use Code for Conditional Uses:

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*

   A Trip Generation analysis was prepared and has been included with this submission. Based on this analysis, it is anticipated that the neighborhood center will generate fewer trips than the former Catholic Church overall and during peak periods. The number of parking spaces proposed meets the minimum amount required and was found to be satisfactory by the Peer Review Traffic Engineer. The volume and type of traffic will not be substantially greater than would normally occur at the surrounding uses, such as Westgate Shopping Center or other allowable uses in the zone, such as multiplex residential complexes, churches and other places of assembly.

   The daycare/preschool hours of operation begin by 7:00am and end between by 3:00pm. There are anticipated afterschool activities that would begin at 2:30pm and end by 5-6:00pm. Special events that may occur periodically would be held on evenings and weekends.

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*

It is not anticipated that the proposed neighbor center will create any objectionable or harmful conditions as described above. As noted below, The Site Lighting Plan has been revised to limit or eliminate light trespass onto abutting residential properties in accordance with the City of Portland Technical Standards. Waste generated by the proposed development will be stored in the proposed dumpster enclosure area shown on the Site Plan. It is anticipated that waste will be collected weekly. It is anticipated that the proposed development will not generate frequent deliveries and those that do occur will not require by large trucks.

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.*

The operation of the neighborhood center is not anticipated to have a greater effect or impact on surrounding properties than the former Church or Westgate Shopping Center. The layout of the site and proposed landscaping have been designed to minimize effects on surrounding properties by maintaining and improving natural buffers.

Additional Information Since Planning Board Workshop

The Applicant met with the Planning Board for a Workshop on May 19, 2015. The Applicant received feedback from the Planning Board and City Staff. The following is a response to the 'Next Steps' provided in the Memorandum to the Planning Board:

A. *Secure a formal agreement with the owners of Westgate Plaza for the shared drive prior to the Planning Board hearing.*

- A formal Access Easement Agreement with Charter Westgate, LLC has been executed and is included with this submission.

B. *Provide additional information on traffic impacts and operation/management of the day care traffic parking, including pedestrian links between the parking lot and daycare entrance.*

- We met with Jean Fraser and Tom Errico on June 1st, 2015 at the existing JCA facility at 57 Ashmont Street in Portland. The purpose was to observe the daycare drop off routine currently in use and understand how the facility operates the daycare portion of the facility. Based on previous comments from Tom Errico and City Staff, we understand there is concern that parents dropping off their children will stop in the driveway of the proposed facility, which could potentially lead to traffic impacts on Congress Street. We currently do not experience this problem at our Ashmont Street facility and do not anticipate that parents will stop in the driveway to drop off their young children, but will park in the lot and walk them in. However, per our discussion with Tom Errico and Jean Fraser at the meeting on June 1stwe propose to construct a pedestrian barrier along the sidewalk adjacent to the driveway off Congress St. We will install a seating wall along the driveway that will act as a barrier and prevent easy access to the sidewalk from the driveway. The ultimate goal is to keep vehicles from stopping

in the driveway. The Site Plans have been revised to show the proposed seating wall.

- The proposed Site Plan provides the most direct pedestrian routes from the parking lot to the sidewalk possible given the configuration of the building entrances. Dedicated crosswalks and a continuous sidewalk have been provided along the entire northeast side of the parking lot to provide easy and safe access from any location in the parking lot.

C. *Submit a Parking Supply Analysis.*

- During the meeting held on June 1st, 2015 Tom Errico agreed that the parking provided is sufficient to support the day to day operations at the proposed facility. However, he requested that additional information be provided to determine what the parking needs would be based on potential special events. A memo was prepared by Maine Traffic Resources that provides additional information relative to the parking demand for special events. Based on the findings in the memo, the largest special event is expected to require 53 parking spaces. The current site design provides 50 spaces and the Applicant will have access to an additional 40 spaces for special events by using the parking lot of the Dentist office. As discussed below the Applicant will have the formal Parking License Agreement completed before the Planning Board Meeting.

- A Parking License Agreement with the neighboring Dentist Office (Merlin Management Company) parcel is under negotiation and will be fully executed prior to the Planning Board Meeting. The license agreement will provide JCA access to approximately 40 spaces on the Merlin parcel. The agreement also includes a provision for the JCA to construct a raised landscape island to help delineate the driveway as requested by Tom Errico and City Staff. The enclosed Site Plans have been revised to include the island.

D. *Develop designs to delineate the Congress Street drive where it abuts the dental offices, to incorporate street trees/landscape and possibly lighting (and clarify re a waiver for the width of the drive).*

- The enclosed revised Site Plan includes a 17 foot wide curbed landscape island to help delineate the driveway off Congress Street. The Applicant is working with the Property Owner (Merlin Management Company) on an agreement to construct the landscaped island as part of the Parking License Agreement. The proposed landscape island does not impact existing parking on Merlin Parcel. Landscaping has been provided and revisions made to address comments made by the City Arborist. The driveway width provided at the location of the proposed landscape island is 24 feet per City of Portland Technical Manual requirements.

E. *Revised landscaping proposals to address the City Aroborist comments (including fence specs) and the comment from the Peer Engineer regarding planting for the underdrained soil filter.*

- The Landscape Architect worked directly with the City Arborist to address his comments and those revisions are reflected in the revised Landscape Plan included with this submission. The revisions provide a detailed underdrained

soil filter planting plan, perimeter and play area fence details, and additional plantings throughout the site to compensate for existing trees that need to be removed for the proposed development.

F. *Undertake future research and discussions with neighbors to address two substantial concerns outlined by Peer Engineer regarding the stormwater flow impacts.*

- On June 1, 2015 the Applicant met with Justin Johnson of 60 Willow Lane to discuss the project and concerns he may have regarding the existing drainage on his property. Based on our discussion, the Applicant agreed to complete drainage improvements on his property as part of this project. Sheet C-10, Off-Site Grading and Drainage Plan, included with this submission provides a preliminary design for the proposed improvements. The Applicant is currently working on completing a Temporary Construction Easement with the Abutter and will submit to the Planning Board prior to the meeting. The Applicant and Abutter agreed that an easement for the permanent drainage improvements would not be required as the proposed work is completely contained within the Abutters property. The final design will be coordinated with the Abutter prior to construction.

- The Pre-Development Watershed Plan has been revised to reflect the exiting discharge point of the Church roof runoff, which is located within the Congress Street Sewer. The configuration of the existing roof drainage system was verified in the field via camera inspection and dye flow testing. The City of Portland does not allow stormwater discharge into the City Sewer, so the existing connection will only be re-used for sanitary sewer for the proposed development. The proposed stormwater management system and Drainage Study have been revised, and included with this submission. The revised Pre-Development Watershed Plan resulted in the need for a larger Stormtech detention system to compensate for the larger peak flow rate from the roof runoff that no longer can discharged to Congress Street. The revisions made are in compliance with the MaineDEP Chapter 500 Stormwater Management Rules including Basic, General, and Flooding Standards.

G. *Revised lighting to avoid light trespass and clarify whether existing lighting is adequate along the Congress Street drive and building entrance.*

- The Site Lighting Plan has been revised to limit or eliminate light trespass onto abutting residential properties in accordance with the City of Portland Technical Standards. The revised Site Lighting Plan includes proposed parking lot lighting and building lighting to demonstrate that appropriate light levels have been provided both in the parking lot and at the building. Lighting along the Congress Street driveway is provided by the existing building mounted food lights on the Dentist's office building and the existing Congress Street utility pole mounted lights.

Waiver Requests

1. Section 7 of the City of Portland Technical Manual requires a soil survey be completed as part of a Level III Site Plan Development. The Applicant requests a waiver from this requirement based on soil borings that were completed as part of

the Phase I/II Environmental Site Assessment completed at this parcel. This information has been included in the Appendix of the Drainage Study enclosed with this submission.

2. City of Portland Technical Manual requires that driveways have a minimum width of 24 feet where vehicle parking maneuvering takes place. The Applicant requests a waiver from this requirement in one section of the reconstructed driveway off of Congress Street where only 22.7 feet is provided in the area directly across from Abutter's existing parking, which is partially on the Applicant's property.

We look forward to working with the City of Portland Planning Board on this project. Please don't hesitate to call me if you have any questions.

Very Truly Yours,

TIGHE & BOND, INC

Bradlee Mezquita, P.E.
Vice President

Greg Halsey
Project Engineer

Enclosures

Cc: Steve Brinn, JCA (by email)
Charles E. Miller, Esq. Bernstein Shur (by email)
Mary Costigan Bernstein Shur (by email)
Mark Lee, Harriman (by email)

J:\J\J0096 Jewish Community Alliance\ADMIN\J0096-013(Site Plan Cover Letter).Docx

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: 3/31/15

I have provided digital copies and sent them on: _____ Date: 4/6/15

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.

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: April 23, 2014

PROJECT NAME: Proposed Neighborhood Center

PROPOSED DEVELOPMENT ADDRESS:

1342 Congress Street Portland, ME

PROJECT DESCRIPTION:

Construction of a 19,300 SF Neighborhood Center with associated site improvements that include surface parking, a stormwater management system, utilities, site lighting, and landscaping.

CHART/BLOCK/LOT: 191/B/16 & 17

PRELIMINARY PLAN 4/3/15 (date)
FINAL PLAN 6/24/14 (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Steve Brinn Business Name, if applicable: Jewish Community Alliance of Southern Maine Address: 57 Ashmont Street City/State : Portland, ME Zip Code: 04103	**Applicant Contact Information** Work # 207-772-1959 Home# Cell # 207-712-8237 Fax# e-mail: stvbrinn@gmail.com
Owner – (if different from Applicant) Name: Roman Catholic Bishop of Portland Address: 510 Ocean Road City/State : Portland ME Zip Code: 04103	**Owner Contact Information** Work # Home# Cell # Fax# e-mail:
Agent/ Representative Name: Bradlee Mezquita, P.E. Address: 177 Corporate Drive City/State : Portsmouth NH Zip Code: 03801	**Agent/Representative Contact information** Work # 603-433-8818 Cell # e-mail: BLMezquita@tighebond.com
Billing Information Name: Address: City/State : Zip Code:	**Billing Information** Work # Cell # Fax# e-mail:

Engineer Name: Tighe & Bond Bradlee Mezquita, P.E. Address: 177 Corporate Drive City/State : Portsmouth, NH Zip Code: 03801	**Engineer Contact Information** Work # 603-433-8818 Cell # Fax# e-mail: BLMezquita@tighebond.com
Surveyor Name: Northeast Civil Solutions, Inc. Address: 153 US Route 1 City/State : Scarborough ME Zip Code: 04074	**Surveyor Contact Information** Work # 207-883-1000 Cell # Fax# e-mail:
Architect Name: Harriman Mark Lee Address: 123 Middle Street City/State : Portland, ME Zip Code: 04101	**Architect Contact Information** Work # 207-775-0053 Cell # Fax# e-mail: mlee@harriman.com
Attorney Name: Bernstein Shur Charles Miller, Esq. Address: 100 Middle Street City/State : Portland, ME Zip Code: 04104	**Attorney Contact Information** Work # 207-774-1200 Cell # Fax# e-mail: bsmith@bernsteinshur.com

APPLICATION FEES: Application Fees Included with Preliminary Site Plan Submission

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) ___ 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 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 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:**
	3/31/15

PROJECT DATA

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

Total Area of Site	91,146	sq. ft.
Proposed Total Disturbed Area of the Site	85,000	sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
Impervious Surface Area		
Impervious Area (Total Existing)	36,810	sq. ft.
Impervious Area (Total Proposed)	48,310	sq. ft.
Building Ground Floor Area and Total Floor Area		
Building Footprint (Total Existing)	14,960	sq. ft.
Building Footprint (Total Proposed)	19,300	sq. ft.
Building Floor Area (Total Existing)		sq. ft.
Building Floor Area (Total Proposed)		sq. ft.
Zoning		
Existing	R-5 Residential	
Proposed, if applicable		
Land Use		
Existing	Catholic Church	
Proposed	Neighborhood Center / Preschool Daycare	
Residential, If applicable	N/A	
# of Residential Units (Total Existing)		
# of Residential Units (Total Proposed)		
# of Lots (Total Proposed)		
# of Affordable Housing Units (Total Proposed)		
Proposed Bedroom Mix	N/A	
# of Efficiency Units (Total Proposed)		
# of One-Bedroom Units (Total Proposed)		
# of Two-Bedroom Units (Total Proposed)		
# of Three-Bedroom Units (Total Proposed)		
Parking Spaces		
# of Parking Spaces (Total Existing)	13	
# of Parking Spaces (Total Proposed)	50	
# of Handicapped Spaces (Total Proposed)	2	
Bicycle Parking Spaces		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	3	
Estimated Cost of Project	TBD	

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
X		1	Completed Application form
X		1	Application fees
X		1	Written description of project
X		1	Evidence of right, title and interest
		1	Evidence of state and/or federal approvals, if applicable
X		1	Written assessment of proposed project's compliance with applicable zoning requirements
X		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
X		1	Written requests for waivers from site plan or technical standards, if applicable.
X		1	Evidence of financial and technical capacity
X		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
X		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
X		Proposed grading and contours;	
X		Existing structures with distances from property line;	
X		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
X		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
X		Preliminary infrastructure improvements;	
X		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
X		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
X		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
X		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
X		Exterior building elevations.	

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
		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.
		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
		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
X		1	**Final Site Plans including the following:**
X		Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);	
X		Existing and proposed structures on parcels abutting site;	
X		All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;	
X		Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;	
X		Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;	
X		Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;	
		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;	
		Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);	
		Location and proposed alteration to any watercourse;	
		A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;	
		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;	
		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;
		A shadow analysis as described in Section 11 of the Technical Manual, if applicable;
		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;
		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.

Conditional Use for Planning Board Review
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 Conditional Use where the Planning Board is listed as the reviewing authority rather than the Zoning Board of Appeals. 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.

A. Conditional Use: Standards and Criteria – Section 14-474 and Zone Related Criteria

Conditional uses are listed in the Zoning Ordinance for each zone and these proposed uses must address the criteria contained in Section 14-474 in the written application. In addition to the criteria in Section 14-474, each application must address any applicable conditional use standards contained in the applicable zone and the proposed specific use. The Zoning Ordinance specifies when the Planning Board is designated as the reviewing authority rather than the Zoning Board of Appeals. This application is for Planning Board reviews only.

Upon showing that a proposed use is a conditional use under this article, a conditional use permit shall be granted unless the Board determines that:

a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and

c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

B. Site Plan Application: <u>Please submit the Conditional Use Application in addition to the applicable Site Plan Application.</u>

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.

PROJECT NAME: Proposed Neighborhood Center

PROPOSED DEVELOPMENT ADDRESS:

1342 Congress Street Portland, ME

ASSESSOR'S CHART/BLOCK/LOT (s): 191/B/16 &17 **Applicable Zone**: R-5 Residential

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Steve Brinn Business Name, if applicable: Jewish Community Alliance of Southern Maine Address: 57 Ashmont Street City/State : Portland, ME Zip Code: 04103	**Applicant Contact Information** Work # 207-772-1959 Home# Cell # 207-712-8237 Fax# e-mail: stvbrinn@gmail.com
Owner – (if different from Applicant) Name: Roman Catholic Bishop of Portland Address: 510 Ocean Road City/State : Portland, ME Zip Code: 04103	**Owner Contact Information** Work # Home# Cell # Fax# e-mail:
Billing Information Name: Address: City/State : Zip Code:	**Billing Information** Work # Cell # Fax# e-mail:

RIGHT, TITLE OR INTEREST:

See Sales Agreement Enclosed

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

VICINITY MAP: (Please attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use.) See ALTA/ASCM Land Title Survey Enclosed with Application

EXISTING USE: Describe the existing use of the subject property.

Catholic Church

PROPOSED USE: Describe the proposed use of the subject property

Neighborhood Center and Preschool/Daycare

TYPE OF CONDITIONAL USE PROPOSED (Refer To Specific Provisions Of Land Use Code Authorizing The Proposed Conditional Use).

The proposed uses are authorized in R-5 Residential Zone per Section 14 -118 (b)

SITE PLAN: Submit a separate site plan application for the proposal that provides a site plan for the property, showing existing and proposed improvements, which meets the submission requirements of the applicable level of site plan review.

CONDITIONAL USE STANDARDS AND CONDITIONS – 14-474
Address the following criteria in your written application and any applicable conditional use standards contained in the zoning code for the specific use. Upon showing that a proposed use is a conditional use under this article, a conditional use permit shall be granted unless the Board determines that:

a. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone; and

b. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter; and

c. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.

CONDITIONAL USE AUTHORIZED BY: SECTION 14- 118
Address any specific conditional use standards for the specific use contained in the zoning code in the written submission.

APPLICATION FEES: Application Fees Submitted with Preliminary Site Plan Submission
(Payment may be made by Credit Card, Cash or Check payable to the City of Portland.)

X Conditional Use Review ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($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.**
3. **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:**

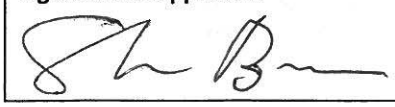
   1. **One (1) full size site plans** that must be **folded.**
   2. One (1) copy of all written materials or as follows, unless otherwise noted:

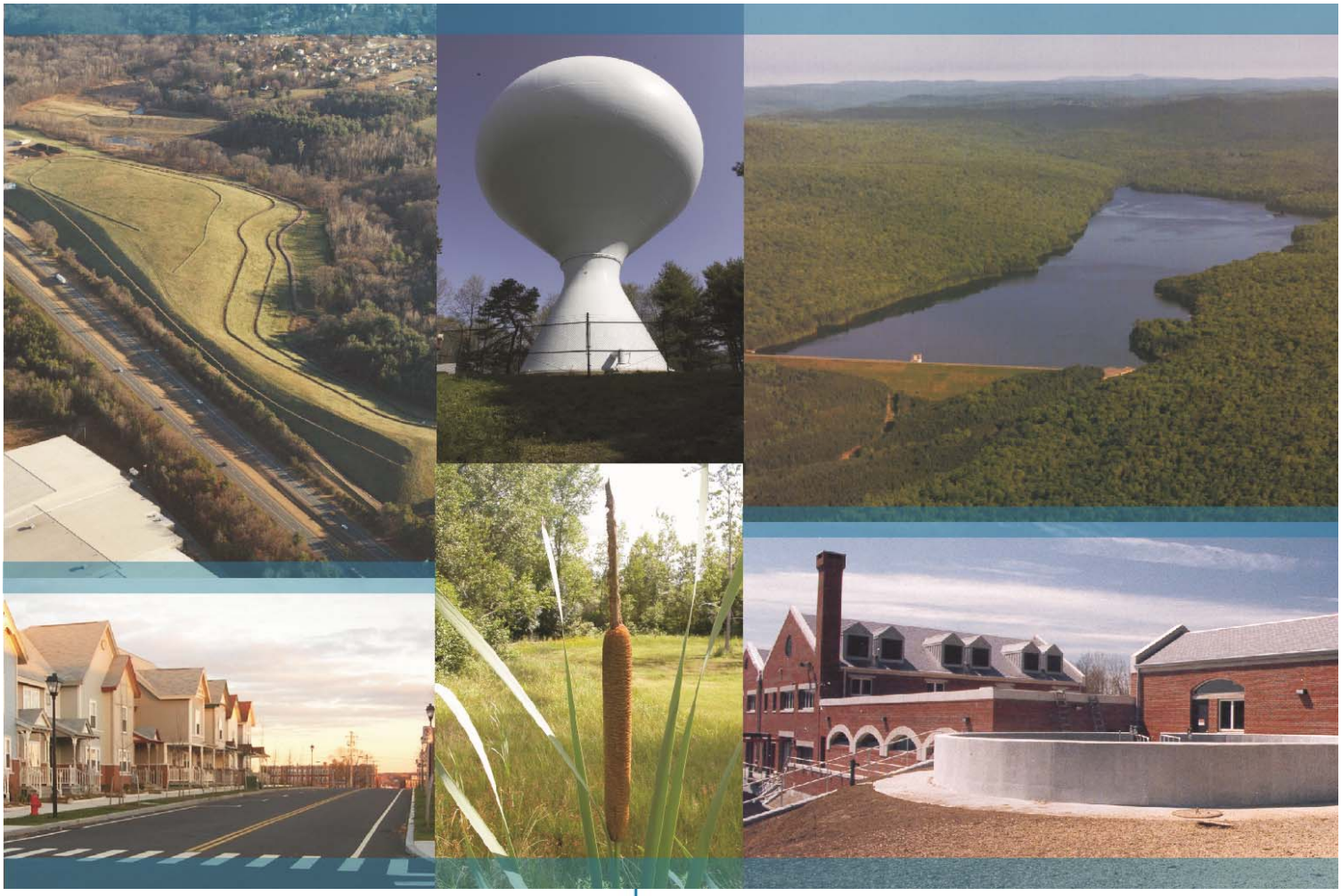
Applicant Checklist	Planner Checklist	# of Copies	
X		1	Application form that is completed and signed.
X		1	Cover letter stating the nature of the project.
X		1	Evidence of right, title and interest.
X		1	Written Submittals that address the conditional use standards of Sec. 14-474.
X		1	Written submittals that address any applicable standards of review contained in the zoning code for the specific use.
X		1	A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 50 feet and containing the information required for the applicable level of site plan review.
X		1	An accompanying site plan application, as applicable.

APPLICANT SIGNATURE:

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

This application is for a Conditional Use 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:**
	3/31/15



Tighe&Bond

Proposed Neighborhood Center
1342 Congress Street
Portland, Maine

Site Plan Review Checklist Attachments

Prepared For:

Jewish Community Alliance of Southern Maine
57 Ashmont Street
Portland, Maine

June 24, 2015

Section 1 Evidence of right, title, and interest

1.1 Sales Agreement 1-1

Section 2 Evidence of Financial Capacity

2.1 Key Bank Letter of Intent 2-1

Section 3 Traffic and Parking

3.1 Trip Generation Analysis for Proposed JCA Community Center in Portland – March 19, 2015 3-1

3.2 Additional Trip Generation Analysis for Proposed JCA Community Center in Portland – May 13, 2015 3-1

3.3 Parking Needs for Special Events for Proposed JCA Community Center in Portland – June 4, 2015 3-1

Section 4 Utility Capacity to Serve

Section 5 Fire Department

5.1 Fire Department Checklist 5-1

5.2 Fire Truck Turning Plan 5-1

Section 6 City of Portland Wastewater Capacity Application

Section 7 Neighborhood Meeting

7.1 Neighborhood Meeting Certification 7-1

7.2 Neighborhood Meeting Invitation 7-1

7.3 Sign-In Sheet 7-1

7.4 Meeting Minutes 7-1

Section 8 Easement Agreements

8.1 Charter Westgate, LLC Access Easement Agreement 8-1

Section 9 Proposed Floor Plan

9.1 First Floor Plan - Date June 24, 2015 9-1

J:\J\J0096 Jewish Community Alliance\SUBMITTALS\J-0096-Final Site Plan Submission-6-24-15\J0096-Site Plan Attachements.docx

Section 1
Evidence of right, title, and interest

1.1 Sales Agreement

AGREEMENT FOR THE SALE OF COMMERCIAL REAL ESTATE

RECEIVED from **THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE** (as successor by merger between The Jewish Community Center a/k/a The Jewish Community Center of Portland and the Jewish Federation of Southern Maine), a not-for-profit corporation organized and existing under the laws of the State of Maine, and having a mailing address of 57 Ashmont Street, Portland, Maine 04103 (the "Purchaser"), the sum of [redacted] as Earnest Money Deposit within forty-eight (48) hours after the Effective Date as set forth in paragraph 19 herein toward purchase of real estate owned by **ROMAN CATHOLIC BISHOP OF PORTLAND**, a not-for-profit corporation organized and existing under the laws of the State of Maine, and having a mailing address of 510 Ocean Avenue, Portland, Maine 04101 (the "Seller") and located at 1342 & 1348 Congress Street in the city of Portland, County of Cumberland, State of Maine, described as all that certain parcel of land situated in the City of Portland, County of Cumberland, State of Maine and more particularly described in Exhibit A attached hereto (the "Premises" or the "Property") upon the terms and conditions indicated below.

1. PERSONAL PROPERTY: The following items of personal property are included in this sale (if applicable): N/A

2. PURCHASE PRICE: The total Purchase Price is [redacted] payable pursuant to Section 1 of the Addendum.~~, with payment to be made as follows:~~

Earnest Money Deposit	$	SEE ADDENDUM
Other: SEE ADDENDUM	$	SEE ADDENDUM
Other: SEE ADDENDUM	$	SEE ADDENDUM
Balance due at closing, in cash or certified funds:	$	SEE ADDENDUM

3. EARNEST MONEY/ACCEPTANCE: This offer shall be valid until December 12, 2014 at 5:00 PM Eastern Time. King Real Estate ("Escrow Agent") shall hold the Earnest Money Deposit in a non-interest bearing account and shall act as Escrow Agent until closing. The Earnest Money Deposit shall be tendered to the Escrow Agent within forty-eight (48) hours after this Agreement for the Sale of Commercial Real Estate is fully executed.

4. TITLE AND CLOSING: That a deed, conveying the Premises in fee simple with good and marketable title in accordance with Standards of Title adopted by the Maine Bar Association shall be delivered to Purchaser and that Purchaser shall pay the Purchase Price as provided herein and execute all necessary papers for the completion of the purchase on or before SEE SECTIONS 3 AND 4 OF THE ADDENDUM. ~~If Seller is unable to convey title to the premises in accordance with the provisions of paragraph 5 below, then Seller shall have a reasonable time period, not to exceed 30 days from the time Seller receives written notice of the defect, unless otherwise agreed to by both parties, to remedy the title, after which time, if such defect is not corrected so that there is marketable title, Purchaser may within ____ days thereafter, at Purchaser's option, withdraw the Earnest Money Deposit and neither party shall have any further obligation hereunder, or Purchaser may, at Purchaser's option, close notwithstanding such uncured defects as may then exist. Seller hereby agrees to make a good faith effort to cure any title defect identified pursuant to paragraph 5 below during such period.~~

5. DEED: That the Property shall be conveyed by a Maine Short Form Deeds Act Quit Claim with Covenant Deed (the "Deed"), and shall be subject to all encumbrances (other than liens and mortgages), except covenants, conditions, easements and restrictions of record that materially and negatively impair the current use of the Premises and usual public utilities servicing the Premises and shall be subject to applicable land use and building laws and regulations.

6. LEASES/TENANT SECURITY DEPOSITS: The Premises shall be transferred free and clear of all leases, tenants, and/or occupants.

7. POSSESSION/OCCUPANCY: Possession of Premises shall be given to Purchaser immediately at closing unless otherwise agreed by both parties in writing.

8. RISK OF LOSS: Until transfer of title, the risk of loss or damage to the Premises by fire or otherwise is assumed by Seller unless otherwise agreed in writing. The Premises shall at closing be in substantially the same condition as at present, excepting reasonable use and wear. If the Premises are materially damaged or destroyed prior to closing, Purchaser may either terminate this Agreement and be refunded the Earnest Money Deposit if such damage or destruction occurs within the Preliminary Due Diligence Period, and in any case may elect to close this transaction and accept the Premises in their as-is condition together and with no assignment of the Seller's right to any insurance proceeds relating thereto; provided, however, that if Purchaser's cost to demolish the building and/or abate and dispose of asbestos on the Premises should increase due to said damage or destruction of the Premises, Seller agrees to make a contribution of said insurance proceeds to the full extent of the difference.

9. PRORATIONS: The following items shall be prorated as of the date of closing:
   a. Real Estate Taxes based on the municipality's tax year. Seller is responsible for any unpaid taxes for prior years.
   b. Fuel
   c. Metered utilities, such as water and sewer, shall be paid by the Seller through the date of closing.
   d. Purchaser and Seller shall each pay one-half of the transfer tax as required by the laws of the State of Maine.
   ~~e. Rents, monthly common area maintenance charges, and all other additional rents received by Seller pursuant to leases of the property.~~[N/A]
   f. Property tax payments shall be prorated to the extent applicable.

Buyer's Initials KC Seller's Initials

10. INSPECTIONS: Purchaser is advised to seek information from professionals regarding any specific issue of concern. Purchaser acknowledges receipt of disclosure form attached hereto. Except as set forth in this Agreement, neither Seller nor the Real Estate Licensees identified below make any representations or warranties regarding the condition, permitted use or value of Seller's real or personal property. This Contract is subject to the following inspections, with the results being satisfactory to Purchaser:

TYPE OF INSPECTION	YES	NO	RESULTS REPORTED	TYPE OF INSPECTION	YES	NO	RESULTS REPORTED
a. General Building	_X__	____	Within _60__ days	i. Lead Paint	____	____	Within ____ days
b. Sewage Disposal	____	____	Within _____ days	j. Pests	____	____	Within ____ days
c. Water Quality	____	____	Within _____ days	i. ADA	____	____	Within ____ days
d. Radon Air Quality	____	____	Within _____ days	k. Wetlands	____	____	Within ____ days
e. Radon Water Quality	____	____	Within _____ days	l. Environmental Scan	_X__	____	Within _90_ days
f. Asbestos Air Quality	____	____	Within _____ days	m. Zoning	_X__	____	Within _90* days
g. Code Conformance	____	____	Within _____ days	n. Insurance	____	____	Within ____ days
h. Flood Plain	____	____	Within _____ days	o. Other: All Permits and Approvals	_X__	____	Within _90* days
				p. Other: Survey	_X__	____	Within _60_ days

* Or as such date may be extended pursuant to Section 1 of the Addendum.

All inspections (including, without limitation, survey) will be done by inspectors chosen and paid for by Purchaser. If the result of any inspection or other condition specified herein is unsatisfactory to Purchaser, Purchaser may declare the Contract null and void by notifying Seller in writing within the specified number of days set forth above, and the Earnest Money Deposit (except for any non-refundable portions of said Earnest Money Deposit) shall be returned to Purchaser if such notice is delivered prior to the expiration of the Preliminary Due Diligence Period. If Purchaser does not notify Seller that an inspection is unsatisfactory within the time period set forth above, this contingency is waived by Purchaser. In the absence of inspection(s) mentioned above, Purchaser is relying completely upon Purchaser's own opinion as to the condition of the Premises.

11. REVIEW OF LEASES AND INCOME AND EXPENSE INFORMATION. [N/A]

12. FINANCING: Purchaser's obligation to close hereunder is contingent upon Purchaser's obtaining within __N/A__ days from the effective date of this contract a written commitment (the "Commitment") from a lender for a mortgage loan of not less than __N/A__% of the purchase price at an initial interest rate not to exceed __N/A__% per annum and amortized over a period of not less than __N/A__ years. Purchaser acknowledges that a breach of this good faith obligation to seek and accept financing on the above-described terms shall be a breach of this Contract.

In the event that Purchaser is unable to obtain the Commitment and Purchaser notifies Seller within __N/A__ days from the effective date of this Contract, then Seller shall return the earnest money to Purchaser and this Contract shall terminate and neither party shall be under any further obligation hereunder. If Purchaser is unable to obtain the Commitment and does not notify Seller that Purchaser has failed to obtain the Commitment within the time limit set forth above, then Purchaser shall be in default of this Agreement.

13. AGENCY DISCLOSURE: Purchaser and Seller acknowledge that they have been informed that Joseph Malone of Malone Commercial Brokers ("Selling Agent") is acting as Selling Agent in this transaction and is representing Roman Catholic Bishop of Portland and that Michael Jacobson of King Real Estate ("Purchaser Agent") is acting as Purchaser Agent in this transaction and is representing The Jewish Community Alliance of Southern Maine (Selling Agent and Purchaser Agent are referred to elsewhere herein as "Licensees").

14. DEFAULT: In the event of breach by Purchaser of its obligations herein, Seller shall have as its sole remedy, in lieu of all other legal and equitable remedies, the right to terminate the Agreement and retain, as liquidated damages for such breach, the Earnest Money Deposit and all other non-refundable deposit(s) tendered to it pursuant to the Addendum, the parties agreeing that damages for such breach are difficult to measure, and that such amount represents a fair and proper determination of such damages. In the event of Seller's breach of Seller's obligations hereunder, Purchaser shall elect either (a) to receive a refund of the Earnest Money Deposit and all other non-refundable deposit(s) tendered to it pursuant to the Addendum, or (b) to enforce the right to seek specific performance, but shall have no other remedy; provided, however, that if Purchaser successfully enforces said right to specific performance, Seller agrees to pay Purchaser's reasonable attorneys' fees and costs related thereto . In the event of an undisputed default by either party, the Escrow Agent may return the earnest money to Purchaser or Seller with written notice to both parties pursuant to Maine Real Estate Commission regulations. If a dispute arises between Purchaser and Seller as to the existence of a default hereunder and said dispute is not resolved by the parties within thirty (30) days, Escrow Agent may elect to file an action in interpleader and deposit the earnest money in the court to resolve said dispute, or otherwise disburse the earnest money pursuant to Maine Real Estate Commission regulations. Purchaser and Seller, jointly and severally, shall indemnify Escrow Agent for all costs, losses, expenses, and damages, including reasonable attorneys' fees, incurred by Escrow Agent in connection with said action and/or in connection with any dispute relating to this Contract and/or the Deposit.

15. MEDIATION: Any dispute or claim arising out of or relating to this Contract or the Premises addressed in this Contract shall be submitted to mediation in accordance with the Maine Residential Real Estate Mediation Rules of the Maine Association of Dispute Resolution Professionals or its successor organization. This clause shall survive the closing of this transaction.

16. PRIOR STATEMENTS: This Contract sets forth the entire agreement between the parties, and there are no other representations, agreements or understandings with respect to the subject matter of this Contract. This Contract shall be construed according to the laws of the State of Maine.

Buyer's Initials CKC Seller's Initials

17. HEIRS/ASSIGNS: This Contract shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns of the respective parties.

18. COUNTERPARTS: This Contract may be signed on any number of identical counterparts, including PDF or scanned copies, or electronically transmitted copies with the same binding effect as if all the signatures were on one instrument.

19. EFFECTIVE DATE: This Contract is a binding contract when signed by both Seller and Purchaser and when that fact has been communicated to all parties or to their agents. Time is of the essence of this Contract. Seller or Transaction Broker is given permission by the parties to complete the Effective Date blank below with the date of the last signature of the parties, and that date shall be the Effective Date for all purposes under this Contract, and if that blank is not completed, then the Effective Date shall be the date of the last signature of the parties. Except as expressly set forth to the contrary in this Contract, the use of the term "days" in this Contract, including all addenda made a part hereof, shall mean calendar days. Deadlines in this Contract, including all addenda, expressed as "within x days" or the like shall be counted from the Effective Date, unless another starting date is expressly set forth, beginning with the first day after the Effective Date, or such other established starting date, and ending at 5:00 PM, Eastern Time, on the last day counted.

20. Seller and Purchaser acknowledge receipt of the Maine Real Estate Brokerage Relationships Form.

21. ADDENDA: This contract has an addendum containing additional terms and conditions: Yes __X__ No _____.

22. EXTENSION: Seller and Purchaser agree to extend the following date(s) set forth in this Contract to the new dates shown:

    Date for SEE ADDENDUM, changed from SEE ADDENDUM to SEE ADDENDUM, 20___.
    Date for SEE ADDENDUM, changed from SEE ADDENDUM to SEE ADDENDUM, 20___.
    Date for SEE ADDENDUM, changed from SEE ADDENDUM to SEE ADDENDUM, 20___.

The parties agree that none of the above are collateral agreements. It is the intent of the parties that except as expressly set forth in this Contract, all covenants, representations, statements and obligations of both parties herein shall not survive closing.

A COPY OF THIS CONTRACT IS TO BE RECEIVED BY ALL PARTIES AND, BY SIGNATURE, RECEIPT OF A COPY IS HEREBY ACKNOWLEDGED. IF NOT FULLY UNDERSTOOD, CONSULT AN ATTORNEY.

Seller acknowledges that the laws of the State of Maine provide that every buyer of real property located in Maine must withhold a withholding tax equal to 2½% of the consideration unless Seller furnishes to Purchaser a certificate by the Seller stating, under penalty of perjury, that Seller is a resident of Maine or the transfer is otherwise exempt from withholding.

Emily Chaleff

_____
Legal Name of Purchaser

E. Chaleff
_____
Signature

Emily Chaleff
Social Security # or Tax ID#

Emily Chaleff Executive Direct
_____
Name/Title, thereunto duly authorized

Seller accepts and agrees to the terms and conditions set forth in this Contract and agrees to pay the Licensees the commission for services according to the terms of the listing agreement or if there is no listing agreement, the sum of _____ Dollars ($_____.00). In the event the Earnest Money Deposit is forfeited by Purchaser, it shall be evenly distributed between (1) Licensees and (2) Seller; provided, however, that the Licensees' portion shall not exceed the full amount of the commission specified.

Signed this _____ day of _____, 20____

ROMAN CATHOLIC BISHOP OF PORTLAND
_____
Seller

_____
Signature

_____
Social Security # or Tax I.D.#

CHIEF FINANCIAL OFFICER
_____
Name/Title, thereunto duly authorized

_____
Escrow Agent

DAVID P TWOMEY
_____
Name/Title

_____
Signature

The Purchasing Agent is _____ of _____ (Agency)

The Selling Agent is _____ of _____ (Agency)

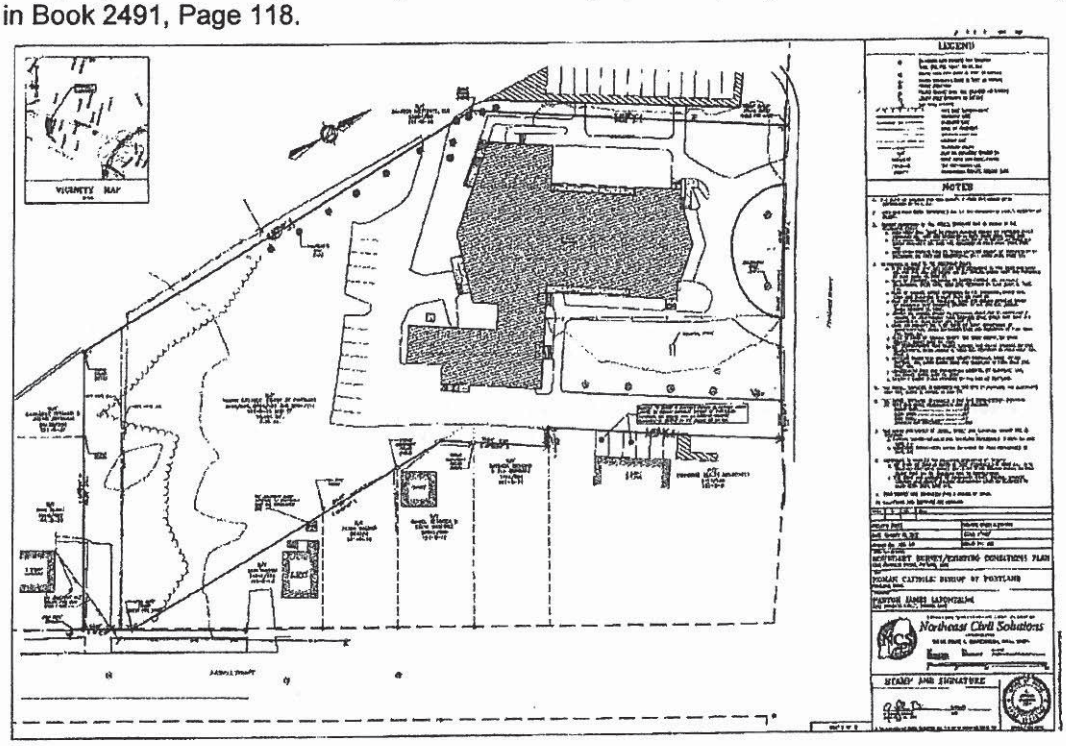
EFFECTIVE DATE OF CONTRACT: _____, 20____.

Buyer's Initials _____ Seller's Initials _____

Exhibit A

Legal Description

The survey below will be replaced by a legal description acceptable to both parties and prepared by the surveyor retained by Purchaser at closing; provided, however, that said legal description shall include all three (3) parcels conveyed to Seller by virtue of three (3) deeds recorded in the Cumberland County Registry of Deeds in Book 2338, Page 240; Book 2724, Page 109; and Book 2724, Page 111, the associated legal descriptions of which are attached hereto, subject to Notice of Layout and Taking by the State of Maine, Department of Transportation, dated January 18, 1983 and recorded in said registry at Book 6110, Page 287 and subject to easement rights granted to Central Maine Power Company and New England Telephone and Telegraph Company in instrument dated July 22, 1959 and recorded in Book 2491, Page 118.



Buyer's Initials EKC Seller's Initials

Parcel 1:

A certain lot or parcel of land, with the buildings thereon, situated on the Southwesterly side of Congress Street, in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning on the Southwesterly side line of Congress Street at the Northerly corner of land conveyed by P.H. & J.M. Brown Company to Martin Curran, Jr., by deed dated May 13, 1902, Book 717, page 129; thence North 57° 10' West by the Southwesterly side line of Congress Street two hundred and five (205) feet more or less to the Easterly corner of land formerly of Edward H. Davels; thence South 32° 50' West by said Davels land two hundred eleven and two tenths (211.1) feet; thence South 1° 41' East by said Davels land three hundred two and one tenth (302.1) feet to an angle in said Davels land; thence Southeasterly by a line at right angles with the northwesterly side line of Lassell Street, as extended, one hundred ninety (190) feet more or less to said Northwesterly side line of Lassell Street; thence Northeasterly by the Northwesterly side line of Lassell Street, as extended, forty (40) feet more or less to the Westerly side line of said Curran land; thence North 1° 27' West by said Curran land two hundred sixty (260) feet more or less to an angle in said Curran line; thence North 33° East by said Curran land two hundred nine and eighty-two hundredths (209.82) feet to the point of beginning.

Being the premises described in a warranty deed to Roman Catholic Bishop of Portland from Norman E. Blake and Irma B. Blake dated February 28, 1957 and recorded in the Cumberland County Registry of Deeds in Book 2338, Page 240.

Parcel 2:

A certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Being a rear portion of Lot #5 as shown on a Plan of Lots of Martin Curran, Jr., recorded in Cumberland County Registry of Deeds Plan Book 9, Page 121. Said lot is located on the westerly side of Lassell Street in the City of Portland, County of Cumberland, State of Maine and is more particularly bounded and described as follows:

Beginning at the point formed by the intersection of the division line between lots 4 and 5 on said Plan with the easterly line of land conveyed to the Grantee herein by Norman E. Blake et.al. by deed dated February 28, 1957 and recorded in said Registry in Book 2338, Page 240. Said point of beginning is located along said easterly property line of the Grantee at a point that is distant S 33° 04' W, 207.42' from its intersection with the southerly side of Congress Street. Thence continuing by said easterly property line S 33° 04' W, 2.48' to an iron marking an angle in said line. Thence S 0° 57 1/2' E, 21.45' to a point on the rear property line of said Lot #5. Thence through said Lot #5 N 33° 04' E, 20.97' to the southerly side of said lot #4. Thence by the southerly side of lot #4 N 60° 22' W, 12.02' to the point of beginning.

Said above described lot being a portion of the lot of land conveyed to Albert D. Keniston and Iva L. Keniston by Elizabeth A. Curran and Thomas E. Curran by deed dated June 7, 1946 and recorded in Cumberland County Registry of Deeds in Book 1825, Page 95.

Said above-described courses are magnetic and of the date of 1904.

Being the premises described in a warranty deed to Roman Catholic Bishop of Portland from Albert D. Keniston and Iva L. Keniston dated December 22, 1962 and recorded in said Registry in Book 2724, Page 109.

Parcel 3:

A certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, bounded and

described as follows:

Being the rear portion of Lot #4 as shown on a Plan of Lots of Martin Curran, Jr., recorded in Cumberland County Registry of Deeds Plan Book 9, Page 121. Said lot is located on the westerly side of Lassell Street in the City of Portland, County or Cumberland, State of Maine and is more particularly bounded end described as follows:

Beginning at the point formed by the intersection of the division line between Lots 3 and 4 on said plan with the easterly line of land conveyed to the Grantee herein by Norman E. Blake et.al. by deed dated February 28, 1957 and recorded in said Registry in Book 2338, Pace 240. Said point of beginning is located along said easterly property line of the Grantee at a point that is distant S 33° 04' W, 157.33' from its intersection with the southerly side of Congress Street. Thence continuing by said easterly property line S 33° 04' W, 50.09' to the most northwesterly corner of Lot #5 as shown on said plan. Thence by the northerly side of said Lot #5 S 60° 22' E, 12.02' to a point. Thence through said Lot #4 N 33° 04' E, 50.09' to the southerly side of Lot #3. Thence by the southerly side of said Lot #3 N 60° 22' W 12.02' to the point of beginning.

Said above described lot being a portion of the lot of land acquired by Richard M. King as son and one of the two heirs at law of Richard J. King, late of Portland, deceased, and by deed of Helen K. Curran, daughter and the other heir at law of said Richard J. King, said deed dated November 10, 1943 and recorded in Cumberland County Registry of Deeds in Book 1730 at Page 139.

Said above described courses are magnetic and of the date of 1904.

Being the premises described in a warranty deed to Roman Catholic Bishop of Portland from Richard M. King dated December 21, 1962 and recorded in said Registry in Book 2724, Page 111.

EKC

Buyer's Initials _____ Seller's Initials

Addendum to Agreement

Addendum to Agreement for the Sale of Commercial Real Estate dated December 10, 2014 between **THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE** (as successor by merger between The Jewish Community Center a/k/a The Jewish Community Center of Portland and the Jewish Federation of Southern Maine), a not-for-profit corporation organized and existing under the laws of the State of Maine (the "Purchaser") and **ROMAN CATHOLIC BISHOP OF PORTLAND**, a not-for-profit corporation organized and existing under the laws of the State of Maine (the "Seller") as owner of the property located at 1342 & 1348 Congress Street, Portland, Maine and as more fully described in the main body of the Agreement (the "Premises" or the "Property"). This Addendum is made a part of the Agreement to which it is intended to be attached, and the Agreement form and this Addendum together are referred to as the "Contract" or "Agreement".

In the event that any provision of this Addendum conflicts in whole or in part with any provision of the main body of the Agreement form to which it is attached, the terms of this Addendum shall control and the conflicting provisions or portions of provisions of the main body of the Contract shall be considered waived and deleted.

1. Purchase Price. The total Purchase Price is [redacted], payable by Purchaser to Seller as follows:

(a)

(i) Within forty-eight (48) hours after the execution hereof, Purchaser shall deliver an earnest money deposit of [redacted] (the "Earnest Money Deposit") to King Real Estate, as Escrow Agent, to be held in a non-interest bearing account. The Earnest Money Deposit shall remain fully refundable to Purchaser until February 15, 2015 (the "Preliminary Due Diligence Period"), immediately following which the Earnest Money Deposit shall be non-refundable, and Purchaser agrees to make commercially reasonable efforts to file a preliminary application with the City Planning Board within the Preliminary Due Diligence Period.

(ii) If, following the expiration of the Preliminary Due Diligence Period on February 15, 2015, Purchaser has demonstrated that it is diligently pursuing its permits and approvals but has not yet received them, Seller agrees to furnish to Purchaser an additional one hundred and twenty (120) day due diligence period (the "Second Due Diligence Period"), which will (except as provided below) extend until June 15, 2015, in exchange for an additional non-refundable Earnest Money Deposit payment of [redacted] (the "First Additional Earnest Money Deposit"); Purchaser further affirmatively agrees in the event of payment of the First Additional Earnest Money Deposit that, notwithstanding the above June 15, 2015 date, the Second Due Diligence Period shall instead terminate early, on April 16, 2015, unless the Purchaser by April 16, 2015 shall have submitted to the Planning Board its preliminary application for approval and paid its application fee therefor, and that in the event of such early termination Purchaser shall elect by April 17, 2015 whether to waive the permitting contingency and close within thirty (30) days of said election or instead to terminate the Agreement and forfeit all earnest money deposits made, and if no such election is made, then the Purchaser shall be deemed to have terminated the Agreement and forfeited all earnest money deposits paid to date.

(iii) If, following the expiration of the Second Due Diligence Period on June 15, 2015, Purchaser has presented its preliminary application at a meeting of the Planning Board scheduled to consider sketch plan approval and has otherwise demonstrated that it is actively pursuing its permits, Seller agrees to furnish to Purchaser an additional ninety (90) day due diligence period (the "Third Due Diligence Period"), which will extend until September 14, 2015, in exchange for an additional non-refundable Earnest Money Deposit payment of [redacted] (the "Second Additional Earnest Money Deposit").

(iv) The Earnest Money Deposit and First Additional Earnest Money Deposit shall be applied to the Purchase Price at closing. The Second Additional Earnest Money Deposit shall be non-refundable and shall not be applied to the Purchase Price at closing.

(v) The above Due Diligence Periods and extensions thereof have no bearing on the inspection periods under Paragraph 10 (a), (l), and (p) for "General Building," "Environmental Scan," and "Survey," the lengths of which periods are established instead by reference to said Paragraph 10 (a), (l), and (p).

(b) The Sum of [redacted], if the closing occurs after payment of the First Additional Earnest Money Deposit), as adjusted for all prorations, closing costs, and adjustments, which Purchaser shall pay to Seller at closing by wire transfer, bank check, or closing agent's check upon recording of the deed.

2. Deed and Removal of Religious Items.

(a) The Premises shall be subject to the following Diocesan real estate restrictions, to be included in the Deed: "The above-described premises are conveyed SUBJECT to the restrictions that for so long as the present building (but not the foundation, which Grantee may use or maintain in an unrestricted manner) on the premises has not been removed or has not been razed, the Grantee, Grantee's successors assigns, shall not use the premises in any way relating to (1) counseling regarding or performance of abortions; (2) sale or distribution of pornographic materials; or (3) erotic displays or activities. The burden of this restriction shall run with the land conveyed hereby to the Grantee. The benefit of this restriction is held by the Roman Catholic Bishop of Portland, corporation sole, its successors and assigns."

(b) Seller has requested as part of this transaction that Purchaser remove or raze the building (other than the foundation) after closing, and Purchaser agrees to Seller's request to remove or raze said building (other than the foundation) at Purchaser's cost. To that end, Seller shall apply at its cost for a demolition permit for the Premises at Purchaser's request, and to such extent as may be needed to provide the benefit of the permit to Purchaser, Purchaser shall join the application. Cost of any asbestos studies, abatement, storage, transportation and removal shall be borne by Purchaser, and Purchaser agrees to conduct in accordance with applicable environmental, permitting, handling, transportation, demolition and storage regulations any such abatement (whether required as a condition of the permit or in order to comply with environmental laws or regulations applicable to the demolition and associated work) and to conduct the same following closing. The Purchaser wishes to honor the Seller's longstanding (over fifty (50) years) presence at the Premises. Accordingly, before removing or razing the building located on the Premises or performing site work on the Premises, the Purchaser will provide the Seller a ten- (10-) day period of time after closing to remove stained glass windows and any religious objects still located in the building of which the Premises is a part and from other portions of the Premises.

3. Title. Purchaser agrees to conduct a title investigation on the Premises within forty-five (45) days of the Effective Date of the Agreement, and waives any title defect not identified to Seller within said forty-five days, except for title defects that first arise thereafter, as to which Purchaser shall notify Buyer within seven (7) days of learning of the same. If Seller, as the result of any such defect, would in the event of a closing lack the ability to convey title in accordance with the provisions of paragraph 4 of the Agreement, then Seller shall have forty-five (45) days from the time Seller is notified of the defect, unless otherwise agreed in writing by both Purchaser and Seller, to cure the defect or obtain a title insurance commitment providing Purchaser with affirmative coverage over any such defect. Seller hereby agrees to make good-faith and best efforts to remedy any title defect during such period, provided that, except for liens, Seller need not expend more than $15,000 to effectuate said cure. If, at the expiration of the forty-five (45) day cure period, Seller is unable to remedy the title, Purchaser may at its option (i) waive the title defect as of the expiration of said cure period and accept the deed at closing notwithstanding any defects, or (ii) cancel and terminate the Agreement, in which case the Earnest Money Deposit shall be promptly returned to Purchaser, this Agreement shall be null and void, and both parties shall be relieved of any further obligations hereunder. Notwithstanding any provision herein to the contrary, if new title

issues arise after the expiration of the forty-five (45) day period herein described, Seller agrees to cure said title issues irrespective of the cost and without any limit.

4. Closing. The closing shall take place within thirty (30) days of Purchaser's obtaining all required and non-appealable local, state, and federal (if any) permits and approvals, including but not limited to a demolition permit, necessary to erect the new Jewish Community Center on the Premises, but in no event later than October 15, 2015. In the event that a demolition permit cannot be obtained, all Earnest Money Deposits shall be refunded to Purchaser, notwithstanding the provisions of Section 1 of this Addendum to agreements to the contrary. Seller agrees to execute and deliver to Purchaser at closing such affidavits and certificates as are reasonably necessary for Purchaser's acquisition of the Premises, including, without limitation, a Certificate of Non-Foreign Status (as required by the Internal Revenue Service), the applicable Maine Real Estate Withholding forms (as required by Maine Revenue Services), a title insurance "Seller's Affidavit" regarding mechanic's liens and persons in possession, an affidavit regarding underground storage tanks (as required by Maine Law), and evidence of Seller's legal existence, good standing, and authority to convey the Premises. Purchaser agrees to execute and deliver at closing evidence of Purchaser's legal existence, good standing, and authority to purchase the Premises, as well as any other instruments reasonably requested by Seller to consummate the transaction intended hereby.

5. Inspection and Seller's Delivery of Information. Seller agrees that Purchaser may enter onto the Premises at reasonable times designated by Seller prior to closing in order to inspect the Premises, perform due diligence, conduct surveys and engineering studies, and do any other such things as are reasonably necessary to its acquisition of the Premises, including, but not limited to, a Phase 1 Environmental Study. Seller further agrees to furnish to Purchaser, upon execution of this Agreement, all materials and studies in Seller's possession relating to the Premises or its condition, including, without limitation, copies of any Phase 1 Environmental Study, Seller's title insurance policy, any engineering and/or structural studies, and any environmental studies. Seller will provide said information without warranting the correctness of the information. Purchaser further reserves the right to view the Premises within forty-eight (48) hours prior to closing.

6. Conditions Precedent. The following are Conditions Precedent to Purchaser's obligation to close this transaction. Purchaser and only Purchaser may waive any or all of these Conditions Precedent. In the event that all Conditions Precedent are not fulfilled as of the date of the closing, Purchaser may elect not to close this transaction, whereupon Purchaser shall have the right to terminate this Agreement and all Earnest Money Deposits shall be distributed in accordance with Section 1 of the Addendum; provided, however, that if a demolition permit cannot be obtained, all Earnest Money Deposits shall be refunded to Purchaser, notwithstanding the provisions of Section 1 of this Addendum to agreements to the contrary: (a) Subject to the use by Seller of proceeds to clear title or dismiss suits, there are no suits filed or claims made against Seller that would in any way create a lien on the Premises or jeopardize Seller's right and authority to convey the Premises, or any portion thereof, or interest therein, to Purchaser. (b) Subject to any matters of title waived by Purchaser, Purchaser shall have obtained, at its cost, a Title Commitment at closing that is satisfactory to Purchaser and shall have been furnished with a satisfactory survey. (c) The zoning of the Premises permits the Buyer's proposed use for the Premises, which includes the establishment and operation of a new Jewish Community Center of up to 20,000± SF to contain, without limitation, an elementary school and preschool/daycare facility, together with at least fifty (50) surface parking spaces and adjacent space suitable for an outdoor play area that is satisfactory to Purchaser (the "Proposed Use"). (d) Purchaser shall have obtained all required local, state, and federal (if any) permits and approvals, including but not limited to demolition permit(s) that expire not less than sixty (60) days following closing (but this condition for issuance of the permit may be subject to a requirement for post-closing asbestos remediation), necessary to erect the new Jewish Community Center on the Premises.

[SIGNATURES ON FOLLOWING PAGE]

Agreed to: **PURCHASER**

THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE

By: Emily Chaleff

Name: Emily Chaleff Executive Director

Title: 12/9/2014

Date: _____

Agreed to: **SELLER**

ROMAN CATHOLIC BISHOP OF PORTLAND

By: _____

Name: DAVID P TWOMEY

Title: CHIEF FINANCIAL OFFICER

Date: 12/10/14

AUTHORIZATION

On behalf of the Roman Catholic Bishop of Portland, corporation sole, I authorize either David Twomey or Msgr. Andrew Dubois to negotiate and sign a purchase contract between the Roman Catholic Bishop of Portland, corporation sole, and the Jewish Community Alliance of Southern Maine for the purchase of St. Patrick's church property in Portland, Maine, as well as any amendment to the same. This authorization shall continue until revoked.

DATE: 12/9, 2014

ROMAN CATHOLIC BISHOP OF PORTLAND

Robert P. Deeley, Roman Catholic Bishop of Portland

Section 2
Evidence of Financial Capacity

2.1 Key Bank Letter of Intent

Att. E

KeyBank

April 2, 2015

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

Re: Letter of Intent / Jewish Community Alliance – 1342 & 1348 Congress Street

Dear Planning Department:

This Letter of Intent is to verify that KeyBank has reviewed the financing needs of the Jewish Community Alliance ("JCA") for the above-referenced project and that it is the opinion of KeyBank that the JCA has the financial capacity to undertake the purchase construction of the same.

The JCA has maintained a deposit relationship with KeyBank since 2000 and a lending relationship since 2010. The JCA has advised us that in addition to having raised $3,000,000.00 in dedicated cash, its capital campaign has yielded an additional $1,250,000.00 in firm pledges (including the value of its building on Ashmont Street to be sold as part of this transaction) to support the project. Based on KeyBank's longstanding relationship with the JCA, our review of the JCA's financial representations and our understanding of projected project costs, KeyBank will be pleased to consider issuing a commitment to make a loan to the JCA for the purchase and subsequent construction of the project. This Letter of Intent, however, is not a contract or an offer to enter into a contract, nor a commitment to make any loan, and does not obligate us to issue any commitment or obligate us in any other way.

Should the Planning Department need anything further, please do not hesitate to contact me directly at 207-874-7222.

Sincerely,

Anthony DiSotto
Vice President
Business Banking

cc: Steven Brinn, President, JCA
Elinor G. Miller, Interim Director, JCA

Section 3
Traffic and Parking

3.1 Trip Generation Analysis for Proposed JCA Community Center in Portland – March 19, 2015

3.2 Additional Trip Generation Analysis for Proposed JCA Community Center in Portland – May 13, 2015

3.3 Parking Needs for Special Events for Proposed JCA Community Center in Portland – June 4, 2015

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

SUMMARY MEMORANDUM

TO: Mr. Greg Halsey, Staff Engineer
Tighe & Bond
177 Corporate Drive
Portsmouth, NH 03801

DATE: March 19, 2015

RE: Trip Generation Analysis for Proposed JCA Community Center in Portland

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Introduction

The purpose of this memorandum is to summarize trip generation analysis prepared for the proposed Jewish Community Alliance (JCA) of Southern Maineôs proposed new community center on Congress Street in Portland, Maine. The proposed community center is being located on the Saint Patrick Catholic Church site on Congress Street. It is understood that the proposed new building will be approximately 19,075 square feet (S.F.) in size. The building is expected to include a preschool/daycare facility for up to 68 students. In addition, the center is expected to provide an after school program for up to 20 students. There will be approximately 2,000 square feet of office space. The remainder of the building will provide for the community center purposes, which will include an assembly room for up to 260 persons and a multi-purpose room that will hold up to 49 persons. A copy of the current JCA building program is attached for information.

Trip Generation Analysis

The number of trips that will be generated by the proposed pre-school and the office component on a daily basis were estimated using the most recent Institute of Transportation Engineers (ITE) ñTrip Generation, 9th Editionò report, published in 2012. Land use code (LUC) 568 ï Day Care Center was used. There is no pre-school code and this LUC is described as ña facility where care for pre-school age children is provided, normally during the daytime hours. Day care facilities include classrooms, offices, eating areas and playgrounds. Some centers also provide after-school care for school-age childrenò.

The community center is also expecting to provide an after-school program for up to 20 school-age children. These children will be transported to the center in a van and picked up by parents. As a result, the day care calculations were performed on the basis of 88 (68 pre-school and 20 after-school) total students. LUC 710 ï General Office Building was used on the basis of 2,000 S.F. for the office component. The results are summarized in the following table:

ITE Trip Generation Summary – One Way-Trip Ends

Time Period	Day Care	Offices	Total
Weekday	386	22	408
AM Peak Hour ï Adj. Street	70	3	73
AM Peak Hour - Generator	71	3	74
PM Peak Hour ï Adj. Street	71	3	74
PM Peak Hour ï Generator	74	3	77

As can be seen above, the pre-school, after-school program and program offices are expected to generate a maximum of 77 one-way trips during peak hours on weekdays. The remaining community center component is more difficult to estimate since there is no ITE land use code that describes this particular use, however, it will be compared to previous grandfathered trips of the Church.

Since the church was in use until 2013 their former uses were compared to those of the proposed Jewish Community Center. It is understood, from information provided by the diocese, that Saint Patrickôs Church seated 500 persons in the pews. Additional seating was brought in for Easter and Christmas services. Again, based upon information provided by the church, their weekday masses typically had 100 attendees while weekend masses had 250 to 400 attendees. In addition to daily and weekend masses, the church held marriages, funerals and also private events, with attendances ranging from 200 to 500. The private events included dances, wedding receptions and birthday parties. A table provided by the Church listing all of these activities and events is attached to this memorandum.

In contrast, the proposed community center will provide an assembly room, for up to 260 persons. In addition, the multi-purpose room will provide for 49 additional persons. The assembly room is expected to provide for such events as occasional lectures, an annual meeting and performances. It is important to note that the JCA will not hold any events on Saturdays. However, other community uses could possibly occur on a Saturday. The majority of these events would be expected to occur off-peak (not during the weekday AM or PM peak hours), similar to the former Churchôs weekend masses, with lesser attendance than the former Church activities/events. The multi-purpose room is expected to be used for such activities as exercise classes and the after school program which has already been considered in the above trip generation calculations. Based upon all of this information, it is my professional opinion that the Jewish Community Center activities and events, with a lesser building capacity than the Church, will generate fewer trips than the former Saint Patrickôs Church both overall and during peak periods.

It is also important to note that while overall trip generation for the Jewish Community Center is expected to be less than the former Church use, as well as less frequent than the Church activities, the proposed site plan greatly enhances access management. The Church had three curb cuts to Congress Street. The proposed JCA site plan reduces the Congress Street curb cuts to just one, closing the two closest to the signalized Stevens Avenue intersection, thus improving both safety by reducing conflict points and the capacity of Congress Street.

To summarize, trip generation is expected to be reduced for the Jewish Community Center from the former Church use and access management will be greatly improved. It is also understood that the nearby signalized Stevens Avenue has been recently improved/ upgraded. As a result of all of these factors, no additional traffic study should be necessary. As always, please do not hesitate to contact me if you or the City of Portland have any questions or concerns regarding this analysis or if you need any additional information.

Sincerely,

Diane W. Morabito, P.E. PTOE
President

cc: Steven Brinn

HARRIMAN

JCA of Southern Maine
Jewish Community Center
Draft Building Program

March 5, 2015

- **School**

o	Infant (up to 8 students)	600 SF
o	Young Toddler (up to 10 students)	500 SF
o	Older Toddler (up to 12 students)	700 SF
o	Nursery (up to 18 students)	700 SF
o	Pre-K (up to 20 students)	900 SF
o	Teachers Room	250 SF
o	Laundry	100 SF
o	Staff Toilets	150 SF
o	Storage	200 SF
o	Multi-purpose Activity Room	900 SF
o	Cubbies	200 SF
	Net Area Subtotal	***5,200 SF***

- **Community Center**

o	Assembly Room (dividable assumed occupant load of 260)	3,900 SF
o	Multipurpose Room (occupant load: 49)	750 SF
o	Kitchen	200 SF
o	Food Pantry	400 SF
o	Lobby	500 SF
o	Public Toilets	300 SF
o	Mothers Room	80 SF
o	Storage	200 SF
	Net Area Subtotal	***6,030 SF***

- **Offices**

o	Private Offices (12 single use offices)	1,200 SF
o	Front Desk (1 staff receptionist)	100 SF
o	Conference Room (occupant load: 20)	300 SF
o	Work Room	200 SF
o	Break Room	200 SF
	Net Area Subtotal	***2,000 SF***

- **General**

o	Mechanical Room	400 SF
o	Electrical/Telecom Room	200 SF
o	Building Storage	300 SF
	Net Area Subtotal	***900 SF***

Net Program Area Subtotal	**14,130 SF**
Gross Building Area (1.35)	**19,075 SF**

YEAR	MASSES	BAPTISMS	MARRIAGE	FUNERALS	1ST C/Conf	PRIVATE EVENTS
2005	D-312 / WkE-208	33	15	54	45/43	Approx a dozen
2006	D-312 / WkE-208	26	10	32	32/11	Approx a dozen
2007	D-132 / WkE-156	10	5	27	31/31	" "
2008	D-132 / WkE-156	14	5	26	At St. Pius X	" "
2009	WkE. 156	11	2	37	21/93	20 separate
2010	WkE. 156	9	2	31	At. St. Joseph	25 separate
2011	WkE. 156	6	1	31	68/73	5 separate
2012	WkE. 156		2	29		
2013	WkE. 66			9		
2014						

Private Events:	Large # attending	Birthday,	Bridal, Dances	Receptions;	etc.	#'s = 200 to 500+ per event
Weekley:	Choir Practice	Rug Hookers;	Masses;	Water Color		
Monthly:	(2X) Tues & Thurs) PCM	K.C.; 4th Degree	Boy Scouts;	Worship & Spirituality	Baptism Prep; Classes	Hibernians; Railroad Mtgs.
Women:	Membership Banquet	Coummun Breakfast w/Mass	Year Ending Banquet	2 - 4 X yr. Various Type Dinners		
School:	7th & 8th Grade Luncheons	8th Grade Spelling Bee	Graduations & Receptions	Dances	Spagh. Dinners 3 - 4 annually	
Annual:	St. Patty's Dinner;	Parish Picnic	Daffodil Days;	GPCCM Meeting	Rummage Sale 2 x year	Christmas Bazaar
	Thanksgiving Baskets	Precinct Voting	Christmas Baskets	YMCA Banquets 6-8 Annually Various Sport	Altar, Eucharist Ministers & Lector Training	Recitals - Various Types
	Choral Art Society Sing-A-Long	K.C. Dinners Various	Respect Life Comm. Programs		1st Communion Mass &	/ Confirmation Receptions
MISC:	3 Schooner Fare Concerts	Lifeline Screening All Day	International Piano Festival 1 week	MCCCW All Day Mtg.	People to People Student Ambassador	Guitar Society 4 - 6 X month
	Coffee & Donuts A/Mass					
Masses:	Holiday - Easter Christmas, Lent Ash Wednesday	Reconcil. - Wkly & Holiday	Lenten Stations of The Cross	Holy Days of Obligation		

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

SUMMARY MEMORANDUM

TO: Mr. Greg Halsey, Staff Engineer
Tighe & Bond
177 Corporate Drive
Portsmouth, NH 03801

DATE: May 13, 2015

RE: Additional Trip Generation Analysis for Proposed JCA Community Center, Portland

---

This is written to respond to additional information requested by Tom Errico in his April 29, 2015 email to Jean Fraser regarding the proposed Jewish Community Alliance (JCA) of Southern Maineôs proposed new community center on Congress Street in Portland, Maine. Specifically, under his first bullet Mr. Errico requests weekday AM and PM peak hour trip generation data for the former Saint Patrick Catholic Church and a comparison to the expected JCA trips during this period. Based upon information you provided the church is 25,076 square feet in size.

Trip Generation Analysis

Since specific information was not available from the church regarding daily masses, former weekday AM and PM peak hour church trips were estimated using the most recent Institute of Transportation Engineers (ITE) ñTrip Generation, 9th Editionò report, published in 2012. Land use code (LUC) 560 ï Church was used on the basis of 25,076 square feet. The results are shown below:

ITE Trip Generation Summary

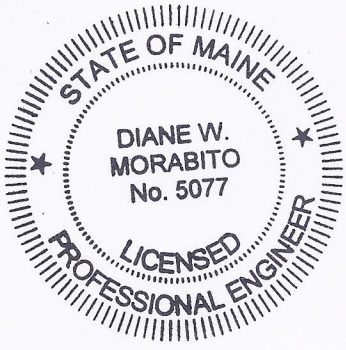
Time Period	One-way Trips
AM Peak Hour ï Adj. Street	14
AM Peak Hour - Generator	22
PM Peak Hour ï Adj. Street	14
PM Peak Hour ï Generator	24

In comparison, the regular components of the JCA center were previously estimated by Maine Traffic Resources and are repeated in the following table along with the former church trips:

Time Period	JCA Pre-School	JCA Offices	JCA Total	Former Church	Increase
AM Peak Hour – Adj. Street	70	3	73	14	59
AM Peak Hour - Generator	71	3	74	22	52
PM Peak Hour – Adj. Street	71	3	74	14	60
PM Peak Hour – Generator	74	3	77	22	55

Based upon the ITE data, the JCA community center will generate from 50 to 60 additional one-way trips during the weekday AM and PM peak hour periods. However, based upon information provided by the JCA this likely will not occur. For instance, the pre-school component was estimated based upon the day care code, which assumes parent pick-ups during the PM peak hour periods. Currently, approximately 16 students get picked up at 12:30, 4 or 5 students at 1:15 and 28 at 3:30. So, very few would be expected to occur in the PM peak hours in contrast to the above analysis. Also, as noted by Tom Errico, the Church did previously hold daily masses but we have no information regarding times or number of attendees to estimate these trips. However, they were likely greater than the trips indicated by the above ITE analysis.

As always, please do not hesitate to contact me if you or the City of Portland have any additional questions or concerns regarding this trip generation analysis.



Sincerely,

Diane W. Morabito

Diane W. Morabito, P.E. PTOE
President

cc: Steven Brinn

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

SUMMARY MEMORANDUM

TO: Mr. Greg Halsey, Staff Engineer
Tighe & Bond
177 Corporate Drive
Portsmouth, NH 03801

DATE: June 4, 2015

RE: Parking Needs for Special Events for Proposed JCA Community Center, Portland

---

This is written to respond to additional information requested by Tom Errico regarding parking demand for special events in our meeting on June 1st for the Jewish Community Alliance (JCA) of Southern Maineôs proposed new community center on Congress Street. Jean Fraser from Portlandôs Planning Division was also present at this meeting. Mr. Errico was not concerned with daily parking demand for the proposed center but specifically with the demand for special events.

Information was compiled by the JCA for their largest expected events, the annual frequency of these events and the likely number of attendees they would have. That information is repeated below:

Event	Frequency/Occurring	# of Attendees
Annual Meeting	mid-June weeknight 6:30-9 pm	100
Lecture Series	3 Evenings or Sundays	50-100 per
Concerts	2-3 Sundays	100 per
School Events, i.e. Math Night		100 inc students per
Holiday Celebrations:		
Yom Ha'shoa	April Sunday Afternoon	100
Israel Independence Day	April/May Wkdy Night	100
Passover Seder	April/May evening	50-100
Succot	October Sunday afternoon	50-100

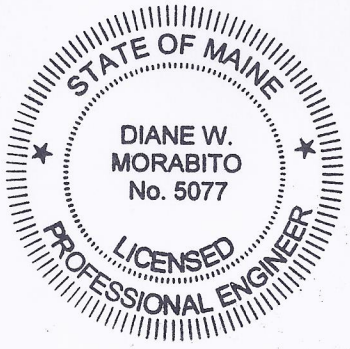
Expected vehicle occupancy rates were also obtained from the JCA for their Annual Meeting and for their Holiday Celebrations since Maine Traffic Resources was unfamiliar with these events. They reported that the annual meeting is primarily couples and families with 40 % singles with a vehicle occupancy rate (VOR) of 2.1. To be conservative Maine Traffic Resources used a rate of 1.9. The Holiday events are mostly families so they expect 2.2 persons per vehicle. The Eno Foundationôs ñParking for Institutions and Special Events reports an average vehicle occupancy rate of 3.0 for concerts and entertainment. For this analysis Maine Traffic Resources assumed a lesser 2.0 rate and also applied this same rate to

the lecture series. For the school events Maine Traffic Resources assumed a rate of 2.25. Two parent families with at least one child would be 3.0 so the use of 2.25 allows for some single parent households or parents arriving from different workplaces. These vehicle occupancy rates result in the following parking demands for the reported special events:

Event	# of Attendees	VOR	Max. Vehicles
Annual Meeting	100	1.9	53
Lecture Series	50-100	2.0	50
Concerts	100	2.0	50
School Events, i.e. Math Night	100	2.25	45
Holiday Celebrations:			
Yom Ha'shoa	100	2.2	46
Israel Independence Day	100	2.2	46
Passover Seder	50-100	2.2	46
Succot	50-100	2.2	46

As can be seen above, the largest parking demand will occur during the annual meeting. During this annual event, the facility is expected to require 53 parking spaces. Given that the current site design provides 50 spaces this is only a three vehicle overflow. Given that there is an agreement with the adjacent dentist for use of his spaces (thirty-five+), as overflow when his facility is closed, and that this is an evening event there should be adequate parking available for the annual meeting. Based upon the above analysis, parking for all other events should be contained on site provided that no other programs are scheduled at the same time.

As always, please do not hesitate to contact me if you or the City of Portland have any questions or concerns regarding this parking analysis.



Sincerely,

Diane W. Morabito

Diane W. Morabito, P.E. PTOE
President

cc: Steven Brinn, JCA

Section 4
Utility Capacity to Serve

Att. G

Central Maine Power
162 Canco Road, Portland, Maine 04103
1-800-750-4000

June 6, 2015

JUN 10 2015

TIGHE@BOND
C/O Mr. Greg Halsey
177 Corporate Drive
Portsmouth, NH 03801

RE: Three Phase Electric Service, 1342 Congress Street, Portland, Maine

Dear Mr. Halsey,

This letter is to advise you Central Maine Power has sufficient three phase electrical capacity in the area to serve the subject project.

Once the project is accepted by the City of Portland, the owner will need to call our Customer Service Center at 1-800-565-3181 to sign up for a New Account and a Work Request Order so we may provide an actual cost.

I will need to know what size service and voltage the Customer will be requesting.

If you have any questions please feel free to call me at 828-2882.

Sincerely,

Paul DuPerre

Paul DuPerre
Energy Service Specialist

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

May 11, 2015

Tighe & Bond
177 CorporateDrive
Portsmouth, NH 03801

Attn: Greg Halsey
Re: 1342 Congress Street - Portland
Ability to Serve with PWD Water

Dear Mr. Halsey:

The Portland Water District has received your request for an Ability to Serve determination for the noted site submitted on 3/23/2015. 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 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 the 2-inch service) or removing the 6-inch gate valve and capping the tapping sleeve (for the 6-inch service).

- 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 existing water service. A 6-inch diameter cast iron fire service line and a 2-inch diameter copper domestic service line 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.

Water System Characteristics

According to District records, there is a 6-inch diameter cast iron and a 42- inch water main both on the northerly side of Congress Street and a public fire hydrant located 225-feet from the site.

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

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

Hydrant Location:	Caleb Street 140 feet northerly of Congress Street
Hydrant Number:	POD-HYD01375
Last Tested:	3/31/2015
Static Pressure:	90 psi
Residual Pressure:	Not Measured
Flow:	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. 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 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, E.I.
Design Engineer

Greg W. Halsey

From: David Margolis-Pineo <DMP@portlandmaine.gov>
Sent: Thursday, February 26, 2015 2:01 PM
To: Greg W. Halsey
Cc: Michelle Sweeney
Subject: Re: Proposed Community Center 1342 Congress Street - Sewer/Water Services

Greg,

The water system in the Greater Portland Area is own and maintained by the Portland Water District. They can be reached at 207-774-5961 Ask for the person who took Rico Spugnardi's position.

As for sewer laterals, I will put a request in now to Michelle Sweeney to check out 1342 Congress St. Are there any other addresses for that property?

Congress St in that area is not under a paving moratorium so not problem there. You should try to reuse the existing sewer lateral if possible but it would be worth running a camera down the line to evaluate before making that decision.

>>> "Greg W. Halsey" <GWHalsey@tigheBond.com> 2/26/2015 10:05 AM >>>
David,
It was nice meeting you at yesterday's preliminary meeting with City Staff. I wanted to follow up with you and request some additional information. Does the City have utility service cards that can provide the pipe size, type for the existing water and sewer services to the building? Our surveyed plan shows (2) water service connections and we will need to confirm size to ensure we have capacity for domestic and fire flows in the proposed building and that we can re-use those existing services.

Also, you had mentioned a possible moratorium on cutting pavement in Congress Street. Can you confirm if that is still in effect?

We look forward to working with the City of Portland on this project. Feel free to call or email me for additional information you may need.

Thanks

Greg Halsey, EIT| Staff Engineer
Tighe & Bond | 177 Corporate Drive | Portsmouth, NH 03801 | 603.433.8818 | 315.436.6693 (Cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn

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

June 8, 2015

Greg Halsey
Tighe & Bond
177 Corporate Dr.
Portsmouth, NH 03801

Re: 1342 Congress St, Portland, ME

Dear Mr. Halsey:

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

Unitil has natural gas in the street in front of this building. The evaluation to complete the design, costs and determining what the customer contribution may be, if any, can be completed once Unitil receives the completed design and load information. Unitil welcomes the opportunity for further discussions regarding this project.

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

Sincerely,

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

Section 5
Fire Department

5.1 Fire Department Checklist

5.2 Fire Truck Turning Plan

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. See attachment
3. Name address, telephone number of architect
   See attachment
4. Proposed uses of any structures [NFPA and IBC classification]
5. See attachment
6. Square footage of all structures [total and per story]
   See attachment
7. Elevation of all structures
   See A201 Exterior Elevations
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
   See Sheet C-4 Utilities Plan
10. Water main[s] size and location
    See Sheet C-4 Utilities Plan
11. Access to all structures [min. 2 sides]
    Access to structure on 2 sides provided. See Sheet C-2A Overall Site Plan
12. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.
    See attachment

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

HARRIMAN

April 3, 2015

Portland Fire Department
Site Review
Fire Department Checklist

1. *Name of Applicant:*

   Steve Brinn
   Jewish Community Alliance of Southern Maine
   57 Ashmont Street
   Portland, ME 04103
   207-772-1959

2. *Name of Architect:*

   Mark D. Lee, AIA
   Harriman
   46 Harriman Drive
   Auburn, Maine 04210
   207-784-5162

3. *Proposed Use of Structure:*
   Mixed Use (Separated):
   Day-Care (NFPA Chapter 16, IBC I-4)
   Assembly (NFPA Chapter 12, IBC A-3)
   Business (NFPA Chapter 38, IBC B)

4. *Square footage of proposed structure (total and per story):*
   1-Story, 19,300 SF

5. *Elevation of Structures*
   See A201, Exterior Elevations

6. *Proposed Fire Protection of All Structures*
   Construction: NFPA II (000), IBC 2B
   Addressable Fire Alarm System
   Sprinkled in accordance with NFPA 101 9.7/NFPA 13

HARRIMAN

April 3, 2015

7. Code Summary (NFPA 1)

Chapter 6: Use and Classification, See above for Proposed Use of Structure

Chapter 10: General Safety Requirements

- 10.1.2 Building designed to NPFA 101 2009 with City of Portland Amendment (10-7-13) for the above listed occupancy uses
- 10.10.6 Kitchen designed with Fire Suppression System at applicable equipment (Ansul or equivalent)
- 10.18.3.2 18" min clearance from sprinkler deflector to obstructions

Chapter 11: Building Services

- 11.1.2.1 Building designed to NFPA 70 NEC
- 11.2.1 Building designed to NFPA 90A, NFPA 90B
- 11.3 Single story building does not have an elevator
- 11.4 Building designed to NFPA 54 and has natural gas service from Congress Street

Chapter 12: Features of Fire Protection

- 12.2 Building designed to NPFA 101 2009 with City of Portland Amendment (10-7-13) for the above listed occupancy uses. All applicable section of this code (NFPA 1) will be addressed by compliance with NFPA 101.

Chapter 13: Fire Protection Systems

- 13.1 Building plans will be submitted to the City of Portland for review and approval with the building permit application.

Chapter 14: Means of Egress

- 14.1 Building designed to NPFA 101 2009 and Maine Uniform Building and Energy Code (MUBEC). Respective code summary will be provided with the building permit application.

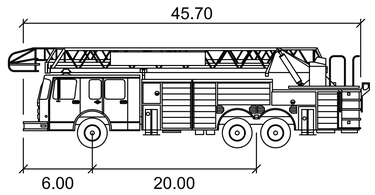
Chapter 16: Safeguarding Construction, Alteration, and Demolition Operations

- 16.1.1 Construction Manager for the project will contact the City of Portland Fire Department to coordinate necessary requirements under this Chapter prior to construction.

Chapter 18 Fire Department Access and Water Supply

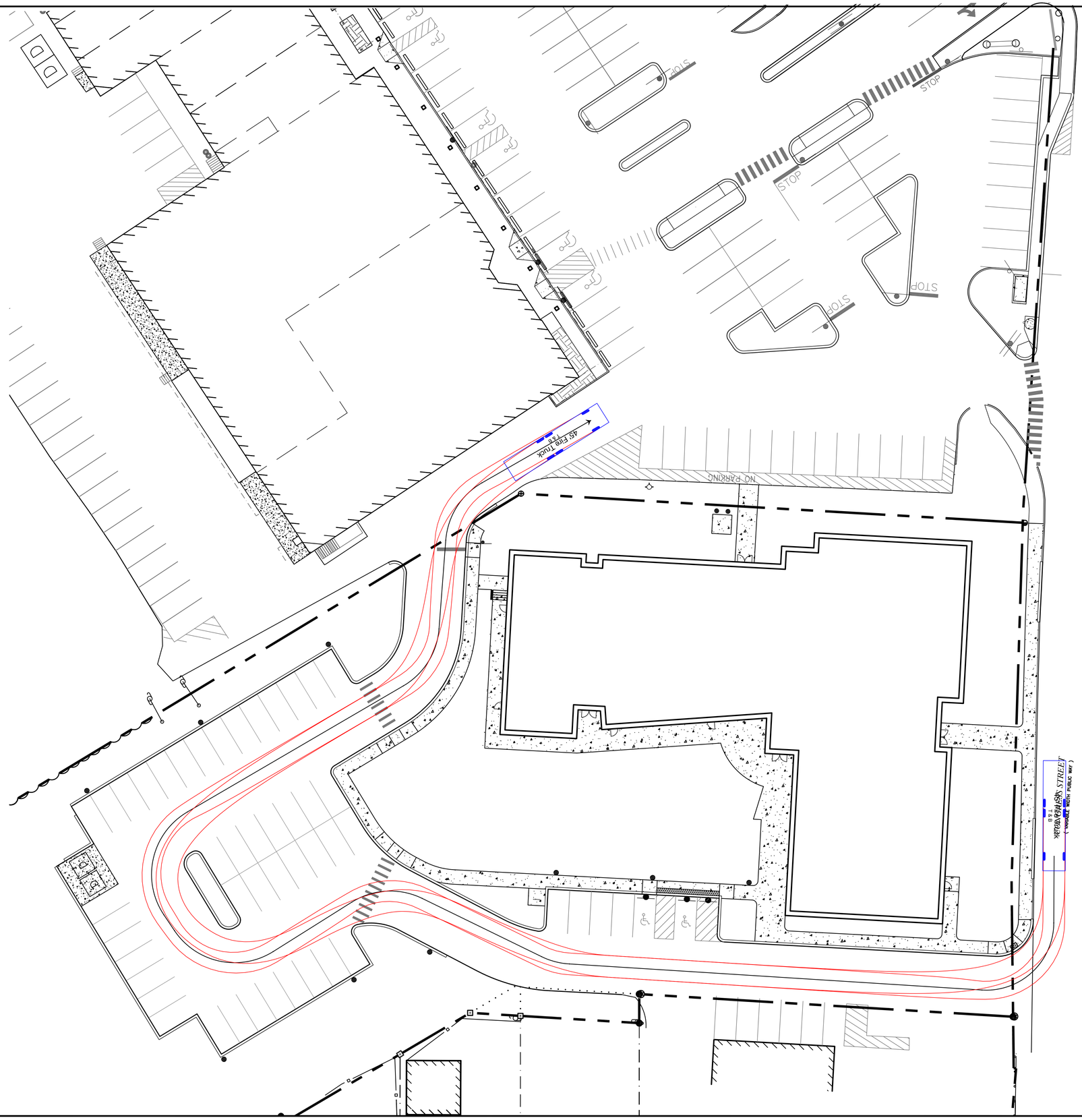
- 18.1.3 Plans

  Knox Box will be provided at the main building entrance. See site plans for access drive and water supply.



45' Fire Truck feet

Width	:	9.33
Track	:	9.00
Lock to Lock Time	:	6.0
Steering Angle	:	40.0



Tighe&Bond
Consulting Engineers
www.tighebond.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

Mark	Date	Description

PROJECT NO:	J-0096
FILE:	J0094-SITE-BUS.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

FIRE TRUCK TURNING PLAN

SCALE: AS SHOWN

1 OF 1

May 08, 2015-5:12pm Plotted By: gwh
Tighe & Bond, Inc. J:\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE-BUS.dwg Layout: FIRE

Section 6
City of Portland Wastewater Capacity Application

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Date: 6/16/2015

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: 1342 Congress Street

Chart Block Lot Number: 191-B-16/17

Proposed Use: Neighborhood Center and School

Previous Use: Catholic Church

Existing Sanitary Flows: Unknown GPD

Existing Process Flows: N/A GPD

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

Site Category:

Commercial *(see part 4 below)*	X
Industrial *(complete part 5 below)*	
Governmental	
Residential	
Other *(specify)*	

The existing 8" clay sewer service will be re-used for the proposed project. A new manhole will be constructed to connect the proposed 6" PVC sewer service from the building to the existing 8" service connection into Congress Street.

(Clearly, indicate the proposed connections, on the submitted plans)

2. Please, Submit Contact Information.

City Planner's Name: Jean Fraser Phone: _____

Owner/Developer Name: Applicant: Jewish Community Alliance of Southern Maine Attn: Steve Brinn

Owner/Developer Address: Applicant: 57 Ashmont Street, Portland, ME

Phone: _____ Fax: _____ E-mail: stvbrinn@gmail.com

Engineering Consultant Name: Tighe & Bond Attn: Bradlee Mezquita, P.E.

Engineering Consultant Address: 177 Corporate Drive, Portsmouth, NH 03801

Phone: 603-433-8818 Fax: _____ E-mail: BLMezquita@tighebond.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: 1,200 GPD

Peaking Factor/ Peak Times: PEAK TIME: DURING A FUNCTION EVENT,

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)*

SEE BELOW.

(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)

CALCULATIONS BASED ON TABLE 4C OF CMR 241 (2011)

ASSEMBLY: 150 @ 2 GPD PER SEAT = 300 GPD

DAY CARE: 60 KIDS @ 10 GPD + 10 STAFF @ 12 GPD = 720 GPD

EMPLOYEES W/O SHOWERS: 15 @ 12 GPD = 180 GPD

Uniform Plumbing Code Grease Sizing

Project 15309 Jewish Community Alliance Portland, Maine

Date: 23-Jun-15

Interceptor sizing using fixture volume capacity						
	Compartments				Rated size of grease interceptor	
Fixtures	Size/per compartment	No.	Load (gal)	Fills per hour	One-minute drainage period	Gallons peak 60 minutes
1-Compartment Sink	19 x 16 x 14	2	13.82	1	27.64	27.64
3-Compartment Sink	18 x 24 x 14	2	58.91	1	117.82	117.82
Upright Dishwasher	GPM	1	1.25	58	1.25	72.5
Pre-Rinse Sink	GPM	1	1.42	40	1.42	56.8
Hand Sink	GPM (2.2 each)	2	5.5	1	11	11
Beverage Station	GPH	1	5	1	5	5
Ice Machine	GPH	1	5	1	5	5
Sub-Total					127.42	295.76
Calculated Size	Sized for 60 minutes of flow plus 60 minutes of retention (peak 60 minute flow x 2)					591.52
Rounded up to next common size.						1000 Gallons

(1) Hand sink calculated at 15 seconds per use x 10 uses per hour (2.2/4*10 = 5.5 GPH each)

Section 7
Neighborhood Meeting

7.1 Neighborhood Meeting Certification

7.2 Neighborhood Meeting Invitation

7.3 Sign-In Sheet

7.4 Meeting Minutes

Tighe&Bond
www.tighebond.com

J-0096-1
June 24, 2015

RE: Neighborhood Meeting Certification
Proposed Neighborhood Center – 1342 Congress Street

I, Greg Halsey hereby certify that a neighborhood meeting was held on May 5, 2015 at the Italian Heritage Center at 7:30pm.

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.

The following attachments are included with this certification:
- Copy of Neighborhood Meeting Invitation
- Sign-In Sheet
- Meeting Minutes

Regards,

TIGHE & BOND, INC

Greg Halsey
Project Engineer

J:\J\J0096 Jewish Community Alliance\ADMIN\J0096-012(Neighborhood Meeting Certification).Docx

Tighe&Bond
www.tighebond.com

J-0096-1
April 24, 2015

Dear Neighbor:

On behalf of the Jewish Community Alliance of Southern Maine we would like to invite you to join us for a neighborhood meeting to discuss our plans for a Proposed Neighborhood Center. The project is located at 1342 Congress Street, which is in the R-5 Residential Zone. The proposed project includes the construction of a (1) story, 19,300 SF Neighborhood Center with associated site improvements that include a surface parking lot, stormwater management system, utilities, site lighting, and landscaping.

Meeting Location: **Italian Heritage Center**
40 Westland Avenue
Portland, ME 04102

Meeting Date: **May 5, 2015**

Meeting Time: **7:30pm**

Note: 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.

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

We look forward to meeting with you to discuss this project. If you have any questions, please contact Greg Halsey by phone at 603-433-8818 or by email at GWHalsey@Tighebond.com.

Very Truly Yours,

TIGHE & BOND, INC

Bradlee Mezquita, P.E.
Vice President

Greg Halsey
Staff Engineer

J:\J\J0096 Jewish Community Alliance\ADMIN\J0096-Neighborhood Meeting Notice.Docx

Proposed Neighborhood Center – 1342 Congress Street

Neighborhood Meeting
Location: Italian Heritage Center 40 Westland Ave Portland, Maine 04102
Date: May 5, 2015 at 7:30 p.m.

	Name	Address	Phone	Email
1.	Sherrie Bergman	288 Pine Pt Rd Brunswick	P: 7250070	sherrie.bergman@gmail.com
2.	Charles Miller	45 Belmont St PTLD	P: 772-8427	CMiller@bernsteinshur.com
3.	BETH SMITH	5 EASTWOODS RD KENNEBUNK	P: (508) 954-2025	bsmith@bernsteinshur.com
4.	Ed Suslovic	46 Kenwood St Portland ME 04102	P: 671-6370	edsuslovic@portlandmaine.gov
5.	Mike Lilly	83 Dunlap Rd Gorham, ME 04038	P: 329-1588	maclilly@Gmail.com
6.	Mary Lilly	11	P: 318-5673	mlilly@mainejewish.org
7.	Vin Veroneau	40 Caldwell St. Portland	P: 838-3397	Veroneau@maine.rr.com
8.	Ellie Miller	45 Belmont St Portland	P: 772-8427	emiller@mainejewish.org
9.	MICHAEL JACOBSON	4 ST ANDREWS FALMOUTH, ME	P: F: 749-0270	jacobsonekyrealestate.com

	Name	Address	Phone	Email
10.	Daniel Pearl	14 Greta Way, Falmouth	P: 807-7028	dpearl68@gmail.com
11.	Bill Green	22 Rockland Ave	P: 773-8619	BGandRG@aol.com
12.	Kristina Joyce Smith	148 Capisic St. Portland	P: 828-1390	kjsesq@maine.rr.com
13.	Steve Cecil	170 Milk St. Boston MA	P: 617 426-5050	scecil@cecilgroup.com
14.	Adam Wynn	170 Milk St. Boston MA	P: 617.426.5050	scecil@cecilgroup.com
15.	STEVE BRINN	9 BRACKNOLLS CE, ME	P: 207 799 6100	STUBRINN@GMAIL.COM
16.	MARK LEE	123 MIDDLE STREET	P: F: 784-5100	mlee@harriman.com
17.			P:	
18.			P:	
20.			P:	
21.			P:	
22.			P:	

Proposed Neighborhood Center

TO: Jean Fraser, City of Portland Planning Department

FROM: Greg Halsey, Tighe & Bond

DATE: June 5, 2015

On May 5, 2015 at 7:30 pm, a Neighborhood Meeting was held at the Italian Heritage Center in Portland, Maine

Project Introduction

- Steve Brinn with the Jewish Community Alliance of Southern Maine introduced the project and provided a brief history of the organization and the reason they are proposing to build a new community center.

Architectural Presentation

- Mark Lee with Harriman provided a brief overview of the proposed building.
- (3) major components of the building are neighborhood center, pre-school/school, and administrative offices.
- Discussed the floor plan and overall basis for the layout of the building.

Site Improvements

- Adam Wynn with Cecil Group provided a brief overview of the site layout and basis for the design.
- Focused on landscape, screening, and parking layout.
- Privacy fence will buffer residences from proposed development.
- Play area is nestled into the back of the building with ornamental fence for safety.
- Drainage improvements that include a underdrained soil filter for stormwater management.

Questions from Attendees

- **Ed Suslovic (City Councilor)**
  - *Concern with light spilling over from parking lot.*
  - Response: The proposed lighting will be designed to limit light trespass from the proposed development onto abutting properties. Goal is to completely eliminate light trespass with cutoff fixtures if necessary.

  - *How many parking spaces are proposed?*
  - Response: 50 parking spaces are proposed.

  - *Will there be a front entrance to the building?*
  - Response: Yes there will be a front entrance to the building. However, the front entrance will normally remain locked during the day unless there is a special event. Given the use as a school the JCA would like to have control over access to the building.

  - *How will access to the site work?*

- Response: JCA is pursuing a access easement agreement with the Westgate Shopping Center that will allow patrons of the proposed neighborhood center to use the signalized intersection from the Shopping Center. The existing shared access driveway will be reconstructed to accommodate two way traffic.

- *Why doesn't the JCA re-use the Church?*
- Response: The Diocese will not allow the JCA to purchase the property unless they agree to demolish it. Realistically the existing building does not lend itself to the proposed uses, so it would make the most sense to start with a new building. The Church was built with one use in mind while the proposed building needs to be flexible. Vin Veroneau with the Diocese was present at the meeting to discuss this issue.

- **Charlie Miller**
  - *Asked how the play area would be protected from parking area.*
  - Response: The proposed play area will be fenced in to keep the separate uses from mixing. Safety is paramount given the young age of the students that may attend.

Section 8
Easement Agreements

8.1 Charter Westgate, LLC Access Easement Agreement

ACCESS EASEMENT AGREEMENT

THIS ACCESS EASEMENT AGREEMENT (this "***Agreement***") is made and entered into as of this 25th day of MAY 2015, by and between **CHARTER WESTGATE, LLC**, a Delaware limited liability company having a mailing address at c/o Charter Realty Development Corporation, 800 Westchester Avenue, Suite S-632, Rye Brook, New York 10573 ("Grantor") and **THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE** (as successor by merger between The Jewish Community Center a/k/a The Jewish Community Center of Portland and the Jewish Federation of Southern Maine), a Maine not-for-profit corporation having a mailing address of 57 Ashmont Street, Portland, Maine 04103 ("Grantee");

RECITALS

WHEREAS, Grantor is the owner of certain real estate located in the City of Portland, County of Cumberland, and State of Maine and more particularly described on **Exhibit A** attached hereto and incorporated herein ("***Grantor's Land***");

WHEREAS, Grantee owns certain real property adjacent to, and on the southwesterly side of, Grantor's Land, which property is more particularly described on **Exhibit B** attached hereto and incorporated herein ("***Grantee's Land***"); and

WHEREAS, Grantor's Land and Grantee's Land are connected by a paved driveway (the "***Driveway***"); and

WHEREAS, Grantee desires to have vehicular and pedestrian access for ingress and egress to and from Grantor's Land on, over and across the Driveway; and

WHEREAS, Grantor has agreed to grant to Grantee an irrevocable, non-exclusive, perpetual easement on, over and across the Driveway for vehicular and pedestrian access, ingress and egress to and from Grantor's Land, all on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of One Dollar ($1.00) and the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, do hereby agree as follows:

1. Access Easement.

(a) Except as set forth in paragraph 5 below, Grantor hereby grants to Grantee and its employees, tenants, guests, occupants, visitors, invitees, successors and assigns, a perpetual, irrevocable and non-exclusive easement for vehicular and pedestrian access, ingress and egress (the "***Access Easement***") on and over that certain portion of Grantor's Land identified as the twenty-four (24) foot wide cross-hatched area traversing Grantor's Land and Grantee's Land on the site plan attached hereto and incorporated herein as **Exhibit C** (the "***Easement Area***"), which Access Easement shall be appurtenant to, and run with and for the benefit of, Grantee's Land.

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(b) The Access Easement may be used only by Grantee and the employees, tenants, guests, occupants, visitors and invitees of Grantee for pedestrian and vehicular ingress and egress. The Access Easement may not be used for parking or for any purpose other than for pedestrian and vehicular ingress and egress and may not be used by commercial or construction vehicles of any type except as otherwise expressly permitted by Grantor in writing. Grantee shall make reasonable efforts to ensure that any adjoining landowner or occupant of any property abutting Grantee's Land shall not use the Access Easement. Grantee and the employees, tenants, guests, occupants, visitors and invitees of Grantee shall use the Access Easement for ingress and egress only and for no other purpose.

(c) Grantor hereby reserves for itself, its successors and assigns, the use and enjoyment of the Easement Area for all purposes consistent with the foregoing use described in subparagraph (a), including: (i) the right to regulate traffic in, upon, over and across Grantor's Land; and (ii) the right to maintain, repair and replace any such driveways, roadways and any entrances, exits and other paved surfaces, sidewalks, and curbing located upon the Easement Area so long as reasonably equivalent and convenient access is provided to Grantee. Notwithstanding anything herein to the contrary, Grantor and Grantee shall ensure that a clear delivery path over the Easement Area shall be maintained for Shaw's delivery trucks at all times and shall not be impeded in any way as it relates to Grantee's use under this Easement.

(d) Grantor, and its successors and assigns, shall be responsible, at its sole cost and expense, for the repair and maintenance of the Easement Area, including snow and ice removal, in a timely manner so as to provide commercially reasonable access for Grantee and its employees, tenants, guests, occupants, visitors and invitees. Grantee, and its successors and assigns, shall be responsible, at its sole cost and expense, for the repair and maintenance of that portion of the Driveway located on Grantee's Land, including snow and ice removal.

(e) If any party's use of the Easement Area or the Driveway results in damages thereto (except for normal wear and tear) arising from accidents, negligence, or use in a manner not consistent with use by a reasonably prudent operator, such party causing the damage shall be solely responsible for the costs of repairing such damage. Grantee shall indemnify and hold harmless Grantor and Grantor's tenants and employees from and against all claims or lawsuits arising from or caused by Grantee's use of the Easement Area except to the extent that any claims or lawsuits are related to or caused by the negligence or willful misconduct of Grantor or Grantor's tenants or employees.

2. Hazardous Materials. Neither Grantor nor Grantee shall cause or permit any hazardous material to be brought upon, kept or used by it or its agents, employees, contractors, sublessees, tenants or invitees in or about the Easement Area, unless such hazardous material is necessary to the business of any such person or entity and such hazardous material is used, kept, stored and disposed of in a manner that complies with all applicable laws regulating any such hazardous material so brought upon or used or kept in or about the Easement Area.

3. Interference. Grantor and Grantee shall cause all construction, installation, maintenance and repair work required of either party hereunder to be conducted so as not to unreasonably interfere with any construction or business activities of the other party, its tenants, guests, customers, invitees,

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contractors, servicemen, on Grantor's Land or Grantee's Land, respectively. Grantor shall not, except for permitted improvements to the Easement Area, erect or allow to be erected any structures or improvements on or in the Easement Area and shall not plant or allow to be planted or grown any trees or other plantings therein nor perform any work therein which may obstruct, impede or interfere with Grantee's use of the Easement Area for the purposes stated herein. To the extent that any cleaning, power-washing, security/policing or other costs are caused by the construction of Grantee's new facility or by Grantee, all such costs shall be paid directly by Grantee and not by Grantor.

4. Relocation or Reconfiguration of Easement Area. Grantor, and its successors and assigns, shall have the right to relocate or reconfigure all or any part or parts of the Easement Area upon at least thirty (30) days' prior written notice to Grantee, provided that such relocation or reconfiguration does not, in Grantee's reasonable discretion, materially impair Grantee's use of the Easement Area, and provided further that any such proposed relocation or reconfiguration does not violate a City permit or the permit of any other governing authority. In the event that relocation or reconfiguration of the Easement Area shall require an amendment to a City permit or the permit of any other governing authority, the parties mutually agree to make best efforts and otherwise cooperate in good faith to prosecute said amendment to completion in order to allow the relocation or reconfiguration to occur. Notice under this paragraph 4 shall include a copy of a plan showing the proposed relocation or reconfiguration of the Easement Area. Grantee agrees to promptly execute and deliver to Grantor all documents reasonably requested by Grantor to effectuate any such relocation or reconfiguration.

5. Automatic Termination. Notwithstanding the provisions of paragraph 1 to the contrary, the Access Easement shall automatically terminate and be extinguished upon any of the following events: (i) Grantee has not substantially completed its development plan within thirty-six (36) months after the date that Grantor has both (a) signed this Agreement and (b) obtained all consents required from its lenders and tenants pursuant to paragraph 7 herein; or, (ii) Grantee transfers fee title to Grantee's Land, and the new owner uses Grantee's Land for any purpose other than a private school, community center and/or a place of community public assembly, none of which uses may overburden the Access Easement granted herein and all of which uses shall be of a non-commercial type use; or, (iii) Grantee leases Grantee's Land to any entity or person for any purpose other than as a subsidiary of Grantee or for the uses permitted in subsection (ii) above. The Access Easement shall not run with the land if one of the events provided for in subsections (i), (ii) and/or (iii) above occurs.

6. Insurance. For so long as the Access Easement is in effect, Grantee shall maintain liability insurance in the sum of Two Million Dollars ($2,000,000.00) combined single limit per occurrence, or in such higher amounts as Grantor may reasonably request from time to time, insuring against the actions of Grantee and its employees, tenants, guests, occupants, visitors and invitees and naming Grantor as an additional insured.

7. Consent of Third Parties. Notwithstanding anything herein to the contrary, the easements, covenants and restrictions set forth in this Agreement shall be effective only upon receipt of the written consent of (i) Grantor's lender who holds the loan secured by Grantor's Land, and (ii) any tenant of Grantor's Land whose consent must be obtained under the terms of its lease. This instrument may not be recorded until such consents are obtained and Grantor shall make and employ best efforts to

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obtain the same.

8. Duration and Effective Date. Except as set forth in paragraph 5 above, the Access Easement created by this Agreement is irrevocable and shall be effective upon recording.

9. Grant of Easements Only. Grantor is not hereby conveying any land or title thereto, but merely granting the rights, privileges and easements hereinabove set forth.

10. Priority of Easements. The rights and easements granted by this Agreement are and will be superior in priority to any mortgages, security deeds, deeds of trust or liens, the foreclosure of which could terminate such easements.

11. Amendment. The provisions of this Agreement may be abrogated, modified, rescinded or amended in whole or in part only with the consent of the parties hereto, their successors and assigns, in a written instrument duly executed, delivered and recorded.

12. Further Acts. From time to time after the date of this instrument, the parties hereto shall each promptly perform such acts and execute, acknowledge and deliver any and all additional instruments or documents as either party may reasonably request to fully effectuate the purposes of this Agreement.

13. Governing Law. This Agreement shall be governed by, interpreted under, and construed and enforced exclusively in accordance with the provisions hereof and the laws of the State of Maine.

14. Binding Effect. The easement rights, obligations and restrictions created hereby shall be rights, obligations and restrictions running with the land and shall be binding upon and inure to the benefit of Grantor and Grantee, and their respective heirs, successors and assigns.

15. Cost of Recording. This instrument shall be recorded at Grantee's expense.

16. Notices. Any notice or demand required or permitted to be given under the Agreement shall be in writing and sent to the parties at their addresses first set forth above by national overnight delivery service. Notices shall be effective upon receipt, or, if delivery is refused, on the date delivery is first attempted.

17. Severability. If any provision of this Agreement, or portion thereof, or the application thereof to any person or circumstances, shall to any extent be held invalid, inoperative or unenforceable, the remainder of this Agreement, or the application of such provision or portion thereof to any other persons or circumstances, shall not be affected thereby; it shall not be deemed that any such invalid provision affects the consideration for this Agreement; and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

18. Rules of Construction. The parties have experience with the subject matter of this Agreement, have been represented by counsel and have each fully participated in the negotiation and

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drafting of this Agreement. Accordingly, this Agreement shall be construed without regard to the rule that ambiguities in a document are to be construed against the drafter.

19. Counterparts. This Agreement may be executed in multiple counterpart copies, each of which shall constitute an original and which, when taken together, shall constitute one and the same instrument. Signature pages may be detached from the counterparts and attached to a single copy of this document to form one document.

20. Recitals Incorporated. The foregoing Recitals are hereby incorporated into the covenants of the body of this Agreement.

IN WITNESS WHEREOF, the undersigned have executed and delivered this Agreement under seal as of the date first above written.

CHARTER WESTGATE, LLC,
a Delaware limited liability company

By: _____
Paul Brandes, its Manager

THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE,
a Maine not-for-profit corporation

By: _____
Steven Brinn, its President

STATE OF ~~MAINE~~ CONNECTICUT
COUNTY OF ~~CUMBERLAND~~ FAIRFIELD, ss.

MAY 28TH, 2015

Personally appeared the above-named Paul S. Brandes, Manager of Charter Westgate, LLC and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Charter ~~Realty, LLC.~~ WESTGATE, LLC

Before me,

_____
Notary Pubic/Attorney-at-law
Print name:
My commission expires:

Laura A. O'Brien
Notary Public
Connecticut
My Commission Expires
March 31, 2016

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. MAY 27, 2015

Personally appeared the above-named Steven Brinn, President of The Jewish Community Alliance of Southern Maine, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of The Jewish Community Alliance of Southern Maine.

Before me,

Marion S Logan

Notary Pubic/~~Attorney-at-law~~
Print name:
My commission expires:

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

EXHIBIT A

["Grantor's Land"]

A certain lot or parcel of land with any building and improvements thereon, situated on the southerly side of Congress Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning on said southerly side of Congress Street at an iron located at the northeasterly corner of land conveyed by Mary O. Davels, Trustee under the Will of Edward H. Davels to C. W. Boyle by deed dated March 2, 1938 and recorded in Cumberland County Registry of Deeds in Book 1543 Page 373;

Thence running South 04° 56' East by said Boyle land one hundred eight (108) feet to an iron;

Thence South 85° 04' West ninety-one and sixty-seven hundredths (91.67) feet to an iron;

Thence South 9° 27' East forty-two and twenty-eight hundredths (42.28) feet to an iron;

Thence South 15° 21' East two hundred forty-three and thirty-eight hundredths (243.38) feet to an iron;

Thence South 15° 06' East two hundred eighty-nine and fifty-four hundredths (289.54) feet to an iron, the last three (3) courses being along the easterly line of Congress Terrace, so-called, which plan is recorded in said Registry of Deeds in Plan Book 14, Page 61;

Thence North 85° 46' East by land of Norman E. Blake, et al, five hundred seventy-four and two tenths (574.2) feet to an iron;

Thence North 01° 36' West by land of the Roman Catholic Bishop of Portland three hundred one and two tenths (301.2) feet to an iron;

Thence North 32° 54' East by said land of the Roman Catholic Bishop of Portland two hundred twenty-one and seventy-five hundredths (221.75) feet to an iron at the southerly side line of Congress Street;

Thence running by said Congress Street North 56° 16' West two hundred twenty-eight and forty-five hundredths (228.45) feet to a point;

Thence by said Congress Street on a curving line with a radius of two hundred eighty-five and twenty-nine hundredths (285.29) feet a distance of ninety-five and one tenth (95.1) feet to an iron;

Thence South 19° 04' West ninety-four and seventy-five hundredths (94.75) feet to an iron;

Thence South 85° 04' West three hundred sixty-three and ninety-six hundredths (363.96) feet to an iron;

Thence North 04° 56' West one hundred eight (108) feet to an iron on said southerly side of Congress Street;

Thence South 85° 04' West by said Congress Street eighty-five and one tenth (85.1) feet to the iron at the point of beginning.

Also, another certain lot or parcel of land with any buildings and improvements thereon, situated in Portland, County of Cumberland and State of Maine on the southerly side of Congress Street and more particularly bounded and described as follows:

Beginning on the southerly side of Congress Street at an iron located three hundred twenty-three and fifty-five hundredths (323.55) feet westerly by Congress Street from land of Roman Catholic Bishop of Portland and at a corner on said Congress Street of land conveyed by the Trustees u/w/o Mabel S. Davels to Bradley Realty Co, by deed dated March 27, 1959, and recorded in Cumberland County Registry of Deeds in Book 2462 Page 498;

Thence running South 10° 04' West ninety-four and seventy-five hundredths (94.75) feet to an iron;

~~Thence running South 85° 04' West three hundred sixty-three and ninety-six hundredths (363.96) feet to an iron;~~

Thence running North 04° 56' West one hundred eight (108) feet to an iron on said southerly side of Congress Street, said last three courses being by said land conveyed to Bradley Realty Co. as aforesaid;

Thence running North 85° 04' East by Congress Street to a point;

Thence running by said Congress Street on a curving line with a radius of two hundred eighty-five and ninety-nine hundredths (285.99) feet a distance of ninety-seven and forty-three hundredths (97.43) feet to the point of beginning.

Also, another certain lot or parcel of land with any buildings and improvements thereon; situated in Portland, County of Cumberland and State of Maine and more particularly bounded and described as follows:

Being Lots 11, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 and 31 as depicted on a plan entitled "Congress Terrace" made for A.H. Chapman Land Co. by W.M. Hicks, C.E., dated April, 1922 and recorded May 11, 1922 in the Cumberland County Registry of Deeds in Plan Book 14, Page 61.

Also, another certain lot or parcel of land with any buildings and improvements thereon, situated in Portland, County of Cumberland and State of Maine, commonly known as Ainsworth Street and being more particularly shown on a plan entitled "Congress Terrace" made for A.H. Chapman Land Co. by W.M. Hicks, CE., dated April, 1922 and recorded May 11, 1922 in the Cumberland County Registry of Deeds in Plan Book 14, Page 61.

EXHIBIT B

["Grantee's Land"]

Parcel 1:

A certain lot or parcel of land, with the buildings thereon, situated on the Southwesterly side of Congress Street, in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning on the Southwesterly side line of Congress Street at the Northerly corner of land conveyed by P.H. & J.M. Brown Company to Martin Curran, Jr., by deed dated May 13, 1902, Book 717, page 129; thence North 57° 10' West by the Southwesterly side line of Congress Street two hundred and five (205) feet more or less to the Easterly corner of land formerly of Edward H. Daveis; thence South 32° 50' West by said Daveis land two hundred eleven and two tenths (211.1) feet; thence South 1° 41' East by said Daveis land three hundred two and one tenth (302.1) feet to an angle in said Daveis land; thence Southeasterly by a line at right angles with the northwesterly side line of Lassell Street, as extended, one hundred ninety (190) feet more or less to said Northwesterly side line of Lassell Street; thence Northeasterly by the Northwesterly side line of Lassell Street, as extended, forty (40) feet more or less to the Westerly side line of said Curran land; thence North 1° 27' West by said Curran land two hundred sixty (260) feet more or less to an angle in said Curran line; thence North 33° East by said Curran land two hundred nine and eighty-two hundredths (209.82) feet to the point of beginning.

Excepting land described in Notice of Layout and Taking by the State of Maine, Department of Transportation, dated January 18, 1983 and recorded in Book 6110, Page 287.

Parcel 2:

A certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Being a rear portion of Lot #5 as shown on a Plan of Lots of Martin Curran, Jr., recorded in Cumberland County Registry of Deeds Plan Book 9, Page 121. Said lot is located on the westerly side of Lassell Street in the City of Portland, County of Cumberland, State of Maine and is more particularly bounded and described as follows: Beginning at the point formed by the intersection of the division line between lots 4 and 5 on said Plan with the easterly line of land conveyed to Roman Catholic Bishop of Portland by Norman E. Blake et.al. by deed dated February 28, 1957 and recorded in said Registry in Book 2338, Page 240. Said point of beginning is located along said easterly property line of Roman Catholic Bishop of Congress Street. Thence continuing by said easterly property line S 33° 04' W, 2.48' to an iron marking an angle in said line. Thence S 0° 57 1/2' E, 21.45' to a point on the rear property line of said Lot #5. Thence through said Lot #5 N 33° 04' E, 20.97' to the southerly side of said lot #4. Thence by the southerly side of lot #4 N 60° 22' W, 12.02' to the point of beginning.

Parcel 3:

A certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

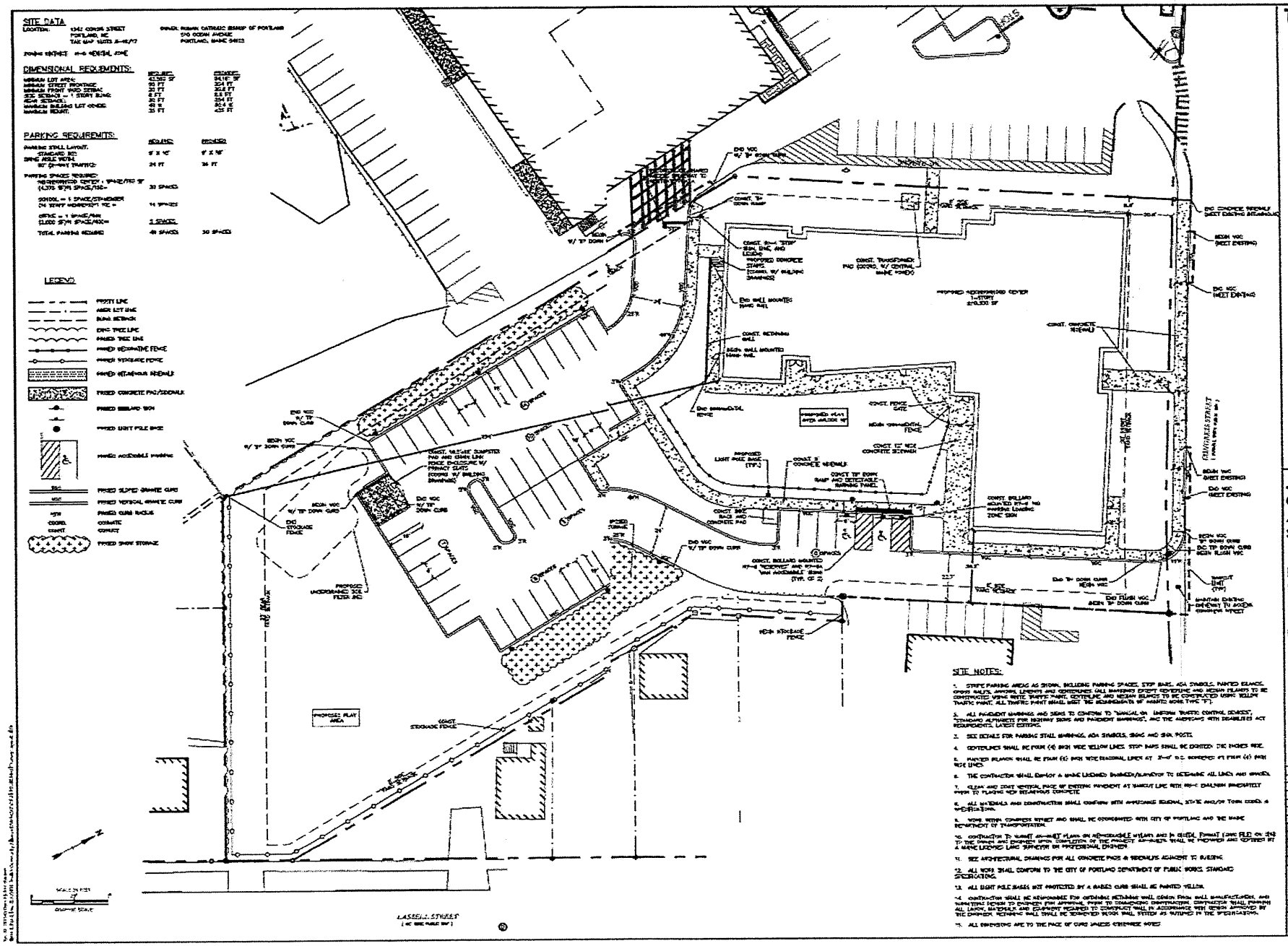
Being the rear portion of Lot #4 as shown on a Plan of Lots of Martin Curran, Jr., recorded in Cumberland County Registry of Deeds Plan Book 9, Page 121. Said lot is located on the westerly side of Lassell Street in the City of Portland, County or Cumberland, State of Maine and is more particularly bounded end described as follows:

Beginning at the point formed by the intersection of the division line between Lots 3 and 4 on said plan with the easterly line of land conveyed to Roman Catholic Bishop of Portland by Norman E. Blake et.al. by deed dated February 28, 1957 and recorded in said Registry in Book 2338, Pace 240. Said point of beginning is located along said easterly property line of Roman Catholic Bishop of Portland at a point that is distant S 33° 04' W, 157.33' from its intersection with the southerly side of Congress Street. Thence continuing by said easterly property line S 33° 04' W, 50.09' to the most northwesterly corner of Lot #5 as shown on said plan. Thence by the northerly side of said Lot #5 S 60° 22' E, 12.02' to a point. Thence

through said Lot #4 N 33° 04' E, 50.09' to the southerly side of Lot #3. Thence by the southerly side of said Lot #3 N 60° 22' W 12.02' to the point of beginning.

EXHIBIT C

["Site Plan Depicting Easement Area"]



Tighe&Bond
Consulting Engineers
www.tighebond.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

PROJECT NO.		
FILE:		
DRAWN BY:		
CHECKED BY:		
APPROVED BY:		

SITE PLAN

SCALE: AS SHOWN

C-2B

Section 9
Proposed Floor Plan

9.1 First Floor Plan - Date June 24, 2015

HARRIMAN

AUBURN PORTLAND MANCHESTER

JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE

PORTLAND, ME

Harriman Project No.	15309

Key Plan

Proj North

Issues and Revisions

Mark	Date	Description
-	06-24-15	PLANNING BOARD SUBMISSION

PRELIMINARY NOT FOR CONSTRUCTION

Drawing Scales
1/8" = 1'-0"

PA / PE: MDL

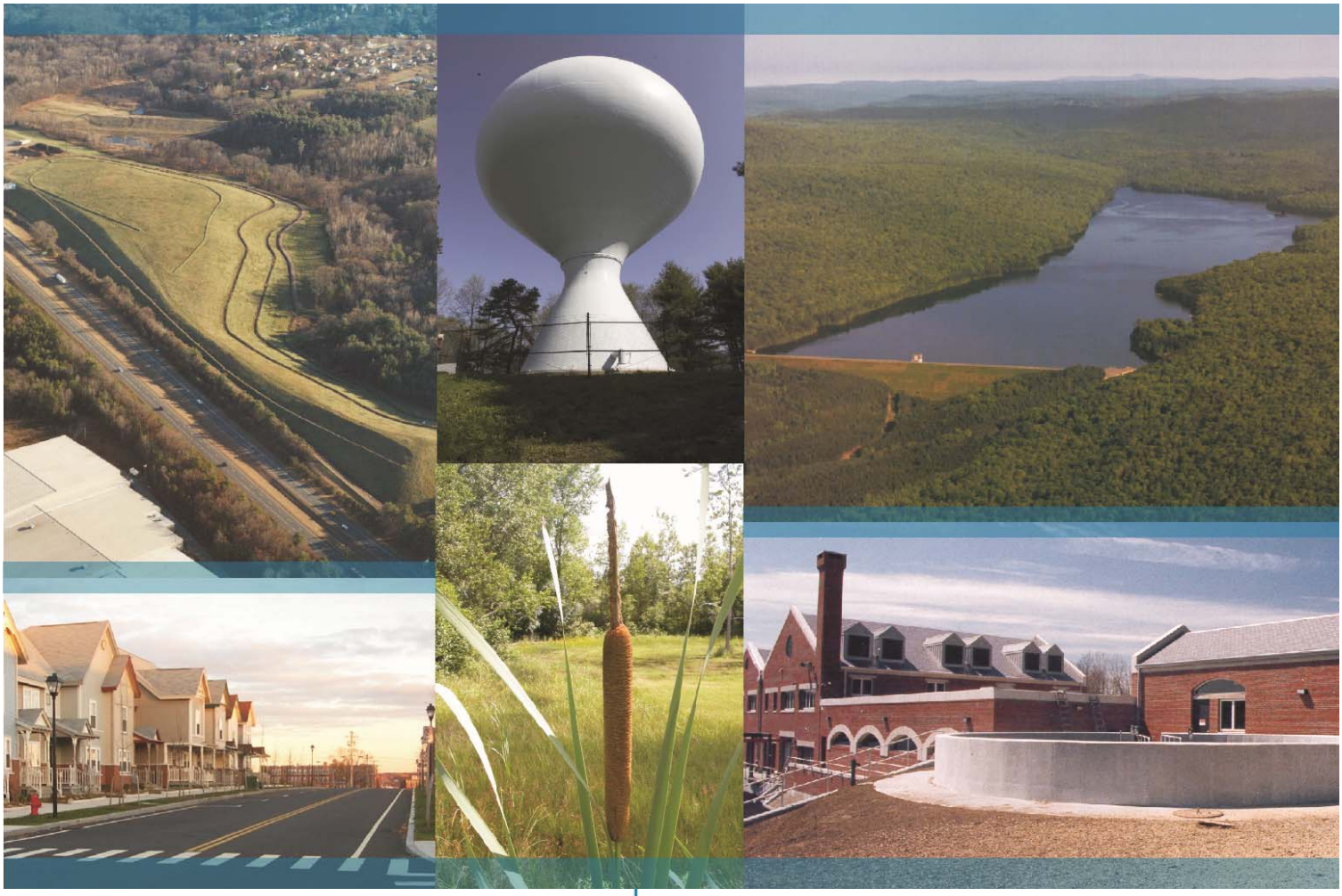
Drawn By: KSA

© 2015 Harriman Associates

FIRST FLOOR PLAN

A10.1

Plot Date: 6/24/2015 4:40:38 PM



Tighe&Bond

Proposed Neighborhood Center
1342 Congress Street
Portland, ME

Drainage Study

Prepared For:

Jewish Community Alliance of Southern Maine

Last Revised June 23, 2015

Section 1 Narrative

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Section 1
Narrative

The proposed project consists on the construction of a one (1) story Neighborhood Center on a 2.16 acre lot in the R-5 Residential Zone There will also be associated site improvements that include surface parking lot, utilities, site lighting, landscaping, and stormwater management system.

The site is currently developed with a 14,960 SF Church that includes associated parking lot and driveways. The existing building and parking lot will be demolished as part of the proposed project. Currently, the runoff from the majority of the site including the parking lot and roof flows to the south of the property where it enters an existing drainage swale. Due to the lack of any stormwater treatment infrastructure, all runoff leaves the site untreated.

The proposed project includes substantial improvements to manage and treat runoff through the use of Stormtech Chambers and an underdrained soil filter bed. The proposed redevelopment will increase impervious area by approximately 12,500 SF. The proposed stormwater management system has been designed to mitigate additional impervious areas by decreasing peak runoff rates for the 2-year, 10-year, and 25-year design storms.

The proposed stormwater management system has been designed to meet the requirements and design principles outlined in the City of Portland Technical Manual and the Maine Stormwater Best Management Practices Manual.

1.1 On Site Soil Description

Section 7 of the City of Portland Technical Manual requires a Soil Survey be completed by a Maine Certified Soil Scientist for Level III Site Plan Submissions. We are requesting a waiver from this requirement as soil borings were completed as part of a Phase I/II Environmental Site Assessment at this site. Based on the soil information the runoff analyzed within this study area has been modeled assuming Class C soils. The boring logs have been included in the Appendix of this report. Due to the low infiltration rates associated with Class C soils, the drainage design has been completed assuming no exfiltration.

Section 2
Drainage Analysis

2.1 Calculation Methods

The design storms analyzed in this study are the 2-year, 10-year and 50-year 24-hour duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. A Type III storm pattern was used in the model.

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow and channel flow. Runoff curve numbers were calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.

2.2 Pre-Development Conditions

Pre-development conditions are considered, for this study, to be the conditions of the site prior to the start of the ongoing excavation operations. In order to analyze the pre-development condition, the site has been divided into three (3) contributing watershed areas modeled at three (3) points of analysis. These points of analysis and watersheds are depicted on the plan entitled “Pre-Development Watershed Plan”, Sheet WS-1.

Each of the points of analysis and their contributing watershed areas are described below:

Point of Analysis (PA-1)

Point of Analysis One (PA-1) is comprised of Pre-Development Watershed 1 (WS-1), which accounts for approximately 75% of the total watershed area. WS-1 consists of runoff generated from a portion of the roof of the existing building, parking lot, driveway, and grass/wooded areas at the south side of the parcel. Runoff travels in a southwestern direction via overland flow where it enters an existing drainage swale at PA-1.

Point of Analysis (PA-2)

Point of Analysis Two (PA-2) is comprised of Pre-Development Watershed 2 (WS-2). WS-2 consists primarily of runoff generated from the roof of the existing building, sidewalks, and grass areas. Runoff travels west via overland flow onto the adjacent parking lot of Westgate Plaza at PA-2.

Point of Analysis (PA-3)

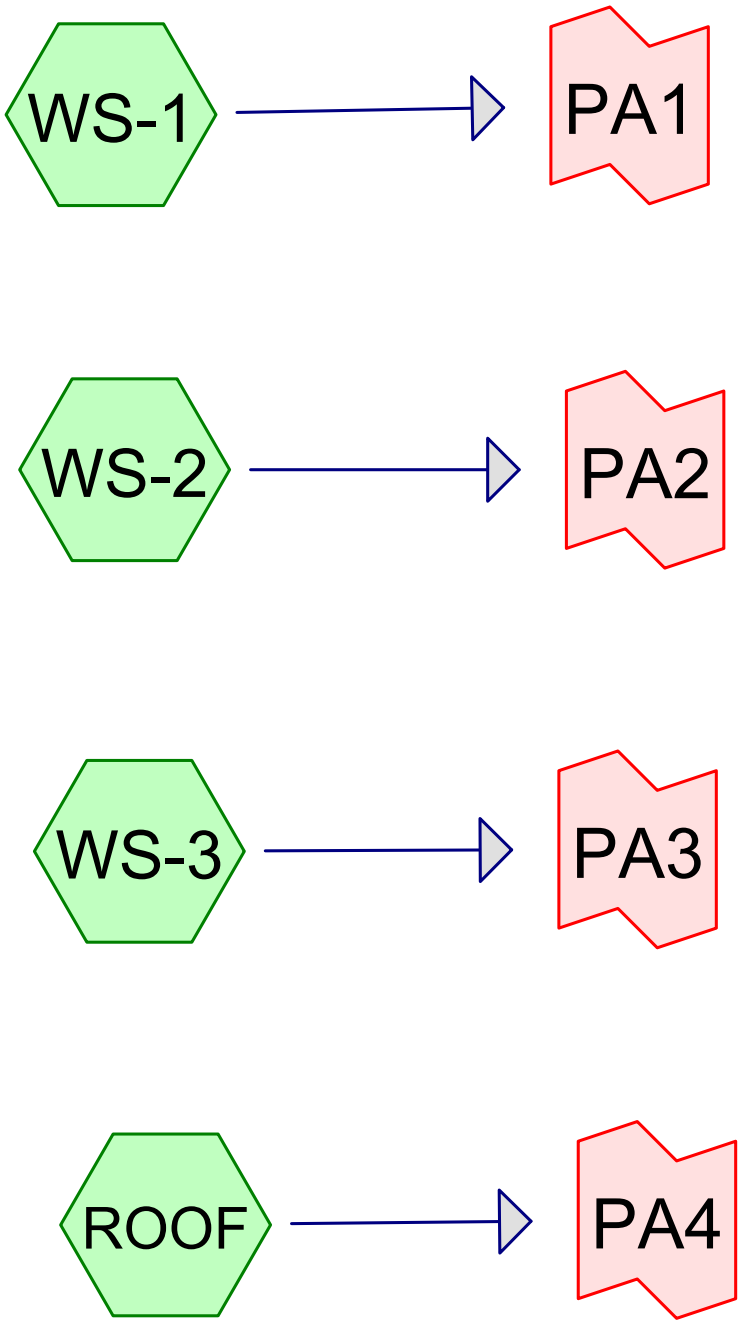
Point of Analysis Three (PA-3) is comprised of Pre-Development Watershed 3 (WS-3). WS-3 consists of runoff generated from the driveway and grass on the north side of the site. Runoff generated travels via overland flow north onto Congress Street and eventually into the City's closed drainage system.

Point of Analysis (PA-4)

Point of Analysis Four (PA-4) is comprised of the existing roof of the Chruch. The roof leaders are connected to the sanitary sewer on site for a combined sewer/stormwater system. The combined sewer/stormwater ultimately discharges into the sewer system in Congress Street. The configuration of the existing roof drainage system was verified in the field via camera inspection and dye flow testing. The City of Portland does not permit stormwater runoff to be conveyed into the City sewer system, so this connection will only be re-used for sanitary sewer for the proposed development.

2.2.1 Pre-Development Calculations

2.2.2 Pre-Development Watershed Plan, WS-1



Congress Street Sewer

Subcat Reach Pond Link

Routing Diagram for J0096-PRE
Prepared by Tighe & Bond, Printed 6/23/2015
HydroCAD® 10.00 s/n 03436 © 2013 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.106	74	>75% Grass cover, Good, HSG C (WS-1, WS-2, WS-3)
0.490	98	Paved parking, HSG C (WS-1, WS-2, WS-3)
0.355	98	Roofs, HSG C (ROOF)
0.227	72	Woods/grass comb., Good, HSG C (WS-1)
2.179	**83**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.179	HSG C	ROOF, WS-1, WS-2, WS-3
0.000	HSG D	
0.000	Other	
2.179		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ROOF: Runoff Area=15,470 sf 100.00% Impervious Runoff Depth>2.77"
Flow Length=50' Slope=0.0400 '/' Tc=5.0 min CN=98 Runoff=1.07 cfs 0.082 af

Subcatchment WS-1: Runoff Area=64,314 sf 25.78% Impervious Runoff Depth>1.25"
Flow Length=451' Tc=7.6 min CN=80 Runoff=2.01 cfs 0.154 af

Subcatchment WS-2: Runoff Area=5,325 sf 25.60% Impervious Runoff Depth>1.25"
Flow Length=44' Slope=0.0150 '/' Tc=5.9 min CN=80 Runoff=0.18 cfs 0.013 af

Subcatchment WS-3: Runoff Area=9,792 sf 34.74% Impervious Runoff Depth>1.38"
Flow Length=87' Tc=5.0 min CN=82 Runoff=0.37 cfs 0.026 af

Link PA1: Inflow=2.01 cfs 0.154 af
Primary=2.01 cfs 0.154 af

Link PA2: Inflow=0.18 cfs 0.013 af
Primary=0.18 cfs 0.013 af

Link PA3: Inflow=0.37 cfs 0.026 af
Primary=0.37 cfs 0.026 af

Link PA4: Congress Street Sewer Inflow=1.07 cfs 0.082 af
Primary=1.07 cfs 0.082 af

Total Runoff Area = 2.179 ac Runoff Volume = 0.274 af Average Runoff Depth = 1.51"
61.20% Pervious = 1.333 ac 38.80% Impervious = 0.845 ac

Summary for Subcatchment ROOF:

Runoff = 1.07 cfs @ 12.07 hrs, Volume= 0.082 af, Depth> 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
15,470	98	Roofs, HSG C
15,470		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
4.4	50	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-1:

Runoff = 2.01 cfs @ 12.11 hrs, Volume= 0.154 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
16,583	98	Paved parking, HSG C
37,846	74	>75% Grass cover, Good, HSG C
9,885	72	Woods/grass comb., Good, HSG C
64,314	80	Weighted Average
47,731		74.22% Pervious Area
16,583		25.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	90	0.0320	3.63		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.8	311	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.6	451	Total			

Summary for Subcatchment WS-2:

Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
1,363	98	Paved parking, HSG C
3,962	74	>75% Grass cover, Good, HSG C
5,325	80	Weighted Average
3,962		74.40% Pervious Area
1,363		25.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	44	0.0150	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"

Summary for Subcatchment WS-3:

Runoff = 0.37 cfs @ 12.08 hrs, Volume= 0.026 af, Depth> 1.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
3,402	98	Paved parking, HSG C
6,390	74	>75% Grass cover, Good, HSG C
9,792	82	Weighted Average
6,390		65.26% Pervious Area
3,402		34.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	30	0.0500	1.51		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	57	0.0350	2.81		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.6	87	Total, Increased to minimum Tc = 5.0 min			

Summary for Link PA1:

Inflow Area = 1.476 ac, 25.78% Impervious, Inflow Depth > 1.25" for 2-YR event
Inflow = 2.01 cfs @ 12.11 hrs, Volume= 0.154 af
Primary = 2.01 cfs @ 12.11 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA2:

Inflow Area = 0.122 ac, 25.60% Impervious, Inflow Depth > 1.25" for 2-YR event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af
Primary = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA3:

Inflow Area = 0.225 ac, 34.74% Impervious, Inflow Depth > 1.38" for 2-YR event
Inflow = 0.37 cfs @ 12.08 hrs, Volume= 0.026 af
Primary = 0.37 cfs @ 12.08 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA4: Congress Street Sewer

Inflow Area = 0.355 ac,100.00% Impervious, Inflow Depth > 2.77" for 2-YR event
Inflow = 1.07 cfs @ 12.07 hrs, Volume= 0.082 af
Primary = 1.07 cfs @ 12.07 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ROOF: Runoff Area=15,470 sf 100.00% Impervious Runoff Depth>4.46"
Flow Length=50' Slope=0.0400 '/' Tc=5.0 min CN=98 Runoff=1.69 cfs 0.132 af

Subcatchment WS-1: Runoff Area=64,314 sf 25.78% Impervious Runoff Depth>2.63"
Flow Length=451' Tc=7.6 min CN=80 Runoff=4.31 cfs 0.323 af

Subcatchment WS-2: Runoff Area=5,325 sf 25.60% Impervious Runoff Depth>2.63"
Flow Length=44' Slope=0.0150 '/' Tc=5.9 min CN=80 Runoff=0.38 cfs 0.027 af

Subcatchment WS-3: Runoff Area=9,792 sf 34.74% Impervious Runoff Depth>2.81"
Flow Length=87' Tc=5.0 min CN=82 Runoff=0.77 cfs 0.053 af

Link PA1: Inflow=4.31 cfs 0.323 af
Primary=4.31 cfs 0.323 af

Link PA2: Inflow=0.38 cfs 0.027 af
Primary=0.38 cfs 0.027 af

Link PA3: Inflow=0.77 cfs 0.053 af
Primary=0.77 cfs 0.053 af

Link PA4: Congress Street Sewer Inflow=1.69 cfs 0.132 af
Primary=1.69 cfs 0.132 af

Total Runoff Area = 2.179 ac Runoff Volume = 0.535 af Average Runoff Depth = 2.95"
61.20% Pervious = 1.333 ac 38.80% Impervious = 0.845 ac

Summary for Subcatchment ROOF:

Runoff = 1.69 cfs @ 12.07 hrs, Volume= 0.132 af, Depth> 4.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
15,470	98	Roofs, HSG C
15,470		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
4.4	50	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-1:

Runoff = 4.31 cfs @ 12.11 hrs, Volume= 0.323 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
16,583	98	Paved parking, HSG C
37,846	74	>75% Grass cover, Good, HSG C
9,885	72	Woods/grass comb., Good, HSG C
64,314	80	Weighted Average
47,731		74.22% Pervious Area
16,583		25.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	90	0.0320	3.63		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.8	311	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.6	451	Total			

Summary for Subcatchment WS-2:

Runoff = 0.38 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
1,363	98	Paved parking, HSG C
3,962	74	>75% Grass cover, Good, HSG C
5,325	80	Weighted Average
3,962		74.40% Pervious Area
1,363		25.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	44	0.0150	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"

Summary for Subcatchment WS-3:

Runoff = 0.77 cfs @ 12.07 hrs, Volume= 0.053 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
3,402	98	Paved parking, HSG C
6,390	74	>75% Grass cover, Good, HSG C
9,792	82	Weighted Average
6,390		65.26% Pervious Area
3,402		34.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	30	0.0500	1.51		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	57	0.0350	2.81		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.6	87	Total, Increased to minimum Tc = 5.0 min			

Summary for Link PA1:

Inflow Area = 1.476 ac, 25.78% Impervious, Inflow Depth > 2.63" for 10-YR event
Inflow = 4.31 cfs @ 12.11 hrs, Volume= 0.323 af
Primary = 4.31 cfs @ 12.11 hrs, Volume= 0.323 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA2:

Inflow Area = 0.122 ac, 25.60% Impervious, Inflow Depth > 2.63" for 10-YR event
Inflow = 0.38 cfs @ 12.09 hrs, Volume= 0.027 af
Primary = 0.38 cfs @ 12.09 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA3:

Inflow Area = 0.225 ac, 34.74% Impervious, Inflow Depth > 2.81" for 10-YR event
Inflow = 0.77 cfs @ 12.07 hrs, Volume= 0.053 af
Primary = 0.77 cfs @ 12.07 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA4: Congress Street Sewer

Inflow Area = 0.355 ac,100.00% Impervious, Inflow Depth > 4.46" for 10-YR event
Inflow = 1.69 cfs @ 12.07 hrs, Volume= 0.132 af
Primary = 1.69 cfs @ 12.07 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ROOF: Runoff Area=15,470 sf 100.00% Impervious Runoff Depth>5.26"
Flow Length=50' Slope=0.0400 '/' Tc=5.0 min CN=98 Runoff=1.98 cfs 0.156 af

Subcatchment WS-1: Runoff Area=64,314 sf 25.78% Impervious Runoff Depth>3.33"
Flow Length=451' Tc=7.6 min CN=80 Runoff=5.45 cfs 0.410 af

Subcatchment WS-2: Runoff Area=5,325 sf 25.60% Impervious Runoff Depth>3.33"
Flow Length=44' Slope=0.0150 '/' Tc=5.9 min CN=80 Runoff=0.48 cfs 0.034 af

Subcatchment WS-3: Runoff Area=9,792 sf 34.74% Impervious Runoff Depth>3.53"
Flow Length=87' Tc=5.0 min CN=82 Runoff=0.96 cfs 0.066 af

Link PA1: Inflow=5.45 cfs 0.410 af
Primary=5.45 cfs 0.410 af

Link PA2: Inflow=0.48 cfs 0.034 af
Primary=0.48 cfs 0.034 af

Link PA3: Inflow=0.96 cfs 0.066 af
Primary=0.96 cfs 0.066 af

Link PA4: Congress Street Sewer Inflow=1.98 cfs 0.156 af
Primary=1.98 cfs 0.156 af

Total Runoff Area = 2.179 ac Runoff Volume = 0.665 af Average Runoff Depth = 3.66"
61.20% Pervious = 1.333 ac 38.80% Impervious = 0.845 ac

Summary for Subcatchment ROOF:

Runoff = 1.98 cfs @ 12.07 hrs, Volume= 0.156 af, Depth> 5.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
15,470	98	Roofs, HSG C
15,470		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
4.4	50	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-1:

Runoff = 5.45 cfs @ 12.11 hrs, Volume= 0.410 af, Depth> 3.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
16,583	98	Paved parking, HSG C
37,846	74	>75% Grass cover, Good, HSG C
9,885	72	Woods/grass comb., Good, HSG C
64,314	80	Weighted Average
47,731		74.22% Pervious Area
16,583		25.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	90	0.0320	3.63		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.8	311	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.6	451	Total			

Summary for Subcatchment WS-2:

Runoff = 0.48 cfs @ 12.09 hrs, Volume= 0.034 af, Depth> 3.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
1,363	98	Paved parking, HSG C
3,962	74	>75% Grass cover, Good, HSG C
5,325	80	Weighted Average
3,962		74.40% Pervious Area
1,363		25.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	44	0.0150	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"

Summary for Subcatchment WS-3:

Runoff = 0.96 cfs @ 12.07 hrs, Volume= 0.066 af, Depth> 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
3,402	98	Paved parking, HSG C
6,390	74	>75% Grass cover, Good, HSG C
9,792	82	Weighted Average
6,390		65.26% Pervious Area
3,402		34.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	30	0.0500	1.51		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	57	0.0350	2.81		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.6	87	Total, Increased to minimum Tc = 5.0 min			

Summary for Link PA1:

Inflow Area = 1.476 ac, 25.78% Impervious, Inflow Depth > 3.33" for 25-YR event
Inflow = 5.45 cfs @ 12.11 hrs, Volume= 0.410 af
Primary = 5.45 cfs @ 12.11 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA2:

Inflow Area = 0.122 ac, 25.60% Impervious, Inflow Depth > 3.33" for 25-YR event
Inflow = 0.48 cfs @ 12.09 hrs, Volume= 0.034 af
Primary = 0.48 cfs @ 12.09 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA3:

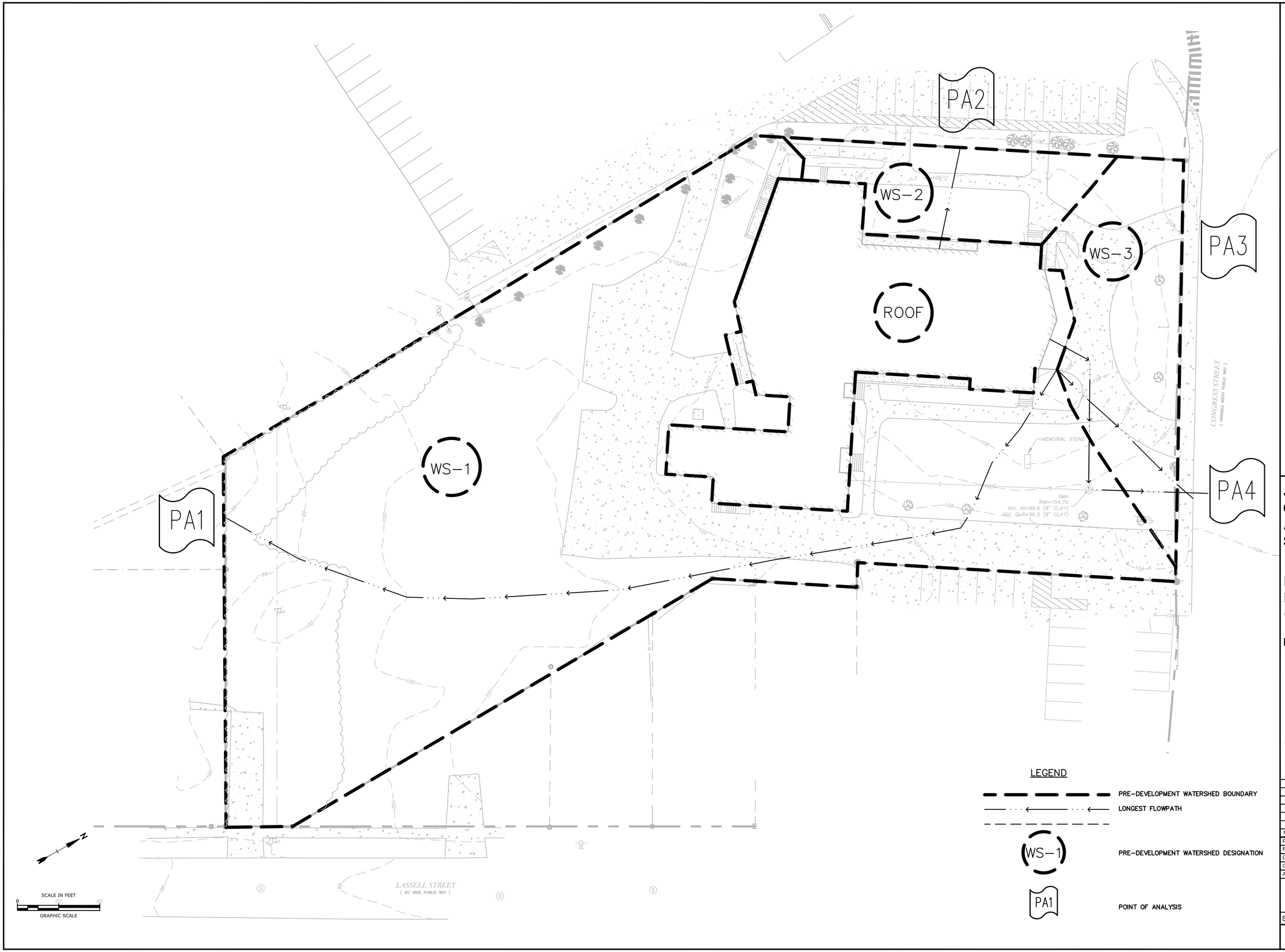
Inflow Area = 0.225 ac, 34.74% Impervious, Inflow Depth > 3.53" for 25-YR event
Inflow = 0.96 cfs @ 12.07 hrs, Volume= 0.066 af
Primary = 0.96 cfs @ 12.07 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA4: Congress Street Sewer

Inflow Area = 0.355 ac,100.00% Impervious, Inflow Depth > 5.26" for 25-YR event
Inflow = 1.98 cfs @ 12.07 hrs, Volume= 0.156 af
Primary = 1.98 cfs @ 12.07 hrs, Volume= 0.156 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



Tighe&Bond
Consulting Engineers
www.tighebond.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
1.	6/23/15	REVISED FOR PB SUBMISSION

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

PRE-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

WS-1

Jun 23, 2015-8:06pm Plotted By: gwh
Tighe & Bond, Inc. J:\J\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: PRE

2.3 Post-Development Conditions

The post-development drainage condition is also characterized by three (3) watershed areas modeled at the same three (3) points of analysis as the pre-development condition. These three (3) watershed areas are depicted on the Post-Development Watershed Plan, WS-2.

Point of Analysis (PA-1)

Point of Analysis One (PA-1) is comprised Post-Development Watershed 1A (WS-1A), Watershed 1B (WS-1B), and Watershed 1C (WS-1C). WS-1A consists of the proposed parking lot, sidewalks, and landscaped areas in the southwestern side of the site. Runoff from WS-1A travels via sheetflow into the underdrained soil filter bed to the rear of the parking lot.

WS-1B is a redeveloped area as the characteristics of this watershed remain largely unchanged from the pre-development condition. This watershed consists of the driveway that provides access to Congress Street, a small portion of sidewalk near the proposed building, and lawn at the south side of the site. Runoff generated travels via overland flow in the same pattern as the pre-development condition to PA-1.

WS-1C consists of the roof of the proposed building and the designated play area directly adjacent to the building. Runoff generated from the roof and play area is collected and conveyed to an underground detention area in the parking lot. Detained stormwater is conveyed via closed drainage to PA-1.

Point of Analysis (PA-2)

Point of Analysis Two (PA-2) is comprised of Post-Development Watershed 2 (WS-2A). WS-2 consists of runoff generated from the lawn and landscaping on the west side of the building. The runoff travels via overland flow in the same pattern as the pre-development condition.

Point of Analysis (PA-3)

Point of Analysis Three (PA-3) is comprised of Post Development Watershed 3 (WS-3). WS-3 is comprised of the sidewalk and landscaped areas along Congress Street. The runoff generated travels via overland flow in the same pattern as the pre-development condition.

2.3.1 Post-Development Calculations

2.3.2 Post-Development Watershed Plan, WS-2

2.4 Peak Rate Comparisons

The following table summarizes and compares the pre- and post-development peak runoff rates for the 2-year, 10-year, and 25-year storm events. The post-development peak rate of runoff for each discharge point has been determined to be less than the peak runoff rate generated during the pre-development condition.

Point of Analysis	Pre/**Post** 2-Year Storm (cfs)	Pre/**Post** 10-Year Storm (cfs)	Pre/**Post** 25-Year Storm (cfs)
PA1	2.01/**2.01**	4.31/**3.73**	5.45/**4.50**
PA2	0.18/**0.11**	0.38/**0.24**	0.48/**0.31**
PA3	0.37/**0.14**	0.77/**0.31**	0.96/**0.40**
PA4 (Roof)	1.07/**0.0**	1.69/**0.0**	1.98/**0.0**

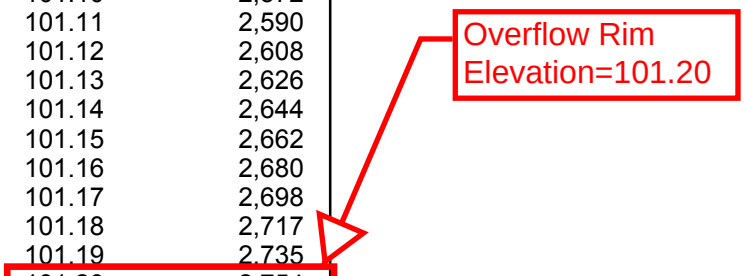
2.5 Stormwater Treatment Volume

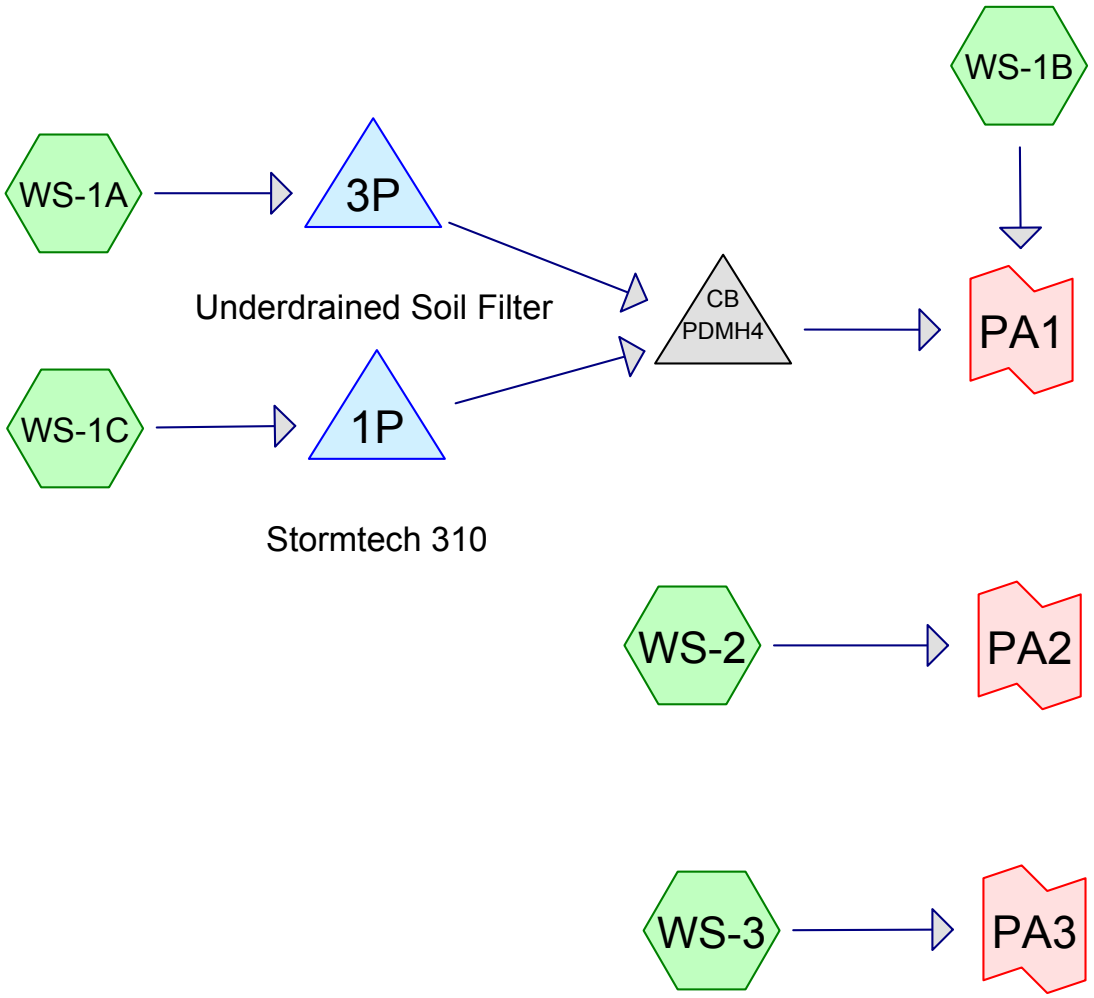
Table 6.1 - Underdrained Soil Filter Treatment Volume Calculations		
VARIABLE	DESCRIPTION	VALUE
Pi	1 Inch of Rainfall for Impervious Area	1 inch
Pv	0.4 Inch of Rainfall for Vegetated Area	0.4 inch
A	Total Area Draining to Design Structure	23,512 SF
Ai	Impervious Area Draining to Design Structure	14,558 SF
Av	Vegetated Area Draining to Design Structure	9,104 SF
ITV	**Impervious Area Treatment Volume = Pi*Ai**	**1,213 CF**
VTV	**Vegetated Area Treatment Volume = Pv*Av**	**304 CF**
	Total Treatment Volume Required	**1,517 CF**
Vs	**Total Treatment Volume Provided (see HydroCAD)**	**2,754 CF**

The Treatment Volume provided is greater than the Treatment Volume required. The total storage volume provided below the overflow rim elevation is 2,754 CF. The proposed Underdrained Soil Filter is treating a total of 14,558 SF of impervious area, which is equivalent to approximately 115% of the new impervious area and exceeds the requirements of the MaineDEP Chapter 500 General Standards.

Stage-Area-Storage for Pond 3P: Underdrained Soil Filter (continued)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
100.33	1,373	100.86	2,162	101.39	3,118
100.34	1,386	100.87	2,178	101.40	3,138
100.35	1,400	100.88	2,194	101.41	3,158
100.36	1,413	100.89	2,211	101.42	3,178
100.37	1,427	100.90	2,228	101.43	3,198
100.38	1,441	100.91	2,244	101.44	3,218
100.39	1,454	100.92	2,261	101.45	3,238
100.40	1,468	100.93	2,278	101.46	3,258
100.41	1,482	100.94	2,294	101.47	3,279
100.42	1,496	100.95	2,311	101.48	3,299
100.43	1,510	100.96	2,328	101.49	3,320
100.44	1,524	100.97	2,345	101.50	**3,340**
100.45	1,538	100.98	2,362		
100.46	1,552	100.99	2,379		
100.47	1,566	101.00	2,397		
100.48	1,580	101.01	2,414		
100.49	1,594	101.02	2,431		
100.50	1,609	101.03	2,448		
100.51	1,623	101.04	2,466		
100.52	1,637	101.05	2,483		
100.53	1,652	101.06	2,501		
100.54	1,666	101.07	2,518		
100.55	1,681	101.08	2,536		
100.56	1,696	101.09	2,554		
100.57	1,710	101.10	2,572		
100.58	1,725	101.11	2,590		
100.59	1,740	101.12	2,608		
100.60	1,755	101.13	2,626		
100.61	1,770	101.14	2,644		
100.62	1,785	101.15	2,662		
100.63	1,800	101.16	2,680		
100.64	1,815	101.17	2,698		
100.65	1,830	101.18	2,717		
100.66	1,845	101.19	2,735		
100.67	1,861	101.20	2,754		
100.68	1,876	101.21	2,772		
100.69	1,891	101.22	2,791		
100.70	1,907	101.23	2,810		
100.71	1,922	101.24	2,828		
100.72	1,938	101.25	2,847		
100.73	1,953	101.26	2,866		
100.74	1,969	101.27	2,885		
100.75	1,985	101.28	2,904		
100.76	2,001	101.29	2,923		
100.77	2,016	101.30	2,942		
100.78	2,032	101.31	2,962		
100.79	2,048	101.32	2,981		
100.80	2,064	101.33	3,000		
100.81	2,080	101.34	3,020		
100.82	2,097	101.35	3,039		
100.83	2,113	101.36	3,059		
100.84	2,129	101.37	3,078		
100.85	2,145	101.38	3,098		





Subcat Reach Pond Link

Routing Diagram for J0096-POST
Prepared by Tighe & Bond, Printed 6/23/2015
HydroCAD® 10.00 s/n 03436 © 2013 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.047	74	>75% Grass cover, Good, HSG C (WS-1A, WS-1B, WS-1C, WS-2, WS-3)
0.689	98	Paved parking, HSG C (WS-1A, WS-1B, WS-1C, WS-2, WS-3)
0.443	98	Roofs, HSG C (WS-1C)
2.179	**86**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.179	HSG C	WS-1A, WS-1B, WS-1C, WS-2, WS-3
0.000	HSG D	
0.000	Other	
2.179		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment WS-1A: Runoff Area=23,662 sf 61.52% Impervious Runoff Depth>1.90"
Flow Length=130' Slope=0.0200 '/' Tc=5.0 min CN=89 Runoff=1.25 cfs 0.086 af

Subcatchment WS-1B: Runoff Area=34,411 sf 34.55% Impervious Runoff Depth>1.38"
Flow Length=495' Tc=5.5 min CN=82 Runoff=1.29 cfs 0.091 af

Subcatchment WS-1C: Runoff Area=28,650 sf 75.57% Impervious Runoff Depth>2.16"
Flow Length=240' Tc=5.0 min CN=92 Runoff=1.69 cfs 0.118 af

Subcatchment WS-2: Runoff Area=3,505 sf 17.12% Impervious Runoff Depth>1.13"
Flow Length=22' Slope=0.0150 '/' Tc=5.0 min CN=78 Runoff=0.11 cfs 0.008 af

Subcatchment WS-3: Runoff Area=4,685 sf 13.06% Impervious Runoff Depth>1.07"
Flow Length=30' Slope=0.0200 '/' Tc=5.0 min CN=77 Runoff=0.14 cfs 0.010 af

Pond 1P: Stormtech 310 Peak Elev=100.15' Storage=2,540 cf Inflow=1.69 cfs 0.118 af
Outflow=0.36 cfs 0.091 af

Pond 3P: Underdrained Soil Filter Peak Elev=99.84' Storage=916 cf Inflow=1.25 cfs 0.086 af
Outflow=0.56 cfs 0.080 af

Pond PDMH4: Peak Elev=98.06' Inflow=0.90 cfs 0.170 af
12.0" Round Culvert n=0.013 L=10.0' S=0.0100 '/' Outflow=0.90 cfs 0.170 af

Link PA1: Inflow=2.01 cfs 0.261 af
Primary=2.01 cfs 0.261 af

Link PA2: Inflow=0.11 cfs 0.008 af
Primary=0.11 cfs 0.008 af

Link PA3: Inflow=0.14 cfs 0.010 af
Primary=0.14 cfs 0.010 af

Total Runoff Area = 2.179 ac Runoff Volume = 0.312 af Average Runoff Depth = 1.72"
48.05% Pervious = 1.047 ac 51.95% Impervious = 1.132 ac

Summary for Subcatchment WS-1A:

Runoff = 1.25 cfs @ 12.07 hrs, Volume= 0.086 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
14,558	98	Paved parking, HSG C
9,104	74	>75% Grass cover, Good, HSG C
23,662	89	Weighted Average
9,104		38.48% Pervious Area
14,558		61.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	80	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	130	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-1B:

Runoff = 1.29 cfs @ 12.08 hrs, Volume= 0.091 af, Depth> 1.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
11,890	98	Paved parking, HSG C
22,521	74	>75% Grass cover, Good, HSG C
34,411	82	Weighted Average
22,521		65.45% Pervious Area
11,890		34.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0125	0.96		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.0	125	0.0110	2.13		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.6	320	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
5.5	495	Total			

Summary for Subcatchment WS-1C:

Runoff = 1.69 cfs @ 12.07 hrs, Volume= 0.118 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
19,300	98	Roofs, HSG C
2,350	98	Paved parking, HSG C
7,000	74	>75% Grass cover, Good, HSG C
28,650	92	Weighted Average
7,000		24.43% Pervious Area
21,650		75.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	75	0.0150	1.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.9	165	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.0	240	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-2:

Runoff = 0.11 cfs @ 12.08 hrs, Volume= 0.008 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
2,905	74	>75% Grass cover, Good, HSG C
600	98	Paved parking, HSG C
3,505	78	Weighted Average
2,905		82.88% Pervious Area
600		17.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	22	0.0150	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.4	22	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-3:

Runoff = 0.14 cfs @ 12.08 hrs, Volume= 0.010 af, Depth> 1.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.00"

Area (sf)	CN	Description
612	98	Paved parking, HSG C
4,073	74	>75% Grass cover, Good, HSG C
4,685	77	Weighted Average
4,073		86.94% Pervious Area
612		13.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	30	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.9	30	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond 1P: Stormtech 310

Inflow Area = 0.658 ac, 75.57% Impervious, Inflow Depth > 2.16" for 2-YR event
Inflow = 1.69 cfs @ 12.07 hrs, Volume= 0.118 af
Outflow = 0.36 cfs @ 12.48 hrs, Volume= 0.091 af, Atten= 79%, Lag= 24.7 min
Primary = 0.36 cfs @ 12.48 hrs, Volume= 0.091 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 100.15' @ 12.48 hrs Surf.Area= 3,082 sf Storage= 2,540 cf
Flood Elev= 101.50' Surf.Area= 3,082 sf Storage= 4,570 cf

Plug-Flow detention time= 177.6 min calculated for 0.091 af (76% of inflow)
Center-of-Mass det. time= 95.4 min (894.0 - 798.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	98.60'	2,776 cf	**38.17'W x 80.76'L x 2.83'H Field A** 8,733 cf Overall - 1,794 cf Embedded = 6,939 cf x 40.0% Voids
#2A	99.60'	1,794 cf	**ADS_StormTech SC-310** x 121 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 11 rows
		4,570 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	99.50'	**12.0" Round Culvert** L= 135.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 99.50' / 97.60' S= 0.0141 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	99.50'	**4.5" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.36 cfs @ 12.48 hrs HW=100.15' TW=98.05' (Dynamic Tailwater)
↑**1=Culvert** (Passes 0.36 cfs of 1.47 cfs potential flow)
↑**2=Orifice/Grate** (Orifice Controls 0.36 cfs @ 3.26 fps)
3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 3P: Underdrained Soil Filter

Inflow Area = 0.543 ac, 61.52% Impervious, Inflow Depth > 1.90" for 2-YR event
Inflow = 1.25 cfs @ 12.07 hrs, Volume= 0.086 af
Outflow = 0.56 cfs @ 12.24 hrs, Volume= 0.080 af, Atten= 55%, Lag= 9.9 min
Primary = 0.56 cfs @ 12.24 hrs, Volume= 0.080 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 99.84' @ 12.24 hrs Surf.Area= 1,945 sf Storage= 916 cf
Flood Elev= 101.50' Surf.Area= 4,001 sf Storage= 3,340 cf

Plug-Flow detention time= 65.5 min calculated for 0.080 af (93% of inflow)
Center-of-Mass det. time= 29.1 min (841.3 - 812.2)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	2,378 cf	**Pond Storage (Prismatic)**Listed below (Recalc)
#2	98.50'	439 cf	**Soil Filter (Prismatic)**Listed below (Recalc) 1,463 cf Overall x 30.0% Voids
#3	97.15'	524 cf	**Stone Resevoir (Prismatic)**Listed below (Recalc) 1,309 cf Overall x 40.0% Voids
		3,340 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.00	1,150	0	0
101.00	1,718	1,434	1,434
101.50	2,056	944	2,378

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	975	0	0
100.00	975	1,463	1,463

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
97.15	970	0	0
98.50	970	1,309	1,309

Device	Routing	Invert	Outlet Devices
#1	Primary	97.65'	**12.0" Round Culvert** L= 5.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 97.65' / 97.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	97.75'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.20'	**16.0" x 16.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.56 cfs @ 12.24 hrs HW=99.84' TW=98.06' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.56 cfs of 4.92 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.56 cfs @ 6.43 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PDMH4:

Inflow Area = 1.201 ac, 69.22% Impervious, Inflow Depth > 1.70" for 2-YR event
Inflow = 0.90 cfs @ 12.32 hrs, Volume= 0.170 af
Outflow = 0.90 cfs @ 12.32 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 0.90 cfs @ 12.32 hrs, Volume= 0.170 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 98.06' @ 12.32 hrs
Flood Elev= 102.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	97.50'	**12.0" Round Culvert** L= 10.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 97.50' / 97.40' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.90 cfs @ 12.32 hrs HW=98.06' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.90 cfs @ 2.88 fps)

Summary for Link PA1:

Inflow Area = 1.991 ac, 55.46% Impervious, Inflow Depth > 1.57" for 2-YR event
Inflow = 2.01 cfs @ 12.10 hrs, Volume= 0.261 af
Primary = 2.01 cfs @ 12.10 hrs, Volume= 0.261 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA2:

Inflow Area = 0.080 ac, 17.12% Impervious, Inflow Depth > 1.13" for 2-YR event
Inflow = 0.11 cfs @ 12.08 hrs, Volume= 0.008 af
Primary = 0.11 cfs @ 12.08 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA3:

Inflow Area = 0.108 ac, 13.06% Impervious, Inflow Depth > 1.07" for 2-YR event
Inflow = 0.14 cfs @ 12.08 hrs, Volume= 0.010 af
Primary = 0.14 cfs @ 12.08 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment WS-1A: Runoff Area=23,662 sf 61.52% Impervious Runoff Depth>3.48"
Flow Length=130' Slope=0.0200 '/' Tc=5.0 min CN=89 Runoff=2.24 cfs 0.158 af

Subcatchment WS-1B: Runoff Area=34,411 sf 34.55% Impervious Runoff Depth>2.81"
Flow Length=495' Tc=5.5 min CN=82 Runoff=2.65 cfs 0.185 af

Subcatchment WS-1C: Runoff Area=28,650 sf 75.57% Impervious Runoff Depth>3.79"
Flow Length=240' Tc=5.0 min CN=92 Runoff=2.89 cfs 0.208 af

Subcatchment WS-2: Runoff Area=3,505 sf 17.12% Impervious Runoff Depth>2.46"
Flow Length=22' Slope=0.0150 '/' Tc=5.0 min CN=78 Runoff=0.24 cfs 0.016 af

Subcatchment WS-3: Runoff Area=4,685 sf 13.06% Impervious Runoff Depth>2.37"
Flow Length=30' Slope=0.0200 '/' Tc=5.0 min CN=77 Runoff=0.31 cfs 0.021 af

Pond 1P: Stormtech 310 Peak Elev=101.07' Storage=4,120 cf Inflow=2.89 cfs 0.208 af
Outflow=0.86 cfs 0.179 af

Pond 3P: Underdrained Soil Filter Peak Elev=100.66' Storage=1,850 cf Inflow=2.24 cfs 0.158 af
Outflow=0.66 cfs 0.151 af

Pond PDMH4: Peak Elev=98.26' Inflow=1.51 cfs 0.331 af
12.0" Round Culvert n=0.013 L=10.0' S=0.0100 '/' Outflow=1.51 cfs 0.331 af

Link PA1: Inflow=3.73 cfs 0.515 af
Primary=3.73 cfs 0.515 af

Link PA2: Inflow=0.24 cfs 0.016 af
Primary=0.24 cfs 0.016 af

Link PA3: Inflow=0.31 cfs 0.021 af
Primary=0.31 cfs 0.021 af

Total Runoff Area = 2.179 ac Runoff Volume = 0.588 af Average Runoff Depth = 3.24"
48.05% Pervious = 1.047 ac 51.95% Impervious = 1.132 ac

Summary for Subcatchment WS-1A:

Runoff = 2.24 cfs @ 12.07 hrs, Volume= 0.158 af, Depth> 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
14,558	98	Paved parking, HSG C
9,104	74	>75% Grass cover, Good, HSG C
23,662	89	Weighted Average
9,104		38.48% Pervious Area
14,558		61.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	80	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	130	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-1B:

Runoff = 2.65 cfs @ 12.08 hrs, Volume= 0.185 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
11,890	98	Paved parking, HSG C
22,521	74	>75% Grass cover, Good, HSG C
34,411	82	Weighted Average
22,521		65.45% Pervious Area
11,890		34.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0125	0.96		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.0	125	0.0110	2.13		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.6	320	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
5.5	495	Total			

Summary for Subcatchment WS-1C:

Runoff = 2.89 cfs @ 12.07 hrs, Volume= 0.208 af, Depth> 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
19,300	98	Roofs, HSG C
2,350	98	Paved parking, HSG C
7,000	74	>75% Grass cover, Good, HSG C
28,650	92	Weighted Average
7,000		24.43% Pervious Area
21,650		75.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	75	0.0150	1.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.9	165	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.0	240	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-2:

Runoff = 0.24 cfs @ 12.08 hrs, Volume= 0.016 af, Depth> 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
2,905	74	>75% Grass cover, Good, HSG C
600	98	Paved parking, HSG C
3,505	78	Weighted Average
2,905		82.88% Pervious Area
600		17.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	22	0.0150	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.4	22	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-3:

Runoff = 0.31 cfs @ 12.08 hrs, Volume= 0.021 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.70"

Area (sf)	CN	Description
612	98	Paved parking, HSG C
4,073	74	>75% Grass cover, Good, HSG C
4,685	77	Weighted Average
4,073		86.94% Pervious Area
612		13.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	30	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.9	30	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond 1P: Stormtech 310

Inflow Area = 0.658 ac, 75.57% Impervious, Inflow Depth > 3.79" for 10-YR event
Inflow = 2.89 cfs @ 12.07 hrs, Volume= 0.208 af
Outflow = 0.86 cfs @ 12.38 hrs, Volume= 0.179 af, Atten= 70%, Lag= 18.7 min
Primary = 0.86 cfs @ 12.38 hrs, Volume= 0.179 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 101.07' @ 12.38 hrs Surf.Area= 3,082 sf Storage= 4,120 cf
Flood Elev= 101.50' Surf.Area= 3,082 sf Storage= 4,570 cf

Plug-Flow detention time= 152.2 min calculated for 0.179 af (86% of inflow)
Center-of-Mass det. time= 91.8 min (875.1 - 783.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	98.60'	2,776 cf	**38.17'W x 80.76'L x 2.83'H Field A** 8,733 cf Overall - 1,794 cf Embedded = 6,939 cf x 40.0% Voids
#2A	99.60'	1,794 cf	**ADS_StormTech SC-310** x 121 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 11 rows
		4,570 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	99.50'	**12.0" Round Culvert** L= 135.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 99.50' / 97.60' S= 0.0141 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	99.50'	**4.5" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.86 cfs @ 12.38 hrs HW=101.07' TW=98.26' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.86 cfs of 3.91 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.62 cfs @ 5.66 fps)
  └**3=Sharp-Crested Rectangular Weir** (Weir Controls 0.23 cfs @ 0.86 fps)

Summary for Pond 3P: Underdrained Soil Filter

Inflow Area = 0.543 ac, 61.52% Impervious, Inflow Depth > 3.48" for 10-YR event
Inflow = 2.24 cfs @ 12.07 hrs, Volume= 0.158 af
Outflow = 0.66 cfs @ 12.29 hrs, Volume= 0.151 af, Atten= 71%, Lag= 13.0 min
Primary = 0.66 cfs @ 12.29 hrs, Volume= 0.151 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 100.66' @ 12.40 hrs Surf.Area= 3,472 sf Storage= 1,850 cf
Flood Elev= 101.50' Surf.Area= 4,001 sf Storage= 3,340 cf

Plug-Flow detention time= 53.8 min calculated for 0.151 af (96% of inflow)
Center-of-Mass det. time= 31.3 min (826.5 - 795.1)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	2,378 cf	**Pond Storage (Prismatic)**Listed below (Recalc)
#2	98.50'	439 cf	**Soil Filter (Prismatic)**Listed below (Recalc) 1,463 cf Overall x 30.0% Voids
#3	97.15'	524 cf	**Stone Resevoir (Prismatic)**Listed below (Recalc) 1,309 cf Overall x 40.0% Voids
		3,340 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.00	1,150	0	0
101.00	1,718	1,434	1,434
101.50	2,056	944	2,378

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	975	0	0
100.00	975	1,463	1,463

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
97.15	970	0	0
98.50	970	1,309	1,309

Device	Routing	Invert	Outlet Devices
#1	Primary	97.65'	**12.0" Round Culvert** L= 5.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 97.65' / 97.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	97.75'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.20'	**16.0" x 16.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.66 cfs @ 12.29 hrs HW=100.64' TW=98.20' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.66 cfs of 5.91 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.66 cfs @ 7.52 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PDMH4:

Inflow Area = 1.201 ac, 69.22% Impervious, Inflow Depth > 3.30" for 10-YR event
Inflow = 1.51 cfs @ 12.38 hrs, Volume= 0.331 af
Outflow = 1.51 cfs @ 12.38 hrs, Volume= 0.331 af, Atten= 0%, Lag= 0.0 min
Primary = 1.51 cfs @ 12.38 hrs, Volume= 0.331 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 98.26' @ 12.38 hrs
Flood Elev= 102.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	97.50'	**12.0" Round Culvert** L= 10.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 97.50' / 97.40' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.51 cfs @ 12.38 hrs HW=98.26' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.51 cfs @ 3.24 fps)

Summary for Link PA1:

Inflow Area = 1.991 ac, 55.46% Impervious, Inflow Depth > 3.11" for 10-YR event
Inflow = 3.73 cfs @ 12.09 hrs, Volume= 0.515 af
Primary = 3.73 cfs @ 12.09 hrs, Volume= 0.515 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA2:

Inflow Area = 0.080 ac, 17.12% Impervious, Inflow Depth > 2.46" for 10-YR event
Inflow = 0.24 cfs @ 12.08 hrs, Volume= 0.016 af
Primary = 0.24 cfs @ 12.08 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA3:

Inflow Area = 0.108 ac, 13.06% Impervious, Inflow Depth > 2.37" for 10-YR event
Inflow = 0.31 cfs @ 12.08 hrs, Volume= 0.021 af
Primary = 0.31 cfs @ 12.08 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment WS-1A: Runoff Area=23,662 sf 61.52% Impervious Runoff Depth>4.25"
Flow Length=130' Slope=0.0200 '/' Tc=5.0 min CN=89 Runoff=2.71 cfs 0.192 af

Subcatchment WS-1B: Runoff Area=34,411 sf 34.55% Impervious Runoff Depth>3.53"
Flow Length=495' Tc=5.5 min CN=82 Runoff=3.31 cfs 0.232 af

Subcatchment WS-1C: Runoff Area=28,650 sf 75.57% Impervious Runoff Depth>4.58"
Flow Length=240' Tc=5.0 min CN=92 Runoff=3.45 cfs 0.251 af

Subcatchment WS-2: Runoff Area=3,505 sf 17.12% Impervious Runoff Depth>3.14"
Flow Length=22' Slope=0.0150 '/' Tc=5.0 min CN=78 Runoff=0.31 cfs 0.021 af

Subcatchment WS-3: Runoff Area=4,685 sf 13.06% Impervious Runoff Depth>3.04"
Flow Length=30' Slope=0.0200 '/' Tc=5.0 min CN=77 Runoff=0.40 cfs 0.027 af

Pond 1P: Stormtech 310 Peak Elev=101.19' Storage=4,273 cf Inflow=3.45 cfs 0.251 af
Outflow=1.75 cfs 0.221 af

Pond 3P: Underdrained Soil Filter Peak Elev=101.00' Storage=2,398 cf Inflow=2.71 cfs 0.192 af
Outflow=0.69 cfs 0.186 af

Pond PDMH4: Peak Elev=98.54' Inflow=2.38 cfs 0.407 af
12.0" Round Culvert n=0.013 L=10.0' S=0.0100 '/' Outflow=2.38 cfs 0.407 af

Link PA1: Inflow=4.50 cfs 0.640 af
Primary=4.50 cfs 0.640 af

Link PA2: Inflow=0.31 cfs 0.021 af
Primary=0.31 cfs 0.021 af

Link PA3: Inflow=0.40 cfs 0.027 af
Primary=0.40 cfs 0.027 af

Total Runoff Area = 2.179 ac Runoff Volume = 0.724 af Average Runoff Depth = 3.99"
48.05% Pervious = 1.047 ac 51.95% Impervious = 1.132 ac

Summary for Subcatchment WS-1A:

Runoff = 2.71 cfs @ 12.07 hrs, Volume= 0.192 af, Depth> 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
14,558	98	Paved parking, HSG C
9,104	74	>75% Grass cover, Good, HSG C
23,662	89	Weighted Average
9,104		38.48% Pervious Area
14,558		61.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	80	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	130	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-1B:

Runoff = 3.31 cfs @ 12.08 hrs, Volume= 0.232 af, Depth> 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
11,890	98	Paved parking, HSG C
22,521	74	>75% Grass cover, Good, HSG C
34,411	82	Weighted Average
22,521		65.45% Pervious Area
11,890		34.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0125	0.96		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.0	125	0.0110	2.13		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.6	320	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
5.5	495	Total			

Summary for Subcatchment WS-1C:

Runoff = 3.45 cfs @ 12.07 hrs, Volume= 0.251 af, Depth> 4.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
19,300	98	Roofs, HSG C
2,350	98	Paved parking, HSG C
7,000	74	>75% Grass cover, Good, HSG C
28,650	92	Weighted Average
7,000		24.43% Pervious Area
21,650		75.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	75	0.0150	1.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.9	165	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
2.0	240	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-2:

Runoff = 0.31 cfs @ 12.07 hrs, Volume= 0.021 af, Depth> 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
2,905	74	>75% Grass cover, Good, HSG C
600	98	Paved parking, HSG C
3,505	78	Weighted Average
2,905		82.88% Pervious Area
600		17.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	22	0.0150	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.4	22	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment WS-3:

Runoff = 0.40 cfs @ 12.07 hrs, Volume= 0.027 af, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.50"

Area (sf)	CN	Description
612	98	Paved parking, HSG C
4,073	74	>75% Grass cover, Good, HSG C
4,685	77	Weighted Average
4,073		86.94% Pervious Area
612		13.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	30	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.9	30	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond 1P: Stormtech 310

Inflow Area = 0.658 ac, 75.57% Impervious, Inflow Depth > 4.58" for 25-YR event
Inflow = 3.45 cfs @ 12.07 hrs, Volume= 0.251 af
Outflow = 1.75 cfs @ 12.20 hrs, Volume= 0.221 af, Atten= 49%, Lag= 7.5 min
Primary = 1.75 cfs @ 12.20 hrs, Volume= 0.221 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 101.19' @ 12.20 hrs Surf.Area= 3,082 sf Storage= 4,273 cf
Flood Elev= 101.50' Surf.Area= 3,082 sf Storage= 4,570 cf

Plug-Flow detention time= 137.9 min calculated for 0.221 af (88% of inflow)
Center-of-Mass det. time= 83.9 min (862.3 - 778.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	98.60'	2,776 cf	**38.17'W x 80.76'L x 2.83'H Field A** 8,733 cf Overall - 1,794 cf Embedded = 6,939 cf x 40.0% Voids
#2A	99.60'	1,794 cf	**ADS_StormTech SC-310** x 121 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 11 rows
		4,570 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	99.50'	**12.0" Round Culvert** L= 135.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 99.50' / 97.60' S= 0.0141 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	99.50'	**4.5" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=1.74 cfs @ 12.20 hrs HW=101.19' TW=98.54' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.74 cfs of 4.13 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.65 cfs @ 5.91 fps)
  └**3=Sharp-Crested Rectangular Weir** (Weir Controls 1.09 cfs @ 1.43 fps)

Summary for Pond 3P: Underdrained Soil Filter

Inflow Area = 0.543 ac, 61.52% Impervious, Inflow Depth > 4.25" for 25-YR event
Inflow = 2.71 cfs @ 12.07 hrs, Volume= 0.192 af
Outflow = 0.69 cfs @ 12.57 hrs, Volume= 0.186 af, Atten= 74%, Lag= 29.9 min
Primary = 0.69 cfs @ 12.57 hrs, Volume= 0.186 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 101.00' @ 12.43 hrs Surf.Area= 3,664 sf Storage= 2,398 cf
Flood Elev= 101.50' Surf.Area= 4,001 sf Storage= 3,340 cf

Plug-Flow detention time= 53.2 min calculated for 0.186 af (97% of inflow)
Center-of-Mass det. time= 34.1 min (823.8 - 789.7)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	2,378 cf	**Pond Storage (Prismatic)**Listed below (Recalc)
#2	98.50'	439 cf	**Soil Filter (Prismatic)**Listed below (Recalc) 1,463 cf Overall x 30.0% Voids
#3	97.15'	524 cf	**Stone Resevoir (Prismatic)**Listed below (Recalc) 1,309 cf Overall x 40.0% Voids
		3,340 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.00	1,150	0	0
101.00	1,718	1,434	1,434
101.50	2,056	944	2,378

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	975	0	0
100.00	975	1,463	1,463

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
97.15	970	0	0
98.50	970	1,309	1,309

Device	Routing	Invert	Outlet Devices
#1	Primary	97.65'	**12.0" Round Culvert** L= 5.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 97.65' / 97.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	97.75'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.20'	**16.0" x 16.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.70 cfs @ 12.57 hrs HW=100.95' TW=98.22' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.70 cfs of 6.26 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.70 cfs @ 7.96 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PDMH4:

Inflow Area = 1.201 ac, 69.22% Impervious, Inflow Depth > 4.07" for 25-YR event
Inflow = 2.38 cfs @ 12.20 hrs, Volume= 0.407 af
Outflow = 2.38 cfs @ 12.20 hrs, Volume= 0.407 af, Atten= 0%, Lag= 0.0 min
Primary = 2.38 cfs @ 12.20 hrs, Volume= 0.407 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 98.54' @ 12.20 hrs
Flood Elev= 102.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	97.50'	**12.0" Round Culvert** L= 10.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 97.50' / 97.40' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.38 cfs @ 12.20 hrs HW=98.54' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.38 cfs @ 3.64 fps)

Summary for Link PA1:

Inflow Area = 1.991 ac, 55.46% Impervious, Inflow Depth > 3.86" for 25-YR event
Inflow = 4.50 cfs @ 12.08 hrs, Volume= 0.640 af
Primary = 4.50 cfs @ 12.08 hrs, Volume= 0.640 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA2:

Inflow Area = 0.080 ac, 17.12% Impervious, Inflow Depth > 3.14" for 25-YR event
Inflow = 0.31 cfs @ 12.07 hrs, Volume= 0.021 af
Primary = 0.31 cfs @ 12.07 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link PA3:

Inflow Area = 0.108 ac, 13.06% Impervious, Inflow Depth > 3.04" for 25-YR event
Inflow = 0.40 cfs @ 12.07 hrs, Volume= 0.027 af
Primary = 0.40 cfs @ 12.07 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Stormtech 310

Inflow Area = 0.658 ac, 75.57% Impervious, Inflow Depth > 5.75" for 100-YR event
Inflow = 4.28 cfs @ 12.07 hrs, Volume= 0.315 af
Outflow = 3.42 cfs @ 12.13 hrs, Volume= 0.285 af, Atten= 20%, Lag= 3.4 min
Primary = 3.42 cfs @ 12.13 hrs, Volume= 0.285 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 101.36' @ 12.13 hrs Surf.Area= 3,082 sf Storage= 4,474 cf
Flood Elev= 101.50' Surf.Area= 3,082 sf Storage= 4,570 cf

Plug-Flow detention time= 122.6 min calculated for 0.285 af (90% of inflow)
Center-of-Mass det. time= 75.6 min (848.1 - 772.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	98.60'	2,776 cf	**38.17'W x 80.76'L x 2.83'H Field A** 8,733 cf Overall - 1,794 cf Embedded = 6,939 cf x 40.0% Voids
#2A	99.60'	1,794 cf	**ADS_StormTech SC-310** x 121 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 11 rows
		4,570 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	99.50'	**12.0" Round Culvert** L= 135.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 99.50' / 97.60' S= 0.0141 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	99.50'	**4.5" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=3.41 cfs @ 12.13 hrs HW=101.36' TW=99.13' (Dynamic Tailwater)
└─**1=Culvert** (Passes 3.41 cfs of 3.93 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.69 cfs @ 6.22 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Weir Controls 2.72 cfs @ 1.95 fps)

Summary for Pond 3P: Underdrained Soil Filter

Inflow Area = 0.543 ac, 61.52% Impervious, Inflow Depth > 5.41" for 100-YR event
Inflow = 3.41 cfs @ 12.07 hrs, Volume= 0.245 af
Outflow = 1.26 cfs @ 12.31 hrs, Volume= 0.239 af, Atten= 63%, Lag= 14.2 min
Primary = 1.26 cfs @ 12.31 hrs, Volume= 0.239 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 101.31' @ 12.30 hrs Surf.Area= 3,869 sf Storage= 2,952 cf
Flood Elev= 101.50' Surf.Area= 4,001 sf Storage= 3,340 cf

Plug-Flow detention time= 50.7 min calculated for 0.238 af (97% of inflow)
Center-of-Mass det. time= 35.0 min (818.2 - 783.2)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	2,378 cf	**Pond Storage (Prismatic)**Listed below (Recalc)
#2	98.50'	439 cf	**Soil Filter (Prismatic)**Listed below (Recalc) 1,463 cf Overall x 30.0% Voids
#3	97.15'	524 cf	**Stone Resevoir (Prismatic)**Listed below (Recalc) 1,309 cf Overall x 40.0% Voids
		3,340 cf	Total Available Storage

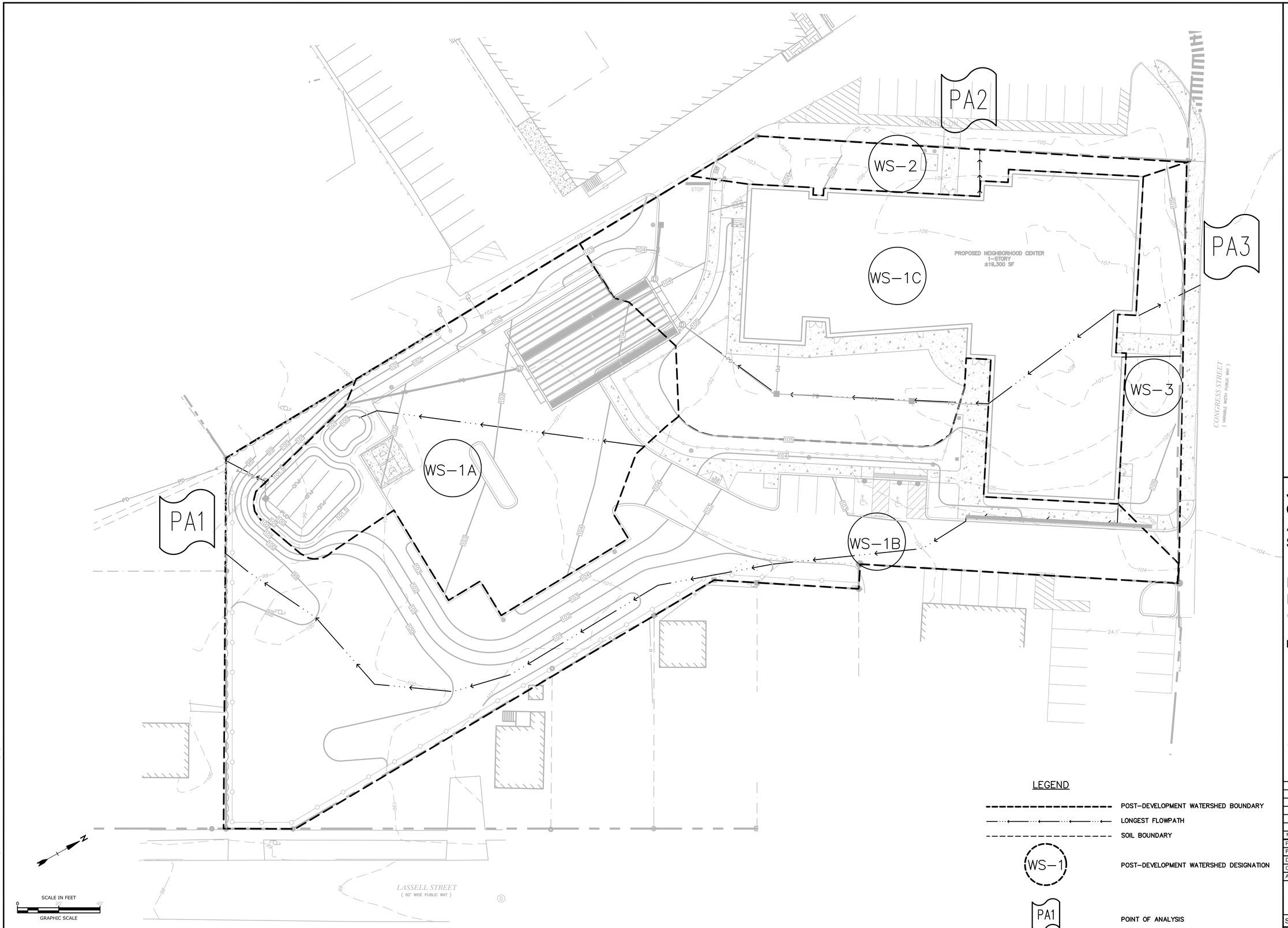
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.00	1,150	0	0
101.00	1,718	1,434	1,434
101.50	2,056	944	2,378

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	975	0	0
100.00	975	1,463	1,463

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
97.15	970	0	0
98.50	970	1,309	1,309

Device	Routing	Invert	Outlet Devices
#1	Primary	97.65'	**12.0" Round Culvert** L= 5.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 97.65' / 97.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	97.75'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	101.20'	**16.0" x 16.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.26 cfs @ 12.31 hrs HW=101.30' TW=98.76' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.26 cfs of 6.04 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.67 cfs @ 7.69 fps)
  └─**3=Orifice/Grate** (Weir Controls 0.59 cfs @ 1.06 fps)



Tighe&Bond
Consulting Engineers
www.tighebond.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
1.	5/8/15	REVISED FOR PB WORKSHOP

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

WS-2

Jun 23, 2015-8:10pm Plotted By: gwh
Tighe & Bond, Inc. J:\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: POST

2.6 Mitigation Description and Best Management Practices

In order to mitigate the increase in impervious area required for the proposed project, a stormwater system has been designed for this project utilizing low impact development measures.

The intent of the stormwater management system design is for runoff to be collected, detained, and treated, where possible. An Underdrained Soil Filter has been provided to mitigate potential impacts from the increase in impervious area. The Underdrained Soil Filter has been designed to treat the entire runoff volume from the 2 and 10-year 24 hour storms. As shown in Section 2.5, the treatment volume provided is greater than the volume required by the stormwater regulations.

The underground detention basin, which consists of Stormtech SC-310 chambers, has been designed to detain and mitigate peak flows generated by the roof and grass play area. Runoff generated from the roof will not be treated as it is inherently clean. Deep sump catch basins with Casco traps will provide pre-treatment for stormwater that is collected within the play area adjacent to the building prior to discharge into the detention basin.

All soil erosion and sediment control measures shall be in accordance with regulations and principles as outlined in the Stormwater Management for Maine: Best Management Practices and Maine Erosion and Sediment Control Handbook for Construction. The intent of the outlined measures is to minimize erosion and sedimentation during construction, stabilize and protect the site from erosion after construction is complete and improve stormwater quality from the site. Best Management Practices for this project include:

- Temporary practices to be implemented during construction.
- Permanent practices to be implemented after construction.
- Stormwater treatment devices.

TEMPORARY PRACTICES

Sequencing:

1. Construct temporary and permanent sediment, erosion and detention control facilities. Erosion, sediment and detention measures shall be installed prior to any earth moving operations that will influence stormwater runoff such as:

    - New construction
    - Development of borrow pit areas
    - Disposal of sediment spoil, stump and other solid waste
    - Control of dust

2. All permanent ditches, swales, detention, retention and sedimentation basins to be stabilized using the vegetative and nonstructural BMPs prior to directing runoff to them.

3. Clear and dispose of debris.

4. Construct temporary culverts and diversion channels as required.

5. Begin permanent and temporary seeding and mulching. All cut and fill slopes shall be seeded and mulched immediately after their construction.

6. Daily, or as required, construct temporary berms, drains, ditches, silt fences, sediment traps etc., mulch and seed as required.

7. Finish pave all roadways and parking lots.

8. Inspect and maintain all erosion and sediment control measures.

9. Complete permanent seeding and landscaping.

10. Remove trapped sediment from collection devices as appropriate and then remove temporary erosion control measures.

Stabilization Practices:

1. Install stabilized construction entrance at the location shown on plans.

2. Loam stockpiles shall be mulched, seeded and contained by a silt fence barrier.

3. All erosion control devices, including silt fences and storm drain inlet filters, shall be inspected at least once per week and following any rainfall of 1/4 inch or greater. All necessary maintenance shall be completed within 48 hours. A Maintenance Inspection Report shall be kept on site and made available by the contractor at the city's request.

4. Inactivity: Area of the site which has been disturbed, where construction activity will not occur for more than twenty-one (21) days, shall be temporarily stabilized by mulching and seeding.

5. Waste Disposal/Spill Prevention: The Erosion Control Notes and Details Sheet of the Site Plans fully detail the waste disposal and spill prevention procedures. All waste from construction activities shall be collected and stored in receptacles. No construction materials shall be buried on site. The Spill Prevention Plan focuses on personnel training, housekeeping, storage and standard practices for use and disposal of materials.

PERMANENT PRACTICES

The objectives for developing permanent Best Management Practices for this site include the following:

- Develop a plan that provides the best hydrologic condition both on site and downstream.
- Provide a higher level of removal of pollutants from stormwater runoff.
- Minimize impact on the natural environment.
- Minimize future maintenance.

Section 3
Long Term Operation & Maintenance Plan

It is the intent of this Operation and Maintenance Plan to identify the areas of this site that need special attention and consideration, as well as implementing a plan to assure routine maintenance. By identifying the areas of concern as well as implementing a frequent and routine maintenance schedule the site will maintain a high quality of stormwater runoff.

Annual Reporting Requirements
The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to City of Portland Department of Public Services (DPS) in a form provided by DPS, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.

3.1 Contact/Responsible Party

Steve Brinn
Jewish Community Alliance of Southern Maine
57 Ashmont Street
Portland, Maine

(Note: The contact information for the Contact/Responsible Party shall be kept current. If ownership changes, the Operation and Maintenance Plan must be transferred to the new party.)

3.2 Maintenance Items

Maintenance of the following items shall be recorded:

- Litter/Debris Removal
- Landscaping
- Catch basin/Yard drain Cleaning
- Pavement Sweeping
- Stormtech Chamber Cleaning
- Underdrained Soil Filter Cleaning and Maintenance

The following maintenance items and schedule represent the minimum action required. Periodic site inspections shall be conducted and all measures must be maintained in effective operating condition. The following items shall be observed during site inspection and maintenance:

- Inspect vegetated areas, particularly slopes and embankments for areas of erosion. Replant and restore as necessary
- Inspect catch basins for sediment buildup
- Inspect site for trash and debris

3.3 Overall Site Operation & Maintenance Schedule

Overall Site Operation and Maintenance Schedule		
Maintenance Item	**Frequency of Maintenance**	**Operation**
Litter/Debris Removal	Weekly	Management Company
Pavement Sweeping - Sweep impervious areas to remove sand and litter.	2 - 4 times annually	Parking Lot Sweeper
Underdrain Soil Filter - Trash and debris to be removed. - Any required maintenance shall be addressed.	Two (2) times annually and after any rainfall event exceeding 2.5" in a 24-hr period	Management Company
Stormtech Chambers - Visual inspection and cleaning.	Twice Yearly	Management Company / Vacuum Truck
Rip Rap Aprons - Trash and debris to be removed. - Any required maintenance shall be addressed.	Annually	Management Company
Catch Basin (CB) / Yard Drain (YD) Cleaning - CBs/YDs to be cleaned of solids and oils.	Annually	Vacuum Truck
Landscaping - Landscaped islands to be maintained and mulched.	Maintained as required and mulched each Spring	Management Company

Underdrained Soil Filter Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**

Monitor to ensure that Rain Gardens function effectively after storms	Four (4) times annually (quarterly) and after any rainfall event exceeding 2.5" in a 24-hr period	- Trash and debris to be removed - Any required maintenance shall be addressed
Inspect Vegetation	Annually	- Inspect the condition of all Rain Garden vegetation - Prune back overgrowth - Replace dead vegetation - Remove any invasive species
Inspect Drawdown Time - The system shall drawdown within 48-hours following a rainfall event.	Annually	- Assess the condition of the facility to determine measures required to restore the filtration function, including but not limited to removal of accumulated sediments or reconstruction of the filter.

StormTech Inspection / Maintenance Requirements		
Inspection / Maintenance	**Frequency**	**Action**
Inspection with maintenance following as warranted	Twice Yearly	- Trash and debris to be removed - Any required maintenance shall be addressed.

Rip Rap Inspection / Maintenance Requirements		
Inspection / Maintenance	**Frequency**	**Action**
Visual Inspection	Annually	- Visually inspect for damage and deterioration - Repair damages immediately

3.3.1 Disposal Requirements

Disposal of debris, trash, sediment and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state and federal waste regulations.

3.3.2 Snow & Ice Management for Standard Asphalt and Walkways

Snow storage areas shall be located such that no direct untreated discharges are possible to receiving waters from the storage site (snow storage areas have been shown

on the Site Plan). Curb cuts shown on the plan shall remain free of snow and ice buildup. Salt storage areas shall be covered or located such that no direct untreated discharges are possible to receiving waters from the storage site.

3.3.3 Annual Updates and Log Requirements

The Owner and/or Contact/Responsible Party shall review this Operation and Maintenance Plan once per year for its effectiveness and adjust the plan and deed as necessary.

A log of all preventative and corrective measures for the stormwater system shall be kept on-site and be made available upon request by any public entity with administrative, health environmental or safety authority over the site.

Stormwater Management Report						
Project Name		**Proposed Neighborhood Center, 1342 Congress St, Portland, ME**				
BMP Description	**Date of Inspection**	**Inspector**	**BMP Installed and Operating Properly?**	**Cleaning / Corrective Action Needed**	**Date of Cleaning / Repair**	**Performed By**
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			

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Table 2-1
24 Hour Duration Rainfalls for Various Return Periods
Natural Resources Conservation Service County Rainfall Data

County	Storm Type	Return Interval or Frequency 1-Yr	2-Yr	5-Yr	10-Yr	25-Yr	100-Yr	500-Yr	Annual	
Androscoggin		2.5	3.0	3.9	4.6	5.4	6.5	7.8	45.3	
Aroostook C		2.1	2.1	3.2	3.6	4.2	5.0	5.9	36.1	(Presque Isle Area)
Aroostook N	S	2.0	2.3	3.0	3.5	4.0	4.8	5.7	36.1	(Fort Kent Area)
Aroostook S	E	2.2	2.5	3.3	3.8	4.4	5.3	6.4	39.0	(Houlton Area)
Cumberland NW	E	2.8	3.3	4.3	5.0	5.8	6.9	8.3	43.4	(NW of St. Route 11)
Cumberland SE		2.5	3.0	4.0	4.7	5.5	6.7	8.1	44.4	(SE of St. Route 11)
Franklin	N	2.4	2.9	3.7	4.2	4.9	5.9	7.0	45.6	
Hancock	O	2.4	2.7	3.6	4.2	4.9	6.0	7.2	45.2	
Kennebec	T	2.4	3.0	3.8	4.4	5.1	6.1	7.2	41.7	
Knox-Lincoln	E	2.5	2.9	3.8	4.4	5.1	6.2	7.4	46.1	
Oxford E	S	2.5	3.0	4.0	4.6	5.3	6.4	7.6	43.0	(E of St. Route 26)
Oxford W		3.0	3.5	4.5	5.2	6.0	7.1	8.4	43.8	(W of St. Route 26)
Penobscot N	1	2.2	2.5	3.3	3.8	4.4	5.4	6.4	41.5	(N of Can. -Atl. Rwy)
Penobscot S		2.4	2.7	3.5	4.1	4.8	5.8	6.9	39.5	(S of Can. -Atl. Rwy)
Piscataquis N		2.2	2.5	3.3	3.8	4.4	5.3	6.3	38.5	(N of Can. - Atl. Rwy)
Piscataquis S	A	2.3	2.6	3.4	4.0	4.6	5.5	6.6	41.0	(S of Can. - Atl. Rwy)
Sagadahoc	N	2.5	3.0	3.9	4.6	5.4	6.5	7.8	45.3	
Somerset N	D	2.2	2.5	3.3	3.8	4.4	5.3	6.3	37.3	(N of Can. - Atl. Rwy)
Somerset S		2.4	2.7	3.5	4.1	4.7	5.7	6.8	39.5	(S of Can. - Atl. Rwy)
Waldo	2	2.5	2.8	3.7	4.3	4.9	6.0	7.1	47.2	
Washington		2.4	2.5	3.4	4.0	4.8	5.9	7.1	44.2	
York		2.5	3.0	4.0	4.6	5.4	6.6	7.8	46.7	

NOTES: REVISED 4/10/92 Lew P. Crosby
24-HR DURATION RAINFALL

SOURCES: 24-HR. DATA - TP 40
ANNUAL DATA - CDAN

Note 1: [1]Use ***Type II*** for Oxford County (with the exception of towns listed below) and Penobscot County (with the exception of towns listed below) and all Main counties not listed below)

Note 2: [2]Use ***Type III*** for York, Cumberland, Androscoggin, Sagadahoc, Kennebec, Waldo, Knox, Piscataquis, Somerset, Franklin, Aroostook, Lincoln, Hancock, Washington Counties; the following Oxford County Towns: Porter, Brownfield, Hiram, Denmark, Oxford, Hebron, Buckfield and Hartford; and the following Penobscot County Towns: Dixmont, Newburgh, Hampden, Bangor, Veazie, Orono, Bradley, Clifton, Eddington, Holden, Brewer, Orrington, Plymouth, Etna, Carmel, Hermon, Glenburn, Old Town, Milford and Greenfield.

March 18, 2013

Karen Johnson
Charter Realty & Development Corporation
800 Westchester Avenue, Suite S-632
Rye Brook, NY 10573

Re: Phase II Environmental Site Assessment
St. Patrick's Church
1342 and 1348 Congress Street
Portland, Maine
St.Germain Collins File No.: 3410.2

Dear Ms. Johnson:

St.Germain Collins is providing you with the results of a Phase II Environmental Site Assessment (ESA) conducted at St. Patrick's Church in Portland, Maine (Site) (see **Figure 1 – Site Location**). This work was in response to our identification of a 3,000-gallon #2 fuel oil underground storage tank (UST) formerly present on the Site. During completion of a Phase I ESA, St.Germain Collins determined that contaminated soil was observed during removal of this UST in 1991, and it therefore was considered a Recognized Environmental Condition (REC). The purpose of the Phase II ESA was to determine if the REC represented a threat to human health or the environment, and in turn could limit Site redevelopment.

Background and Site Description

The Site is located at 1342 and 1348 Congress Street in Portland, Maine in a mixed residential and light commercial neighborhood (see Figure 1). It encompasses approximately 2.2 acres and is occupied by a church and rectory, surrounded by paved driveways, parking, and vegetated areas (see **Figure 2 – Site Plan)**.

The church was built on the Site in 1964, and prior to its construction the Site was occupied by a farm and a small residence. The topography of the Site and surrounding area slopes gently to the south and west toward the Fore River. The Site and surrounding area are served by public water and sewer.

According to Maine Geological Survey maps, the Site is underlain by the Presumpscot Formation consisting of silt, clay and minor deposits of sand to unknown depth.

Phase II ESA Tasks

On March 4, 2013, St.Germain Collins supervised the advancement of four geoprobe soil borings in the area of the former UST located in a grassed area north of the Rectory (see Figure 2). All borings were continuously sampled and field screened with the Oil in Soil® shake test for petroleum hydrocarbons and a photoionization detector (PID) following Maine Department of Environmental Protection (MEDEP) Standard Operating Procedure TS-004 (Compendium of Field Testing of Soil Samples for Gasoline and Fuel Oil). One soil sample was collected for analysis of extractable petroleum hydrocarbons (EPH) by Analytics Environmental Laboratory (Analytics) in Portsmouth, New Hampshire. **Soil Boring Logs** are provided as **Attachment A** and the **Laboratory Report** is included as **Attachment B**.

Results

As shown on the boring logs in Attachment A, site geology consists of interbedded sand, silt, and clay. Boring SB-1 encountered refusal at a depth of 9.5 feet; the other borings did not reach refusal with the deepest boring SB-2 terminated at 24 feet. Groundwater was not encountered in any of the borings, though the low permeability clay may have limited groundwater flow into the borings.

No headspace readings exceeding the MEDEP notification limit of 40 parts per million (ppm) were recorded in the any of the borings; the highest PID reading was 6 ppm at 8 to 9 feet below grade in SB-1. One soil sample was collected from this interval for laboratory analysis of EPH. None of the samples showed the presence of free product based on the field tests.

The analyzed soil sample had detectable levels of three EPH constituents (C9-C18 Aliphatics, C19-C36 Aliphatics, and C11-C22 Aromatics. The detection of the aliphatic and aromatic hydrocarbons confirms that a petroleum release occurred. None of the detected constituents exceeded the 2009 MEDEP Petroleum Remediation Guidelines (PRGs), including the Residential PRG.

Dibenzo(a,h)anthracene was reported as non-detect, but had a practical quantization limit (PQL) above the Residential and Park User PRGs. This means that it is possible this compound is present about these two PRGs; the PQL is below the Construction/Excavation Worker and Outdoor Commercial Worker PRGs. With this soil being 8 to 9 feet below grade, it does not pose a risk under the Residential or Parker User PRGs unless brought to the surface.

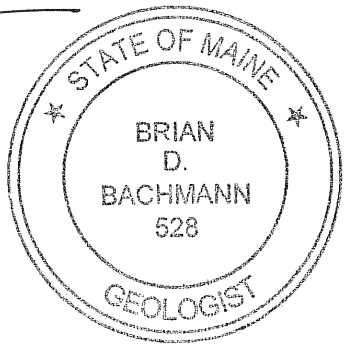
Although the impacted soil at SB-1 does not currently pose a risk, if this soil is brought to the surface it must be managed appropriately. The MEDEP typically allows such soil to be reused on-site, especially if the soil remains below the ground surface. Otherwise, the soil would need to be disposed of or recycled at a MEDEP-approved facility.

Closure

Based upon the March 2013 subsurface investigation and sample results, St.Germain Collins does not recommend any additional actions be taken at this time. If you have any questions, please do not hesitate to contact us at (207) 591-7000.

ST.GERMAIN COLLINS

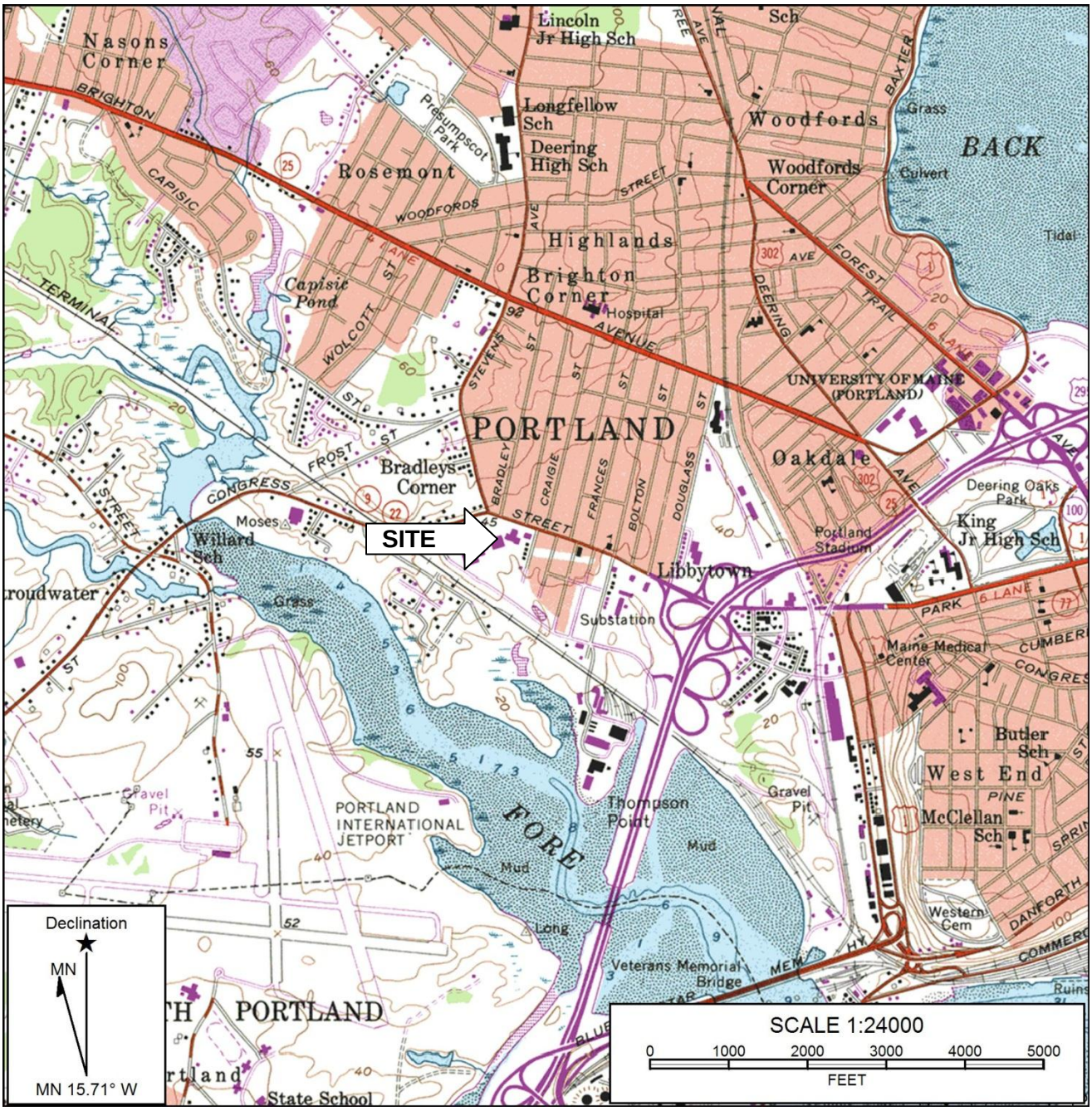
Brian Bachmann, C.G.
Geologist



Attachments

Figure 1 - Site Location
Figure 2 – Site Plan

Attachment A	Soil Boring Logs
Attachment B	Laboratory Report



REFERENCE:
USGS PORTLAND WEST, MAINE 7.5 MIN TOPGRAPHICAL MAP

SITE LOCATION MAP

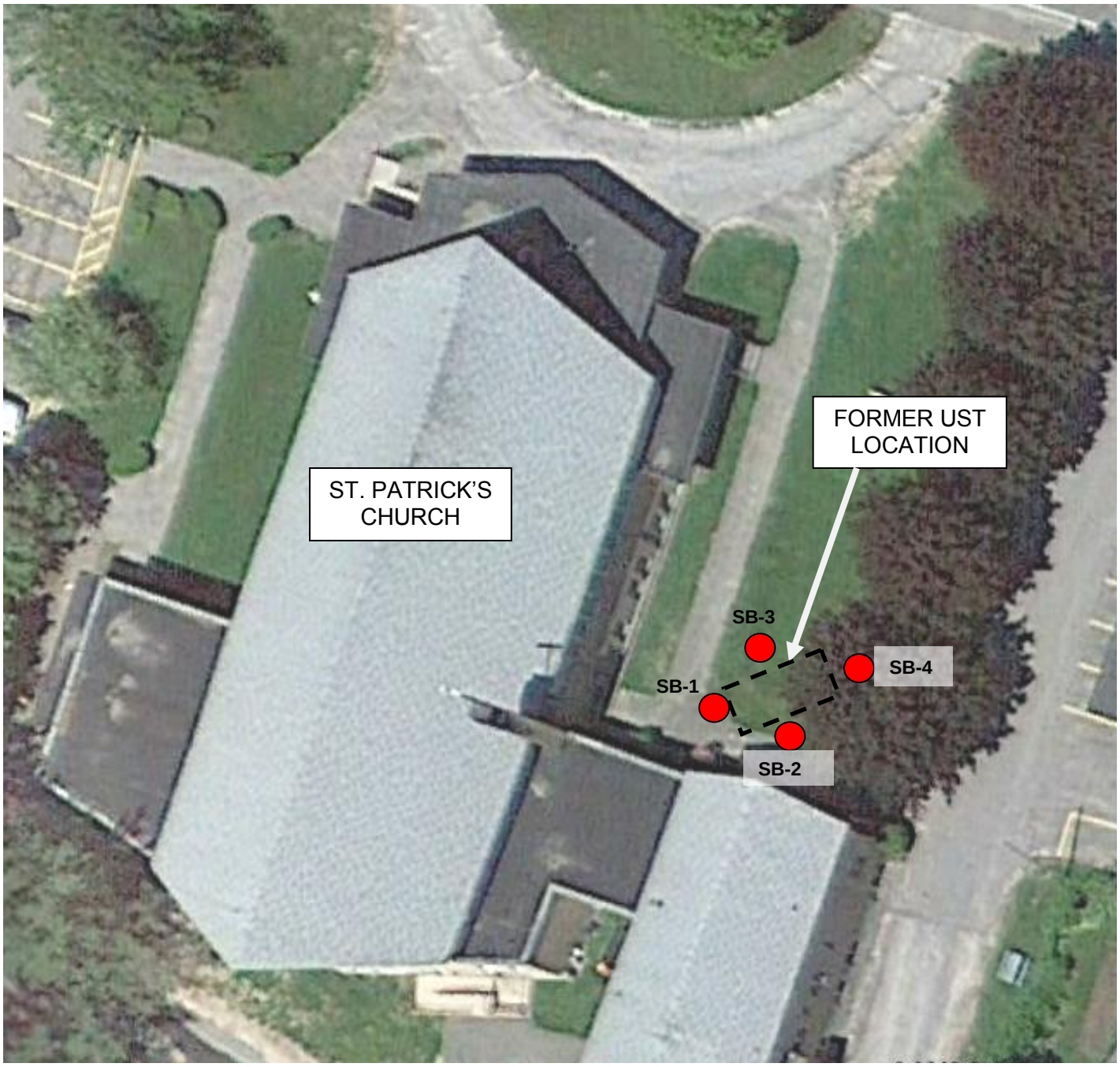
ST. PATRICK'S CHURCH
1342 AND 1348 CONGRESS STREET
PORTLAND, MAINE

CHARTER REALTY & DEVELOPMENT CORP.
800 WESTCHESTER AVENUE
RYE BROOK, NY

ENVIRONMENTAL CONSULTING GROUP
St.Germain · Collins

FIGURE
1

DATE: FEBRUARY 4, 2013	SCALE: SEE ABOVE	FILE: 3410.1	846 MAIN ST., SUITE 3 WESTBROOK, MAINE, 04092 TEL: 207-591-7000 WWW.STGERMAINCOLLINS.COM



REFERENCE: GOOGLE EARTH 2010

LEGEND

APPROXIMATE SOIL BORING LOCATIONS

FORMER UNDERGROUND STORAGE TANK (UST)

0 50 ft.

SCALE APPROXIMATE

N

SITE PLAN

ST.PATRICK'S CHURCH
1342 AND 1348 CONGRESS STREET
PORTLAND, MAINE

CHARTER REALTY & DEVELOPMENT CORP.
800 WESTCHESTER AVENUE
RYE BROOK. NY

ENVIRONMENTAL CONSULTING GROUP
St.Germain · Collins

FIGURE 2

DATE: MARCH 14, 2013 | SCALE: SEE ABOVE | FILE: 3410.2

846 MAIN ST., SUITE 3 WESTBROOK, MAINE, 04092 TEL: 207-591-7000 WWW.STGERMAINCOLLINS.COM

ATTACHMENT A

Soil Boring Logs

BORING AND MONITORING WELL LOG							BORING #:	SB-1
St.Germain Collins 846 Main Street Westbrook, Maine 04092 www.stgermaincollins.com					Project Number:	3410.2	Client/Location:	Charter Realty, St. Patricks Church
					Date of Installation:	3/4/13	Representative:	Brian Bachmann
					Total Depth of Boring:	9.5 feet	Drilling Company:	EPI
					Depth to Water:	NA	Drilling Technology:	Direct push
					Depth of Well:	NA	Sampler:	Dual Tube
					Well Screen Interval:	NA	Well Screen Type:	NA
					Well Riser Interval:	NA	Well Riser Type:	NA

Depth (ft)	Sample number	Sample Interval	Blows	Rec/Driven (in.)	Description	Stratum	Headspace Results (ppm)	Saturation Test Result	Depth (ft)	Well Construction
0	S-1	0-2	NA	31/48	organic **SILT** with sand, 2.5Y 3/3 dark olive brown, loose, slightly plastic, moist	SILT	0.4		0	No well installed at this location.
1									1	
2	S-2	2-4			**CLAY** with gravel, 2.5Y 4/2 dark grayish brown, medium stiff, plastic, dry	CLAY	1.7	Neg	2	
3									3	
4	S-3	4-6	NA	24/48	same as above		1.9		4	
5									5	
6	S-4	6-8			clayey **SAND**, 5Y 5/1 gray, very soft, very plastic, moist	SAND	4.2	Neg	6	
7									7	
8	S-5	8-10	NA	40/48	same as above (8.0 to 9.5 interval submitted for laboratory analysis of Extractable Petroleum Hydrocarbons)		6.0	Neg	8	
9									9	
					Refusal at 9.5 feet below ground surface.				12	

Notes:
NA = not applicable.
NS = not sampled.
ppm = parts per million.
Soil headspace screening completed with a MiniRae 3000 Photoionization Detector (PID).
Neg = negative result using Oil in Soil shaker test kit as prescribed by MEDEP SOP TS 004

BORING AND MONITORING WELL LOG						BORING #:	SB-2
St.Germain Collins 846 Main Street Westbrook, Maine 04092 www.stgermaincollins.com					Project Number:	3410.2	Client/Location:	Charter Realty, St. Patricks Church
					Date of Installation:	3/4/13	Representative:	Brian Bachmann
					Total Depth of Boring:	24.0	Drilling Company:	EPI
					Depth to Water:	NA	Drilling Technology:	Direct push
					Depth of Well:	NA	Sampler:	Dual Tube
					Well Screen Interval:	NA	Well Screen Type:	NA
					Well Riser Interval:	NA	Well Riser Type:	NA

Depth (ft)	Sample number	Sample Interval	Blows	Rec/Driven (in.)	Description	Stratum	Headspace Results (ppm)	Saturation Test Result	Depth (ft)	Well Construction
0	S-1	0-2	NA	48/48	organic SILT, 2.5Y 3/3 dark olive brown, medium dense, slightly plastic, dry	SILT	4.8		0	No well installed at this location.
1									1	
2	S-2	2-4			same as above		4.8	Neg	2	
3									3	
4	S-3	4-6	NA	48/48	clayey SAND, 2.5Y 5/3 light olive brown, stiff, plastic, dry	SAND	3.8		4	
5									5	
6	S-4	6-8			same as above		3.2	Neg	6	
7									7	
8	S-5	8-10	NA	48/48	CLAY,2.5Y 4/2 dark grayish brown, stiff, very plastic, dry	CLAY	1.8		8	
9									9	
10	S-6	10-12			same as above		2.3		10	
11									11	
12	S-7	12-14	NA	48/48	CLAY, 2.5Y 4/2 dark grayish brown, soft, very plastic, dry		NA	NA	12	
13									13	
14	S-8	14-16			CLAY, 2.5Y 5/0 gray, very soft, very plastic, moist				14	
15									15	
16	S-9	16-18	NA	48/48	same as above				16	
17									17	
18	S-10	18-20			same as above				18	
19									19	
20	S-11	20-22	NA	48/48	clayey SAND, 2.5Y 3/0 very dark gray, very soft, very plastic, moist	SAND			20	
21									21	
22	S-12	22-24							22	
23									23	
24					Terminated boring at 24.0 feet below ground surface				24	

Notes:
NA = not applicable.
NS = not sampled.
ppm = parts per million.
Soil headspace screening completed with a MiniRae 3000 Photoionization Detector (PID).
Neg = negative result using Oil in Soil shaker test kit as prescribed by MEDEP Standard Operating Procedure TS 004.

BORING AND MONITORING WELL LOG							BORING #:	SB-3
St.Germain Collins 846 Main Street Westbrook, Maine 04092 www.stgermaincollins.com					Project Number:	3410.2	Client/Location:	Charter Realty, St. Patricks Church
					Date of Installation:	3/4/13	Representative:	Brian Bachmann
					Total Depth of Boring:	12.0	Drilling Company:	EPI
					Depth to Water:	NA	Drilling Technology:	Direct push
					Depth of Well:	NA	Sampler:	Dual Tube
					Well Screen Interval:	NA	Well Screen Type:	NA
					Well Riser Interval:	NA	Well Riser Type:	NA

Depth (ft)	Sample number	Sample Interval	Blows	Rec/Driven (in.)	Description	Stratum	Headspace Results (ppm)	Saturation Test Result	Depth (ft)	Well Construction
0	S-1	0-2	NA	48/48	organic **SILT**, 2.5Y 3/3 dark olive brown, medium dense, slightly plastic, dry				0	
							1.7			
1									1	
2	S-2	2-4			same as above	**SILT**			2	
							1.8	Neg		
3									3	
4	S-3	4-6	NA	24/48	clayey **SAND**, 2.5Y 5/3 light olive brown, stiff, plastic, dry				4	
							1.5	Neg		
5									5	
										No well installed at this location.
6	S-4	6-8			same as above	**SAND**			6	
							2.9			
7									7	
8	S-5	8-10	NA	40/48	**CLAY**,2.5Y 4/2 dark grayish brown, stiff, very plastic, dry				8	
							3.6	Neg		
9									9	
10	S-6	10-12			same as above	**CLAY**			10	
							2.8			
11									11	
12					Terminated boring at 12.0 feet below ground surface				12	

Notes:
NA = not applicable.
NS = not sampled.
ppm = parts per million.
Soil headspace screening completed with a MiniRae 3000 Photoionization Detector (PID).
Neg = negative result using Oil in Soil shaker test kit as prescribed by MEDEP Standard Operating Procedure TS 004.

BORING AND MONITORING WELL LOG							BORING #:	SB-4
St.Germain Collins 846 Main Street Westbrook, Maine 04092 www.stgermaincollins.com					Project Number:	3410.2	Client/Location:	Charter Realty, St. Patricks Church
					Date of Installation:	3/4/13	Representative:	Brian Bachmann
					Total Depth of Boring:	12.0	Drilling Company:	EPI
					Depth to Water:	NA	Drilling Technology:	Direct push
					Depth of Well:	NA	Sampler:	Dual Tube
					Well Screen Interval:	NA	Well Screen Type:	NA
					Well Riser Interval:	NA	Well Riser Type:	NA

Depth (ft)	Sample number	Sample Interval	Blows	Rec/Driven (in.)	Description	Stratum	Headspace Results (ppm)	Saturation Test Result	Depth (ft)	Well Construction
0	S-1	0-2	NA	48/48	organic **SILT**, 2.5Y 3/3 dark olive brown, medium dense, slightly plastic, dry				0	
							1.1			
1									1	
2	S-2	2-4			same as above	**SILT**			2	
							1.5	Neg		
3									3	
4	S-3	4-6	NA	24/48	clayey **SAND**, 2.5Y 5/3 light olive brown, stiff, plastic, dry				4	
							1.0			
5									5	
										No well installed at this location.
6	S-4	6-8			same as above	**SAND**			6	
							2.4	Neg		
7									7	
8	S-5	8-10	NA	40/48	**CLAY**,2.5Y 4/2 dark grayish brown, stiff, very plastic, dry				8	
							0.9			
9									9	
10	S-6	10-12			same as above	**CLAY**			10	
							0.9	Neg		
11									11	
12					Terminated boring at 12.0 feet below ground surface				12	

Notes:
NA = not applicable.
NS = not sampled.
ppm = parts per million.
Soil headspace screening completed with a MiniRae 3000 Photoionization Detector (PID).
Neg = negative result using Oil in Soil shaker test kit as prescribed by MEDEP Standard Operating Procedure TS 004.

Att. M

For JCA Site

STORMWATER DRAINAGE SYSTEM
MAINTENANCE AGREEMENT

FOR SITE PLANS (THAT ARE NOT SUBDIVISIONS)

IN CONSIDERATION OF the site plan approval granted by the Planning Board/Planning Authority of the City of Portland for the proposed Neighborhood Center at 1342-1348 Congress Street, and the associated Grading, Drainage & Erosion Control Plan (a copy of which is attached hereto and incorporated herein as "Exhibit A") submitted and prepared by Tighe & Bond of 177 Corporate Drive, Portsmouth, NH dated April 3, 2015 and revised on June 23, 2015, and pursuant to a condition thereof, The Jewish Community Alliance of Southern Maine (as successor by merger between The Jewish Community Center a/k/a The Jewish Community Center of Portland and the Jewish Federation of Southern Maine), a Maine non-profit corporation with a principal place of business in Portland, Maine, and having a mailing address of 57 Ashmont Street, the owner of the subject premises (the "Owner"), does hereby agree, for itself, its successors and assigns, as follows:

Maintenance Agreement

That Owner, 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 catch basins, Stormtech detention system, underdrained soil filter, and associated drainage system (hereinafter collectively referred to as the "stormwater system"), as shown on the Grading, Drainage & Erosion Control Plan in Exhibit A and in strict compliance with the Approved Long Term Operation & Maintenance Plan prepared for the Owner by Tighe & Bond (a copy of which is attached hereto and incorporated herein as "Exhibit B") and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said Agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the site plan most recently and formally approved by the Planning Board/Planning Authority of the City of Portland.

This Agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any Condominium Association or management company, and to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this Agreement and release, "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the

Owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the Agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax rolls 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 6th day of July, 2015.

THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE

By: _____
Eric Kolben, President

STATE OF MAINE
CUMBERLAND, ss.

Date: 7-6-2015

Personally appeared the above-named Eric Kolben, President of The Jewish Community Alliance of Southern Maine, and acknowledged the foregoing instrument to be his free act in his said capacity and the free act and deed of said organization.

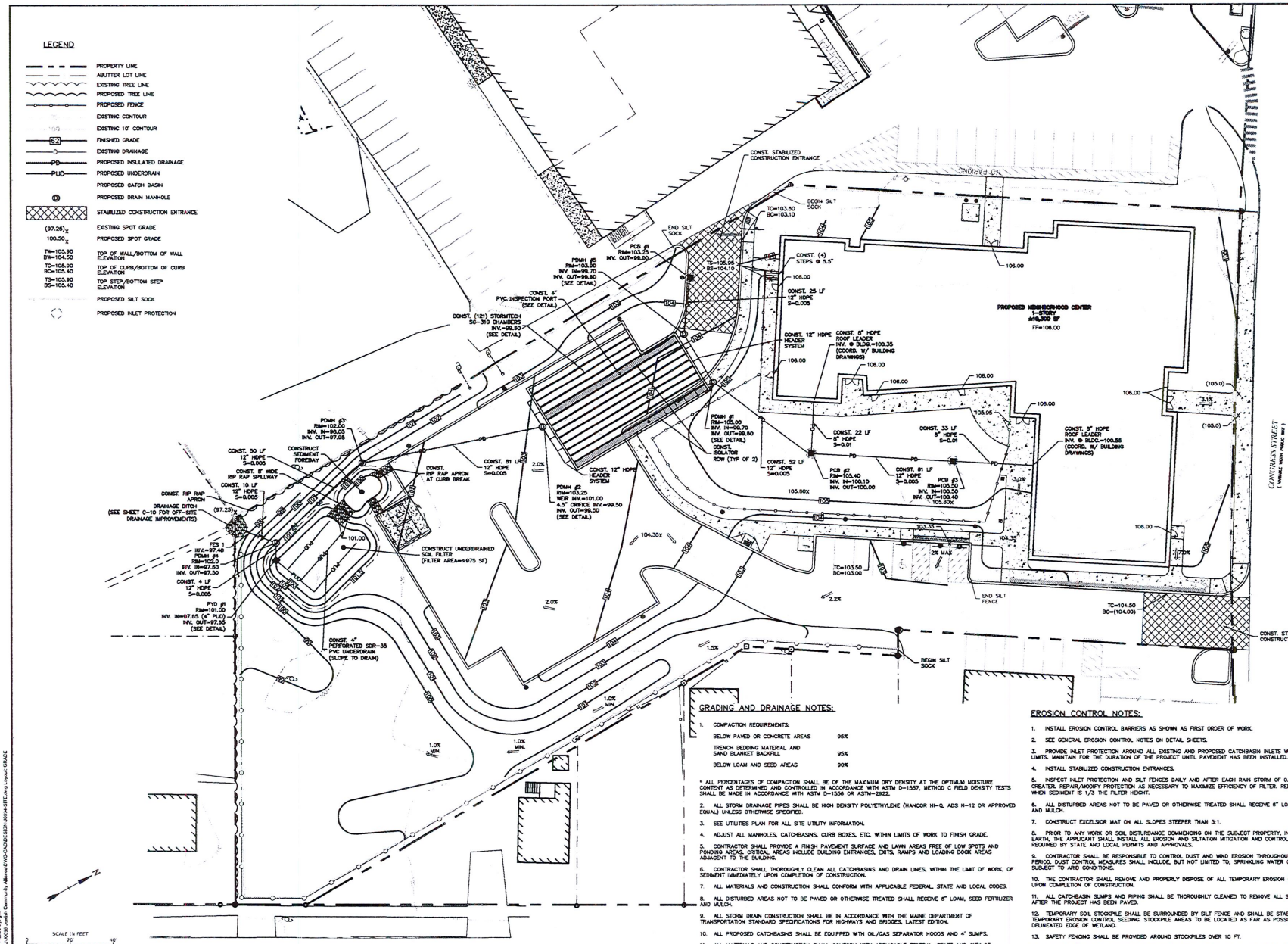
Before me,

_____
Notary Public/~~Attorney at Law~~

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

My commission expires: _____

Exhibit A
Approved Grading, Drainage & Erosion Control Plan



GRADING AND DRAINAGE NOTES:

1. COMPACTION REQUIREMENTS:

BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.

2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR APPROVED EQUAL) UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITIES PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCHBASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCHBASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
9. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCHBASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS AND CONSTRUCTION SPECIFICATIONS, LATEST REVISIONS.
12. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A MAINE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER.
13. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

EROSION CONTROL NOTES:

1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON DETAIL SHEETS.
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCHBASIN INLETS WITHIN THE WORK LIMITS. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
5. INSPECT INLET PROTECTION AND SILT FENCES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EXCELSIOR MAT ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO WIND CONDITIONS.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL CATCHBASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLAND.
13. SAFETY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT.
14. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) SHOOTS ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASH OUT WILL BE ALLOWED.

Tighe&Bond
Consulting Engineers
www.tighebond.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
2.	6/23/15	REVISED FOR PB SUBMISSION
1.	5/8/15	REVISED FOR PB WORKSHOP

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SCALE: AS SHOWN

C-3

Apr 23, 2015-5:01pm Plotted By: gwh
Xref: X:\Work\J-0094 Community Alliance\DWG\GRADE\J0094-SITE.dwg Layout: GRADE

Exhibit B
Approved Long Term Operation & Maintenance Plan

Section 3
Long Term Operation & Maintenance Plan

It is the intent of this Operation and Maintenance Plan to identify the areas of this site that need special attention and consideration, as well as implementing a plan to assure routine maintenance. By identifying the areas of concern as well as implementing a frequent and routine maintenance schedule the site will maintain a high quality of stormwater runoff.

Annual Reporting Requirements
The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to City of Portland Department of Public Services (DPS) in a form provided by DPS, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.

3.1 Contact/Responsible Party

Steve Brinn
Jewish Community Alliance of Southern Maine
57 Ashmont Street
Portland, Maine

(Note: The contact information for the Contact/Responsible Party shall be kept current. If ownership changes, the Operation and Maintenance Plan must be transferred to the new party.)

3.2 Maintenance Items

Maintenance of the following items shall be recorded:

- Litter/Debris Removal
- Landscaping
- Catch basin/Yard drain Cleaning
- Pavement Sweeping
- Stormtech Chamber Cleaning
- Underdrained Soil Filter Cleaning and Maintenance

The following maintenance items and schedule represent the minimum action required. Periodic site inspections shall be conducted and all measures must be maintained in effective operating condition. The following items shall be observed during site inspection and maintenance:

- Inspect vegetated areas, particularly slopes and embankments for areas of erosion. Replant and restore as necessary
- Inspect catch basins for sediment buildup
- Inspect site for trash and debris

3.3 Overall Site Operation & Maintenance Schedule

Overall Site Operation and Maintenance Schedule		
Maintenance Item	**Frequency of Maintenance**	**Operation**
Litter/Debris Removal	Weekly	Management Company
Pavement Sweeping - Sweep impervious areas to remove sand and litter.	2 - 4 times annually	Parking Lot Sweeper
Underdrain Soil Filter - Trash and debris to be removed. - Any required maintenance shall be addressed.	Two (2) times annually and after any rainfall event exceeding 2.5" in a 24-hr period	Management Company
Stormtech Chambers - Visual inspection and cleaning.	Twice Yearly	Management Company / Vacuum Truck
Rip Rap Aprons - Trash and debris to be removed. - Any required maintenance shall be addressed.	Annually	Management Company
Catch Basin (CB) / Yard Drain (YD) Cleaning - CBs/YDs to be cleaned of solids and oils.	Annually	Vacuum Truck
Landscaping - Landscaped islands to be maintained and mulched.	Maintained as required and mulched each Spring	Management Company

Underdrained Soil Filter Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**

Monitor to ensure that Rain Gardens function effectively after storms	Four (4) times annually (quarterly) and after any rainfall event exceeding 2.5" in a 24-hr period	- Trash and debris to be removed - Any required maintenance shall be addressed
Inspect Vegetation	Annually	- Inspect the condition of all Rain Garden vegetation - Prune back overgrowth - Replace dead vegetation - Remove any invasive species
Inspect Drawdown Time - The system shall drawdown within 48-hours following a rainfall event.	Annually	- Assess the condition of the facility to determine measures required to restore the filtration function, including but not limited to removal of accumulated sediments or reconstruction of the filter.

StormTech Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**
Inspection with maintenance following as warranted	Twice Yearly	- Trash and debris to be removed - Any required maintenance shall be addressed.

Rip Rap Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**
Visual Inspection	Annually	- Visually inspect for damage and deterioration - Repair damages immediately

3.3.1 Disposal Requirements

Disposal of debris, trash, sediment and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state and federal waste regulations.

3.3.2 Snow & Ice Management for Standard Asphalt and Walkways

Snow storage areas shall be located such that no direct untreated discharges are possible to receiving waters from the storage site (snow storage areas have been shown

on the Site Plan). Curb cuts shown on the plan shall remain free of snow and ice buildup. Salt storage areas shall be covered or located such that no direct untreated discharges are possible to receiving waters from the storage site.

3.3.3 Annual Updates and Log Requirements

The Owner and/or Contact/Responsible Party shall review this Operation and Maintenance Plan once per year for its effectiveness and adjust the plan and deed as necessary.

A log of all preventative and corrective measures for the stormwater system shall be kept on-site and be made available upon request by any public entity with administrative, health environmental or safety authority over the site.

Stormwater Management Report						
Project Name		**Proposed Neighborhood Center, 1342 Congress St, Portland, ME**				
BMP Description	**Date of Inspection**	**Inspector**	**BMP Installed and Operating Properly?**	**Cleaning / Corrective Action Needed**	**Date of Cleaning / Repair**	**Performed By**
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			
			❑Yes ❑No			

J:\J\J0096 Jewish Community Alliance\DRAINAGE\DRAINAGE STUDIES\Revised 6-23-15\J0096-Drainage Study-(Revised 6-23-15).doc

for Abutters site (Willow Lane)

STORMWATER DRAINAGE SYSTEM
MAINTENANCE AGREEMENT

FOR SITE PLANS (THAT ARE NOT SUBDIVISIONS)

IN CONSIDERATION OF the site plan approval granted by the Planning Board/Planning Authority of the City of Portland to the proposed Neighborhood Center at 1342-1348 Congress Street, and the associated OffSite Grading & Drainage Plan (a copy of which is attached hereto and incorporated herein as "Exhibit A") submitted and prepared by Tighe & Bond of 177 Corporate Drive, Portsmouth, NH dated June 23, 2015, and pursuant to a condition thereof, Justin S. Johnson and Katharine R. Ireland, owners of the premises located at 71 Willow Lane, Portland, ME, which is located adjacent to the subject property at 1342-1348 Congress Street and is the beneficiary of certain drainage improvements on the premises, do hereby agree, for themselves, their successors and assigns (collectively, the "Owner"), as follows:

Maintenance Agreement

That Owner will, at Owner's own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the rip rap apron, drainage ditch and associated drainage system, (hereinafter collectively referred to as the "stormwater system"), as shown on the Off Site Grading, Drainage & Erosion Control Plan in Exhibit A and in strict compliance with Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at his own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said Agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system

in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the site plan most recently and formally approved by the Planning Board/Planning Authority of the City of Portland.

This Agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any Condominium Association or management company, and to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this Agreement and release, "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the Owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the Agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested, or ordinary mail, or both to the owner of record as shown on the tax rolls 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 _____, 2015.

_____
Justin S. Johnson

_____
Katharine R. Ireland

STATE OF MAINE
CUMBERLAND, ss. Date: _____

Personally appeared the above-named Justin S. Johnson and Katharine R. Ireland and acknowledged the foregoing instrument to be their free act and deed.

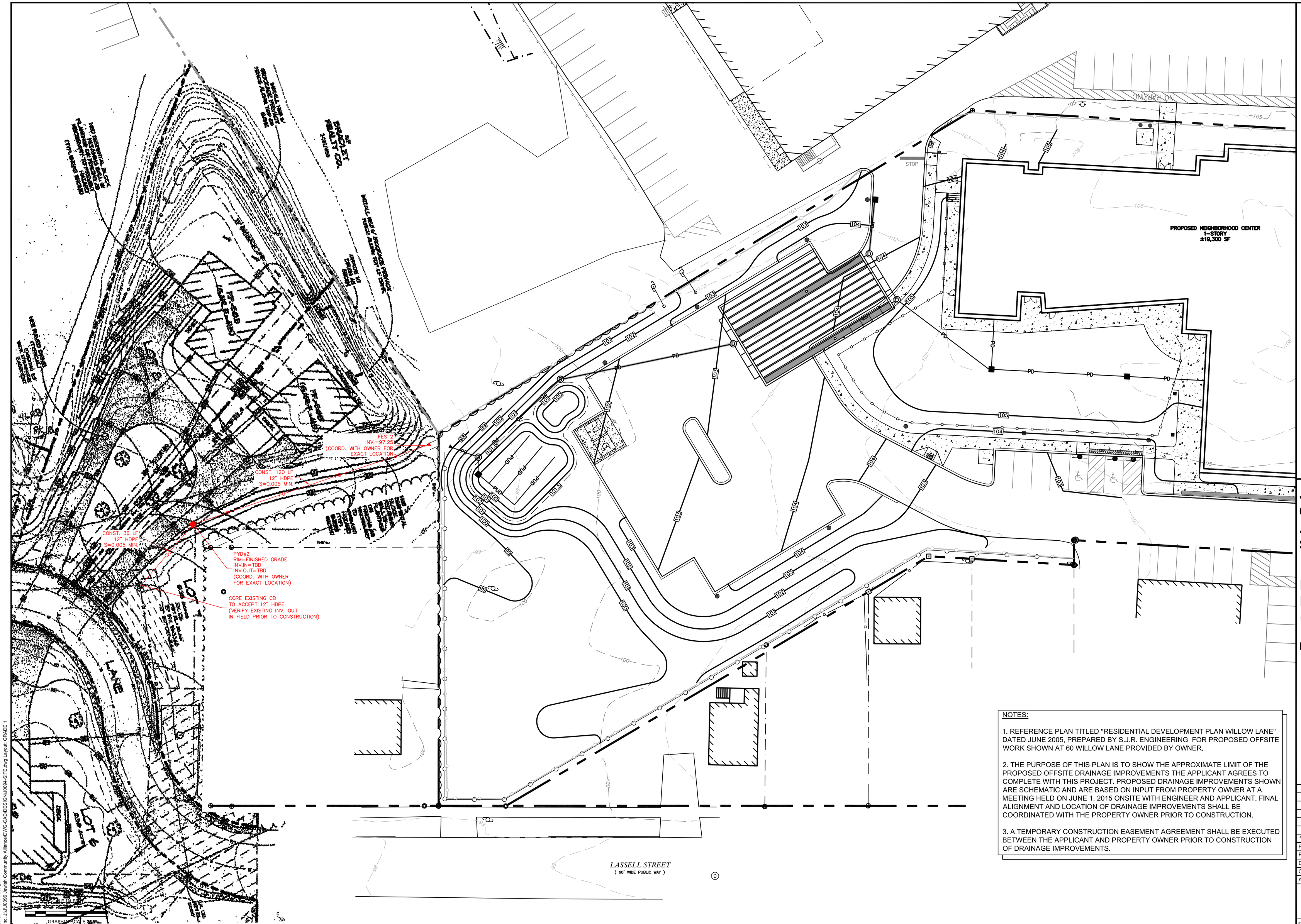
Before me,

_____
Notary Public/Attorney at Law

Print name: _____

My commission expires: _____

Exhibit A
Approved Off Site Grading & Drainage Plan



NOTES:

1. REFERENCE PLAN TITLED "RESIDENTIAL DEVELOPMENT PLAN WILLOW LANE" DATED JUNE 2005, PREPARED BY S.J.R. ENGINEERING FOR PROPOSED OFFSITE WORK SHOWN AT 60 WILLOW LANE PROVIDED BY OWNER.

2. THE PURPOSE OF THIS PLAN IS TO SHOW THE APPROXIMATE LIMIT OF THE PROPOSED OFFSITE DRAINAGE IMPROVEMENTS THE APPLICANT AGREES TO COMPLETE WITH THIS PROJECT. PROPOSED DRAINAGE IMPROVEMENTS SHOWN ARE SCHEMATIC AND ARE BASED ON INPUT FROM PROPERTY OWNER AT A MEETING HELD ON JUNE 1, 2015 ONSITE WITH ENGINEER AND APPLICANT. FINAL ALIGNMENT AND LOCATION OF DRAINAGE IMPROVEMENTS SHALL BE COORDINATED WITH THE PROPERTY OWNER PRIOR TO CONSTRUCTION.

3. A TEMPORARY CONSTRUCTION EASEMENT AGREEMENT SHALL BE EXECUTED BETWEEN THE APPLICANT AND PROPERTY OWNER PRIOR TO CONSTRUCTION OF DRAINAGE IMPROVEMENTS.

Tighe&Bond
Consulting Engineers
www.tighebond.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

Mark	Date	Description
1.	6/23/15	REVISED FOR PB SUBMISSION

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

OFF-SITE
GRADING AND DRAINAGE PLAN

SCALE: AS SHOWN

C-10

Jun 24, 2015-3:37pm Plotted By: gwh
Tighe & Bond, Inc. J:\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: GRADE 1

DRAINAGE IMPROVEMENTS
AND TEMPORARY CONSTRUCTION EASEMENT

KATHARINE R. IRELAND and JUSTIN S. JOHNSON of Portland, Maine, their successors and assigns (together, "Grantor"), for good and valuable consideration, hereby grant to **THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE** (as successor by merger between The Jewish Community Center a/k/a The Jewish Community Center of Portland and the Jewish Federation of Southern Maine), a not-for-profit corporation organized and existing under the laws of the State of Maine and having a mailing address of 57 Ashmont Street, Portland, Maine 04103, its successors and assigns, the following rights and easements in, on, over and to that portion of Grantor's land described in deed from Erin Associates, LLC to Grantor herein dated October 24, 2008 and recorded in the Cumberland County Registry of Deeds in Book 26430, Page 234, such portion being more particularly depicted on Exhibit A attached hereto and made a part hereof by reference (the "Easement Area"):

1. Drainage Improvements. A temporary easement for the purposes of (i) grading the Easement Area; (ii) installing a new section or sections of stormwater piping on or about the Easement Area; (iii) altering or extending the existing stormwater catch basin located on the Easement Area; and (iv) adjusting the alignment of any existing piping extending the catch basin (the "Drainage Improvements"); provided, however, that upon Grantee's completion of the Drainage Improvements, Grantee shall restore the surface of the Easement Area as near as reasonably possible to its condition prior to the commencement of said Drainage Improvements. Grantee shall bear all costs and expenses relating to the easement rights granted herein and Grantor hereby consents to Grantee's construction of the Drainage Improvements.

2. Temporary Construction Easement. A temporary construction easement for the purpose of constructing the Drainage Improvements on the Easement Area, together with the right of Grantor or its agents to enter the Easement Area and to cross such other property of Grantor as necessary for access to and egress from the Easement Area on weekdays between 6:00 a.m. and 3:00 p.m. with such workers, vehicles and construction equipment as Grantee deems reasonably necessary to complete the Drainage Improvements described herein.

When exercising its rights under this easement, Grantee shall complete construction within one hundred twenty (120) days of commencement of construction. Upon Grantee's completion of construction, Grantor shall thereafter be responsible for all repairs to, and maintenance of, the Drainage Improvements and Easement Area.

For so long as the foregoing easements are in effect, Grantee shall maintain liability insurance in the sum of One Million Dollars ($1,000,000.00) combined single limit per occurrence, insuring against the actions of Grantee and its agents and naming Grantor as a certificate holder.

Grantor reserves to itself, its successors and assigns the right to use and enjoy the larger parcel of which the Easement Area is a part, provided that such use and enjoyment shall not interfere with the rights and easements granted to Grantee herein.

WITNESS our hands and seals this _____ day of _____, 2015.

WITNESS:

_____ _____

Print name: Katharine R. Ireland

_____ _____

Print name: Justin S. Johnson

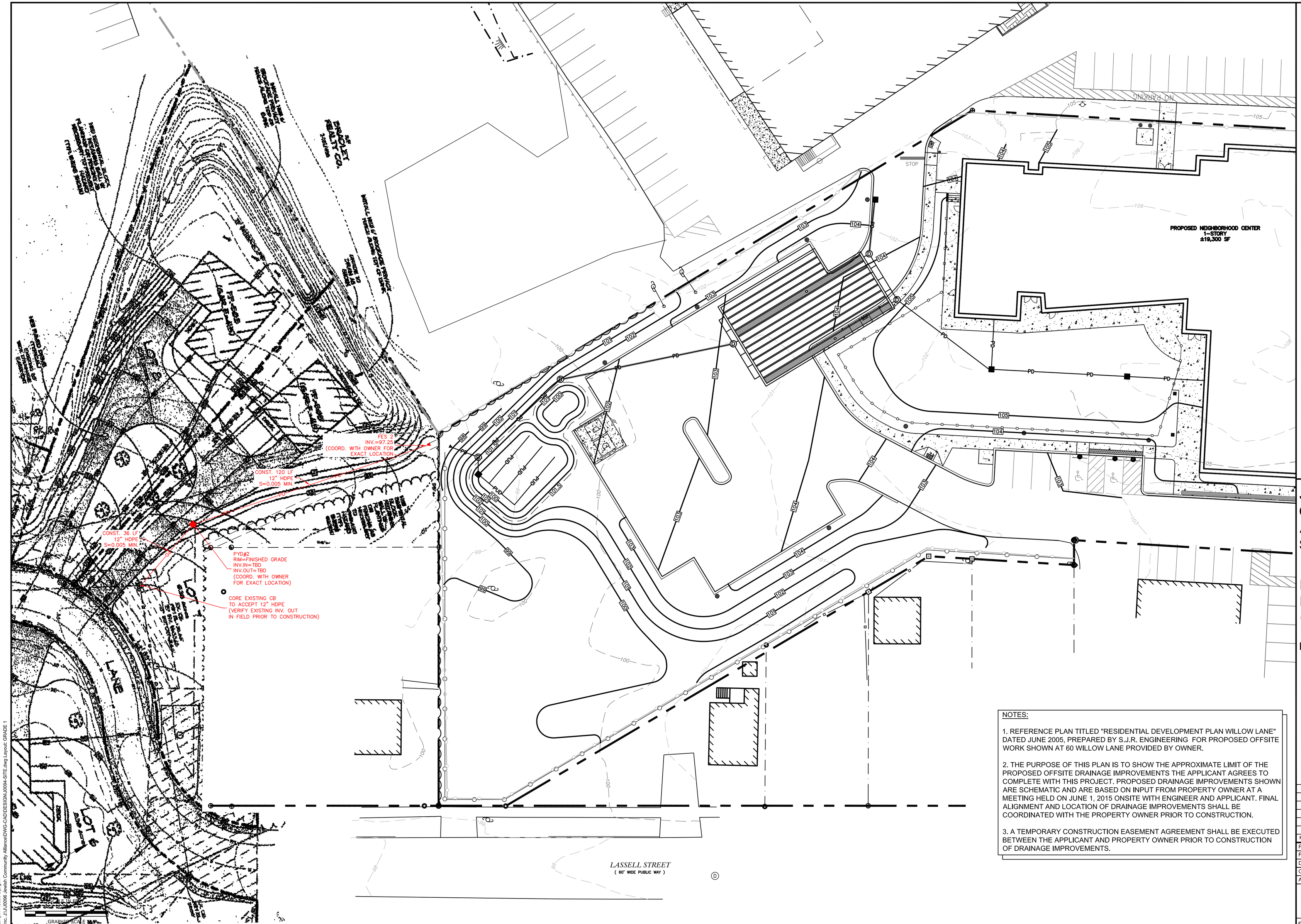
STATE OF MAINE
COUNTY OF CUMBERLAND, ss. _____, 2015

PERSONALLY APPEARED before me the above-named Katharine R. Ireland and Justin S. Johnson and acknowledged the foregoing instrument to be their free acts and deeds.

_____
Print name:
Notary Public/Attorney-at-LawMy commission expires:

EXHIBIT A

[Easement Area]



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Tighe&Bond
Consulting Engineers
www.tighebond.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

Mark	Date	Description
1.	6/23/15	REVISED FOR PB SUBMISSION

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
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OFF-SITE
GRADING AND DRAINAGE PLAN

SCALE: AS SHOWN

C-10

Jun 24, 2015-3:37pm Plotted By: gwh
Tighe & Bond, Inc. J:\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: GRADE 1

LICENSE AGREEMENT

LICENSE AGREEMENT ("Agreement") made as of this 7 day of July, 2015, by and between **MERLIN MANAGEMENT COMPANY, LLC**, a Maine limited liability company (together with its successors and assigns, "Merlin"), and **THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE**, as successor by merger with The Jewish Community Center a/k/a The Jewish Community Center of Portland, a Maine not-for-profit corporation (together with its successors and assigns, the "JCA").

RECITALS

WHEREAS, Merlin and the JCA separately own two (2) abutting parcels of real property (the "JCA Parcel" and the "Merlin Parcel", respectively) situated in the City of Portland, County of Cumberland and State of Maine; and

WHEREAS, the JCA has requested that Merlin grant to the JCA a non-exclusive parking license with respect to a portion of the Merlin Parcel designated as the "JCA Parking Area" on the plan attached hereto as Exhibit A and made a part hereof by reference, subject to the terms and conditions provided in this Agreement; and

WHEREAS, Merlin has not previously entered into any other agreement with the JCA granting parking or other rights with respect to the Merlin Parcel, and the JCA has no parking, access or other rights in, over or across the Merlin Parcel except as set forth in this Agreement; and

WHEREAS, the parties desire to enter into this written Agreement pursuant to which Merlin grants to the JCA a parking, access and egress license on and over the Merlin Parcel on the terms and conditions herein contained, which Merlin may irrevocably terminate at any time (without any monetary payment or other consideration whatsoever to be given to the JCA) subject to the terms and conditions herein upon either (i) at least three hundred sixty-five (365) days' prior written notice, or (ii) such other terms and conditions as shall be mutually agreeable to both parties; and

WHEREAS, the parties desire that this Agreement supersede all prior agreements to the extent that such agreements may exist.

NOW, THEREFORE, in consideration of the mutual promises herein contained and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereto agree as follows:

1. **License to the JCA.** Merlin hereby grants to the JCA a non-exclusive license over the JCA Parking Area, in accordance with the terms and conditions set forth herein (the "License") on weekdays from 5:30 p.m. (except from 6:30 p.m. on Wednesdays) to 6:30

a.m. (the "Scheduled Times") and at any time on Saturdays, Sundays and legal holidays. The JCA Parking Area consists of thirty-five (35) parking spaces designated as the "JCA Parking Area" on Exhibit A. The JCA Parking Area located on the Merlin Parcel may be used by the JCA, its employees, agents, invitees, and tenants (collectively, the "JCA Permitted Users"), for vehicular and pedestrian access to, egress from and parking in, the parking spaces located in the JCA Parking Area subject to the terms and conditions of this Agreement and any reasonable rules and regulations adopted by Merlin for the Merlin Parcel from time to time.

Merlin shall maintain the JCA Parking Area reasonably free of snow and ice and in reasonably good condition and repair, reasonable wear and tear excepted in accordance with existing practice.

The JCA's access to and from the JCA Parking Area shall be over, about, and through its own abutting land and/or over the existing entrance/exit to the land of Charter Westgate, LLC, known as Westgate Shopping Center.

Merlin reserves the exclusive right to use the JCA Parking Area free of the JCA Permitted Users on all weekdays from 6:30 a.m. to 5:30 p.m. except 6:30 on Wednesdays (the "Scheduled Times") and, with the consent of the JCA which shall not be unreasonably withheld, conditioned or delayed, at such other times as Merlin shall reasonably request.

2. **Insurance.** The JCA shall at all times maintain liability insurance in the sum of Two Million Dollars ($2,000,000.00) combined single limit per occurrence insuring against the actions of the JCA and JCA Permitted Users in connection with the use of the JCA Parking Area and any access rights and parking rights hereunder, naming Merlin as an additional insured. The JCA shall provide proof of such insurance to Merlin on or before the effective date of this Agreement, with the understanding that this Agreement shall not become effective until such date as the JCA building has been fully constructed.

3. **Indemnification.** The JCA shall hold harmless, indemnify and defend Merlin from and against all claims, actions, proceedings and costs (including, but not limited to reasonable attorneys' fees and cost of suit) relating in any way to personal injury and/or property damage arising out of or resulting from the use of the JCA Parking Area and any access rights and parking rights hereunder by the JCA or any JCA Permitted User.

4. **Payment.** As payment for its rights under the license, the JCA shall pay Merlin Two Hundred and Fifty Dollars ($250.00) per month, payable in advance.

5. **Island.** With Merlin's consent, the JCA agrees to construct a small traffic island (the "Island") on the Merlin Parcel in location and dimensions approved by Merlin in writing but substantially similar to the island depicted on Exhibit A in order to slow traffic, control the flow of traffic, and mitigate risk of traffic accidents or about the JCA Parking Area. All

traffic shall be in two directions on the JCA side of the Island. No JCA traffic shall enter the Merlin Parcel on the Merlin side of the Island for purposes of entering the JCA or Merlin Parcel. All costs and expenses for constructing and removing the Island, and all maintenance and repair associated therewith, shall borne entirely by the JCA. The JCA's obligation to maintain and repair the Island shall continue until the termination of this Agreement by either party. During the term of this Agreement, the JCA agrees to grant a license to Merlin, by separate agreement, for ingress and egress over the twenty-four foot (24') wide paved area abutting the Merlin Parcel and running from Congress Street along the northeasterly boundary of the JCA Parcel (the "Access License").

6. **Termination.** Subject to the provisions of Section 5 above, this Agreement may be terminated by either party (including any successor owner of the Merlin Parcel or the JCA Parcel) at any time and for any or no reason upon either (i) three hundred sixty-five (365) days' advance notice given to the other party (and which notice need not be given on the first (1st) day of a calendar month in order to be three hundred sixty-five (365) days later), or (ii) such other terms and conditions as shall be mutually agreeable to both parties. The JCA fully understands and agrees that upon termination of this Agreement, whether by the JCA or Merlin, no moneys shall be payable to the JCA and that if the JCA pays any funds in advance, those funds need not be returned in the event of cancellation. Termination of this Agreement by either party shall irrevocably terminate the JCA's rights to park on the Merlin Parcel and all other rights (if any) of the JCA with respect to the Merlin Parcel, including all rights of ingress and egress over, on and across the Merlin Parcel.

7. **Modifications.** Subject to either party's right to terminate this Agreement unilaterally pursuant to paragraph 6 herein, this Agreement may be amended or modified only by a writing, executed and acknowledged by all parties to the Agreement or their successors or assigns.

8. **Notices.** Any notice or demand required or permitted to be given under this Agreement shall be in writing and sent to the parties at their addresses first set forth above by national overnight delivery service. Notices shall be effective upon receipt, or if delivery is refused, on the date delivery is first attempted.

9. **Severability**. If any provision of this Agreement, or portion thereof, or the application thereof to any person or circumstances, shall to any extent be held invalid, inoperative or unenforceable, the remainder of this Agreement, or the application of such provision or portion thereof to any other persons or circumstances, shall not be affected thereby; it shall not be deemed that any such invalid provision affects the consideration for this Agreement; and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

10. **Governing Law.** This Agreement shall be deemed made in the State of Maine and shall be governed by and construed in accordance with the laws of the State of Maine for instruments executed within such State.

11. **Counterparts.** This Agreement may be executed in multiple counterpart copies, each of which shall constitute an original and which, when taken together, shall constitute one and the same instrument. Signature pages may be detached from the counterparts and attached to a single copy of this document to form one document.

12. **Termination of Prior Agreements**. This Agreement shall supersede all prior agreements.

13. **Recording.** This Agreement shall not be recorded in any Registry of Deeds. In the event that the Agreement is recorded, the License created by the Agreement shall terminate as a result of the recording, the recording party shall immediately provide the other party notice of the recording, and the License in all events shall terminate within thirty (30) days of recording.

14. **Recitals Incorporated.** The foregoing Recitals are hereby incorporated into the covenants of the body of this Agreement.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date and year first above written.

MERLIN MANAGEMENT COMPANY, LLC

By: _____

Print Name: Mark Lebel Jr

Its: Sole member

THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE

By: _____

Print Name:

Its:

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date and year first above written.

MERLIN MANAGEMENT COMPANY, LLC

By: _____

Print Name:

Its:

THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE

By: _____ President

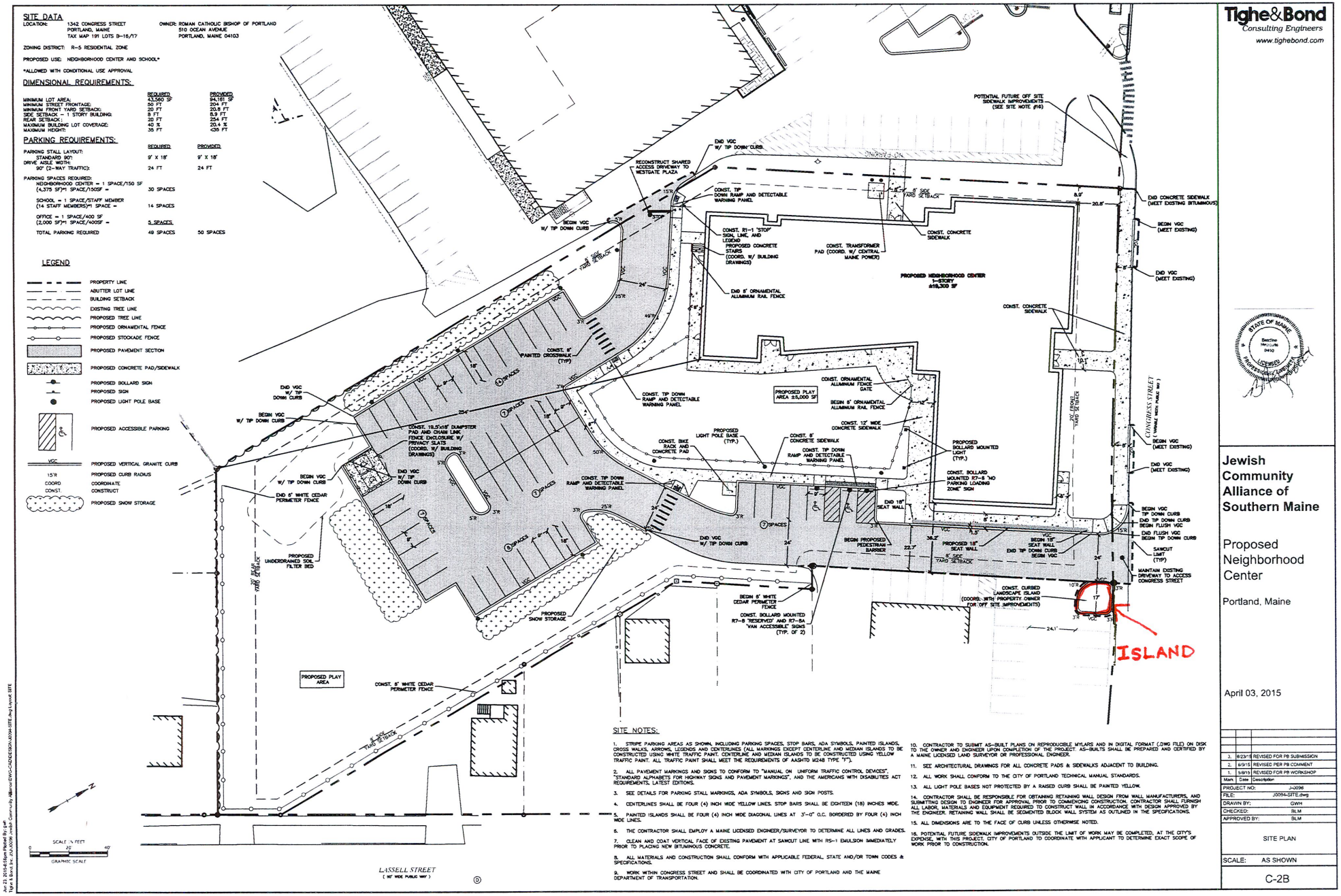
Print Name: Eric Kolben

Its: President

Exhibit A

JCA Parking Area
[to identify designated spaces for JCA to park when not being used for Merlin purposes]

[see following page]



SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "I").
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A MAINE LICENSED ENGINEER/SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND/OR TOWN CODES & SPECIFICATIONS.
9. WORK WITHIN CONGRESS STREET AND SHALL BE COORDINATED WITH CITY OF PORTLAND AND THE MAINE DEPARTMENT OF TRANSPORTATION.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A MAINE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER.
11. SEE ARCHITECTURAL DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM WALL MANUFACTURERS, AND SUBMITTING DESIGN TO ENGINEER FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTED BLOCK WALL SYSTEM AS OUTLINED IN THE SPECIFICATIONS.
15. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
16. POTENTIAL FUTURE SIDEWALK IMPROVEMENTS OUTSIDE THE LIMIT OF WORK MAY BE COMPLETED, AT THE CITY'S EXPENSE, WITH THIS PROJECT. CITY OF PORTLAND TO COORDINATE WITH APPLICANT TO DETERMINE EXACT SCOPE OF WORK PRIOR TO CONSTRUCTION.

Tighe&Bond
Consulting Engineers
www.tighebond.com

STATE OF MAINE — Bettina Meguire — 9410 — LICENSED PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
3.	9/23/15	REVISED FOR PB SUBMISSION
2.	6/9/15	REVISED PER PB COMMENT
1.	5/8/15	REVISED FOR PB WORKSHOP

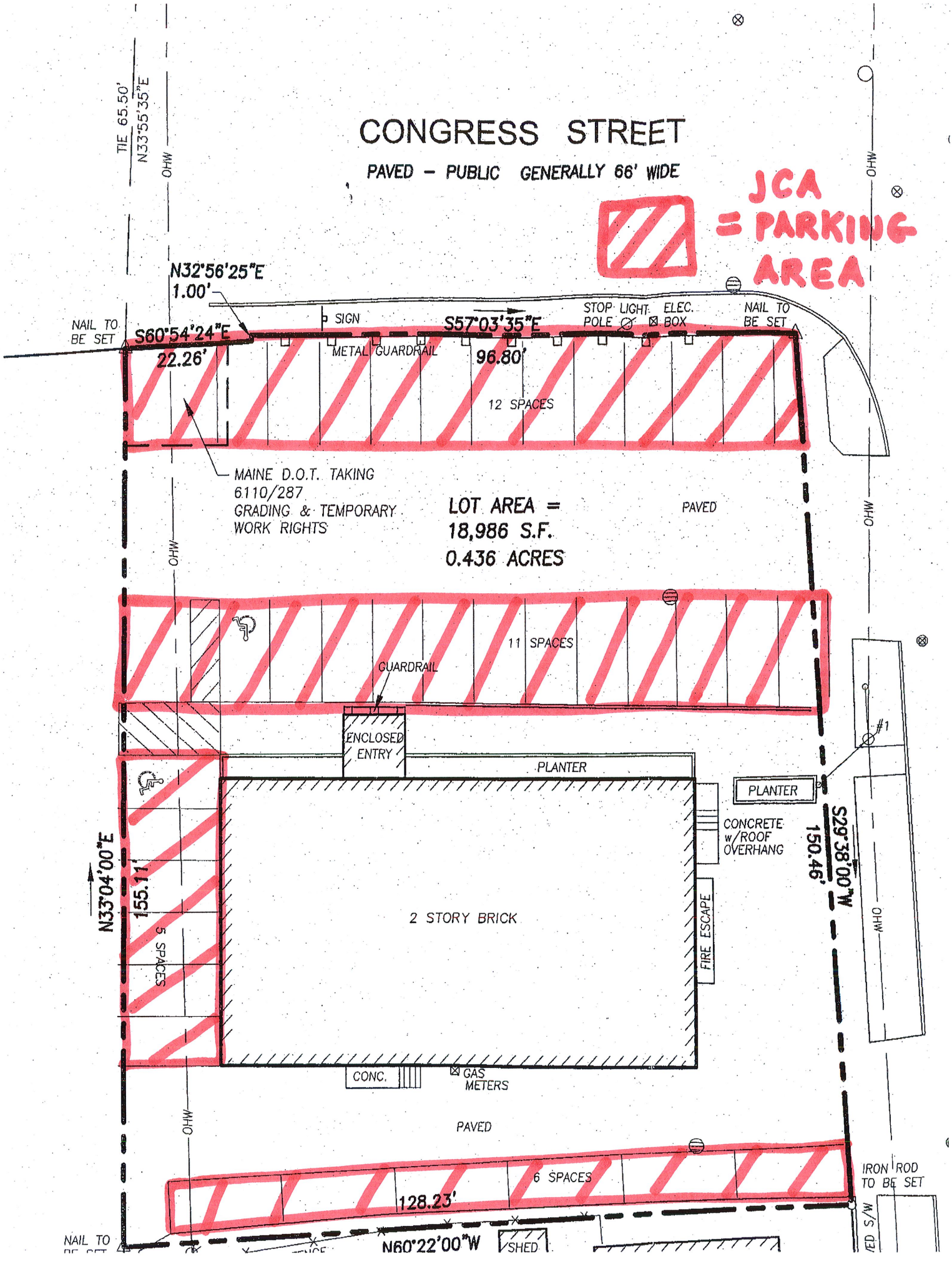
PROJECT NO: J-J0096
FILE: J0094-SITE.dwg
DRAWN BY: GWH
CHECKED: BLM
APPROVED BY: BLM

SITE PLAN

SCALE: AS SHOWN

C-2B

Jul 23, 2015-8:55pm Plotted By: cpell
Tighe & Bond, Inc. - J:\J0096 Jewish Community Alliance\ENGR\CADD\ESIGN\J0094-SITE.dwg Layout: SITE


CONGRESS STREET
PAVED – PUBLIC GENERALLY 66' WIDE
JCA = PARKING AREA
TIE 65.50'
N33°55'35"E
OHW
N32°56'25"E
1.00'
NAIL TO BE SET
S60°54'24"E
22.26'
SIGN
METAL GUARDRAIL
S57°03'35"E
96.80'
STOP LIGHT
POLE
ELEC. BOX
NAIL TO BE SET
12 SPACES
MAINE D.O.T. TAKING
6110/287
GRADING & TEMPORARY
WORK RIGHTS
LOT AREA =
18,986 S.F.
0.436 ACRES
PAVED
11 SPACES
GUARDRAIL
ENCLOSED ENTRY
PLANTER
#1
PLANTER
CONCRETE w/ROOF OVERHANG
S29°38'00"W
150.46'
N33°04'00"E
155.11'
5 SPACES
2 STORY BRICK
FIRE ESCAPE
CONC.
GAS METERS
PAVED
6 SPACES
128.23'
IRON ROD TO BE SET
N60°22'00"W
SHED

Att. O

From: "Greg W. Halsey" <GWHalsey@tigheBond.com>
To: Jean Fraser <JF@portlandmaine.gov>
Date: 7/7/2015 5:47 PM
Subject: FW: Public comments - Proposed Neighborhood Center - 1342 Congress Street

Jean,
We have provided a response to the additional comments in red in the email below.
I will send you the executed JCA Stormwater Maintenance Agreement and the Parking License Agreement with the Dentist in a separate email due to the file. The remaining temporary construction easement and stormwater maintenance agreement with Justin Johnson are currently under his review and we are awaiting his signature.
Feel free to contact me with any questions.
Regards,
Greg Halsey, P.E. | Project Engineer
Tighe & Bond | 177 Corporate Drive | Portsmouth, NH 03801 | 603.294.9233

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Thursday, July 02, 2015 12:32 PM
To: Greg W. Halsey
Subject: Public comments - Proposed Neighborhood Center - 1342 Congress Street

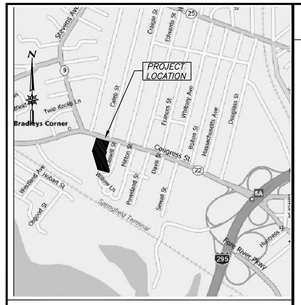
Greg

I have had two recent public comments regarding your final submission:

1. The property owner next to the dental offices- she has written to ask a number of questions but her main concern seems to be the 6 ft high stockade fence. I spoke with reviewers and we think that fence is necessary but could/should be lower and I said that I would raise that with you. The Applicant has worked hard to provide both substantial landscaping and a wooden fence to buffer the proposed development from their residential neighbors. The proposed 6' tall cedar stockade fence was also recommended by the City Arborist in the Staff Memorandum prepared for the Planning Board Workshop. The fence will enhance the vegetated screen while providing an appropriate aesthetic appearance for the residential area that typically has 6' tall fences between properties. However, the Applicant will review the request to decrease the height of the fence to determine if a fence shorter than 6' will provide the appropriate screening required given the project's location abutting the residential properties.

2. The attached letter arrived today from Margaret Gaertner on behalf of the Libbytown Neighborhood Association. Her main concern (starts on second page) appears to be the front elevation- she mentioned this to me before but I told her the architect was still working on it. Could you please forward her letter to the applicant and the architect, as it would be good to have some kind of "response" in the PB Report. We are very appreciative with the feedback provided us from the Libbytown Neighborhood Association in their letter to the Jewish Community Alliance of Southern Maine dated June 30, 2015. With respect to the concern raised regarding the elevation of the front façade of the community hall, and the desire for additional embellishment, we offer the following. The form of the community hall is being carefully designed to consider the appropriate scale at both a vehicular and pedestrian level on the north corner of the site while responding to internal program demands. Its architectural expression is principally achieved through its cladding and fenestration materials and layout as well as the graphic nature of the building's sign, all of which are being constantly refined through the design process. The exterior elevations submitted as part of the Planning Board submission graphically represent these qualities but don't offer the experiential perception of perspective and the relationship of this form to its context - the surrounding neighborhood and adjacent structures. We are glad to continue to update interested parties as we progress in this endeavor and are confident that this building's expression will be an enhancement to the community.

I will be in touch next week as I finalize the report.
thank you
Jean



VICINITY MAP
N.T.S.

SCHEDULE B EXCEPTIONS

1–8 THESE ITEMS ARE NOT SURVEY MATTERS.

(9) RIGHTS OF THE TENANTS IN POSSESSION AT WILL OR UNDER UNRECORDED LEASES.
– PARKING RIGHTS AS SHOWN ON THIS PLAN GRANTED TO CONGRESS REALTY ASSOCIATES. SEE NOTE 8.c.

(10) RIGHTS AND EASEMENTS GRANTED BY THE ROMAN CATHOLIC BISHOP OF PORTLAND TO CENTRAL MAINE POWER COMPANY AND NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY BY INSTRUMENT DATED JULY 22, 1959 AND RECORDED IN DEED BOOK 2491, PAGE 118.
– AS SHOWN ON THIS PLAN

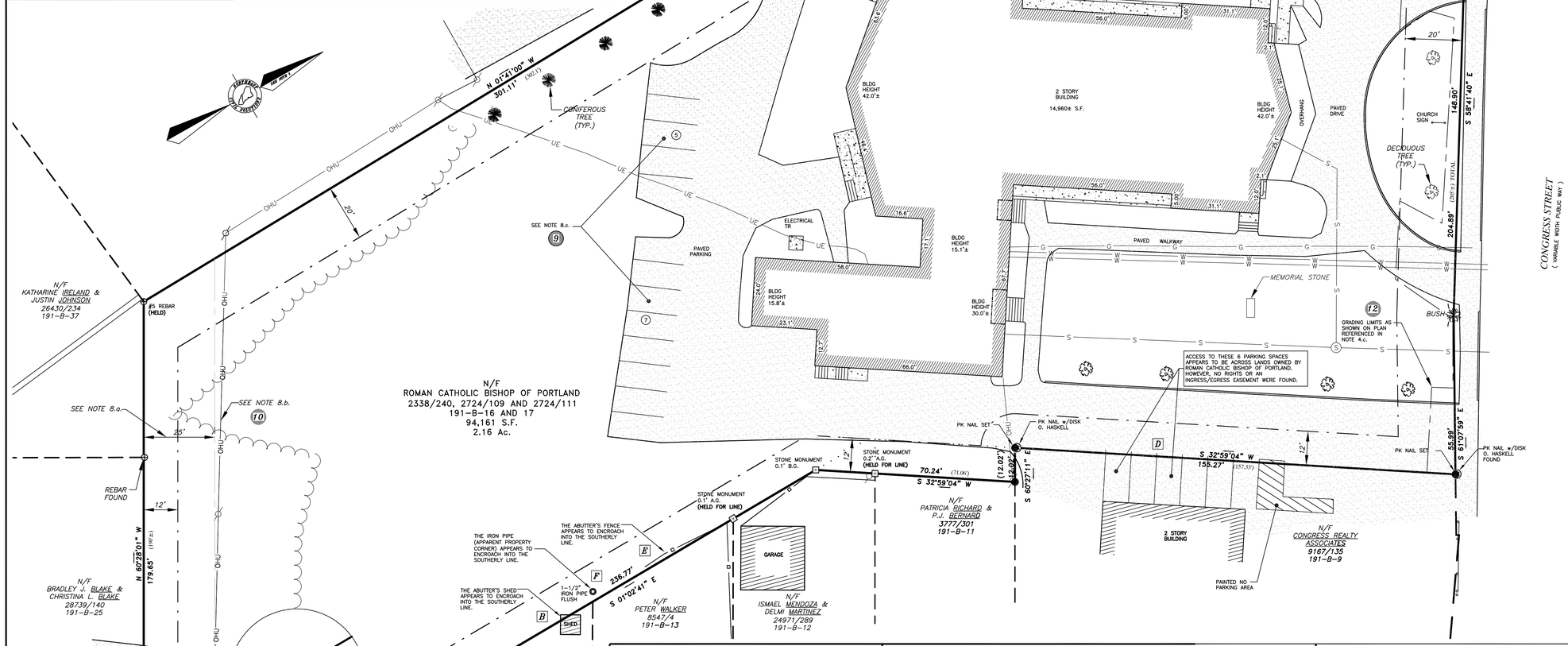
(11) RIGHTS AND EASEMENTS GRANTED BY ROMAN CATHOLIC BISHOP OF PORTLAND TO MOBIL PIPE LINE COMPANY BY INSTRUMENT DATED JULY 25, 1967 AND RECORDED IN DEED BOOK 3006, PAGE 705.
– THE RIGHTS AND EASEMENTS DO NOT FALL WITHIN THE SURVEYED PREMISES.

(12) NOTICE OF LAYOUT AND TAKING BY TTHE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 18, 1983 AND RECORDED IN DEED BOOK 6110, PAGE 287, AND RELATED PLAN RECORDED IN PLAN BOOK 155, PAGE 39.
– AS SHOWN ON THIS PLAN

13 SUCH STATE OF FACTS INCLUDING NOTES DISCLOSED ON PLAN ENTITLED ALTA/ACSM LAND TITLE SURVEY OF ST. PATRICKS CHURCH, CONGRESS STREET, LASSELL STREET, PORTLAND, MAINE PREPARED BY DOUCET SURVEY, INC. DATED JANUARY 15, 2013.
– AS SHOWN ON SAID PLAN

14 RIGHTS, EASEMENTS AND RESTRICTIONS SET FORTH IN THE DEED FROM ROMAN CATHOLIC BISHOP OF PORTLAND TO THE JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE TO BE RECORDED AT CUMBERLAND COUNTY REGISTRY OF DEEDS.
– THIS DEED HAS NOT YET BEEN WRITTEN. DESCRIPTION DEPENDANT UPON THIS SURVEY.

15 THIS ITEM IS NOT A SURVEY MATTER.



LEGEND

●	#5 REBAR WITH PLASTIC CAP STAMPED "NCS, INC. PLS 1314" (UNLESS NOTED OTHERWISE) SET ON DECEMBER 31, 2014
⊙	FOUND IRON PIPE (SIZE & TYPE AS NOTED)
⊡	FOUND MONUMENT (SIZE & TYPE AS NOTED)
⊕	FOUND IRON ROD
⊕	FOUND CAPPED IRON ROD (NUMBER AS NOTED)
PK	FOUND PK NAIL
○	UTILITY POLE (NUMBER AS NOTED)
◡	GUY WIRE ANCHOR
	FOUND DECIDUOUS TREE
	FOUND CONIFEROUS TREE
	TREE LINE (APPROXIMATE)
	BOUNDARY LINE
	EASEMENT 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)
12-34	TAX MAP-LOT
(123.45')	PARENTHESIS DENOTE RECORD DATA

NOTES

1. THE BASIS OF BEARING FOR THIS SURVEY WAS FROM THE LOCUS DEED REFERENCED IN NOTE 3.a.
2. DEED AND PLAN BOOK REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
3. RECORD OWNERSHIP OF THE PARCEL SURVEYED CAN BE FOUND IN THE FOLLOWING DEEDS:
   a. DEED FROM IRMA BLAKE TO ROMAN CATHOLIC BISHOP OF PORTLAND DATED FEBRUARY 28, 1957 AND RECORDED IN DEED BOOK 2338, PAGE 240.
   b. DEED FROM ALBERT KENISTON TO ROMAN CATHOLIC BISHOP OF PORTLAND DATED DECEMBER 22, 1962 AND RECORDED IN DEED BOOK 2724, PAGE 109.
   c. DEED FROM RICHARD KING TO ROMAN CATHOLIC BISHOP OF PORTLAND DATED DECEMBER 21, 1962 AND RECORDED IN DEED BOOK 2724, PAGE 111.
4. REFERENCE IS MADE TO THE FOLLOWING PLANS:
   a. BOUNDARY SURVEY / EXISTING CONDITIONS PLAN, 1342 CONGRESS STREET, PORTLAND, MAINE BY NORTHEAST CIVIL SOLUTIONS, INC., DATED JANUARY 12, 2009, NOT RECORDED.
   b. ALTA / ACSM LAND TITLE SURVEY OF ST. PATRICKS CHURCH BY DOUCET SURVEY, INC., DATED JANUARY 15, 2013, NOT RECORDED.
5. THE PARCEL SURVEYED IS IDENTIFIED ON THE CITY OF PORTLAND TAX ASSESSOR'S MAP 191, BLOCK B, PARCEL 16 AND 17.
6. THE PARCEL SURVEYED IS LOCATED IN THE R-5 ZONE/DISTRICT. PORTIONS OF BULK AND SPACE REQUIREMENTS ARE AS FOLLOWS:
   FRONT YARD.....20'
   REAR YARD.....20'
   SIDE YARD.....14'
   MAXIMUM LOT COVERAGE.....40%
   MAXIMUM BUILDING HEIGHT.....35'
   PARKING (CHURCH).....1 SPACE / 5 FIXED SEATS
   *OTHER MUNICIPAL AND STATE OVERLAY ZONES MAY EXIST AND APPLY. BEFORE PROCEEDING ON ANY PROJECT, WE RECOMMEND VERIFYING THE CURRENT ZONING / SETBACKS / RESTRICTIONS WITH THE APPROPRIATE AGENCIES.
7. THE WIDTH AND LAYOUT OF LASSELL STREET AND CONGRESS STREET ARE AS FOLLOWS:
   a. LASSELL STREET – 60' AS SHOWN ON PLAN REFERENCED IN NOTE 4.a.
   b. CONGRESS STREET – WIDTH VARIES AS SHOWN ON PLAN REFERENCED IN NOTE 4.a.
8. REFERENCE IS MADE TO THE FOLLOWING EASEMENTS OF RECORD:
   a. 25' STRIP OF LAND AS NOTED IN DEED REFERENCED IN NOTE 3.a. BASED ON THE WORDING IN THE DOCUMENT, THAT THE EASEMENT DOES NOT RUN WITH THE PROPERTY, IT IS BELIEVED THAT SINCE PARCEL 191-B-25 IS NO LONGER OWNED BY IRMA BLAKE THAT THE 25' EASEMENT HAS BEEN EXTINGUISHED.
   b. THE RIGHT AND EASEMENT TO CENTRAL MAINE POWER COMPANY AND NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY, DATED JULY 22, 1959 TO CONSTRUCT, ERECT, REBUILD, OPERATE, MAINTAIN AND REMOVE ELECTRIC DISTRIBUTION LINES AS DESCRIBED IN DEED BOOK 2491, PAGE 118.
   c. AN AT-WILL LICENSE AGREEMENT BETWEEN CONGRESS REALTY ASSOCIATES AND THE CHURCH ALLOWING CONGRESS EMPLOYEES TO PARK IN THE DESIGNATED SPACES ON THE CHURCH PROPERTY AS DESCRIBED IN A DOCUMENT DATED JULY 1, 2013, NOT RECORDED.

STATEMENT OF ENCROACHMENTS

A PAVED DRIVEWAY ON THE LOCUS BEING USED BY THE SOUTHERLY ABUTTER (N/F BLAKE). THIS DRIVEWAY WAS IN AN EASEMENT THAT APPARENTLY WAS EXTINGUISHED WHEN IRMA BLAKE TRANSFERRED THE PROPERTY TO HER HEIRS. (SEE NOTE 8.a.)

B A SHED BELONGING TO THE EASTERLY ABUTTER (N/F WILSON) APPEARS TO ENCROACH ON THE LOCUS PROPERTY.

C OVERHEAD UTILITIES SERVICING THE SOUTHERLY ABUTTER (N/F BLAKE) APPEAR TO CROSS THE LOCUS PROPERTY WITH NO APPARENT EASEMENT.

D A PORTION OF THE PARKING STALLS AND STRIPING APPEAR TO ENCROACH ONTO THE LOCUS PROPERTY.

E A FENCE BELONGING TO THE EASTERLY ABUTTER (N/F WALKER) APPEARS TO ENCROACH ONTO THE LOCUS PROPERTY.

F AN IRON PIPE, ON AN EXTENTION OF THE PROPERTY LINE BETWEEN EASTERLY ABUTTERS, (N/F WILSON & WALKER) APPEARS TO ENCROACH ONTO THE LOCUS PROPERTY.

NOTES CONTINUED

10. THE UTILITIES SHOWN ON THIS PLAN WERE MARKED BY DIG SMART OF MAINE IN DECEMBER, 2014 AND THEIR LOCATIONS ARE TO BE CONSIDERED APPROXIMATE. THERE MAY BE OTHER UTILITIES EXISTING THAT ARE NOT SHOWN. CONTRACTOR SHALL CONTACT DIG SAFE (866)DIG-SAFE PRIOR TO ANY EXCAVATION WORK.
11. THE LANDS DESCRIBED ON THIS SURVEY ARE THE SAME AS THE LANDS DESCRIBED IN THE WARRANTY DEED FROM NORMAN E. BLAKE AND IRMA B. BLAKE DATED FEBRUARY 28, 1957 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 2338, PAGE 240; A WARRANTY DEED FROM ALBERT D. KENNISTON AND IVA L. KENNISTON DATED DECEMBER 22, 1962 AND RECORDED IN BOOK 2724, PAGE 109; AND A WARRANTY DEED FROM RICHARD M. KING DATED DECEMBER 21, 1962 AND RECORDED IN BOOK 2724, PAGE 111.

SURVEY LEGAL DESCRIPTION

A CERTAIN PARCEL OF LAND LOCATED ON THE SOUTHWESTERLY SIDE OF CONGRESS STREET, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE, BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF CONGRESS STREET AT THE NORTHEASTERLY CORNER OF LAND N/F OF CHARTER WESTGATE, LLC AS RECORDED IN DEED BOOK 25887, PAGE 80, CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD);

THENCE S 58°41'40" E ALONG THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF SAID CONGRESS STREET 148.90' TO A POINT AT AN ANGLE POINT IN THE RIGHT-OF-WAY;

THENCE S 61°07'59" E ALONG THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF SAID CONGRESS STREET 55.99' TO A PK NAIL IN THE PAVEMENT AT THE NORTHERLY CORNER OF LAND N/F OF CONGRESS REALTY ASSOCIATES AS DESCRIBED IN DEED BOOK 9167, PAGE 135;

THENCE S 32°59'04" W ALONG THE NORTHWESTERLY LINE OF SAID CONGRESS REALTY ASSOCIATES 155.27' TO A PK NAIL IN THE PAVEMENT;

THENCE S 60°27'11" E ALONG THE SOUTHWESTERLY LINE OF SAID CONGRESS REALTY ASSOCIATES 12.02' TO A #5 REBAR W/CAP STAMPED "NCS, INC, PLS 1314" SET AT THE NORTHERLY CORNER OF LAND N/F OF PATRICIA RICHARD & P.J. BERNARD AS DESCRIBED IN DEED BOOK 3777, PAGE 301;

THENCE S 32°59'04" W ALONG THE NORTHWESTERLY LINE OF SAID RICHARD & BERNARD AND THE NORTHWESTERLY LINE OF LAND N/F OF ISMAEL MENDOZA & DELMI MARTINEZ AS DESCRIBED IN DEED BOOK 24971, PAGE 289 A TOTAL DISTANCE OF 70.24' TO A STONE MONUMENT AT AN ANGLE POINT;

THENCE S 01°02'41" E ALONG THE WESTERLY LINE OF SAID MENDOZA & MARTINEZ, THE WESTERLY LINE OF LAND N/F OF PETER WALKER AS DESCRIBED IN DEED BOOK 8547, PAGE 4 AND THE WESTERLY LINE OF LAND N/F OF LORI WILSON AS DESCRIBED IN DEED BOOK 14310, PAGE 178 A TOTAL DISTANCE OF 236.77' TO A POINT ON THE NORTHWESTERLY RIGHT-OF-WAY LINE OF LASSELL STREET;

THENCE S 29°31'59" W ALONG THE NORTHWESTERLY RIGHT-OF-WAY LINE OF SAID LASSELL STREET 32.62' TO A #5 REBAR W/CAP STAMPED "NCS, INC, PLS 1314" AT THE EASTERLY CORNER OF LAND N/F OF BRADLEY J. BLAKE & CHRISTINA L. BLAKE AS DESCRIBED IN DEED BOOK 28739, PAGE 140;

THENCE N 60°28'01" W ALONG THE NORTHEASTERLY LINE OF SAID BLAKE AND THE NORTHEASTERLY LINE OF LAND N/F OF KATHARINE IRELAND & JUSTIN JOHNSON AS DESCRIBED IN DEED BOOK 26430, PAGE 234 A TOTAL DISTANCE OF 179.65' TO A #5 REBAR AT THE SOUTHEASTERLY CORNER OF SAID CHARTER WESTGATE, LLC;

THENCE N 01°41'00" W ALONG THE EASTERLY LINE OF SAID CHARTER WESTGATE, LLC 301.11' TO A #5 REBAR AT AN ANGLE POINT;

THENCE N 32°50'14" E ALONG THE SOUTHEASTERLY LINE OF SAID CHARTER WESTGATE, LLC 208.36' TO THE POINT OF BEGINNING. THE ABOVE DESCRIBED PARCEL CONTAINS 94,1615.F. MORE OR LESS.

FLOOD ZONE CRITERIA

COUNTY:	CUMBERLAND
COMMUNITY:	PORTLAND
COMM. NO:	230051
PANEL NO:	0013 B
EFFECTIVE DATE:	JULY 17, 1986
FLOOD ZONE :	C

ALTA CERTIFICATION

CHICAGO TITLE INSURANCE COMPANY
TITLE NO. 121814-01
EFFECTIVE DATE: DECEMBER 17, 2014

TO: BANK, JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE, LENDER AND CHICAGO TITLE INSURANCE COMPANY AND THE SUCCESSORS AND ASSIGNS OF EACH:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS AND INCLUDES ITEMS 1, 2, 3, 4, 6b, 7a, 7b(1), 7c, 8, 9, 10a, 11b, 13, 14, 16, 17, 18, 20a & b, 21 AND 22 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 31, 2013.

DATE OF PLAT OR MAP:
JANUARY 7, 2015

M. JOHANN BUISMAN
MAINE PROFESSIONAL LAND SURVEYOR NO. 1314

Revision:	By:	Date:	Change:
1	JAP	1/20/2015	REVISED PER ATTORNEY COMMENTS

PROJECT: 31211.01	DRAWING NAME: 31211-ALTA.DWG	
DATE: JANUARY 7, 2015	SCALE: 1"= 20'	FB # 400 E. FB YES
FIELDED BY: JAP / BS	FIELD DATE: 12/31/2014	DRAWN BY: JAP

Drawing Name and Location:
ALTA / ACSM LAND TITLE SURVEY
1342 CONGRESS STREET, PORTLAND, MAINE

Owner:
ROMAN CATHOLIC BISHOP OF PORTLAND
PORTLAND, MAINE

Prepared For:
JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE
57 ASHMONT STREET, PORTLAND, MAINE 04103

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 20' 40' 80'

STAMP AND SIGNATURE

1/20/2015
M. JOHANN BUISMAN
MAINE P.L.S. No. 1314
DATE

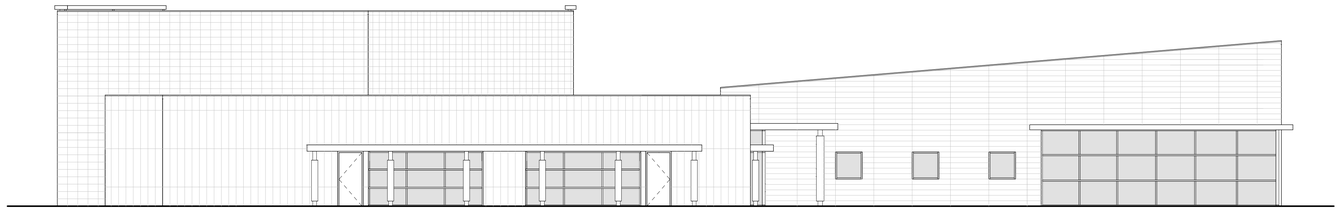
M. JOHANN BUISMAN 1314

IF THIS PLAN DOES NOT CONTAIN AN EMBOSSED SEAL, IT IS NOT AN ORIGINAL AND MAY BE VOID.

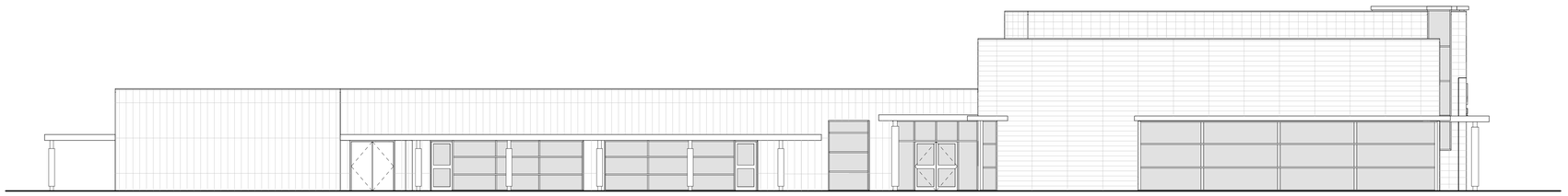
EMBOSSED SEAL ABOVE

E:\Land Projects\31000\31211-St Patricks-Survey\dwg\31211-ALTA.dwg

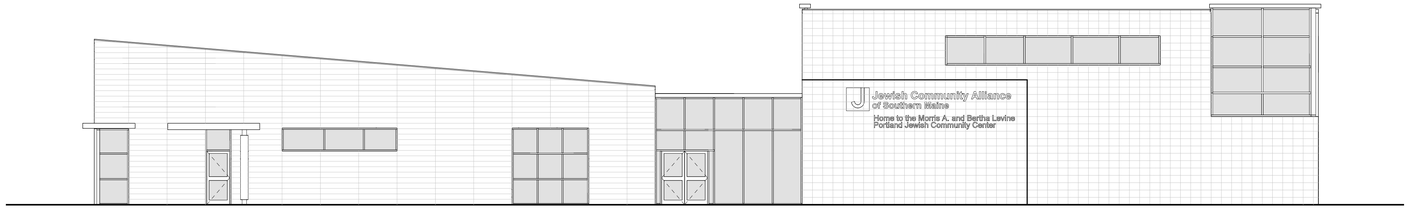
Plan 2



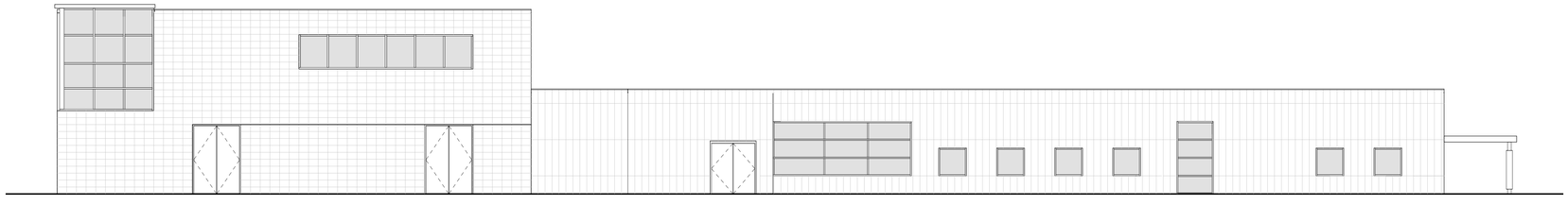
D1 SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"



C1 SOUTHEAST ELEVATION
SCALE: 1/8" = 1'-0"



B1 NORTHEAST ELEVATION
SCALE: 1/8" = 1'-0"



A1 NORTHWEST ELEVATION
SCALE: 1/8" = 1'-0"

HARRIMAN

AUBURN PORTLAND MANCHESTER

JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE

PORTLAND, ME

Harriman Project No.	15309

Key Plan

Proj North

Issues and Revisions

Mark	Date	Description
-	06-24-15	PLANNING BOARD SUBMISSION

PRELIMINARY
NOT FOR
CONSTRUCTION

Drawing Scales
1/8" = 1'-0"

PA / PE: Designer

Drawn By: Author

© 2015
Harriman Associates

EXTERIOR ELEVATIONS

A20.2

Plot Date: 6/23/2015 9:27:23 PM

Plan 3

PROPOSED NEIGHBORHOOD CENTER
1342 CONGRESS STREET
PORTLAND, MAINE
SITE PLANS

APRIL 3, 2015

LAST REVISED: JUNE 24, 2015

APPLICANT:

JEWISH COMMUNITY ALLIANCE
OF SOUTHERN MAINE
57 ASHMONT STREET
PORTLAND, MAINE 04103

PREPARED BY:

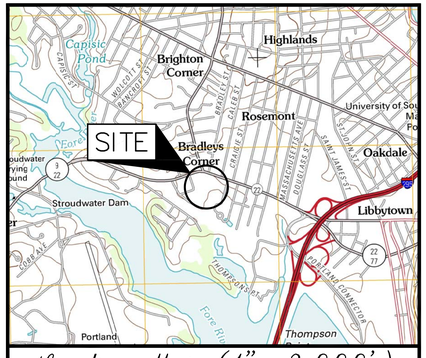
Tighe&Bond
Consulting Engineers
177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
(603) 433-8818 info@tighebond.com

ARCHITECT:

HARRIMAN
AUBURN PORTLAND MANCHESTER

LANDSCAPE ARCHITECT:

The Cecil Group
Planning and Design
170 MILK STREET, SUITE 5
BOSTON, MA 02109
P 617 426.5050 **F** 617 426.5051
cecilgroup.com



Location Map (1"=2,000')

LIST OF DRAWINGS		
SHEET NO.	TITLE	LAST REVISED
	COVER SHEET	06/23/2015
C-1	EXISTING CONDITIONS AND DEMOLITION PLAN	06/23/2015
C-2A	OVERALL SITE PLAN	06/23/2015
C-2B	SITE PLAN	06/23/2015
C-3	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	06/23/2015
C-4	UTILITIES PLAN	06/23/2015
C-5	EROSION CONTROL NOTES AND DETAILS SHEET	06/23/2015
C-6	DETAILS SHEET	06/23/2015
C-7	DETAILS SHEET	06/23/2015
C-8	DETAILS SHEET	06/23/2015
C-9	DETAILS SHEET	06/23/2015
C-10	OFFSITE GRADING AND DRAINAGE PLAN	06/23/2015
L-1	LANDSCAPE PLAN	06/23/2015
A20.2	EXTERIOR ELEVATIONS	06/24/2015
E80.1	SITE LIGHTING PLAN	06/24/2015

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED
PROFESSIONAL ENGINEER

811 DigSafe MA-ME-NH-RI-VT

Jun 23, 2015 - 10:22pm Plotted By: gwh
Tighe & Bond, Inc. J:\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\0096-CS.dwg Layout:: 24X36_COVER SHEET

REFERENCE PLAN NOTES:

1. THE BASIS OF BEARING FOR THIS SURVEY WAS FROM THE LOCUS DEED REFERENCED IN NOTE 3.A.
2. DEED AND PLAN BOOK REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
3. RECORD OWNERSHIP OF THE PARCEL SURVEYED CAN BE FOUND IN THE FOLLOWING DEEDS:
   A. DEED FROM IRMA BLAKE TO ROMAN CATHOLIC BISHOP OF PORTLAND DATED DECEMBER 28, 1957 AND RECORDED IN DEED BOOK 2724, PAGE 240.
   B. DEED FROM ALBERT KENISTON TO ROMAN CATHOLIC BISHOP OF PORTLAND DATED DECEMBER 22, 1962 AND RECORDED IN DEED BOOK 2724, PAGE 109.
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   B. ALTA / ACSM LAND TITLE SURVEY OF ST. PATRICKS CHURCH BY DOUCET SURVEY, INC., DATED JANUARY 15, 2013, NOT RECORDED.
5. THE PARCEL SURVEYED IS IDENTIFIED ON THE CITY OF PORTLAND TAX ASSESSOR'S MAP 191, BLOCK B, PARCEL 16 AND 17.
6. THE PARCEL SURVEYED IS LOCATED IN THE R-5 ZONE/DISTRICT. PORTIONS OF BULK AND SPACE REQUIREMENTS ARE AS FOLLOWS:
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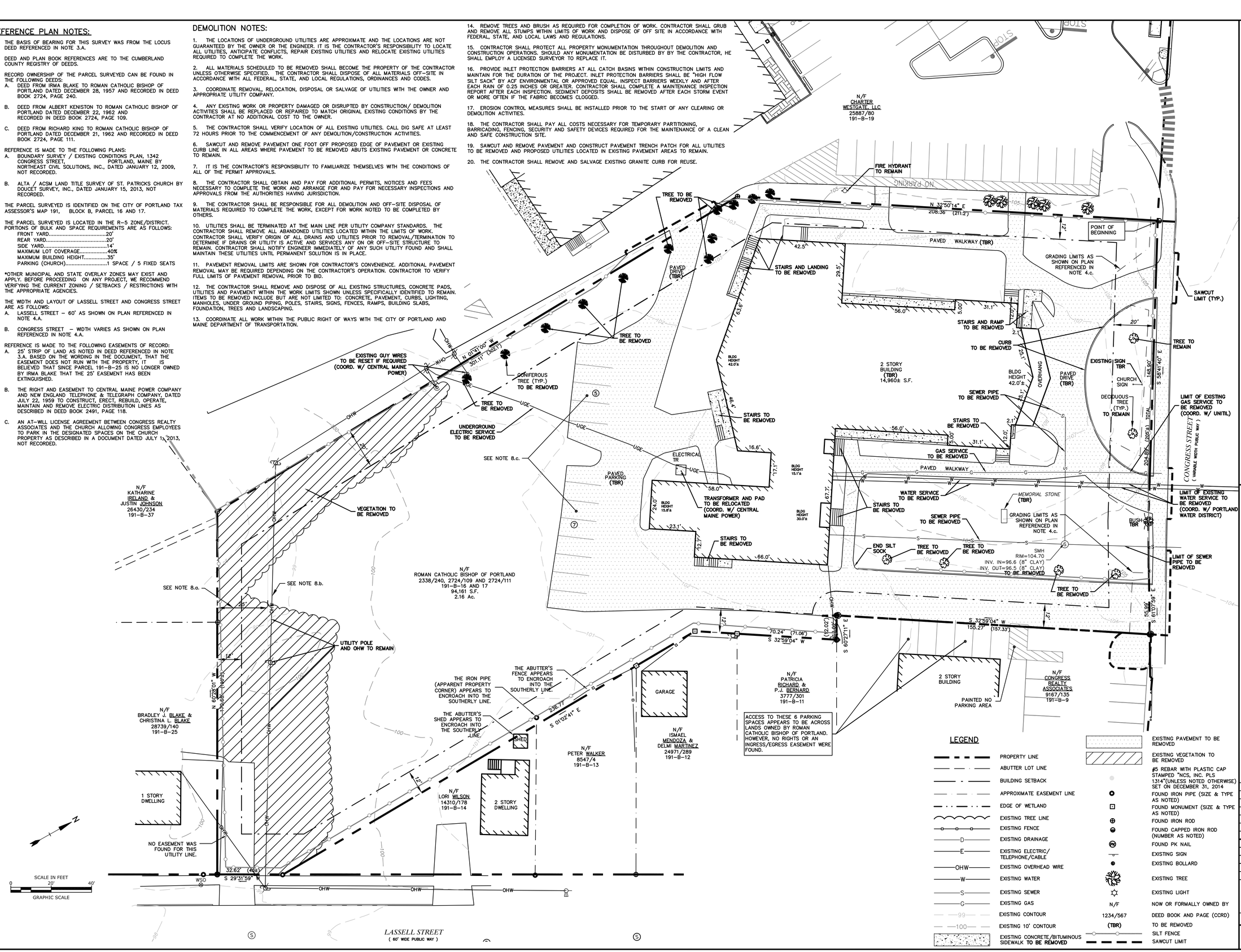
   REAR YARD.....20'
   SIDE YARD.....14'
   MAXIMUM LOT COVERAGE.....40%
   MAXIMUM BUILDING HEIGHT.....35'
   PARKING (CHURCH).....1 SPACE / 5 FIXED SEATS

   *OTHER MUNICIPAL AND STATE OVERLAY ZONES MAY EXIST AND APPLY. BEFORE PROCEEDING ON ANY PROJECT, WE RECOMMEND VERIFYING THE CURRENT ZONING / SETBACKS / RESTRICTIONS WITH THE APPROPRIATE AGENCIES.
7. THE WIDTH AND LAYOUT OF LASSELL STREET AND CONGRESS STREET ARE AS FOLLOWS:
   A. LASSELL STREET – 60' AS SHOWN ON PLAN REFERENCED IN NOTE 4.A.
   B. CONGRESS STREET – WIDTH VARIES AS SHOWN ON PLAN REFERENCED IN NOTE 4.A.
8. REFERENCE IS MADE TO THE FOLLOWING EASEMENTS OF RECORD:
   A. 25' STRIP OF LAND AS NOTED IN DEED REFERENCED IN NOTE 3.A. BASED ON THE WORDING IN THE DOCUMENT, THAT THE EASEMENT DOES NOT RUN WITH THE PROPERTY, IT IS BELIEVED THAT SINCE PARCEL 191–B–25 IS NO LONGER OWNED BY IRMA BLAKE THAT THE 25' EASEMENT HAS BEEN EXTINGUISHED.
   B. THE RIGHT AND EASEMENT TO CENTRAL MAINE POWER COMPANY AND NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY, DATED JULY 22, 1959 TO CONSTRUCT, ERECT, REBUILD, OPERATE, MAINTAIN AND REMOVE ELECTRIC DISTRIBUTION LINES AS DESCRIBED IN DEED BOOK 2491, PAGE 118.
   C. AN AT–WILL LICENSE AGREEMENT BETWEEN CONGRESS REALTY ASSOCIATES AND THE CHURCH ALLOWING CONGRESS EMPLOYEES TO PARK IN THE DESIGNATED SPACES ON THE CHURCH PROPERTY AS DESCRIBED IN A DOCUMENT DATED JULY 1, 2013, NOT RECORDED.

DEMOLITION NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF–SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
3. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
4. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
6. SAWCUT AND REMOVE PAVEMENT ONE FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF–SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE AND SERVICES ANY ON OR OFF–SITE STRUCTURE TO REMAIN. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
11. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
12. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
13. COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTLAND AND MAINE DEPARTMENT OF TRANSPORTATION.
14. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
15. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY BY THE CONTRACTOR, HE SHALL EMPLOY A LICENSED SURVEYOR TO REPLACE IT.
16. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS WITHIN CONSTRUCTION LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR APPROVED EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.
17. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
18. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
19. SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
20. THE CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING GRANITE CURB FOR REUSE.



LEGEND

- PROPERTY LINE
- ABUTTER LOT LINE
- BUILDING SETBACK
- APPROXIMATE EASEMENT LINE
- EDGE OF WETLAND
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING DRAINAGE
- EXISTING ELECTRIC/ TELEPHONE/CABLE
- EXISTING OVERHEAD WIRE
- EXISTING WATER
- EXISTING SEWER
- EXISTING GAS
- EXISTING CONTOUR
- EXISTING 10' CONTOUR
- EXISTING CONCRETE/BITUMINOUS SIDEWALK TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- #5 REBAR WITH PLASTIC CAP STAMPED "NCS, INC. PLS 1314"(UNLESS NOTED OTHERWISE) SET ON DECEMBER 31, 2014
- FOUND IRON PIPE (SIZE & TYPE AS NOTED)
- FOUND MONUMENT (SIZE & TYPE AS NOTED)
- FOUND IRON ROD
- FOUND CAPPED IRON ROD (NUMBER AS NOTED)
- FOUND PK NAIL
- EXISTING SIGN
- EXISTING BOLLARD
- EXISTING TREE
- EXISTING LIGHT
- N/F NOW OR FORMALLY OWNED BY
- 1234/567 DEED BOOK AND PAGE (CCRD)
- (TBR) TO BE REMOVED
- SILT FENCE
- SAWCUT LIMIT

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Plan 4

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED
PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
1.	6/23/15	REVISED FOR PB SUBMISSION

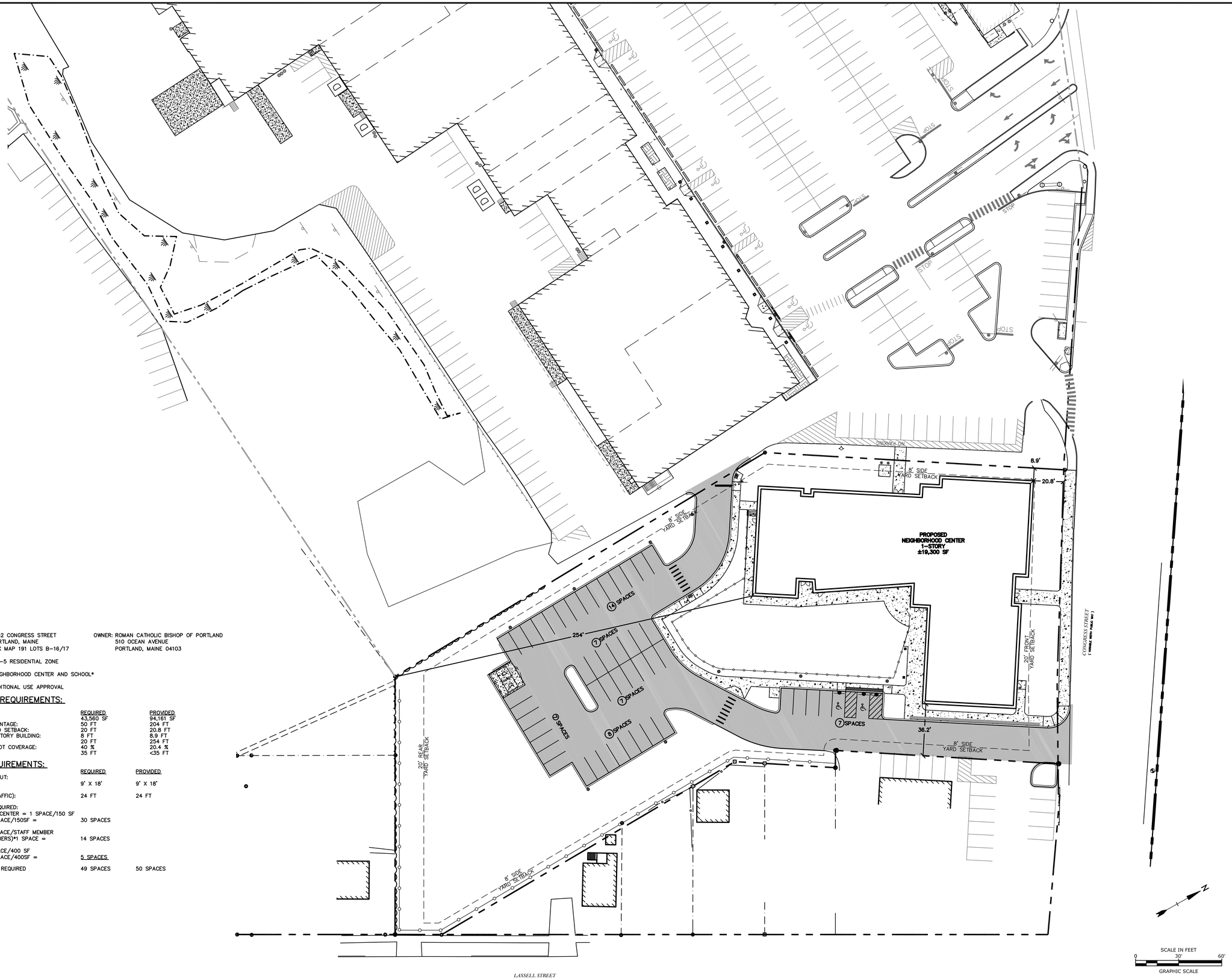
PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-1

Jun 23, 2015-8:49pm Plotted By: gwh
Tighe & Bond, Inc. J:\JOBS\Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: DEMO



SITE DATA

LOCATION: 1342 CONGRESS STREET
PORTLAND, MAINE
TAX MAP 191 LOTS B-16/17

OWNER: ROMAN CATHOLIC BISHOP OF PORTLAND
510 OCEAN AVENUE
PORTLAND, MAINE 04103

ZONING DISTRICT: R-5 RESIDENTIAL ZONE

PROPOSED USE: NEIGHBORHOOD CENTER AND SCHOOL*

*ALLOWED WITH CONDITIONAL USE APPROVAL

DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT AREA:	43,560 SF	94,161 SF
MINIMUM STREET FRONTAGE:	50 FT	204 FT
MINIMUM FRONT YARD SETBACK:	20 FT	20.8 FT
SIDE SETBACK - 1 STORY BUILDING:	8 FT	8.9 FT
REAR SETBACK:	20 FT	254 FT
MAXIMUM BUILDING LOT COVERAGE:	40 %	20.4 %
MAXIMUM HEIGHT:	35 FT	<35 FT

PARKING REQUIREMENTS:

	REQUIRED	PROVIDED
PARKING STALL LAYOUT:		
STANDARD 90°:	9' X 18'	9' X 18'
DRIVE AISLE WIDTH:		
90° (2-WAY TRAFFIC):	24 FT	24 FT
PARKING SPACES REQUIRED:		
NEIGHBORHOOD CENTER = 1 SPACE/150 SF (4,375 SF)*1 SPACE/150SF =	30 SPACES	
SCHOOL = 1 SPACE/STAFF MEMBER (14 STAFF MEMBERS)*1 SPACE =	14 SPACES	
OFFICE = 1 SPACE/400 SF (2,000 SF)*1 SPACE/400SF =	5 SPACES	
TOTAL PARKING REQUIRED	49 SPACES	50 SPACES

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Plan 5

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED
PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
2.	6/23/15	REVISED FOR PB SUBMISSION
1.	5/8/15	REVISED FOR PB WORKSHOP

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

OVERALL SITE PLAN

SCALE: AS SHOWN

C-2A

Jun 23, 2015-8:53pm Plotted By: gwh
Tighe & Bond, Inc. J:\JU0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: OVERALL SITE

SITE DATA

LOCATION: 1342 CONGRESS STREET, PORTLAND, MAINE
TAX MAP 191 LOTS B-16/17

OWNER: ROMAN CATHOLIC BISHOP OF PORTLAND
510 OCEAN AVENUE
PORTLAND, MAINE 04103

ZONING DISTRICT: R-5 RESIDENTIAL ZONE

PROPOSED USE: NEIGHBORHOOD CENTER AND SCHOOL*

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DIMENSIONAL REQUIREMENTS:

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SIDE SETBACK - 1 STORY BUILDING:	8 FT	8.9 FT
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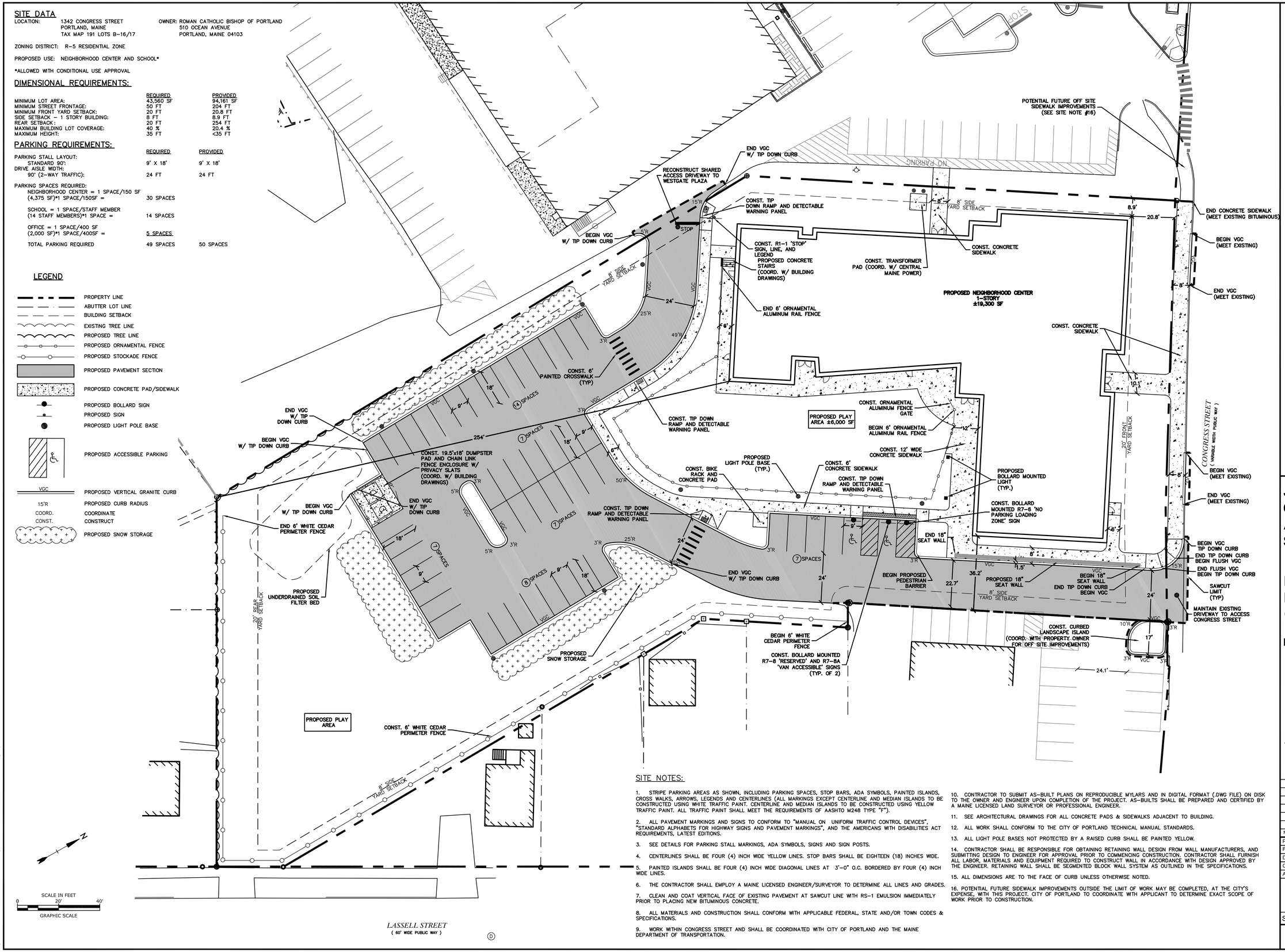
MAXIMUM BUILDING LOT COVERAGE:	40 %	20.4 %
MAXIMUM HEIGHT:	35 FT	<35 FT

PARKING REQUIREMENTS:

	REQUIRED	PROVIDED
PARKING STALL LAYOUT: STANDARD 90°:	9' X 18'	9' X 18'
DRIVE AISLE WIDTH: 90° (2-WAY TRAFFIC):	24 FT	24 FT
PARKING SPACES REQUIRED:		
NEIGHBORHOOD CENTER = 1 SPACE/150 SF (4,375 SF)*1 SPACE/150SF =	30 SPACES	
SCHOOL = 1 SPACE/STAFF MEMBER (14 STAFF MEMBERS)*1 SPACE =	14 SPACES	
OFFICE = 1 SPACE/400 SF (2,000 SF)*1 SPACE/400SF =	5 SPACES	
TOTAL PARKING REQUIRED	49 SPACES	50 SPACES

LEGEND

- PROPERTY LINE
- ABUTTER LOT LINE
- BUILDING SETBACK
- EXISTING TREE LINE
- PROPOSED TREE LINE
- PROPOSED ORNAMENTAL FENCE
- PROPOSED STOCKADE FENCE
- PROPOSED PAVEMENT SECTION
- PROPOSED CONCRETE PAD/SIDEWALK
- PROPOSED BOLLARD SIGN
- PROPOSED SIGN
- PROPOSED LIGHT POLE BASE
- PROPOSED ACCESSIBLE PARKING
- VGC — PROPOSED VERTICAL GRANITE CURB
- 15'R — PROPOSED CURB RADIUS
- COORD. — COORDINATE
- CONST. — CONSTRUCT
- PROPOSED SNOW STORAGE



SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A MAINE LICENSED ENGINEER/SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND/OR TOWN CODES & SPECIFICATIONS.
9. WORK WITHIN CONGRESS STREET AND SHALL BE COORDINATED WITH CITY OF PORTLAND AND THE MAINE DEPARTMENT OF TRANSPORTATION.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A MAINE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER.
11. SEE ARCHITECTURAL DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
13. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM WALL MANUFACTURERS, AND SUBMITTING DESIGN TO ENGINEER FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTED BLOCK WALL SYSTEM AS OUTLINED IN THE SPECIFICATIONS.
15. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
16. POTENTIAL FUTURE SIDEWALK IMPROVEMENTS OUTSIDE THE LIMIT OF WORK MAY BE COMPLETED, AT THE CITY'S EXPENSE, WITH THIS PROJECT. CITY OF PORTLAND TO COORDINATE WITH APPLICANT TO DETERMINE EXACT SCOPE OF WORK PRIOR TO CONSTRUCTION.

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Plan 6

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED
PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
3.	6/23/15	REVISED FOR PB SUBMISSION
2.	6/9/15	REVISED PER PB COMMENT
1.	5/8/15	REVISED FOR PB WORKSHOP

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

SITE PLAN

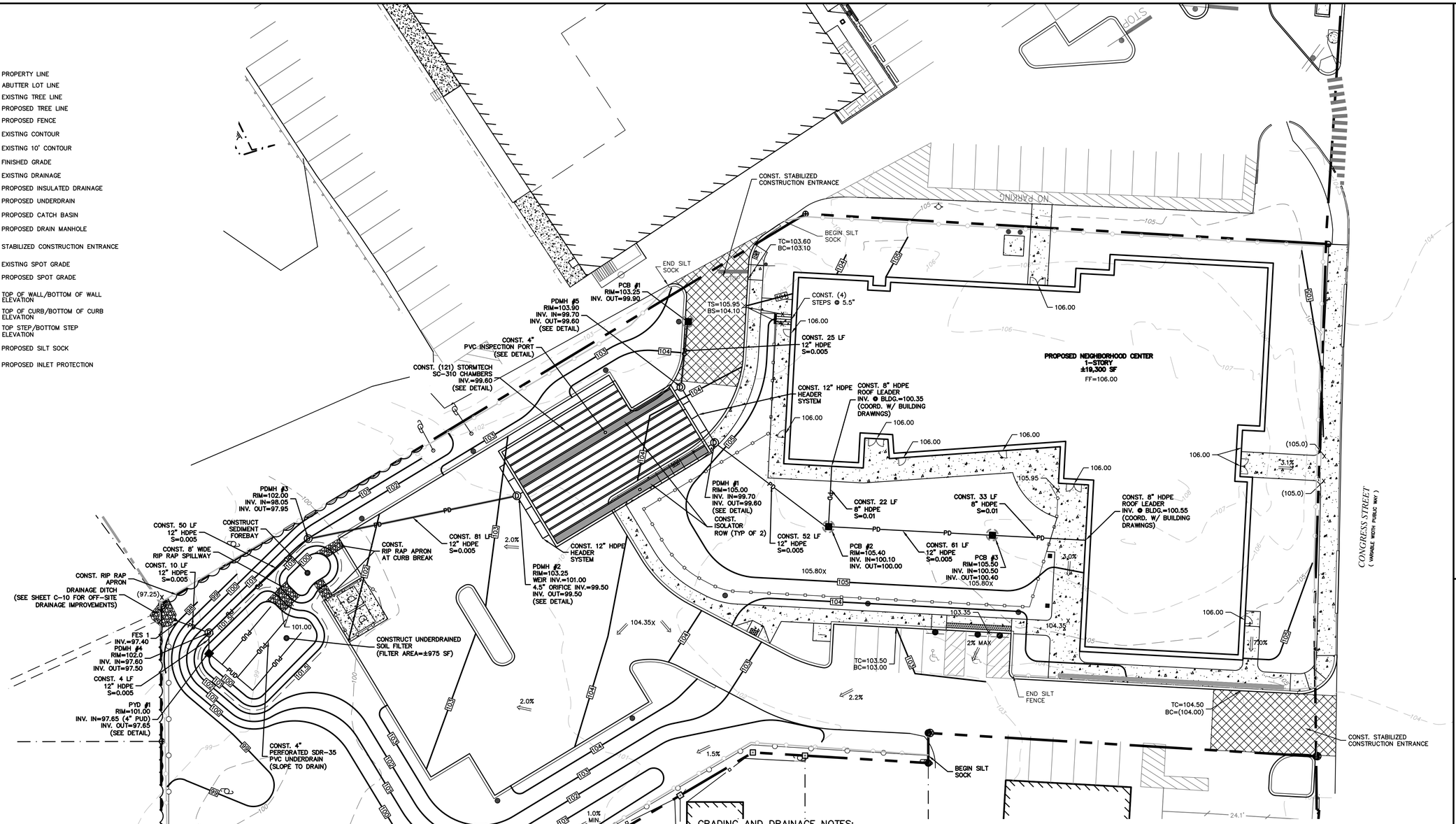
SCALE: AS SHOWN

C-2B

Jun 23, 2015-8:58pm Plotted By: gwh
J:\gis & Bond, Inc.-(1)\J0094 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: SITE

LEGEND

- PROPERTY LINE
- ABUTTER LOT LINE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- PROPOSED FENCE
- 98 EXISTING CONTOUR
- 100 EXISTING 10' CONTOUR
- 62 FINISHED GRADE
- D EXISTING DRAINAGE
- PD PROPOSED INSULATED DRAINAGE
- PUD PROPOSED UNDERDRAIN
- PROPOSED CATCH BASIN
- (D) PROPOSED DRAIN MANHOLE
- STABILIZED CONSTRUCTION ENTRANCE
- (97.25)X EXISTING SPOT GRADE
- 100.50X PROPOSED SPOT GRADE
- TW=105.90 BW=104.50 TOP OF WALL/BOTTOM OF WALL ELEVATION
- TC=105.90 BC=105.40 TOP OF CURB/BOTTOM OF CURB ELEVATION
- TS=105.90 BS=104.40 TOP STEP/BOTTOM STEP ELEVATION
- PROPOSED SILT SOCK
- PROPOSED INLET PROTECTION



GRADING AND DRAINAGE NOTES:

1. COMPACTION REQUIREMENTS:

BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.

2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR APPROVED EQUAL) UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITIES PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCHBASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCHBASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
9. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCHBASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS AND CONSTRUCTION SPECIFICATIONS, LATEST REVISIONS.
12. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A MAINE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER.
13. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

EROSION CONTROL NOTES:

1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON DETAIL SHEETS.
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCHBASIN INLETS WITHIN THE WORK LIMITS. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
5. INSPECT INLET PROTECTION AND SILT FENCES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EXCELSIOR MAT ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL CATCHBASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLAND.
13. SAFETY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT.
14. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) SHOOTS ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASH OUT WILL BE ALLOWED.

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Plan 7

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
2.	6/23/15	REVISED FOR PB SUBMISSION
1.	5/8/15	REVISED FOR PB WORKSHOP

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SCALE: AS SHOWN

C-3

Jun 23, 2015-9:01pm Plotted By: gwh
Tighe & Bond, Inc. - J:\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: GRADE

LEGEND

- PROPERTY LINE
- ABUTTER LOT LINE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- PROPOSED FENCE
- EXISTING DRAINAGE
- PROPOSED INSULATED DRAINAGE
- PROPOSED UNDERDRAIN
- PROPOSED YARD DRAIN
- EXISTING ELECTRIC
- EXISTING OVERHEAD WIRE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC AND TELECOMMUNICATIONS
- EXISTING WATER
- PROPOSED WATER
- EXISTING SEWER
- PROPOSED SEWER
- EXISTING GAS
- PROPOSED GAS
- PROPOSED SEWER MANHOLE

EXISTING FIRE HYDRANT

PROPOSED TRANSFORMER AND CONCRETE PAD (COORD. WITH CENTRAL MAINE POWER)

CONST. SECONDARY ELECTRIC AND TELECOMMUNICATION SERVICES (COORD. W/ BUILDING DRAWINGS)

CONST. NATURAL GAS SERVICE AND METER (COORD. W/ BUILDING DRAWINGS)

CONST. 2" DOMESTIC SERVICE (COORD. W/ BUILDING DRAWINGS)

CONST. 6" DI FIRE SERVICE (COORD. W/ BUILDING DRAWINGS)

CONST. 1,000 GALLON GREASE TRAP RIM=FINISHED GRADE INV. IN=102.00 INV. OUT=101.75

CONST. (3) LF 4" PVC SDR-35 GREASE SERVICE INV. OUT @ BLDG=102.10 (COORD. W/ BUILDING DRAWINGS)

CONST. (3) LF 4" PVC SDR-35 GREASE SERVICE INV. IN @ BLDG=101.65 (COORD. W/ BUILDING DRAWINGS)

PROPOSED NEIGHBORHOOD CENTER 1-STORY ±19,300 SF

CONST. 6" DI FIRE SERVICE

CONST. 2" TYPE K COPPER DOMESTIC SERVICE

CONST. RISER FOR PRIMARY ELECTRIC AND TELECOMMUNICATIONS SERVICES (COORD. WITH CENTRAL MAINE POWER AND FAIRPOINT))

CONNECT TO EXISTING 2" COPPER DOMESTIC SERVICE (COORD. W/ PORTLAND WATER DISTRICT)

CONNECT TO EXISTING 6" CI (COORD. W/ PORTLAND WATER DISTRICT)

CONGRESS STREET (VARIABLE WIDTH PUBLIC WAY)

APPROXIMATE LOCATION OF 8" CI WATER MAIN

CONNECT TO EXISTING NATURAL GAS SERVICE (COORD. W/ UNITIL)

CONST. 6" SANITARY SEWER SERVICE INV. @ BLDG=98.65

EXISTING 8" CLAY SEWER PIPE

CONST. 12 LF 6" SDR-35 PVC S=0.02

PSMH 1 (DROP) RIM=105.00 INV. IN=95.40 INV. OUT=96.5 (8" CLAY) (VERIFY EXISTING INVERTS IN FIELD)

24.1'

LASSELL STREET (60' WIDE PUBLIC WAY)

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

UTILITY NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.

2. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
   NATURAL GAS –UNITIL
   WATER –PORTLAND WATER DISTRICT
   SEWER –CITY OF PORTLAND SEWER DEPARTMENT
   ELECTRIC –CENTRAL MAINE POWER
   TELEPHONE –FAIRPOINT COMMUNICATIONS

3. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.

4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.

5. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.

6. ALL WATERMAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE PORTLAND WATER DISTRICT.

7. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.

8. ALL WORK WITHIN CITY ROWS SHALL BE COORDINATED WITH CITY OF PORTLAND.

9. CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.

10. CONNECTION TO EXISTING WATERMAIN SHALL BE CONSTRUCTED TO PORTLAND WATER DISTRICT STANDARDS.

11. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.

12. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.

13. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE UTILITY COMPANIES.

14. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

15. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.

16. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.

17. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.

18. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.

19. A 10–FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18–INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.

20. THE CONTRACTOR SHALL CONTACT "DIG–SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG–SAFE" NUMBER ON SITE AT ALL TIMES.

21. CONTRACTOR TO SUBMIT AS–BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS–BUILTS SHALL BE PREPARED AND CERTIFIED BY A MAINE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER.

22. SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN

23. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTLAND SEWER DEPARTMENT.

24. ALL SEWER PIPE WITH LESS THAN 4' OF COVER SHALL BE INSULATED.

25. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.

Tighe&Bond
Consulting Engineers
www.tighebond.com

Plan 8

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
2.	6/23/15	REVISED FOR PB SUBMISSION
1.	5/8/15	REVISED FOR PB WORKSHOP

PROJECT NO:	J-0096
FILE:	J0094-SITE.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

UTILITIES PLAN

SCALE: AS SHOWN

C-4

Jun 23, 2015-9:02pm Plotted By: gwh
Tighe & Bond, Inc. P:\J-JOBS\J0094 Jewish Community Alliance\DWG-CAD\DESIGN\J0094-SITE.dwg Layout: UTIL

PROJECT NAME AND LOCATION
PROPOSED NEIGHBORHOOD CENTER
1342 CONGRESS STREET
PORTLAND, MAINE 04103

43°–39'–29.87"N
70°–17'–43.50"W

DESCRIPTION
THE PROJECT CONSISTS OF THE CLEARING AND DEMOLITION OF EXISTING FEATURES ON SITE FOR A PROPOSED 1–STORY 19,300 SF NEIGHBORHOOD CENTER WITH 49 PARKING SPACES AND ASSOCIATED SITE IMPROVEMENTS INCLUDING SIDEWALK, STORMWATER MANAGEMENT, UTILITIES AND LANDSCAPING.

THE WORK IS ANTICIPATED TO START IN SUMMER 2015, AND BE COMPLETED BY SPRING 2016.

DISTURBED AREA
THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 1.90 ACRES.

SOIL CHARACTERISTICS
BASED ON THE PHASE 1 SITE ASSESSMENT PREPARED BY ST GERMAIN COLLINS AND DATED FEBRUARY 10, 2015 THE SOILS CONSIST OF SILTY CLAY SOILS THAT ARE ASSUMED TO BE HYDROLOGIC GROUP C SOILS.

SEQUENCE OF MAJOR ACTIVITIES
1. CUT AND CLEAR TREES.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   - NEW CONSTRUCTION
   - DEVELOPMENT OF BORROW PIT AREAS
   - DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE
   - CONTROL OF DUST
   - CONSTRUCTION OF SITE ACCESS
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON–STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL DRIVES AND PARKING AREAS — ALL DRIVES AND PARKING AREA SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES HALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES, SILT SOCKS, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. FINISH PAVING ALL DRIVES AND PARKING AREAS.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

NOTE: THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.

NAME OF RECEIVING WATERS
THE STORM WATER RUNOFF FLOWS OFFSITE TO AN EXISTING DRAINAGE SWALE.

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES

A. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES AND DISTURBED AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR MORE THAN TWENTY ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   1. TEMPORARY SEEDING
   2. MULCHING
B. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY NOVEMBER 15.
C. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
   3. A MINIMUM OF 3" OF NON–EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED.
   4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
D. WINTER STABILIZATION PRACTICES:
   1. ALL PROPOSED POST–DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURE WITH ANCHOR NETTING, ELSEWHERE.
   2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITION.
   3. AFTER NOVEMBER 15TH, INCOMPLETE DRIVE OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3–INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

OFF SITE VEHICLE TRACKING
THE CONTRACTOR SHALL CONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO ANY EXCAVATION ACTIVITIES.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. GENERAL:
   THESE ARE THE GENERAL INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO IMPLEMENT THE PLAN.
   1. ALL SWALES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
   2. THE SMALLEST PRACTICAL PORTION OF THE SITE WILL BE DENUDED AT ONE TIME.
   3. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER.
   4. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
   5. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT SOCK WHEN IT HAS REACHED ONE THIRD THE HEIGHT OF THE SILT SOCK.
   6. ALL DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
   7. TEMPORARY SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND UNHEALTHY GROWTH.
   8. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
   9. A REPRESENTATIVE OF THE SITE CONTRACTOR, WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
   10. THE EROSION CONTROL PROCEDURES SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL MANUAL.
      A. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES OR SPECIFICATIONS.
      B. THE USE OF SAND FOR THE PURPOSE OF PEDESTRIAN SAFETY AND SAFE DRIVING CONDITION SHALL BE MINIMIZED.
      C. THE OWNER SHALL CLEAN ALL CATCH BASINS, DRAIN MANHOLES AND SWEEP THE PARKING LOT ON AN ANNUAL BASIS.

B. FILTERS:
   1. SILT SOCK
      A. APPLICATION
         I. SILT SOCK ARE TO BE INSTALLED DOWN SLOPE OF ANY DISTURBED AREA REQUIRING EROSION AND SEDIMENT CONTROL AND FILTRATION OF SOLUBLE POLLUTANTS FROM RUNOFF. SILT SOCK ARE EFFECTIVE WHEN INSTALLED PERPENDICULAR TO SHEET OR LOW CONCENTRATED FLOW.
      A. INSTALLATION DETAILS
         II. SILT SOCK USED FOR PERIMETER CONTROL OF SEDIMENT AND SOLUBLE POLLUTANTS IN STORM RUNOFF SHALL MEET FILTREXX SOXX MATERIAL SPECIFICATIONS, OR APPROVED EQUAL, AND USE CERTIFIED FILTREXX FILTER MEDIA, OR APPROVED EQUAL.
         III. CONTRACTOR IS REQUIRED TO BE FILTREXX CERTIFIED AS DETERMINED BY FILTREXX INTERNATIONAL, LLC., OR APPROVED EQUAL. CERTIFICATION SHALL BE CONSIDERED CURRENT IF APPROPRIATE IDENTIFICATION IS SHOWN DURING TIME OF BID OR AT TIME OF APPLICATION. LOOK FOR THE FILTREXX CERTIFIED SEAL, OR APPROVED EQUAL.
         IV. SILT SOCK WILL BE PLACED AT LOCATIONS INDICATED ON PLANS AS DIRECTED BY THE ENGINEER.
         V. SILT SOCK SHOULD BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER DISTURBED AREA. IN EXTREME CONDITIONS (i.e. 2:1 SLOPES), A SECOND SILT SOCK SHALL BE CONSTRUCTED AT THE TOP OF THE SLOPE.
         VI. STAKES SHALL BE INSTALLED THROUGH THE MIDDLE OF THE SILT SOCK ON 10 FT CENTERS, USING 2 INCH BY 2 INCH BY 3 FEET WOODEN STAKES. IN THE EVENT STAKING IS NOT POSSIBLE, I.E., WHEN SILT SOCK ARE USED ON PAVEMENT, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SILT SOCK TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.
         VII. STAKING DEPTH FOR SAND AND SILT LOAM SOILS SHALL BE 12 INCHES, AND 8 INCHES FOR CLAY SOILS.
         VIII. LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE SILT SOCK, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE DEVICE, IMPROVING FILTRATION AND SEDIMENT RETENTION.
         IX. IF THE SILT SOCK IS TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, IT MAY BE SEEDED AT TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
         X. SILT SOCK ARE NOT TO BE USED IN PERENNIAL, EPHEMERAL, OR INTERMITTENT STREAMS.
         XI. SEE DETAIL FOR CORRECT SILT SOCK INSTALLATION.
      2. SEQUENCE OF INSTALLATION:
         A. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
      3. MAINTENANCE:
         A. SILT SOCK BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THEY SHALL BE REPAIRED IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.
         B. SHOULD THE FABRIC ON A SILT SOCK BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
         C. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–THIRD (1/3) THE HEIGHT OF THE BARRIER.
         D. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT SOCK BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

C. MULCHING:
   1. TIMING:
      A. IN ORDER FOR MULCH TO BE EFFECTIVE, IT MUST BE IN PLACE PRIOR TO MAJOR STORM EVENTS. THERE ARE TWO (2) TYPES OF STANDARDS WHICH SHALL BE USED TO ASSURE THIS:
         I. APPLY MULCH PRIOR TO ANY STORM EVENT. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS, USUALLY BY CONTACTING THE NATIONAL WEATHER SERVICE IN CONCORD, TO HAVE ADVANCE NOTICE OF SIGNIFICANT STORMS.
         II. REQUIRED MULCHING WITHIN A SPECIFIED TIME PERIOD. THE TIME PERIOD CAN RANGE FROM 14 TO 21 DAYS OF INACTIVITY ON A AREA, THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. PROFESSIONAL JUDGMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES, ETC.) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION.
   2. APPLICATION RATE:
      A. MULCH SHALL BE APPLIED AT A RATE OF BETWEEN 1.5 TO 2 TONS PER ACRE, OR 90 TO 100 POUNDS PER 1000 SQUARE FEET. THE MINIMUM MULCH REQUIREMENT, REGARDLESS OF APPLICATION RATE IS THAT SOIL MUST NOT BE VISIBLE.
   3. GUIDELINES FOR WINTER MULCH APPLICATION:
      A. WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER WINTER (PAST THE GROWING SEASON) IT SHALL BE AT A RATE OF 6,000 POUNDS OF HAY OR STRAW PER ACRE. A TACKIFIER MAY BE ADDED TO THE MULCH. NO MULCH IS TO BE APPLIED OVER MORE THAN TWO (2) INCHES OF SNOW. IF SNOW DEPTH IS GREATER THAN TWO (2) INCHES IT SHALL BE REMOVED BEFORE MULCHING.
   4. MAINTENANCE:
      A. 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.
   5. EXCELSIOR MATTING:
      A. EXCELSIOR MATTING SHALL BE USED IN PLACE OF MULCH ON ALL SLOPES STEEPER THAN 3:1.
   6. SLOPES:
      A. ALL SLOPES GREATER THAN 15% DURING THE REGULAR CONSTRUCTION SEASON ARE TO HAVE NETTING OVER MULCH OR COMBINATION EROSION CONTROL MAT USED (MULCH AND NET). THIS APPLIES TO ALL SLOPES GREATER THAN 8% AFTER OCTOBER 1. MULCHING IS REQUIRED OVER HYDROSEEDING.

D. TEMPORARY GRASS COVER:
   1. SEEDBED PREPARATION:
      A. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10–10–10 FERTILIZER.
      B. APPLY LIMESTONE EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE.
   2. SEEDING:
      A. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE.
      B. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
      C. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH,MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
   3. MAINTENANCE:
      A. TEMPORARY SEEDINGS SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).

E. PERMANENT MULCHING
   1. TIMING:
      A. APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS THAT RESIST DECOMPOSITION SUCH AS WOOD CHIPS OR CRUSHED STONE TO THE SOIL SURFACE WHERE VEGETATION STABILIZATION IS EITHER IMPRACTICAL OR DIFFICULT TO ESTABLISH.
      B. WINTER STABILIZATION SHALL MEET OR EXCEED THE FOLLOWING REQUIREMENTS.
   2. CONSIDERATIONS:
      A. PERMANENT MULCHING SHALL BE USED TO STABILIZE CHRONIC EROSION AREAS WHICH RECEIVE HEAVY FOOT OR VEHICLE TRAFFIC. NOT INTENDED FOR AREAS OF CONCENTRATED FLOWS.
      B. IF WOOD CHIPS ARE USED IN LANDSCAPED AREAS (TREES & SHRUBS), A SUPPLEMENTAL APPLICATION OF CHEMICAL FERTILIZER SHOULD BE APPLIED AT A RATE OF TWO POUNDS OF 5–10–5 PER 100 SQUARE FEET OF MULCH.
      C. IF CRUSHED STONE IS USED, A PLASTIC FILTER CLOTH SHALL BE PLACED BETWEEN THE GROUND AND THE STONE.
   3. SPECIFICATIONS
      A. WOOD CHIPS OR AGGREGATE SHALL BE USED ON SLOPES NO STEEPER THAN 3 HORIZONTALLY ON 1 VERTICALLY.
      B. PERMANENT MULCH SHALL BE 3 INCHES OR MORE IN DEPTH.
      C. WOOD CHIPS SHALL BE APPLIED AT A RATE OF 500–900 POUNDS PER 1,000 SQUARE FEET OR 10–20 TONS PER ACRE. WOOD CHIPS SHALL BE GREEN OR AIR–DRIED AND FREE OF OBJECTIONABLE COARSE MATERIALS.
      D. AGGREGATE COVER (GRAVEL, CRUSHED STONE OR SLAG) SHALL BE WASHED, 0.25 INCHES TO 2.5 INCHES AND APPLIED AT A RATE OF 9 CUBIC YARDS PER 1,000 SQUARE FEET.
   4. MAINTENANCE
      A. WOOD CHIPS SHALL BE MONITORED FOR DECOMPOSITION AND NEW APPLICATIONS MADE.
      B. CRUSHED STONE SHALL BE MONITORED FOR WASH OUT AND SLIPPING DOWN SLOPE. IF EITHER OCCUR, NEW MATERIAL SHALL BE PROVIDED ON THE BARREN AREAS.

F. VEGETATIVE PRACTICE:
   1. FOR PERMANENT MEASURES AND PLANTINGS.
      A. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 3 TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5.
      B. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10–20–20 FERTILIZER.
      C. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4.5 POUNDS AND 5.5 POUNDS PER INCH OF WIDTH.
      D. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH.
      E. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE.
      F. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.
      G. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED.
      H. A GRASS SEED MIXTURE CONTAINING THE FOLLOWNG SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEEDING RATE:	
CREEPING RED FESCUE	XX LBS/ACRE
TALL FESCUE	XX LBS/ACRE
REDTOP	X LBS/ACRE

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.

G. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL)
   FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

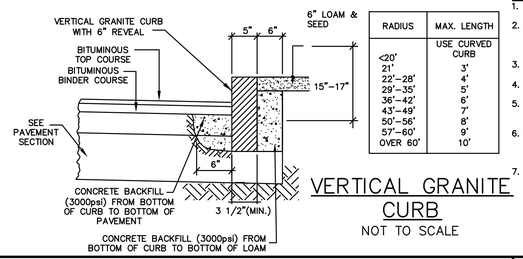
H. STORM DRAIN INLET PROTECTION:
   1. SILT SACK
      A. SACK SHALL BE INSTALLED WITHIN CATCH BASIN, MAKING SURE EMPTY STRAPS ARE LAID FLAT OUTSIDE THE BASIN.
      B. SACK SHALL FIT TIGHTLY WITHIN THE BASIN TO PREVENT SEDIMENT FROM GOING THROUGH ANY GAPS.
      C. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAINSTORM AND REPAIRS MADE AS NECESSARY.
      D. SEDIMENT SHOULD BE REMOVED FROM THE DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE–THIRD THE DEPTH OF THE TRAP.
      E. SILT SACK SHALL BE REMOVED UPON THE COMPLETION OF PROJECT.

I. STABILIZED CONSTRUCTION ENTRANCE:
   1. SPECIFICATIONS
      A. AGGREGATE SIZE: USE TWO (2) INCHES STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
      B. AGGREGATE THICKNESS: NOT LESS THAN SIX (6) INCHES.
      C. WIDTH: TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS.
      D. LENGTH: AS REQUIRED, BUT NOT LESS THAN FIFTY (50) FEET
      E. GEOTEXTILE: TO BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.
      F. CRITERIA FOR GEOTEXTILE: THE FABRICS SHALL BE TREVIA SPUNBOND 1135, MIRAFI 600X OR APPROVED EQUAL.
   2. MAINTENCE
      A. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES OR WATERWAYS.

TIMING OF CONTROLS/MEASURES
A. THE MAXIMUM AREA TO BE DISTURBED AT ONE TIME SHALL BE KEPT UNDER FIVE (5) ACRES. A PHASING PLAN DESCRIBING THE AREAS TO BE DISTURBED SHALL BE SUBMITTED TO THE DESIGN ENGINEER AND NHDES. AN INDEPENDENT MONITORING COMPANY SHALL BE HIRED BY THE CONTRACTOR TO MONITOR ALL EROSION CONTROL DEVICES.
B. AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES THE EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING OR GRADING OF THE SITE. STRUCTURAL CONTROLS SHALL BE INSTALLED CONCURRENTLY WITH THE APPLICABLE ACTIVITY. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN TWENTY ONE (21) DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN FOURTEEN (14) DAYS OF THE LAST DISTURBANCE. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF ANY WETLAND OR STREAM, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, SILT FENCES AND HAYBALE BARRIERS AND ANY EARTH/DIKES WILL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.

WASTE DISPOSAL
A. WASTE MATERIALS:
   1. ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
B. HAZARDOUS WASTE:
   1. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
C. SANITARY WASTE:
   1. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

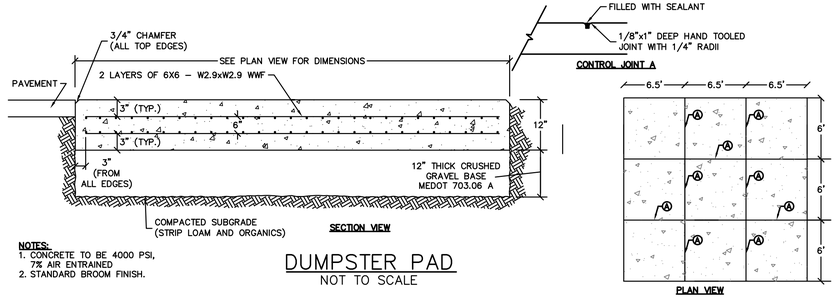
SPILL PREVENTION
A. MATERIAL MANAGEMENT PRACTICES:
   THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   1. GOOD HOUSEKEEPING:
      THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON SITE DURING THE CONSTRUCTION PROJECT:
      A. AN EFFORT WILL BE MADE TO STORE ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB.
      B. ALL MATERIALS STORED ON SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
      C. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
      D. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
      E. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
      F. WHENEVER POSSIBLE ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
   2. HAZARDOUS PRODUCTS:
      THE FOLLOWING PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      A. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
      B. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION.
      C. SURPLUS PRODUCT THAT MUST BE DISPOSED OF WILL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   3. PRODUCT SPECIFICATION PRACTICES:
      THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:
      A. PETROLEUM PRODUCTS:
         ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
      B. FERTILIZERS:
         FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS. ONCE APPLIED FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
      C. PAINTS:
         ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   4. SPILL CONTROL PRACTICES:
      IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
      B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
      C. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
      D. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
      E. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
      F. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECURRING AND HOW TO CLEANUP THE SPILL IF IT RECURS. A DESCRIPTION OF THE SPILL, ITS CAUSE, AND THE CLEANUP MEASURES WILL BE INCLUDED.
      G. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY–TO–DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLE



RADIUS	MAX. LENGTH USE CURVED CURB
<20'	3'
21'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
OVER 60'	10'

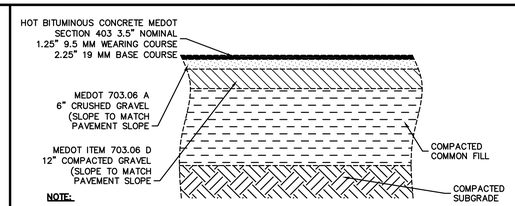
NOTES:
1. SEE SITE PLAN FOR LIMITS OF CURBING.
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF CURB STONES = 3'
4. MAXIMUM LENGTH OF CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE CHART).
6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS
7. JOINTS BETWEEN STONES SHALL BE MORTARED.

VERTICAL GRANITE CURB
NOT TO SCALE



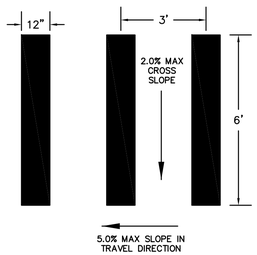
NOTES:
1. CONCRETE TO BE 4000 PSI, 7% AIR ENTRAINED
2. STANDARD BROOM FINISH.

DUMPSTER PAD
NOT TO SCALE



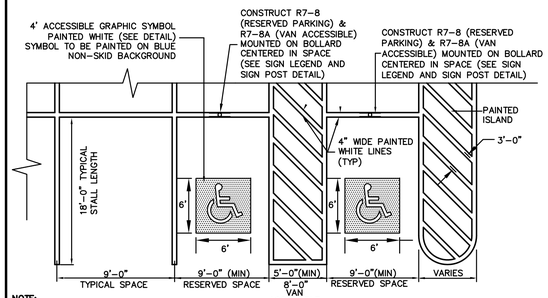
NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. CONTRACTOR SHALL HAVE THE OPTION OF RECLAIMING THE EXISTING PAVEMENT AND REMOVING THE MATERIAL, THEN REUSING THE RECLAIMED MATERIAL AS A PAVEMENT SUBBASE.

STANDARD DUTY PAVEMENT SECTION
NOT TO SCALE



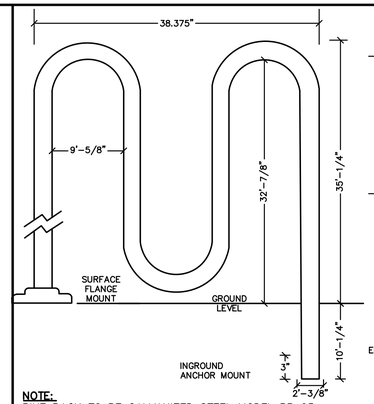
NOTE:
ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.

CROSSWALK STRIPING
NOT TO SCALE

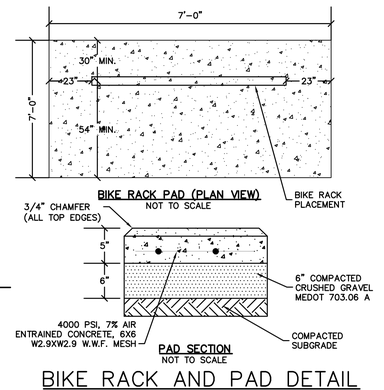


NOTE:
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
3. FINISH PAVEMENT GRADES AT ALL HANDICAP ACCESSIBLE STALLS AND PAINTED ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION.

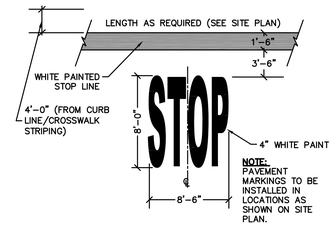
STALL STRIPING-SINGLE STRIPE
NOT TO SCALE



NOTE:
BIKE RACK TO BE GALVANIZED STEEL MODEL RB 05 (5 BICYCLES) AS MANUFACTURED BY AAA RIBBON RACK CO. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

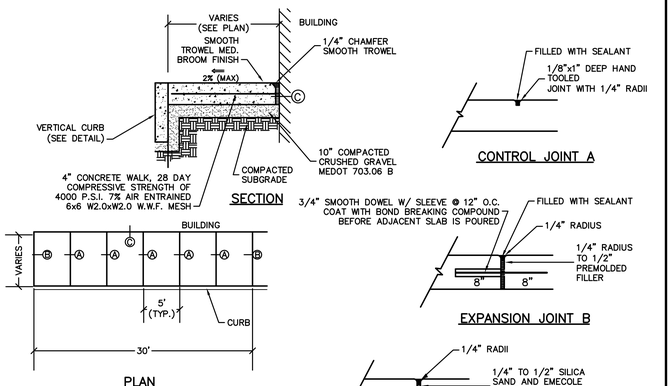


BIKE RACK AND PAD DETAIL (MODEL RB 05)
NOT TO SCALE

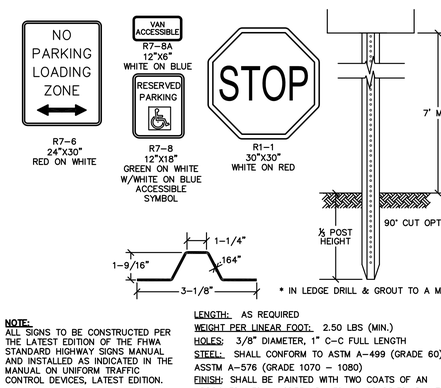


NOTE:
PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.

STOP BAR AND LEGEND
NOT TO SCALE



CONCRETE SIDEWALK WITH GRANITE CURB
NOT TO SCALE

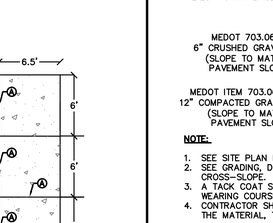


NOTE:
ALL SIGNS TO BE CONSTRUCTED PER THE LATEST EDITION OF THE FHWA STANDARD HIGHWAY SIGNS MANUAL AND INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASSTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN BAKED ON OR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

SIGN LEGEND & SIGN POST
NOT TO SCALE

SIGN BOLLARD
NOT TO SCALE

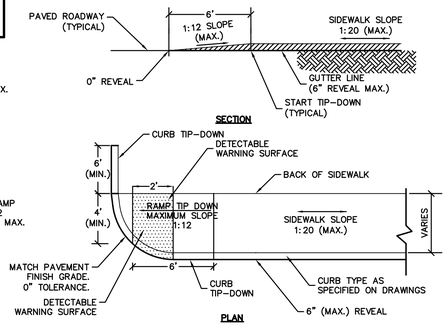


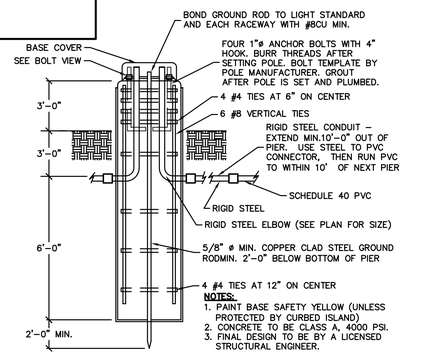
NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

ACCESSIBLE SYMBOL
NOT TO SCALE

NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS
2. PROVIDE 6" COMPACTED CRUSHED GRAVEL BASE BENEATH RAMPS
3. DETECTABLE WARNING STRIP SHALL BE ADA SOLUTIONS, INC. CAST IN PLACE RAMP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

CONCRETE WHEELCHAIR ACCESSIBLE RAMP
NOT TO SCALE





NOTES:
1. PAINT BASE SAFETY YELLOW (UNLESS PROTECTED BY CURBED ISLAND)
2. CONCRETE TO BE CLASS A, 4000 PSI.
3. FINAL DESIGN TO BE BY A LICENSED STRUCTURAL ENGINEER.

LIGHT POLE BASE
NOT TO SCALE

Tighe&Bond
Consulting Engineers
www.tighebond.com

Plan 10

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
2.	6/23/15	REVISED FOR PB SUBMISSION
1.	5/8/15	REVISED FOR PB WORKSHOP

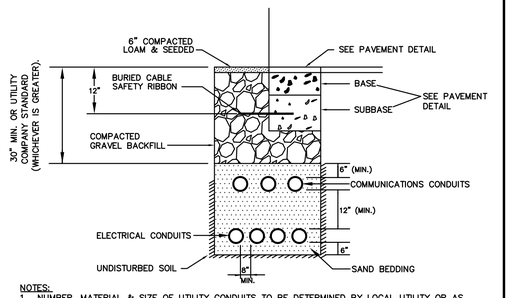
PROJECT NO:	J-0096
FILE:	J0096-DETAILS.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

DETAILS SHEET

SCALE: AS SHOWN

C-6

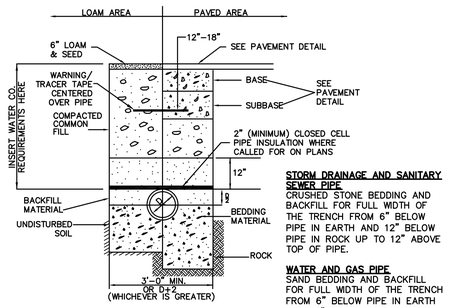
Jun 23, 2015 - 10:10pm Plotted By: gwh
Tighe & Bond, Inc. J:\J0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0096-DETAILS.dwg Layout: C-6



NOTES:

1. NUMBER, MATERIAL & SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.

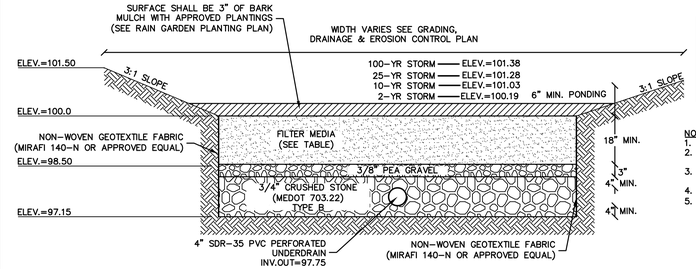
ELECTRICAL AND COMMUNICATION CONDUIT
NOT TO SCALE



UTILITY TRENCH
NOT TO SCALE

STORM DRAINAGE AND SANITARY SEWER PIPE
CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.

WATER AND GAS PIPE
SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.



FILTER MEDIA COMPOSITION:

COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL SIEVE NO.	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH	20-30	200	5 MAX.

NOTES:

1. BARK MULCH SHALL BE AGED A MINIMUM OF 12 MONTHS AND SHALL NOT FLOAT.
2. UNDERDRAINED SOIL FILTER SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE UNDERDRAINED SOIL FILTER.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND ELEVATIONS.
5. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33):

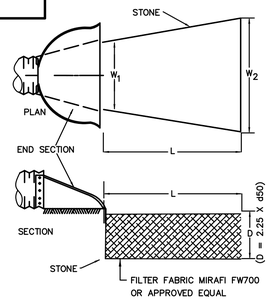
SIEVE SIZE	PERCENT PASSING
1/4"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

6. THE ESTIMATED SEASONAL HIGH WATER TABLE (ESHWT) IS NOT ANTICIPATED TO BE WITHIN 1 FOOT OF THE BOTTOM OF THE RAIN GARDENS. CONTRACTOR TO CONTACT ENGINEER TO INSPECT SUBGRADE AND VERIFY ESHWT.
7. CONTRACTOR SHALL CONDUCT INFILTRATION TESTS AND REPORT RESULTS TO ENGINEER PRIOR TO CONSTRUCTION.

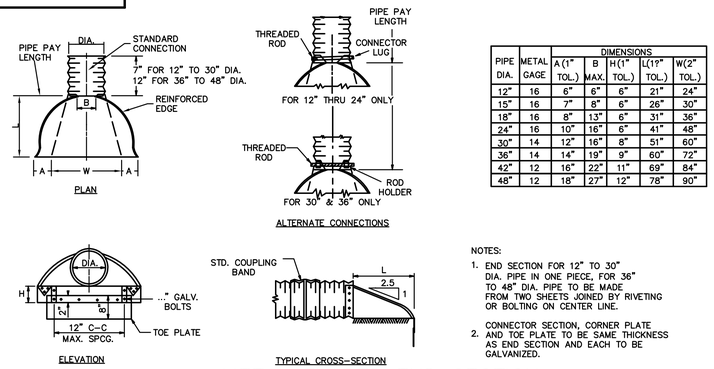
CROSS SECTION
UNDERDRAINED SOIL FILTER DETAIL
NOT TO SCALE

NOTES:

1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS.
2. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.



STONE APRON DETAIL
NOT TO SCALE



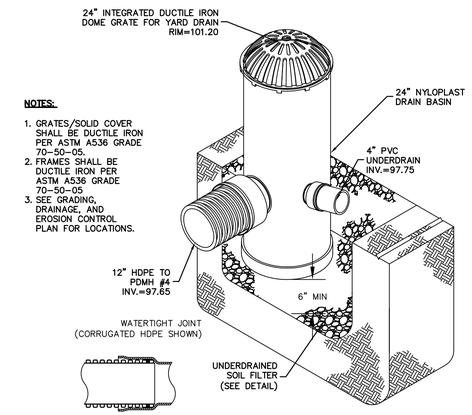
PIPE DIA.	METAL GAGE	DIMENSIONS A (1" TOL.)	B MAX.	H (1" TOL.)	L (1" TOL.)	W (2" TOL.)
12"	16	6"	6"	6"	21"	24"
15"	16	7"	8"	6"	26"	30"
18"	16	8"	13"	6"	31"	36"
24"	16	10"	16"	6"	41"	48"
30"	14	12"	16"	8"	51"	60"
36"	14	14"	19"	9"	60"	72"
42"	12	16"	22"	11"	69"	84"
48"	12	18"	27"	12"	78"	90"

NOTES:

1. END SECTION FOR 12" TO 30" DIA. PIPE IN ONE PIECE, FOR 36" TO 48" DIA. PIPE TO BE MADE FROM TWO SHEETS JOINED BY RIVETING OR BOLTING ON CENTER LINE.

   CONNECTOR SECTION, CORNER PLATE
2. AND TOE PLATE TO BE SAME THICKNESS AS END SECTION AND EACH TO BE GALVANIZED.

METAL FLARED END SECTION
NOT TO SCALE



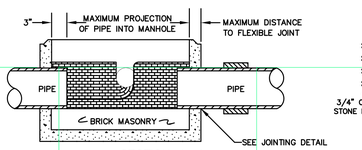
NOTES:

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. SEE GRADING, DRAINAGE, AND EROSION CONTROL PLAN FOR LOCATIONS.

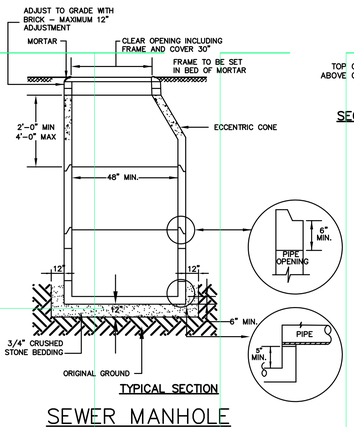
YARD DRAIN OVERFLOW
NOT TO SCALE

NOTES:

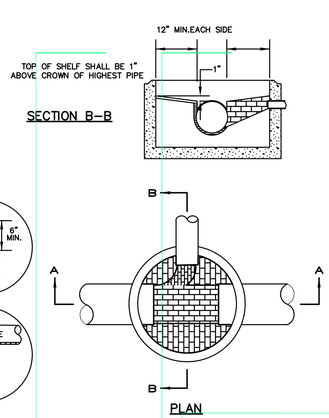
1. INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST.
2. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
3. INVERT BRICKS SHALL BE LAID ON EDGE.
4. BITUMINOUS WATERPROOF COATING TO BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
5. FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
6. HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT.
7. BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H20 LOADING, AND CONFORMING TO ASTM C478-06.



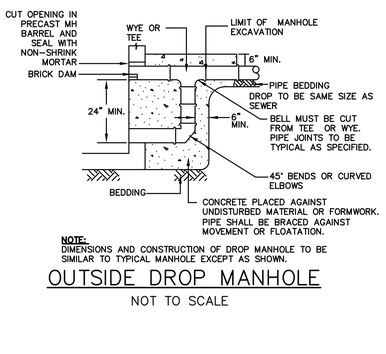
SECTION A-A



TYPICAL SECTION

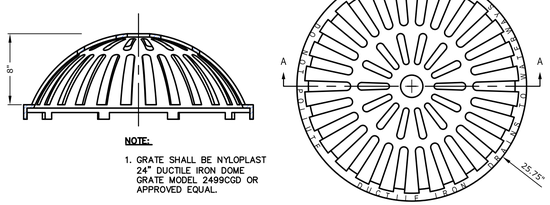


SEWER MANHOLE
NOT TO SCALE



NOTE:
DIMENSIONS AND CONSTRUCTION OF DROP MANHOLE TO BE SIMILAR TO TYPICAL MANHOLE EXCEPT AS SHOWN.

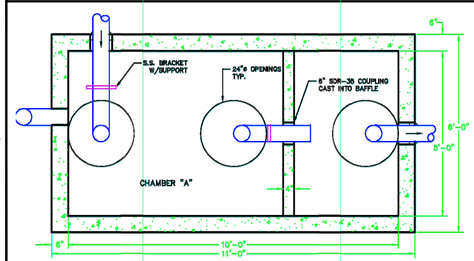
OUTSIDE DROP MANHOLE
NOT TO SCALE

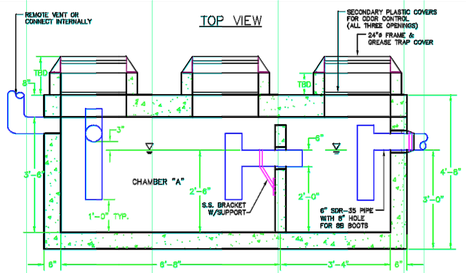


NOTE:

1. GRATE SHALL BE NYLOPLAST 24" DUCTILE IRON DOME GRATE MODEL 2499CGD OR APPROVED EQUAL.

YARD DRAIN OVERFLOW GRATE
NOT TO SCALE





DESIGN NOTES:
1. CONCRETE 5000 PSI AT 28 DAYS.
2. H-20 LOADING
3. JOINTS SEALED WITH BUTYL RUBBER JOINT SEALANT (ASSHTO M-19)
4. ALL TEES/BAFFLES PROVIDED BY PRECAST.

THIS STRUCTURE MUST DISCHARGE TO A CITY OF PORTLAND STANDARD MANHOLE WITH CHANNEL (CONTROL/SAMPLING MANHOLE).

FORMULA FOR SIZING THE TRAP: CHAMBER "A" (2/3 OF TANK VOLUME) MUST BE EQUIVALENT TO THE AVERAGE DAILY PROCESS FLOW FROM THE FACILITY WITH NO SANITARY OR OTHER EXTRANEOUS WASTES FLOWING THROUGH IT.

1,000 GALLON GREASE TRAP
NOT TO SCALE

Tighe&Bond
Consulting Engineers
www.tighebond.com

Plan 11

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
2.	6/23/15	REVISED FOR PB SUBMISSION
1.	5/8/15	REVISED FOR PB WORKSHOP

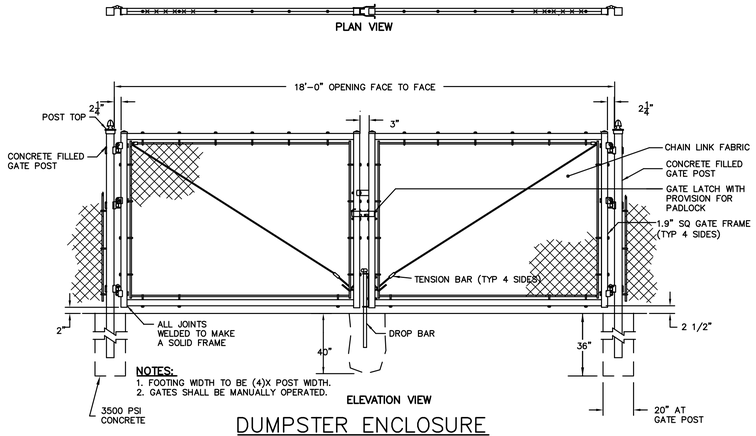
PROJECT NO:	J-0096
FILE:	J0096-DETAILS.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

DETAILS SHEET

SCALE: AS SHOWN

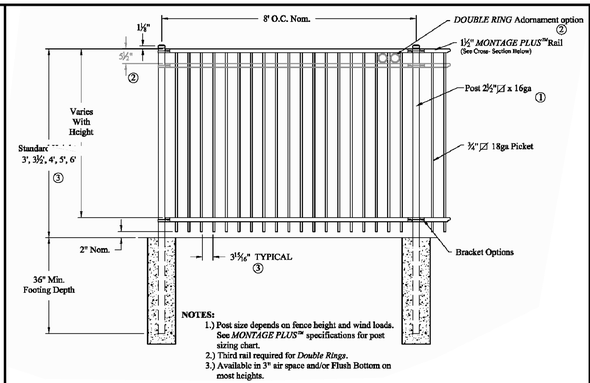
C-7

Jun 23, 2015 10:08pm Plotted By: gwh
Tighe & Bond Inc. J:\J0096\Jewish Community Alliance\DWG-CAD\DESIGN\J0096-DETAILS.dwg Layout: C-7



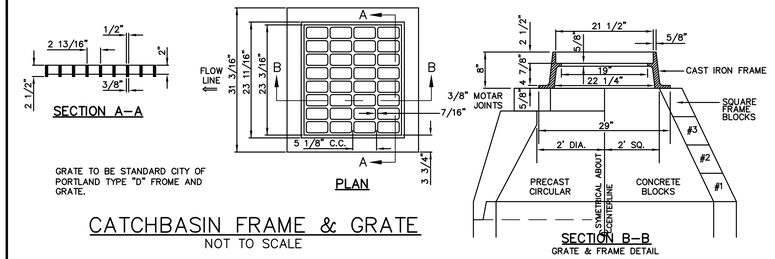
DUMPSTER ENCLOSURE DOUBLE SWING GATE

NOT TO SCALE



6' ORNAMENTAL ALUMINUM FENCE

NOT TO SCALE

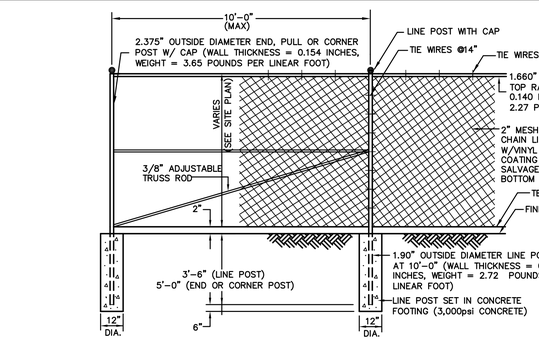


CATCHBASIN FRAME & GRATE

NOT TO SCALE

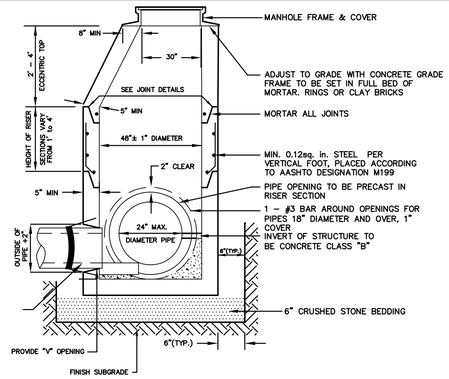
SECTION B-B

GRATE & FRAME DETAIL



DUMPSTER ENCLOSURE CHAIN LINK FENCE

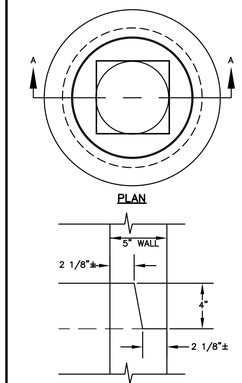
NOT TO SCALE



DRAIN MANHOLE (4' DIA)

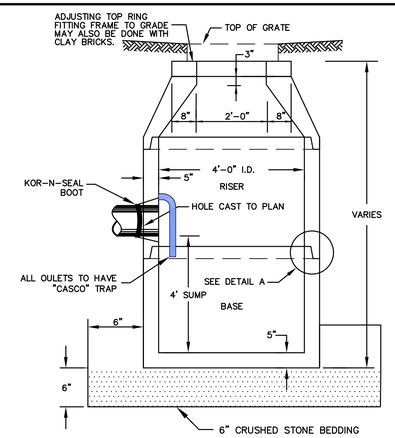
NOT TO SCALE

NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO .12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS).
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.



DETAIL A
(TONGUE & GROOVE JOINT)

NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.

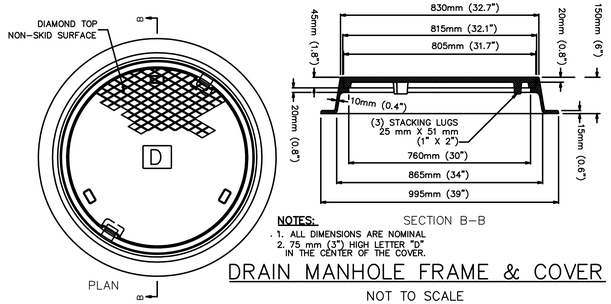


(4' DIA)

SECTION A-A

CATCHBASIN

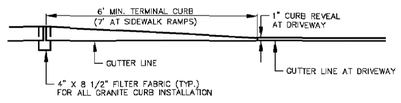
NOT TO SCALE



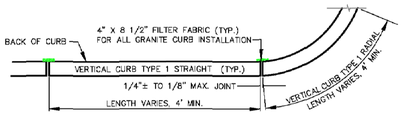
NOTES:
1. ALL DIMENSIONS ARE NOMINAL
2. 75 mm (3") HIGH LETTER "D" IN THE CENTER OF THE COVER.

DRAIN MANHOLE FRAME & COVER

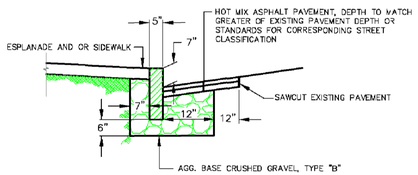
NOT TO SCALE



TERMINAL CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW

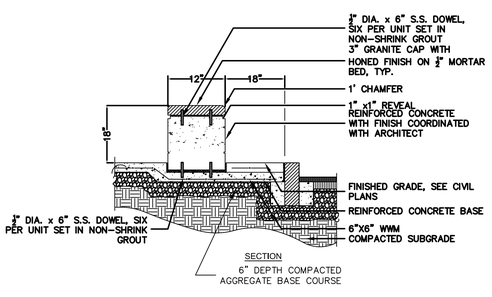


VERTICAL GRANITE CURB CROSS SECTION

NOTE:
1. DETAIL TAKEN FROM THE CITY OF PORTLAND TECHNICAL MANUAL. ALL WORK IN THE CITY ROW SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTLAND TECHNICAL MANUAL, LATEST EDITION.

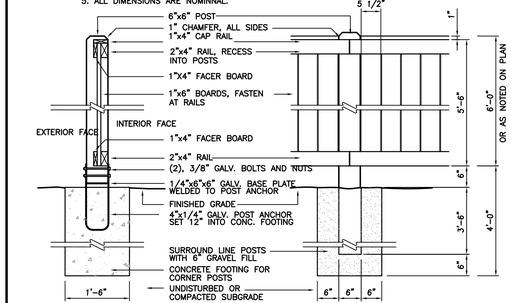
CITY OF PORTLAND - VERTICAL GRANITE CURB IN EXISTING STREETS

NOT TO SCALE



PRE-CAST CONCRETE SEATWALL WITH GRANITE CAP

NOT TO SCALE

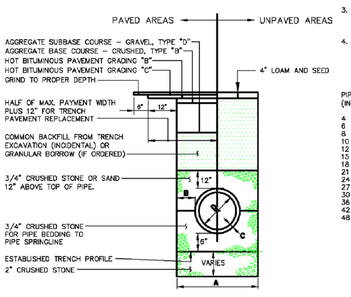


6' WHITE CEDAR PERIMETER FENCE

NOT TO SCALE

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES.



TYPICAL PIPE TRENCH INSTALLATION

NOT TO SCALE

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

TYPICAL PIPE INSTALLATION - NOTES

NOT TO SCALE

NOTE:
1. DETAIL TAKEN FROM THE CITY OF PORTLAND TECHNICAL MANUAL. ALL WORK IN THE CITY ROW SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTLAND TECHNICAL MANUAL, LATEST EDITION.

CITY OF PORTLAND - TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE

Tighe&Bond
Consulting Engineers
www.tighebond.com

Plan 12

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

April 03, 2015

Mark	Date	Description
2.	6/23/15	REVISED FOR PB SUBMISSION
1.	5/8/15	REVISED FOR PB WORKSHOP

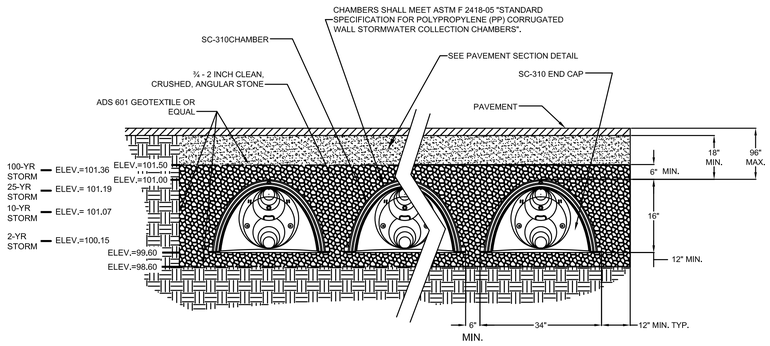
PROJECT NO:	J-0096
FILE:	J0096-DETAILS.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

DETAILS SHEET

SCALE: AS SHOWN

C-8

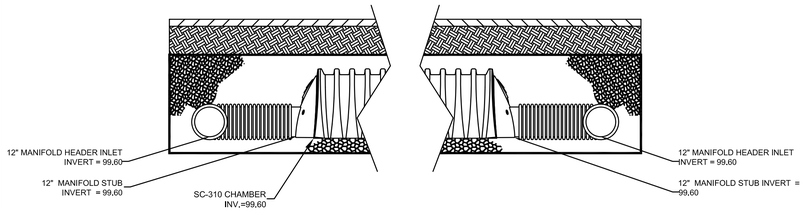
Jun 24, 2015-2:46pm Plotted By: gwh
Tighe & Bond, Inc. J:\J-0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0096-DETAILS.dwg Layout: C-8



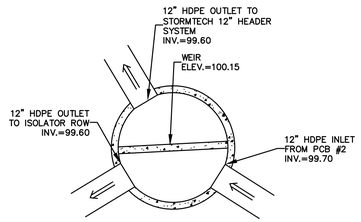
NOTES:

1. SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

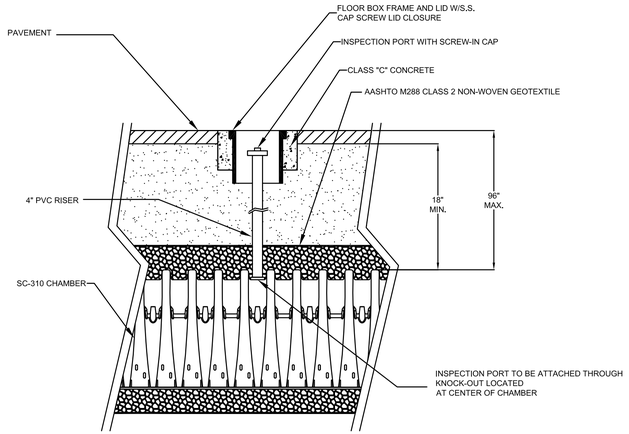
SC-310 CHAMBER SYTEM CROSS-SECTION
NOT TO SCALE



SC-310 CHAMBER HEADER DETAIL
NOT TO SCALE



INLET STRUCTURE DETAIL - PDMH#1
NOT TO SCALE



INSPECTION PORT DETAIL
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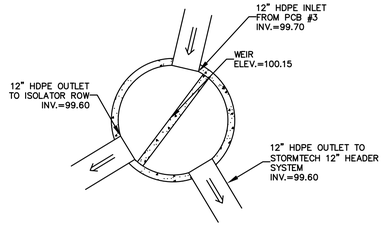
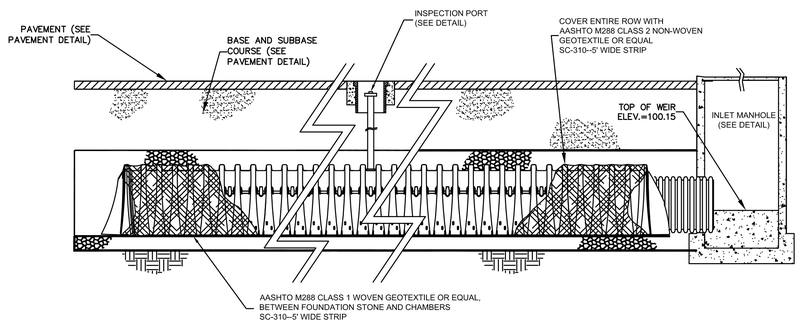
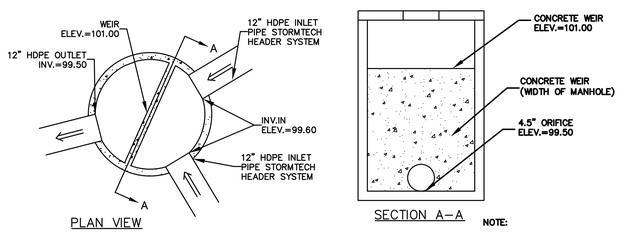


INLET STRUCTURE DETAIL - PDMH#5
NOT TO SCALE



SC-310 ISOLATOR ROW DETAIL
NOT TO SCALE



NOTE:

1. CONTRACTOR SHALL PROVIDE A SUBMITTAL FOR THIS STRUCTURE

OUTLET STRUCTURE DETAIL - PDMH#2
NOT TO SCALE

Tighe&Bond
Consulting Engineers
www.tighebond.com

Plan 13

STATE OF MAINE
Bradlee Mezquita
9410
LICENSED PROFESSIONAL ENGINEER

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

May 8, 2015

Mark	Date	Description
1.	8/23/15	REVISED FOR PB SUBMISSION

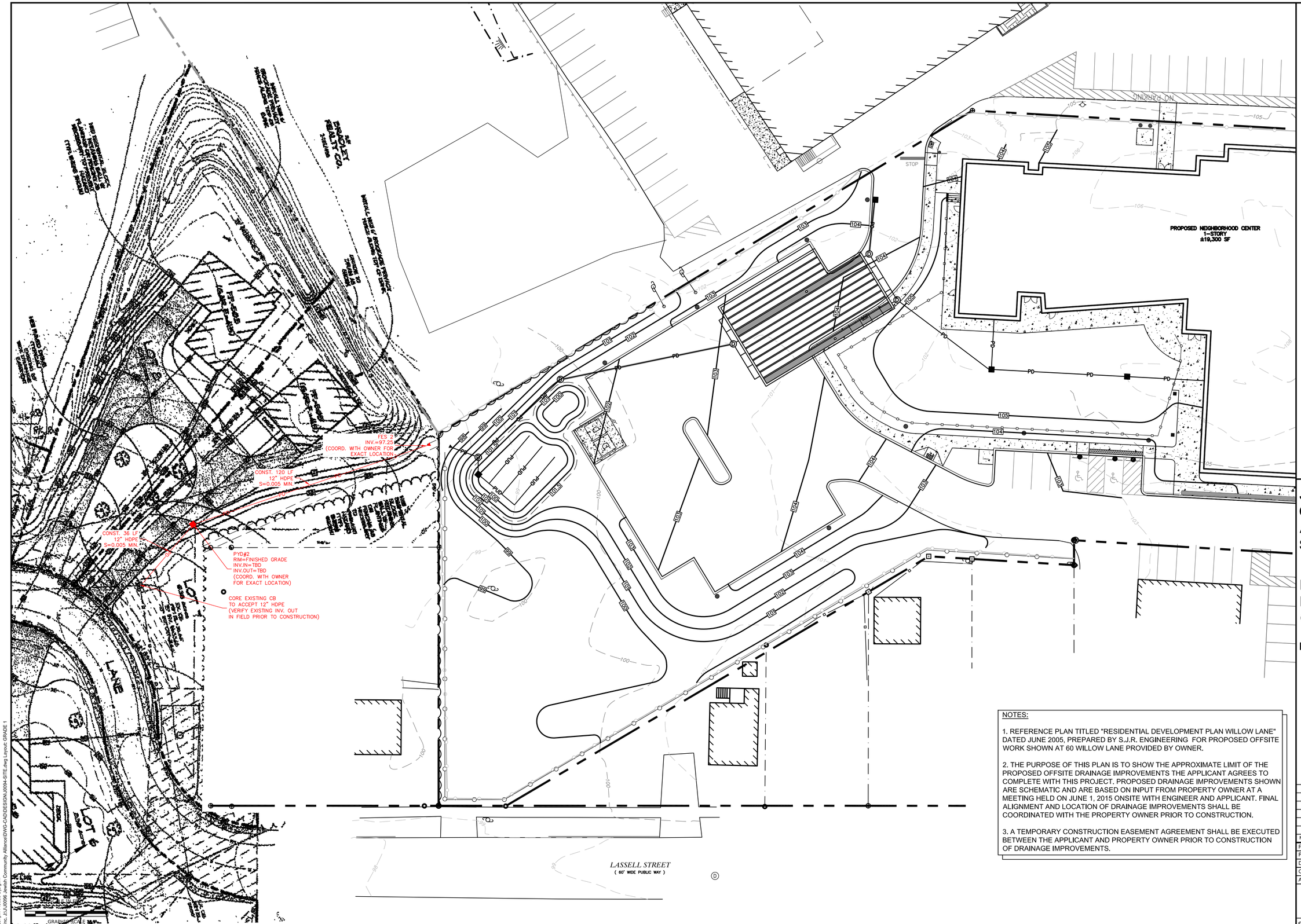
PROJECT NO:	J-0096
FILE:	J0096-DETAILS.dwg
DRAWN BY:	GWH
CHECKED:	BLM
APPROVED BY:	BLM

DETAILS SHEET

SCALE: AS SHOWN

C-9

Jun 23, 2015- 10:05pm Plotted By: gwh
Tighe & Bond, Inc. J:\J-0096 Jewish Community Alliance\DWG-CAD\DESIGN\J0096-DETAILS.dwg Layout: C-9


PROPOSED NEIGHBORHOOD CENTER
1-STORY
±19,300 SF
NO PARKING
STOP
FES 2
INV.=97.25
(COORD. WITH OWNER FOR EXACT LOCATION)
CONST. 120 LF
12" HDPE
S=0.005 MIN
CONST. 36 LF
12" HDPE
S=0.005 MIN
PYD#2
RIM=FINISHED GRADE
INV.IN=TBD
INV.OUT=TBD
(COORD. WITH OWNER FOR EXACT LOCATION)
CORE EXISTING CB
TO ACCEPT 12" HDPE
(VERIFY EXISTING INV. OUT
IN FIELD PRIOR TO CONSTRUCTION)
LASSELL STREET
(60' WIDE PUBLIC WAY)
LOT 52
LOT 53
LOT 54
LOT 55
LOT 56
LOT 57
LOT 58
LOT 59
LOT 60
LOT 61
LOT 62
LOT 63
LOT 64
LOT 65
LOT 66
LOT 67
LOT 68
LOT 69
LOT 70
LOT 71
LOT

KIM LIGHTING

WP9S-LED
WARP9® Small PicoEmitter™ LED
revision 8/18/14 • kim_wp9seled_spec.pdf

Type:
Job:
Catalog number:

Mtg. / Fixture / Electrical Module / Finish / Options
See page 2 — See pages 2-4

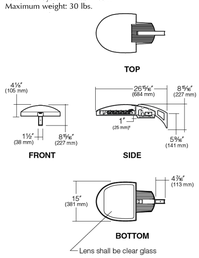
Approvals:

Date:
Page: 1 of 6

Select pole from Kim's Arms and Poles Selection Guide. If pole is provided by others indicate O.D. for arm fitting.

Specifications

WP9S-LED
Small Electronic
60 Light Emitting Diodes
Total Max System Watts = 65W
Maximum weight: 30 lbs.



*NOTE: Driver compartment door extends down 1" on small housing to accommodate integral step-down transformer on 347V and 480V models only.

Housing: One-piece die-cast, low copper (<0.6% Cu) aluminum alloy with integral cooling ribs over the electrical compartment. Solid barrier wall separates optical and electrical compartments. A single die-cast aluminum cam-latch provides positive locking and sealing of the optical chamber. A one-piece extruded and vulcanized silicone gasket seals the housing against the lens surface.

Lens: Clear ⅜" thick tempered glass lens retained by a stainless steel piano hinge and a single die-cast aluminum cam-latch. The edges are camouflaged to conceal the outer portion of the housing.

Electronic Module: All electrical components are UL and CSA recognized, mounted on a single plate and factory prewired with quick-disconnect plugs. Module includes a driver, thermal control device and surge protector. Electrical module attaches to housing with no-tool hinges and latches, accessible by opening the lens frame only. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.

Optical Module: Precision, replaceable PicoEmitters are positioned to achieve directional control toward desired task. The entire EmitterDeck® fastens to the housing as a one-piece module

Dimming: The WARP9 LED luminaire can be dimmed from 0% to 100% by the use of its standard 0-10V Interface driver. To activate the dimming system, a wiring harness is supplied and attached to the DIM Port (DIM IN) on the LifeShield Protection System. This port allows the 0-10v Interface to bypass the LifeShield and control the driver. The LifeShield works in conjunction with the control system to assure that overheating will not harm the LEDs. The wiring harness is connected with the use of the Purple lead as the positive (+) and the Grey lead as the negative (-) to an available control signal (by others).

Support Arm: Heavy cast, low copper aluminum alloy with stainless steel mounting bolts. A pole reinforcing plate is provided with wire strain relief. Arm is circular cut for specified round pole.

Finish: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish. Standard colors include (BL) Black, (DB) Dark Bronze, (WH) White, (PS) Platinum Silver, (SG) Stealth Gray, (LG) Light Gray, and (CC) Custom Color (Include RAL#).

Listed to: UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires. RoHS compliant. Meets Buy American provisions within ARRA.

Warranty: Kim Lighting warrants Warp9 LED products ("Product(s)") sold by Kim Lighting to be free from defects in material and workmanship for (i) a period of five (5) years for metal parts, (ii) a period of ten (10) years for exterior housing paint finish(s), (iii) a period of six (6) years for LED Light Engines (PicoEmitters) and, (iv) a period of five (5) years for LED power components (LED Driver, LifeShield® device, Surge Protector), from the date of sale of such goods to the buyer as specified in Kim Lighting shipment documents for each product.

CAUTION: Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.

HUBBELL — U.S. Patent D568,521, Patent Pending Optics

© 2014 KIM LIGHTING • 16555 EAST GALE AVENUE, CITY OF INDUSTRY, CA 91745-1788 • TEL: 626/968-5666 • FAX: 626/968-5716

NOTE:
LARGE SCALE MOUNTED ON 24' POLE IN PARKING LOT. SIX LOCATIONS. SYMBOL -
SMALL SCALE MOUNTED ON 12' POLE ALONG DRIVE AND PARKING NEAR RESIDENCES.
THREE LOCATIONS. SYMBOL -

4 POLE MOUNTED LIGHTS (TYPE A) WITH HOUSE SIDE SHIELD
SCALE: NO SCALE

KIM LIGHTING

VRB1 LED Round Bollard
Single Function, Vandal-Resistant, Aluminum Shaft
revision 8/7/14 • kl_vrb1led_spec.pdf

Type:
Job:
Catalog number:

VRB1 / Fixture / Electrical Module / Luminaire Finish (includes top cap and shaft) / Option
See page 2

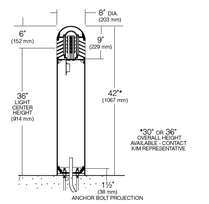
Approvals:

Date:
Page: 1 of 3

Specifications

VRB-LED Models
10 - 20 Diodes

VRB1- Single Function Luminaire (Aluminum Shaft)
Maximum weight: 30 lb



HUBBELL Lighting

Domed Top Cap: One-piece die-cast aluminum secured to louvers by concealed allen screws in keyhole slots. For relamping access, allen screws shall not require complete removal.

Louvers: Aluminum die-cast with vertical support ribs at 90° intervals. Horizontal louver blades shall have a 1⅜" depth, a 65° upward pitch and provide light source cutoff above horizontal. Louver assembly shall be secured to shaft by four internal tie rods.

Lamp Enclosure: One-piece tempered molded glass with internal flutes and full gasketing at bottom edge.

Fixture Head: Allows flow-through ventilation around and above the lamp enclosure.

Shaft: One-piece extruded aluminum, .125" wall thickness with a heavy cast aluminum twist-lock anchor base concealed within the shaft. Concealed set screws shall lock shaft onto the cast anchor base.

Electronic Module: All electrical components are either UL or ETL recognized, mounted on a single plate and factory prewired with quick disconnect plugs. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.

Optical Module: Each LED equipped with a directional optic for maximum beam angle projecting through louver stack spacings. LED boards to be mounted to an anodized inter-locking heat sink extrusion. (Type I) two 5-LED boards for a total of 10-LED. (Type III) three 5-LED boards for a total of 15-LED. (Type V) four 5-LED boards for a total of 20-LED. Available in 580nm Amber, 3000K, 4200K and 5100K color temperatures.

Anchor Bolts: Four ¾" x 10" x 2" zinc plated L-hooks, each with two nuts, washers and a rigid pressed board template.

Finish: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish. Standard colors include (BL) Black, (DB) Dark Bronze, (WH) White, (PS) Platinum Silver, (SG) Stealth Gray, (LG) Light Gray, and (CC) Custom Color (Include RAL#).

Listed to: UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires. RoHS compliant. Meets Buy American provisions within ARRA.

Warranty: Kim Lighting warrants Bollard LED products sold by Kim Lighting to be free from defects in material and workmanship for (i) a period of five (5) years for metal parts, (ii) a period of five (5) years for exterior housing paint finish(s), (iii) a period of five (5) years for LED Light Engines and, (iv) a period of five (5) years for LED power components (driver, surge protector and LifeShield® device), from the date of sale of such goods to the buyer as specified in Kim Lighting shipment documents for each product.

CAUTION: Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE

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5 BOLLARD LIGHT (TYPE B)
SCALE: NO SCALE

Shaper
shaperlighting.com

682-WP SERIES EXTERIOR WALL

		Type
Catalog #		
Project		
Comments		Date
Prepared by		

DESCRIPTION

682-WP "Floating" Wedge Wall Sconce features bronze construction and is available in two sizes.

SPECIFICATION FEATURES

Material
Painted aluminum or solid bronze. 1/8" white acrylic diffuser for CFL/ Incandescent and clear tempered refractive glass for MH. Optional clear tempered glass for full cut-off.

Finish
Premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear.
Standard: Natural Bronze (NBZ) (Sustainable Design).
Note: Bronze will weather to a dark bronze patina.
Premium: Aluminum Paint (ALP), Black Paint (BK), Bronze Metallic Paint (BM), Dark Platinum Paint (DP), Gold Metallic Paint (GM), Graphite Metallic Paint (GRM), Grey Paint (GY), Verdigris (VG), White Paint (WH) or Custom Color (CC).

Optics
Refer to www.shaperlighting.com for complete photometrics.

Ballast
Integral electronic HPF multi-volt 120/277V (347V Canada), thermally protected with end-of-life circuitry to accommodate 26W, 32W or 42W lamps. Metal halide ballasts are HPF open core & coil type, multi-volt 120/277V for the specified lamp wattage. Contact the factory for 347V.

Lamp/Socket
8": One (1) or two (2) 26W or 32W (GX24q-3) triple CFL lamp(s), one (1) 42W (GX24q-4) triple CFL lamp, or one (1) 75W A-19 lamp.
11": Two (2) 26W, 32W (GX24q-3) or 42W (GX24q-4) triple CFL lamps, one (1) 50W, 70W or 100W ED-17 Metal halide lamp or one (1) 100W A-19 lamp.
CFL socket injection molded plastic. INC socket fired ceramic rated for 660W-250V. MH socket ceramic pulse-rated, 4KV. INC socket fired ceramic rated for 660W/250V. Lamps furnished by others.

LED
8" LO:1000 nominal luments at max 15.5W

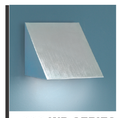
Long-life LED system coupled with electrical driver to deliver optimal performance. Electronic drivers are available for 120-277 applications. The standard driver is ELV reverse phase dimmable. Type IV-Forward throw optic is standard.

Installation
Supplied with a mounting back for a standard 4" J-box or stucco ring. Optional rear (through wall) feed conduit mounting. Surface mount conduit power feed - Contact factory.

Options
Rear (through wall) Feed Conduit Mounting (C), Blunt Nose (BN), Photocell with 1 1/2" deep back support (PH), Quartz Restrike - MH 11" only (QR), Clear Tempered Glass Lense for full cut-off (TGL) (Dark Sky Compliant).

Labels
U.L. and C.U.L. listed for wet location.

Modifications
Shaper's skilled craftspeople with their depth of experience offer the designer the flexibility to modify standard exterior wall luminaires for project specific solutions. Contact the factory regarding scale options, unique finishes, mounting, additional materials/colors, or decorative detailing.



682-WP SERIES
Exterior Wall Luminaire "Floating" Wedge

ARRA
Shaper Lighting certifies that its products satisfy the requirements of Section 1605 of the American Recovery and Reinvestment Act (also known as the ARRA Buy American provision).

DARK SKY
Shaper offers a selection of exterior luminaires that are "Dark Sky Compliant". The Dark Sky Compliant fixtures meet the criteria of the International Dark-Sky Association (IDA) for their effectiveness in limiting the detrimental effects of sky glow, also known as light pollution. Every Shaper exterior luminaire offer a clear, tempered glass option that meets the IES criteria for Full Cut-Off.

QUICK SHIP (QS)
Shaper's Quick Ship program features over 30 standard finishes including Bronze, such as Satin Chrome, Natural Aluminum and Satin Brass, and a wide variety of lamp selections. All products ship in five days from receipt of order.

SUSTAINABLE DESIGN
Shaper has a long-standing history of offering environmentally-friendly fixtures. The copper and bronze alloys used in our fixtures contain recycled metal. Due to recycled content, contribute less undesirable air emissions compared to painted aluminum and are easy to recycle.

ORDERING INFORMATION

Sample Number: 682-11-WP-MH-1/70-277V-VG-BN

Series	Size	Mounting Type	Lamp	Voltage	Finish [5, 6]	Options
682 = Floating Wedge Wall Sconce	8" = 8" 11" = 11"	WP = Exterior Wall	CFL/(26/32/42W-Triple) [1] CFL/(26/32/42W-Triple) [2] INC/1/35 [3] INC/1/50 [3] MH/1/50 [4] MH/1/70 [4] MH/1/100 [4] LED [1] L0/827 [1] L0/830 [1] L0/840	120V 277V [1] 347V [4] LED UNV 120-277V	Standard: NBZ = Natural Bronze Premium: ALP = Aluminum Paint BK = Black BM = Bronze Metallic Paint CC = Custom Color DP = Dark Platinum Paint GM = Gold Metallic Paint GRM = Graphite Metallic Paint GY = Grey VG = Verdigris WH = White	BN = Blunt Nose C = Rear (through wall) Feed Conduit Mounting PH = Photocell QR = Quartz Restrike [6, 7] TGL = Clear Tempered Glass Lens [8]

Notes:
1 Available in 8" only.
2 Available in 11" only.
3 CFL and MH only.
4 Available with CFL only.
5 Premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear.
6 Bronze will weather to a dark bronze patina.
7 MH only.
8 For CFL and INC lamping (TGL is standard with MH lamping).
LED Lamp
L0:1000 nominal lumens at max 15.5W

Cooper Lighting by EATON

ADS042807
2014-05-20 08:26:06

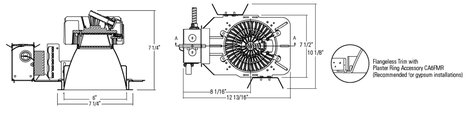
1 EXTERIOR BUILDING MOUNTED (TYPE C)
SCALE: NO SCALE

C6L1520DL(M)
Calculite LED 6", Downlight, Medium Beam

Page 1 of 2

Project: Catalog No: Mfg:
Location: Fixture Type: Qty:

Complete product = light engine + frame-in kit



Ordering guide: Light engine

example: C6L1520DL35KMCCLWEM9VA

Light engine	CCT	Beam spread	Reflector finish	Flange	Options	CRI
C6L1520DL Calculite LED 6", 1500/2000 Lumen, Downlights	27K 2700K 30K 3000K 35K 3500K 40K 4000K	M (medium beam, 0.8 s.c)	CL Clear CCL Comfort clear CCD Comfort clear diffuse CCZ Champagne bronze WH Painted white	W Painted white P Aperture-matching/ polished FT Flush-mount/flangeless[2]	EM Integral emergency test switch[3]	VA 3000K - 4000K (+80) 2700K (79)

Ordering guide: Frame-in kits

example: C6L15NTIZ10VEM

Frame-in kit series	Installation options	Input voltage	Driver	Options
C6L15 Calculite LED 6", 1500 lumen C6L20 Calculite LED 6", 2000 lumen	N New construction	1 120V 2 277V	Z10V 0-10V dimming LD Luxon driver[1] (1000 lumen only)	EM Emergency (new construction w/1000 lumen only)

1. Accessory CA4PYR required for gypsum applications. Reflector flange is 1/4". New construction frame-in kits only.
2. See LED-EM for details and restrictions.
3. For use with HiLume® and Ecosystem® controls.

Features
Aperture: 6" (152 mm) I.D., 7 1/4" (184mm) O.D.
Input Wattage: 27W (1500 Lumens), 39W (2000 Lumens).
Reflector Cone: Aluminum. Provides 50° cutoff to source & source image. Self-flanged.
Depth (including Frame-in kit): 7 1/4" (184mm)
Power Connection: Attaches to frame-in kit via push-in connector (on frame). Removable cover provides access.

Technology
LED board: Array of high brightness royal blue LED's.
Remote Phosphor Technology: Remote phosphor technology provides increased efficiency and color consistency. Phosphor lens assembly positioned in front of LED array converts blue light to white. Color shift will not exceed +/- 100K over life.
Optical Mixing Chamber: Lightolier-specific mixing chamber redirects back-reflected light through aperture resulting in 20% increase in efficiency.
Thermal Management: Heat sink and thermal design along with clean room assembly ensures specified performance.
Rated Life: Based on IESNA LM-80-2008
1500 Lumen – 60,000 hours at 70% lumen maintenance.
2000 Lumen – 57,000 hours at 70% lumen maintenance.
Photometric Performance: Tested in accordance to IESNA LM-79-2008

Options
Dimming capability: 0-10V. See LED-DIM spec sheet.
Emergency capability (integral): Add "EM" suffix. See LED-EM spec sheet.
Emergency capability (inverter): See LED-LMI spec sheet.

Labels
UL (suitable for wet locations), cUL. I.B.E.W.
5 year warranty.

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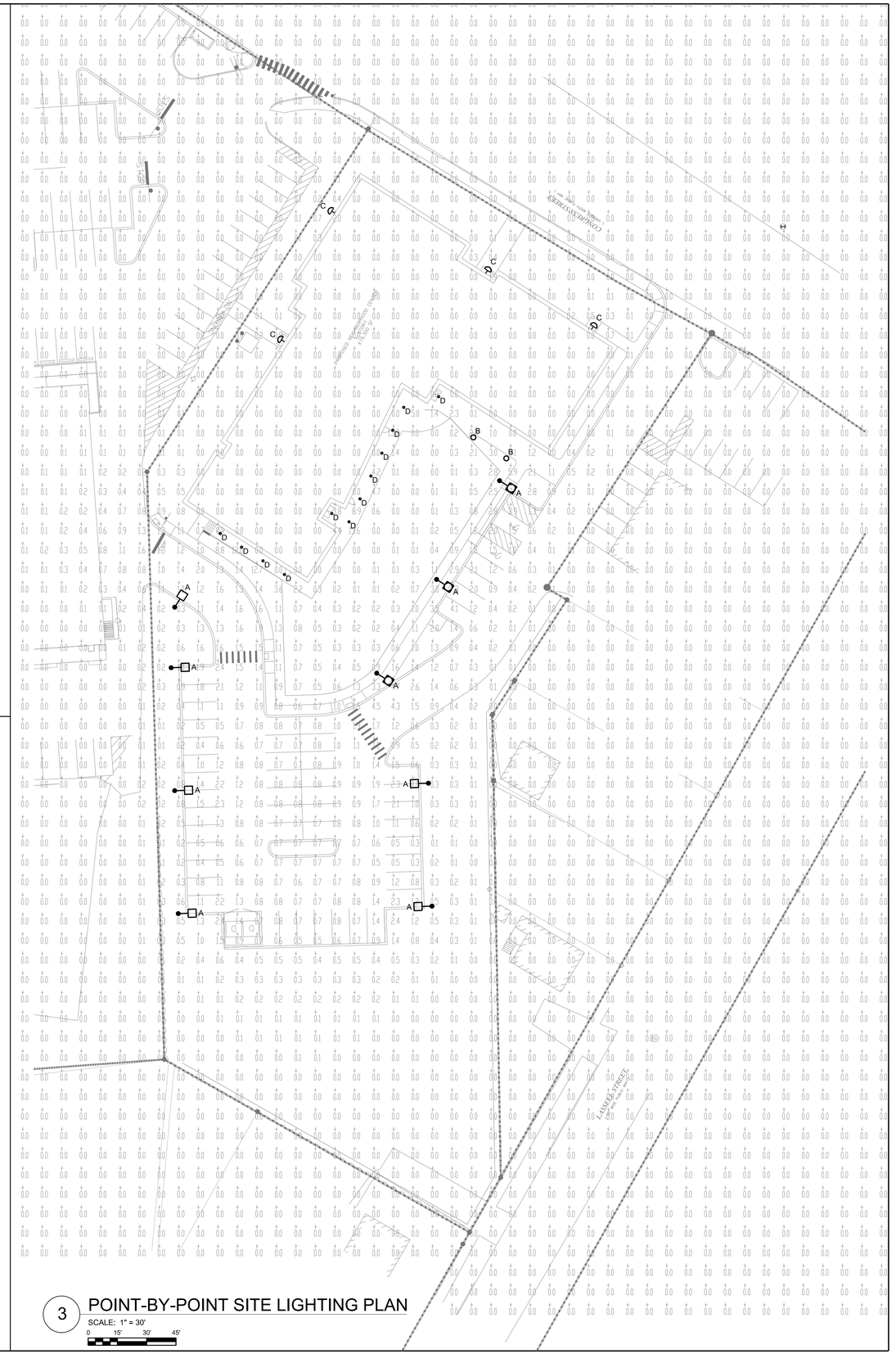
Specifications are subject to change without notice.

C6L1520DL(M) 04/13

PHILIPS LIGHTOLIER

2 EXTERIOR CANOPY MOUNTED (TYPE D)
SCALE: NO SCALE



3 POINT-BY-POINT SITE LIGHTING PLAN
SCALE: 1" = 30'
0 15' 30' 45'

HARRIMAN
AUBURN PORTLAND MANCHESTER

JEWISH COMMUNITY ALLIANCE OF SOUTHERN MAINE
Portland, Maine

Harriman Project No.	15309
Key Plan	Proj North

Issues and Revisions

Mark	Date	Description
--	06-24-15	PLANNING BOARD SUBMISSION

PRELIMINARY NOT FOR CONSTRUCTION

Drawing Scales

PA / PE: JWT
Drawn By: JMB

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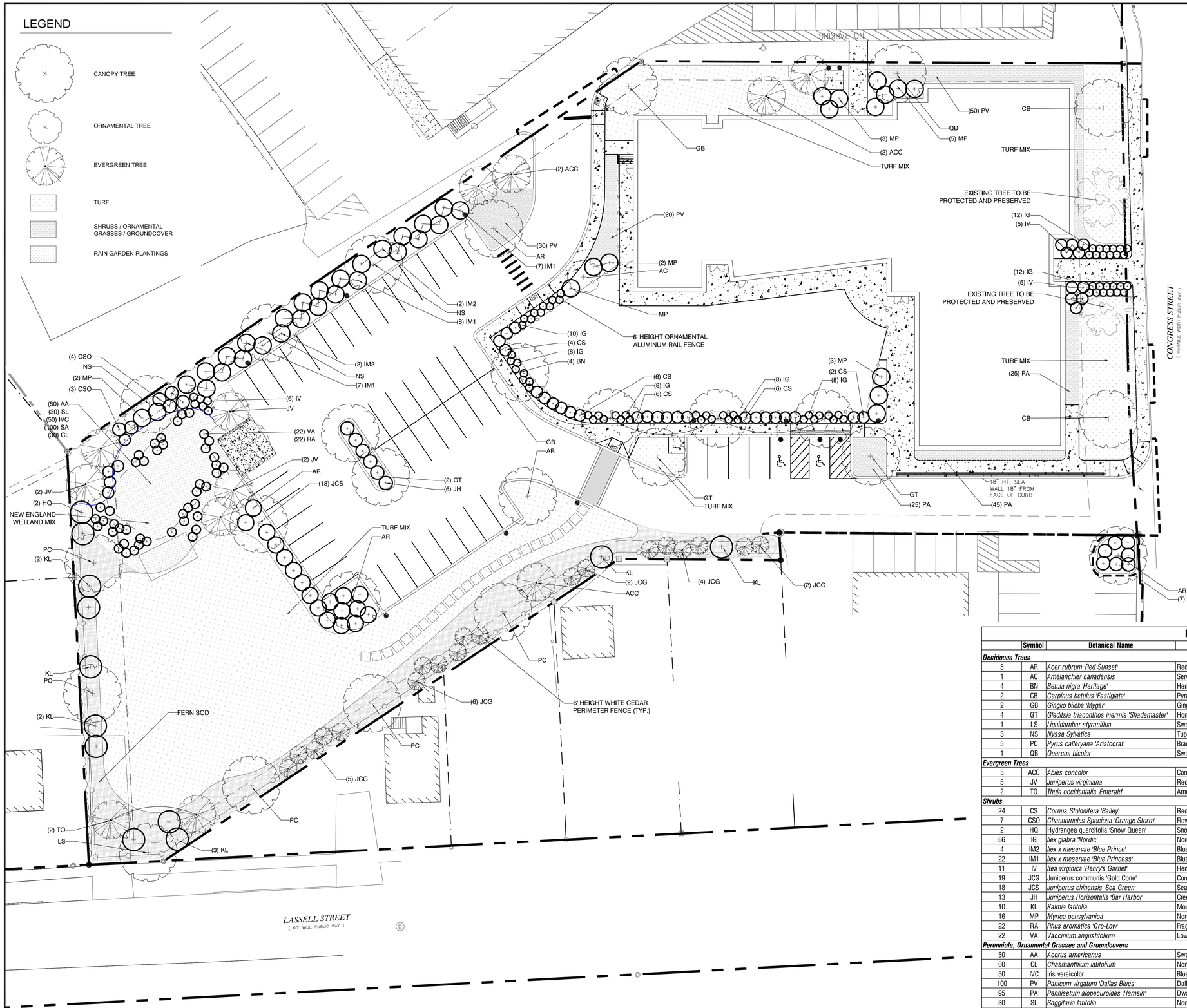
SITE PLAN LIGHTING

E80.1



Plant List

	Symbol	Botanical Name	Common Name	Size	Container	Comments
Deciduous Trees						
5	AR	*Acer rubrum 'Red Sunset'*	Red Maple	3.5" Caliper	B&B	
1	AC	*Amelanchier canadensis*	Serviceberry	3" Caliper	B&B	
4	BN	*Betula nigra 'Heritage'*	Heritage River Birch	3.5" Caliper	B&B	Single Stem
2	CB	*Carpinus betulus 'Fastigiata'*	Pyramidal European Hornbeam	3.5" Caliper	B&B	
2	GB	*Gingko biloba 'Mygar'*	Gingko	3.5" Caliper	B&B	
4	GT	*Gleditsia triacanthos inermis 'Shademaster'*	Honeylocust	3.5" Caliper	B&B	
1	LS	*Liquidambar styraciflua*	Sweetgum	3.5" Caliper	B&B	
3	NS	*Nyssa Sylvatica*	Tupelo	3.5" Caliper	B&B	
5	PC	*Pyrus calleryana 'Aristocrat'*	Bradford Aristrocrat Pear	3.5" Caliper	B&B	
1	QB	*Quercus bicolor*	Swamp White Oak	3.5" Caliper	B&B	
Evergreen Trees						
5	ACC	*Abies concolor*	Concolor Fir	7'-8' HT.	B&B	
5	JV	*Juniperus virginiana*	Red Cedar	7'-8' HT.	B&B	
2	TO	*Thuja occidentalis 'Emerald'*	American Arborvitae	5'-6' HT.	B&B	
Shrubs						
24	CS	*Cornus Stolonifera 'Bailey'*	Red-Twigged Dogwood		CONT.	
7	CSO	*Chaenomeles Speciosa 'Orange Storm'*	Flowering Quince		CONT.	
2	HQ	Hydrangea quercifolia 'Snow Queen'	Snow Queen Oakleaf Hydrangea		CONT.	
66	IG	*Ilex glabra 'Nordic'*	Nordic Inkberry		CONT.	
4	IM2	*Ilex x meservae 'Blue Prince'*	Blue Prince Holly		CONT.	
22	IM1	*Ilex x meservae 'Blue Princess'*	Blue Princess Holly		CONT.	
11	IV	*Itea virginica 'Henry's Garnet'*	Henry's Garnet Virginia Sweetspire		CONT.	
19	JCG	Juniperus communis 'Gold Cone'	Common Juniper		CONT.	
18	JCS	*Juniperus chinensis 'Sea Green'*	Sea Green Juniper		CONT.	
13	JH	*Juniperus Horizontalis 'Bar Harbor'*	Creeping Juniper		CONT.	
10	KL	*Kalmia latifolia*	Mountain Laurel		CONT.	
16	MP	*Myrica pensylvanica*	Northern Bayberry		CONT.	
22	RA	*Rhus aromatica 'Gro-Low'*	Fragrant Sumac		CONT.	
22	VA	*Vaccinium angustifolium*	Lowbush Blueberry		CONT.	Underdrained Soil Filter
Perennials, Ornamental Grasses and Groundcovers						
50	AA	*Acorus americanus*	Sweetflag		2" Plug	Underdrained Soil Filter
60	CL	*Chasmanthium latifolium*	Northern Sea Oats		#1 Pot	Underdrained Soil Filter
50	IVC	Iris versicolor	Blue Flag Iris		2" Plug	Underdrained Soil Filter
100	PV	*Panicum virgatum 'Dallas Blues'*	Dallas Blues Switch Grass		2 Gal.	
95	PA	*Pennisetum alopecuroides 'Hamelni'*	Dwarf Fountain Grass		2 Gal.	
30	SL	*Saggitaria latifolia*	Northern Arrowhead		2" Plug	Underdrained Soil Filter
100	SA	*Scirpus atrovirens*	Green Bulrush		2" Plug	Underdrained Soil Filter
Seed Mix						
		Fern Sod	Fern Sod			
20000 SF	TM	*Turf Mix (Kentucy Bluegrass and Fescue Mix)*				Turf Areas
3000 SF	WM	*New England Wetland Mix*				Underdrained Soil Filter

Tighe&Bond
Consulting Engineers
www.tighebond.com

The Cecil Group
Planning and Design
170 MILK STREET, SUITE 5
BOSTON, MA 02109
P 617 426.5050 F 617 426.5051
cecilgroup.com

Jewish Community Alliance of Southern Maine

Proposed Neighborhood Center

Portland, Maine

Mark	Date	Description

PROJECT NO:	J-0096
FILE:	
DRAWN BY:	ARW
CHECKED:	JF
APPROVED BY:	

LANDSCAPE PLAN

SCALE: 1" = 20'-0"

L-1

PLANNING BOARD REPORT
PORTLAND, MAINE

Bishop Street Apartments
72 Bishop Street
Level III Site Plan and Subdivision Review
2015-060
Avesta 72 Bishop Street, LP

Submitted to: Portland Planning Board Date: July 10, 2015 Public Hearing Date: July 14, 2015	Prepared by: Nell Donaldson, Planner CBL: 293 C002001 Project #: 2015-060

Figure 1: 72 Bishop Street, aerial view

I. INTRODUCTION

Avesta Housing has requested a Level III site plan and subdivision review for a 3-story, 30-unit housing project, the Bishop Street Apartments, at 72 Bishop Street near Morrill's Corner. The building is designed for chronically homeless individuals around the Housing First approach, and includes a large entry lobby, community kitchen, common seating areas, and a library. Landscaping, 12 spaces of surface parking, and stormwater treatment facilities are included in the proposal. The planning board previously considered the plans for the site at a workshop in May of 2015. At that workshop, the board asked the applicant to provide additional context drawings and a staffing plan, to work with the planning division to resolve outstanding issues around a sidewalk proposed for the south side of Bishop Street to the east, and to communicate with neighbors around their remaining questions. In the intervening tie, the applicant has provided additional submittals and met with both staff and neighbors in an effort to meet these requests.

Public notice of the planning board workshop appeared in the *Portland Press Herald* on July 3 and 6, 2015, was posted on the city's web site, and was sent by mail or e-mail to 60 property owners within 500 feet as well as the Planning Division's interested citizens list.

Applicant: Brooks More, Avesta 72 Bishop Street, LP
Consultants: Bob Metcalf, Mitchell & Associates; Stephen Bradstreet, Ransom Consulting; Ben Walter, CWS Architects; Owen Haskell

II. REQUIRED REVIEWS

Waiver Requests	***Applicable Standards***
Street trees – To plant 6 street trees (2 in proximity to the street line and 4 in or near the right-of-way adjacent to the site), with contribution for remainder (24) to street tree fund	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. *30 units = 30 street trees required*
Review	***Applicable Standards***
Site Plan	*Section 14-526*
Subdivision	*Section 14-497*

III. PROJECT DATA

Existing Zoning	B-2c
Existing Use	Single-family residential
Proposed Use	Multi-family residential
Proposed Development Program	30 efficiency units, including common spaces, totaling 21, 374 SF
Parcel Size	52,383 SF

	Existing	***Proposed***	***Net Change***
Building Footprint	826 SF	7,804 SF	6,978 SF
Building Floor Area	1,600 SF	21,347 SF	19,774 SF
Impervious Surface Area	1,206 SF	20,659 SF	19,453 SF
Parking Spaces (on site)	2	12	10
Bicycle Parking Spaces	0	12	12
Estimated Cost of Project	$5,586,058		

Figure 2: 72 Bishop Street, existing conditions

IV. BACKGROUND & EXISTING CONDITIONS

72-78 Bishop Street lies on the south side of Bishop Street approximately 850 feet west of Morrill's Corner. The site is presently occupied by a single-family home. Forested wetlands, housing the headwaters of the Capisic Brook, lie at the rear of the property. An office building and taxi dispatch facility sit to the east of the site, a Masonic Hall to the west, UNE property across the wetlands to the south, and Maine Moped Factory and Portland Collision lie across Bishop Street to the north.

Figure 3: Existing zoning, 72 Bishop Street

The site and its neighboring properties were recently rezoned, at the applicant's request, from Moderate Impact Industrial (IM) to Business B-2c. An IM zone lies across Bishop Street and a Residential R-5 zone lies at the site's rear. A single-family residential neighborhood is located approximately 400 feet to the east on Mayfield Street in an R-5 zone.

V. PROPOSED DEVELOPMENT

The proposal for the Bishop Street Apartments focuses around the development of a three-story, 30-unit building to house formerly homeless individuals, many with significant medical conditions, much in the same vein as Avesta Housing's two other Housing First projects in the city, Florence House and Logan Place. The proposal is a direct response to a call from the City Council identifying the need for additional permanent housing for homeless individuals in locations beyond the city's peninsula. The building's 30 efficiency units would be constructed with shared library, kitchen, meeting, laundry, and interior and exterior social spaces. The building would also include a "private medical office and care room" *(Attachment V)*. The main entrance is proposed via a vestibule off Bishop Street, and the plans include a sidewalk connection on the south side of Bishop Street to the east. 12 parking spaces are proposed, as is landscaping. Stormwater treatment would also be provided on site *(Figure 4)*.

The applicant has provided an updated staffing plan in the revised submittal *(Attachment V)*. This memo augments that submitted with the preliminary plans *(Attachment M)*, and provides references to studies documenting the success of the Housing First model. As previously proposed, Avesta would develop the site, provide building maintenance, and serve as the landlord for the eventual tenants of the building, and Preble Street would provide on-site supportive services. In their original staffing memo, Preble Street describes a plan to staff 10 full-time employees at the site, including "one coordinator, one supervisor, and one team leader managing seven housing support workers" *(Attachment M)*. The revised memo reinforces Preble Street's plan to station three staff on site at all times, as "[t]his pattern allow monitoring of the entry, common space, and individual units to ensure safety and to respond to specific tenant concerns while enabling workers to intervene in individual crises as required" *(Attachment V)*. Based on the Preble Street web site for Logan Place, it is assumed that these staff would not only monitor the building, but support tenants in "developing and enhancing life skills," "help with…household management, shopping, use of transportation, and meal preparation," and "facilitate access to community resources, such as health clinics, and mental health and substance abuse services." The project narrative further states that "[m]edical staff will be available on site during specific hours and will coordinate daily with Preble Street…to coordinate referrals, follow up, and monitoring of individual tenants" *(Attachment A)*.

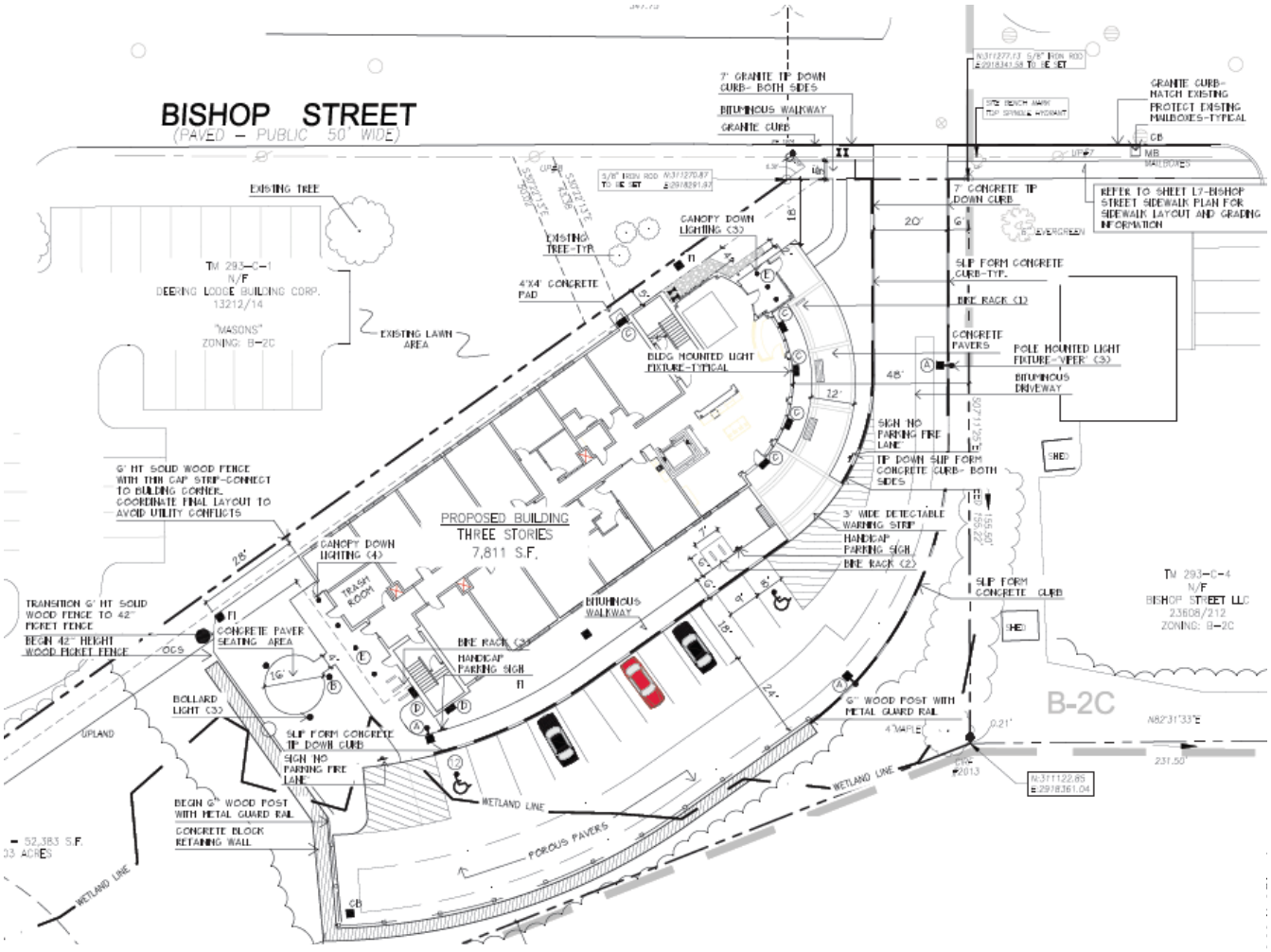


Figure 4: Final site plan, Bishop Street Apartments

VI. PUBLIC COMMENT

The Planning Division received correspondence from one neighbor following the workshop on this proposal. This email questioned the parking assumptions contained in staff's review, specifically whether residents of the proposed development would be permitted to own cars *(Attachment PC-1)*. This question is discussed in detail below.

The applicant has provided neighborhood meeting minutes which demonstrate that neighbors asked questions about the proposed sidewalk on the south side of Bishop Street, wetland impacts, the architecture, and the tenant population *(Attachment T)*. At the planning board workshop, neighbors raised similar concerns, questioning the potential wetland and traffic safety impacts of the project, as well as the plans for the proposed Bishop Street sidewalk, building staffing, and tenant composition. It should also be noted that, during the associated zoning map amendment review, a number of neighbors expressed concerns with respect the project's environmental, traffic, and security impacts, as well as the project's scale. Light and noise trespass were also discussed.

The applicant has met on site with neighbors on several occasions following the workshop on this proposal.

VII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed as evidence of right, title, and interest *(Attachment C).*

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided two letters as evidence of Avesta's technical capacity to develop affordable housing. The applicant has also provided a letter from Gorham Savings Bank expressing an interest in financing the project *(Attachment H).*

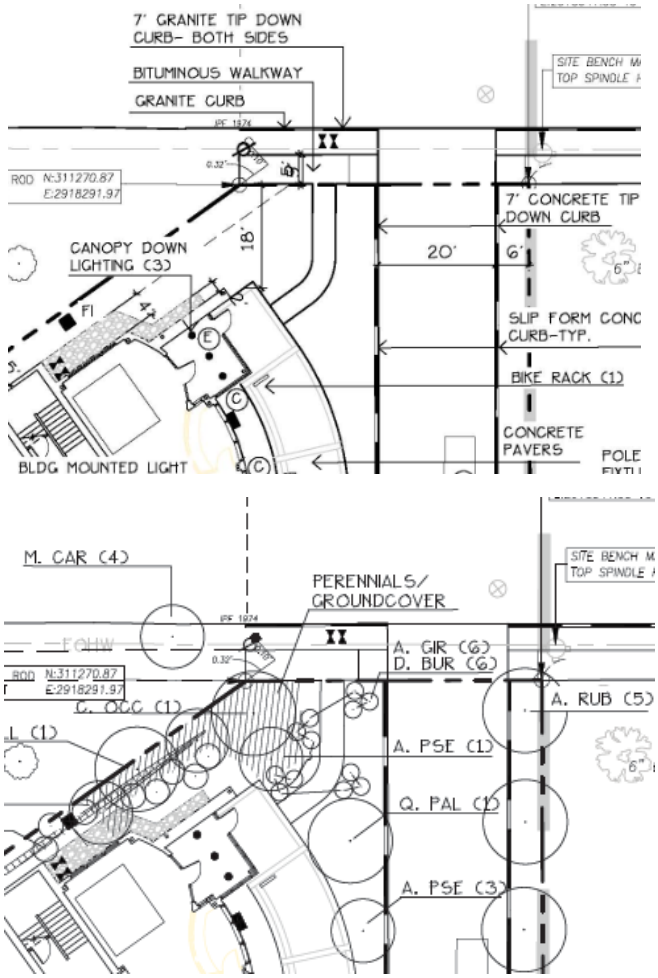


Figure 5: Bishop Street frontage and setback with revised landscaping

IX. ZONING ANALYSIS

The applicant has submitted a zoning analysis, which notes that the development, as proposed, does not meet two requirements of the B-2c zone *(Attachment I)*. These include the following:

1. Front Yard Maximum. The B-2c zone establishes a front yard maximum of 10 feet, which the applicant continues to propose to exceed. At its closest point, the building is planned to sit 18 feet from the front property line *(Figure 5)*. The ordinance does provide for an exception, stating that "the Planning Board or Planning Authority may approve a different amount for irregularly shaped lots or lots with frontage less than 40 feet provided this standard is met to the maximum extent practicable" *(Section 14-185).* The applicant has claimed in their site plan submittal that 72 Bishop is an irregularly shaped lot and that they have sited the building as close to the street as possible. The applicant writes,

"[t]he property is 50 feet wide at the property line and does not offer the ability to locate a 24 foot driveway and the primary building façade towards the street. Because of the low traffic volume entering the site and to allow the building to be as close to the road as possible, the driveway was designed as 20' wide. The building is located as close as possible to the front property line (18') to achieve the appearance of an active street front" (Attachment I).

The B-2 dimensional requirements also include a provision that, "[w]here setbacks exceed 10 feet, a continuous, attractive, and pedestrian-scaled edge treatment shall be constructed along the street, consisting of street trees spaced at no more than 15 feet on center, approved by city arborist, and a combination of landscaping no less than 4 feet deep, ornamental brick or stone walls or ornamental fencing" *(Section 14-185).* In the revised submittal, the applicant has added perennials/groundcover, hackberry and red maple trees, and azaleas and daphnes in the space between the building and the street line in an effort to provide sufficient edge treatment in this location *(Figure 5).* The arborist has reviewed the plans and generally found them satisfactory. The applicant is requesting that the board approve the project with the proposed deviation from the front yard maximum of the B-2c.

2. Residential Parking Requirement. Division 20 of the land use ordinance requires one parking space per dwelling unit for residential development in the B-2, B-2b, and B-2c zones. At this ratio, the project would be required to provide 30 parking spaces for the 30 residential units. However, *Section 14-332.2(b)* of the ordinance also provides an exception for affordable housing, whereby "the planning board

may establish a parking requirement for affordable housing units for rent or sale within an eligible project that is less than one parking space per affordable housing unit, regardless of the size of the structure." The applicant has proposed 12 spaces, less than the 30 technically required by ordinance, explaining that the project is expected to generate limited demand based on comparables from Avesta's experience at Logan Place. The applicant's traffic engineer, Gorrill-Palmer, writes that the parking demand at Logan Place is generally a product of staff, outside medical providers, and social workers. Given anticipated staffing levels at the Bishop Street Apartments, they estimate a total demand for the Bishop Street site of 11 spaces *(Attachment M)*.

In his original review comments, Tom Errico, the city's traffic engineer, assumed that the applicant would restrict tenant parking. At the board's workshop in May, Avesta corrected this assumption, stating that tenant car ownership would not, in fact, be limited. In response, Mr. Errico has reconsidered Gorill-Palmer's parking demand estimates and revised his comments on the proposed parking supply, writing,

> *The applicant has requested a waiver from the City's Technical Standards as it relates to off-street parking requirements. Gorrill-Palmer has provided a summary of parking needs based primarily on staffing requirements. According to the analysis, 12 parking spaces will be sufficient for demand needs...*
>
> *It is suggested that an annual monitoring report be provided to the Planning Authority as it relates to parking and automobile ownership by tenants and if parking demand cannot be accommodated on-site, the applicant shall identify strategies to manage parking conditions.*

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

X. SITE PLAN SUBMISSION REQUIREMENTS *(Section 14-527)* and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS *(Section 14-496)*

In their final submittal, the applicant provided a revised survey in an attempt to address comments by Bill Clark, the city's surveyor *(Attachment 2)*. Mr. Clark's comments on the revised survey were not available for publication in this report. In addition, the applicant has indicated that, due to the availability of the surveyor, a survey for the eastern end of Bishop Street could not be submitted prior to hearing. A final revised survey, addressing the comments of Mr. Clark, has been included as a condition of approval.

The applicant has noted that the grading plan will require revisions based on survey edits requested on the part of Mr. Clark. Thus, the review and approval of the revised grading plan has also been included as a condition of approval.

Mr. Clark, David Margolis-Pineo, of the city's Department of Public Services, and Jen Thompson, Associate Corporation Counsel, have reviewed the draft subdivision plat and provided comments *(Attachments 2, 3, and 4)*. The applicant has submitted a revised plat in an attempt to address these comments. Given additional changes which will be necessary following the planning board hearing, a final subdivision plat has been included as a condition of approval.

Lastly, the applicant has submitted a construction management plan in the final submittal *(Plan 25)*. This plan depicts the location of construction fencing and a construction entrance, but contains no information about proposed work in the right-of-way to the east of the site. Mr. Errico has asked for revisions as a condition of approval. He writes,

> *The applicant has submitted a construction management plan for site work and I find it to be acceptable. A construction management plan for construction of the sidewalk will be required*

and should be submitted for review and approval.

XI. SUBDIVISION REVIEW *(Section 14-497(a))*
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
Currently, the vast majority of the site is covered in grass or low scrub brush, and drains to the wetlands to the south, which serve as the headwaters of the Capisic Brook, an urban impaired stream. The proposed development would result in an increase of over 19,000 SF in impervious surface and change drainage patterns on the site. All runoff is proposed to flow through treatment systems which will mitigate for both quality and quantity. David Senus, consulting civil engineer, has reviewed the stormwater management plan *(Attachment N)*. Given the findings of this review, the proposal is not expected to generate undue air or water quality impacts.

2 & 3. Adequacy of Water Supply
The applicant has provided evidence of capacity from the Portland Water District *(Attachment G)*.

4. Soil Erosion
The applicant has provided a soil survey noting that "soils on the site are representative of the urban environment," including "fill material, relic topsoil and glaciomarine deposits including silty clay." The geotechnical report recommends excavation of fill material and backfilling with compacted granular borrow below the development site. The project is not expected to cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition results.

5. Impacts on Existing or Proposed Highways and Public Roads
The applicant has provided a traffic study, prepared by Gorrill-Palmer Consulting Engineers. Tom Errico, the city's consulting traffic engineer, has reviewed this traffic study and provided comments, discussed in detail under site plan review below.

6. Sanitary Sewer/Stormwater Disposal
The applicant has provided a wastewater capacity letter from the Department of Public Services *(Attachment G)*. A review of the proposed stormwater management system is discussed in detail below.

7. Solid Waste
The applicant has proposed an internal trash and recycling room for residential use and has stated that a private hauler will be contracted for the removal of solid waste. The application states that the "hauler will back into the driveway off of Bishop Street [and]…wheel container units to the truck." Given this, the development is not anticipated to cause a burden on the city's system.

8. Scenic Beauty
This proposal is not deemed to have an adverse impact on the scenic beauty of the area.

9. Comprehensive Plan
The applicant has provided a narrative regarding consistency with the city's comprehensive plan *(Attachment K)*. Consistency with the comprehensive plan is discussed in more detail under site plan review below.

10. Financial and Technical Capacity
As noted above, the applicant has submitted a letter from Gorham Savings Bank indicating the intent to consider project financing (*Attachment H*). Letters attesting to the proficiency of Avesta Housing have also been provided *(Attachment H)*.

11. Wetland/Water Body Impacts
Altogether, the proposed development would impact just over 3,000 SF of wetlands. The applicant has made efforts to minimize this impact by siting the building as far from the wetland as possible, proposing limited parking and thus limited pavement, and designing retaining walls rather than grading at the project's rear. As noted above, the applicant proposes to treat all stormwater proposed to enter these wetlands. This system and wetland impacts are discussed in detail below.

12. Groundwater Impacts
There are no anticipated detrimental impacts to groundwater supplies.

13. Flood-Prone Area
Per the city's existing flood maps, the development is not proposed in a flood zone.

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

The applicant has provided trip generation, access, and crash analyses prepared by Tom Gorrill of Gorrill-Palmer Consulting Engineers *(Attachment M)*. The Gorrill-Palmer study estimates trip generation based on data collected at Logan Place, which is managed by Preble Street in much the same fashion as is anticipated at Bishop Street. Based on the Logan Place data, Gorrill-Palmer estimates a total of 13 AM peak hour and 11 PM peak hour vehicular trip ends to/from the site, mostly as a product of staff. Preble Street, who will provide services at the building, has written that all tenants will be afforded bus passes, that Preble Street has an account with Elite Taxi for emergency use, and that many clients will qualify for subsidized paratransit service. Given the low anticipated traffic volumes, no vehicular level of service analysis for area intersections was conducted.

Mr. Errico has reviewed the trip generation estimates and provided the following comments,

> *I have reviewed the traffic generation estimate prepared by Gorrill-Palmer and concur with the estimate that approximately 13 trips are projected to be generated during the AM peak hour and 11 trips during the PM peak hour. Based upon this level of traffic, I do not expect the project to have a significant impact to traffic safety and operations in the study area. It should be emphasized that while the tenants of the project are not expected to own cars, it is expected that they will be using the proposed sidewalk to gain access to METRO buses at Forest Avenue and general commercial land uses in the area.*

It should be noted that, during the workshop, one neighbor expressed concerns regarding traffic safety on Bishop Street. With respect to vehicular traffic safety, the Gorrill-Palmer study pulled crash data from the area, including Morrill's Corner and the intersection of Bishop Street and Warren Avenue. Mr. Errico writes,

> *The crash data provided by the applicant notes that the Morrill's Corner intersection(s) had significant crashes over the report 2011 to 2013 three-year period. While the Forest Avenue/Stevens Avenue/Bishop Street intersection was not classified as a High Crash Location, it still had 30 reported crashes. The Forest Avenue/Allen Avenue intersection is a High Crash Location and had 53 reported collisions. Given that the project is not generating a significant amount of traffic, I do not expect safety conditions to be exacerbated.*

b. *Access and Circulation*

As a corollary to the low vehicular trip generation noted above, the development poses the potential to generate significant pedestrian traffic. In fact, the relatively limited parking supply proposed by the applicant virtually guarantees a larger than average pedestrian mode share. Further, it should be noted that, during the associated zone change review, pedestrian access to goods, services, and transit connections at Morrill's Corner formed a central component of the applicant's argument for the selection of this site for the purposes of housing. During that review, the board questioned the applicant regarding the adequacy of pedestrian access from the site to both businesses and public transportation. In reports to the board, Mr. Errico noted the lack of sidewalk on Bishop Street and stated that, at the time of development, "a sidewalk system, without gaps, should be provided between uses on Bishop Street and Forest Avenue." It should also be reiterated that, during the board workshop on this matter, neighbors expressed concerns regarding pedestrian safety on Bishop Street.

In response to Mr. Errico's comments, the applicant previously provided preliminary plans showing a proposed sidewalk extending for approximately 500' east of the site on the south side of Bishop Street to the location of a short segment of existing sidewalk at 12 Bishop Street *(see proposed sidewalk as blue line in Figure 6)*. This plan left what currently exists as a 125 foot open curb cut at the corner of Bishop Street and Stevens Avenue adjacent to the property at 2-10 Bishop Street *(see purple line in Figure 6)*. Staff notified the applicant prior to the planning board workshop that they would be required to provide a sidewalk in this location and thus extend the sidewalk all the way to Forest Avenue/Stevens Avenue, as stated during the zone change review. At the workshop, the applicant argued that they shouldn't be required to complete this last sidewalk segment, citing the cost implications.

At the request of the board and in the time since the workshop, staff has engaged the applicant in an attempt to resolve this outstanding issue. In order to soften the financial impact of the sidewalk construction, DPS staff offered the applicant recycled granite curbing at the city's reduced price for both the outstanding sidewalk segment as well as the entire stretch of proposed sidewalk from the site to Forest Avenue/Stevens Avenue. Ultimately, in their July 9 response to comments, the applicant agreed "to construct the last section of sidewalk (continuous open curb cut section)" *(Attachment X)*. They noted, "[w]e have had initial discussions with City staff concerning the potential of the City providing the used granite required for this added section of sidewalk and will continue to have discussion as the design of the sidewalk improvements are finalized." Given the timing of this resolution, the design and construction of the entire sidewalk, from 72 Bishop Street to Stevens Avenue/Forest Avenue, has been drafted as a condition of approval.

Figure 6: Bishop Street sidewalk to Morrill's Corner as proposed by applicant (blue) and requested by staff (blue and purple)

Regarding the sidewalk plans, it should also be noted that, as currently designed, the installation of the sidewalk will require both temporary construction and permanent grading easements. Mr. Margolis-Pineo writes,

> *It is recommended that as a condition of approval, the applicant be required to obtain all necessary construction easements to complete this project.*

In their final submittal, the applicant states that they have "met with the abutters to review the design of the sidewalk and the need to obtain grading easements along their respective frontages" *(Attachment X).* DPS and planning staff have offered to facilitate the development of these easements.

With respect to on-site circulation, staff has reviewed the layout of pedestrian access and generally found it acceptable. Vehicular access is proposed via a 20' curb cut from Bishop Street. Mr. Errico has reviewed the driveway layout and found it acceptable.

c. *Public Transit Access*

The proposed development is not located along a public transit route *(Figure 7).* As such, no provisions for transit access are required on the site. The proposed sidewalk to Morrill's Corner, assuming it extends to Stevens Avenue, will serve as a pedestrian connection to existing transit service. At the board's request, staff has approached Metro regarding current plans to rearrange existing bus stops at Morrill's Corner. No response was received from Metro prior to the publication of this report. Bruce Hyman, the city's Transportation Program Manager, is pursuing the potential for relocating bus stops with Metro.

d. *Parking*

As noted under the zoning review above, Division 20 of the land use ordinance requires one parking space/unit for residential development located in the B-2, B-2b, or B-2c zone, but the applicant has

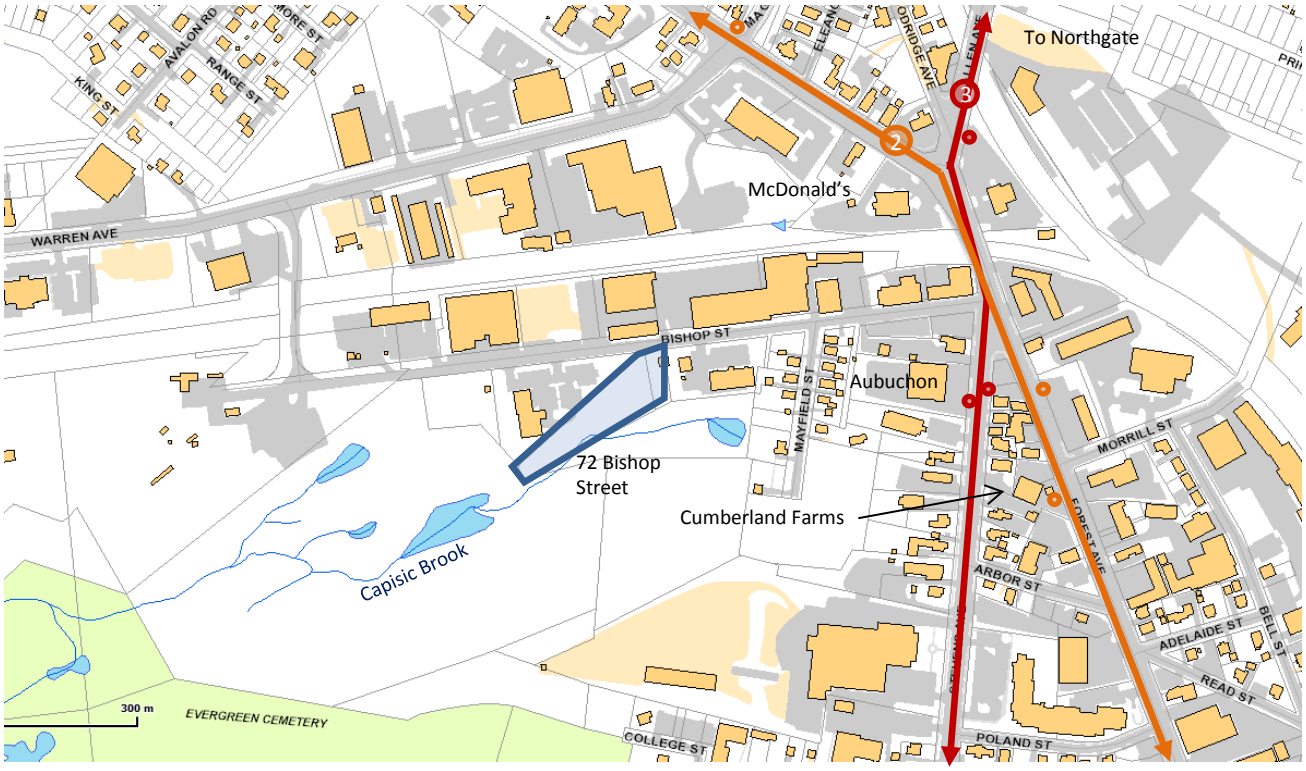


Figure 7: Existing transit service, Morrill's Corner

requested an exception under the affordable housing provisions of the land use ordinance. Mr. Errico has generally expressed his support, suggesting a condition as noted above. Mr. Errico has also reviewed the parking lot layout and driveway condition and found them acceptable.

The final plans include 6 bicycle racks providing 12 bike parking spaces. All of these are located on private property, as the right-of-way in front of the site is constrained. One of these racks is proposed at the building's front; the other five are at the side or rear. The 12 spaces proposed meet the site plan standard of two spaces/five dwelling units for residential structures.

e. Transportation Demand Management

A transportation demand management plan is not required. However, as noted above, the project has been designed to incorporate some transportation demand management strategies, including paratransit services and transit subsidies.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

As noted previously, the Capisic Brook crosses onto the southwestern corner of the site. This segment of the Capisic is often cited by the Department of Public Services as one of the city's cleanest water resources; the *Capisic Brook Watershed Management Plan*, which was published in 2012, documents results of a 2003 monitoring program which determined that the east tributary of the Capisic, which roughly parallels Bishop Street here, met Class C water quality standards. Doug Roncarati, of the city's Department of Public Services, has reported that staff from the Maine Department of Environmental Protection have found that water quality in this segment of the brook has actually improved since the 2003 monitoring program and now meets Class A water quality standards *(Attachment 3)*.

Given this, there are concerns about stream impacts and wetland disturbance on the site. The applicant has made efforts to site the building over 75 feet from the stream, minimize wetland disturbance to just over 3,000 SF, and develop adequate plans to treat stormwater prior to discharge. In their revised submittal, the applicant states that "the proposed infrastructure to treat stormwater quality exceeds DEP Chapter 500 standards for an urban impaired stream as well as the expectation for preserving the Capisic Brook Watershed" *(Attachment U)*. In addition to reviewing the stormwater treatment system, discussed below, Mr. Senus has reviewed wetland impacts and spoken to the Maine DEP's and Army Corps of Engineers' review of the wetland impacts of the proposal,

> *The Applicant has noted that an NRPA Tier 1 Permit Application and an ACOE Category 1 Permit Application will be submitted to the MaineDEP and ACOE, respectively, and that copies of the applications will be submitted under separate cover; copies of the permit approvals should be provided upon receipt.*

A condition of approval has been drafted in this regard.

Similarly, it should be noted that a peer review conducted in 2007 by Call of the Wild Consulting and Environmental Services for the Gullivers Field area immediately south of Bishop Street found that that site provides "very significant migratory passerine (songbird) stopover habitat for both the spring and fall migrations. In fact, this area is a premier destination site for spring birding because of the large variety of bird species and numbers." The review concludes, "this area is a well-documented, important ecological area in Portland that Call of the Wild recommends permanent protection [sic]…" The applicant has made efforts to minimize the impact of the development on the forested area around the wetlands at the property's rear. At the request of Jeff Tarling, the city's arborist, the applicant has added a note on the site and landscaping plans stating that the contractor will demarcate tree saves and wetland protection areas prior to construction.

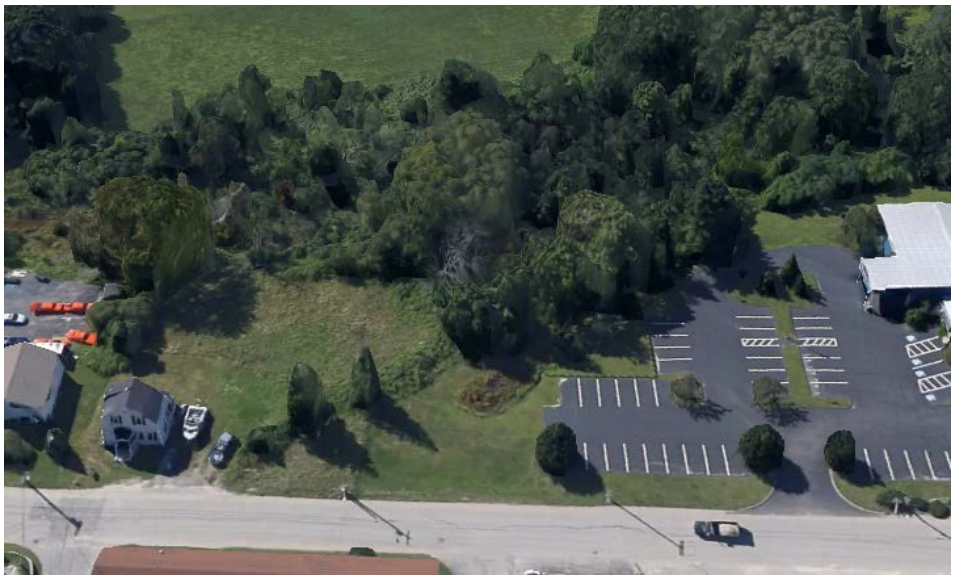


Figure 9: 72 Bishop Street, existing vegetation as seen from the north, with Gullivers Field at rear

b. Landscaping and Landscape Preservation

As noted above, the site is currently forested at rear around the Capisic Brook and associated wetlands *(Figure 9).* In the final plans, the applicant proposes to preserve a considerable amount of this forested area, including existing vegetation on the eastern and southwestern sides of the site. The applicant has revised the proposed landscaping on the UNE property line to include native plantings, as requested by Mr. Tarling; added plantings at the street edge, as noted above; and added understory plantings along the building's east facade. The applicant also continues to propose understory plantings at the rear of the building.

In the workshop memo, staff commented on the location of the plantings, requesting that the applicant consider adding or relocating some of the understory landscaping to the western side of the building to buffer the development from the adjacent Masonic Lodge parking area. The revised plans continue to show the elimination of two existing trees and no new landscaping in this location, as this area is constrained in size and proposed with a vegetated soil filter. At the suggestion of the arborist, the revised plans do depict four trees in the right-of-way in front of the Masonic Lodge as a means of softening this perspective on the building. The applicant has stated that these trees could be relocated to the Mason's property adjacent to the site contingent on an agreement with the Mason's. Staff has drafted a condition of approval suggesting that the treatment of this western side of the building be resolved for review and approval by the arborist.

The applicant has requested a waiver from the street tree provisions of the ordinance, which require that a proposal include street trees at a ratio of one per unit planted in the right-of-way at 30 – 45 feet on center. The site plan ordinance includes language which allows the planting of street trees in the front yard within 10 feet of the property line in cases when site constraints prevent planting in the right-of-way. Two of the applicant's trees fall within this range, and, as previously discussed, the applicant has also proposed four additional trees in the right-of-way in front of the Masonic Lodge to the site's west. DPS staff has indicated that this location is acceptable and, assuming they remain, that they should be counted toward the street tree requirement. Contributions to the tree fund for the remaining 24 trees will be required.

c. Water Quality/Storm Water Management/Erosion Control

The applicant has submitted a revised stormwater management narrative by Ransom Consulting which describes the plan to treat the stormwater from 19,000 SF of additional impervious surface through the use of paver drain and filtered roof drain systems, both of which would lead to R-Tanks for storage and ultimately outlet near the wetlands at rear. Mr. Senus has reviewed the narrative and the associated stormwater plans and has no outstanding comments. It should be noted that, as the project lies within the

watershed of an urban impaired stream, the applicant will be required to make an in-lieu compensation fee payment of $1,927. This has been included as a condition of approval.

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, especially those plans addressing the need for affordable housing. *Housing: Sustaining Portland's Future* highlights the need for supportive housing with a goal particularly targeted towards this housing type. The housing plan recommends that the city should "[e]ncourage proposals from developers that will transition homeless families and individuals out of emergency shelters and transitional facilities into permanent housing, including single room occupancy (SRO) units." In addition, the report of the city's Homelessness Prevention Task Force, issued in November 2012, includes recommendations designed to address the city's issues with homelessness, many of which apply here. Among these, the report recommends "a focus on providing appropriate permanent housing and support in the community for individuals, families, and youth as quickly as possible…Meeting this goal will…require constructing three new housing first units consisting of 35 units each and appropriate supports for people who are chronically homeless (4)."

b. Public Safety and Fire Prevention

At prior meetings related to the related zone change request, responding to neighborhood concerns, board members requested that the applicant provide information related to the potential security and safety impacts of the proposed development. Board members asked explicitly for police department data related to security around Avesta's existing Housing First developments. The applicant provided a testimonial from Vernon Malloch of the Portland Police Department regarding Logan Place, stating that "Logan Place has successfully served as a tested model with no significant impact on the surrounding neighborhood" (*Attachment S)*, but the board stressed the importance of additional information.

In response, the Portland Police Department provided an analysis of calls for service at Logan Place between 2005 and 2014 *(Attachment T)*. The analysis includes explanations of the number of calls of various types, including, most prominently, refusing to leave/bothering and behavioral complaints. The memo also addresses drug-, assault-, and weapons-related calls, noting that many of these involved false alarms or repeat violators. The memo states that "few calls [at Logan Place] resulted in police reports or arrests. None of the [calls for service] were for serious crime types," and concludes that "[w]e can anticipate an increase in police calls for service with development of any otherwise vacant parcel. Housing of the chronically homeless as takes place at Logan Place further increases the likelihood of an increase. Data review suggests there has been no negative impact on the neighborhood from a public safety standpoint. Other reports and studies have shown the population targeted for housing in this model draw significantly more police resources when they are homeless." The applicant has provided references for these studies in their revised submittal *(Attachment V).*

Given the concerns about public safety and security on site, the applicant has generally made efforts to use site design to balance issues regarding natural surveillance and visual impacts to adjacent residential properties. In the final submittal, the applicant has indicated that there will be building-mounted surveillance cameras for monitoring the exterior seating area at the site's rear. The applicant has also provided a photometric plan meeting the city's technical standards *(Plan 24).*

With respect to fire prevention, the applicant proposes to provide 6" water service from Bishop Street for the building's internal sprinkler system. An existing hydrant is located just to the east of the site entrance. At the request of Keith Gautreau, of the city's Fire Prevention Bureau, the applicant has added 'No Parking Fire Lane' signs adjacent to the striped areas of the parking lot. Fire has indicated their general approval.

c. Availability and Capacity of Public Utilities
The applicant has proposed to bring water for both fire suppression and domestic service from a 12" water main in Bishop Street. Sewer will be serviced from an existing 8" line in Bishop Street and natural gas will be supplied from an existing 8" line in Bishop Street. The applicant has provided capacity letters for both water and sewer *(Attachment G).* Electrical, telephone, and cable service is proposed via a pole from Bishop Street to the west of the site. This arrangement requires an easement from the direct abutter, the Masonic Lodge. The applicant has contacted the abutter in an effort to reach an agreement regarding this easement. A condition of approval has been drafted in this regard.

4. Site Design Standards

a. Massing, Ventilation, and Wind Impact
No comments.

b. Shadows
No comments.

c. Snow and Ice Loading
The applicant has indicated in their preliminary submittal that they would contract with a private plow company to maintain the driveway and sidewalk in the event of snow. Snow storage is depicted at the southwest edge of the parking lot in the plans. The applicant has stated explicitly that snow will not be placed in the adjacent wetland, and has added a note to the plat to indicate this.

d. View Corridors
There are no comments.

e. Historic Resources
There are no comments.

f. Exterior Lighting
The applicant has provided a photometric plan and cut sheets for all exterior lighting *(Plan 24 and Attachment P).* The photometric plan shows no light trespass, and all fixtures meet the city's *Technical Manual* standards.

g. Noise and Vibration
No comments.

h. Signage and Wayfinding
No signage or wayfinding is proposed at this time.

i. Zoning-Related Design Standards
In the final submittal, the applicant has provided context drawings as requested by the board *(Plans 20-23).* These drawings depict the proposed building within the context of both existing development as well as potential development as allowed by the recent rezoning. The images also show the design from front and rear.

Planning staff reviewed the plans and drawings for conformance with the multi-family design standards (*Design Manual, Section (i)).* Caitlin Cameron, the city's urban designer, documented the findings of the review, writing,

> *Standard 1 – The surrounding context tends to be more commercial in use and character. Additionally, the neighboring residential context is most often single-family or other small-scale buildings. Therefore, the multi-family, large-scale building proposed is not*

the same type of residential project and is therefore not able to have the same character. The project uses a mix of building materials that, in combination with the fenestration, projections, and the varying forms and roof lines, provide positive visual interest as stipulated in the Standard.

Standard 2 – A building in a B-2 zone should contribute to the street wall. However, this property has an usual lot configuration and very little frontage. As such, it is understandably difficult to build to the street. The principal entry is relatively close to the street and provides good visibility. A direct pedestrian path is provided from the sidewalk to the main entry.

Figures 10 and 11: Bishop Street Apartments in context from front and rear.

Standard 3 – The project provides a garden space and screening and landscaping elements as required by the Standard. The outdoor seating area is screened from neighboring parking lots with a 6' solid wood fence. A 42" wood picket fence separates the wetland area from the seating area. Consider providing additional landscaping/screening to the Northwest property line to buffer dwelling units from the neighboring parking lots.

Standard 4 – Overall the project has a high level of fenestration to provide resident access to light and air. Storage is provided.

Standard 5 – Parking is well screened and positioned away from the street.

Standard 6 – Not Applicable

It should be noted that previous comments from staff related to the treatment of the building bays has been resolved with no change to the building elevations.

XIII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the planning board approve the proposed Bishop Street Apartments at 72 Bishop 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 July 14, 2015 for application 2015-060 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the planning board hearing:

1. The Planning Board **finds/does not find** that the applicant has demonstrated that site constraints prevent the planting of all required street trees. The planning board **waives/does not waive** the site plan standard (*Section 14-526(b)(iii)*) requiring on street tree per unit for multi-family development and concludes that the applicant shall make a financial contribution of $4,800 for 24 trees to Portland's tree fund.

B. 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 July 14, 2015 for application 2015-060 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 condition 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 Services, 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 July 14, 2015 for application 2015-060 relevant to the site plan regulations; and the testimony presented at

the planning board hearing, the planning board finds that the plan **is/is not** in conformance with the site plan standards of the land use code, subject to the following conditions of approval that must be met prior to the issuance of a building permit, unless otherwise stated:

1. Beginning one year following certificate of occupancy, the applicant shall submit an annual report documenting tenant automobile ownership and parking demand, as well as measures to manage parking conditions as necessary, for review and approval by the Planning Authority;

2. The applicant shall submit a revised survey for review and approval by the city's Department of Public Services;

3. The applicant shall submit a revised grading plan for review and approval by the city's Department of Public Services;

4. The applicant shall submit a revised construction management plan which addresses the installation of the proposed sidewalk on the south side of Bishop Street to Stevens Avenue for review and approval by the Department of Public Services;

5. The applicant shall submit plans for, obtain all necessary easements related to, and construct a sidewalk on the south side of Bishop Street from 72 Bishop Street to Forest Avenue/Stevens Avenue, including the easternmost section abutting 2-10 Bishop Street, for review and approval by the Department of Public Services;

6. The applicant shall provide copies of associated permits from Maine DEP and the Army Corps of Engineers for review and approval by the Planning Authority;

7. The applicant shall submit a revised landscaping plan which addresses the treatment of the western side of the building for review and approval by the city arborist;

8. As this development falls within the watershed of an urban impaired stream, the Capisic Brook, the applicant shall make an in-lieu compensation fee payment of $1,927 for review and approval by the Planning Authority; and

9. The applicant shall obtain a utility easement from the Masonic Lodge for review and approval by the Planning Authority.

XV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Traffic Engineer review (memo from Thomas Errico, 6/25/15)
2. Survey review (memo from Bill Clark, 6/1/15)
3. Department of Public Services review (memo from David Margolis-Pineo, 5/12/15)
4. Corporation Counsel Review (memo from Jennifer Thompson, 6/5/15)
5. Civil Engineer review (memo from David Senus, 6/12/15)
6. Design review (memo from Caitlin Cameron, 6/29/15)

APPLICANT'S SUBMITTALS

A. Cover Letter (from Bob Metcalf, Mitchell & Associates, 4/10/15)
B. Development Review Application, Project Data, and Checklist
C. Right, Title, or Interest
D. Project Description, Project Data, and Maps
E. Abutting Property Owners

F. Existing Soils Condition
G. Public Utilities
H. Technical Capability, Financial Capability, and Letter of Authorization
I. Compliance with Applicable Zoning
J. Waiver Request
K. Consistency with City's Master Plan and Conformity with Design Standards
L. Fire Department Checklist and HVAC Emissions Requirements
M. Traffic and Parking Study
N. Stormwater Management Plan
O. Solid Waste Disposal and Snow Removal
P. Light Fixtures
Q. Environmental Quality Standards
R. Letter from PDD
S. PDD Calls for Service Analysis
T. Neighborhood Meeting Minutes
U. Cover Letter (from Bob Metcalf, Mitchell & Associates, 5/22/15)
V. Supplemental Staffing Memo/Description of Services
W. Cover Letter (from Bob Metcalf, Mitchell & Associates, 6/23/15)
X. Cover Letter (from Bob Metcalf, Mitchell & Associates, 6/9/15)

PLANS

Plan 1. Boundary & Topographic Survey
Plan 2. Existing Conditions Plan
Plan 3. Layout and Lighting Plan
Plan 4. Grading, Drainage, and Utilities Plan
Plan 5. Planting Plan
Plan 6. Site Details
Plan 7. Site Details
Plan 8. Site Details
Plan 9. Bishop Street Sidewalk Plan
Plan 10. Erosion & Sedimentation Control Plan
Plan 11. Draft Plat Plan
Plan 12. Pre-Development Stormwater Plan
Plan 13. Post-Development Stormwater Plan
Plan 14. First Floor Plan
Plan 15. Second Floor Plan
Plan 16. Third Floor Plan
Plan 17. Roof Plan
Plan 18. Roof Drain Downspout Locations
Plan 19. Exterior Elevations
Plan 20. Existing Context Aerials
Plan 21. Proposed Context Aerials
Plan 22. Proposed Context from Bishop Street
Plan 23. Proposed Context from Rear
Plan 24. Photometric Plan
Plan 25. Construction Management Plan

PUBLIC COMENT

PC-1. Email from Michael Joyce (5/26/15)

Att. 1

From: Tom Errico <thomas.errico@tylin.com>
To: Helen Donaldson <HCD@portlandmaine.gov>
CC: David Margolis-Pineo <DMP@portlandmaine.gov>, Katherine Earley <KAS@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Jeff Tarling <JST@portlandmaine.gov>
Date: 6/25/2015 8:56 AM
Subject: 72 Bishop Street - Final Traffic Comments

Hi Nell - The following represents a status update of my preliminary comments.

* I find the parking lot layout and driveway condition to be acceptable.
Status: I have no further comment.

* A sidewalk is being constructed on Bishop Street, as identified during the zoning amendment process. I find it to be acceptable although the sidewalk should be extended to the corner at Forest Avenue/Stevens Avenue. I would suggest that the applicant develop a concept plan for review and approval. I can work with the applicant in the development of the plan from a traffic perspective, particularly how it interfaces with the existing parking lot.
Status: Upon receipt of revised plans with the extended sidewalk, I will review and provide comments. As noted above, I view a full safe sidewalk facility to be imperative.

* The applicant has requested a waiver from the City's Technical Standards as it relates to off-street parking requirements. Gorrill-Palmer has provided a summary of parking needs based primarily on staffing requirements. According to the analysis, 12 parking spaces will be sufficient for demand needs. This demand calculation assumes that none of the proposed tenants will be allowed to have vehicles. In general I find the estimate to be reasonable, but I would suggest that a condition of approval note that if automobile ownership is permitted for residents, the project shall return to the Planning Board for review.
Status: It is suggested that an annual monitoring report be provided to the Planning Authority as it relates to parking and automobile ownership by tenants and if parking demand cannot be accommodated on-site, the applicant shall identify strategies to manage parking conditions.

* The applicant should provide general details as it relates to a construction management plan. I do not support a waiver for this request.
Status: The applicant has submitted a construction management plan for site work and I find it to be acceptable. A construction management plan for construction of the sidewalk will be required and should be submitted for review and approval.

* I have reviewed the traffic generation estimate prepared by Gorrill-Palmer and concur with the estimate that approximately 13 trips are projected to be generated during the AM peak hour and 11 trips during the PM peak hour. Based upon this level of traffic, I do not expect the project to have a significant impact to traffic safety and operations in the study area. It should be emphasized that while the tenants of the project are not expected to own cars, it is expected that they will be using the proposed sidewalk to gain access to METRO buses at Forest Avenue and general commercial land uses in the area.
Status: I have no further comment.

* The crash data provided by the applicant notes that the Morrill's Corner intersection(s) had significant crashes over the report 2011 to 2013 three-year period. While the Forest Avenue/Stevens Avenue/Bishop Street intersection was not classified as a High Crash Location, it still had 30 reported crashes. The Forest Avenue/Allen Avenue intersection is a High Crash Location and had 53 reported collisions. Given that the project is not generating a significant amount of traffic, I do not expect safety conditions to be exacerbated.
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<mailto:thomas.errico@tylin.com>
Visit us online at www.tylin.com<http://www.tylin.com>
Twitter | Facebook | LinkedIn | YouTube

"One Vision, One Company"

Please consider the environment before printing.

Att. 2

From: William Clark
To: Helen Donaldson
CC: David Margolis-Pineo; Jennifer Thompson
Date: 6/1/2015 4:11 PM
Subject: Re: Fwd: Bishop Street Draft Plat plan
Attachments: Bishop St No 72 Subdivision Plat Plan 5 22 2015 Survey Review 6 01 2015.PDF; Bishop St No 72 Boundary and Topo Survey Rev 1 20 2015 Survey Review 5 12 2015.PDF

Hi Nell,

I met with Bob Metcalf of Mitchell Associates last week and went over the Boundary and Topographic Survey plan (attached).

He agreed to show the proposed 30 foot storm drain easement on the plans. That has not been corrected.

In addition, the same elevation datum problem exists on the Subdivision Plat Plan dated 5 22 2015 which you sent me this morning. They state they used NAVD88 which is not the official City datum. Existing Grades/Topo, Proposed grades, and structures need to be corrected to the Official City of Portland Datum prior to approval.

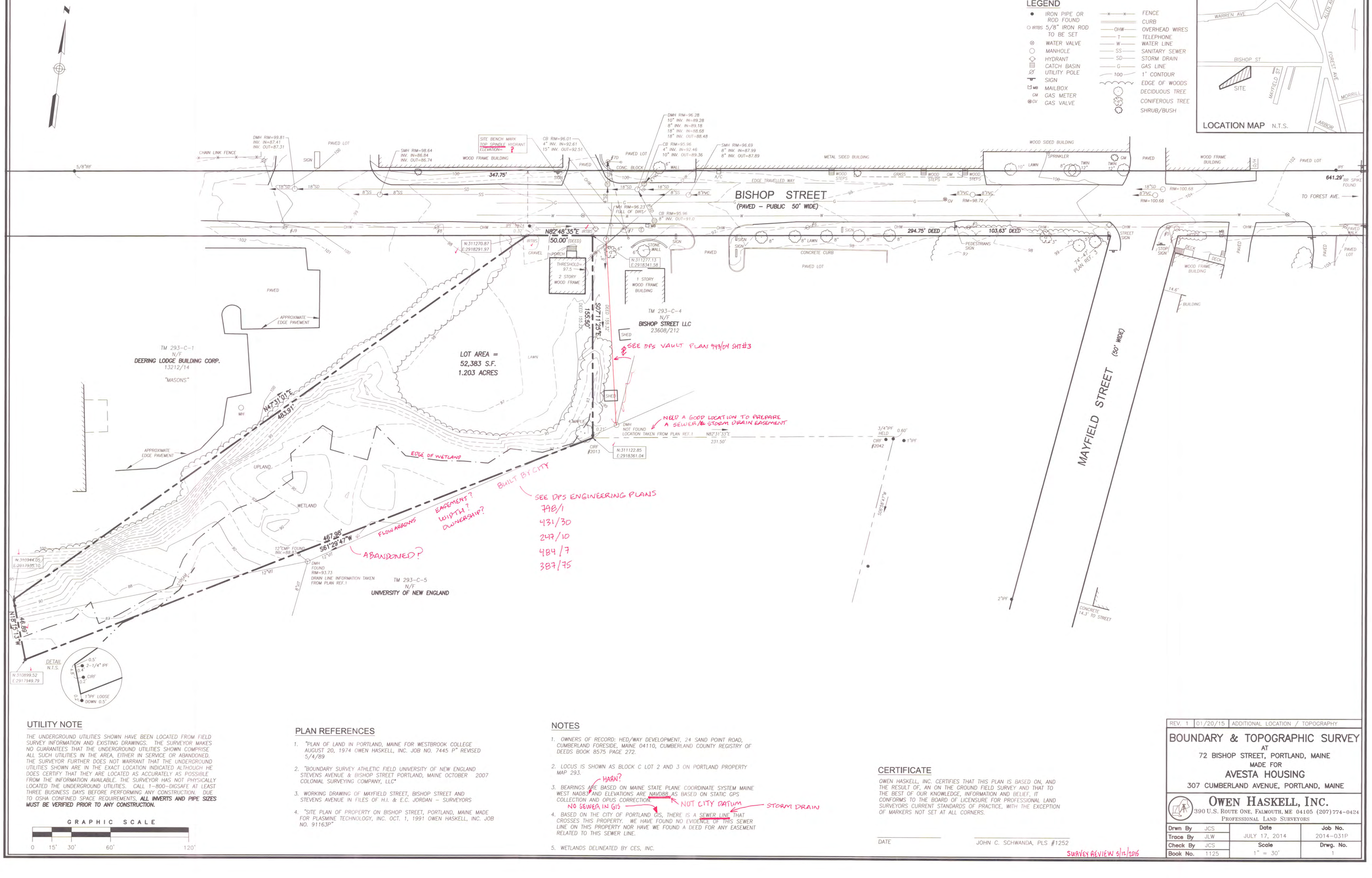
Thanks,

Bill

>>> Helen Donaldson June 1, 2015 8:50 AM >>>
Bill and Jen,

This is a draft subdivision plat for a 30-unit Avesta project, all apartments, out on Bishop Street. Could you take a look and let me know your comments when you have a chance?

Thanks,
Nell



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 THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, **ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.**

GRAPHIC SCALE

0 15' 30' 60' 120'

PLAN REFERENCES

1. "PLAN OF LAND IN PORTLAND, MAINE FOR WESTBROOK COLLEGE AUGUST 20, 1974 OWEN HASKELL, INC. JOB NO. 7445 P" REVISED 5/4/89
2. "BOUNDARY SURVEY ATHLETIC FIELD UNIVERSITY OF NEW ENGLAND STEVENS AVENUE & BISHOP STREET PORTLAND, MAINE OCTOBER 2007 COLONIAL SURVEYING COMPANY, LLC"
3. WORKING DRAWING OF MAYFIELD STREET, BISHOP STREET AND STEVENS AVENUE IN FILES OF H.I. & E.C. JORDAN – SURVEYORS
4. "SITE PLAN OF PROPERTY ON BISHOP STREET, PORTLAND, MAINE MADE FOR PLASMINE TECHNOLOGY, INC. OCT. 1, 1991 OWEN HASKELL, INC. JOB NO. 91163P"

NOTES

1. OWNERS OF RECORD: HED/WAY DEVELOPMENT, 24 SAND POINT ROAD, CUMBERLAND FORESIDE, MAINE 04110, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 8575 PAGE 272.
2. LOCUS IS SHOWN AS BLOCK C LOT 2 AND 3 ON PORTLAND PROPERTY MAP 293.
3. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM MAINE WEST NAD83 AND ELEVATIONS ARE NAVD88 AS BASED ON STATIC GPS COLLECTION AND OPUS CORRECTION.
4. BASED ON THE CITY OF PORTLAND GIS, THERE IS A SEWER LINE THAT CROSSES THIS PROPERTY. WE HAVE FOUND NO EVIDENCE OF THIS SEWER LINE ON THIS PROPERTY NOR HAVE WE FOUND A DEED FOR ANY EASEMENT RELATED TO THIS SEWER LINE.
5. WETLANDS DELINEATED BY CES, INC.

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, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.

DATE

JOHN C. SCHWANDA, PLS #1252

REV. 1	01/20/15	ADDITIONAL LOCATION / TOPOGRAPHY

BOUNDARY & TOPOGRAPHIC SURVEY

AT

72 BISHOP STREET, PORTLAND, MAINE

MADE FOR

AVESTA HOUSING

307 CUMBERLAND AVENUE, PORTLAND, MAINE

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

Drwn By	JCS	Date	Job No.
Trace By	JLW	JULY 17, 2014	2014-031P
Check By	JCS	Scale	Drwg. No.
Book No.	1125	1" = 30'	1

GENERAL NOTES:

1. SITE AREA: 52,383 SF OR 1.20 ACRES
2. APPLICANT: AVESTA 72 BISHOP, LP
   307 CUMBERLAND AVENUE
   PORTLAND, MAINE 04101
3. OWNER: AVESTA HOUSING DEVELOPMENT CORP.
   307 CUMBERLAND AVENUE
   PORTLAND, MAINE 04101
4. ZONING DISTRICT: B-2-C COMMUNITY BUSINESS DISTRICT
5. PARCEL IS SHOWN AS LOT 2 AND LOT 3, BLOCK C ON CITY OF PORTLAND ASSESSORS MAP 293.
6. DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 31827, PAGE 271.
7. SPACE AND BULK STANDARDS:

	REQUIRED	PROPOSED
MINIMUM LOT SIZE:	NONE	52,383 SF
MINIMUM STREET FRONTAGE:	20 FEET	50 FEET
FRONT YARD SETBACK	NONE	18 FEET
REAR YARD SETBACK	10 FEET	10 FEET
SIDE YARD SETBACK	NONE	5 FEET
FRONT YARD MAXIMUM	10 FEET	18 FEET
MAXIMUM IMPERVIOUS SURFACE RATIO:	NONE	35%
MAXIMUM HEIGHT OF STRUCTURES:	45 FEET	39 FEET
MAXIMUM RESIDENTIAL DENSITY:	1,500 SF/UNIT	1,746 SF/UNIT

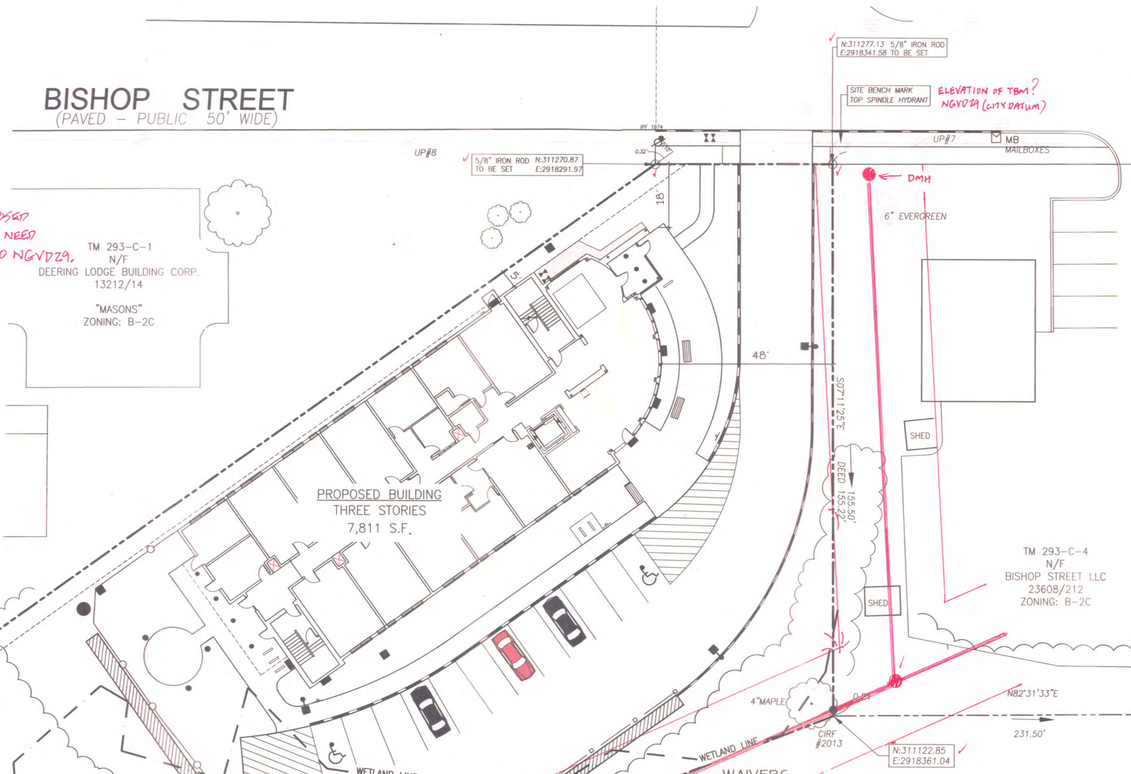
8. EXISTING CONDITIONS AND BOUNDARY INFORMATION TAKEN FROM A PLAN ENTITLED 'BOUNDARY + TOPOGRAPHIC SURVEY AT 72 BISHOP STREET, PORTLAND, MAINE' PREPARED BY OWEN HASKELL, INC. DATED JULY 17, 2014.
9. BEARINGS ARE GRID NORTH AND ELEVATIONS ARE NAVD88 AS BASED ON STATIC GPS COLLECTION AND OPUS CORRECTION.
10. WETLAND DELINEATION PERFORMED BY C.E.S. INC., LEWISTON MAINE, JUNE 2014. FLAGGED WETLAND AREA WAS SURVEYED BY OWEN HASKELL, INC., FALMOUTH, MAINE, JULY 2014.
11. PROPOSED DWELLING UNITS: 30 (SRO) EFFICIENCY APARTMENT UNITS
12. OFF-STREET PARKING REQUIREMENTS:
    REQUIRED: 1/DWELLING UNIT =30 PARKING SPACES
    PROPOSED: 10 STANDARD PARKING SPACES
    2 HANDICAP PARKING SPACE
13. BICYCLE PARKING:
    REQUIRED: 2 SPACES/5 DWELLING UNITS
    12 SPACES (30 NEW DWELLING UNITS)
    PROPOSED: 12 SPACES
14. EXISTING IMPERVIOUS: 1,304 +/- SF (2.5% OF SITE)
    PROPOSED IMPERVIOUS: 18,686 +/- SF (35% OF SITE)
15. FLOOR AREA CALCULATIONS

FIRST FLOOR:	7,310 SF
SECOND FLOOR:	7,240 SF
THIRD FLOOR:	5,940 SF
TOTAL	20,490 SF

16. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY AND ALL UTILITIES CONNECTING TO INFRASTRUCTURE WITHIN THE ROAD SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
17. THE CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR UNDERTAKING THE WORK IN A SAFE AND EFFICIENT MANNER, IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY REGULATIONS. ALL WORK AREAS SHALL BE DELINEATED CLEARLY AND FENCED AS APPROPRIATE TO PREVENT UNAUTHORIZED ACCESS. THE SITE SHALL BE LEFT IN A SAFE, ORDERLY AND TIDY MANNER AT THE END OF EACH WORK DAY.
18. UTILITY SERVICE CONNECTIONS SHALL CONFORM TO STANDARDS FOR INDIVIDUAL UTILITY PROVIDERS
19. EXISTING WETLANDS: 14,203 SF
    IMPACTED WETLANDS: 3,105 SF
20. SITE LIGHTING SHALL MEET THE CITY OF PORTLAND STANDARDS AS OUTLINED IN SECTION 12 OF THE CITY OF PORTLAND TECHNICAL DESIGN STANDARDS. SITE LIGHTING SHALL ADHERE TO SECTION 12.2.5 LIGHT TRESPASS-LIGHTING SHALL NOT BE GREATER THAN 0.1 FOOTCANDLES AT THE PROPERTY LINE.
21. PRIOR TO SITE CLEARING, CONTRACTOR SHALL COORDINATE WITH PROJECT LANDSCAPE ARCHITECT TO DEMARCATE TREES FOR PROTECTION AND WETLAND AREAS TO BE PROTECTED. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.- SEE NOTE 10 SHEET L4

PLAN REFERENCES

1. "PLAN OF LAND IN PORTLAND, MAINE FOR WESTBROOK COLLEGE, AUGUST 20, 1974 OWEN HASKELL, INC. JOB NO. 7445 P" REVISED 5/4/89
2. "BOUNDARY SURVEY ATHLETIC FIELD UNIVERSITY OF NEW ENGLAND STEVENS AVENUE + BISHOP STREET PORTLAND, MAINE OCTOBER 2007 COLONIAL SURVEYING COMPANY, LLC6
3. WORKING DRAWING OF MAYFIELD STREET, BISHOP STREET AND STEVENS AVENUE IN FILES OF H.J. + E.C. JORDAN - SURVEYORS
4. SITE PLAN OF PROPERTY ON BISHOP STREET, PORTLAND, MAINE MADE FOR PLASMINE TECHNOLOGY, INC. OCT. 1, 1991 OWEN HASKELL, INC. JOB NO. 9116-3P"



CONDITIONS OF APPROVAL

ON JUNE XX, 2015, THE PORTLAND PLANNING BOARD APPROVED THE 72 BISHOP STREET APPLICATION FOR MAJOR SITE PLAN AND SUBDIVISION PLAN SUBJECT TO THE CITY OF PORTLAND STANDARD CONDITIONS OF APPROVAL AND THE FOLLOWING CONDITIONS:

SUBDIVISION

1. THE APPLICANT SHALL REVISE THE SUBDIVISION PLAT TO THE SATISFACTION OF THE PLANNING AUTHORITY, DEPARTMENT OF PUBLIC SERVICES, AND CORPORATION COUNSEL.

SITE PLAN

1. THE APPLICANT SHALL PROVIDE A DETAILED CONSTRUCTION MANAGEMENT PLAN, TO BE APPROVED BY THE DEPARTMENT OF PUBLIC SERVICES, PRIOR TO ANY BUILDING PERMIT BEING ISSUED.
2. THE APPLICANT SHALL MAKE A CONTRIBUTION TO THE CITY'S STREET TREE FUND FOR 22 STREET TREES PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

WAIVERS

72 BISHOP STREET MAJOR SITE PLAN AND SUBDIVISION PLAN APPLICATION WAS APPROVED WITH THE FOLLOWING WAIVERS GRANTED ON JUNE XX, 2015 FROM THE CITY OF PORTLAND TECHNICAL STANDARDS:

1. WAIVER REQUEST FROM SECTION 14-526 2.B.III. A. + TECHNICAL DESIGN MANUAL 4.6.1. MULTI-FAMILY RESIDENTIAL STREET TREE REQUIREMENT OF ONE STREET TREE PER UNIT SPACED 30'-45' WITHIN THE RIGHT OF WAY. THE FACILITY PROPOSES 30 UNITS ALTHOUGH HAS ONLY 50 FEET OF ROAD FRONTAGE. DUE TO THE IRREGULAR SHAPE OF THE SITE AND DRIVEWAY AND SIDEWALK REQUIREMENTS THE APPLICANT IS PROPOSING TO INSTALL FOUR (4) TREES WITHIN THE RIGHT OF WAY OF THE ADJACENT PROPERTY AND WOULD LIKE PLANNING STAFF TO CONSIDER THE TWO TREES LOCATED ALONG THE FRONT OF THE BUILDING TO APPLY TOWARDS THE 30 REQUIRED TREES. THE APPLICANT IS REQUESTING A WAIVER FOR THE REMAINING 22 TREES AND WILL PROVIDE THE FEE IN LIEU.
2. WAIVER REQUEST FROM SECTION 14-332 (4) (A) MULTI-FAMILY RESIDENTIAL PARKING REQUIREMENT OF ONE PARKING SPACE PER DWELLING UNIT. THE APPLICANT IS PROPOSING TO PROVIDE 12 PARKING SPACES (10 SPACES AND TWO HANDICAP SPACES).
3. WAIVER REQUEST FROM SECTION 14-185 DIMENSIONAL REQUIREMENTS (FRONT YARD MAXIMUM). THE REQUEST IS BASED ON THE LIMITATIONS THE IRREGULAR SHAPED LOT OFFERS IN REGARDS TO BUILDING LOCATION.

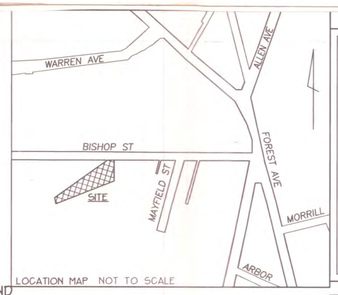
CERTIFICATE

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, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.

DATE

JOHN C. SCHWANDA, PLS #1252

SURVEY REVIEW 6/01/2015



LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
IRON PIPE/MAG NAIL	I.R.F./I.P.F.	● ▲
GRANITE MONUMENT		
CATCHBASIN		CB ■
FIELD INLET		FI ■
HYDRANT		
UTILITY POLE		
FENCE	-x-x-	
DEC. TREE		
EVERGREEN TREE		⊗
LIGHT POLE		
BLDG MOUNTED LIGHT		
CURB		
OVERHEAD WIRES	EOHW	
SOIL BORINGS		
WATER VALVE		
GAS VALVE		
SIGN		
WETLAND		
OUTLET CONTROL STRUCTURE		OCS●
WETLAND IMPACT		

Approved: Portland Planning Board

Date:_____

Chair,

Board Members,

Prepared For:
Owner:
AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:
MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel.: 207-774-4427

72 BISHOP STREET

Portland, Maine

Bishop Street

Date: APRIL 10, 2015

Issued For: SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions: Rev: 5/22/15

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Title: SUBDIVISION PLAT PLAN

Scale: 1"=20'

0 10 20 40 ft.

North:

Sheet No.: L2

From: David Margolis-Pineo
To: Helen Donaldson
CC: Barbara Barhydt
Date: 6/12/2015 1:23 PM
Subject: 72 Bishop St

May 12, 2015
- June 12, 2015

Memo To: Nell Donaldson
Barbara Barhydt
From: David Margolis-Pineo
Re: 72 Bishop Street – AVESTA Housing (2015-060)

The Department of Public Services has the following preliminary comments on the above mentioned site plan.

1. Surveying comments will be forwarded by William Clark of this office under a separate cover. Survey plan will require a Professional Surveyor stamp.
- Plan now stamped.

2. The applicant has agreed to extend a sidewalk to Forest Avenue. The plans show the sidewalk terminating at the parking lot prior to Forest Ave. It is desirable to have the sidewalk continued through this parking area to Forest Ave. Drive cut location(s) will need to determine with the parking lot owner.
- This issue has not been resolved. It is recommended that as a condition of approval the applicant be required to construct a sidewalk to Forest Ave including rebuilding the existing sidewalk ramp at Bishop and Stevens Ave to be ADA compliant.

3. Please show the sidewalk being constructed along the street right of way. It is realized that several trees impede the alignment. Do the best you can. As indicated on the plan, grading and construction easements will need to be executed by the applicant for construction of the sidewalk.
- This Department disagrees with the applicant's response. It is recommended that as a condition of approval the applicant be required to obtain all necessary construction easements to complete this project.

4. An existing stormwater drain is shown crossing the applicant's property. An easement will need to be shown on the survey plan for this utility. For an accurate easement, the cross-country drain manholes will need to be located. If necessary, the City can assist with locating.
- Easement has not been shown on the applicant's Subdivision Plat. It is recommended that as a condition of approval the applicant be required be required to add the drainage easement to the Plat.

5. The grading plan needs to show the existing stormwater drainage system including drain manholes adjacent and on the applicant's property. Show all field inlets, rim elevation, pipe size and pipe invert elevations.
- Since structures are located on private property not owned by the applicant, please disregard this comment.

6. The applicant is indicating that an existing house on the property will be removed for this project. Please be aware that Demolition and Seal Drain Permit is required. No response required.

7. This Department has concerns regarding the wetland impacts and encroachment on the stream. We would like to see the wetland delineation line shown on the post-construction site plan to more clearly define the area of impact. A comparison of pre and post wetlands delineation is requested. Please show the limits of temporary construction activity on the wetlands area.
- Comments by David Senus will nullifies this comment.

8. Note that DEP staff has indicated that this section of brook meets Class A standards, the State's highest water quality class. No comment necessary.

9. All catchbasins capturing stormwater discharging into an urban impaired watershed, the applicant is requested to install four foot diameter catchbasins with three foot sumps.

We have no further comments at this time.

5/24/15

Bishop St

Sidewalk Budget $ Dave

Item #	Qnty	Unit	Description	unit price	total
201.24		EA	Removing Stump	$450.00	$0.00
202.20		SY	Removing Bituminous Concrete Pavement Surface	$10.00	$0.00
403.207		TON	Hot Mix Asphalt - 19 mm Nominal Max. Size	$145.00	$0.00
403.208		TON	Hot Mix Asphalt - 12.5 mm Nominal Max. Size, Surface	$145.00	$0.00
403.209		TON	Hot Mix Asphalt - 9.5 mm Nominal Max, Hand Placed (drives, etc)	$145.00	$0.00
604.181		EA	Adjust Catch Basin To Grade	$550.00	$0.00
604.27		CRS	Repair Existing Catch Basin	$175.00	$0.00
604.40		EA	New Inlet Stone	$650.00	$0.00
608.08	20	SY	Reinforced Concrete Sidewalk	$125.00	$2,500.00
608.09		SY	Reinforced Concrete Driveway	$120.00	$0.00
608.15	0	SY	Brick Sidewalk with Bituminous Base	$125.00	$0.00
608.16		SY	Brick Driveway	$170.00	$0.00
608.25	112	SY	Hot Bituminous Sidewalk	$50.00	$5,600.00
608.26	0	SY	Bituminous Driveway Apron	$55.00	$0.00
608.60	8	SF	Detectable Warning Panel	$55.00	$440.00
609.11	200	LF	New 5" Straight Verticle Curb, Type #1	$50.00	$10,000.00
609.12	20	LF	New 5" Circular Verticle Curb, Type #1	$50.00	$1,000.00
609.237		EA	Terminal Curb Type 1 - 7 ft - Circular	$380.00	$0.00
609.238		EA	Terminal Curb Type 1 - 8 ft - Circular	$400.00	$0.00
609.24	2	EA	New 5" - 4' Tipdown Curb, Type #1	$260.00	$520.00
609.25	2	EA	New 5" - 7' Tipdown Curb, Type #1	$335.00	$670.00
609.38	0	LF	Remove and Reset Existing Curb	$30.00	$0.00
609.41		LF	Remove and Stack Existing Curb at Outer Congress Street	$6.00	$0.00
615.08		SY	Loam and Seed	$17.00	$0.00
627.75		SF	White or Yellow Pavement & Curb Marking	$5.00	$0.00
629.05		HR	Hand Labor, Straight Time	$45.00	$0.00
631.105		HR	Air Tool and Compressor, including Operator	$45.00	$0.00
631.171		HR	Truck, Small, including Operator	$65.00	$0.00
631.225		HR	Excavator or Backhoe, including Operator	$100.00	$0.00
652.39		LS	Work Zone Traffic Control	$13,500.00	$0.00
			Total Estimate		**$20,730.00**
			Total with 10% Contingency Factor		**$22,803.00**
			gave price to Dave		21000

Att. 4

From: Jennifer Thompson
To: Helen Donaldson
Date: 6/5/2015 1:35 PM
Subject: Re: Fwd: Bishop Street Draft Plat plan

Hi Nell - I've looked this over. I'm wondering whether all utilities are reflected? Do you know how they're proposing to handle trash. If it will be handled privately, that will need to be made express in the notes? Are the locations, dimensions and purposes of all easements (including utility easements) included? Does the wetland area require a state or federal permit of any kind? All of these items are required to be on the plat under Section 14-496 of the Code. Assuming they are accurately depicted, this looks o.k. to me for now (it will need to be dated and stamped etc. before final approval).

>>> Helen Donaldson 6/1/2015 8:50 AM >>>
Bill and Jen,

This is a draft subdivision plat for a 30-unit Avesta project, all apartments, out on Bishop Street. Could you take a look and let me know your comments when you have a chance?

Thanks,
Nell

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. 5

MEMORANDUM

TO: Nell Donaldson, Planner
FROM: David Senus, P.E.
DATE: June 25, 2015
RE: 72 Bishop Street Efficiencies, Final Level III Site Plan Application

---

Woodard & Curran has reviewed the response to comments submittal for the Final Level III Site Plan Application for the proposed efficiencies located at 72 Bishop Street in Portland, Maine. The project involves the construction of 30 housing units with 12 parking spaces and associated site improvements.

Documents Reviewed by Woodard & Curran

- Response to Comments Letter and attachments, dated June 23, 2015, prepared by Mitchell & Associates, on behalf of Avesta 72 Bishop Street, LP.
- Plans, Sheets L1.0-L8.0, REV June 22, 2015, prepared by Mitchell & Associates & Ransom Engineering, on behalf of Avesta 72 Bishop Street, LP.
- Stormwater Management Report, dated June 19, 2015, prepared by Ransom Consulting on behalf of Avesta 72 Bishop Street, LP.

Comments

1. All review comments contained in the Woodard & Curran Memorandum dated June 8, 2015 have been adequately addressed.

Planning and Urban Development Department
Planning Division

Subject: B-2c Design Review – 72 Bishop Street
Written by: Caitlin Cameron, Urban Designer
Date of Review: Monday, June 29, 2015

On Monday, June 29, a design review was performed for 72 Bishop Street by Caitlin Cameron, Urban Designer, Nell Donaldson, Planner, within the Planning Division of the Department of Planning & Urban Development. The project was reviewed against the *Two-family, Special Needs Independent Living Units, Multiple-family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters Standards* (Section (i) of the Design Manual).

Design Review Comments*:*

Standard 1 – The surrounding context tends to be more commercial in use and character. Additionally, the neighboring residential context is most often single-family or other small-scale buildings. Therefore, the multi-family, large-scale building proposed is not the same type of residential project and is therefore not able to have the same character. The project uses a mix of building materials that, in combination with the fenestration, projections, and the varying forms and roof lines, provide positive visual interest as stipulated in the Standard.

Standard 2 – A building in a B-2 zone should contribute to the street wall. However, this property has an usual lot configuration and very little frontage. As such, it is understandably difficult to build to the street. The principal entry is relatively close to the street and provides good visibility. A direct pedestrian path is provided from the sidewalk to the main entry.

Standard 3 – The project provides a garden space and screening and landscaping elements as required by the Standard. The outdoor seating area is screened from neighboring parking lots with a 6' solid wood fence. A 42" wood picket fence separates the wetland area from the seating area. Consider providing additional landscaping/screening to the Northwest property line to buffer dwelling units from the neighboring parking lots.

Standard 4 – Overall the project has a high level of fenestration to provide resident access to light and air. Storage is provided.

Standard 5 – Parking is well screened and positioned away from the street.

Standard 6 – Not Applicable

72 Bishop Street

Site Plan and Subdivision Plan
Application

April 10, 2015

APPLICANT:
AVESTA 72 Bishop Street, L.P.
307 Cumberland Avenue
Portland, Maine 04101

AGENT:
MITCHELL & ASSOCIATES
70 Center Street
Portland, Maine 04101

Att. A

Mitchell & Associates
LANDSCAPE ARCHITECTS

The Staples School
70 Center Street
Portland, Maine 04101
P: 207.774.4427
F: 207.874.2460
www.mitchellassociates.biz

April 10, 2015

Mr. Alexander Jaegerman,
Director of the Portland Planning Division
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

Re: Bishop Street Apartments
72 Bishop Street
Site Plan and Subdivision Plan Review

Dear Alex:

On behalf of Avesta 72 Bishop Street, LP, we are pleased to submit the following Site Plan and Subdivision Application for the proposed "72 Bishop Street Efficiencies" located at 72-78 Bishop Street in Portland. This submission has been prepared in compliance with requirements of the City of Portland Zoning, Site Plan and Subdivision Ordinance. The project is intended to provide housing options and needed support services for the chronically homeless.

The Site

72 Bishop Street consists of a single family residence and a vacant lot. The combined property is a 52,383 square foot lot with 50 feet of frontage on Bishop Street. The property has an 826 +/- square foot (footprint) residence with a small gravel driveway. The rear of the property is primary woodland growth with 14,203 square feet of forested and shrub scrub wetland. Abutting properties include a single story, 3 unit professional office building, to the east at 68 Bishop Street and a Masonic Hall to the west. To the south is the University of New England athletic field.

Project Description

Avesta Housing proposes to develop the combined lots of 72 & 78 Bishop Street to create 30 efficiency units at 72 Bishop Street in Portland for chronically homeless individuals, using a "housing first" approach. As was the case at Logan

Place and Florence House, Avesta's two prior 'housing first' projects, Avesta anticipates partnering with Preble Street for the provision of 24-hour, on-site support services and Portland Housing Authority for project-based rental assistance. Bishop Street Apartments will provide housing and support services for those chronically homeless individuals who are currently most vulnerable due to their significant medical conditions.

The proposed facility is in close proximity to employment opportunities, public transportation services, retail and amenities, yet beyond the high paced downtown urban environment. Avesta's vision for the property is to create a high quality housing resource for the neediest population within the City of Portland that combines the best features of affordable housing and quality design.

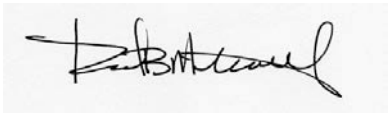
During the zoning amendment process, the applicant and the Planning Board discussed the need to provide a public sidewalk along Bishop Street. We have prepared a sidewalk plan that extends a new bituminous sidewalk, esplanade and granite curb, extending approximately 500 linear feet to meet the existing sidewalk near the intersection with Forest and Stevens Avenues.

This submission includes the following information:

1. Cover letter, dated April 10, 2015
2. Site Plan and Subdivision Application & Checklist
3. Application Fee: $1,500 (Per Sec 14-486 Affordable Housing Reduction)
4. Submission Booklet of required documentation and exhibits
5. One set of plans (24" x 36")
6. One set of plans (11"x17")

We trust that the Planning Board will consider this a complete application for a workshop meeting. If you desire any additional information, please do not hesitate to contact us. We look forward to our meeting with the Board at its earliest convenience.

Sincerely,
Mitchell & Associates



Robert Metcalf, Principal
Maine Licensed Landscape Architect

Enclosure

cc. Brooks More, Avesta
Ben Walter, CWS Architect

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EXHIBIT	5	Existing Soils Condition
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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: April 23, 2014

PROJECT NAME: 72 Bishop Street

PROPOSED DEVELOPMENT ADDRESS:

72 & 78 Bishop Street, Portland

PROJECT DESCRIPTION:

Plan to develop 30 housing units with. 12 parking spaces

CHART/BLOCK/LOT: 293-C-2 & 3

PRELIMINARY PLAN _____ (date)
FINAL PLAN _____ (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Avesta 72 Bishop, L.P., Brooks More Business Name, if applicable: Address: 307 Cumberland Ave City/State : Portland, ME Zip Code: 04101	**Applicant Contact Information** Work # 207. 553 7780 Home# Cell # Fax# e-mail: bmore@avestahousing.org
Owner – (if different from Applicant) Name: Address: City/State : Zip Code:	**Owner Contact Information** Work # Home# Cell # Fax# e-mail:
Agent/ Representative Name: Mitchell & Associates, Bob Metcalf Address: 70 Center Street City/State : Portland, ME Zip Code: 04101	**Agent/Representative Contact information** Work # 207.774.4427 Cell # e-mail: rmetcalf@mitchellassociates.biz
Billing Information Name: Avesta 72 Bishop , L.P. Address: 307 Cumberland Ave City/State : Portland, ME Zip Code: 04101	**Billing Information** Work # 207.553.7780 Cell # Fax# e-mail: bmore@avestahousing.org

Engineer Name: Ransom Consulting Engineers, Stephen Bradstreet, PE Address: 400 Commercial Street City/State : Portland, ME Zip Code: 04101	**Engineer Contact Information** Work # 207.772.2891 Cell # Fax# e-mail: stephen.bradstreet@ransomenv.com
Surveyor Name: Owen Haskell Surveyors, Inc. Address: 390 U.S. Rt 1,Unit 10 City/State : Falmouth, ME Zip Code: 04105	**Surveyor Contact Information** Work # 207.774.4424 Cell # Fax# e-mail: www.owenhaskell.com
Architect Name: CWS Architects, Ben Walter Address: 434 Cumberland Avenue City/State : Portland, ME Zip Code: 04101	**Architect Contact Information** Work # 207.774.4441 Cell # Fax# e-mail: bwalter@cwsarch.com
Attorney Name: Cito Selinger, Curtis Thaxter Address: 1 Canal Plaza Suite 1000 City/State : Portland, ME Zip Code: 04101	**Attorney Contact Information** Work # 207.774.9000 Cell # Fax# e-mail: mselinger@curtisthaxter.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 _30_ x $25/lot = 750
___ 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. 14-525 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 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:** April 10, 2015

PROJECT DATA

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

Total Area of Site	52,383 sq. ft.
Proposed Total Disturbed Area of the Site	28,446 sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.	
Impervious Surface Area	
Impervious Area (Total Existing)	1,340 sq. ft.
Impervious Area (Total Proposed)	18,686 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	826 sq. ft.
Building Footprint (Total Proposed)	7,804 sq. ft.
Building Floor Area (Total Existing)	1,600 sq. ft.
Building Floor Area (Total Proposed)	21,374 sq. ft.
Zoning	
Existing	B-2c
Proposed, if applicable	
Land Use	
Existing	Residential
Proposed	Multi-family Low Income Residential
Residential, If applicable	
# of Residential Units (Total Existing)	1 Single family residence
# of Residential Units (Total Proposed)	30 units
# of Lots (Total Proposed)	1
# of Affordable Housing Units (Total Proposed)	30 units
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	30 efficiency units
# of One-Bedroom Units (Total Proposed)	
# of Two-Bedroom Units (Total Proposed)	
# of Three-Bedroom Units (Total Proposed)	
Parking Spaces	
# of Parking Spaces (Total Existing)	2
# of Parking Spaces (Total Proposed)	10
# of Handicapped Spaces (Total Proposed)	2
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	12
Estimated Cost of Project	$5,586,058

PRELIMINARY PLAN (Optional) - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	**GENERAL WRITTEN SUBMISSIONS CHECKLIST**
		1	Completed Application form
		1	Application fees
		1	Written description of project
		1	Evidence of right, title and interest
		1	Evidence of state and/or federal approvals, if applicable
		1	Written assessment of proposed project's compliance with applicable zoning requirements
		1	Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site
		1	Written requests for waivers from site plan or technical standards, if applicable.
		1	Evidence of financial and technical capacity
		1	Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)
Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST**
X		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)**
X		Proposed grading and contours;	
X		Existing structures with distances from property line;	
X		Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;	
X		Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);	
X		Preliminary infrastructure improvements;	
X		Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;	
X		Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1);	
X		Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);	
X		Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;	
X		Exterior building elevations.	

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
*		1	* Evidence of state and/or federal permits
X		1	* Written assessment of proposed project's specific compliance with applicable Zoning requirements
*		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
X		1	Written summary of project's consistency with related city master plans
**		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
N/A		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.

* Temporary Waiver requested.

** CMP, UNITIL and PWD Ability to Serve letters have been submitted; City of Portland Wastewater Ability to Serve letter has been requested.

Applicant Checklist	Planner Checklist	# of Copies	**SITE PLAN SUBMISSIONS CHECKLIST** **(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)**
X		1	* Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
X		1	**Final Site Plans including the following:**
X		Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);	
X		Existing and proposed structures on parcels abutting site;	
X		All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;	
X		Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;	
X		Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;	
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;	
X		A traffic control plan as detailed in Section 1 of the Technical Manual;	
X		Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);	
N/A		Location and proposed alteration to any watercourse;	
X		A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;	
X		Proposed buffers and preservation measures for wetlands;	
X		Existing soil conditions and location of test pits and test borings;	
X		Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;	
X		A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;	
X		Grading plan;	
N/A		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;
*		Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;
*		An exterior lighting plan in accordance with Section 12 of the Technical Manual;
*		A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;
*		Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.

* Temporary Waiver requested.

RIGHT, TITLE OR INTEREST

Please see attached Quitclaim Deed recorded in the Cumberland County Registry of Deeds, Book 31827, Page 271.

SHORT FORM QUITCLAIM DEED WITH COVENANT

KNOW ALL PERSONS BY THESE PRESENTS, THAT WILLIAM F. DIXON, of Cumberland County, Maine, and J. WESLEY WRIGHT, JR., of Cumberland County, Maine, each individually and together doing business as Hed/Way Development, FOR CONSIDERATION PAID, grant to AVESTA BISHOP STREET LP, a Maine limited partnership with a mailing address of 307 Cumberland Avenue, Portland, ME 04101, WITH QUITCLAIM COVENANT, the following described real property located in Portland, Cumberland County, State of Maine:

A certain lot or parcel of land, with the buildings thereon, situated on the southerly side of Bishop Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

MAINE REAL ESTATE TAX PAID

Beginning on the southerly sideline of Bishop Street at the northwesterly corner of land conveyed by George Wilson to Eri A. Mowatt by deed dated March 12, 1949 and recorded in Cumberland County Registry of Deeds in Book 1952, Page 227; thence North 82° 18' West by Bishop Street fifty (50) feet to the easterly corner of land conveyed by Tilcon-Warren Minerals Inc. to Tilcon Minerals Inc. by deed dated August 17, 1981 and recorded in said Registry of Deeds in Book 4942, Page 143; thence southwesterly by said land of Tilcon-Minerals Inc. four hundred seventy-five (475) feet, more or less, to an angle in the line of land conveyed by the City of Portland to Westbrook College by deed dated November 8, 1973 and recorded in said Registry of Deeds in Book 3481, Page 255; thence South 5° East by said land of Westbrook College forty-two and twenty-four hundredths (42.24) feet to an angle; thence North 76° 24' East by said land of Westbrook College to the southwesterly corner of said Mowatt land; thence North 7° 42' East by said Mowatt land one hundred fifty-five and twenty-two hundredths (155. 22} feet to the point of beginning.

Being the same premises conveyed to William F. Dixon and J. Wesley Wright, Jr. d/b/a Hed/Way Development by deed dated November 30, 1988 and recorded in said Registry of Deeds in Book 8575, Page 272.

The undersigned certify that they are the only partners of a general partnership called Hed/Way Development

IN WITNESS WHEREOF, William F. Dixon and J. Wesley Wright, Jr., individually and together doing business as Hed/Way Development, have hereunto set their hands and seals this 6th day of October, 2014.

WITNESS:

William F. Dixon, individually and as Partner of Hed/Way Development

J. Wesley Wright, Jr. individually and as
Partner of Hed/Way Development

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. October 6, 2014

Personally appeared the above-named William F. Dixon, in his said capacities as aforesaid, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said Hed/Way Development.

Before me,

~~Notary Public~~/Attorney-at-Law
Print name: MA SELINGER

STATE OF MAINE
COUNTY OF CUMBERLAND, SS. October 6, 2014

Personally appeared the above-named J. Wesley Wright, in his said capacities as aforesaid, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said Hed/Way Development.

Before me,

~~Notary Public~~/Attorney-at-Law
Print name: MA SELINGER

O:\MAS\99475 Avesta\Bishop Street\Transfer documents\Quitclaim Deed With Covenant-Short.docx

Received
Recorded Register of Deeds
Oct 06,2014 11:58:25A
Cumberland County
Pamela E. Lovley

PROJECT DESCRIPTION

Housing Objective of the Project

Avesta Housing proposes to develop the combined lots of 72 & 78 Bishop Street to create 30 efficiency units at 72 Bishop Street in Portland for chronically homeless individuals, using a "housing first" approach. As was the case at Logan Place and Florence House, Avesta's two prior 'housing first' projects, Avesta anticipates partnering with Preble Street for the provision of 24-hour, on-site support services and Portland Housing Authority for project-based rental assistance. In addition to the 30 apartments, the property will include common space for residents as well as office space for Avesta and Preble Street staff. Bishop Street Apartments will provide housing and support services for those chronically homeless individuals who are currently most vulnerable due to their significant medical conditions. The project will likely include a partnership with a health care provider, to both address specific health concerns and ensure that residents have access to the health and/or personal care services that medically compromised individuals typically benefit from in their homes.

The proposed facility is in close proximity to employment opportunities, public transportation services, retail and amenities, yet beyond the high paced downtown urban environment. Avesta's vision for the property is to create a high quality housing resource for the neediest population within the City of Portland that combines the best features of affordable housing and quality design.

The Site

72-78 Bishop Street consists of a single family residence with 50 feet of frontage on Bishop Street. The (combined) lot is 52,383 square feet. Abutting properties include a single story 3 unit professional office building to the east at 68 Bishop Street and a Masonic Hall to the west. The property was recently re-zoned as B2c (Business Community). The lot slopes gently to the southwest and has forested/ scrub-shrub wetlands within the southeast portion of the lot.

Building Program

Avesta proposes to demolish the existing single family residence and construct a 3 story apartment building. The main entrance vestibule and reception will be accessed from the first floor as well as building services including community

rooms and offices. Six efficiency units will be located on the first level along with laundry, staff rooms and mechanical and electrical facilities. The remaining 24 efficiency units will be located on the upper second and third levels. The complex will contain 30 total efficiency units. The gross square footage of the proposed building is 21,374 square feet with a 7,804 square foot building footprint.

A driveway with access off of Bishop Street will accommodate a 12 space surface parking lot. A small outdoor recreation space will be located on the south side of the building and a landscaped seating area will be located on the northeast side of the building near the main entrance.

Stormwater Management

The current site is a single family residence with 2 percent of the lot impervious. The proposed building cover and site improvements will cover approximately 40 percent of the property. The project is within the Capisic Brook Watershed and shall adhere to the Urban Impaired Stream Standard for development. Stormwater runoff generated by the site will be treated in an underground treatment system below the parking lot. The majority of runoff will be from the paved driveway and will be designed to flow into the treatment system prior to being discharged. More detail on the stormwater system can be found in the included stormwater management plan.

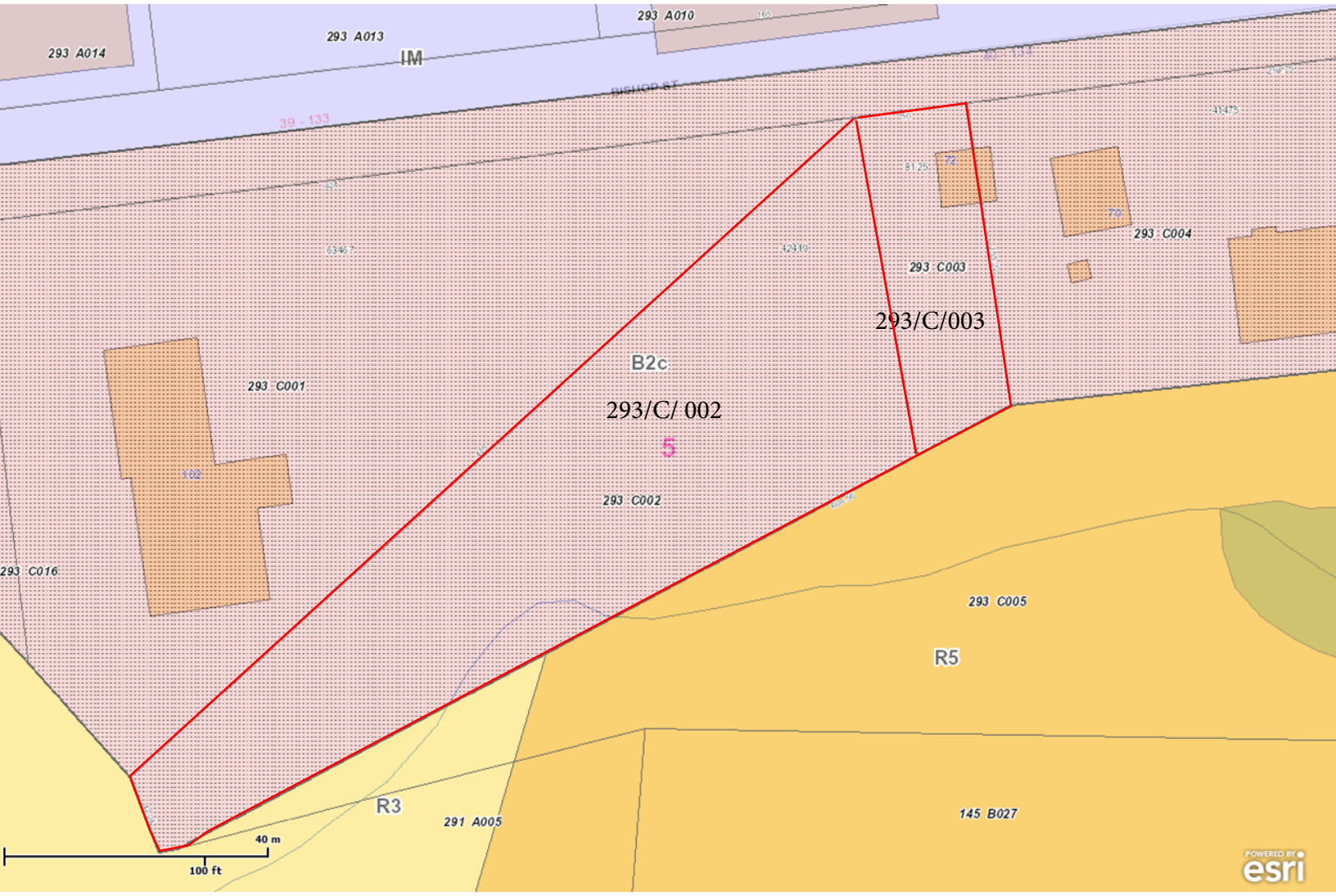
PROJECT DATA

Applicant	Avesta 72 Bishop Street, LP c/o AVESTA Housing 307 Cumberland Avenue Portland, Maine 04101
Owner	Avesta 72 Bishop Street, LP c/o AVESTA Housing 307 Cumberland Avenue Portland, Maine 04101
Existing Zone	B2c –Business Community Zone
Tax Map & Lot Number	Map 293, Block C, Lots 2 & 3
Land Area	52,383 SF, or 1.20 Acres
Existing Land Use	Single Family Residence & Undeveloped Area
Proposed Land Use	30 unit SRO Housing for Homeless
Water	12 inch main in Bishop Street
Sanitary Sewer	8 inch main in Bishop Street
Storm Drainage	18 in storm drain in Bishop Street

Natural Gas	8 inch line in Bishop Street
Electric	Overhead Service on Bishop Street.
Telephone & Cable TV	Overhead services on Bishop Street. To be extended underground

72 Bishop St

Tax & Zoning Map



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ABUTTING PROPERTY OWNERS

Map 293, Block C, Lot 1
Deering Lodge Building Corp.
651 Forest Avenue
Portland, ME 04101

Map 293, Block C, Lot 5
University of New England
11 Beach Road
Biddeford, ME 04005

Map 293, Block C, Lot 4
Bishop Street L.L.C.
70 Bishop Street
Portland, ME 04103

EXISTING SOIL CONDITIONS

Soils on the site are representative of the urban environment.

The following tests results are included in our submission:

- Test borings by S.W.Cole performed on site in February 2015 revealed fill material, relic topsoil and glaciomarine deposits including silty clay. Refer to the attached geotechnical report prepared March 11, 2015.

REPORT

March 11, 2015
14-0696 S

Geotechnical Engineering Services

Proposed Apartment Building
72 Bishop Street
Portland, Maine

PREPARED FOR:
Avesta Housing
Attn: Gregory Payne
Director of Real Estate Development
307 Cumberland Avenue
Portland, ME 04101

PREPARED BY:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, ME 04039
T: (207) 657-2866

S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing*
- *GeoEnvironmental Services*
- *Ecological Services*

www.swcole.com

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Attachment A	Limitations
Sheet 1	Exploration Location Plan
Sheets 2 - 6	Exploration Logs
Sheet 7	Key to the Notes and Symbols
Sheet 8	Gradation Test Results
Sheet 9	Foundation Underdrain

14-0696 S

March 11, 2015

Avesta Housing
Attn: Gregory Payne
Director of Real Estate Development
307 Cumberland Avenue
Portland, ME 04101

Subject: Explorations and Geotechnical Engineering Services
Proposed Apartment Building
72 Bishop Street
Portland, Maine

Dear Greg:

In accordance with our Agreement, dated January 21, 2015, we have completed subsurface explorations for the subject project. This report summarizes our findings and geotechnical recommendations and its contents are subject to the limitations set forth in Attachment A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information in order to develop geotechnical recommendations relative to foundations, earthwork and pavement associated with the proposed construction. Our scope of services included five test boring explorations, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is located at 72 Bishop Street in Portland, Maine. We understand development plans call for construction of a three-story, 30-unit apartment building with a footprint of 7,097 square-feet. Based on the "Concept Site Plan" prepared by Mitchell & Associates (landscape architects), we understand the proposed site generally slopes to the south

with about 3 feet of surface relief ranging from about elevation 96 to 99 feet within the proposed building footprint.

We anticipate the building will be wood framed with spread footing foundations and on-grade floor slabs. We understand preliminary column loads of 20 to 60 kips and wall loads of 2.5 to 3.5 kips/foot are anticipated for the proposed three-story structure. A new access road off Bishop Street and paved parking is planned on the south side of the proposed building. Detailed site grading information is not available at this time.

Proposed and existing site features are shown on the "Exploration Location Plan" attached as Sheet 1.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Five test borings (B-1 through B-5) were made at the site on February 23, 2015 by S. W. Cole Explorations, LLC. The exploration locations were selected and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using a mapping grade GPS receiver and taped measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached as Sheet 1. Logs of the test borings are attached as Sheets 2 through 6. A key to the notes and symbols used on the logs is attached as Sheet 7.

2.2 Testing

The test borings were drilled using hollow-stem auger drilling techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) techniques. Pocket Penetrometer Testing (PPT) was performed where stiffer silty clay soils were encountered. SPT blow counts and PPT results are shown on the logs.

Soil samples obtained from the explorations were returned to our laboratory for further classification and testing. The results of one grain-size test on a combined sample of the existing fill soils from borings B-2, B-3 and B-5 is attached as Sheet 8.

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3.0 SITE AND SUBSURFACE CONDITIONS

3.1 Surficial

The site is an irregular shaped lot at 72 Bishop Street in Portland, Maine with an existing residential structure in the northeast corner of the site. The northern and central portions of the site are generally flat and slope gently downward from northwest to southeast. The southern and western edges of the site drop about 6 feet to a wetland area. The site is generally open lawn area with lightly wooded areas on the western and southern edges.

3.2 Soil and Bedrock

Underlying a surficial layer of topsoil, test borings B-1 through B-5 encountered a soils profile generally consisting of loose to medium dense granular fill overlying a relic topsoil layer overlying glaciomarine deposits of silt, clay and sand overlying refusal surfaces (probable bedrock) at depths of 6.6 to 24.2 feet.

In borings B-1, B-2, B-3 and B-5 (proposed building footprint), the glaciomarine deposits generally consisted of stiff to very stiff silty clay with sandy silt seams becoming silty sand with silty clay layers. At boring B-4 (proposed pavement area), the stiffer silty clay was followed by a relatively thin layer of softer, compressible silty clay between a depth interval of approximately 13 to 19 feet overlying glacial outwash sands and gravel.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

3.3 Groundwater

The soils encountered at the test borings generally were moist to wet from the ground surface. Saturated soils were encountered at depths varying from 4 to 8 feet. Groundwater was encountered at borings B-2 and B-5 at depths of about 6 and 4.5 feet. Groundwater likely becomes perched on the relatively impervious silty clay and bedrock encountered at the test borings. Long term groundwater information is not available. It should be anticipated that seasonal groundwater levels will fluctuate, particularly following during periods of snowmelt and precipitation.

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3.4 Frost and Seismic

The 100-year Air Freezing Index for the Portland, Maine area is about 1,410-Fahrenheit degree-days, which corresponds to a frost penetration depth on the order of 4.5 feet. Based on the subsurface findings, we interpret the site soils to correspond to Seismic Soil Site Class D according to 2009 IBC.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle geotechnical considerations are as follows:

- The proposed building footprint is underlain by uncontrolled fills and relic topsoil. We recommend complete removal of the uncontrolled fills and relic topsoil to exposed undisturbed non-organic native soils and then backfilling the building pad with compacted Granular Borrow up to the bottom of slab base gravel.

- Portions of the proposed site are also occupied by existing structures. We recommend complete removal of existing foundations and utilities and backfilling with compacted Granular Borrow.

- Spread footing foundations and on-grade floor slabs bearing on properly prepared subgrades, as recommended herein, appear suitable for the proposed building. Perimeter footings should be underlain with at least 6 inches of Crushed Stone wrapped in geotextile fabric with a perimeter foundation drain on the outside edge of crushed stone mat. Interior footings are anticipated to be founded on compacted Granular Borrow. On-grade floor slabs should bear on at least 12-inches of compacted Structural Fill underlain by properly prepared subgrades.

- Uncontrolled fills and relic topsoil are problematic for support of pavements and utilities. We recommend removal and replacement of uncontrolled fills to at least 1 foot below pavement subbase gravels. We recommend the complete removal of fills and relic topsoil below gravity utilities.

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- The site soils are sensitive to moisture and frost. Earthwork and grading activities should occur during drier Spring, Summer and Fall seasons. Rubber tired construction equipment should not operate directly on the native silt and clays.

- Imported Granular Borrow, Structural Fill, and Crushed Stone are recommended for fill and backfill. The existing fills and native non-organic soils are unsuitable for reuse below building areas, but may be suitable for reuse as fills to raise paved and landscape areas.

4.2 Site and Subgrade Preparation

We recommend site preparation begin with the construction of an erosion control system to protect adjacent drainage ways and areas outside the construction limits. Surficial organics, uncontrolled fills, relic topsoil, and foundations should be completely removed from areas of proposed fill and construction. As much vegetation as possible should remain outside the construction areas to lessen the potential for erosion.

Building Pad and Footings: As discussed, the site has been previously developed with uncontrolled fills overlying relic topsoil encountered to depths of about 4 to 7 feet. The uncontrolled fills and relic topsoil must be completely removed from beneath the proposed buildings. The extent of removal should extend 1 foot laterally outward from outside edge of perimeter footings for every 1-foot of excavation depth (1H:1V bearing splay). The overexcavated area should be backfilled with compacted Granular Borrow up to the bottom of slab base gravel. General details of uncontrolled fill removal and Granular Borrow backfill are attached as Sheet 9.

In general, native subgrades for the proposed building will consist of stiff to very stiff silty clay with areas of shallow bedrock. We recommend that excavation to subgrades be completed with a smooth-edged bucket to lessen disturbance of subgrade soils. If bedrock is encountered, we recommend removal to 6 inches below footing subgrade.

We recommend that perimeter foundations be underlain with 6 inches of Crushed Stone wrapped in geotextile fabric, such as Mirafi 180N or approved equivalent, overlying compacted Granular Borrow, stable native non-organic soils or bedrock. We anticipate that interior footings will be founded on compacted Granular Borrow.

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Paved Areas and Utilities: Uncontrolled fills encountered beneath proposed paved areas should be removed to a depth of at least 1 foot below pavement gravels and then proof-rolled and densified with a 10-ton vibratory roller compactor. Areas that become soft or continue to yield after densification should be removed and replaced with compacted Structural Fill.

The uncontrolled fills and relic topsoil must be completely removed from beneath gravity utilities. The overexcavated area should be backfilled with compacted Granular Borrow up to the bottom of customary bedding materials.

Segmental Retaining Wall: Uncontrolled fills and relic topsoil must be completely removed from beneath the wall facing blocks. The extent of removal should extend 1 foot laterally outward from inner and outside edge of the facing block for every 1-foot of excavation depth (1H:1V bearing splay). The overexcavated area should be backfilled with compacted Granular Borrow to within 1 foot of the bottom of wall.

4.3 Excavation, Blasting and Dewatering

Excavation work will generally encounter uncontrolled fill, relic topsoil, native silty clay and bedrock. Care must be exercised during construction to limit disturbance of the native bearing soils. Earthwork and grading activities should occur during drier Spring, Summer and Fall seasons. Rubber tired construction equipment should not operate directly on the native silt and clays. Low ground pressure tracked equipment will be needed and temporary haul roads overlying geotextile fabric may be necessary. Final cuts to subgrade should be performed with a smooth-edged bucket to help minimize soil disturbance.

Based on the subsurface findings, we anticipate bedrock removal may be necessary, particularly in the vicinity of boring B-1 where bedrock was encountered at depths of 4 to 7 feet below the ground surface. Bedrock may be removed by hoe-ramming or blasting. If blasting is necessary, we recommend that a licensed drilling and blasting contractor be engaged to provide rock removal and pre-blast surveys should be completed on surrounding structures and infrastructure prior to commencing blasting activities. Vibrations due to blasting should be monitored during construction.

Sumping and pumping dewatering techniques should be adequate to control groundwater in excavations. Controlling the water levels to at least one foot below planned excavation

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depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA regulations to prevent sloughing and caving of the sidewalls during construction. The design and planning of excavations, excavation support and dewatering is the responsibility of the contractor.

4.4 Foundations

We recommend the proposed building be supported on spread footings. Perimeter spread footings should be founded on at least 6 inches of Crushed Stone wrapped in non-woven geotextile fabric, such as Mirafi 180N, bearing on compacted Granular Borrow, stiff silty clay or bedrock. Blasted bedrock surfaces should be cleaned of loose blast rock and backfilled with compacted crushed stone. Interior spread footings are anticipated to be founded on compacted Granular Borrow underlain by stable native soils.

For foundations bearing on properly prepared subgrades, we recommend the following geotechnical parameters for design consideration:

Geotechnical Parameters for Spread Footings and Foundation Walls	
Design Frost Depth	4.5 feet
Net Allowable Soil Bearing Pressure	3.0 ksf or less
Base Friction Factor	0.35
Total Unit Weight of Backfill (compacted Structural Fill)	130 pcf
Internal Friction Angle of Backfill (compacted Structural Fill)	30°
At-Rest Lateral Earth Pressure Coefficient	0.5
Active Lateral Earth Pressure Coefficient	0.3
Total Post-Construction Settlement	1 inch or less
Differential Post-Construction Settlement	½ inch or less

Based on the subsurface findings, we interpret the site soils to correspond to Seismic Soil Site Class D according to IBC 2009/ASCE 7. We recommend the following seismic design parameters for the 2,500-year design earthquake:

RECOMMENDED SEISMIC DESIGN PARAMETERS (2,500-year Design Earthquake)		
Peak Ground Acceleration (PGA)	0.2-second Spectral Acceleration (S_s)	1-second Spectral Acceleration (S_1)
0.173 g	0.319 g	0.078 g

NOTE: Seismic design parameters from USGS accessed March 10, 2015 (http://geohazards.usgs.gov/deaggint/2002).

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Liquefiable soils typically consist of loose, fine sands and non-plastic silts below the groundwater table. Based on the subsurface findings, it is our opinion the soils at the site are not susceptible to liquefaction during a seismic event and therefore the risk of lateral spread and seismic induced settlement are negligible.

4.5 Foundation Drainage

We recommend a foundation underdrain pipe be installed within the 6-inch layer of Crushed Stone wrapped in geotextile filter fabric recommended below perimeter footings. The underdrain pipe should consist of a 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in Crushed Stone surrounded with non-woven geotextile fabric. The underdrain pipe must be connected to a positive gravity outlet protected from freezing, clogging and backflow. Surface grades should be sloped away from the building for positive surface water drainage. General underdrain details are shown on Sheet 9.

4.6 Slab-On-Grade

On-grade floor slabs in heated areas may be designed using a subgrade reaction modulus of 100 pci (pounds per cubic inch) provided the slab is underlain by at least 12-inches of compacted Structural Fill overlying properly prepared subgrades. The structural engineer or concrete consultant must design steel reinforcing and joint spacing appropriate to slab thickness and function.

We recommend a sub-slab vapor retarder particularly in areas of the building where the concrete slab will be covered with an impermeable surface treatment or floor covering that may be sensitive to moisture vapors. The vapor retarder must have a permeance that is less than the floor cover or surface treatment that is applied to the slab. The vapor retarder must have sufficient durability to withstand direct contact with the sub-slab base material and construction activity. The vapor retarder material should be placed according to the manufacturer's recommended method, including the taping and lapping of all joints and wall connections. The architect and/or flooring consultant should select the vapor retarder products compatible with flooring and adhesive materials.

The floor slab should be appropriately cured using moisture retention methods after casting. Typical floor slab curing methods should be used for at least 7 days. The architect or flooring consultant should assign curing methods consistent with current

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applicable American Concrete Institute (ACI) procedures with consideration of curing method compatibility to proposed surface treatments, flooring and adhesive materials.

4.7 Entrance Slabs and Sidewalks

Entrance slabs and sidewalks adjacent to the building must be designed to reduce the effects of differential frost action between adjacent pavement, doorways, and entrances. We recommend that non-frost susceptible Structural Fill be provided to a depth of at least 4.5 feet (2.5 feet over bedrock) below the top of entrance slabs. This thickness of Structural Fill should extend the full width of the entrance slab and outward at least 4.5 feet, thereafter transitioning up to the bottom of the adjacent sidewalk or pavement gravels at a 3H:1V or flatter slope. General details of this frost transition zone are attached as Sheet 9.

4.8 Segmental Retaining Wall

We anticipate an exterior segmental retaining wall (SRW), such as Redi-Scape, will be needed on the southerly edge of the proposed paved area to retain up to 8 feet of soil. We recommend the facing blocks be founded on a minimum 12-inch thick leveling course of compacted Crushed Stone overlying undisturbed stiff silty clay or compacted Granular Borrow overlying native undisturbed stiff silty clay. We anticipate it will be necessary remove and replace uncontrolled fills and relic topsoil below the wall.

Based on the site soils and our understanding of the proposed construction, we provide the following soil parameters for use by a wall design engineer in their design of the segmental retaining wall:

Geotechnical Parameters of Segmental Block Retaining Wall			
Wall Segment	**Friction Angle**	**Cohesion**	**Unit Weight**
Retained Backfill (Granular Borrow)	30 degrees	0 psf	125 pcf
Retained Backfill (Crushed Stone)	34 degrees	0 psf	100 pcf
Foundation (Brown Silty Clay)	0 degrees	1,500 psf	120 pcf
Foundation (Granular Borrow)	30 degrees	0 psf	125 pcf
Net Allowable Bearing Capacity	2 ksf (properly prepared subgrade)		
Anticipated Settlement	up to 1 inch (during construction) up to 1 inch (post-construction)		
Seismic Soil Site Class	D (IBC 2009)		

Design of the retaining wall and evaluation of base sliding, overturning and internal stability of the wall are the responsibility of the wall design engineer. The wall designer must account for construction surcharge loads and future live load conditions. S.W.COLE is available to provide SRW design.

S.W.COLE should be retained to perform a global stability analysis of the SRW and to review the SRW submittal if designed by others.

4.9 Backfill and Compaction

The native soils and existing fills are unsuitable for reuse in building areas, but may be suitable as Common Borrow for compacted fill in paved and landscape areas. We recommend the following fill and backfill materials:

Common Borrow: Fill to raise grades in paved and landscape areas should be non-organic, mineral soils meeting the requirements of MaineDOT 703.18 Common Borrow.

Granular Borrow: Fill to raise grades in building areas and backfill of excavations from removal of existing foundations and utilities should be sand or silty sand meeting the requirements for MaineDOT 703.19 Granular Borrow. A 1-foot lift of Granular Borrow is also recommended below pavement subbase gravel.

Structural Fill: Fill to repair soft areas, backfill for foundations, slab base material and material below exterior entrances and sidewalks should be clean, non-frost susceptible sand and gravel meeting the gradation requirements for Structural Fill as given below:

Structural Fill	
Sieve Size	**Percent Finer by Weight**
4 inch	100
3 inch	90 to 100
¼ inch	25 to 90
#40	0 to 30
#200	0 to 5

Crushed Stone: Crushed Stone, used beneath perimeter foundations and for underdrain aggregate, should meet the gradation requirements of ASTM No. 57 Stone. A nominally sized ¾-inch washed crushed stone usually meets this requirement.

Placement and Compaction: Fill should be placed in horizontal lifts and compacted such that the desired density is achieved throughout the lift thickness with 3 to 5 passes of the compaction equipment. Loose lift thicknesses for grading, fill and backfill activities should not exceed 12 inches. We recommend that fill and backfill in building and paved areas be compacted to at least 95 percent of its maximum dry density as determined by ASTM D-1557. Crushed Stone should be compacted with 3 to 5 passes of a vibratory plate compactor having a static weight of at least 500 pounds.

4.10 Paved Areas

We anticipate paved areas will be subjected primarily to passenger and light delivery truck traffic. Considering the site soils and proposed usage, we offer the following pavement section for consideration. Materials are based on Maine Department of Transportation Standard Specifications.

Asphalt Pavement Section	
Material	**Thickness (inches)**
9.5 mm Hot Mix Asphalt (50 Gyration Design)	1 ¼
19.0 mm Hot Mix Asphalt (50 Gyration Design)	2 ¼
MaineDOT 703.06 Type A, Crushed Aggregate Base	3
MaineDOT 703.06 Type D, Crushed Aggregate Subbase	15
MaineDOT 703.19 Granular Borrow, Granular Subbase	12

Pavement subgrades should be densified with 3 to 5 passes of a vibratory roller. The base and subbase materials should be compacted to at least 95 percent of their maximum dry density as determined by ASTM D-1557. Hot mix asphalt pavement should be compacted to 92 to 97 percent of its theoretical maximum density as determined by ASTM D-2041. A tack coat should be used between successive lifts of bituminous pavement.

It should be understood that frost penetration can be on the order of 4.5 feet in the project area. In the absence of full depth excavation of frost susceptible soils and subsequent replacement with non-frost susceptible compacted fill, frost penetration into the subgrade will occur and some heaving and distress of pavement must be anticipated.

DRAFT

4.11 Weather Considerations

Earthwork and foundation construction should be completed during non-freezing Spring, Summer and Fall weather. The site soils may require drying before construction activities may occur and the contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather.

If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.12 Design Review and Construction Testing

S.W.COLE should be retained to review the construction documents to determine that our foundation, earthwork and pavement recommendations have been properly interpreted and implemented.

A soils and concrete testing program should be implemented during construction to observe compliance with the design concepts, plans, and specifications. S.W.COLE is available to provide geotechnical observations during earthwork, provide subgrade observations for foundations and pavements as well as provide and testing and special inspection services for soils, concrete, asphalt, steel and spray-applied fireproofing construction materials.

5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the construction phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.

Timothy J. Boyce, P.E.
Senior Geotechnical Engineer

MAS:tjb

DRAFT

Attachment A
Limitations

This report has been prepared for the exclusive use of Avesta Housing for specific application to the Proposed Apartment Building at 72 Bishop Street in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

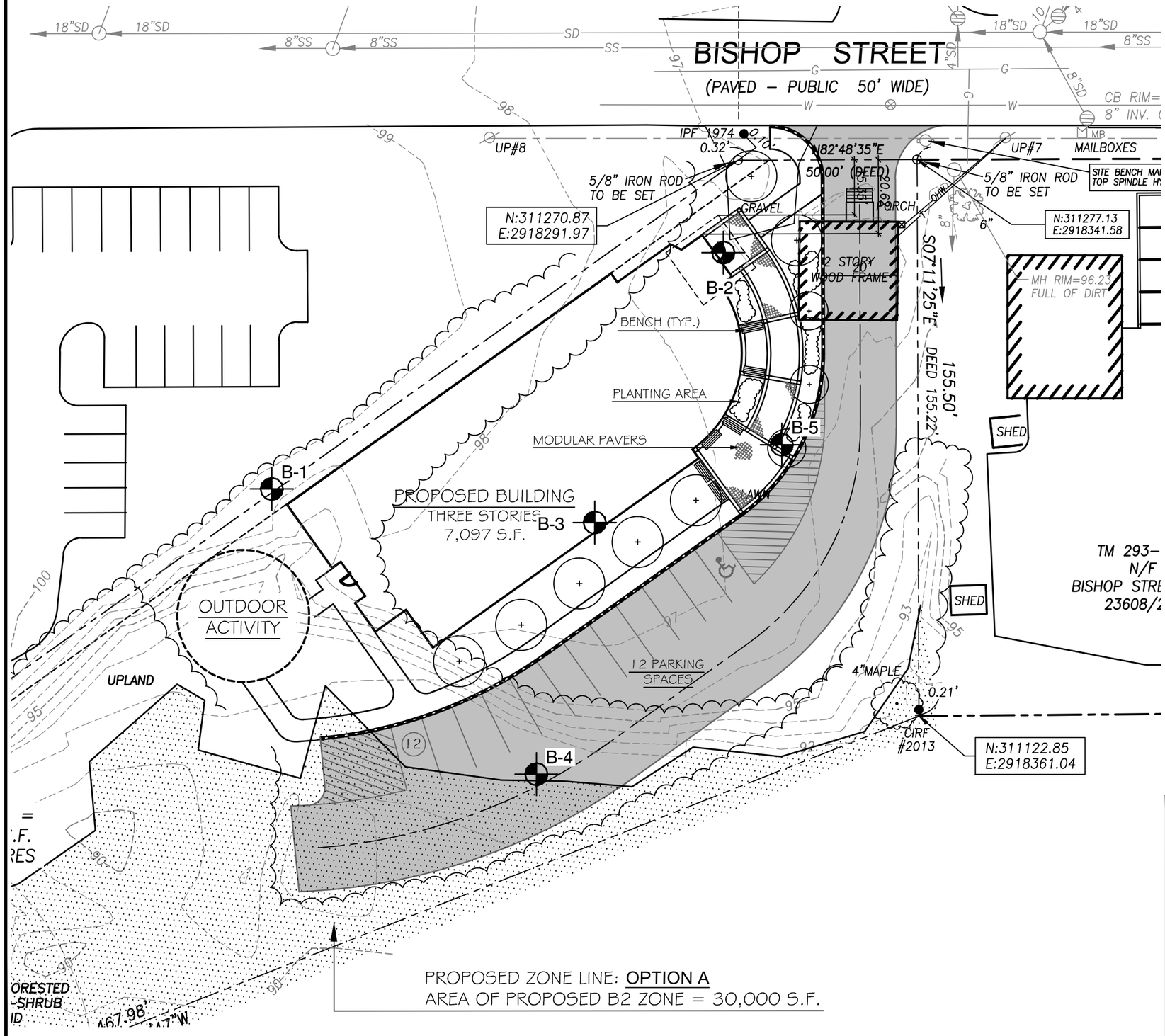
The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.



LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=20' SCALE PLAN OF THE SITE ENTITLED "CONCEPT SITE PLAN," PREPARED BY MITCHELL & ASSOCIATES, DATED JUNE 17, 2014, REVISED AUGUST 1, 2014.
2. THE BORINGS WERE LOCATED IN THE FIELD BY GPS SURVEY BY S. W. COLE ENGINEERING, INC. USING A MAPPING GRADE GPS RECEIVER.
3. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
4. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.

0 30 60 Feet

S.W.COLE ENGINEERING, INC.

AVESTA HOUSING

EXPLORATION LOCATION PLAN

PROPOSED 3-STORY APARTMENT BUILDING
72 BISHOP STREET
PORTLAND, MAINE

Job No.:	14-0696	Scale:	1" = 30'
Date :	03/11/2015	Sheet:	1

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-1**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 98' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.6'	TOPSOIL OVER BROWN FINE SANDY SILT WITH ROOTLETS
	1D	24"	12"	2.0'	4	7	13	15		BROWN GRAVELLY SAND, SOME SILT (FILL)
	2D	2"	0"	4.2'	50/2"					<<REFUSAL AT 4.2'; BORING OFFSET 5' WEST>>
									6.6'	
										REFUSAL AT 6.6'
										PROBABLE BEDROCK
										±6"OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-1**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-2**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 97' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER AT ±6'
SOILS WET BELOW 4'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
										BROWN SAND AND GRAVEL, SOME SILT OCCASIONAL COBBLES (FILL)
	1D	14"	14"	1.2'	36	72	50/2"			<<BLOW COUNT OVERSTATED DUE TO FROST>>
									3.5'	
									4.0'	DARK BROWN ORGANIC FINE SANDY SILT (RELIC TOPSOIL)
										BROWN SILTY CLAY WITH FREQUENT FINE SANDY SILT SEAMS
	2D	24"	10"	6.0'	3	4	5	6		~STIFF~ q_p = 3.5 - 4 ksf
										…BECOMING
										BROWN SILTY FINE TO MEDIUM SAND WITH OCCASIONAL SILTY CLAY LAYERS
	3D	22"	13"	10.8'	3	2	1	30/4"	10.8'	~LOOSE~
										REFUSAL AT 10.8'
										PROBABLE BEDROCK
										±3' OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-2**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-3**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 97.5' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS WET BELOW ±6'
SOILS SATURATED BELOW ±7.5'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	TOPSOIL OVER BROWN FINE SANDY SILT WITH ROOTLETS
	1D	24"	22"	2.0'	4	6	7	9	2.0'	BROWN AND GRAY SAND, SOME SILT WITH FINE ASPHALT FRAGMENTS (FILL)
										BROWN SILTY SAND, SOME GRAVEL (FILL)
									4.5'	~LOOSE TO MEDIUM DENSE~
										DARK BROWN ORGANIC SILT, SOME FINE SAND (RELIC TOPSOIL)
	2D	24"	12"	6.0'	1	1	1	1	5.5'	~VERY LOOSE~
										MOTTLED SILTY CLAY WITH OCCASIONAL SILTY FINE SAND SEAMS
	3D	24"	24"	8.0'	4	4	6	8		~VERY STIFF~ q_p = 6.5 - 7 ksf
										...BECOMES
										BROWN SILTY CLAY WITH FREQUENT SILTY FINE SAND LAYERS
	4D	24"	24"	11.0'	3	4	5	5		~STIFF~ q_p = 3.5 - 5 ksf
									11.9'	
										REFUSAL AT 11.9'
										PROBABLE BEDROCK
										±6" OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-3**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-4**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 92' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SOILS SATURATED BELOW ±8'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.7'	2" OF TOPSOIL OVER BROWN SILTY FINE SAND WITH ROOTLETS
	1D	24"	20"	2.0'	3	1	2	4		BROWN FINE SANDY SILT, SOME FINE GRAVEL (FILL) ~MEDIUM DENSE~
									4.0'	
	2D	24"	10"	6.0'	2	2	2	2	6.5'	BROWN SILTY SAND, SOME GRAVEL, TRACE BRICK FRAGMENTS (FILL) ~LOOSE~
									7.2'	DARK BROWN ORGANIC FINE SANDY SILT (RELIC TOPSOIL)
	3D	24"	24"	8.0'	3	2	5	5		MOTTLED SILTY CLAY WITH FREQUENT FINE SANDY SILT SEAMS ~VERY STIFF~
	4D	24"	24"	11.0'	2	4	6	8		…BECOMES OLIVE-GRAY q_p = 6 - 8 ksf
	5D	24"	24"	16.0'	2	2	2	2		…BECOMES GRAY ~MEDIUM~
									19.0'	
	6D	18"	18"	20.5'	5	13	15			BROWN FINE TO MEDIUM SAND, SOME SILT WITH FREQUENT SILTY CLAY LAYERS ~MEDIUM DENSE~
	7D	2"	2"	24.2'	50/2"				24.2'	…BECOMES BROWN SAND, SOME SILT AND FINE GRAVEL
										REFUSAL AT 24.2' PROBABLE BEDROCK
										±6" OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-4**

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: **B-5**
SHEET: 1 OF 1
PROJECT NO.: 14-0696

PROJECT: PROPOSED APARTMENT BUILDING
CLIENT: AVESTA HOUSING-MAINE AFFORDABLE HOUSING COLLABORATION
LOCATION: 72 & 78 BISHOP STREET, PORTLAND, MAINE
DRILLING CO. : S.W.COLE EXPLORATIONS, LLC. DRILLER: BOB MARCOUX

DATE START: 2/23/2015
DATE FINISH: 2/23/2015
ELEVATION: 96' +/-
S.W.COLE REP: M. ST. PIERRE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	4 1/4"		
SAMPLER:	SS	1 3/8"	140 LBS	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER AT ±4.5'

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	1" OF TOPSOIL OVER BROWN SILTY FINE TO MEDIUM SAND WITH ROOTLETS
	1D	24"	15"	2.0'	5	3	3	2		BROWN GRAVELLY SAND, SOME SILT (FILL)
										~LOOSE~
									4.2'	
									4.5'	DARK BROWN ORGANIC SILT, SOME FINE SAND (RELIC TOPSOIL)
	2D	24"	10"	6.0'	3	1	1	2		BROWN SILTY CLAY WITH FREQUENT FINE SANDY SILT SEAMS
										~MEDIUM TO STIFF~ q_p = 2.5 ksf
										…BECOMING
										BROWN SILTY FINE TO MEDIUM SAND WITH OCCASIONAL SILTY CLAY LAYERS
	3D	20"	18"	10.7'	3	3	13	50/2"	10.7'	~MEDIUM DENSE~
										REFUSAL AT 10.7'
										PROBABLE BEDROCK
										±8" OF FROST

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:

	DRILLER - VISUALLY
X	SOIL TECH. - VISUALLY
	LABORATORY TEST

REMARKS:

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: **B-5**

KEY TO THE NOTES & SYMBOLS
Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

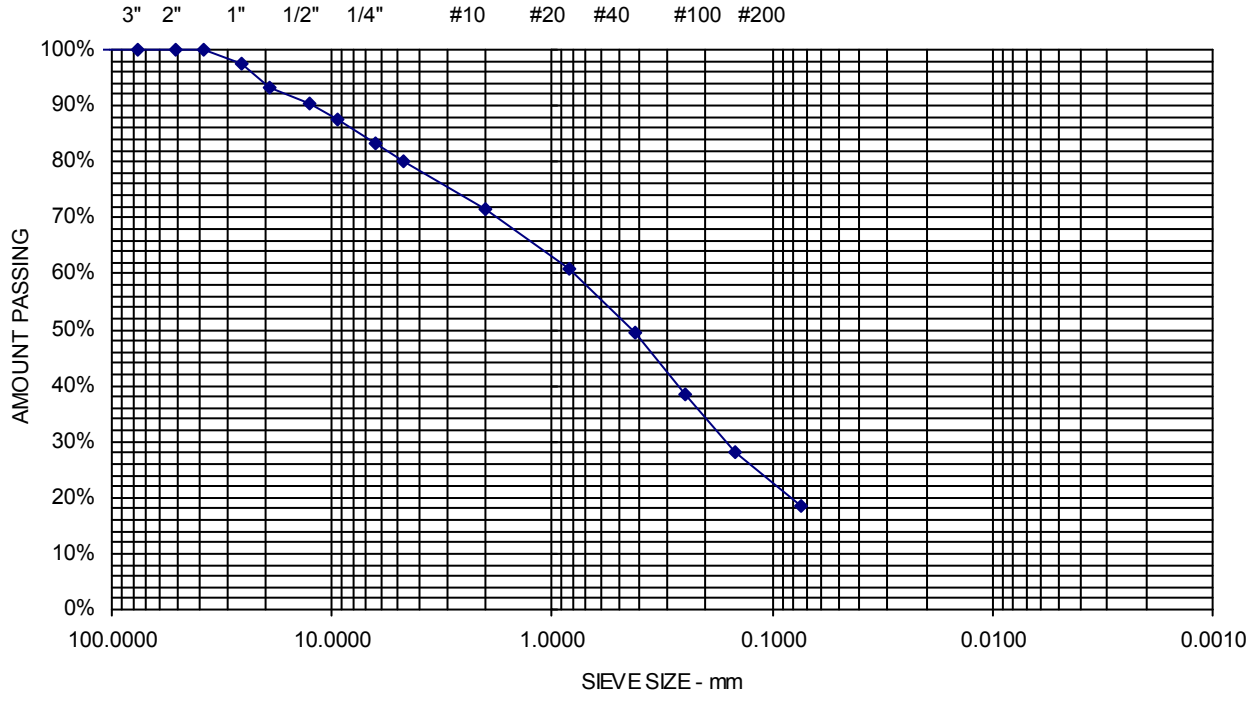
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	PORTLAND ME - PROPOSED BISHOP STREET APARTMENT BUILDING - GEOTECHNICAL ENGINEERING SERVICES	Project Number	14-0696
Client	AVESTA HOUSING	Lab ID	8784A
Exploration	**B-2, B-3 & B-5**	Date Received	3/2/2015
Material Source	**BLENDED SAMPLE 0-2'**	Date Completed	3/2/2015
		Tested By	NEIL DAVIS

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	
150 mm	**6"**	**100**	
125 mm	**5"**	**100**	
100 mm	**4"**	**100**	
75 mm	**3"**	**100**	
50 mm	**2"**	**100**	
38.1 mm	**1-1/2"**	**100**	
25.0 mm	**1"**	**97**	
19.0 mm	**3/4"**	**93**	
12.5 mm	**1/2"**	**91**	
9.5 mm	**3/8"**	**88**	
6.3 mm	**1/4"**	**83**	
4.75 mm	**No. 4**	**80**	20% Gravel
2.00 mm	**No. 10**	**71**	
850 um	**No. 20**	**61**	
425 um	**No. 40**	**49**	61.7% Sand
250 um	**No. 60**	**38**	
150 um	**No. 100**	**28**	
75 um	**No. 200**	**18.3**	18.3% Fines



Comments:

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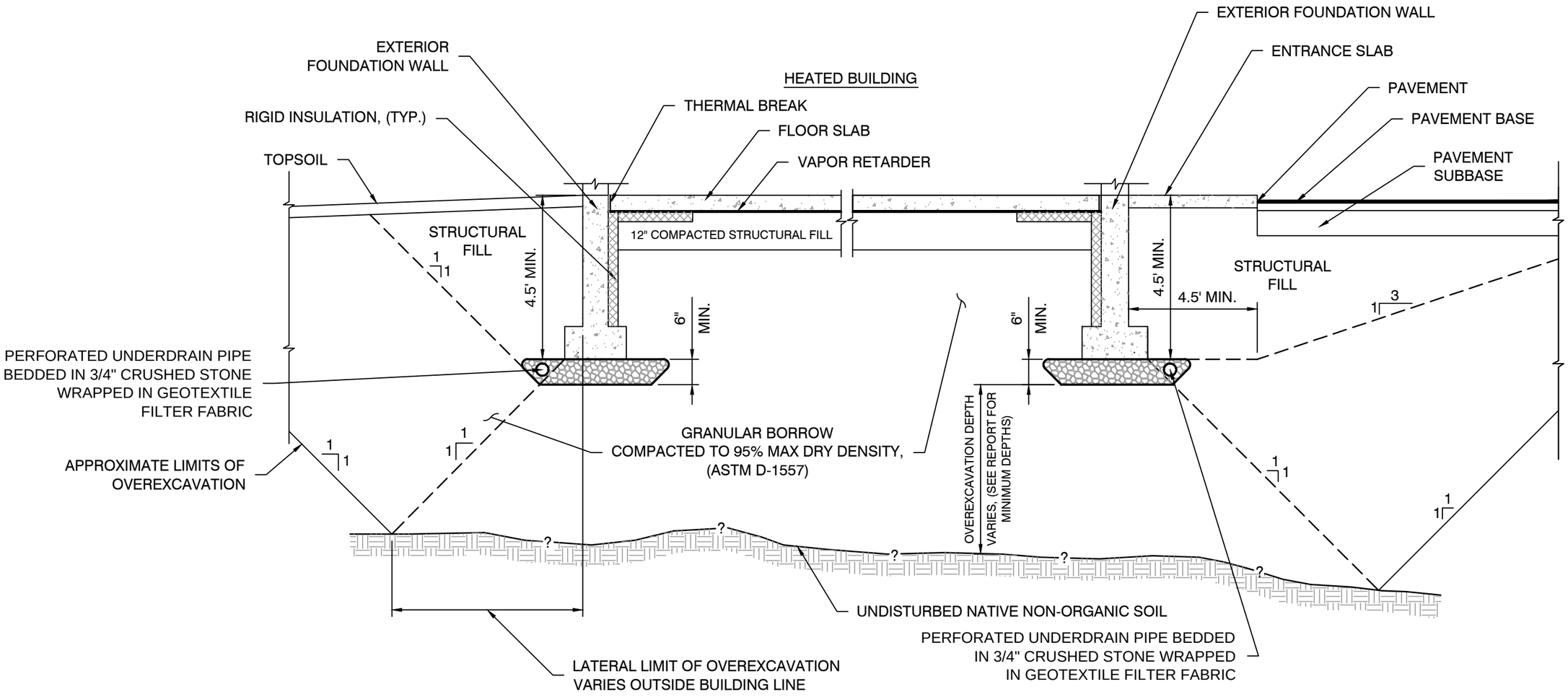


NOTE:

1. UNDERDRAIN INSTALLATION AND MATERIAL GRADATION RECOMMENDATIONS ARE CONTAINED WITHIN THIS REPORT.

2. DETAIL IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY, NOT FOR CONSTRUCTION.

S.W.COLE ENGINEERING, INC.

AVESTA HOUSING

UNDERDRAIN DETAIL

PROPOSED 3-STORY APARTMENT BUILDING
72 BISHOP STREET
PORTLAND, MAINE

Job No.:	14-0696	Scale:	Not to Scale
Date :	03/11/2015	Sheet:	9

PUBLIC UTILITIES

72 Bishop Street will be served by existing utility services located in Bishop Street. There is no moratorium for excavation on this street. The following public utilities are available:

Water

Water for both fire suppression and domestic service will be supplied from an existing 12 inch water main located in Bishop Street. Proposed service connections include 6 inch fire service and 2 inch domestic service. Refer to the attached letter from Portland Water District stating their ability to service this project.

Sanitary Sewer

Sanitary sewer will be supplied from an existing 8 inch public sewer main located in Bishop Street. Proposed service connection will be a 6 inch line. A Wastewater Capacity Application has been filed with this Site Plan Application.

Natural Gas

Natural gas will be supplied from an existing 8 inch HDPE gas main located in Bishop Street. A 2 inch service will connect to the building. Refer to the attached letter from Unitil.

Electric

Electric service will be connected from an existing pole along Bishop Street. Service will be routed underground to the project site. Refer to the attached letter from Central Maine Power

Telephone and Cable TV

Telephone and cable TV will be connected from the existing utility pole along Bishop Street. Service will be routed underground to the project site.

Unitil
ME GAS OPERATIONS

February 17, 2015

Ms. Sashie Misner
Mitchell & Associates
The Staples School
70 Center Street
Portland, ME 04106

Re: 72 Bishop Street Efficiencies

Dear Ms. Misner:

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

Unitil has natural gas in the vicinity of this project to provide service. The main in this vicinity is 8" HDPE plastic intermediate pressure. The evaluation to complete the design, costs and determining what the customer contribution is can be completed once Unitil receives the completed design and load information. Unitil welcomes the opportunity for further discussions regarding this project.

If you have any further questions or require additional information, please contact me directly at (207) 541-2536 or at Harmon@unitil.com.

Sincerely,

Bridget L. Harmon
Business Development Representative
Unitil Corporation
(o) 207-541-2536 (f) 207-541-2586

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

March 30, 2015

Mitchell & Associates
The Staples School
70 Center Street
Portland, ME 04101

Attn: Sashie Misner
Re: 72 Bishop Street Efficiencies, Portland
Ability to Serve with PWD Water

Dear Ms. Misner:

The Portland Water District has received your request for an Ability to Serve determination for the noted site submitted on February 16, 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 service apply:

- Our records show that the site is currently served with a ¾-inch domestic water service; please note that the size of this service is below our minimum service size of 1-inch. This existing ¾-inch water service must be terminated by shutting the corporation valve and cutting the pipe from the water main.

- New service(s) may be installed from the water main in Bishop Street. The services(s) should enter through the properties frontage at least 10-feet from side property lines. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- 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 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. 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.

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

Water System Characteristics

According to District records, there is a 12-inch diameter cast iron, cement lined water main on the south side of Bishop Street and a public fire hydrant located adjacent to the site.

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

Hydrant Location:	Bishop Street 550' west of Mayfield Street	
Hydrant Number:	POD-HYD01616	
Last Tested:	2/14/2013	7/19/2006
Static Pressure:	74 psi	70 psi
Residual Pressure:	Not Measured	Not Measured
Flow:	Not Measured	1,255 GPM

Public Fire Protection

It is not anticipated that this project will include the installation of new public hydrants to be accepted into the District water system. The decision to require new hydrants and to determine their locations is solely that of the local fire department. 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

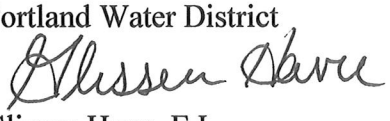
The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

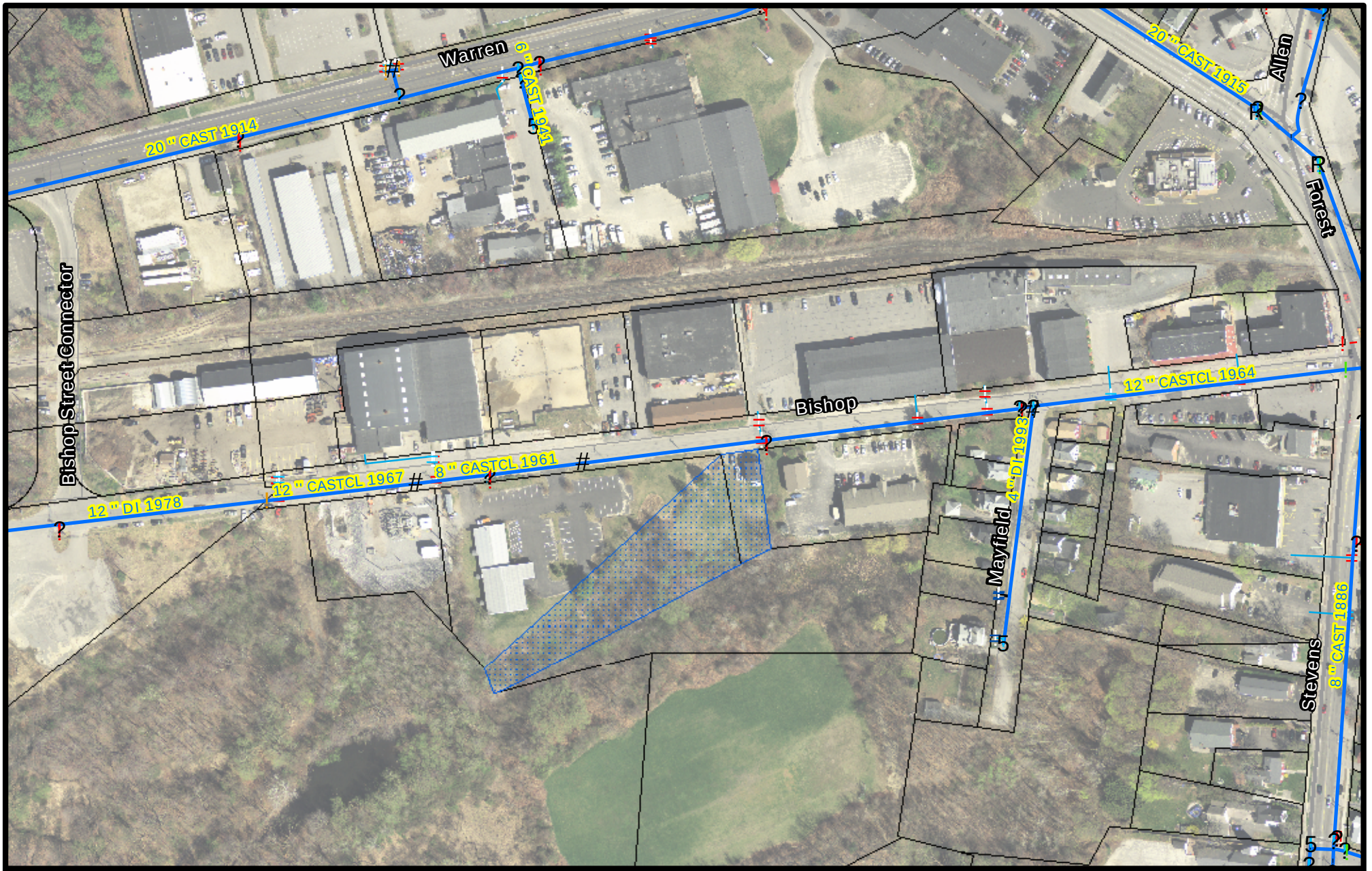
It is anticipated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they 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 the MEANS Division to request a hydrant flow test and we will work with you to get more complete data.

As your project progresses, please remain in contact with the District to ensure that the design meets our current standards. 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



72 Bishop Street

Portland

PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104

Scale 0 50 100 200 300 400 Feet — 1 inch = 200 feet

Legend

!	Air Valve	●	Connection	=	Combined Service	!	Manhole
5	Blow Off	!	Attribute Change	=	Domestic Service	(	CSO
R	By Pass	#	Reducer	=	Fire Service	→	Gravity
?	Distribution	!	Hydrant	(	Private Hydrants	→	Force
?	Transmission	?	Hydrant Control	(	Meter Pits		

Disclaimer: This map is suitable for preliminary study and analysis and is based on PWD record information. PWD is not liable for any damages whatsoever resulting from inaccurate data or from errors made in the location and marking of its infrastructure.

Drawn By: GJH	Prepared For: Mitchell & Associates
Scale: As Noted	Date: March 30, 2015

2/17/2015

Sashie Misner
Mitchell and Associates
70 Center Street
Portland, ME 04101
Sent via email to: SMisner@MitchellAssociates.biz

RE: Ability to Serve Letter for Avesta Housing 72 Bishop Street, Portland, ME.

Dear Ms. Misner:

CMP has the ability to serve the proposed project located at 72 Bishop 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. Should the process be single phase, you will work directly with our Portland Service Center.

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

Portland, Maine Yes. Life's good here.

Michael J. Bobinsky
Director of Public Services

18 June 2015

Mr. Robert Metcalf, Principal,
Mitchell & Associates,
Landscape Architects,
70 Center Street,
Portland, Maine 04101

RE: The Capacity to Handle Wastewater Flows, from a Proposed Three Story, "Housing First," Apartment Building, for the Chronically Homeless, at 72 Bishop Street.

Dear Mr. Metcalf:

The existing, eight-inch diameter polyvinyl chloride sanitary sewer pipe, located in Bishop Street, has adequate capacity to **transport,** while The Portland Water District sewage treatment facility, located off Marginal Way, has adequate capacity to **treat,** the anticipated wastewater flows of **3,551 GPD**, from this proposed project.

In order to offset any increase in sanitary flows, the City combined sewer overflow (C.S.O.) abatement consent agreement (with the U.S.E.P.A., and with the Maine D.E.P.) requires C.S.O. abatement, as well as storm water mitigation, from all projects.

If the City can be of further assistance, please call 874-8832.

Sincerely,
CITY OF PORTLAND

Frank J Brancely, B.A., M.A.
Senior Engineering Technician

C:\Frank's\Capacity Letters\Bishop Street 72

Anticipated Wastewater Flows from the Proposed Project:

30 Proposed One Bedroom Efficiency Units @ 120 gpd per Unit	=	3,600 GPD
2 Proposed Staff @ 12 gpd per Staff	=	24 GPD
Less Wastewater Flows from Most Recent Tenant	=	(73 GPD)
Total Net Increase in Proposed Wastewater Flows for this Project	=	**3,551 GPD**

FJB

CC: 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.
Helen Donaldson, Planner, Department of Planning and Urban Development, City of Portland.
David Margolis-Pineo, Deputy City Engineer, City of Portland.
Nancy Gallinaro, Water Resources Manager.
Michael Farmer, P.E., Project Engineer, City of Portland.
Bradley A. Roland, P.E., Environmental Project Engineer, City of Portland.
Benjamin N. Pearson, E.I., Industrial Pretreatment Coordinator, City of Portland.
John Emerson, Wastewater Coordinator, City of Portland.
Rhonda Zazzara, Field Inspection Coordinator, City of Portland.
Jane B. Ward, Administrative Assistant, Engineering Services, Department of Public Services.

AVESTA HOUSING

Att. H

Quality Affordable Living

To: Interested Parties

From: Greg Payne, Development Officer

Re: Statement of Technical Capability

Avesta Housing is Maine's largest and most sophisticated non-profit housing developer and manager. Incorporated in 1972, Avesta is driven by the vision that decent, affordable housing should be available to all Mainers, without exception. Avesta owns and manages 56 properties containing over 1,500 affordable apartments. These apartments serve low-income seniors and families, as well as persons with special needs, primarily in York and Cumberland Counties.

Avesta Housing is chartered as a nonprofit corporation in the state of Maine and is tax exempt under Section 501(c)3 of the federal Internal Revenue Code. Avesta is governed by a 15-member board of directors representing a variety of banking, business, public, community, social service and housing organizations. Its administrative headquarters is in Portland, Maine. It has a staff of 90 full-time and part-time employees.

307 Cumberland Avenue Portland, Maine 04101
207-553-7777 1-800-339-6516 Voice/TTY 207-553-7778 Fax | www.avestahousing.org

NeighborWorks® CHARTERED MEMBER

Gorham
SAVINGS BANK

February 17, 2015

City of Portland
389 Congress Street
Portland, ME 04101

RE: Avesta Housing, Bishop Street Apartments, Portland, Maine

Dear Sir or Madam,

It is a pleasure to confirm for you that Avesta Housing is a valued customer of Gorham Savings Bank in good standing. We believe, based on our relationship with them, that they have the financial and managerial capability to successfully complete the above project.

While this is not a commitment to lend, we welcome the opportunity to assist Avesta Housing with their financing needs for this project.

Sincerely,

Matthew W. Early
Senior Vice President

MWE/ckb

10 Wentworth Drive, Gorham, ME 04038 • Tel. (207) 839-3342
Customer Service Center (207) 839-4796 • www.gorhamsavingsbank.com

AVESTA HOUSING

LETTER OF AUTHORIZATION

June 17, 2014

To: City of Portland Planning Department

This letter authorizes Robert Metcalf, Michael King and/or Sashie Misner of Mitchell & Associates and Ben Walter of CWS Architects to act as agents on behalf of Avesta Housing Development Corporation in public meetings and the submission of any and all application materials that relate to our proposed development of Bishop Street Apartments on Bishop Street in Portland.

Sincerely,

Greg Payne
Development Officer

307 Cumberland Avenue • Portland, Maine 04101
207-553-7777 • 1-800-339-6516 Voice/TTY
207-553-7778 Fax • www.avestahousing.org

NeighborWorks® CHARTERED MEMBER

COMPLIANCE WITH APPLICABLE ZONING REQUIREMENTS

The proposed development will be located within the Community Business District (B-2-C zone). A mix of business, industry and single family residences exists within this Bishop Street neighborhood. The proposed 30 efficiency units at 72 Bishop Street will provide housing for chronically homeless individuals, using a “housing first” approach. The project is close to Forest Avenue and will provide much needed housing in urban neighborhoods along arterials. The proposed development intends to meld with the neighborhood and be a positive addition to the surrounding services provided.

The B-2-C zone supports moderate to high density residential uses located in close proximity to business uses. 72 Bishop Street will replace the single family residence with 30 efficiency units and providing residential development similar in scale to the surrounding structures. The height of the proposed 3-level building is 39 feet. While B-2-C zone encourages active street frontages, the irregular shape of the lot and program do not allow for the building to be located 10 feet from the front property line. The building will be angled and located as close as possible to the front property line (18’). No parking is proposed within the front of the building. Onsite parking consists of ten parking spaces and two handicap parking spaces.

The proposed development is in compliance with the applicable zoning requirements set-forth the Portland Land Use Ordinance conforming to provisions of the Site Plan and Subdivision Regulations and the zoning provisions of the B-2-C designated district with the following exceptions.

The applicant is requesting a waiver from Section 14-188 Active Street Frontages and 14-185 Dimensional Requirements (Front Yard Maximum). The request is based on the limitations the irregular shaped lot offers in regards to building location. The property is 50 feet wide at the property line and does not offer the ability to locate a 24 foot driveway and the primary building façade towards the street. Because of the low traffic volume entering the site and to allow the building to be as close to the road as possible, the driveway was designed as 20’ wide. The building is located as close as possible to the front property line (18’) to achieve the appearance of an Active Street Front.

The applicant is requesting a waiver from Section 14-332 (4) (a) multi-family residential parking requirement of one parking space per dwelling unit. The applicant is proposing to provide 12 parking spaces (10 spaces and 2 handicap spaces). The proposed reduced amount of parking is based on prior experience serving the target homeless population whom do not typically own vehicles as well as an understanding of future employee parking needs.

WAIVER REQUEST

1. Waiver request from Section 14-185 Dimensional Requirements (Front Yard Maximum). The request is based on the limitations the irregular shaped lot offers in regards to building location. The property is 50 feet wide at the property line and does not offer the ability to locate a 24 foot driveway and the primary building façade within the ten (10) foot setback at the street. To locate the structure as close as possible to the street, we have reduced the width of the access drive from 24 feet to 20 feet allowing the closest point of the building to be 18 feet from the property line. The driveway width for the parking meets the required 24 foot width.

2. Waiver request from Section 14-332 (4) (a) multi-family residential parking requirement of one parking space per dwelling unit. The applicant is proposing to provide 12 parking spaces (10 spaces and two handicap spaces). The proposed reduced amount of parking is based on prior experience serving the target homeless population whom do not typically own vehicles, as well as, an understanding of future employee parking needs.

3. Waiver request from Section 14-526 2.b.iii. a. & Technical Design Manual 4.6.1, Multi-family residential street tree requirement of one street tree per unit spaced 30'-45' within the right of way. The facility proposes 30 units although has only 50 feet of road frontage. Due to the irregular shape of the site and driveway and sidewalk requirements the applicant is not proposing any street trees within the right of way. The applicant would like planning staff to consider the three trees located along the front of the building to apply towards the 30 required trees. The applicant is requesting a waiver for the remaining 27 trees and will provide the fee in lieu.

Temporary Waiver Request

The applicant requests the following temporary waivers:

1. Construction Management Plan. At this stage in development we are unable to provide a detailed construction management plan. We request the ability to provide this at a later time.

2. Lighting Photometric Plan. We have selected the attached fixtures for site lighting. We are requesting a temporary waiver for the submission of the

photometric plan, a plan will be provided before a scheduled public hearing.

3. Manufacturers' Verification of Mechanical Systems, HVAC equipment will be mounted on the roof. Sizing and selection of equipment is currently being developed. Appropriate documentation will be submitted for staff review. We request the ability to provide at a later date.

4. Sign Plan. The Sign Plan will be in conformance with city zoning. We have shown the intended signage location and request the ability to provide the detailed sign information at a later time for staff review.

5. Easements. The location of electric and communication services has not been finalized. Option one shown on plan sheet L3 will require an easement from the abutting masonic lodge. The applicant is pursuing this and will provide any easements as may be required.

CONSISTENCY WITH CITY'S COMPREHENSIVE PLAN

The Project is consistent with the City's Comprehensive Plan and, more specifically, the housing component of that plan, *Housing: Sustaining Portland's Future*.

Housing: Sustaining Portland's Future lays out six major policy objectives to achieve the City's housing goals and address Portland's housing shortage. Each of these primary policies outlines a number of secondary policy goals. The proposed Project is consistent with many of the housing policy goals detailed in the city comprehensive housing plan;

Policy #1: Ensure an Adequate and Diverse Supply of Housing for All

i. *Ensure the construction of a diverse mix of housing types that offers a continuum of options across all income levels, which are both renter and owner-occupied.*

Homelessness is an issue that plagues many urban communities. This project will provide housing for the chronically homeless contributing long term solutions to this greater community issue. The project is located within a business district along an arterial.

ii. *A variety of housing choices should be available such that no one should have to spend more than 30% of their income for housing.*

This 'housing first' project will provide 30 efficiency apartment units. Avesta will partner with Preble Street for the provision of 24-hour, on-site support services and Portland Housing Authority for project-based rental assistance. This housing project will provide quality services and living space for Portland's neediest population.

iii. Encourage higher density housing located near services, such as schools, businesses, institutions, employers, and public transportation.

The Project is a moderate density development near Forest Avenue the services and facilities listed above.

iv. Increase Portland's rental housing stock to maintain a reasonable balance between supply and demand yielding consumer choice, affordable rents, and reasonable return to landlords.

The Project will bring 30 efficiency apartments to the neediest of Portland. In addition to providing housing, the project includes counselling services for homeless individuals with mental disorders. This step is aimed at providing not just a living space but support to establish stability and a hopeful future.

v. Identify vacant land and redevelopment opportunities throughout the City to facilitate the construction of new housing.

The Project involves replacing a single family residence located on the edge of an industrial zone and within a business zone. This redevelopment opportunity will create higher density housing similar in scale to the surrounding neighborhood.

Policy #3: Neighborhood Stability and Integrity

i. *Encourage innovative new housing development, which is designed to be compatible with the scale, character, and traditional development patterns of the City's residential neighborhoods.*

The Project involves replacing a single family residence located on the edge of an industrial zone and within a business zone. This project will create building architecture similar in scale to the surrounding neighborhood.

ii. Encourage new housing development in proximity to neighborhood assets such as open space, schools, community services and public transportation.

The Project is located in close proximity to the neighborhood assets listed above.

Policy #5: Sustainable Development

i. Encourage growth in Portland that strives for a dynamic balance of the essential elements of the city, such as excellent schools, diverse housing choices, proximity to services and employment, increased public transit usage, expanded economic base, high quality services and an affordable tax rate.

The Project will provide diverse housing choices that are close in proximity to services and employment.

ii. *Maximize development where public infrastructure and amenities, such as schools, parks, public/alternative transportation, sewer lines and roads, exist of may be expanded at minimal costs.*

As documented previously, the Project is located in an urban setting that is serviced by the public infrastructure and amenities listed above.

iii. Locate and design housing to reduce impacts on environmentally sensitive areas.

As an urban infill development with a goal to contribute positively on surrounding neighborhood, the Project is designed to reduce environmental impacts associated with new development.

iv. Design housing to use new technologies and materials that reduce costs and increase energy efficiency.

The Project is being designed to achieve maximum energy efficiency.

Policy #6: Freedom of Choice

a. Increase and ensure equal access to housing opportunities for minorities, low-income people and persons with disabilities and special needs.

As documented, the Project will increase access to high quality housing for the chronically homeless.

i. *Ensure that an adequate supply of new and existing housing is accessible to persons with physical disabilities.*

The project provides fully-ADA compliant units as required under state and federal building codes.

FIRE DEPARTMENT CHECKLIST

1. Name, address, telephone number of applicant

   Avesta 72 Bishop Street, LP
   307 Cumberland Avenue
   Portland, Maine 04101
   Contact: Brooks More
   Phone: 207.553.7777

2. Name, address, telephone number of architect

   CWS Architects
   434 Cumberland Avenue
   Portland, Maine 04101
   Contact: Ben Walter
   Phone: 207.774.4441

3. Proposed uses of any structures [NFPA and IBC classification]

   IBC: R-2 Apartments

   NFPA: Residential – New Apartment Building

4. Square footage of all structures [total and per story]

First Floor:	7,804 SF
Second Floor:	7,035 SF
Third Floor:	6,535 SF
Total:	21,374 SF

5. Elevation of all structures

   Building Height is 36.0 feet as measured by IBC definitions

6. Proposed fire protection of all structures
   NFPA 13R system throughout.

7. Hydrant locations:

   There is a hydrant adjacent to the proposed driveway on Bishop Street.

8. A 12 inch water main is located within Bishop Street. Two water services are proposed for the building, one 6 inch service for fire and one 2 inch service for domestic.

9. Access to all structures [min. 2 sides]

   The proposed structure is accessible from Bishop Street and a driveway along the east side of the building.

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

    Preliminary Code Summary provided to PFD under separate cover (CWS to review details with Portland Fire Department).

11. The elevator shall be sized to fit an 80" x 24" stretcher and two personnel

    Elevator Cab Size to meet PFD Requirements (CWS to review details with Portland Fire Department).

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

    Fire Flows to meet PFD Requirements (CWS to review details with Portland Fire Department).

GORRILL PALMER

PO Box 1237, 15 Shaker Road
Gray, Maine 04039
207.657.6910

April 7, 2015

Robert B. Metcalf, Principal
Maine Licensed Landscape Architect
Mitchell & Associates
70 Center Street
Portland, Maine 04101

Subject: Trip Generation, Crash History and Access Review
Avesta Housing Project on Bishop St.

Dear Bob:

Gorrill Palmer (GP) has completed a trip generation forecast, crash history review, access review and on-site parking forecast per your request for the proposed Avesta Housing project at 72 Bishop Street in Portland. The project will be similar to the Logan Place at Frederick Street in Portland which has 30 units. The Bishop Street project will be a first housing project for the homeless and will consist of 30 units and twelve parking spaces. It is our understanding that the housing is to be targeted for low-income, formerly-homeless individuals, some with medical disability. We understand they will tend to be an older population than Logan Place and less likely to own a car.

Background Data

GP based the study on the following information:

- A layout and lighting plan, L2, prepared by Mitchell & Associates dated April 10, 2015.
- Crash data for 2011-2013 provided by the Maine Department of Transportation (MaineDOT).
- Memo to the City Planning Board from Mark Swann dated August 1, 2014.

Sight Distance Evaluation

The Maine Department of Transportation has guidelines for sight distances at driveways within urban compacts. The sight line standards for driveways in an urban compact are as follows:

Maine DOT Standards for Sight Distance

Posted Speed (mph)	Sight Distance
25	200
30	250
35	305
40	360

GP has evaluated the available sight lines at the proposed 72 Bishop Street driveway in accordance with Maine DOT standards.

The Maine DOT standards are as follows:

Driveway observation point:	10 feet off major street travelway
Height of eye at driveway:	3 ½ feet above ground
Height of approaching vehicle:	4 ¼ feet above road surface

The posted speed on Bishop Street in the vicinity of the site driveway is 25 mph. The results of this sight line analysis exiting the site drive is summarized in the following table:

72 Bishop Street Apartments Driveway Sight Line Evaluation

Direction	Posted Speed (mph)	Recommended Sight Line (ft)	Actual Sight Line (ft)
Exiting onto Bishop Street Looking			
Left	25	200	+300
Right	25	200	+300

As shown, the sight lines for the driveway exceeds MaineDOT requirements. GP recommends that all plantings, which will be located within the right of way, not exceed 3 feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Crash Data

In order to evaluate whether a location has a crash problem, Maine DOT uses two criteria to define High Crash Locations (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:

2. A minimum of 8 crashes over a three-year period.

Our office reviewed the 2011-2013 crash data in this area and found there were no high crash locations in the immediate area of the project site on Bishop Street. A copy of the collision history is included in the Appendix.

Trip Generation

Forecast based on ITE. Traffic engineers traditionally use the Institute of Transportation Engineers (ITE) publication *Trip Generation*, 9th Edition to estimate the potential trip generation for the proposed project. Based on Land Use Code (LUC) 220, Apartment, with 30 units, the proposed site would be forecast to generate the following trips during the peak hour of the adjacent street traffic:

AM Peak Hour 15 trip ends
PM Peak Hour 19 trip ends

A trip end is either an entering or exiting vehicle, thus a round trip equals two trip ends. ITE trip rates are based on surveys of predominantly suburban locations rather than urban and does not reflect the type of tenant proposed for this project and therefore is not appropriate for use in this project.

Data based in Preble Street Memo: Given these results, the fact that the project is in an urban area, and that the housing is to be targeted for low-income, formerly-homeless individuals with some disability, most of the traffic for the project is anticipated to come from staff, outside medical providers and social workers. GP has utilized a memo dated August 1, 2014 to the Portland Planning board from Mark Swann of Preble Street concerning staffing at the proposed project. A copy of the memo has been included with this letter. The following peak hour trips are estimated based on that memo.

Project staff- a maximum of 4 staff members are anticipated to be on site at any one time between the hours of 8 AM and 8 PM along with a maximum of 3 management staff. Assuming these staff all arrive in the same hour which is very conservative yields 7 trips into the site. Assuming two overnight staff leaving within the same hour yields a combined total of 9 trip ends for staff during the AM peak hour. For the PM peak hour, we have assumed 2 staff arrive and 2 leave and that 3 management staff leave for a total of 7 trip ends.

Service and healthcare providers- up to 12 individuals visit the site to provide case management, assistance with daily activities or a follow-up to a medical appointment. The attached memo from Preble Street states that there were an average of 4 service workers visit clients each day at Logan Place with a typical appointment lasting 60 minutes with the maximum number on site at the same time of 2. GP has estimated 2 trip ends in both the morning and afternoon peak hours based on this information.

Non-service guest visits- The Preble Street memo estimates a total number of non-service guest visits of approximately 6 per day. GP has estimated 2 trip ends in both the morning and afternoon peak hours based on this information.

Based on the information presented in the memo from Preble Street, GP estimates the following peak hour trip ends:

AM Peak hour: 13 trip ends
PM Peak hour: 11 trip ends

Pedestrian Circulation

The Applicant is proposing to construct approximately 600 feet of 5 foot sidewalk along the southerly side of Bishop Street from the site easterly to match into the existing 300 foot sidewalk at the easterly end of Bishop Street. This will enable tenants to access Metro Route 3 which stops on Stevens Ave approximately 350 feet south of Bishop Street in front of Bogusha', or Metro Route 2 which stops on Forest Avenue approximately 375 feet southerly of Bishop Street near Meineke. Since some of the residents may have medical issues, case managers from several organizations including Maine Health, Catholic Charities, and Preble Street can transport tenants for shopping. These resources are also available to assist able individuals in learning how to use the Metro.

Parking Evaluation

The City ordinance suggests one parking space per housing unit which would result in the Applicant needing to provide a total of 30 spaces. Providing more parking than needed to meet the demand would result in loss of open space, increases stormwater impacts, and underutilization of valuable urban land. At the same time, providing too little parking would have adverse impacts on residents and the surrounding neighborhood. The applicant's goal through the parking demand analysis process is to find the appropriate ratio of parking spaces. It is the opinion of GP that the parking needs for this project will be far less than one space per unit based on the following information. First, Logan Place, the most similar project to the proposed project, has had only one tenant since they have been leasing that owned a car. Secondly, the parking needs for the project is most likely to come from staff, outside medical providers and social workers. The Preble Street memo referenced earlier in this letter in the trip generation discussion, states that for Logan Place (30 units), it is rare for there to be more than 5 cars on site at any one time. Based on the staffing and visitation information presented in the trip generation discussion, we anticipate the parking demand to be as follows:

Staff: 4 spaces
Supervisors: 3 spaces
Service and healthcare providers: 2 spaces
Visitors: 2 spaces
Total: 11

There are 12 spaces planned as part of the project which should be adequate based on this forecast.

Closure

In summary, it is our opinion that the project should generate 11 and 13 trip ends during the AM and PM peak hours respectively and that the proposed 12 on site spaces should adequately serve the project.

Please contact us with any questions.

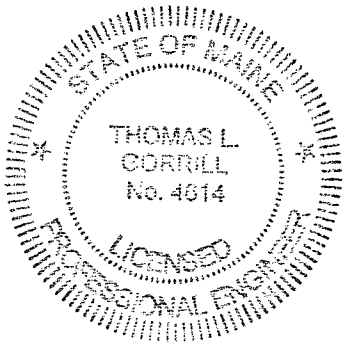
Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Thomas L Gorrill, P.E., PTOE

Enc.

TLG/tlg/JN2976 /Trip generation and parking study 4-7-15.doc



Preble Street

Turning Hunger and Homelessness into Opportunity and Hope

Anti-Trafficking Coalition
Clinical Intervention Program
First Place
Florence House
Food Programs
Joe Kreisler Teen Shelter
Logan Place
Maine Hunger Initiative & Advocacy
Resource Center
Teen Center
Veterans Housing Services

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Mark R. Swann
Executive Director

38 Preble Street
Portland, ME 04101
207.775.0026 Phone
info@preblestreet.org
www.preblestreet.org

Memo to: City of Portland Planning Board
From: Mark R. Swann
Date: August 1, 2014
Re: Zoning Changing for 72 Bishop Street

Thank you for your consideration of this important addition to the Portland community. We look forward to being a valuable and contributing neighbor on Bishop Street. We hope the information below will assist in your assessment.

We remain available to answer any questions you may have.

Staffing Requirements on site at any one time:
A minimum of two staff members will be on duty at all times, with as many as four on-site between the hours of 8 a.m. and 8 p.m. We expect to have 10 full time employees: one coordinator, one supervisor, and one team leader managing seven housing support workers. Full-time staff will be supplemented by as-needed staff to cover vacations and sick days. Management personnel will be onsite during daytime hours, and overnight shifts will have a team leader on site. Preble Street's Chief Program Officer will oversee the program, and Preble Street provides a 24-hour on-call system, staffed by a clinical manager, to address clinically challenging situations. Additional staffing will include social work, counseling, and occupational therapy interns, as well as trained volunteers.

Staff/service traffic volume:
The staff/service traffic volume at Logan Place, the first housing development of this kind in Portland, varies greatly from day to day. Service and healthcare providers make individual appointments with tenants, and there may be a dozen individuals coming to provide case management or assistance with activities of daily living or a follow up to a medical appointment in a given day. Over a two month period from May 1, 2014, through June 30, 2014, Logan Place had an average of four service workers visiting clients each day. This number is slightly inflated due to one tenant being seriously ill and requiring daily hospice visits. A typical service appointment usually lasts 60 minutes or less. These visits are spread throughout the day, sometimes into the evening. The volume at any one time of day is typically one or two, maximum. It is rare for there to be more than five cars in the Logan Place parking lot at any one time. Non-service guest visits total approximately six per day.

Potential number of outside medical providers that would visit residents, including frequency:
As noted above, the average number of outside medical visits at Logan Place, is one or two a day. At the Bishop Street facility, because the target population is individuals who are medically compromised, we anticipate this number will be slightly higher. However, we anticipate being able to mitigate this factor by engaging with a healthcare partner and having medically credentialed staff as part of the program. This will lead to increased efficiency due to coordination of visits.

Transportation options provided to residents:
Transportation is a critical part of service planning for each tenant. Case managers from several organizations including Maine Health, Catholic Charities, and Preble Street can transport individuals for shopping and assist individuals in learning to be comfortable

with available public transportation. All tenants can get bus passes. Preble Street has an account with Elite Taxi service for emergency use. Additionally, most clients in the Bishop Street building will qualify for Medicaid assistance for rides to appointments. Preble Street is working closely with Maine's new Mainecare ride contractor, Logisticare, to transport clients to scheduled medical, case management, mental health, substance abuse counseling or treatment appointments. Tenants and Preble Street staff make these arrangements, which include pick up and return after any appointment. Many tenants who are mobile will be able to walk to local convenience stores and grocers.

Services provided by Preble Street and other partners:
Preble Street provides case management services to all tenants to ensure that individuals succeed in making the transition from chronic homelessness to permanent housing. A key role of Preble Street staff is working alongside tenants to develop service plans for improving independent living skills such as cooking or budgeting, meeting vocational or school goals, or beginning treatment for mental illnesses. Preble Street staff collaborate with tenants to reach goals, and establish new ones over time, making referrals to other providers and organizations as needed to assist tenant in achieving those goals and maintaining health and stability. Outside agencies are welcome at any time to visit and work with tenants, at tenants' discretion. Many tenants routinely receive services ranging from behavioral health to personal care attendants to housekeeping assistance.

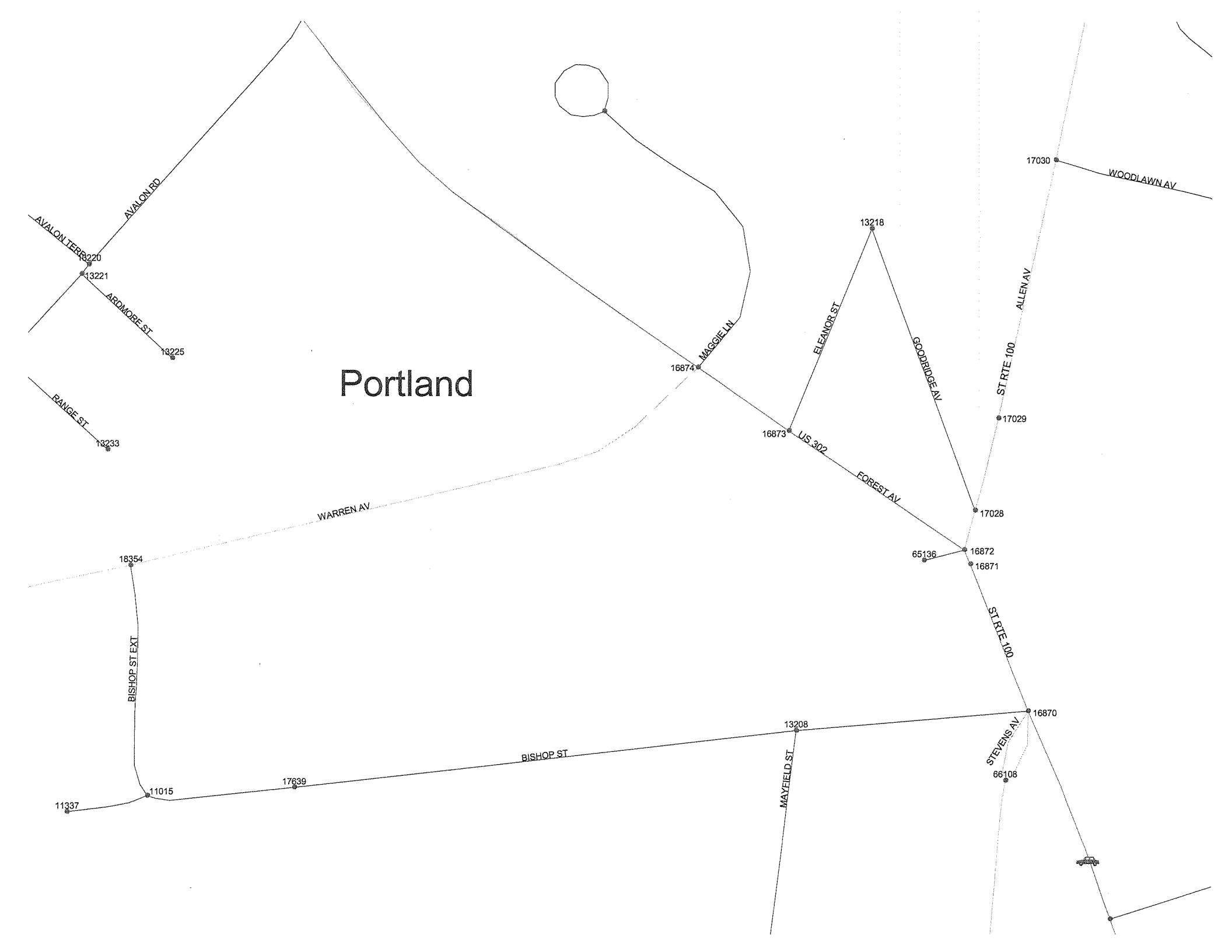
Because many long term homeless individuals need assistance with household responsibilities, such as cleaning and cooking, staff often focus on these issues, and for disabled tenants, will find resources from the community to assist with these tasks.

How the facility will be managed:
Avesta Housing provides building maintenance and is the landlord for all tenants. Preble Street staff work closely with the building manager, facilitating communication and supporting clients with maintaining stable housing.

Preble Street takes building management and security very seriously. Staff provide on-site monitoring and support to deal with any crisis that emerges and to ensure tenant safety. Each residential site has a front desk that is staffed 24 hours a day. The doors to each building are locked and visitors are required to check in at the front desk and produce identification which is copied and filed by staff. The staff member at the front desk monitors the building exterior through strategically placed cameras. The front desk is also the place where can tenants seek assistance if they have a question or concern. An intercom in each room allows tenants to contact the desk, and makes it easy for staff to check in with tenants regarding visitors.

Tenants are allowed a maximum of five overnight visits per month in accordance with public housing leases, and staff maintains a visitor log noting every guest entry and exit. Staff members do regular rounds, ensuring the security of the building and monitoring living spaces. Preble Street offers 24-hour clinical support through an on-call system staffed by managers, and staff are trained to call for medical or law enforcement support in the case of any disturbance.

Tenants at Logan Place have created a strong community, supported by staff and volunteers. Tenants at Logan Place prepare communal dinners, participate in regular house meetings to address their concerns and issues, and enjoy activities and outings such as hikes, cooking contests, and game tournaments.


Portland
AVALON RD
AVALON TERR
13220
13221
ARDMORE ST
13225
RANGE ST
13233
MAGGIE LN
16874
ELEANOR ST
13218
GOODRIDGE AV
ALLEN AV
ST RTE 100
17030
WOODLAWN AV
17029
16873
US 302
FOREST AV
17028
WARREN AV
18354
65136
16872
16871
BISHOP ST EXT
ST RTE 100
16870
13208
STEVENS AV
66108
BISHOP ST
MAYFIELD ST
17639
11015
11337

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

Bishop St area

REPORT PARAMETERS

Year 2011, Start Month 1 through Year 2013 End Month: 12

Route: **0560062**	Start Node: **11015**	Start Offset: **0**	☐ Exclude First Node
	End Node: **16870**	End Offset: **0**	☐ Exclude Last Node
Route: **0561237**	Start Node: **11015**	Start Offset: **0**	☑ Exclude First Node
	End Node: **18354**	End Offset: **0**	☐ Exclude Last Node
Route: **0100X**	Start Node: **16870**	Start Offset: **0**	☑ Exclude First Node
	End Node: **17030**	End Offset: **0**	☑ Exclude Last Node
Route: **0560767**	Start Node: **18354**	Start Offset: **0**	☑ Exclude First Node
	End Node: **16874**	End Offset: **0**	☐ Exclude Last Node
Route: **0302X**	Start Node: **16872**	Start Offset: **0**	☑ Exclude First Node
	End Node: **16874**	End Offset: **0**	☑ Exclude Last Node
Route: **0560249**	Start Node: **13218**	Start Offset: **0**	☐ Exclude First Node
	End Node: **16873**	End Offset: **0**	☑ Exclude Last Node
Route: **0560320**	Start Node: **13218**	Start Offset: **0**	☑ Exclude First Node
	End Node: **17028**	End Offset: **0**	☑ 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
11015	0560062 - 0.03	0501427 POR,BISHOP ST,BISHOP ST EXT	2	1	0	0	0	0	1	0.0	0.404	0.83	0.60	1.37
												Statewide Crash Rate:	0.14	
17639	0560062 - 0.09	0508057 POR,BISHOP ST,.22W/O MAYFIELD	2	0	0	0	0	0	0	0.0	0.425	0.00	0.60	0.00
												Statewide Crash Rate:	0.14	
13208	0560062 - 0.31	0503622 POR,MAYFIELD,BISHOP ST.	2	0	0	0	0	0	0	0.0	0.601	0.00	0.58	0.00
												Statewide Crash Rate:	0.14	
16870	0560062 - 0.40	Int of BISHOP ST FOREST AV STEVENS AV	9	30	0	0	2	7	21	30.0	12.739	0.78	0.97	0.00
												Statewide Crash Rate:	0.65	
18354	0561237 - 0.10	Int of BISHOP ST EXT WARREN AV	2	2	0	0	0	1	1	50.0	5.153	0.13	0.35	0.00
												Statewide Crash Rate:	0.14	
16871	0100X - 2.80	Non Int FOREST AV	2	0	0	0	0	0	0	0.0	5.970	0.00	0.30	0.00
												Statewide Crash Rate:	0.12	
16872	0100X - 2.81	Int of ALLEN AV ENTRANCE TO MCDONALDS Z RD FORE	9	53	0	0	4	17	32	39.6	15.378	1.15	0.94	1.22
												Statewide Crash Rate:	0.65	
17028	0100X - 2.83	Int of ALLEN AV GOODRIDGE AV	2	3	0	0	0	1	2	33.3	6.998	0.14	0.33	0.00
												Statewide Crash Rate:	0.14	
17029	0100X - 2.87	Non-Int ALLEN AV	2	1	0	0	0	1	0	100.0	6.934	0.05	0.33	0.00
												Statewide Crash Rate:	0.14	
16874	0560767 - 1.89	Int of FOREST AV MAGGIE LN WARREN AV	9	29	0	0	0	8	21	27.6	11.834	0.82	0.98	0.00
												Statewide Crash Rate:	0.65	
16873	0302X - 2.40	Int of ELEANOR ST, FOREST AV	2	2	0	0	0	1	1	50.0	11.411	0.06	0.26	0.00
												Statewide Crash Rate:	0.12	
13218	0560249 - 0	0503632 POR,GOODRIDGE AVE,PW AHD.	2	0	0	0	0	0	0	0.0	0.024	0.00	-3.31	0.00
												Statewide Crash Rate:	0.14	
Study Years: 3.00		**NODE TOTALS:**		121	0	0	6	36	79	34.7	77.871	0.52	0.50	1.03

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
11015	17639	184811	0 - 0.06	0560062 - 0.03	0.06	2	0	0	0	0	0	0	0.0	0.00019	0.00	1478.63	0.00
0501427 POR,BISHOP ST,BISHOP ST EXT				RD INV 05 60062											Statewide Crash Rate: 346.93		
13208	17639	187890	0 - 0.22	0560062 - 0.09	0.22	2	2	0	0	0	0	2	0.0	0.00117	570.21	1014.53	0.00
0503622 POR,MAYFIELD,BISHOP ST.				RD INV 05 60062											Statewide Crash Rate: 346.93		
13208	16870	187889	0 - 0.09	0560062 - 0.31	0.09	2	1	0	0	0	0	1	0.0	0.00054	614.98	1229.30	0.00
0503622 POR,MAYFIELD,BISHOP ST.				RD INV 05 60062											Statewide Crash Rate: 346.93		
11015	18354	184812	0 - 0.10	0561237 - 0	0.10	2	0	0	0	0	0	0	0.0	0.00039	0.00	1319.62	0.00
0501427 POR,BISHOP ST,BISHOP ST EXT				RD INV 05 61237											Statewide Crash Rate: 346.93		
16870	16871	3106426	0 - 0.07	0100X - 2.73	0.07	2	10	0	0	0	4	6	40.0	0.00836	398.84	366.48	1.09
Int of BISHOP ST FOREST AV STEVENS AV				ST RTE 100											Statewide Crash Rate: 172.66		
16871	16872	3120028	0 - 0.01	0100X - 2.80	0.01	2	0	0	0	0	0	0	0.0	0.00119	0.00	598.64	0.00
Non Int FOREST AV				ST RTE 100											Statewide Crash Rate: 172.66		
16872	17028	3120112	0 - 0.02	0100X - 2.81	0.02	2	3	0	0	0	0	3	0.0	0.00140	715.22	610.28	1.17
Int of ALLEN AV ENTRANCE TO MCDONALDS Z RD FOREST AV				ST RTE 100											Statewide Crash Rate: 186.42		
17028	17029	3106523	0 - 0.04	0100X - 2.83	0.04	2	2	0	0	0	1	1	50.0	0.00278	239.55	511.45	0.00
Int of ALLEN AV GOODRIDGE AV				ST RTE 100											Statewide Crash Rate: 186.42		
17029	17030	3106524	0 - 0.11	0100X - 2.87	0.11	2	5	0	0	0	4	1	80.0	0.00760	219.24	397.39	0.00
Non-Int ALLEN AV				ST RTE 100											Statewide Crash Rate: 186.42		
16874	18354	3106429	0 - 0.26	0560767 - 1.63	0.26	2	8	0	1	1	2	4	50.0	0.01246	214.01	354.96	0.00
Int of FOREST AV MAGGIE LN WARREN AV				RD INV 05 60767											Statewide Crash Rate: 186.42		
16872	16873	3106427	0 - 0.09	0302X - 2.31	0.09	2	11	0	0	1	2	8	27.3	0.01023	358.44	349.59	1.03
Int of ALLEN AV ENTRANCE TO MCDONALDS Z RD FOREST AV				US 302											Statewide Crash Rate: 172.66		
16873	16874	3119258	0 - 0.05	0302X - 2.40	0.05	2	5	0	0	0	2	3	40.0	0.00570	292.16	402.19	0.00
Int of ELEANOR ST, FOREST AV				US 302											Statewide Crash Rate: 172.66		
13218	16873	187898	0 - 0.08	0560249 - 0	0.08	2	0	0	0	0	0	0	0.0	0.00004	0.00	435.87	0.00
0503632 POR,GOODRIDGE AVE,PW AHD.				RD INV 05 60249											Statewide Crash Rate: 346.93		
13218	17028	187899	0 - 0.10	0560320 - 0	0.10	2	1	0	0	0	0	1	0.0	0.00005	7079.40	844.29	8.39
0503632 POR,GOODRIDGE AVE,PW AHD.				RD INV 05 60320											Statewide Crash Rate: 346.93		
Study Years: 3.00				**Section Totals:**	1.30		48	0	1	2	15	30	37.5	0.05211	307.04	272.92	1.13
				Grand Totals:	1.30		169	0	1	8	51	109	35.5	0.05211	1081.04	391.52	2.76

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
11015	17639	184811	0 - 0.06	0560062 - 0.03	0	0	0	0	0	0				
13208	17639	187890	0 - 0.22	0560062 - 0.09	2	0	0	0	0	2	2012-49919	11/18/2012	0.11	PD
											2011-952C	01/20/2011	0.13	PD
13208	16870	187889	0 - 0.09	0560062 - 0.31	1	0	0	0	0	1	2011-14828	11/06/2011	0.38	PD
11015	18354	184812	0 - 0.10	0561237 - 0	0	0	0	0	0	0				
16870	16871	3106426	0 - 0.07	0100X - 2.73	10	0	0	0	4	6	2012-36460	08/24/2012	2.76	C
											2013-25544	10/14/2013	2.76	C
											2012-36610	08/26/2012	2.76	PD
											2012-41209	10/16/2012	2.77	C
											2013-16294	07/05/2013	2.77	PD
											2011-8015	08/16/2011	2.77	PD
											2012-29274	05/29/2012	2.77	PD
											2011-7939C	04/30/2011	2.79	C
											2012-40747	10/10/2012	2.79	PD
											2012-47725	12/13/2012	2.79	PD
16871	16872	3120028	0 - 0.01	0100X - 2.80	0	0	0	0	0	0				
16872	17028	3120112	0 - 0.02	0100X - 2.81	3	0	0	0	0	3	2013-22613	09/11/2013	2.82	PD
											2013-3646	02/12/2013	2.82	PD
											2011-5719C	03/22/2011	2.82	PD
17028	17029	3106523	0 - 0.04	0100X - 2.83	2	0	0	0	1	1	2011-8543C	05/18/2011	2.85	PD
											2011-6139C	04/01/2011	2.86	C
17029	17030	3106524	0 - 0.11	0100X - 2.87	5	0	0	0	4	1	2011-5964	07/28/2011	2.90	C
											2013-33044	12/12/2013	2.92	C
											2013-33241	12/08/2013	2.94	C
											2011-12770	10/14/2011	2.95	C
											2011-8667C	06/09/2011	2.96	PD
16874	18354	3106429	0 - 0.26	0560767 - 1.63	8	0	1	1	2	4	2011-1710C	01/29/2011	1.64	PD
											2011-5315C	03/03/2011	1.75	PD
											2012-26093	04/11/2012	1.76	PD
											2013-14899	06/21/2013	1.79	PD
											2013-1666	01/20/2013	1.84	A
											2013-4581	02/19/2013	1.84	C
											2013-6821	03/12/2013	1.84	C
											2013-9426	04/13/2013	1.87	B

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
16872	16873	3106427	0 - 0.09	0302X - 2.31	11	0	0	1	2	8	2012-31797	06/26/2012	2.32	C
											2012-35127	08/09/2012	2.35	PD
											2013-13399	06/04/2013	2.35	PD
											2012-38683	09/14/2012	2.36	B
											2013-29142	11/19/2013	2.36	C
											2013-21392	08/27/2013	2.36	PD
											2013-31149	12/03/2013	2.37	PD
											2012-29378	05/30/2012	2.37	PD
											2013-2143	01/26/2013	2.37	PD
											2011-5215	07/19/2011	2.39	PD
											2013-26365	10/23/2013	2.39	PD
16873	16874	3119258	0 - 0.05	0302X - 2.40	5	0	0	0	2	3	2013-2937	02/04/2013	2.43	C
											2013-19733	08/12/2013	2.43	PD
											2011-39C	01/03/2011	2.44	C
											2013-29987	11/22/2013	2.44	PD
											2012-23666	03/08/2012	2.44	PD
13218	16873	187898	0 - 0.08	0560249 - 0	0	0	0	0	0	0				
13218	17028	187899	0 - 0.10	0560320 - 0	1	0	0	0	0	1	2012-34503	08/07/2012	0.09	PD
				Totals:	48	0	1	2	15	30				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM												
	Hour of Day																								
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	1	0	0	0	0	0	0	1	1	0	0	1	1	0	0	1	0	0	0	2	3	0	0	0	11
MONDAY	0	0	0	0	0	0	0	6	3	3	1	1	1	5	0	2	1	2	1	0	0	0	0	0	0	26
TUESDAY	0	0	0	0	0	1	0	1	2	2	1	2	2	3	2	3	3	3	1	2	0	0	1	0	0	29
WEDNESDAY	0	0	0	0	0	0	2	6	2	1	0	3	2	2	2	3	2	4	0	0	1	0	0	0	0	30
THURSDAY	0	0	0	0	0	0	0	1	3	5	4	2	0	2	1	0	6	2	1	0	1	0	1	0	0	29
FRIDAY	0	0	0	0	1	1	0	3	1	1	3	1	5	0	1	2	1	5	0	1	1	0	0	0	0	27
SATURDAY	0	0	0	0	0	0	0	2	1	1	2	2	3	0	2	0	1	0	0	1	0	1	1	0	0	17
Totals	0	1	0	0	1	2	2	19	13	14	11	11	14	13	8	10	15	16	3	4	5	4	3	0	0	**169**

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	224
2-(Sport) Utility Vehicle	55
3-Passenger Van	7
4-Cargo Van (10K lbs or Less)	3
5-Pickup	42
6-Motor Home	1
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	1
11-Motorcycle	0
12-Moped	1
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	1
17-Medium/Heavy Trucks (More than 10,000 lbs)	4
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	4

Unit Type	Total
23-Bicyclist	3
24-Witness	17
25-Other	7
Total	**370**

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	68	65	12	1	0	0	146
Ran Off Roadway	6	0	0	0	0	0	6
Failed to Yield Right-of-Way	25	11	0	0	0	0	36
Ran Red Light	0	1	1	0	0	0	2
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	1	0	0	0	1
Disregarded Other Road Markings	1	0	0	0	0	0	1
Exceeded Posted Speed Limit	3	2	0	0	0	0	5
Drove Too Fast For Conditions	3	3	0	0	0	0	6
Improper Turn	2	2	0	0	0	0	4
Improper Backing	1	1	0	0	0	0	2
Improper Passing	0	4	0	0	0	0	4
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	21	29	6	0	0	0	56
Failed to Keep in Proper Lane	2	4	0	0	0	0	6
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	1	1	1	0	0	0	3
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	1	0	0	0	0	0	1
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	4	3	1	0	0	0	8
Unknown	3	4	1	0	0	0	8
Total	141	130	23	1	0	0	295

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	155	144	23	1	0	4	327
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	1	0	0	0	0	0	1
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	4	0	0	0	0	2	6
Other	3	3	0	0	0	0	6
Total	163	147	23	1	0	6	340

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	23	0	0	0	0	23
20-24	39	0	0	0	0	39
25-29	39	0	0	0	0	39
30-39	65	0	0	0	0	65
40-49	67	0	0	0	0	67
50-59	51	0	0	0	0	51
60-69	31	0	0	0	0	31
70-79	13	0	0	0	0	13
80-Over	5	0	0	0	0	5
Unknown	13	3	0	4	0	20
Total	346	3	0	4	0	353

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	3	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	13
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	**Total**	**278**
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	2		
9-Pedestrian	1		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	1		
13-Motor Vehicle in Transport	249		
14-Parked Motor Vehicle	4		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	2		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	3		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post Pole or Support	0		

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	132
2-Traffic Signals (Flashing)	2
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	5
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	1
12-No Passing Zone	0
13-None	28
14-Other	1
Total	**169**

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	1	1
B	8	10
C	51	58
PD	109	0
Total	**169**	**69**

Road Character

Road Grade	Total
1-Level	158
2-On Grade	11
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	**169**

Light

Light Condition	Total
1-Daylight	132
2-Dawn	3
3-Dusk	2
4-Dark - Lighted	32
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**169**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2011	2012	2013	Total
JANUARY	9	6	5	20
FEBRUARY	6	3	8	17
MARCH	7	2	3	12
APRIL	5	4	3	12
MAY	3	4	2	9
JUNE	3	5	6	14
JULY	6	3	3	12
AUGUST	5	6	4	15
SEPTEMBER	3	5	2	10
OCTOBER	2	6	7	15
NOVEMBER	2	3	5	10
DECEMBER	7	11	5	23
Total	**58**	**58**	**53**	**169**

Report is limited to the last 10 years of data.

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	27	0	1	86	1	7	0	0	0	0	0	0	1	123
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	5	13	0	10	0	0	0	0	0	0	0	28
Pedestrians	0	0	0	4	0	0	0	0	0	0	0	0	0	4
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	4	1	1	4	0	0	0	0	0	0	0	0	0	10
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	2	0	1	0	0	0	0	0	0	0	3
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	**31**	**1**	**7**	**110**	**1**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**169**

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	19	0	0	0	0	0	0	1	0	0	2	22
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	2	1	0	0	0	0	0	0	0	0	0	3
Daylight	89	2	0	0	0	0	1	1	0	0	3	96
Dusk	1	0	0	0	0	0	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	3	0	0	0	0	0	0	0	0	0	0	3
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	10	0	0	0	0	0	0	0	0	0	4	14
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	1	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	5	5
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	14	14
Dusk	0	0	0	0	0	0	0	0	0	0	1	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	1	0	0	0	0	0	1	0	0	0	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	2	0	0	0	0	0	4	0	0	1	7
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**124**	**6**	**0**	**0**	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**169**

RANSOM Consulting, Inc.

Consulting Engineers and Scientists

Bishop Street Stormwater Management Report

Date:	May 22, 2015
To:	City of Portland
From:	Stephen J. Bradstreet, P.E.
Peer Review:	Maureen P. McGlone, P.E.
Location:	72 Bishop Street, Portland, Maine

List of Appendices:

Appendix A: Post Construction Stormwater Compliance Requirements
Appendix B: Stormwater BMP Inspection and Maintenance Requirements
Appendix C: Stormwater Quality Calculations
Appendix D: Pre Development Hydro CAD Calculations
Appendix E: Post Development Hydro CAD Calculations

Existing Conditions:

The site is a 52,383 SF (1.203 acre) lot located on the south side of 72 Bishop Street, west of Mayfield Street and adjacent to the Masonic Lodge. The parcel is trapezoidal in shape and is primarily vegetated (wooded/scrub brush) on the southern 2/3 of the site and grass on the northern 1/3 of the site adjacent to Bishop Street. The northern portion appears to be a fill area and fairly flat though sloping in a south-southeasterly direction into a wetland area. The southern portion of the site is primarily wetlands with some upland area sloping steeply up to the adjacent Masonic Lodge site. The parcel is at the headwaters of the Capisic Brook which is an impaired stream. Stormwater runoff from the site flows into the on-site wetlands and then off-site and onto the abutting property of the University of New England.

Proposed Development:

The applicant, Avesta Housing proposes to construct a 3 story building and housing for the homeless. The site will have 12 spaces of parking, access aisle, sidewalk, outdoor sitting spaces and landscaped areas. The proposed building, pavement and sidewalk areas will increase the impervious area from 1,206 SF to 20,659 SF.

Stormwater Management – Basic Standards:

Erosion and sedimentation control measures are detailed within the design plans. Good housekeeping practices will be in accordance with Maine DEP Best Management Practices. A post construction

stormwater management plan is provided in *Appendix A*. Stormwater BMP inspection and maintenance requirements are provided in *Appendix B*.

Stormwater Management – Quality (General Standards):

The existing site is currently a mix of grass and vegetated (wooded/scrub brush) upland areas and wetlands with a small area of impervious (1,206 SF). The site currently drains to the wetlands on site which is also the headwaters of the Capisic Brook, an impaired stream. The site's new impervious area is now 19,453 SF. For water quality treatment, the site design incorporates a paver drain system along the retaining wall and on the southeast side of the parking area and drive aisle. This will capture the sidewalk and parking area runoff, with only a small area exiting the site toward Bishop Street. The paver drain system is comprised of the pavers underlain by a layer of 3/8" stone, then a layer of 3/4" crushed stone and finally a layer of bio-filter media for filtration for the stormwater runoff. The paver drain system overlays an R-Tank system that will be used for detention during larger storm events. The roof will drain internal to the building and will be filtered through filter cartridges. The roof drains will then outlet into a separate set of R-Tanks for detention. Calculations have been included in Appendix C.

Stormwater Management – Quantity (Flooding Standards):

The use of the R-Tanks will detain the stormwater runoff to below pre-development conditions. The proposed detention system consists of a series of R-Tanks adjacent to the retaining wall and under the paver drains. These R-Tanks are then connected into a supplemental R-Tank system at the outlets of the roof leader and vegetated filter swale. The additional storage is required for site stormwater capacity reasons. The roof drains outlet at the south end of the building into a separate set of R-Tanks for detention. The parking lot R-Tanks and roof drain R-Tanks are connected with an equalizing pipe. Stormwater from the downstream roof drain R-Tanks will flow into an outlet control structure that will control the flow with orifices and a weir. The stormwater then discharges into the upland area at the southwest area of the developed site. During larger storm events there is a catch basin in the southern most area of the parking lot that will collect the additional stormwater and direct it into the R-Tank system for detention.

Hydraulic Analysis:

Stormwater runoff calculations for quantity were made using the HydroCAD 10.0 computer program, which is based on the Soil Conservation Service's TR-20 methodology. Runoff hydrographs are generated based on a standard Type III 24 hour storm.

Five storm events were modeled as follows:

1. 1" storm: The 1" storm event was analyzed to simulate a heavy weather event that would typically happen multiple times over a given year and may impact the CSO frequency and volume.

2. 2-year frequency flood event: 3" rainfall

3. 10-year frequency flood event: 4.7" rainfall
4. 25-year frequency flood event: 5.5" rainfall
5. 100-year frequency flood event: 6.7" rainfall

Runoff Curve numbers were determined based on land coverage and hydro-geological soil type D. Times of concentration were developed based on runoff flow paths for each subarea and shown on the Pre and Post-Development plans. A minimum Tc of 6 minutes was set in the HydroCAD model.

Peak runoff flow rates and runoff volumes are provided at the analysis point, which is identified on the Pre and Post-Development plans.

Storm Event	PRE-Development Peak Runoff RATES cubic feet per second (CFS)
	Analysis Point A Upland
1" Storm	0.25
2 Year Frequency Storm	1.99
10 Year Frequency Storm	3.65
25 Year Frequency Storm	4.44
100 Year Frequency Storm	5.61

Storm Event	POST-Development Peak Runoff RATES cubic feet per second (CFS)
	Analysis Point A Upland
1" Storm	0.38
2 Year Frequency Storm	1.98
10 Year Frequency Storm	3.37
25 Year Frequency Storm	4.01
100 Year Frequency Storm	4.98

Storm Event	PRE-Development Runoff VOLUMES acre feet (AF) volume of water 1' deep over one acre
	Analysis Point A Upland
1" Storm	0.02
2 Year Frequency Storm	0.17
10 Year Frequency Storm	0.32
25 Year Frequency Storm	0.39
100 Year Frequency Storm	0.50

Storm Event	POST-Development Runoff VOLUMES acre feet (AF) volume of water 1' deep over one acre
	Analysis Point A Upland
1" Storm	0.02
2 Year Frequency Storm	0.123
10 Year Frequency Storm	0.259
25 Year Frequency Storm	0.307
100 Year Frequency Storm	0.414

Urban Impaired Stream Standard:

The project is located within the Capisic Brook watershed. Section 5 of the City of Portland's Technical Manual requires that all development within the Capisic Brook watershed (except single and two family homes) comply with the urban impaired stream standards. As such, an in-lieu compensation and mitigation credits have been determined. A compensation fee has been determined to be $1,927. Those calculations are included in *Appendix C.*

APPENDIX A

Post Construction Stormwater Compliance Requirements

City of Portland
72 Bishop Street
Portland, Maine

Ransom Consulting, Inc.
Project 141.06146

Bishop Street Post-Construction Stormwater Compliance Requirements

The Applicant shall maintain the BMPs in accordance with the approved plan and shall demonstrate compliance with the plan as follows:

(a) *Inspections.* The owner or operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

(b) *Maintenance and repair.* If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the department of public services ("DPS") in the annual report.

(c) *Annual report.* The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to DPS in a form provided by DPS, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.

(d) *Filing fee.* Any persons required to file and annual certification under this section shall include with the annual certification a filing fee established by DPS to pay the administrative and technical costs of review of the annual certification.

(e) *Right of entry.* In order to determine compliance with this article and with the post-construction stormwater management plan, DPS may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMPs.

APPENDIX B

Stormwater BMP Inspection and Maintenance Log

City of Portland
72 Bishop Street
Portland, Maine

Bishop Street: Stormwater BMP Inspection Log

The City of Portland, ME requires ongoing annual inspections to ensure the proper maintenance and operation of stormwater management facilities. Inspections must be conducted by third parties qualified by the City.

A. General Information

Use only one Cover Sheet per site with as many specific structural BMP Inspection Report attachments as needed. Attach required color digital photos of site, structures and devices as applicable with captions.

Project Name:	**Bishop Street**	**Inspection Date:**	
Parcel Map, Block and Lot:		**Current Weather:**	
BMP Owner:	**Avesta Housing**	**Date / Amount Last Precip:**	
Owner Mailing Address:	**307 Cumberland Avenue Portland, Maine**		
		3PI Mailing Address:	
Owner Phone #:			
Owner Email:		**Inspector Name:**	
		Inspector Phone #:	
		Inspector Email:	

B. Inspection Report Attachments

Please document the number of each structural BMP type found at this site in the blank spaces provided below. Use additional Attachments if / as needed and submit all Attachments together with the Cover Sheet as a single report.

BMP Type	Number BMPs at site
Vegetated Areas	-
Stormdrain Outlets	1
Stormdrain Structures: Overflow Control and Catch Basin	2
R-Tank Subsurface Detention-Infiltration System	1

Other (describe	

C. Inspection Results

FAIL** ☐

** If any one item on an Inspection Report attachment is coded as "Work Needed" then entire BMP fails inspection.

** If a site has multiple BMPs and one fails inspection, mark as "Fail" until all BMPs pass inspection.

Note: Applicable BMP Inspection Reports and confirmatory color digital photos summarizing required repairs must be submitted to the City following completion of the preliminary inspection. A re-inspection and certification must be completed within 60 days of the failed preliminary report. It is recommended that the inspector be part of the repair / maintenance process to ensure that repairs are performed properly.

PASS ☐

Note: a qualified professional (as determined by the City) must sign below and include all applicable Inspection Report attachments and confirmatory digital color photos with captions.

D. Professional Certification (as qualified by City of Portland Stormwater Program Coordinator)

To be completed only when all BMPs at this site are functioning as designed with no outstanding maintenance issues.

I, _____, as a duly qualified third party inspector attest that a thorough inspection has been completed for ALL applicable BMPs that are associated with this particular site. All inspected structural BMPs are performing as designed and intended and are in compliance with the provisions of the City Portland's Standards

Signature: _____

Date: _____

Form Adapted from the City of South Portland's Annual Structural BMP Inspection Report Cover Sheet

Owner: Avesta Housing	**Operator:**
Location & Parcel Id:	**Inspector:**
	Date:

General Information	**Observations**
Inspection duration (hours)	
Days since last precipitation	
Quantity of last precipitation (in)	
Type of inspection	
Storm event	
Current weather	
Photos taken	☐ Yes ☐ No ☐ NA
Nearby natural resources	☐ Yes ☐ No ☐ NA
Copy of ESC plan	☐ Yes ☐ No ☐ NA
MEDEP Permit # (*if applicable*)	
General info notes	

Vegetated Areas	**Observations**
Condition of slopes and embankment is good	☐ Yes ☐ No ☐ NA
No bare areas (< 90% covered) with sparse growth	☐ Yes ☐ No ☐ NA
Armored areas have no rill erosion or the flow diverted to onsite areas can withstand concentrated flows	☐ Yes ☐ No ☐ NA
Vegetated area notes	

Stormdrain outlets	**Observations**
Accumulated sediments and debris at the outlet and within the conduit have been removed.	☐ Yes ☐ No ☐ NA
Erosion damage at the outlet have been repaired	☐ Yes ☐ No ☐ NA
Outlet notes	

Stormdrain Structures (Require inspection TWICE per year)	**Observations**
Accumulated sediments from inflow channels, pipes and sumps between basins have been removed and legally disposed of.	☐ Yes ☐ No ☐ NA
Floating debris and floating oils have been removed.	☐ Yes ☐ No ☐ NA
Debris and Sediment Removed From Outlet Control Structure	☐ Yes ☐ No ☐ NA

Other Comments	**Observations**
Corrective action needed	☐ Yes ☐ No ☐ NA
If corrective action in needed, please explain detail	
Verbal notification provided to responsible party	☐ Yes ☐ No
Verbal notification contact	
Follow up required	☐ Yes ☐ No
Final comment notes	

Photos (*use additional pages as needed*)

Review Notes
Date Reviewed: Reviewed by: Date entered: Date edited: Edited by:

APPENDIX C

Stormwater Quality Calculations

City of Portland
72 Bishop Street
Portland, Maine

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Portsmouth, New Hampshire 603-436-1490
Portland, Maine 207-772-2891
Hamilton, New Jersey 609-584-0090

PROJECT NO. 141.06146 SITE Bishop St.
SHEET NO. 1 OF
CALCULATED BY MPM DATE 4/9/15
CHECKED BY JGB 5/22/15 DATE Rev. 5/20/15
SCALE N/A

Objective: Determine water quality requirements

Developed Area: 28,407 sf.

Paved: 9,364 sf. 9669 + 471 (wall) = 10140

Sidewalk: 1308 + 105 = ~~1413 sf~~ 2715

~~7774 sf~~ 12885

Building: ~~7811 sf~~ Treated w/ drip edge: 1432
Treated w/ Roof drains: 6342
~~treated w/ landscape:~~

Total impervious = ~~18588 sf~~ 20659

Landscaped = 9819 sf (assume 75%)

See Revised Begin. P.S

* Volume of Quality treatment = 1" over impervious / 0.4" over landscaped

18588 sf x 1"/12" = 1549 cf

9819 sf x 0.4"/12" = 327.3 cf

1876.3 cf ~~treatment~~ volume

Hydrocad / Water Quantity calcs.

Existing conditions: assume Scantic 'C' soils

Lot size: 52,383 sf
Roof = 826 sf
Gravel drive = 380 sf] 1206 sf

Grass (assume 50-75%) 5852 - 826 - 380 = 14646 sf

Vegetated (woodland) 36531 sf
assumed CN of 92

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PROJECT NO. 141 06146 SITE Bishop St
SHEET NO. 2 OF
CALCULATED BY MPM DATE 5/20/15
CHECKED BY DATE
SCALE N/A

Objective: Redefine areas of Development

- Roof impervious: 7774 sf +
  (new Roof plan)

  Roof area to drip edge: 1123sf

  Roof area by roof drains: 7774 - 1123 = 6651 sf

- Paved Impervious:

4x4 conc. pad	: 16sf
Patio/walk	: 2729 sf
Parking/drive	: 9669 sf
Wall	: 471 sf
	12885 sf

Total impervious = 20659 sf

Developed Area: 28,098 sf

∴ Landscaped area = 28,098 sf
- 20659 sf
= 7439 sf

existing impervious = 826sf + 380sf = 1206sf

∴ new impervious = 19453 sf

Impervious Area left untreated:

(driveway to street/ walkway to street)	752sf + 30sf	782sf

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PROJECT NO. KH.06146 SITE Bishop St.
SHEET NO. 3 OF
CALCULATED BY MPM DATE 5/20/15
CHECKED BY DATE
SCALE N/A

% new impervious area being treated:

19453 sf − 782 sf = 18671 / 19453

= 96% > 95%

Removing the Roof impervious (treated by other means) the amount of impervious for treatment by swale & pavers = 18671 − 7774 = 10897 sf

Untreated landscaped area:

785
+ 113
792
15
82
1787

% treated developed area

Developed Area − untreated area =

28098 − 782 (paved) − 1787 (unpaved) = 25529 / 28098

= 91% > 80%

Treatment by filtration swale:

Total area: 2762

Impervious: 157 + 306 + 16 = 479

∴ Landscaped: 2283 sf

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PROJECT NO. 141.06146 SITE Bishop St
SHEET NO. 4 OF
CALCULATED BY MPM DATE 5/20/15
CHECKED BY DATE
SCALE N/A

Grassed underdrain Filter treatment Volume:

1" over impervious and 0.4" over landscaped

$479sf \times 1''/12' = 39.9cf$

$\frac{2283(0.4)}{12} = 76.1cf$

$116cf$

Filter Area: 5% of imperv. + 2% of landscaped

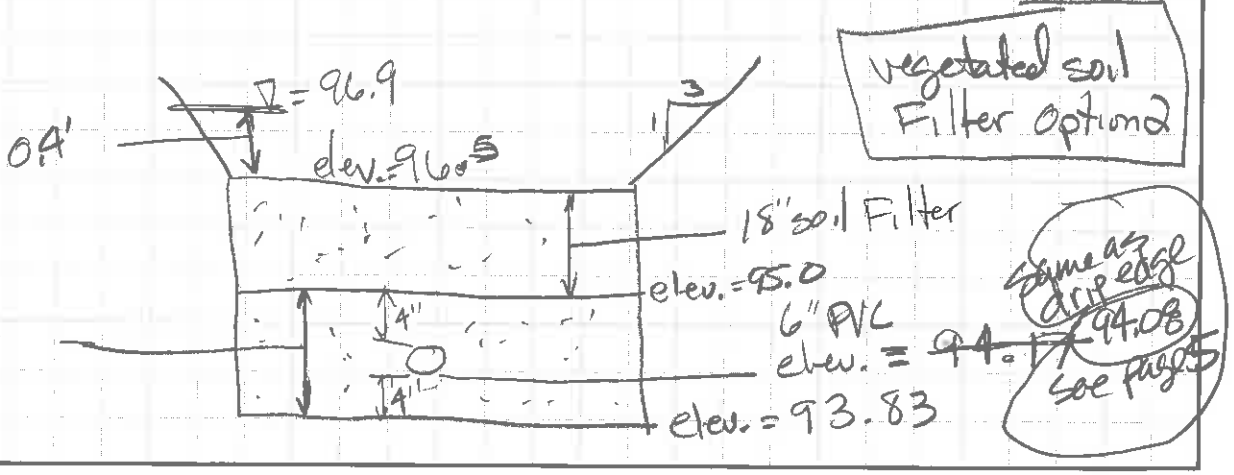
$0.05(479)+0.02(2223) = 68.4sf$

Filter @ elevation 96.5

Surface area (polylines in ACAD) =

$41+252 = 293sf \times .4'$ water depth

$= 118cf$ storage $> 116cf$ Okay



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PROJECT NO. 141.06A16 SITE Bishop St.
SHEET NO. 5 OF
CALCULATED BY MPM DATE 5/21/15
CHECKED BY DATE
SCALE N/A

- Roof Dripline BMP:

Roof being treated by dripedge = 1123sf

Treatment volume = 1123 sf x 1"/12" = 93.58 cf

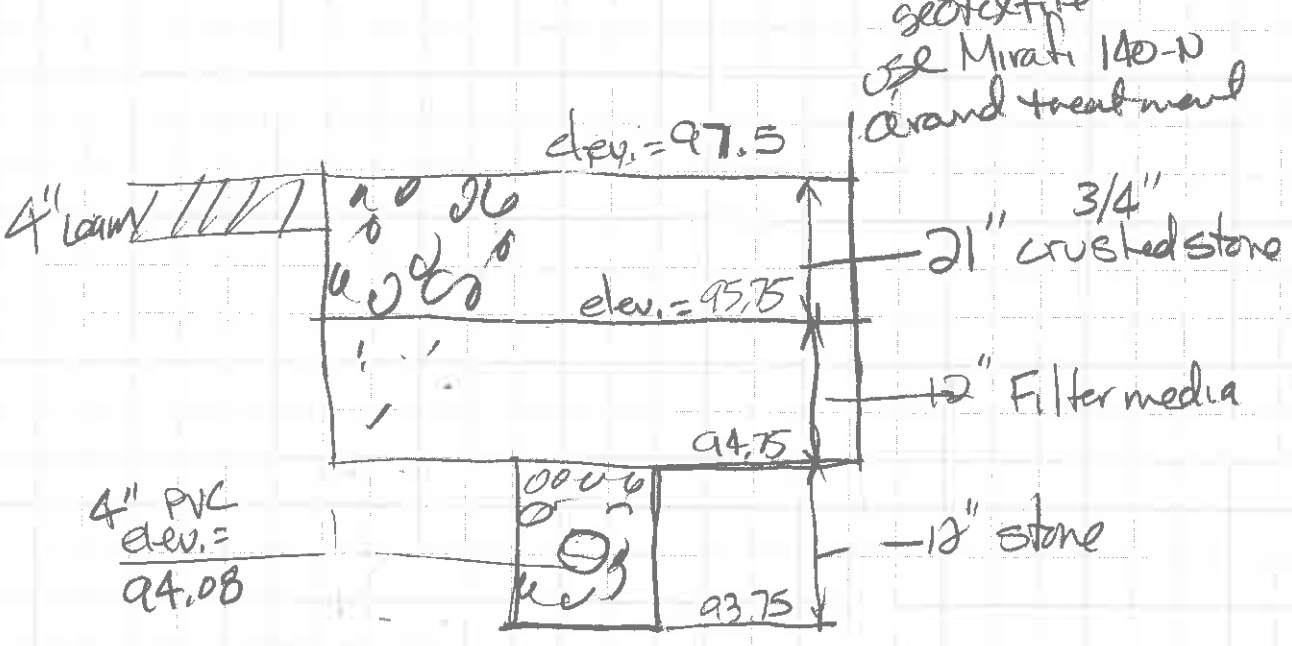
Assuming 40% voids Required storage volume

= 93.58 / 0.4 = 234 cf

Surface area of Dripedge treatment = 139sf

∴ 234cf / 139sf = 1.7' depth min. (21")

Assume 12" soil filter



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PROJECT NO. 141.06146 SITE Bishop St.
SHEET NO. 6 OF
CALCULATED BY MPM DATE 5/21/15
CHECKED BY DATE
SCALE N/A

Vegetated underdrain soil filter @ building front

Landscaped area: 1324sf

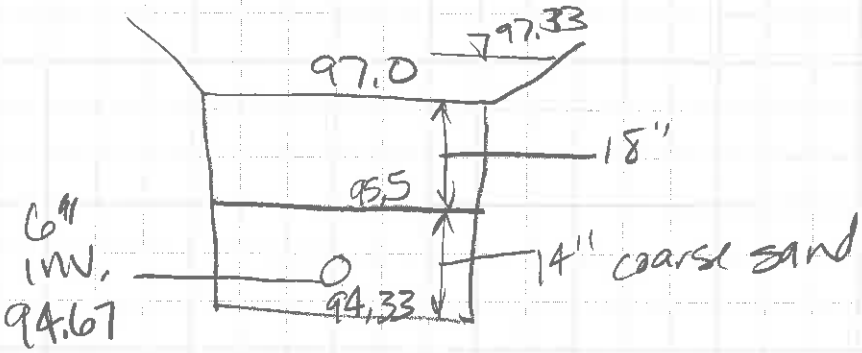
Treatment volume = $\frac{1324\,sf\,(0.4')}{12''}$ = 44cf

Filter area Req'd: 2% (1324sf) = 26.5sf

Filter area provided = 168sf

assume level of channel protection
Volume = 4inches = 0.33ft,

168sf x 0.33 = 56 cf > 44cf req'd



- Manmade Pervious Surfaces - based on April 2015 Revision to Section 7.7 (attached)

Impervious Area to be treated by Pavers

Total new impervious: 19453sf

- Imp. Untreated	7893sf	
- treatment by Roof	7774sf	= 10,418sf
- treatment by swale	479sf	

Section 7.7
Manmade Pervious Surfaces

Revised April 2015

7.7.1 Description

A porous surface consists of the use of a permeable surface material and mineral base and subbase materials which allow penetration of runoff and into the underlying soils.
The efficiency of pavement alternative systems will depend on whether the surface is designed to store and infiltrate most runoff with the remainder discharged to a storm drainage system or over-land flow. The effectiveness of pervious alternatives will also depend on their long term maintenance and serviceability.

7.7.2 General Design Criteria

A typical permeable pavement alternative consists of a top porous structure that is providing structural strength and will allow the infiltration of runoff, a filter course, a reservoir course (with drainage if needed), a geotextile fabric and existing soil or subbase material. The following surface alternatives are example of pervious surfaces:
Porous Asphalt and Concrete: Porous asphalt is similar to conventional asphalt except that it contains very few particles smaller than coarse sand (less than # 30 sieve). Without these finer particles, water is able to infiltrate and into the subsurface.
Block pavers: Block paves are interlocking concrete blocks that leave void spaces between which water can infiltrate. The void spaces can be filled with gravel or soil and grass.
Plastic grid Pavers: These are often constructed from recycled material and come in a honeycomb pattern. The voids are filled with gravel or may be grassed.
Artificial ball fields (turf ballfields): These are also considered pervious surfaces that require similar design considerations. The synthetic nature of the turf may be a concern for the infiltration of chemical into the subsurface; however, no restriction will be applied until more data is available on this subject.

Any manmade pervious surface shall be subject to the General Standards of Chapter 500, Stormwater Management Rules and the DEP licensing staff must be consulted for permitting requirements. However, the use of this technology will provide needed level of treatment to meet the General Standards if designed as below.

7.7.3 Specific Design Criteria

Traffic Volumes: Pavement alternatives are limited to areas with light to moderate traffic. They are not recommended for most roadways, and cannot withstand heavy vehicles.
Grading: The site should slope with less than 5% and preferably closer to 1%.
Sediment loading: Pavement should not be used in areas expected to receive high levels of sediments as they are highly susceptible to clogging. Also alternative measures such as salt should be implemented over these areas in the winter.
Reservoir Course: The reservoir course should consist of clean washed 11/2-inch to 3-inch aggregate that is free of debris. The depth of the reservoir course shall be based on the desired storage volume and frost penetration.

7.7.3 Design Criteria for Infiltration

- All specifications from SW rules, Appendix D, Section 2 apply.
- At a minimum, one foot separation is needed below the road subbase and above the groundwater table. The depth of the water table elevation needs to be considered in designing the road for sufficient frost protection depth.
- A filter layer providing pretreatment before infiltration to groundwater needs to be included in the road design and can be part of the subbase and base. The media must be a mineral soil with between 4 and 7% fines (passing #200 sieve) and should be a minimum of 8 inches thick.
- To meet the General Standards requirements (1 inch infiltration), a minimum storage capacity within the filter layer or subbase and base is needed to allow the direct entry of one inch or more.
- To meet the Flooding Standards requirements, the road design needs to provide a minimum storage capacity for the direct entry of the rain precipitation from a 24-hour, 25-year storm (5 + inches).
- Infiltration rate should be confirmed with a double ring infiltrometer test to determine the soils ability to accept water. The test needs to be on native subgrade even if there is fill above it, and not on the fill itself. Recommended infiltration should be less than 2.41 inches per hour but great enough that the inch of stored precipitation infiltrates in 24 hours (i.e. >0.04 inches per hour).
- The stored volume needs to fully infiltrate within 24-48 hours
- Provide appropriate drainage and discharge of flows from larger storms where is needed.

7.7.4 Design Criteria for Storage and Filtration

- Appropriate specifications from SW rules, Appendix E and BMP design standards for an underdrained filter bed apply
- To meet the General Standards requirements (treatment of 1 inch of runoff), a minimum storage capacity within the filter layer or subbase and base is needed to allow the treatment of one inch or more.
- To meet the Flooding Standards requirements, the road design needs to provide a minimum storage capacity for the direct entry of the rain precipitation from a 24-hour, 25-year storm (5 + inches).
- The filter bed may be part of the road base and subbase horizon. The filter media must be a mineral soil with between 4 and 7% fines (passing #200 sieve) and must be a minimum of 4 inches thick.
- An underdrained bed consisting of a minimum of 12 inches of underdrain gravel meeting the MDOT Specification 703.22, Type B should be a minimum of 12 inches to provide sufficient coverage for the underdrain piping.
- An underdrain pipe network is needed to drain adequately the underdrain bed. Pipes should be placed perpendicular to the slope and should be spaced no further apart than 20 feet. An orifice may be needed to control the outflow.
- Stored volume needs to fully drain within 24-48 hours.
- Provide appropriate drainage and discharge of flows from larger storms where is needed.

7.7.5 Modular Pervious Pavement

In addition to the design guidelines from above, an area of modular pervious pavement structure may be used to provide the treatment of impervious pavement where the area of pervious pavement is 20% of the impervious area that drains to it, if the thickness of the filter sand layer is equivalently increased and meet the following sizing criteria:

- The flow path over the impervious area should not exceed 50 feet before reaching the pervious pavement section for treatment.
- The thickness of the filter layer should be increased exponentially from 4 inches for a full (100%) pervious pavement section with no run-on from other areas to 18 inches for a pervious section and treatment system that is no less than 20% of the impervious area draining into it.
- Long-term inspection and maintenance by a DEP approved stormwater maintenance inspector will be regularly provided under a five-year binding inspection and maintenance contract that is renewed before contract expiration.
- The replacement of the modular pervious system will be provided when more than 40% of the pervious system shows signs of clogging.

Pervious surfaces and pavement, whether asphalt, concrete or paving stones, have the potential to become impervious if not properly maintained. The following need to be planned for and be met:

- Design pervious pavement structures to prevent erosion from surrounding areas from reaching the pavement and sediment deposition.
- Restrain vehicles with muddy wheels from accessing pervious pavement areas.
- Limit salt use for deicing and do not use sand.
- Remove leaves and organic debris in the fall.
- Sweep, vacuum and/or pressure wash pavement **twice** annually at a minimum.

7.7.6 Maintenance Criteria

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PROJECT NO. 14/.06146 SITE Bishop St.
SHEET NO. 10 OF
CALCULATED BY MPM DATE 5/21/15
CHECKED BY DATE
SCALE N/A

Landscaped Area to be Treated by Pavers

Total = 7439 sf
- untreated: 1787 sf
- treated by swale: 2283
- treated by front filter: 1324

0.4"/1"

= 2045 sf Remaining x (0.4)

= 818 sf

Total area to be treated by pavers

10,418 + 818 = 11,236 sf x 0.2

= 2247 sf of pavers Reqd.

Pavers are 1'x1' and will be placed over R-Tanks

R-Tanks: 15.75'W x 28.15'L height varies

(1.31) x (2.35)

Paver Area provided = 2280 sf > 2247 sf

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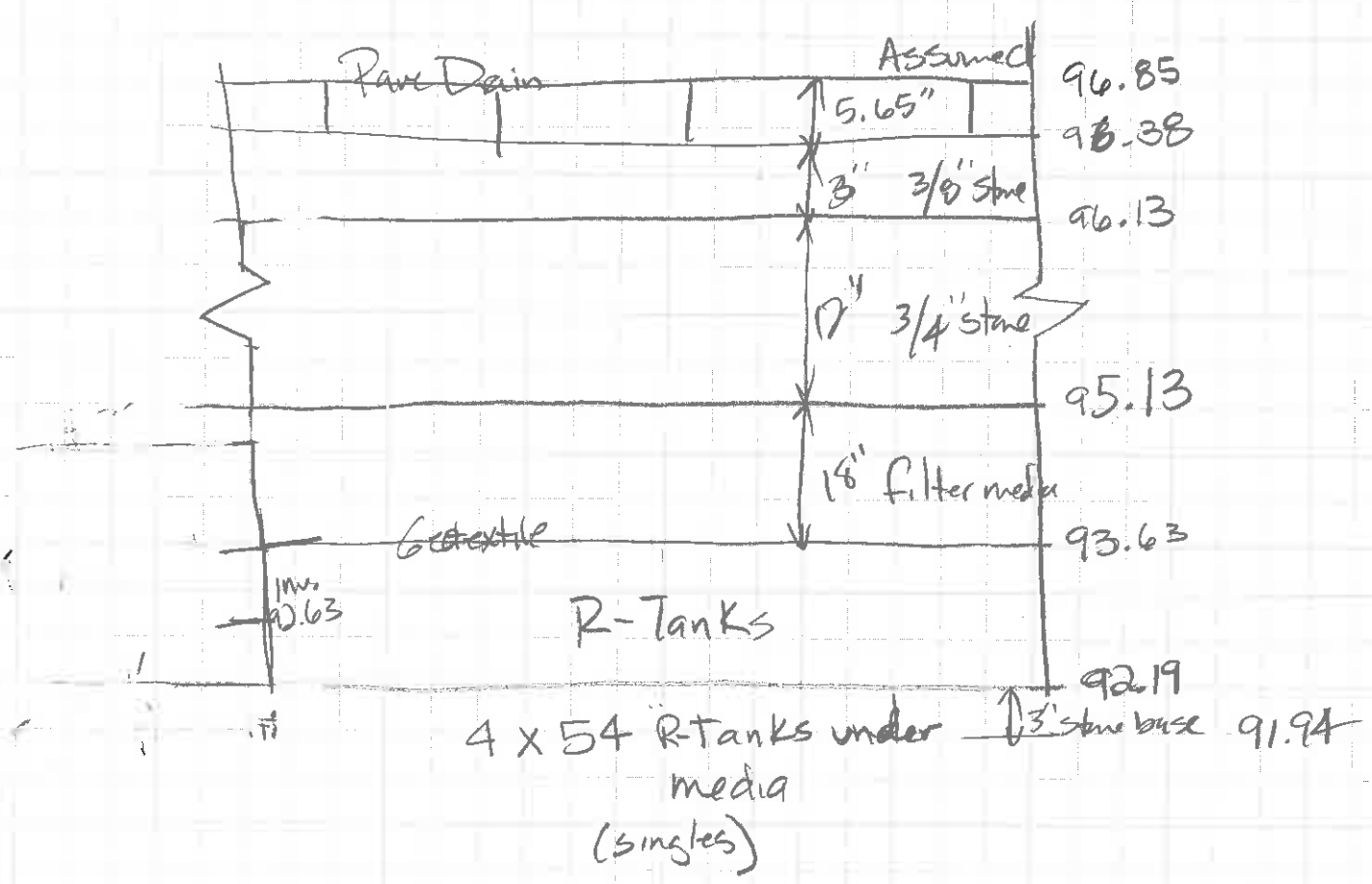
PROJECT NO. 141.06 K46 SITE Bishop St.
SHEET NO. 11 OF
CALCULATED BY MPM DATE 4/10/15
CHECKED BY DATE
SCALE N/A



weir = 94.3

4" = 93.8

4" = 93.3

(2) 4" = 92.8

R-Tanks – Single (1)

4 x 106 = 424 (5.25 x 24 ft)

+ 5 x 53 = 265 (6.55 x 148)

689

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PROJECT NO. 141.06146 SITE Bishop St.
SHEET NO. 12 OF
CALCULATED BY MPM DATE 5/21/15
CHECKED BY DATE
SCALE N/A

HydroCAD Inputs

Subcatchment No. 1 - Areas Draining to Pervious Pavers

Total Area: 15022

Impervious (add in untreated): 19453 - 7774 - 479 = 11,200

Landscaped (add in Untreated): 3822 + 1324 from front = 5146

Tc assumed 6 min.

Subcatchment No. 2 - Roof & swale

Roof impervious: 7774

Swale: Impervious = 479
Landscaped = 2283

Total impervious	8253
" Landscaped	2283
	10536

Subcatchment No. 3:

52383 - 28092 = 24291 sf

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PROJECT NO. 141.06146 SITE Bishop St.
SHEET NO. 13 OF
CALCULATED BY MPM DATE 5/14/15
CHECKED BY DATE
SCALE

Objective: Determine compensation fees or mitigation credits required

Non Impervious Roof Area: Assumes pre-existing area exempt.

Paved: 12805 sf − 300sf (existing gravel)

= 12505 sf / 43560 sf/Ac = 0.29 AC

compensation: $5000 x 0.29 = $ 1435

Mitigation: 0.5 credits x 0.29 = 0.15 credits

Roof area: 7774 sf − 826 (existing roof) = 6948 sf

6948 sf / 43560 sf/Ac = 0.16 AC

Compensation: $2000 x 0.16 = $ 321

Mitigation: 0.2 credits x 0.16 = 0.03 credits

Landscaping: New developed area - 7439 sf / 43560 sf/Ac = 0.17 Ac

Compensation: $1000 x 0.17 = $ 171

Mitigation: 0.1 credits x 0.17 = 0.02 credits

Total compensation: $1927

Mitigation: 0.2 credits

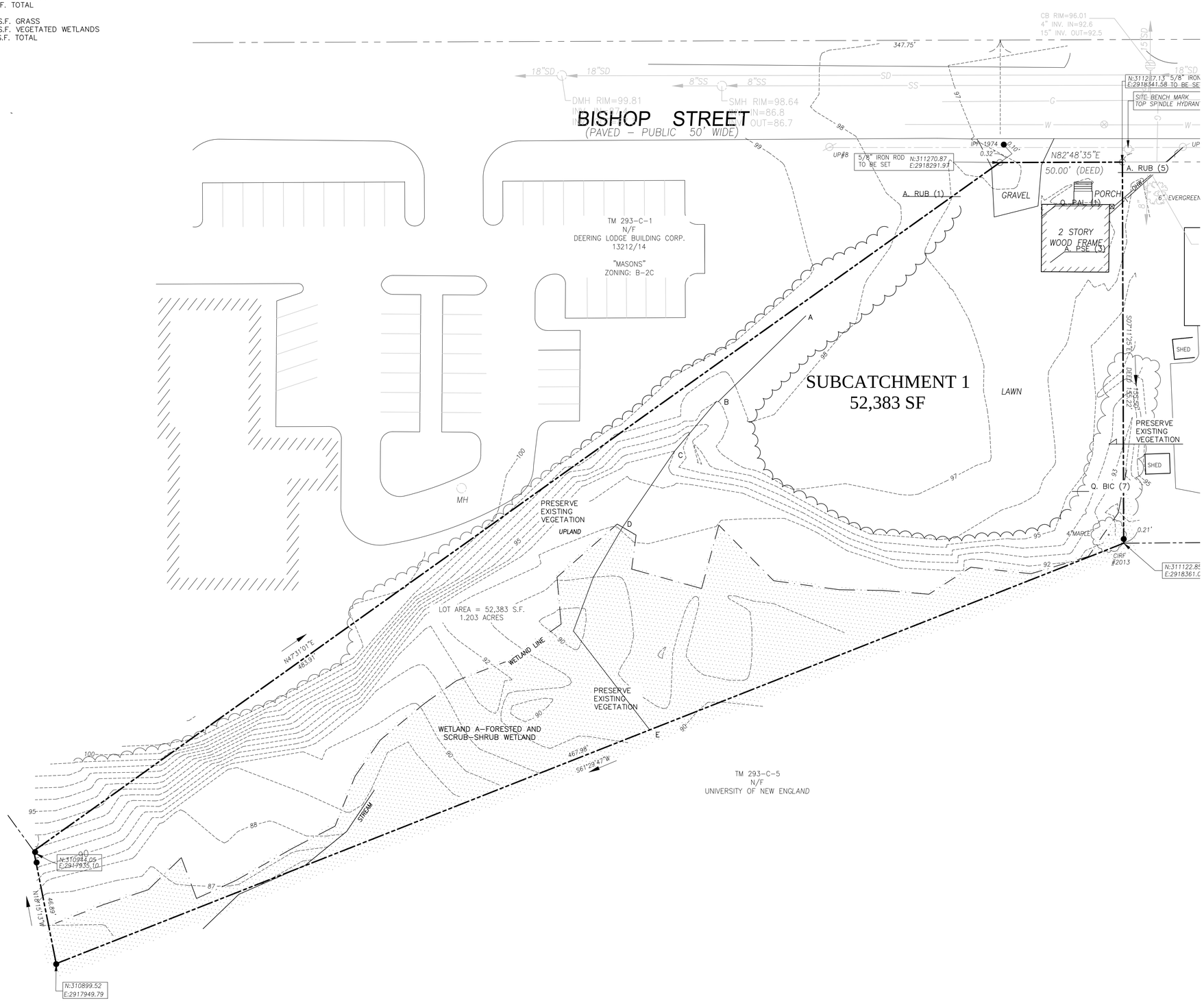
APPENDIX D

Pre-Development Stormwater Calculations

City of Portland
72 Bishop Street
Portland, Maine

GENERAL NOTES:

1. SITE AREA: 52,383 SF OR 1.20 ACRES
2. IMPERVIOUS AREA: 826 S.F. BUILDING
   380 S.F. GRAVEL DRIVE
   1,206 S.F. TOTAL
3. LANDSCAPED AREA: 14,646 S.F. GRASS
   36,531 S.F. VEGETATED WETLANDS
   51,177 S.F. TOTAL



STATE OF MAINE
STEPHEN J. BRADSTREET
#5740
LICENSED PROFESSIONAL ENGINEER

Prepared For:
Owner:
AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:
RANSOM
Consulting Engineers and Scientists
MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel.: 207-774-4427

72 BISHOP STREET

Bishop Street

Portland, Maine

Date: April 10, 2015

Issued For: Site Plan and Subdivision Plan Review

Revisions:

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Title: PRE-DEVELOPMENT STORMWATER PLAN

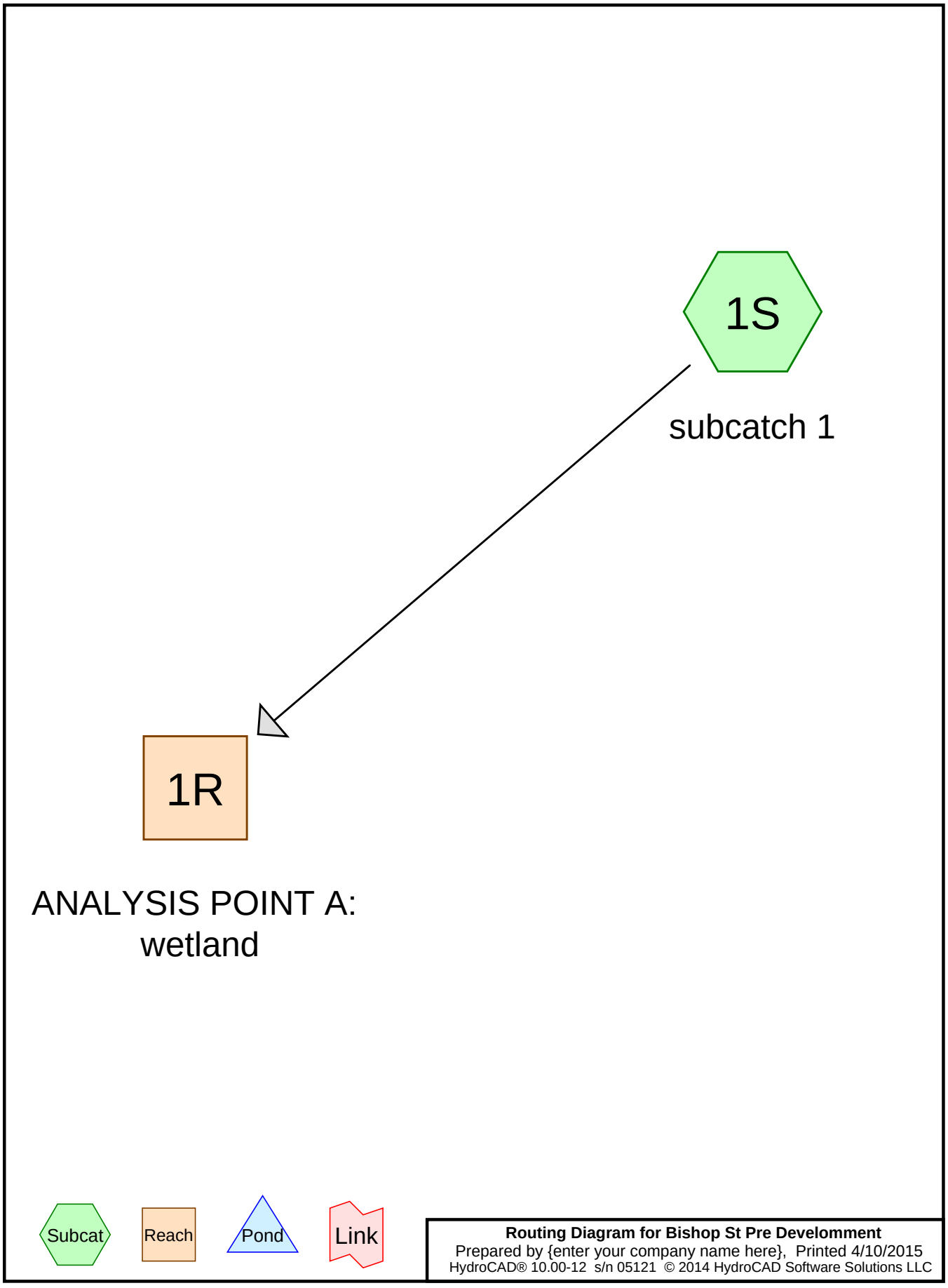
Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.: SW 1

P:\2014\14106\14106 Bishop Street\Drawings\15-3-31 - Standard\pre Development Plan.dwg maureen.mcgloon 4/12/2015 1:27 PM


1S
subcatch 1
1R
ANALYSIS POINT A:
wetland
Subcat
Reach
Pond
Link
Routing Diagram for Bishop St Pre Develomment
Prepared by {enter your company name here}, Printed 4/10/2015
HydroCAD® 10.00-12 s/n 05121 © 2014 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.336	79	50-75% Grass cover, Fair, HSG C (1S)
0.009	96	Gravel surface, HSG C (1S)
0.019	98	Paved parking & roofs (1S)
0.839	92	wooded wetlands area (1S)
1.203	**88**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.345	HSG C	1S
0.000	HSG D	
0.858	Other	1S
1.203		**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
0.000	0.000	0.336	0.000	0.000	0.336	50-75% Grass cover, Fair	1S
0.000	0.000	0.009	0.000	0.000	0.009	Gravel surface	1S
0.000	0.000	0.000	0.000	0.019	0.019	Paved parking & roofs	1S
0.000	0.000	0.000	0.000	0.839	0.839	wooded wetlands area	1S
0.000	**0.000**	**0.345**	**0.000**	**0.858**	**1.203**	**TOTAL AREA**	

Time span=2.00-20.00 hrs, dt=0.01 hrs, 1801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: subcatch1 Runoff Area=52,383 sf 1.58% Impervious Runoff Depth>0.23"
Flow Length=213' Tc=14.0 min CN=88 Runoff=0.24 cfs 0.023 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=0.24 cfs 0.023 af
Outflow=0.24 cfs 0.023 af

Total Runoff Area = 1.203 ac Runoff Volume = 0.023 af Average Runoff Depth = 0.23"
98.42% Pervious = 1.184 ac 1.58% Impervious = 0.019 ac

Summary for Subcatchment 1S: subcatch 1

Runoff = 0.24 cfs @ 12.21 hrs, Volume= 0.023 af, Depth> 0.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
	826	98	Paved parking & roofs
	380	96	Gravel surface, HSG C
	14,646	79	50-75% Grass cover, Fair, HSG C
*	36,531	92	wooded wetlands area
	52,383	88	Weighted Average
	51,557		98.42% Pervious Area
	826		1.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0300	0.08		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.00"
0.3	27	0.1110	1.67		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.6	38	0.0530	1.15		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.3	98	0.0200	0.71		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.0	213	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.203 ac, 1.58% Impervious, Inflow Depth > 0.23" for 1-inch event
Inflow = 0.24 cfs @ 12.21 hrs, Volume= 0.023 af
Outflow = 0.24 cfs @ 12.21 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs / 3

Time span=2.00-20.00 hrs, dt=0.01 hrs, 1801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: subcatch1 Runoff Area=52,383 sf 1.58% Impervious Runoff Depth>1.70"
Flow Length=213' Tc=14.0 min CN=88 Runoff=1.99 cfs 0.170 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=1.99 cfs 0.170 af
Outflow=1.99 cfs 0.170 af

Total Runoff Area = 1.203 ac Runoff Volume = 0.170 af Average Runoff Depth = 1.70"
98.42% Pervious = 1.184 ac 1.58% Impervious = 0.019 ac

Summary for Subcatchment 1S: subcatch 1

Runoff = 1.99 cfs @ 12.19 hrs, Volume= 0.170 af, Depth> 1.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.00"

	Area (sf)	CN	Description
	826	98	Paved parking & roofs
	380	96	Gravel surface, HSG C
	14,646	79	50-75% Grass cover, Fair, HSG C
*	36,531	92	wooded wetlands area
	52,383	88	Weighted Average
	51,557		98.42% Pervious Area
	826		1.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0300	0.08		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.00"
0.3	27	0.1110	1.67		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.6	38	0.0530	1.15		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.3	98	0.0200	0.71		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.0	213	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.203 ac, 1.58% Impervious, Inflow Depth > 1.70" for 2-Year event
Inflow = 1.99 cfs @ 12.19 hrs, Volume= 0.170 af
Outflow = 1.99 cfs @ 12.19 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs / 3

Time span=2.00-20.00 hrs, dt=0.01 hrs, 1801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: subcatch1 Runoff Area=52,383 sf 1.58% Impervious Runoff Depth>3.18"
Flow Length=213' Tc=14.0 min CN=88 Runoff=3.65 cfs 0.319 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=3.65 cfs 0.319 af
Outflow=3.65 cfs 0.319 af

Total Runoff Area = 1.203 ac Runoff Volume = 0.319 af Average Runoff Depth = 3.18"
98.42% Pervious = 1.184 ac 1.58% Impervious = 0.019 ac

Summary for Subcatchment 1S: subcatch 1

Runoff = 3.65 cfs @ 12.18 hrs, Volume= 0.319 af, Depth> 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.70"

	Area (sf)	CN	Description
	826	98	Paved parking & roofs
	380	96	Gravel surface, HSG C
	14,646	79	50-75% Grass cover, Fair, HSG C
*	36,531	92	wooded wetlands area
	52,383	88	Weighted Average
	51,557		98.42% Pervious Area
	826		1.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0300	0.08		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.00"
0.3	27	0.1110	1.67		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.6	38	0.0530	1.15		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.3	98	0.0200	0.71		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.0	213	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.203 ac, 1.58% Impervious, Inflow Depth > 3.18" for 10-Year event
Inflow = 3.65 cfs @ 12.18 hrs, Volume= 0.319 af
Outflow = 3.65 cfs @ 12.18 hrs, Volume= 0.319 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs / 3

Time span=2.00-20.00 hrs, dt=0.01 hrs, 1801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: subcatch 1 Runoff Area=52,383 sf 1.58% Impervious Runoff Depth>3.91"
Flow Length=213' Tc=14.0 min CN=88 Runoff=4.44 cfs 0.391 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=4.44 cfs 0.391 af
Outflow=4.44 cfs 0.391 af

Total Runoff Area = 1.203 ac Runoff Volume = 0.391 af Average Runoff Depth = 3.91"
98.42% Pervious = 1.184 ac 1.58% Impervious = 0.019 ac

Summary for Subcatchment 1S: subcatch 1

Runoff = 4.44 cfs @ 12.18 hrs, Volume= 0.391 af, Depth> 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
	826	98	Paved parking & roofs
	380	96	Gravel surface, HSG C
	14,646	79	50-75% Grass cover, Fair, HSG C
*	36,531	92	wooded wetlands area
	52,383	88	Weighted Average
	51,557		98.42% Pervious Area
	826		1.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0300	0.08		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.00"
0.3	27	0.1110	1.67		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.6	38	0.0530	1.15		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.3	98	0.0200	0.71		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.0	213	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.203 ac, 1.58% Impervious, Inflow Depth > 3.91" for 25-Year event
Inflow = 4.44 cfs @ 12.18 hrs, Volume= 0.391 af
Outflow = 4.44 cfs @ 12.18 hrs, Volume= 0.391 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs / 3

Time span=2.00-20.00 hrs, dt=0.01 hrs, 1801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: subcatch1 Runoff Area=52,383 sf 1.58% Impervious Runoff Depth>5.01"
Flow Length=213' Tc=14.0 min CN=88 Runoff=5.61 cfs 0.502 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=5.61 cfs 0.502 af
Outflow=5.61 cfs 0.502 af

Total Runoff Area = 1.203 ac Runoff Volume = 0.502 af Average Runoff Depth = 5.01"
98.42% Pervious = 1.184 ac 1.58% Impervious = 0.019 ac

Summary for Subcatchment 1S: subcatch 1

Runoff = 5.61 cfs @ 12.18 hrs, Volume= 0.502 af, Depth> 5.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=6.70"

	Area (sf)	CN	Description
	826	98	Paved parking & roofs
	380	96	Gravel surface, HSG C
	14,646	79	50-75% Grass cover, Fair, HSG C
*	36,531	92	wooded wetlands area
	52,383	88	Weighted Average
	51,557		98.42% Pervious Area
	826		1.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0300	0.08		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.00"
0.3	27	0.1110	1.67		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.6	38	0.0530	1.15		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.3	98	0.0200	0.71		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
14.0	213	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.203 ac, 1.58% Impervious, Inflow Depth > 5.01" for 100-Year event
Inflow = 5.61 cfs @ 12.18 hrs, Volume= 0.502 af
Outflow = 5.61 cfs @ 12.18 hrs, Volume= 0.502 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-20.00 hrs, dt= 0.01 hrs / 3

APPENDIX E

Post-Development Stormwater Calculations

City of Portland
72 Bishop Street
Portland, Maine

GENERAL NOTES:

1. SITE AREA: 52,383 SF OR 1.20 ACRES

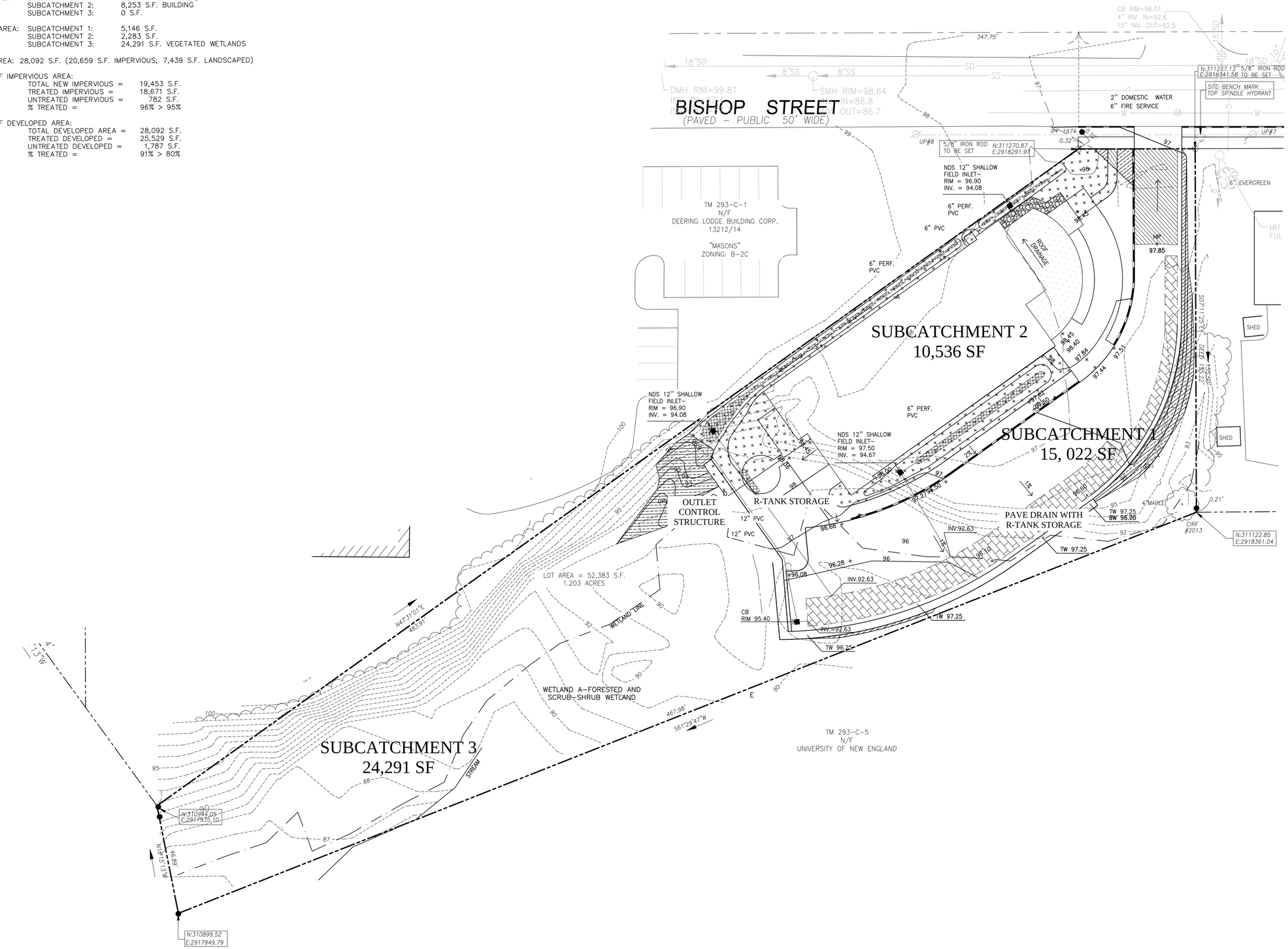
2. IMPERVIOUS AREA: SUBCATCHMENT 1: 11,200 S.F. PARKING/SIDEWALK
   SUBCATCHMENT 2: 8,253 S.F. BUILDING
   SUBCATCHMENT 3: 0 S.F.

3. LANDSCAPED AREA: SUBCATCHMENT 1: 5,146 S.F.
   SUBCATCHMENT 2: 2,283 S.F.
   SUBCATCHMENT 3: 24,291 S.F. VEGETATED WETLANDS

4. DEVELOPED AREA: 28,092 S.F. (20,659 S.F. IMPERVIOUS; 7,439 S.F. LANDSCAPED)

5. TREATMENT OF IMPERVIOUS AREA:
   TOTAL NEW IMPERVIOUS = 19,453 S.F.
   TREATED IMPERVIOUS = 18,671 S.F.
   UNTREATED IMPERVIOUS = 782 S.F.
   % TREATED = 96% > 95%

6. TREATMENT OF DEVELOPED AREA:
   TOTAL DEVELOPED AREA = 28,092 S.F.
   TREATED DEVELOPED = 25,529 S.F.
   UNTREATED DEVELOPED = 1,787 S.F.
   % TREATED = 91% > 80%



STATE OF MAINE
STEPHEN J. BRADSTREET #5740 LICENSED PROFESSIONAL ENGINEER

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72 BISHOP STREET

Portland, Maine

Bishop Street

Date:
April 10, 2015

Issued For:
Site Plan and Subdivision Plan Review

Revisions:

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Title:
POST DEVELOPMENT STORMWATER PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.:
SW 2

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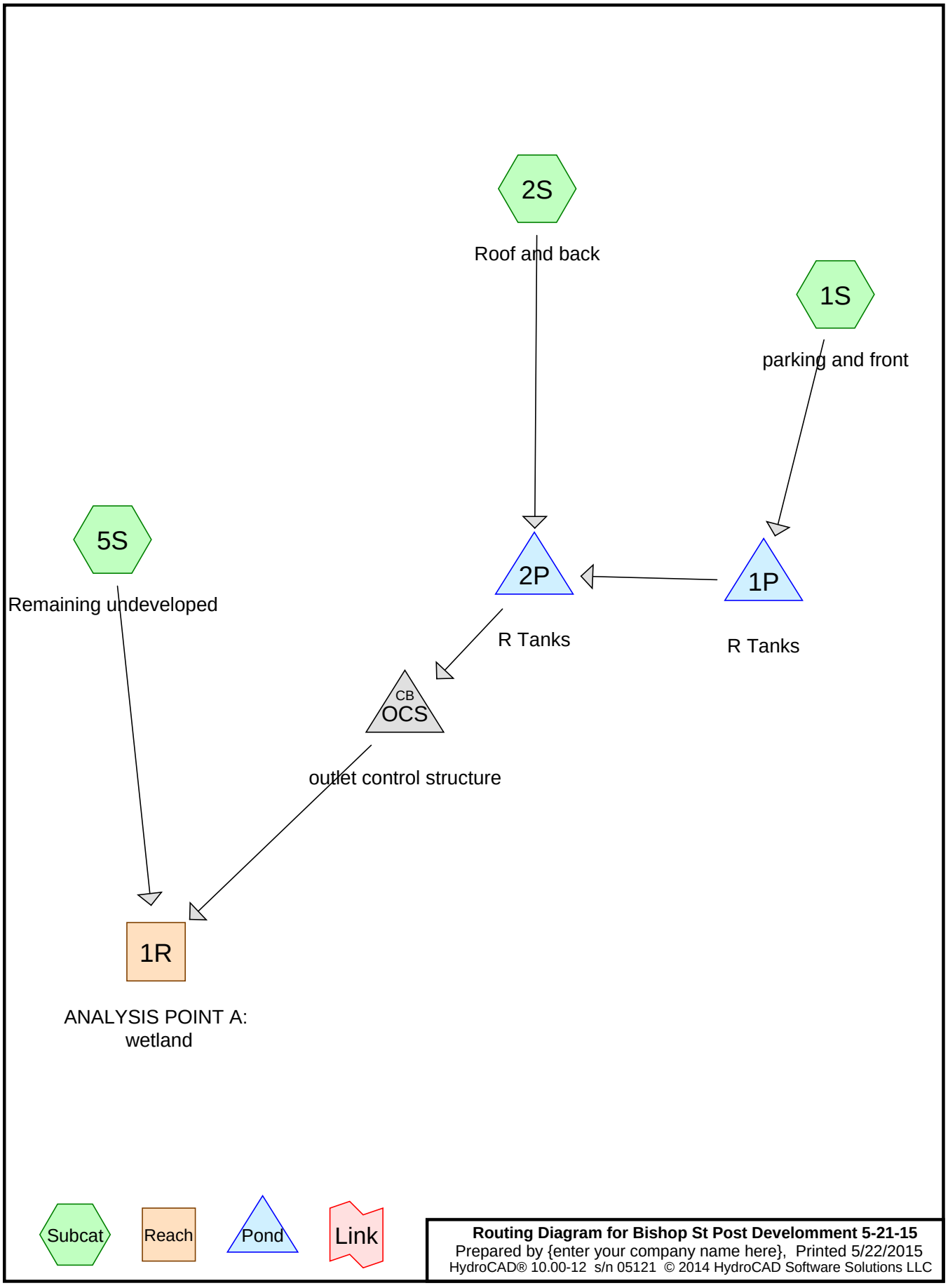


Routing Diagram for Bishop St Post Develomment 5-21-15
Prepared by {enter your company name here}, Printed 5/22/2015
HydroCAD® 10.00-12 s/n 05121 © 2014 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.171	74	>75% Grass cover, Good, HSG C (1S, 2S)
0.257	98	Paved parking & roofs (1S)
0.189	98	Unconnected roofs, HSG C (2S)
0.558	92	wooded wetland (5S)
1.175	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.360	HSG C	1S, 2S
0.000	HSG D	
0.815	Other	1S, 5S
1.175		**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
0.000	0.000	0.171	0.000	0.000	0.171	>75% Grass cover, Good	1S, 2S
0.000	0.000	0.000	0.000	0.257	0.257	Paved parking & roofs	1S
0.000	0.000	0.189	0.000	0.000	0.189	Unconnected roofs	2S
0.000	0.000	0.000	0.000	0.558	0.558	wooded wetland	5S
0.000	**0.000**	**0.360**	**0.000**	**0.815**	**1.175**	**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	92.63	92.63	80.0	0.0000	0.013	12.0	0.0	0.0
2	2P	92.63	92.63	20.0	0.0000	0.013	12.0	0.0	0.0

Time span=3.00-15.00 hrs, dt=0.01 hrs, 1201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: parking and front Runoff Area=16,346 sf 68.52% Impervious Runoff Depth>0.23"
Tc=6.0 min CN=90 Runoff=0.13 cfs 0.007 af

Subcatchment2S: Roof and back Runoff Area=10,536 sf 78.33% Impervious Runoff Depth>0.34"
Tc=6.0 min CN=93 Runoff=0.13 cfs 0.007 af

Subcatchment5S: Remaining undeveloped Runoff Area=24,285 sf 0.00% Impervious Runoff Depth>0.30"
Flow Length=90' Slope=0.0300 '/' Tc=6.5 min CN=92 Runoff=0.25 cfs 0.014 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=0.38 cfs 0.020 af
Outflow=0.38 cfs 0.020 af

Pond 1P: R Tanks Peak Elev=92.21' Storage=309 cf Inflow=0.13 cfs 0.007 af
12.0" Round Culvert n=0.013 L=80.0' S=0.0000 '/' Outflow=0.00 cfs 0.000 af

Pond 2P: R Tanks Peak Elev=92.90' Storage=52 cf Inflow=0.13 cfs 0.007 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0000 '/' Outflow=0.12 cfs 0.006 af

Pond OCS: outlet control structure Peak Elev=92.97' Inflow=0.12 cfs 0.006 af
Outflow=0.12 cfs 0.006 af

Total Runoff Area = 1.175 ac Runoff Volume = 0.028 af Average Runoff Depth = 0.28"
61.98% Pervious = 0.728 ac 38.02% Impervious = 0.447 ac

Summary for Subcatchment 1S: parking and front

Runoff = 0.13 cfs @ 12.10 hrs, Volume= 0.007 af, Depth> 0.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

Area (sf)	CN	Description
11,200	98	Paved parking & roofs
5,146	74	>75% Grass cover, Good, HSG C
16,346	90	Weighted Average
5,146		31.48% Pervious Area
11,200		68.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 2S: Roof and back

Runoff = 0.13 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

Area (sf)	CN	Description
8,253	98	Unconnected roofs, HSG C
2,283	74	>75% Grass cover, Good, HSG C
10,536	93	Weighted Average
2,283		21.67% Pervious Area
8,253		78.33% Impervious Area
8,253		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 5S: Remaining undeveloped

Runoff = 0.25 cfs @ 12.10 hrs, Volume= 0.014 af, Depth> 0.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-inch Rainfall=1.00"

	Area (sf)	CN	Description
*	24,285	92	wooded wetland
	24,285		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	20	0.0300	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.3	70	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.5	90	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

Inflow Area = 1.175 ac, 38.02% Impervious, Inflow Depth > 0.20" for 1-inch event
Inflow = 0.38 cfs @ 12.10 hrs, Volume= 0.020 af
Outflow = 0.38 cfs @ 12.10 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2

Summary for Pond 1P: R Tanks

Inflow Area = 0.375 ac, 68.52% Impervious, Inflow Depth > 0.23" for 1-inch event
Inflow = 0.13 cfs @ 12.10 hrs, Volume= 0.007 af
Outflow = 0.00 cfs @ 3.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 3.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 92.21' @ 15.00 hrs Surf.Area= 2,703 sf Storage= 309 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	1,687 cf	**21.06'W x 128.33'L x 2.69'H Field A** 7,280 cf Overall - 3,062 cf Embedded = 4,218 cf x 40.0% Voids
#2A	92.19'	2,909 cf	**ACF R-Tank HD 1.0** x 689 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 13 Rows of 53 Chambers
		4,596 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 3.00 hrs HW=91.94' TW=91.94' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.00 cfs)

Summary for Pond 2P: R Tanks

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 0.13" for 1-inch event
Inflow = 0.13 cfs @ 12.09 hrs, Volume= 0.007 af
Outflow = 0.12 cfs @ 12.11 hrs, Volume= 0.006 af, Atten= 2%, Lag= 1.0 min
Primary = 0.12 cfs @ 12.11 hrs, Volume= 0.006 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 92.90' @ 12.11 hrs Surf.Area= 104 sf Storage= 52 cf

Plug-Flow detention time= 31.2 min calculated for 0.006 af (84% of inflow)
Center-of-Mass det. time= 12.6 min (762.9 - 750.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	94 cf	**6.62'W x 15.73'L x 2.69'H Field A** 281 cf Overall - 44 cf Embedded = 236 cf x 40.0% Voids
#2A	92.19'	42 cf	**ACF R-Tank HD 1.0** x 10 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 2 Rows of 5 Chambers
		137 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 12.11 hrs HW=92.90' TW=92.97' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)

Summary for Pond OCS: outlet control structure

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 0.11" for 1-inch event
Inflow = 0.12 cfs @ 12.11 hrs, Volume= 0.006 af
Outflow = 0.12 cfs @ 12.11 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min
Primary = 0.12 cfs @ 12.11 hrs, Volume= 0.006 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 92.97' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	93.30'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	93.30'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	92.80'	**4.0" Vert. Orifice/Grate X 2.00** C= 0.600

Primary OutFlow Max=0.12 cfs @ 12.11 hrs HW=92.97' TW=0.00' (Dynamic Tailwater)
- **1=Sharp-Crested Rectangular Weir**(Controls 0.00 cfs)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Orifice/Grate** (Orifice Controls 0.12 cfs @ 1.40 fps)

Time span=3.00-15.00 hrs, dt=0.01 hrs, 1201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: parking and front Runoff Area=16,346 sf 68.52% Impervious Runoff Depth>1.58"
Tc=6.0 min CN=90 Runoff=0.87 cfs 0.049 af

Subcatchment2S: Roof and back Runoff Area=10,536 sf 78.33% Impervious Runoff Depth>1.83"
Tc=6.0 min CN=93 Runoff=0.62 cfs 0.037 af

Subcatchment5S: Remaining undeveloped Runoff Area=24,285 sf 0.00% Impervious Runoff Depth>1.74"
Flow Length=90' Slope=0.0300 '/' Tc=6.5 min CN=92 Runoff=1.36 cfs 0.081 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=1.98 cfs 0.123 af
Outflow=1.98 cfs 0.123 af

Pond 1P: R Tanks Peak Elev=92.91' Storage=1,884 cf Inflow=0.87 cfs 0.049 af
12.0" Round Culvert n=0.013 L=80.0' S=0.0000 '/' Outflow=0.05 cfs 0.006 af

Pond 2P: R Tanks Peak Elev=93.41' Storage=82 cf Inflow=0.62 cfs 0.043 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0000 '/' Outflow=0.63 cfs 0.042 af

Pond OCS: outlet control structure Peak Elev=93.34' Inflow=0.63 cfs 0.042 af
Outflow=0.63 cfs 0.042 af

Total Runoff Area = 1.175 ac Runoff Volume = 0.167 af Average Runoff Depth = 1.71"
61.98% Pervious = 0.728 ac 38.02% Impervious = 0.447 ac

Summary for Subcatchment 1S: parking and front

Runoff = 0.87 cfs @ 12.09 hrs, Volume= 0.049 af, Depth> 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
11,200	98	Paved parking & roofs
5,146	74	>75% Grass cover, Good, HSG C
16,346	90	Weighted Average
5,146		31.48% Pervious Area
11,200		68.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 2S: Roof and back

Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.037 af, Depth> 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
8,253	98	Unconnected roofs, HSG C
2,283	74	>75% Grass cover, Good, HSG C
10,536	93	Weighted Average
2,283		21.67% Pervious Area
8,253		78.33% Impervious Area
8,253		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 5S: Remaining undeveloped

Runoff = 1.36 cfs @ 12.09 hrs, Volume= 0.081 af, Depth> 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.00"

	Area (sf)	CN	Description
*	24,285	92	wooded wetland
	24,285		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	20	0.0300	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.3	70	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.5	90	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

Inflow Area = 1.175 ac, 38.02% Impervious, Inflow Depth > 1.26" for 2-Year event
Inflow = 1.98 cfs @ 12.09 hrs, Volume= 0.123 af
Outflow = 1.98 cfs @ 12.09 hrs, Volume= 0.123 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2

Summary for Pond 1P: R Tanks

Inflow Area = 0.375 ac, 68.52% Impervious, Inflow Depth > 1.58" for 2-Year event
Inflow = 0.87 cfs @ 12.09 hrs, Volume= 0.049 af
Outflow = 0.05 cfs @ 14.56 hrs, Volume= 0.006 af, Atten= 94%, Lag= 148.4 min
Primary = 0.05 cfs @ 14.56 hrs, Volume= 0.007 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 92.91' @ 14.22 hrs Surf.Area= 2,703 sf Storage= 1,884 cf

Plug-Flow detention time= 243.7 min calculated for 0.006 af (13% of inflow)
Center-of-Mass det. time= 118.6 min (850.6 - 732.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	1,687 cf	**21.06'W x 128.33'L x 2.69'H Field A** 7,280 cf Overall - 3,062 cf Embedded = 4,218 cf x 40.0% Voids
#2A	92.19'	2,909 cf	**ACF R-Tank HD 1.0** x 689 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 13 Rows of 53 Chambers
		4,596 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.08 cfs @ 14.56 hrs HW=92.91' TW=92.85' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.08 cfs @ 0.65 fps)

Summary for Pond 2P: R Tanks

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 0.84" for 2-Year event
Inflow = 0.62 cfs @ 12.09 hrs, Volume= 0.043 af
Outflow = 0.63 cfs @ 12.16 hrs, Volume= 0.042 af, Atten= 0%, Lag= 4.5 min
Primary = 0.63 cfs @ 12.16 hrs, Volume= 0.042 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.41' @ 12.09 hrs Surf.Area= 104 sf Storage= 82 cf

Plug-Flow detention time= 12.0 min calculated for 0.042 af (97% of inflow)
Center-of-Mass det. time= 8.0 min (748.9 - 741.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	94 cf	**6.62'W x 15.73'L x 2.69'H Field A** 281 cf Overall - 44 cf Embedded = 236 cf x 40.0% Voids
#2A	92.19'	42 cf	**ACF R-Tank HD 1.0** x 10 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 2 Rows of 5 Chambers
		137 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 12.16 hrs HW=93.27' TW=93.34' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)

Summary for Pond OCS: outlet control structure

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 0.82" for 2-Year event
Inflow = 0.63 cfs @ 12.16 hrs, Volume= 0.042 af
Outflow = 0.63 cfs @ 12.16 hrs, Volume= 0.042 af, Atten= 0%, Lag= 0.0 min
Primary = 0.63 cfs @ 12.16 hrs, Volume= 0.042 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.34' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	93.30'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	93.30'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	92.80'	**4.0" Vert. Orifice/Grate X 2.00** C= 0.600

Primary OutFlow Max=0.63 cfs @ 12.16 hrs HW=93.34' TW=0.00' (Dynamic Tailwater)
- **1=Sharp-Crested Rectangular Weir**(Weir Controls 0.11 cfs @ 0.66 fps)
- **2=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.69 fps)
- **3=Orifice/Grate** (Orifice Controls 0.51 cfs @ 2.95 fps)

Time span=3.00-15.00 hrs, dt=0.01 hrs, 1201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: parking and front Runoff Area=16,346 sf 68.52% Impervious Runoff Depth>2.92"
Tc=6.0 min CN=90 Runoff=1.53 cfs 0.091 af

Subcatchment2S: Roof and back Runoff Area=10,536 sf 78.33% Impervious Runoff Depth>3.22"
Tc=6.0 min CN=93 Runoff=1.04 cfs 0.065 af

Subcatchment5S: Remaining undeveloped Runoff Area=24,285 sf 0.00% Impervious Runoff Depth>3.12"
Flow Length=90' Slope=0.0300 '/' Tc=6.5 min CN=92 Runoff=2.32 cfs 0.145 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=3.37 cfs 0.259 af
Outflow=3.37 cfs 0.259 af

Pond 1P: R Tanks Peak Elev=93.38' Storage=2,951 cf Inflow=1.53 cfs 0.091 af
12.0" Round Culvert n=0.013 L=80.0' S=0.0000 '/' Outflow=0.60 cfs 0.034 af

Pond 2P: R Tanks Peak Elev=93.54' Storage=90 cf Inflow=1.04 cfs 0.116 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0000 '/' Outflow=1.04 cfs 0.114 af

Pond OCS: outlet control structure Peak Elev=93.41' Inflow=1.04 cfs 0.114 af
Outflow=1.04 cfs 0.114 af

Total Runoff Area = 1.175 ac Runoff Volume = 0.301 af Average Runoff Depth = 3.07"
61.98% Pervious = 0.728 ac 38.02% Impervious = 0.447 ac

Summary for Subcatchment 1S: parking and front

Runoff = 1.53 cfs @ 12.09 hrs, Volume= 0.091 af, Depth> 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.70"

Area (sf)	CN	Description
11,200	98	Paved parking & roofs
5,146	74	>75% Grass cover, Good, HSG C
16,346	90	Weighted Average
5,146		31.48% Pervious Area
11,200		68.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 2S: Roof and back

Runoff = 1.04 cfs @ 12.08 hrs, Volume= 0.065 af, Depth> 3.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.70"

Area (sf)	CN	Description
8,253	98	Unconnected roofs, HSG C
2,283	74	>75% Grass cover, Good, HSG C
10,536	93	Weighted Average
2,283		21.67% Pervious Area
8,253		78.33% Impervious Area
8,253		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 5S: Remaining undeveloped

Runoff = 2.32 cfs @ 12.09 hrs, Volume= 0.145 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.70"

	Area (sf)	CN	Description
*	24,285	92	wooded wetland
	24,285		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	20	0.0300	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.3	70	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.5	90	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

Inflow Area = 1.175 ac, 38.02% Impervious, Inflow Depth > 2.65" for 10-Year event
Inflow = 3.37 cfs @ 12.09 hrs, Volume= 0.259 af
Outflow = 3.37 cfs @ 12.09 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2

Summary for Pond 1P: R Tanks

Inflow Area = 0.375 ac, 68.52% Impervious, Inflow Depth > 2.92" for 10-Year event
Inflow = 1.53 cfs @ 12.09 hrs, Volume= 0.091 af
Outflow = 0.60 cfs @ 12.50 hrs, Volume= 0.034 af, Atten= 61%, Lag= 24.9 min
Primary = 0.60 cfs @ 12.50 hrs, Volume= 0.051 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.38' @ 12.54 hrs Surf.Area= 2,703 sf Storage= 2,951 cf

Plug-Flow detention time= 154.0 min calculated for 0.034 af (37% of inflow)
Center-of-Mass det. time= 83.9 min (804.1 - 720.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	1,687 cf	**21.06'W x 128.33'L x 2.69'H Field A** 7,280 cf Overall - 3,062 cf Embedded = 4,218 cf x 40.0% Voids
#2A	92.19'	2,909 cf	**ACF R-Tank HD 1.0** x 689 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 13 Rows of 53 Chambers
		4,596 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.39 cfs @ 12.50 hrs HW=93.38' TW=93.33' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.39 cfs @ 0.85 fps)

Summary for Pond 2P: R Tanks

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 2.25" for 10-Year event
Inflow = 1.04 cfs @ 12.08 hrs, Volume= 0.116 af
Outflow = 1.04 cfs @ 12.09 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.3 min
Primary = 1.04 cfs @ 12.09 hrs, Volume= 0.114 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.54' @ 12.09 hrs Surf.Area= 104 sf Storage= 90 cf

Plug-Flow detention time= 6.4 min calculated for 0.114 af (98% of inflow)
Center-of-Mass det. time= 4.2 min (752.3 - 748.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	94 cf	**6.62'W x 15.73'L x 2.69'H Field A** 281 cf Overall - 44 cf Embedded = 236 cf x 40.0% Voids
#2A	92.19'	42 cf	**ACF R-Tank HD 1.0** x 10 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 2 Rows of 5 Chambers
		137 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.04 cfs @ 12.09 hrs HW=93.54' TW=93.41' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.04 cfs @ 1.39 fps)

Summary for Pond OCS: outlet control structure

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 2.23" for 10-Year event
Inflow = 1.04 cfs @ 12.09 hrs, Volume= 0.114 af
Outflow = 1.04 cfs @ 12.09 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min
Primary = 1.04 cfs @ 12.09 hrs, Volume= 0.114 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.41' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	93.30'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	93.30'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	92.80'	**4.0" Vert. Orifice/Grate X 2.00** C= 0.600

Primary OutFlow Max=1.04 cfs @ 12.09 hrs HW=93.41' TW=0.00' (Dynamic Tailwater)
- **1=Sharp-Crested Rectangular Weir**(Weir Controls 0.46 cfs @ 1.07 fps)
- **2=Orifice/Grate** (Orifice Controls 0.03 cfs @ 1.12 fps)
- **3=Orifice/Grate** (Orifice Controls 0.56 cfs @ 3.20 fps)

Time span=3.00-15.00 hrs, dt=0.01 hrs, 1201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: parking and front Runoff Area=16,346 sf 68.52% Impervious Runoff Depth>3.57"
Tc=6.0 min CN=90 Runoff=1.84 cfs 0.112 af

Subcatchment2S: Roof and back Runoff Area=10,536 sf 78.33% Impervious Runoff Depth>3.88"
Tc=6.0 min CN=93 Runoff=1.24 cfs 0.078 af

Subcatchment5S: Remaining undeveloped Runoff Area=24,285 sf 0.00% Impervious Runoff Depth>3.78"
Flow Length=90' Slope=0.0300 '/' Tc=6.5 min CN=92 Runoff=2.77 cfs 0.175 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=4.01 cfs 0.307 af
Outflow=4.01 cfs 0.307 af

Pond 1P: R Tanks Peak Elev=93.54' Storage=3,299 cf Inflow=1.84 cfs 0.112 af
12.0" Round Culvert n=0.013 L=80.0' S=0.0000 '/' Outflow=0.56 cfs 0.054 af

Pond 2P: R Tanks Peak Elev=93.61' Storage=93 cf Inflow=1.24 cfs 0.133 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0000 '/' Outflow=1.24 cfs 0.131 af

Pond OCS: outlet control structure Peak Elev=93.43' Inflow=1.24 cfs 0.131 af
Outflow=1.24 cfs 0.131 af

Total Runoff Area = 1.175 ac Runoff Volume = 0.365 af Average Runoff Depth = 3.73"
61.98% Pervious = 0.728 ac 38.02% Impervious = 0.447 ac

Summary for Subcatchment 1S: parking and front

Runoff = 1.84 cfs @ 12.08 hrs, Volume= 0.112 af, Depth> 3.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
11,200	98	Paved parking & roofs
5,146	74	>75% Grass cover, Good, HSG C
16,346	90	Weighted Average
5,146		31.48% Pervious Area
11,200		68.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 2S: Roof and back

Runoff = 1.24 cfs @ 12.08 hrs, Volume= 0.078 af, Depth> 3.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
8,253	98	Unconnected roofs, HSG C
2,283	74	>75% Grass cover, Good, HSG C
10,536	93	Weighted Average
2,283		21.67% Pervious Area
8,253		78.33% Impervious Area
8,253		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 5S: Remaining undeveloped

Runoff = 2.77 cfs @ 12.09 hrs, Volume= 0.175 af, Depth> 3.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	24,285	92	wooded wetland
	24,285		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	20	0.0300	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.3	70	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.5	90	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

Inflow Area = 1.175 ac, 38.02% Impervious, Inflow Depth > 3.13" for 25-Year event
Inflow = 4.01 cfs @ 12.09 hrs, Volume= 0.307 af
Outflow = 4.01 cfs @ 12.09 hrs, Volume= 0.307 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2

Summary for Pond 1P: R Tanks

Inflow Area = 0.375 ac, 68.52% Impervious, Inflow Depth > 3.57" for 25-Year event
Inflow = 1.84 cfs @ 12.08 hrs, Volume= 0.112 af
Outflow = 0.56 cfs @ 12.96 hrs, Volume= 0.054 af, Atten= 70%, Lag= 52.6 min
Primary = 0.56 cfs @ 12.96 hrs, Volume= 0.054 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.54' @ 12.42 hrs Surf.Area= 2,703 sf Storage= 3,299 cf

Plug-Flow detention time= 129.9 min calculated for 0.054 af (49% of inflow)
Center-of-Mass det. time= 73.6 min (789.8 - 716.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	1,687 cf	**21.06'W x 128.33'L x 2.69'H Field A** 7,280 cf Overall - 3,062 cf Embedded = 4,218 cf x 40.0% Voids
#2A	92.19'	2,909 cf	**ACF R-Tank HD 1.0** x 689 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 13 Rows of 53 Chambers
		4,596 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.70 cfs @ 12.96 hrs HW=93.37' TW=93.20' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.70 cfs @ 1.58 fps)

Summary for Pond 2P: R Tanks

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 2.58" for 25-Year event
Inflow = 1.24 cfs @ 12.08 hrs, Volume= 0.133 af
Outflow = 1.24 cfs @ 12.09 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.3 min
Primary = 1.24 cfs @ 12.09 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.61' @ 12.09 hrs Surf.Area= 104 sf Storage= 93 cf

Plug-Flow detention time= 6.1 min calculated for 0.131 af (99% of inflow)
Center-of-Mass det. time= 4.0 min (744.4 - 740.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	94 cf	**6.62'W x 15.73'L x 2.69'H Field A** 281 cf Overall - 44 cf Embedded = 236 cf x 40.0% Voids
#2A	92.19'	42 cf	**ACF R-Tank HD 1.0** x 10 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 2 Rows of 5 Chambers
		137 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.24 cfs @ 12.09 hrs HW=93.61' TW=93.43' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.24 cfs @ 1.59 fps)

Summary for Pond OCS: outlet control structure

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 2.55" for 25-Year event
Inflow = 1.24 cfs @ 12.09 hrs, Volume= 0.131 af
Outflow = 1.24 cfs @ 12.09 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min
Primary = 1.24 cfs @ 12.09 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.43' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	93.30'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	93.30'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	92.80'	**4.0" Vert. Orifice/Grate X 2.00** C= 0.600

Primary OutFlow Max=1.24 cfs @ 12.09 hrs HW=93.43' TW=0.00' (Dynamic Tailwater)
- **1=Sharp-Crested Rectangular Weir**(Weir Controls 0.63 cfs @ 1.19 fps)
- **2=Orifice/Grate** (Orifice Controls 0.04 cfs @ 1.24 fps)
- **3=Orifice/Grate** (Orifice Controls 0.57 cfs @ 3.29 fps)

Time span=3.00-15.00 hrs, dt=0.01 hrs, 1201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: parking and front Runoff Area=16,346 sf 68.52% Impervious Runoff Depth>4.56"
Tc=6.0 min CN=90 Runoff=2.30 cfs 0.142 af

Subcatchment2S: Roof and back Runoff Area=10,536 sf 78.33% Impervious Runoff Depth>4.88"
Tc=6.0 min CN=93 Runoff=1.54 cfs 0.098 af

Subcatchment5S: Remaining undeveloped Runoff Area=24,285 sf 0.00% Impervious Runoff Depth>4.77"
Flow Length=90' Slope=0.0300 '/' Tc=6.5 min CN=92 Runoff=3.44 cfs 0.222 af

Reach 1R: ANALYSISPOINT A: wetland Inflow=4.98 cfs 0.414 af
Outflow=4.98 cfs 0.414 af

Pond 1P: R Tanks Peak Elev=93.86' Storage=3,758 cf Inflow=2.30 cfs 0.142 af
12.0" Round Culvert n=0.013 L=80.0' S=0.0000 '/' Outflow=1.29 cfs 0.085 af

Pond 2P: R Tanks Peak Elev=93.90' Storage=106 cf Inflow=2.20 cfs 0.194 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0000 '/' Outflow=2.02 cfs 0.192 af

Pond OCS: outlet control structure Peak Elev=93.52' Inflow=2.02 cfs 0.192 af
Outflow=2.02 cfs 0.192 af

Total Runoff Area = 1.175 ac Runoff Volume = 0.463 af Average Runoff Depth = 4.73"
61.98% Pervious = 0.728 ac 38.02% Impervious = 0.447 ac

Summary for Subcatchment 1S: parking and front

Runoff = 2.30 cfs @ 12.08 hrs, Volume= 0.142 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=6.70"

Area (sf)	CN	Description
11,200	98	Paved parking & roofs
5,146	74	>75% Grass cover, Good, HSG C
16,346	90	Weighted Average
5,146		31.48% Pervious Area
11,200		68.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, direct entry**

Summary for Subcatchment 2S: Roof and back

Runoff = 1.54 cfs @ 12.08 hrs, Volume= 0.098 af, Depth> 4.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=6.70"

Area (sf)	CN	Description
8,253	98	Unconnected roofs, HSG C
2,283	74	>75% Grass cover, Good, HSG C
10,536	93	Weighted Average
2,283		21.67% Pervious Area
8,253		78.33% Impervious Area
8,253		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment 5S: Remaining undeveloped

Runoff = 3.44 cfs @ 12.09 hrs, Volume= 0.222 af, Depth> 4.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=6.70"

	Area (sf)	CN	Description
*	24,285	92	wooded wetland
	24,285		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	20	0.0300	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.3	70	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.5	90	Total			

Summary for Reach 1R: ANALYSIS POINT A: wetland

Inflow Area = 1.175 ac, 38.02% Impervious, Inflow Depth > 4.23" for 100-Year event
Inflow = 4.98 cfs @ 12.09 hrs, Volume= 0.414 af
Outflow = 4.98 cfs @ 12.09 hrs, Volume= 0.414 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2

Summary for Pond 1P: R Tanks

Inflow Area = 0.375 ac, 68.52% Impervious, Inflow Depth > 4.56" for 100-Year event
Inflow = 2.30 cfs @ 12.08 hrs, Volume= 0.142 af
Outflow = 1.29 cfs @ 12.19 hrs, Volume= 0.085 af, Atten= 44%, Lag= 6.3 min
Primary = 1.30 cfs @ 12.19 hrs, Volume= 0.096 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.86' @ 12.21 hrs Surf.Area= 2,703 sf Storage= 3,758 cf

Plug-Flow detention time= 116.5 min calculated for 0.085 af (59% of inflow)
Center-of-Mass det. time= 70.3 min (781.4 - 711.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	1,687 cf	**21.06'W x 128.33'L x 2.69'H Field A** 7,280 cf Overall - 3,062 cf Embedded = 4,218 cf x 40.0% Voids
#2A	92.19'	2,909 cf	**ACF R-Tank HD 1.0** x 689 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 13 Rows of 53 Chambers
		4,596 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 12.19 hrs HW=93.85' TW=93.87' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)

Summary for Pond 2P: R Tanks

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 3.78" for 100-Year event
Inflow = 2.20 cfs @ 12.19 hrs, Volume= 0.194 af
Outflow = 2.02 cfs @ 12.22 hrs, Volume= 0.192 af, Atten= 8%, Lag= 1.7 min
Primary = 2.02 cfs @ 12.22 hrs, Volume= 0.192 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.90' @ 12.20 hrs Surf.Area= 104 sf Storage= 106 cf

Plug-Flow detention time= 4.4 min calculated for 0.192 af (99% of inflow)
Center-of-Mass det. time= 3.0 min (746.2 - 743.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	91.94'	94 cf	**6.62'W x 15.73'L x 2.69'H Field A** 281 cf Overall - 44 cf Embedded = 236 cf x 40.0% Voids
#2A	92.19'	42 cf	**ACF R-Tank HD 1.0** x 10 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 2 Rows of 5 Chambers
		137 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	92.63'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.63' / 92.63' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.83 cfs @ 12.22 hrs HW=93.89' TW=93.52' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.83 cfs @ 2.34 fps)

Summary for Pond OCS: outlet control structure

Inflow Area = 0.617 ac, 72.36% Impervious, Inflow Depth > 3.74" for 100-Year event
Inflow = 2.02 cfs @ 12.22 hrs, Volume= 0.192 af
Outflow = 2.02 cfs @ 12.22 hrs, Volume= 0.192 af, Atten= 0%, Lag= 0.0 min
Primary = 2.02 cfs @ 12.22 hrs, Volume= 0.192 af

Routing by Dyn-Stor-Ind method, Time Span= 3.00-15.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 93.52' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	93.30'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	93.30'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	92.80'	**4.0" Vert. Orifice/Grate X 2.00** C= 0.600

Primary OutFlow Max=2.02 cfs @ 12.22 hrs HW=93.52' TW=0.00' (Dynamic Tailwater)
- **1=Sharp-Crested Rectangular Weir**(Weir Controls 1.30 cfs @ 1.52 fps)
- **2=Orifice/Grate** (Orifice Controls 0.09 cfs @ 1.58 fps)
- **3=Orifice/Grate** (Orifice Controls 0.62 cfs @ 3.57 fps)

RANSOM Consulting, Inc.

Consulting Engineers and Scientists

Bishop Street Stormwater Inspection and Maintenance Plan

Inspection and Maintenance Contract:

Long-term inspection and maintenance by a DEP approved stormwater maintenance inspector shall be regularly provided under a five-year binding inspection and maintenance contract that must be renewed prior to contract expiration. A legal agreement shall be established with responsibility for inspection and maintenance and should list specific maintenance responsibilities (including timetables) as well as provide for funding for the long-term inspection and maintenance. Debris and sediment buildup shall be removed from the forebay, basin, stone filter, or paver system as needed.

Inspection schedule:

During the first year of operation, filtration BMPs shall be inspected twice annually and following major storm events. Thereafter, the filter should be inspected every six months to ensure that it is draining within 48 hours following a 1-inch storm. Additionally, a storm that fills the system to overflow should be monitored to confirm in drains in no less than 36 hours and within 60 hours.

Vegetated Soil Filter:

Maintenance criteria for the vegetated soil filter are as follows:

- Debris and sediment buildup shall be removed from the vegetated soil filter system as needed. The removed sediments should be disposed in an appropriate manner.
- Mowing of the grassed basin can occur semi-annually to a height of no less than 6 inches. If mowing is desired only hand-held or push-mowers shall be used (no tractors).
- Any bare areas or erosion rills shall be repaired with new media filter or sandy loam then seeded and mulched. Fertilization of the filter area should be avoided unless abslolutely necessary to establish vegetation.
- Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary. Add new mulch only as necessary.

- Maintaining good grass cover will minimize clogging with fine sediments and if ponding exceeds 48 hours, the top of the filter bed must be tilled to reestablish the soil's filtration capacity.
- Should water pond on the surface of the filter bed for longer than 72 hours, the top several inches of the filter shall be replaced with fresh material. The removed material shall be disposed properly.

R-Tank Stormwater Detention:

Inspection and Maintenance of the R-Tank shall be in accordance with the manufacturer's recommended practices to provide the performance required by the design. The R-Tank system includes inspection ports and maintenance ports, each of which has a cover at the surface. A visual inspection of all ports should be used to determine the depth of sediments deposited in the R-Tank system. The system should be back-flushed once the sediment accumulation has reached the manufacturer's limits. Once removed, sediment-laden water must be disposed of properly.

Roof Dripline Filter:

The roof dripline filter bed is part of the stormwater management plan and requires maintenance similar to the vegetated soil filter basin. Debris and sediment buildup shall be removed from the stone filter bed system as needed and shall be properly disposed. The filter bed must not be paved over or altered in any way.

Manmade Pervious Surfaces:

Long-term inspection and maintenance by a DEP approved stormwater maintenance inspector shall be regularly provided under a five-year binding inspection and maintenance contract that must be renewed prior to contract expiration. Maintenance criteria for manmade pervious surfaces are as follows:

- Debris and sediment buildup shall be removed from the paver system using a vac truck as needed and shall be disposed properly.
- Remove sediment when the surface infiltration rates of more than 75% of the surface area fall below 10% of the post-installation verified surface infiltration rate.
- Remove sediment when surface ponding remains for more than 24 hours after the storm event in an area larger than 10 square feet.
- Restrain vehicles with muddy wheels from accessing pervious pavement areas.
- Limit salt use for deicing and do not use sand.

- Remove leaves and organic debris in the fall.
- Sweep, vacuum and/or pressure wash pavement twice annually at a minimum.

Inline Roof Drain Filter:

The maintenance of inline roof drain filters shall be in accordance with the manufacturer's recommended requirements to ensure the performance requirements are met. At a minimum, it is recommended that the filters are inspected and cleaned twice per year. Replace the filter cartridge annually. All debris and spent filter material shall be properly disposed.

IAPMO RESEARCH AND TESTING, INC.

5001 East Philadelphia Street, Ontario, California 91761-2816 • (909) 472-4100 Fax (909) 472-4244 • www.iapmo.org

CERTIFICATE OF LISTING

IAPMO Research and Testing, Inc. is a product certification body which tests and inspects samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

The most updated information on this Certificate of Listing is available online at pld.iapmo.org

Effective Date: September 2014 Void After: September 2015

Product: In-Line Devices for Downspout Filtration File No. 6266

Issued To: Bio Clean Environmental Services, Inc.
2972 San Luis Rey Road
Oceanside, CA 92058

Identification: Each unit shall be marked with the manufacturer's name or trademark. This mark shall be legible, readily identified, and applied so as to be permanent. The product shall also bear the maintenance contact information and the UPC® certification mark. The markings shall be located so as to be visible after installation.

Characteristics: In-line devices used for filtration of storm water runoff in structure downspouts. To be installed in accordance with the manufacturer's instructions and the requirements of the latest edition of the Uniform Plumbing Code.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

Products are in compliance with the following code(s):
Uniform Plumbing Code (UPC®)

Chairman, Product Certification Committee

CEO, The IAPMO Group

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing.

IAPMO RESEARCH AND TESTING, INC.
CERTIFICATE OF LISTING

Void After: September 2015

Product: In-Line Devices for Downspout Filtration File No. 6266

Issued To: Bio Clean Environmental Services, Inc.

Products are in compliance with the following standard(s):

IGC 214-2009

IAPMO RESEARCH AND TESTING, INC.
CERTIFICATE OF LISTING

Void After: September 2015

Product: In-Line Devices for Downspout Filtration File No. 6266

Issued To: Bio Clean Environmental Services, Inc.

MODELS:

BC-DF4 (4")
BC-DF6 (6")
BC-DF8 (8")

Downspout Filter

PROVEN STORMWATER TREATMENT TECHNOLOGY

BIO CLEAN ENVIRONMENTAL SERVICES, INC.

Overview

The Bio Clean Downspout Filter is the industry's leading solution for treatment of roof runoff. This technology is used to treat commercial and industrial roof tops along with highrise buildings, parking structures and residential buildings.

Available in 3 sizes, this filter can easily adapt to downspouts 2" to 12" in diameter. The filter comes standard with rubber boots that allow for easy installation to the downspout.

Proven since 2003, the Bio Clean Downspout Filter has been used on hundreds of installations throughout the United States. All internal components are constructed of stainless steel.

The sleek inline design allows the filter to be used in tight spaces. Approved by the IAPMO, this filter can meet all your needs.

Advantages

- 10 Year Warranty
- No Nets or Geofabrics
- Sleek Inline Design
- High Treatment Flow Rate
- High Bypass Flow Rate
- Low Cost

Performance

- 93% Removal of TSS
- 87% Removal of Hydrocarbons
- Effective at Removing Metals, Nutrients and Bacteria (Media Type)

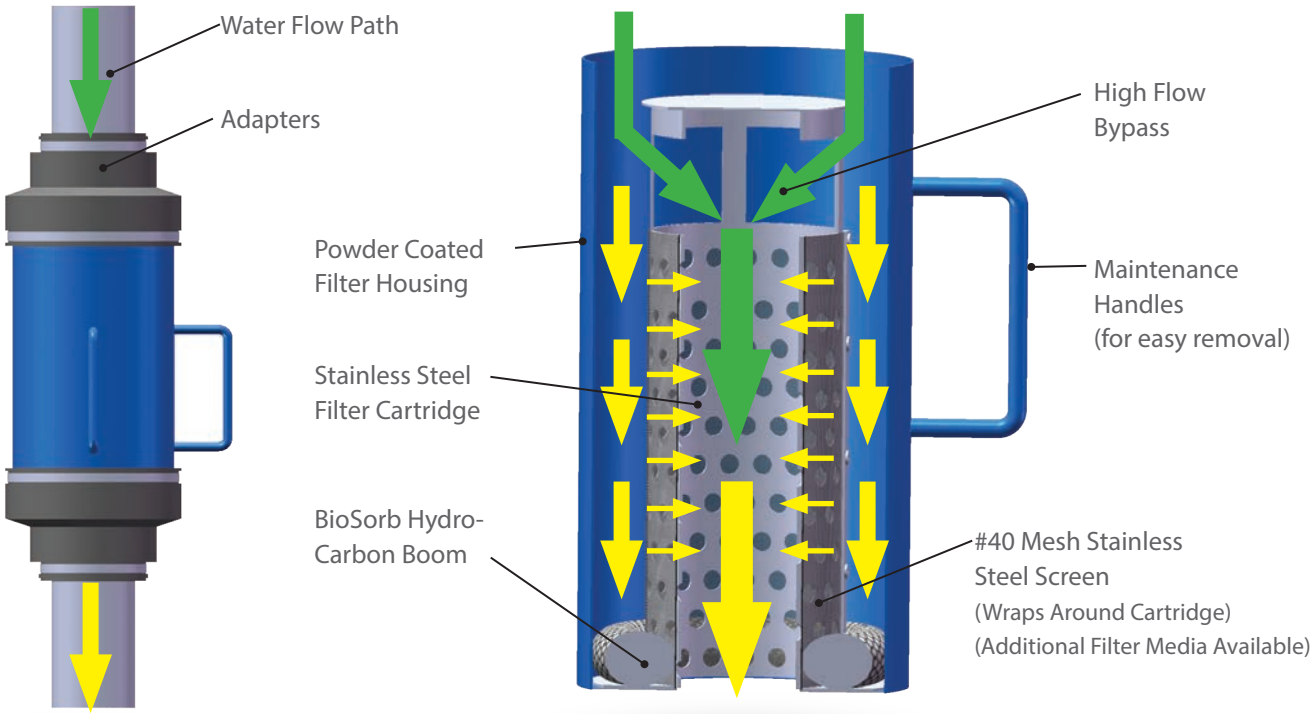
Specifications

Model #	Inlet ID (dia., in.)	Filter OD (dia., in.)	Storage Cap. (cu. ft.)	Filtered Flow (gpm)	Bypass Flow (gpm)
BC-DF4	4	6.625	0.9	249	566
BC-DF6	6	8.625	0.21	509	1006
BC-DF8	8	8.625	0.21	509	1006
BC-DF10	10	12.75	0.77	1145	2264
BC-DF12	12	12.75	0.77	1145	2264

Downspout Filter

PROVEN STORMWATER TREATMENT TECHNOLOGY

Operation



Application

Easily Adapts to
Square or Rectangle
Downspouts

- Commercial
- Residentail
- Parking Structures
- Mixed Use

Fits Inline with Iron,
Steel or Plastic Pipe

Approvals

IAPMO Testing
& Approval Listing

Installation & Maintenance

See our Website for Installation & Maintenance
Manuals at www.BioCleanEnvironmental.com

2972 San Luis Rey Rd
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BIO CLEAN

Bio Clean Downspout Filter TSS & Hydrocarbons Removal Testing

Prepared by

Bio Clean Environmental Services, Inc.

April & June 2007

Testing Laboratory - PAHs

D-Tek Analytical Laboratories, Inc.

9020 Kenamar Drive, Suite 205
San Diego, CA 92121
Phone: 858-566-4542

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Background

A number of specialty post-construction BMPs have been developed in recent years to deal with unique situations and constraints. Situations in which traditional proprietary and non-proprietary BMPs are not feasible nor even possible. Many new and retrofit projects characterized by curb to curb structures, such is the case with taller buildings and parking structures in highly urbanized or down town areas. Due to these constraints, the need for BMPs that can be incorporated into these types of projects has arisen. The majority of the impervious surfaces on these sites are roof tops and parking area. Therefore, a BMP that will address the "pollutants of concern" and related concentrations and forms unique to these impervious areas has been in great demand in recent years. As stormwater regulations become more stringent the demand for BMPs the effectively and feasibly deal with these situations will increase. More importantly, these BMPs will have to be designed to work with the current drainage infrastructure of rooftops and parking structures. The most commonly used method for conveying runoff from these areas are downspouts. Downspouts are a series of vertical pipes the collect runoff from rooftops and parking areas, channels the water either internally or externally of the building and discharges at ground level either to the street or the existing drainage infrastructure usually sub-surface of the street.

Bio Clean Environmental Services has been offering a downspout filter over the past three years to address the need for a stormwater BMP that will effectively treat runoff from rooftops and parking areas. Downspout filters are source controls, being inexpensive, easy to retrofit to most new and existing downspout drainage infrastructures, and keeping pollutants out of the water bodies. Bio Clean Environmental Services, Inc, of Oceanside, California performed testing on a Bio Clean Downspout Filter (BCDF) to determine its pollutant removal effectiveness for TSS and hydrocarbons that are associated with storm water runoff. The hydrocarbon testing (PAHs) was performed on April 25th of 2007. Attached are photographs from the test and the accompanying laboratory test analysis and results performed by D-Tek Analytical Laboratories, Inc. The TSS and turbidity testing was performed on June 3rd, 2007. A full scale laboratory test was performed on a standard BCDF. The particle size gradations where used to represent both coarse and fine total suspended solids. Considering the pollutants usually found in roof runoff are comprised of both coarser roofing material and finer solids associated with atmospheric decomposition and wind blown material, these particle ranges are most closely correlated to actual field conditions.

The Bio Clean Downspout Filter is designed to use numerous media types. The filter is designed to trap sediment, TSS, leaves, organic debris, metals, and hydrocarbons, thereby preventing these pollutants from entering the storm drain system where they would cause detrimental impacts on downstream water bodies. The Bio Clean Downspout Filter is a two piece metal fabricated filtering device. The filters outer shell is made of 1/8th inch powered coated rolled steel. The inner removable filter housing/bypass cone is constructed of 316 stainless steel. The inner cylinder is perforated allowing for media to be wrapped around it. The storage of trapped pollutants occurs in the area between the

inner cylinder and outer shell. The capacity of the pollutant capture chamber is approximately 2.94 cubic feet. The overflow capacity of the BCDF is designed to be greater than the peak design flow, thereby insuring that there will be no loss of hydraulic capacity due to the device being inline of the downspout pipe.

Water flowing through the downspout filter first encounters the pollutant capture chamber where runoff passes through the filter media. As mentioned above the media is wrapped around the internal cylinder. If the flow rate through the filter media reaches capacity the higher flows will enter the bypass located in the middle of the top end of the internal cylinder.

Downspout filters such as the BCDF are generally designed to capture hydrocarbons, sediment, and debris. Depending on the specified media the filter can be effective at capturing fine TSS, heavy metals, and nutrients. The Bio Clean Flume Filters standard filter media is a combination of BioSorb booms and X-Tex Filter Fabric. This combination of media allows for very effective removal of pollutants commonly present in stormwater runoff, particularly runoff from rooftops and parking structures.

Methodology – Hydrocarbon Testing

Two tests where performed at separate times. The first test focused on the BioSorb booms removal of TPH (total petroleum hydrocarbons). A test was designed to simulate a rainfall event and measure the ability of a BCDF to remove hydrocarbons. A mock downspout was constructed of 6” SD40 PVC piping. The constructed downspout was approximately seven feet in height, with the filter placed inline approximately half way between the bottom of the collection chamber and the top of the downspout. A new downspout filter installed inline of the downspout (see pictures). A forklift with a 500 gallon tank was allowed to discharge through a 2” valve used to regulate the flow of the discharged batch water into the flume at a rate of 25 gpm. It was observed that the visible hydrocarbons (a rainbow sheen floating on the surface) were present in the influent, prior to the downspout filter and were not visible in the discharge collection chamber (effluent), which indicated that the hydrocarbons were being absorbed by the media booms. The effluent was collected down stream in a container after passing through the filter.

The batch was created by making a concentrated solution of hydrocarbon enriched water. The batch was intended to be mixed in 250 gallons to create a solution of highly contaminated water. This solution was added to the 250 gallon water tank and agitated with a mixer for a period of 15 minutes before the test and also throughout the test period. Once mixed thoroughly a grab sample was taken form the tank. This sample provided the background levels in the tank to be compared to the five tests that were run through the flume filter and its media.

By the use of a flow meter and control valve the flow was maintained at 25 gpm. Each test was conducted for approximately 2 minutes. Each water sample was done by taking

three grab samples of effluent water that had passed through the filter. This was done to get an average sample concentration. Water was allowed to flow through the filter for 30 seconds then one third of the sample water was collected in a clean vessel and poured into the sampling bottle. The second and third sample was taken at one minute of flow and the final portion of the sample was taken at approximately 2 minutes as the final amount of water from the test was flowing through the filter.

As part of the initial sample of the influent readings where taken for pH, NTU and temperature. This initial information is as follows: time of testing started at 2:06, wind was 0.9 mph, temperature 79.4, Barometric pressure 1014.3 hPa, starting pH = 9.3 and NTU= 20.5, altitude = 60 feet MSL.

Results

Following is a summary of the results of removal of Total Petroleum Hydrocarbons.

Downspout Filter - Bio Sorb

Run	Pollutant	Influent (mg/L)	Effluent (mg/L)	Percent Reduction
1	TPH	223.5	40.3	81.97%
	pH	7.07	7.22	
2	TPH	223.5	18.4	91.77%
	pH	7.07	7.22	
3	TPH	223.5	31.3	86.00%
	pH	7.07	7.19	
4	TPH	223.5	40.6	81.83%
	pH	7.07	7.19	
5	TPH	223.5	17.26	92.28%
	pH	7.07	7.18	

Pollutant	Average Concentration	Average Removal %
TPH	29.57	86.77%
pH	7.20	

Methodology – TSS Testing – Sil-Co-Sil 106

The second test was performed to measure the Bio Clean Downspouts filters ability to remove TSS from stormwater runoff. As with the last test, a full scale laboratory test was designed to simulate actual field conditions. As described above, a mock downspout was constructed of 6" SD40 PVC piping. The constructed downspout was approximately seven feet in height, with the filter placed inline approximately half way between the bottom of the collection chamber and the top of the downspout. The bottom part of the downspout was constructed with a cut away to allow to the gathering of grab samples. A new downspout filter installed inline of the downspout (see pictures). A forklift with a 500 gallon tank was allowed to discharge through a 2" valve used to regulate the flow of the discharged batch water into the flume at a rate of 25 gpm.

The TSS was measured in two fashions. For this test two separate soil gradations where used to simulate both the fine and coarse TSS associated with stormwater runoff. Exact weights where calculated for the two gradations. For the Sil-Co-Sil 106, exactly 4.67 pounds where weighed out and mixed into the 400 gallons of water present in the water tank. This calculates to precisely 1400 mg/L. The water tank was agitated with a mixer for a period of 15 minutes before the test and also throughout the test period. Once mixed thoroughly a grab sample was taken form the tank and measured for turbidity. Due to the fine nature of the Sil-Co-Sil 106 (mean particle size of 20 microns) turbidity provides an accurate indication of the level of fine TSS present in the water. A grab sample of the mix was taken and measured for turbidity. The resulting reading for the influent concentration was 429 NTUs. A grab sample was taken of the influent prior to each test run to ensure the turbidity level remained constant, the readings ranged from 408 to 437 NTUs throughout the influent samples, indicating consistency in influent concentration. These samples provided the background levels in the tank to be compared to the effluent grab samples of the eight runs. The influent concentration (known by weight) and the relating turbidity reading was plotted against several and readily available correlation studies between TSS and turbidity on particle gradations similar to that of the Sil-Co-Sil 106. Through statistical analysis it was proven with a high level of certainty that the influent concentration and related turbidity reading strongly correlated to the existing data. The r value was greater than .999, which proves the strength of this correlation. Following are the results of this statistical analysis.

Statistical Analysis - Correlation

Pearson Product Moment Correlation - Monitoring Report - Lab Data with Bio Clean Data Point (weight)		
Statistic	Variable Y	Variable X
Mean	128.886667	39.866667
Variance	117954.5665	11085.18222
Standard Error	343.445143	105.286192
Covariance		36147.15156
Correlation		0.999644
Determination		0.999288
T-Test		135.052132

Critical 2-sided T-value (5%)	2.16
2-sided p-value	0
Critical 1-sided T-value (5%)	1.771
1-sided p-value	0
Degrees of Freedom	13
Observations	15

By the use of a flow meter and control valve the flow was maintained at 25 gpm. Each test was conducted for approximately 2 minutes. Each water sample was done in three grab samples of effluent water that had passed through the filter. This was done to get average sample turbidity. Water was allowed to flow through the filter for 30 seconds then one third of the sample water was collected in a clean vessel and poured into the sampling bottle. The second and third sample was taken at one minute of flow and the final portion of the sample was taken at approximately 2 minutes as the final amount of water from the test was flowing through the filter. Following are the results of the turbidity readings gathered from the grab samples.

Results – Sil-Co-Sil 106

TSS - Sil-Co-Sil Testing Log

	TSS (mg/L)**	Turbidity (ntu)*
Influent mg/L	**1400**	**429**
Test Run 1		
Grab 1	**1128.998**	**346**
Grab 2	**1292.148**	**396**
Grab 3	**929.955**	**285**
Average Reduction %	**41.8%**	
Test Run 2		
Grab 1	**956.059**	**293**
Grab 2	**978.9**	**300**
Grab 3	**704.808**	**216**
Average Reduction %	**53.0%**	
Test Run 3		
Grab 1	**952.796**	**292**
Grab 2	**796.172**	**244**
Grab 3	**750.49**	**230**

Average Reduction %	**56.0%**	
Test Run 4		
Grab 1	**952.796**	**292**
Grab 2	**838.591**	**257**
Grab 3	**721.123**	**221**
Average Reduction %	**55.7%**	
Test Run 5	**0**	
Grab 1	**832.065**	**255**
Grab 2	**877.747**	**269**
Grab 3	**724.386**	**222**
Average Reduction %	**57.5%**	
Test Run 6		
Grab 1	**907.114**	**278**
Grab 2	**695.019**	**213**
Grab 3	**867.958**	**266**
Average Reduction %	**56.7%**	
Test Run 7		
Grab 1	**655.863**	**201**
Grab 2	**567.762**	**174**
Grab 3	**613.444**	**188**
Average Reduction %	**76.2%**	
Test Run 8		
	688.493	**211**
	642.811	**197**
	652.6	**200**
Average Reduction %	**70.6%**	
Total Average Reduction %	**58.4%**	

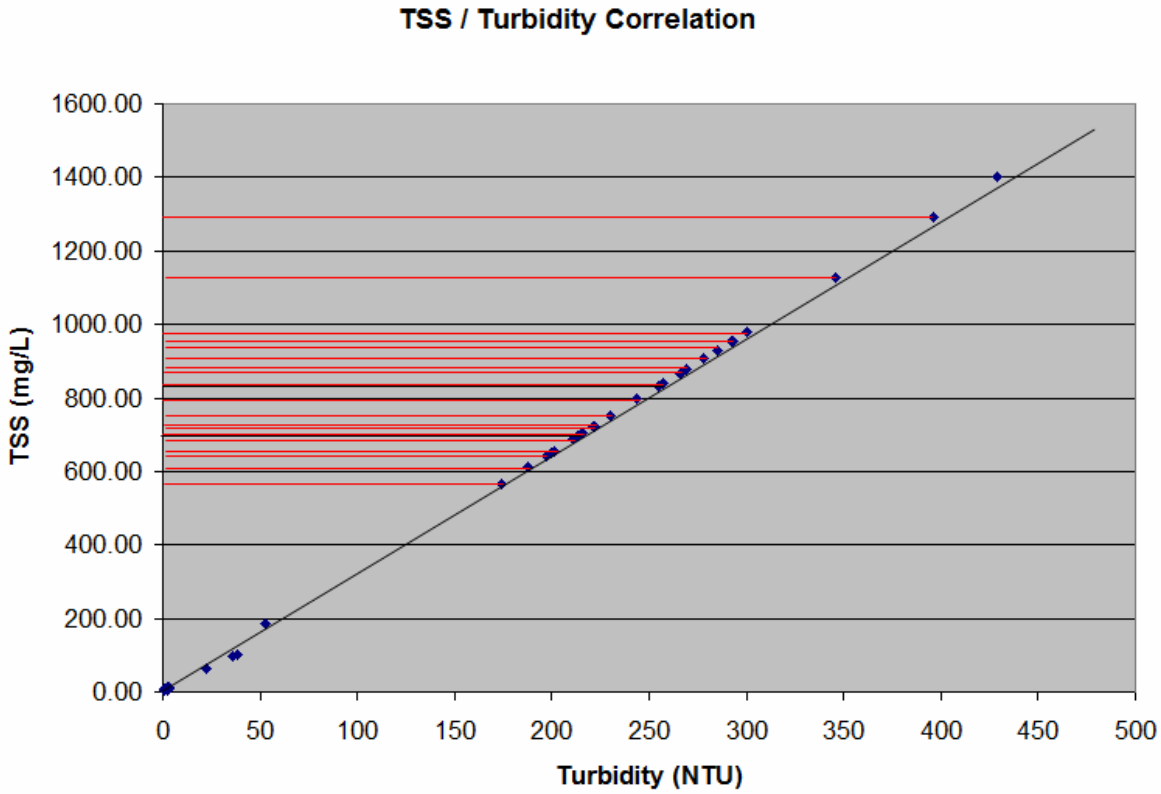
***Turbidity (NTU) data was taken during the full scale laboratory testing of the Bio Clean Downspout Filter. During the testing 8 two minute test runs where performed at a flow rate of 25 gpm. 3 grab samples where taken at the 30 second, 1 minute and 1.5 minute intervals.**

**** Approximations based upon Turbidity readings and its proven strong correlation to TSS, particularly particles less than 50 microns. Influent fine TSS concentration (mg/L) batch mix was 1400 mg/L (400 gallons and 4.67 pounds of Sil-Co-Sil 106, mean particle size of 20 microns).**

The TSS concentrations above where calculated by the following statistical analysis.

The Following Scatter Plot compiled from existing laboratory data was used to plot results of the grab samples (turbidity readings) in order to find the related TSS concentration in mg/L.

Scatter Plot



Data Table

TURBIDITY (NTU)	TSS (mg/l)
38	102.60
36	96.60
2	14.60
3	11.40
2	9.60
2	11.20
53	184.30
22	61.60
2	10.00
1	9.00
1	3.40
2	5.20
2	7.20
3	6.60

429	1400.00
346.00	1128
396.00	1292
285.00	929
293.00	956
300.00	978
216.00	704
292.00	952
244.00	796
230.00	750
292.00	952
257.00	838
221.00	721
255.00	832
269.00	877
222.00	724
278.00	907
213.00	695
266.00	867
201.00	655
174.00	567
188.00	613
211.00	688
197.00	642
200.00	652

Methodology – TSS Testing – Sand

Taking into account the quick settling velocities of coarse TSS it was determined that a different method should be employed to accurately measure the Bio Clean Downspout Filters removal of coarser TSS. For this test it was concluded to most accurate method for calculating the removal efficiency of coarse TSS is by weight comparison between the amounts added to the influent and compare it by the amount collected in the filter. As a precautionary measure, any TSS that passed through the filter was collected in a discharge collection chamber. The amount collected by the filter plus the amount collected in the discharge collection chamber would be added to see if the total was equal to the amount added to the influent. Exactly 6.67 pounds of sand where metered into the influent over the 2 minute period of each test run. Approximately .834 pounds of sand were metered into each test run. This method ensured that the concentration of 2000 mg/L would be maintained throughout the entire period of each test run. Following are the results of this test.

Results – Sand

TSS - Sand Testing Log

	TSS (mg/L)***
Influent mg/L	**2000**
Test Run 1	
(in pounds)	**0.834**
Test Run 2	
(in pounds)	**0.834**
Test Run 3	
(in pounds)	**0.834**
Test Run 4	
(in pounds)	**0.834**
Test Run 5	
(in pounds)	**0.834**
Test Run 6	
(in pounds)	**0.834**
Test Run 7	
(in pounds)	**0.834**
Test Run 8	
(in pounds)	**0.834**
Total Sand Added (Influent) (lbs)	**6.7**
Total Sand Collected in Downspout Filter - at Conclusion of Test Run 8 - Dried and Weighed (lbs)	**6.2**
******Total Reduction %**	**92.9%**

*****To obtain a concentration of 2000 mg/L of TSS (sand) approximately 6.67 pounds of sand needed to be added evenly to 400 gallons of water. Due to sands fast settling time, sand was metered into the influent at a rate of .417 pounds per minute. This was done during the duration of the tests runs, totaling a time of 16 minutes.**

******Calculated by weight difference between sand added and sand removed from Bio Clean Downspout Filter.**

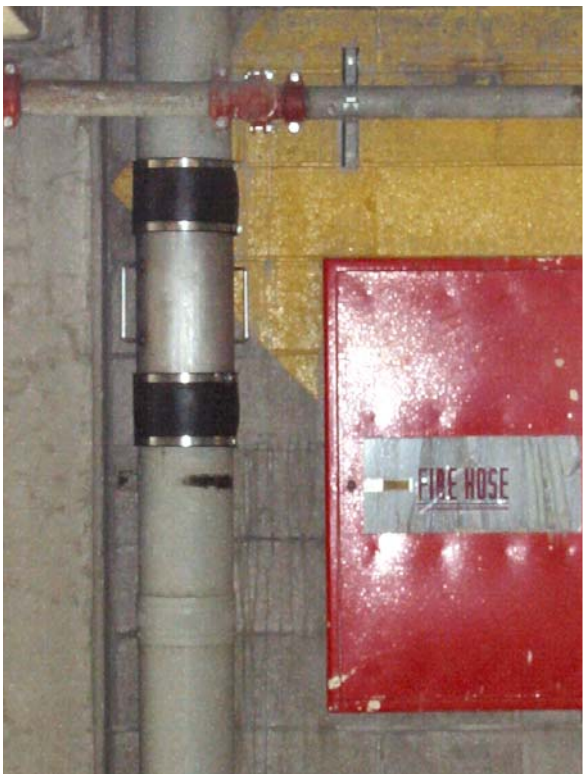
Conclusion

A total of five runs where performed to provide statistical verification of the removal efficiencies of TPH. There was an average effluent concentration of 29.57 mg/l for TPH (total petroleum hydrocarbons), resulting in an average removal efficiency of 86.7% respectively. The Average TSS removal efficiency of Sil-Co-Sil 106 (mean particle size of 20 microns) was approximately 58.4%. The Average TSS removal efficiency of Sand (mean particle size of 250 microns) was approximately 92.9%.The conclusion of the test indicates that the BCFF filter is a very good device for the removal of oil and grease and TPH with removal rates of 86% and an overall removal of TSS through a range of particle sizes of 75.65% (average of Sil-Co-Sil 106 and sand combined). Particle gradations for both the Sil-Co-Sil 106 (fly ash) and sand (sand clay) are provided in appendix B. Also, considering the Bio Clean Downspout Filter utilizes X-Tex fabric as it primary filter media it can be noted that this fabric has a wet sieve size of 86 microns. Thus, the Bio Clean Downspout Filter utilizing the X-Tex fabric has the potential to capture 100% of TSS particles greater than 86 microns up to a peak flow rate of .3 CFS or 135 gpm. This flow rate has been calculated by finding the total surface area of the internal cylinder (which the fabric is wrapped around), equal to 1.2775 square feet times the X-Tex fabric stated flow rate of 106 gpm per square foot.

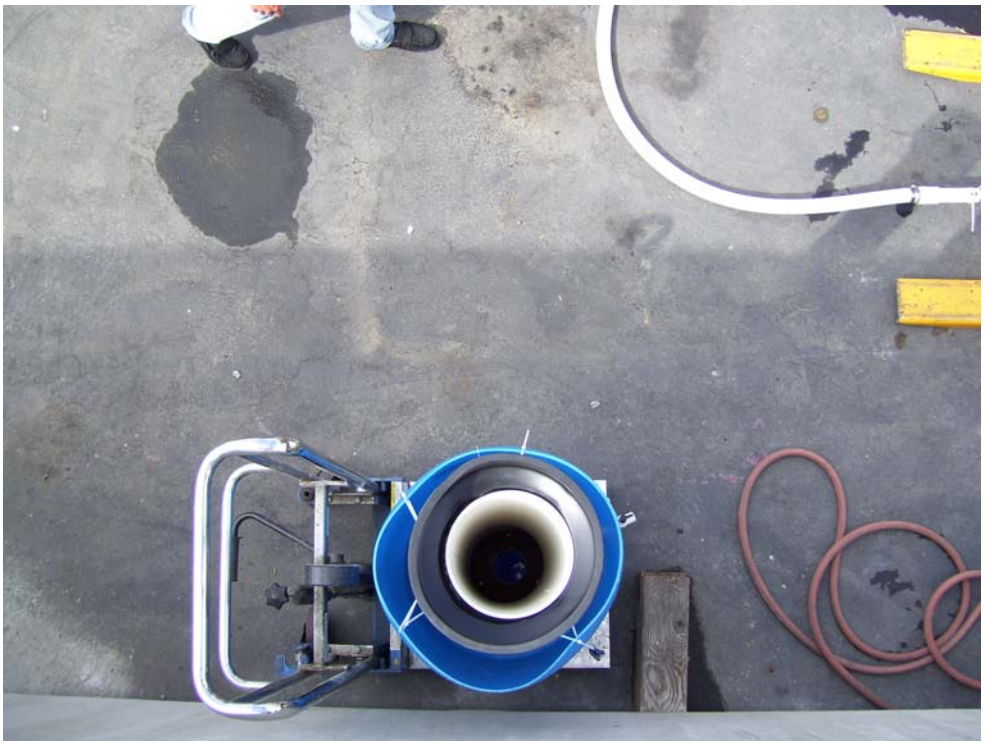
At the flow rate of 25 gpm, the Bio Clean Downspout Filter had a TSS removal efficiency of 75.65%. The BCDF has sediment removal capabilities rivaling those found in many structural BMPs, at a fraction of the cost, and without disruptive construction. In conclusion the Bio Clean Downspout Filter is invaluable tool that can be used to prevent pollutants from entering our waterways. The Bio Clean Flume Filter has the potential to utilize different media, which may allow this filter to be effective at removing metals and nutrients.

Appendix A

Field Installation



Testing Photos



F-300
GPM
LPM
140
120
100
80
60
40
550
450
350
250
150
Read Float at Top
Calibrated with Water
www.Blue-White.com
FLOW

Appendix B

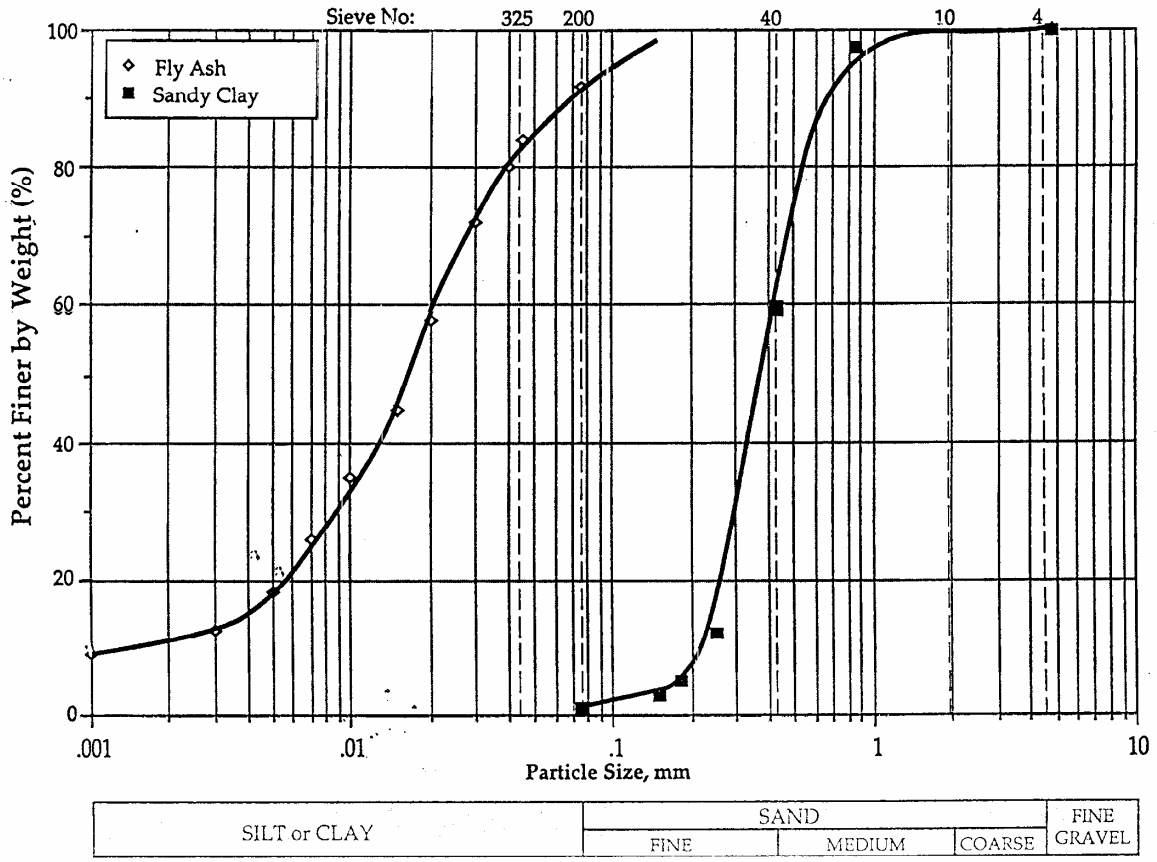
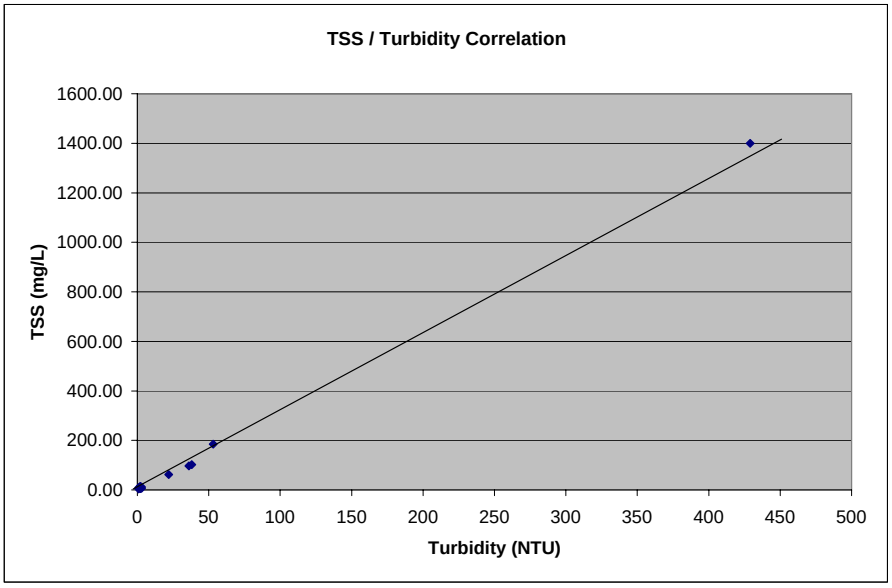


Figure 4.2: Grain Size Distribution Curves of Chosen Sediments for Model Study.

TURBIDITY (NTU)	TSS (mg/l)
38	102.60
36	96.60
2	14.60
3	11.40
2	9.60
2	11.20
53	184.30
22	61.60
2	10.00
1	9.00
1	3.40
2	5.20
2	7.20
3	6.60
429	1400.00



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Column 1	1	
Column 2	0.999644	1

Date	Mon, 04 Jun 2007 10:55:21 -0700
Cite	Wessa, P. (2007), Free Statistics Software, Office for Research Development and Education, version 1.1.21, URL http://www.wessa.net/

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Enter (or paste) two different data series delimited by hard returns.

Pearson Product Moment Correlation - Monitoring Report - Lab Data with Bio Clean Data Point (weight)		
Statistic	Variable Y	Variable X
Mean	128.886667	39.866667
Variance	117954.5665	11085.18222
Standard Error	343.445143	105.286192
Covariance	36147.15156	
Correlation	0.999644	
Determination	0.999288	
T-Test	135.052132	
Critical 2-sided T-value (5%)	2.16	
2-sided p-value	0	
Critical 1-sided T-value (5%)	1.771	
1-sided p-value	0	
Degrees of Freedom	13	
Observations	15	

TURBIDITY (NTU)	TSS (mg/l)
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2	9.60
2	11.20
53	184.30
22	61.60
2	10.00
1	9.00
1	3.40
2	5.20
2	7.20
3	6.60
429	1400.00
346.00	1128
396.00	1292
285.00	929
293.00	956
300.00	978
216.00	704
292.00	952
244.00	796
230.00	750
292.00	952
257.00	838
221.00	721
255.00	832
269.00	877
222.00	724
278.00	907
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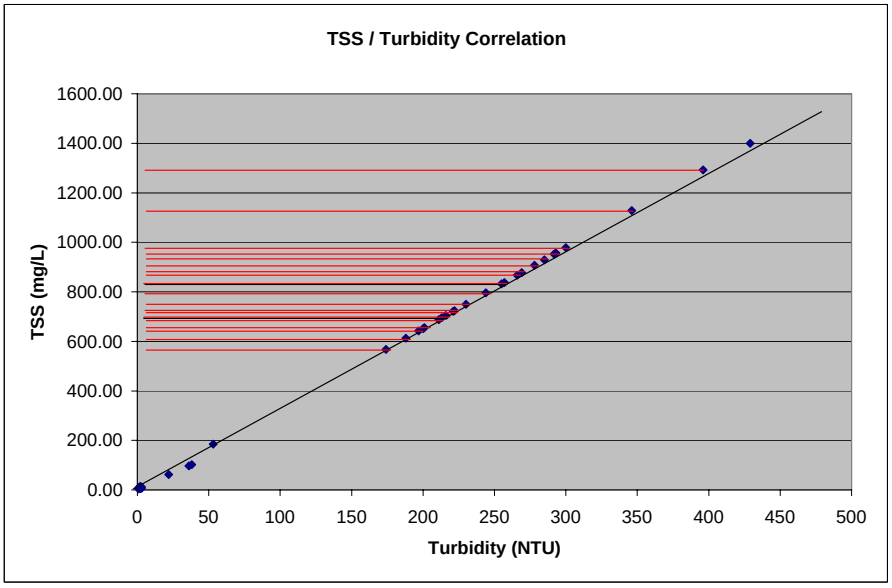
197.00	642
200.00	652



ENVIRONMENTAL INNOVATIONS

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Applications
Endorsements
Test Data
Our Team
Contact Us
Distributors

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Email:
jbxextex@comcast.net

Physical Test Data- To understand all the physical properties of the X-TEX blanket and to help in developing other applications additional physical testing was conducted.

The table below is a summary of those tests.

Physical Test Results of the X-TEX Blanket

Test	Method	Units	Result
Thickness	ASTM D5199	Mills	115.5
Mass Per Unit Area	ASTM 5261	oz/yd	8.0
Grab Tensile MD	ASTM D4632	lbs	56
Grab Tensile TD	ASTM D4632	lbs	66
Elongation at Peak MD	ASTM D4632	percent	102
Elongation at Peak TD	ASTM D4632	percent	96
Wide Width Tensile MD	ASTM D4595	lbs/in	19
Wide Width Tensile TD	ASTM D4595	lbs/in	24
Elongation at break MD	ASTM D4595	percent	75
Elongation at break TD	ASTM D4595	percent	73
Pucture Resistance	ASTM D4833	lbs	54
Trapezoid Tear Strength MD	ASTM D4533	lbs	26
Trapezoid Tear Strength TD	ASTM D4533	lbs	29
Mullen Burst Strength	ASTM D3786	psi	135
Permittivity(Constant Head)	ASTM D4491	sec-1	1.42
Permeability	ASTM D4491	cm/sec	0.36
Flow Rate	ASTM D4491	gal/ft2	106
Apparent Opening Size	ASTM D4751	mm	100-140
Static Puncture Resistance	ASTM D6241	lbs	175
Wet Sieving	ISO 12956	um	83
Asphalt Retention MD	ASTM D6140	grams/m2	2433
Asphalt Retention TD	ASTM D6140	grams/m2	2305
Note MD = Machine Direction* *TD = Transverse Direction*			

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Total Suspended Solids-Turbidity Correlation in Northeastern Wisconsin Streams

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http://www.uwgb.edu/watershed

AWRA – Wisconsin Section Meeting
Delavan, WI, 3-4 March 2005

Abstract

Knowledge of sediment loading is fundamental to assessing non-point source pollution in streams. The cost of collection and analysis of sediment samples could be reduced if total suspended solids (TSS) can be accurately estimated from continuously monitored turbidity. This poster presents TSS-turbidity correlations for three high sediment-yielding tributaries to the Lower Fox River in northeastern Wisconsin. Continuous turbidity measurements were matched with 195 TSS samples from automated event samplers and manual low-flow samples collected during WY2004. R^2 values for linear regressions exceeded 0.95 for the four sites analyzed. Regressions were site specific and significantly different from each other. Flow did not have a significant effect on the regressions. We hypothesize that differences between sites are due to variances in watershed hydrologic response, soils, bank sediment characteristics and land use/cover. Loads from turbidity-derived TSS concentrations were within 10% of loads calculated using TSS observations.

Introduction and Project Objectives

Estimation of sediment loading in a stream typically requires utilizing automated flow and event samplers to collect a limited number of TSS samples for laboratory analysis. Others have found that continuously monitored turbidity measurements may closely correlate with TSS concentrations in streams (Christensen 2000). Turbidity is a measure of the decrease in transparency of stream water as light is scattered by suspended matter (Ziegler 2002). Because optical sensors can be used to continuously monitor turbidity throughout a storm event, turbidity-derived predictions of TSS may yield an accurate estimate of sediment fluctuations with reduced sample costs. Particle properties, such as color, shape, and size distribution, may impact turbidity readings (Ankcorn 2003). Although general TSS-turbidity relationships have been reported, relationships must be established on a site-by-site basis, and reliability may vary due to water color and suspended particle composition (Packman et al 1999).

This poster presents research conducted on Apple, Ashwaubenon, and Baird Creeks in Northeastern Wisconsin as part of a larger watershed monitoring project (Figure 1). Objectives of this study were to:

1) Establish relationships between real-time turbidity and TSS in Lower Fox River watershed tributaries.
2) Determine if the relationships differed between sites or by flow.
3) Compare turbidity-derived loads to those based on TSS samples.

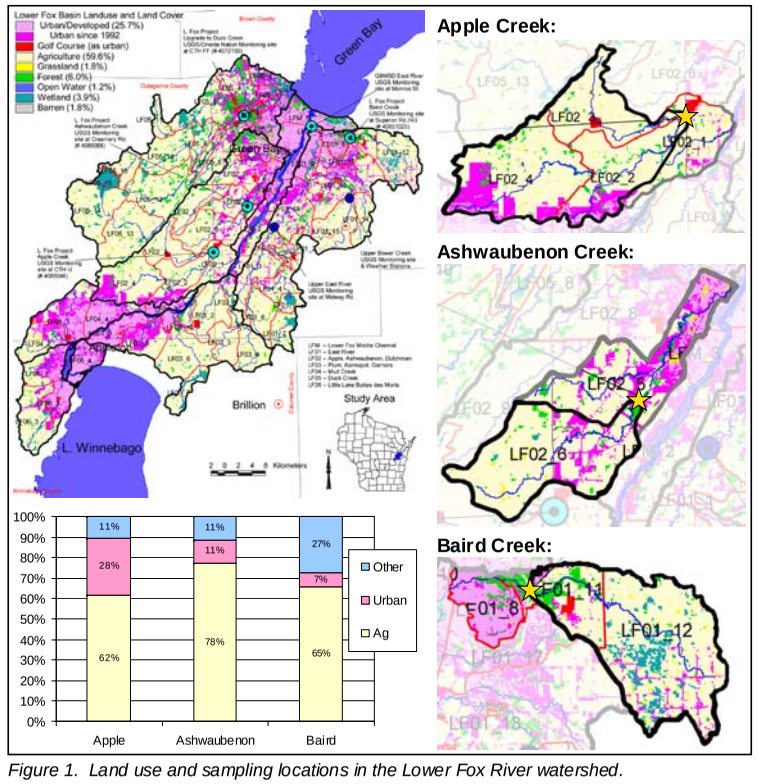

Figure 1. Land use and sampling locations in the Lower Fox River watershed.

Methods

Fully automated flow and water sampling stations were established in cooperation with the Wisconsin USGS Office in 2003. Standard methods were used for gaging streamflow and for collecting, processing, and analyzing water samples (Shelton 1994, Figure 2). Stage-triggered event samples were collected at the USGS gaging stations. In addition, a manually-activated sampler was located at a site upstream of the USGS station on the North Branch of Baird Creek. Biweekly low-flow samples were collected at each site using the equal width increment (EWI) method. YSI-6200 multi-parameter sondes were also deployed at each site and logged T, pH, DO, specific conductance, depth, and turbidity at 10 minute intervals (Figure 3). The optical turbidity sensors had automated wipers to reduce fouling.

Figure 2. Refrigerated ISCO sampler.

Figure 3. YSI-6200 sonde.

Sonde data was processed to exclude anomalous observations due to sediment deposition and equipment-associated false spikes in turbidity. Linear regression analysis was performed using Microsoft Excel 2003 and SAS 9.1 (SAS Institute 2003) to generate predictive relationships between TSS and turbidity. Comparisons were made between sites and between event versus low-flow samples and samples taken on the rising versus falling limbs of flow event hydrographs. There were not sufficient data to test for the significance of seasonality.

Results

Annual precipitation was about 10% below the 30 year average. However, November, May and June were a combined 218 mm (+202%) above average. This rainfall led to several major runoff events during the study period.

Figure 4 shows an example of the automated data and TSS event samples collected at each site. This figure illustrates:

- The dynamic real-time response and variability of turbidity in events.
- The close correlation between turbidity and TSS.
- The need for data processing to remove false-spikes and erratic responses of the optical sensor during high flows.

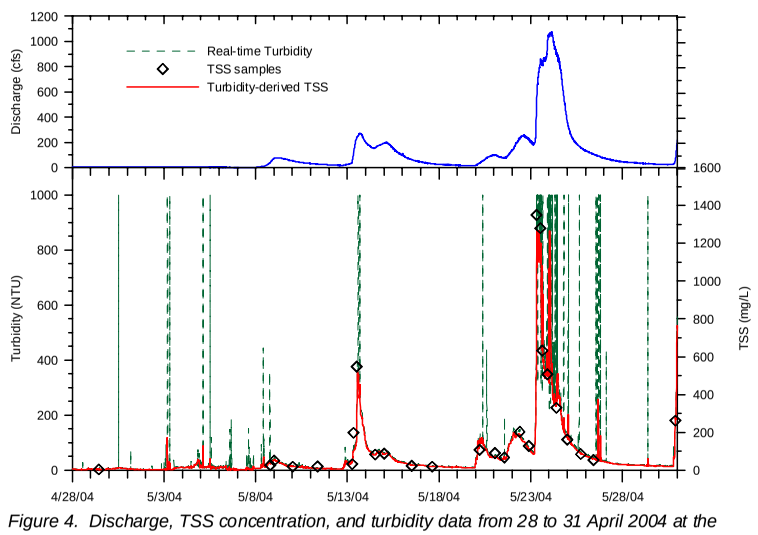

Figure 4. Discharge, TSS concentration, and turbidity data from 28 to 31 April 2004 at the Apple Creek USGS Station.

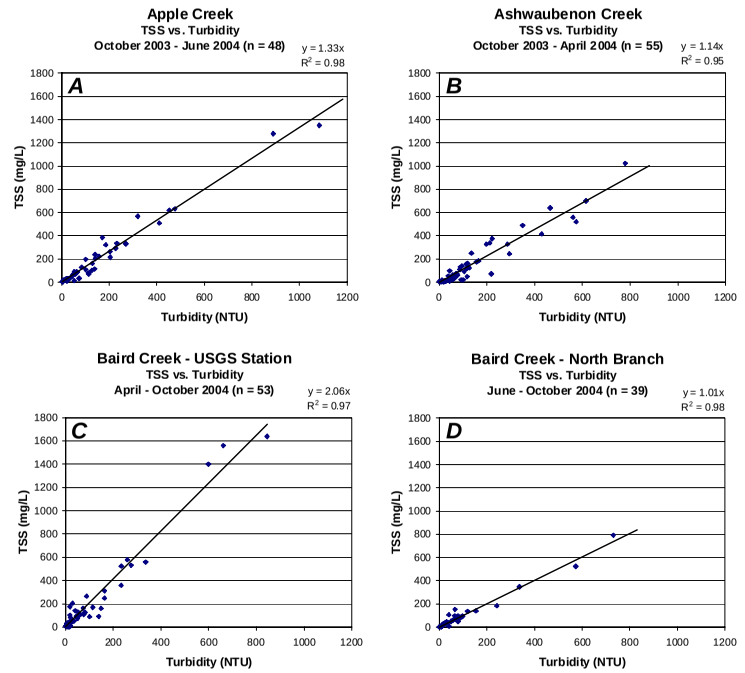

Figure 5. TSS-turbidity relationships for Apple Creek (A), Ashwaubenon Creek (B), Baird Creek USGS Station (C) and the Baird Creek North Branch site (D).

Linear regressions for the four sites are presented in Figure 5. The results show the following:

- The relationship between TSS and turbidity was highly significant at the 0.05 confidence level for all four sites.
- The slope of the TSS vs. turbidity line ranged from 1.01 to 2.06.
- In no case was the intercept significantly different from zero.
- All TSS-turbidity between-site relationships are significantly different from each other at the 0.05 confidence level.
- The Ashwaubenon-Baird (North Branch) relationship was the closest ($p = 0.0178$ compared to $p < 0.0001$ for all others). Statistically, however, they are different from each other.
- Flow (event vs. low-flow) and hydrograph position (rising vs. falling) did not have a significant effect on the regressions.

Load Comparisons

Real-time turbidity measurements from Apple Creek were processed with an algorithm that replaced observations that were >0.3 standard deviations from the running median with a 70-minute median value. These turbidity values were converted to TSS using the Apple Creek regression (TSS = 1.33 x Turbidity) and matched to 15 minute discharge values to calculate instantaneous and daily loads (Figures 5A, 4). The turbidity-derived TSS loads were compared to loads calculated by USGS scientists using TSS observations and graphical interpolation software (metric tons).

Period	Turbidity Loads	USGS Loads	Difference
14 April – 22 May	312	348	-10.2%
14 April – 30 May	2458	2327	+5.7%
10 – 20 June	1170	1125	+4.0%

Figure 6. Baird Creek at Superior Road during a runoff event, Fall 2003.

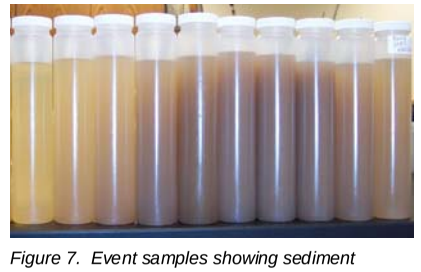

Figure 7. Event samples showing sediment concentration change during a storm.

Figure 8. Ashwaubenon Creek during May 2004 storm events: (A) May 14, (B) May 23.

Conclusions

- Turbidity of the three creeks within the Lower Fox River Watershed is highly dynamic, and increased turbidity measurements coincided with runoff events and sharp rises in stream discharge.
- Turbidity and TSS concentrations were highly correlated for our data sets, but the TSS-turbidity relationship appears to be site specific. We hypothesize that these differences result from sediment particle properties and varying hydrological responses from urban and agricultural land uses.
- The two Baird Creek sites displayed the largest difference despite being located only 1 mile apart. A study by Fink et al. (2005) found that development and bank erosion on urbanizing tributaries contributed significant amounts, and likely different, sediment particles above the USGS station but below the North Branch site.
- No significant difference was found due to event vs. low-flow or hydrograph position. The effect of seasonality was not analyzed due to lack of data from equipment fouling.
- Turbidity-derived sediment loads were similar (+/- 10%) to TSS sample load methods.

Continuous turbidity monitoring appears to be a reasonable surrogate for TSS prediction in Apple, Ashwaubenon, and Baird Creeks, and may provide long-term, cost effective and rapidly available information on watershed sediment delivery due to changes in land use. Refining multi-probe sonde deployments for turbidity monitoring could contribute to fewer false spikes and/or equipment fouling and, thus, more complete data sets and higher relationship confidence. Research on suspended particle properties would also provide information needed to better explain site-to-site differences in the TSS–turbidity relationships.

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Green Bay Metropolitan Sewerage District Laboratory
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MONITORING REPORT No. 7
DREDGING AND RECLAMATION PROGRAMME IN KINGSTON HARBOUR

Prepared for:
The Port Authority of Jamaica

Prepared by:
T.E.M.N. Limited
April 4th, 2002

BACKGROUND:

Water quality sampling fieldwork was carried out on March 11, 2002, and data from fixed stations at Middle, Angel, and Bustamante beacons was reviewed.

The sampling exercise carried out on March 11, was intended to provide measurement of TSS (total suspended solids)/turbidity in the channel (H1 and H2) where dredging was in progress.

A monitoring flight took place on 18th March and a selection of the photographs taken are attached.

An inspection of the berm at R1 was carried out on March 13th. The R1 bund preparation continued during the period covered by this report. The first sector was completed and work continued in the extension of the berm by PIHL. Significant plume from this activity was noted in our monitoring flight of March 19. The screen around the berm preparation activity was down at the time of our flight and was being repaired.

METHODOLOGY:

Monitoring on March 11 was carried out in the channel near Port Royal, where the dredge Cristoforo Colombo was operating. Other sites monitored included wake of a small container vessel (Heinrich – Plate 1), a site east of Delbert Sicard beacon, and Angel beacon (Figure 1). In order to assess the impact of dredging, sampling was carried out in an identified plume (Plate 2) as soon as the dredge departed, and the same site was re-sampled approximately ½hr later. The sampling sites were designated KTP 1 – 6 (Table 1).

Table 1: Dredging And Reclamation In Kingston Harbour
Water Quality Sampling Sites March 22, 2002

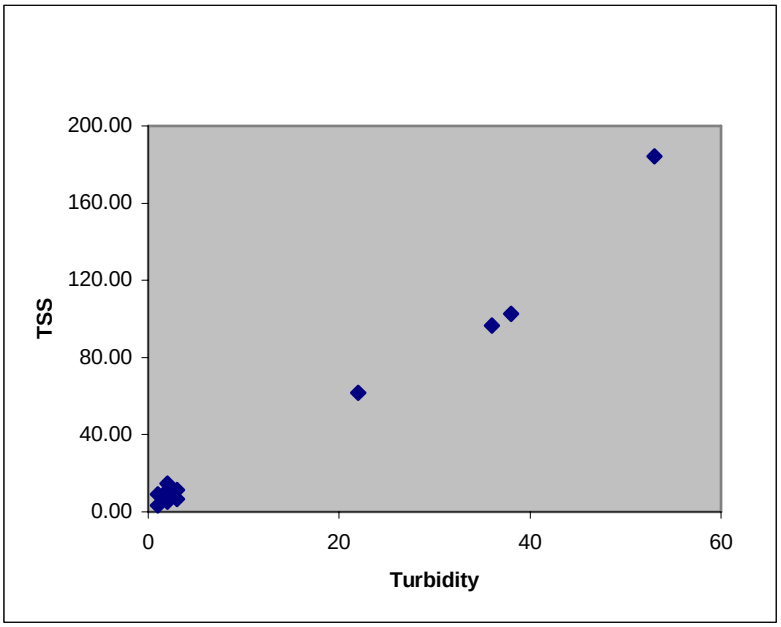
DESCRIPTION N COORD. W COORD	STATION NO.
Wake of Heinrich (Surface) 18° 00.218' 76° 46.736'	1
Dredge Plume North of Dredge 17° 57.417' 76° 50.999'	2
Area recently dredged 17° 57.147' 76° 51.197'	3
West of Delbert Sicard Beacon 17° 56.894' 76° 51.525'	4
Station 3 Resampled 17° 57.150' 76° 51.201'	5
Angel Beacon 17° 57.180' 76° 49.607'	6

Samples were generally collected at three depths (sub-stations) at each site sampled using the Van Dorn sampler. These sub-stations were denoted T (surface sample), M (middle depth), and B (bottom depth). The exception was station 6 - Angel beacon where sampling was confined to the surface.

Samples were analysed by Poly-Diagnostic Centre in accordance with Standard Methods for the Analysis of Water and Waste Water. TSS was determined by filtration of a known sample volume through a dried, pre weighed filter. After filtration, the filter was dried and re-weighed. TSS in mg/l is obtained through a determination of the weight difference of the filter before and after filtration. As a precaution against salt-water interference, filters were rinsed with warm distilled water after filtration of the sample. This precaution was employed in analysing samples collected subsequent to February 18.

Relying on the good correlation between turbidity and TSS determined from the February data (Figure 2) the WQ team was able to collect more samples. Most of these samples were analysed to determine turbidity. TSS was then determined from the plot of TSS vs. turbidity (Figure 2). Turbidity only was determined at Stations 1, 2, and 4, while as a control, turbidity and TSS were measured at stations 3, 5, and 6.

Figure 2: TSS vs Turbidity – February 22nd



OBSERVATION AND RESULTS

During the exercise, sea state was calm, with a light SW wind. There was no visible plume associated with a small container vessel traversing the channel. On approaching sector H1 a plume was observed just north of where the dredge was operating. There was a visible plume remaining after the departure of the dredge.

Laboratory and field data are summarised in Table 2.

Laboratory Results:
Laboratory analysis results indicate a range of TSS for all sites monitored of 3.6–76.1mg/l. The highest values were reported for the dredge site (Station 5) where TSS was determined to be 34.0mg/l at the surface, 43.1mg/l at middle depth, and 78.1mg/l at the bottom. At station 2 (fugitive plume) TSS was 12mg/l at the surface, 32.3mg/l at middle depth and 18.2mg/l at the bottom. In the wake of the small container vessel, TSS was 5.5mg/l at the surface, 3.6mg/l at middle depth, and 6.7mg/l at the bottom. At station 5 (dredge site after 30min) TSS was 7.6mg/l at the surface, 14.6mg/l at middle depth, and 69.2mg/l at the bottom. At station 6 TSS was 9.7mg/l at the surface. At station 4 (west of Sicard beacon) TSS was 13.5mg/l at the surface, and 7.8mg/l below the surface.

Table 2: Kingston Container Terminal Water Quality Data March 11, 2002

STATION NO	TIME	DEPTH (M)	LAB. RESULTS		FIELD DATA*
			TURBIDITY (NTU)	TSS (mg/l)	TSS (mg/l)
1T	1030	0.5		5.5	15
1M		6.5		3.6	5
1B		13.0		6.7	20
2T	1050	0.5		12.0	20
2M		6.0		32.3	10
2B		12.0		18.2	10
3T	1057	0.5	6.0	34.0	50
3M		6.0	7.0	43.1	100
3B		12.5	19.0	78.1	300
4T	1112	0.5		13.5	5
4M		5.0		7.8	5
4B		9.5		7.8	10
5T	1129	0.5	1.0	7.6	20
5M		6.0	3.0	14.6	10
5B		12.5	15.0	69.2	150
6T	1148	0.5	1.0	9.7	5
6M		2.0		-	10
6B		4.0		-	50

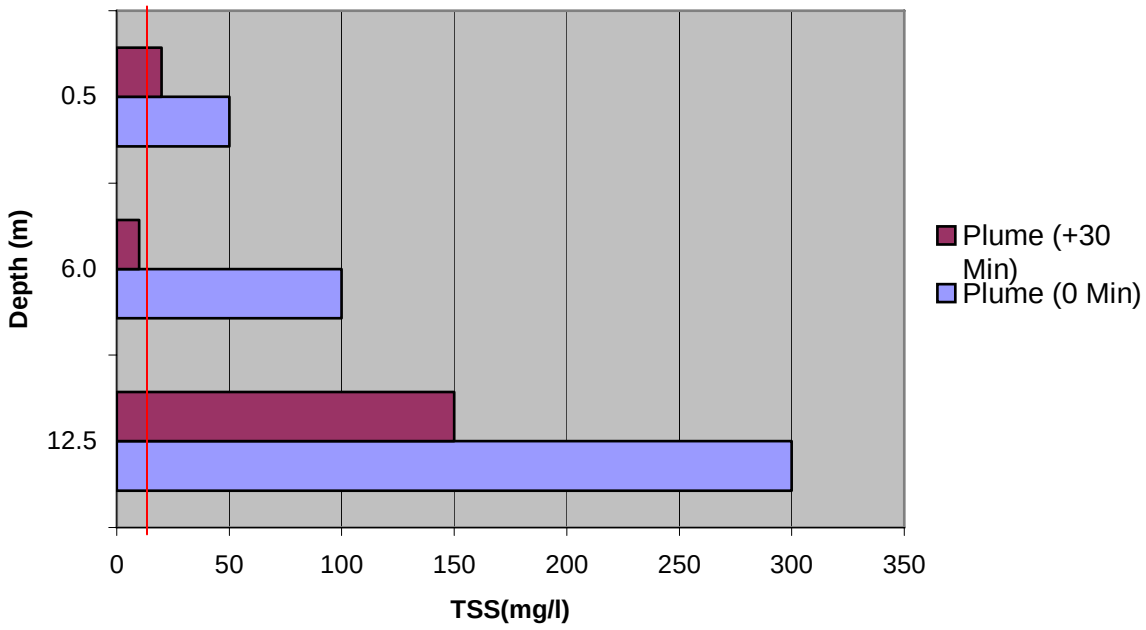
Field Data

Field data collected by Jan De Nul on March 11 indicated a range of 5 – 300mg/l for TSS at the sites monitored. The highest values were determined for Station 3, the dredge site.

At the dredge site TSS was 50mg/l at the surface, 100mg/l at middle depth (6.0M), and 300mg/l at the bottom (12.5M). At this same site approximately thirty minutes later, the values were significantly reduced to 20mg/l at the surface, 10mg/l at middle depth, and 150mg/l at the bottom (Figure 3).

In the wake of the Heinrich, Station 2 TSS was determined to be 15mg/l at the surface, 5mg/l at middle depth (6.5M), and 20mg/l at the bottom (13M).

Figure 3 : TSS Profile at Dredge Site March 11



At Station 3 - the plume north of the dredge site, TSS was determined to be 20mg/l at the surface, and 10mg/l below the surface.

At Station 4 (west of Delbert Sicard beacon), TSS was determined to be 5mg/l at surface and middle, and 10mg/l at the bottom.

At Angel beacon (Station 6) TSS was 5mg/l at the surface, 10mg/l at middle depth (2.0M) and 50mg/l at the bottom (4.0M).

Data from the **fixed stations** indicated a range of 20 – 200mg/l TSS at Middle ground. For March 4, TSS was around 50mg/l increasing to 200mg/l prior to cleaning on March 5. Subsequent to cleaning TSS reading dropped to around 20mg/l increasing to 160mg/l at around 1100 on March 7. TSS remains high even after cleaning on March 8. After cleaning on March 9 however, TSS drops to 20mg/l through March 10.

At Bustamante beacon the range for TSS -was 5 – 40mg/l throughout March 4 to March 10.

CONCLUSION/ENVIRONMENTAL IMPACT

Results indicate that effects of the dredging were confined to the channel. The effect was not noticeable at the sampling location to the west of the dredge site or at Angel beacon.

The significant fall off in TSS at the dredge site over a 30 minute period indicates that the impact from dredging on water quality is significant for a relatively short period. The fact that the bottom values are also significantly higher than at the surface suggests that much of the disturbed material settled rapidly.

Data from the fixed stations suggest that impact from TSS is greater at Middle Ground.

SOLID WASTE DISPOSAL

72 Bishop Street will contract with a private hauler for removal of solid waste generated within the building. A waste management room is located on the first floor of the building and accessible from an exterior door along the southwest side of the building. The trash hauler will back into the driveway off of Bishop Street. The hauler will wheel container units to the truck. These units will provide recycling and solid waste disposal.

Please refer to the trash demand analysis for estimated needs.

SNOW REMOVAL

72 Bishop Street will contract with a snow plow company to maintain driveway and sidewalk access after snow storms. Snow can be piled at the edge of the parking lot as shown on the plan or, in extreme situations, hauled off site. Snow will not be placed in wetland areas.

72 Bishop Street TRASH ANALYSIS

The following analysis is based on MaineHousing guideline of 0.25 cubic yards per week per bedroom. Recycling based on experience of PineTree Waste and Avesta.

NEEDED TRASH CAPACITY	
	Cubic Yards
# Bedrooms	30
times 0.25 cu. yd. per BR	7.5
TOTAL NEEDED (rounded up)	
without recycling program	**8**

NEEDED RECYCLE CAPACITY	
Max 45% of trash volume	3.6
Max Recycling Capacity	**4**
Min 30% of trash volume	2.4
Minimum Recycling Capacity	**2**
Total Yards Trash with recycling	**6**

PROPOSED DUMPSTER CAPACITY	
Weekly Collection	
TRASH	4 yards
RECYCLING	2 yards
TOTAL CAPACITY	6 yards

LIGHT FIXTURES

Site lighting locations are identified on Sheet L2, Layout Plan. Fixture cut sheets are included in this submission.

SSS SERIES POLES

SQUARE STRAIGHT STEEL

Cat. #		Approvals
Job	Type	

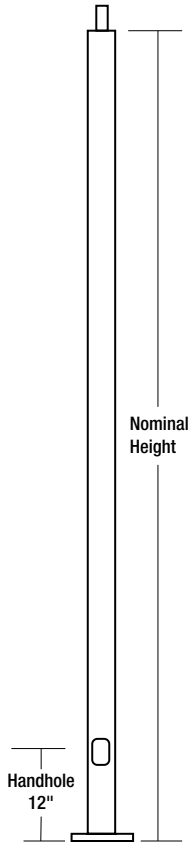
SPAULDING LIGHTING

APPLICATIONS

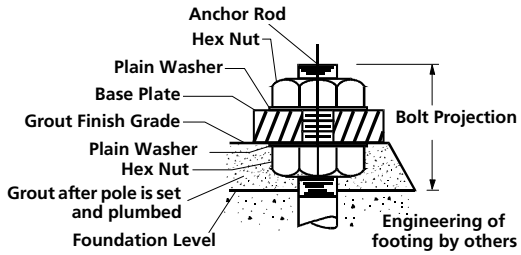
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location.

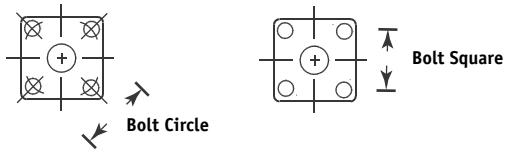
FEATURES

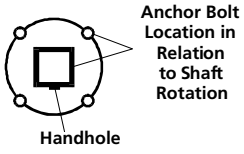
- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.36" radius on all corners. Minimum yield of 46,000 psi (ASTM-A500, Grade B). Longitudinal weld seam to appear flush with shaft side wall. Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ATM-A36).
- BASE COVER: Two-piece square aluminum base cover included standard.
- POLE CAP: Pole shaft covered with removable non-metallic cover when applicable. Tenon and post-top configurations also available.
- HAND HOLE: Rectangular steel-reinforced hand hole (2.5" x 4.5"). Pole grounding lug located behind gasketed cover.
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (modified ASTM-A36). Galvanized hardware with two washers/nuts per bolt for leveling meet or exceed bolt strength.
- FINISH: Durable Lektrocote® TGIC thermoset polyester powder coat paint finish with nominal 3.0 mil thickness. Zinc-rich powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method. Decorative finish coat available in seven standard colors. Custom colors available. RAL number preferable. Internal protective coating available.



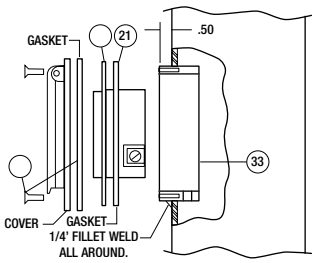
BASE DETAIL







15 AMP GFCI RECEPTACLE & COVER



Q18 OPTION

ORDERING INFORMATION

S	-	S	-	S	-	25	-	40	-	1	-	TA	-	DB
Cross Section		Style		Material		Nominal Length		Nominal Shaft Dia.		Shaft Thickness		Mounting Type		Finish

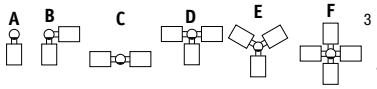
Catalog Number	Pole Ht. ft	Pole Ht. m	Nominal Shaft Dim.	Wind Load Rating[1] 70 MPH	80 MPH	90 MPH	100 MPH	120 MPH	Wall Thick.	Bolt Circle (Sug.)	Bolt Circle	Bolt Sq.	Base Plate (sq.)	Anchor Bolt Size	Bolt Proj.	Pole Wt (lbs)
SSS-10-40-1-XX-XX	10	3.0	4"	25	25	22	17	11.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	91
SSS-10-50-1-XX-XX	10	3.0	5"	25	25	25	23	15	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	106
SSS-12-40-1-XX-XX	12	3.7	4"	25	21	16	13.0	8.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	104
SSS-12-50-1-XX-XX	12	3.7	5"	25	25	23	18	11.8	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	122
SSS-14-40-1-XX-XX	14	4.3	4"	24	18	14.2	11.0	6.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	116
SSS-14-40-7-XX-XX	14	4.3	4"	25	25	23	18	12.2	.179"	11"	8 1/2 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	158
SSS-14-50-1-XX-XX	14	4.3	5"	25	24	19	14.4	9.0	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	138
SSS-16-40-1-XX-XX	16	4.9	4"	16	12.2	9.0	6.8	3.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	128
SSS-16-40-7-XX-XX	16	4.9	4"	25	20	15	12.2	7.6	.179"	11"	8 1/2 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	176
SSS-16-50-1-XX-XX	16	4.9	5"	22	16	12.2	9.2	5.2	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	153
SSS-16-50-7-XX-XX	16	4.9	5"	25	25	24	19	12.4	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	214
SSS-18-40-1-XX-XX	18	5.5	4"	13.8	10.0	7.2	5.2	2.4	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	147
SSS-18-40-7-XX-XX	18	5.5	4"	23	17	13.0	10.0	6.0	.179"	11"	10 - 13.5"	7.1 - 9.5"	11 x 1"	3/4 x 30 x 3"	4"	201
SSS-18-50-1-XX-XX	18	5.5	5"	18	13.2	9.6	7.0	3.4	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	175
SSS-18-50-7-XX-XX	18	5.5	5"	25	25	20	16	9.8	.179"	11"	8 1/2 - 12"	6 - 8.4"	12 x 1"	3/4 x 30 x 3"	4"	243
SSS-20-40-1-XX-XX	20	6.1	4"	11.4	8.0	5.6	3.8	1.4	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	160
SSS-20-40-7-XX-XX	20	6.1	4"	19	14.6	10.8	8.0	4.4	.179"	11"	8 1/2 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	225
SSS-20-50-1-XX-XX	20	6.1	5"	15	10.8	7.6	5.2	2.0	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	191
SSS-20-50-7-XX-XX	20	6.1	5"	25	23	17	13.2	7.6	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	266
SSS-20-60-7-XX-XX	20	6.1	6"	25	25	24	18	11.2	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	312
SSS-25-40-1-XX-XX	25	7.6	4"	7.0	4.2	2.2	NR	NR	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	190
SSS-25-40-7-XX-XX	25	7.6	4"	13.4	9.4	6.4	4.2	1.4	.179"	11"	8.5 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	266
SSS-25-50-1-XX-XX	25	7.6	5"	9.6	6.0	3.4	1.4	NR	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	231
SSS-25-50-7-XX-XX	25	7.6	5"	22	15	11.2	7.8	3.4	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	324
SSS-25-50-3-XX-XX	25	7.6	5"	25	22	16	12.4	6.6	.250"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	437
SSS-25-60-7-XX-XX	25	7.6	6"	25	22	16	11.6	5.6	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	404
SSS-27-40-7-XX-XX	27	8.2	4"	11.4	7.8	5.0	3.0	NR	.179"	11"	8.5 - 12"	6 - 8.4"	11 x 1"	1 x 36 x 4"	4"	290
SSS-30-40-7-XX-XX	30	9.1	4"	8.2	5.0	2.8	1.2	NR	.179"	11"	8.5 - 12"	6 - 8.4"	11 x 1"	1 x 36 x 4"	4"	313
SSS-30-50-7-XX-XX	30	9.1	5"	14.2	9.4	6.0	3.4	NR	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	398
SSS-30-50-3-XX-XX	30	9.1	5"	20	14.6	10.2	6.8	2.4	.250"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	537
SSS-30-60-7-XX-XX	30	9.1	6"	20	13.8	9.2	5.8	1.2	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	467
SSS-30-60-3-XX-XX	30	9.1	6"	25	24	17	12.8	6.2	.250"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1.25 x 42 x 6"	4"	630
SSS-35-60-7-XX-XX	35	10.7	6"	14.2	8.4	4.6	1.6	NR	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	538
SSS-35-60-3-XX-XX	35	10.7	6"	25	17	11.6	7.4	1.8	.250"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1.25 x 42 x 6"	4"	726
SSS-40-60-7-XX-XX	40	12.2	6"	9.0	4.0	NR	NR	NR	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	614
SSS-40-60-3-XX-XX	40	12.2	6"	18	11.8	6.8	3.2	NR	.250"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1.25 x 42 x 6"	4"	802

1 Allowable EPA with 1.3 gust factor. To determine max. pole loading weight, multiply allowable EPA by 30 lbs.
NOTE Factory supplied template must be used when setting anchor bolts. Hubbell Lighting will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

COMPLETE PART NUMBER REQUIRES SHAFT ABOVE PLUS MOUNTING TYPE, FINISH & APPROPRIATE OPTIONS BELOW

MOUNTING TYPE

AX[1]	Side - Single
BX[1]	Side - Double at 90°
CX[1]	Side - Double at 180°
DX[1]	Side - Triple at 90°
FX[1]	Side - Quad at 90°
P1	Pad Mount - Spider Type
P2	Pad Mount - Yoke Type
P3	Pad Mount - Yoke Type (Proformer XL only)
TA	Tenon (2.375" OD)
TB	Tenon (2.875" OD)
TR[2]	Removable Tenon (2.375 x 4.25)
CD	Concord Luminaire
OT	No drilling (includes pole cap)



FINISH

DB	Dark Bronze
BL	Black
WH	White
GR	Gray
PS	Platinum Silver
RD	Red (Premium Color)
FG	Forest Green (Premium Color)
CC	Custom Color (Consult Factory)
PR	Primer Only

1 DRILL PATTERNS: Replace **X** with
1 = Spaulding luminaires with a straight pole (4-bolt),
2 = Cimarron CR1, MSV and Raven Series luminaires.
4 = MSS & DS luminaires,
5 = Spaulding Detroit III luminaires,
6 = DM luminaires
2 Removable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by the "**TR**" notation. Example: **SSS-25-40-7-C6-TR-DB**
3 Specify option location using logic found on cover.

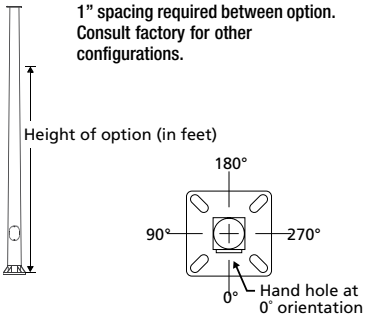
Denotes handhole location

OPTIONS

Q55	Internal Coating (Hubbell Seal)
Q18[3]	15 Amp GFCI Receptacle and Cover
Q22[3]	Extra Handhole
Q26[3]	.5" Coupling
Q27[3]	.75" Coupling
Q30[3]	2" Coupling
Q32[3]	Mid-pole Luminaire Bracket
Q40	Vibration Damper
LAB	Less Anchor Bolts
CSA	CSA Certified (consult factory)

OPTION ORIENTATION

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet). Example: Option Q26 should be ordered as:
SSS-20-40-1-TA-DB-Q26-0-15
(.5" coupling on the handhole/arm side of pole, 15 feet up from the pole base)
1" spacing required between option. Consult factory for other configurations.



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

SPAULDING LIGHTING

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Ordering

rev 10.08.2012

Type:

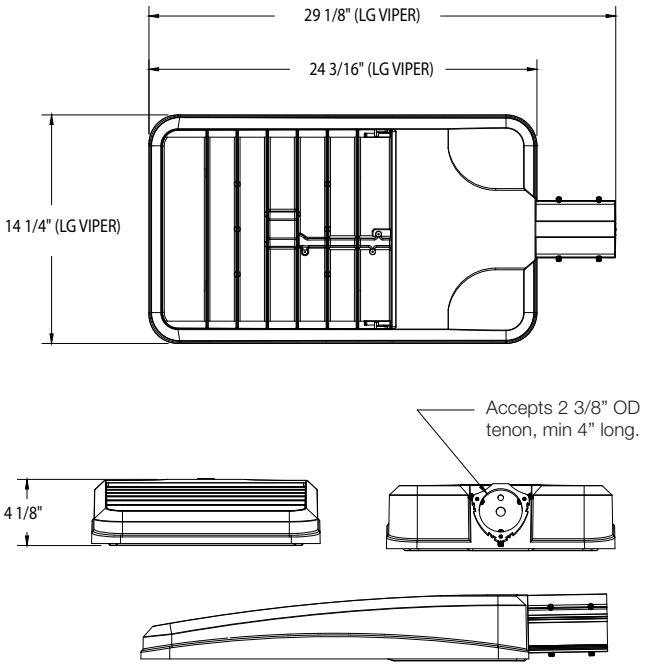
Ordering Code:

Job Name:

Notes:

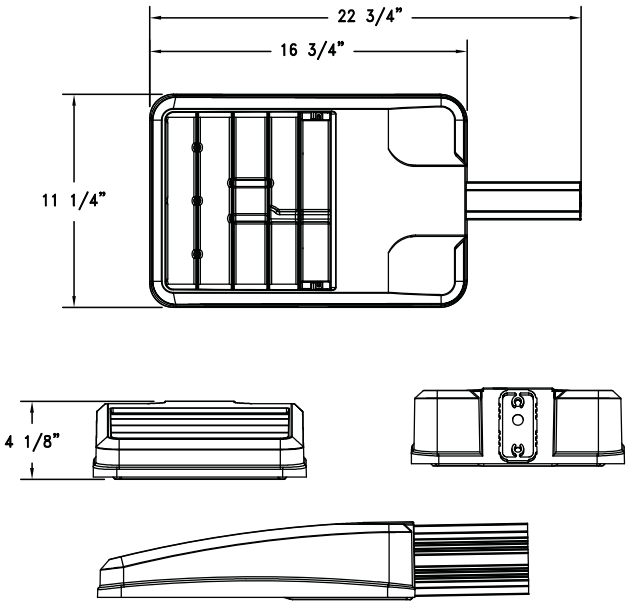
VIPER

VP-L (Viper - Large) - *shown with 2" slip fitter (SF2)*



weight: 25lbs **epa:** 1 ft²

VP-S (Viper - Small) - *shown with rectangular arm (RA)*

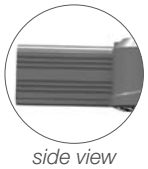


weight: 15lbs **epa:** 0.67 ft²

ORDERING EXAMPLE: VP-L / 96NB-280 / T5R / UNV / PEC-TL / SF2 / BB

model	engine-watts	optics	voltage	electrical options	mounting	color
VP-S *(small)*	**22NB-50**	**T2** type II	**UNV** 120-277	**PEC-TL** twistlock photocell *(spefiy voltage)*	**SF2** 2-3/8" OD slip-fitter	**BB** black
	22NB-70	**T3** type III	**347**		**PK2** 2-3/8" adjustable knuckle	**BZ** bronze
	30NB-70	**T4** type IV	**480**	**2PF** dual power feed	**RA** rectangular arm	**BW** white
	30NB-90	**T5R** rectangular	**12VDC** *(consult factory)*	**standard electrical options**	**USA** upswept arm	**BG** green
VP-L *(large)*	**64NB-135**	**T5QW** square wide		LifeShield™ thermal protection	**WB** wall bracket	**BY** gray
	64NB-190	**T5QM** square medium		20k-Surge protection		**MB** metallic bronze
	80NB-180	**T5W** round wide		Dimming Drivers		**MT** metallic titanium
	80NB-235					**___ RAL**
	96NB-220					**___ OTHER**
	96NB-280					

RECTANGULAR ARM

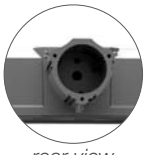


side view

rear view

2" SLIPFITTER

side view



rear view

GENERAL: The Beacon Viper luminaire is available in two sizes with a wide choice of different LED wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS and with 5 different mounting options for application in a wide variety of new and existing installations. Luminaires are suitable for wet locations.

BEZEL OPTICAL SYSTEM: Each Viper luminaire is supplied with an one piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. Two-piece silicone and microcellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.
The optical cartridge is secured to the die cast housing with fasteners. The optics are held in place without the use of adhesives. The cartridge assembly is available in various lighting distributions using TIR designed acrylic optical lenses over each LED.

LIFESHIELD™ CIRCUIT: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55ºC (131ºF). The thermal circuit will allow higher maximum wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure or lumen depreciation. Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point. Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage. The device shall be located in an area of the luminaire that is protected from the elements. Thermal circuit shall be designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.
Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

PRINTED CIRCUIT BOARD (PCB): Aluminum thermal clad board with 0.062” thick aluminum base layer, thermally conductive dielectric layer, 0.0014” thick copper circuit layer circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board will be mounted to the heat sink using minimum 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

HOUSING AND LED THERMAL MANAGEMENT: The Viper’ monolithic housing design creates over 4.5 square feet (small Viper) or 7.7 square feet (large Viper) of heat-sinking surface area. Vertical fins, combined with flow-thru openings prevent sediment and moisture buildup on critical heat sinking surfaces without the need for grates, screens or other debris control tactics. The Viper housing, electrical compartment and fitter are made from die cast aluminum that is pre-treated and powder-coated to meet the most rugged industry standards. The finish is corrosion resistant to meet ASTMB-117, resists cracking or loss of adhesion per ASTM D522, resists surface impacts of up to 160 inch-pound. All external hardware is corrosion resistant. The housing serves as a heat-sink for the LED bezel with a separate compartment for the drivers.

ELECTRICAL ASSEMBLY: The fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections. The housing is designed for an optional twist lock photo control receptacle.

ACCESSIBILITY: Although the Viper luminaire is designed to operate for many years without maintenance, accessibility is a key component in its design. The Drivers are mounted on a removable door that is secured with keyslotted screws and hinges down for convenient access. The drivers are field replaceable using quick disconnects.

DRIVERS: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2. Dimming drivers are standard, with connections for external dimming equipment available upon request. Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

SURGE PROTECTOR: The onboard surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 925V and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

FASTENERS: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

AGENCY CERTIFICATION: The luminaire shall bear a CSA label and be marked suitable for wet locations.

WARRANTY: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distrubutions

Engine	nominal wattage	lumen output (500k) varies by optic	delivered LPW	TM21 reported L95/85C	TM21 calculated L70/85C
VP-S					
VP-S-22NB	50	4700-5300	93-103	60,000	215,000
VP-S-22NB	70	5780-6540	82-93	60,000	215,000
VP-S-30NB	70	6408-7250	91-103	60,000	215,000
VP-S-30NB	90	7700-8717	85-97	60,000	215,000
VP-L					
VP-L-64NB	135	12500-13900	93-103	60,000	215,000
VP-L-64NB	190	16500-18000	86-95	60,000	215,000
VP-L-80NB	180	17000-19000	93-103	60,000	215,000
VP-L-80NB	235	20000-22500	86-95	60,000	215,000
VP-L-96NB	220	20500-22460	93-103	60,000	215,000
VP-L-96NB	280	24700-27000	88-96	60,000	215,000

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections.
Reported and calculated lifetimes shown are based on hours at the time of this printing.
For current Reported and Calculated hours please contact factory of Beacon’s web site.

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Type:	
Project Name:	
Notes:	

rev. 02.04.2015

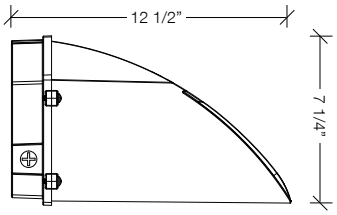
TRAVERSE (LED)

Traverse Wall Pack

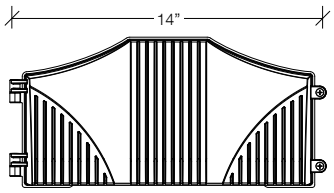
Max Weight: 24.0 lbs

Sample	*TRV-D*		*60NB-136*		*5K*		*T5R*		*UNV*		*GENIXX*		*PEC*		*BBT*
Ordering		/		/		/		/		/		/		/	
	A		**B**		**C**		**D**		**E**		**F**		**G**		**H**

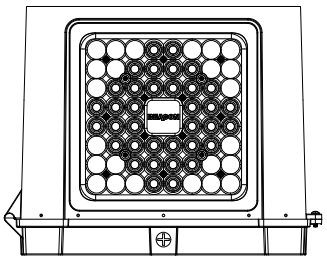
DETAILS

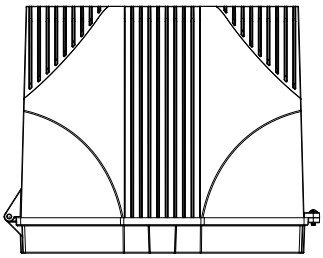


Side View



Front View


Bottom View


Top View

A. MODEL

TRV-D	Traverse down light
TRV-U	Traverse up light (lens req.) [1]

B. ENGINE-WATTS

24NB-27	27 Watts - LED array
24NB-55	55 Watts - LED array
36NB-80	80 Watts - LED array
48NB-110	110 Watts - LED array
60NB-136	136 Watts - LED array

C. CCT - COLOR TEMP

3K	3000K
4K	4000K
5K	5000K (std.)

D. OPTICS

T2	type II
T3	type III
T4	type IV
T5R	type V, rectangular

FLOOD OPTICS

2X2	narrow spot
5X5	medium flood

E. VOLTAGE

UNV	120-277V
347	347V
480	480V

F. CONTROL OPTIONS

GENI-XX	Energeni [7]

G. ELECTRICAL OPTIONS

PEC	photocell, button
2PF	dual power feed [2,3]
MOB	motion sensor 33% or 50% dimming [5,6]
OCS	occupancy sensor (on/off)
BPC	cold weather battery pack [4]

H. COLOR

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

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

TRV-D / 48E-63 / AMB / T5SW / 180 / UNV / **MOB** - 1 to 30 min. - 33% or 50% - ?? / MT

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

[1] indoor use only

[2] not available on 240NB-27

[3] not available @ 347V or 480V input

[4] 36NB-80 only

[5] not available on 48NB-110

[6] not available on 60NB-136

[7] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.

rev. 02.04.2015

TRAVERSE (LED)

Traverse Wall Pack

Max Weight: 24.0 lbs

General: The Beacon TRV luminaire is a wall surface mounted luminaire with a field replaceable LED light engine & optical bezel system. Internal components are totally enclosed in rain-tight and corrosion-resistant die cast aluminum housing. The TRV Luminaire is suitable for wet locations.

Housing/LED Thermal Management: The Beacon TRV luminaire consists of a die cast aluminum two-piece housing. The die cast main (thermal) housing provides direct heat exchange between the LED light engine and the cool outdoor air by drawing heat through integral heat channels and out to the sculptured and functional luminaire surface. LED drivers are thermally isolated from the main housing, mechanically attached and heat sinked to the rear housing The main housing is designed with heat dissipating fins for LED thermal management without the use of metallic screens, cages, or fans. The shape of the main housing is designed to prevent debris accumulation and as a bird nesting deterrent. The back and main housings are designed to hinge open for easy mounting and easy access.

Mounting & Installation: The rear housing (back plate) is designed with various bolt patterns for direct wall mounting or mounting to a recessed 4" junction box. The rear housing has three integral 3/4" NPT power feed locations (bottom and each side) for surface mounted conduit applications. After mounting the rear housing to the wall or junction box, the main housing is designed to hang and hinge closed after connecting the male and female quick connectors. The mounting design permits a simple retrofit to existing wall luminaires that utilize surface mount or recessed junction boxes.

Bezel Optical System: Each Traverse luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece Optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the Traverse luminaire to be rated for high-pressure hose down (IP67) applications.

The optical cartridge is secured to the extruded housing with fasteners and a heat pad to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: (optional) Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55ºC (131ºF).

The LifeShield™ thermal regulation circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure. Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point. LifeShield™ shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

LifeShield™ shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Motion Activated Luminaires: Beacon TRV luminaires are available with an optional passive infrared (PIR) motion sensor capable of detecting motion within 24 feet of the sensor, 360° around the luminaire, when placed at an 8 foot mounting height. When no motion is detected for 5 minutes, the Motion Response system reduces the Wattage from 10% to 50% (factory set at 50% reduction) of the maximum Wattage, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full Wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. 15A rating applies to primary (AC) side only.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Cold Weather Battery Pack: The emergency driver shall be capable of operating an LED load of up to 23.1 Watts at rated current (700 mA) for a minimum of 90 minutes. It is suitable for damp locations as well as sealed and gasketed fixtures. The BPC shall have 37 Watts of input power and a 54.0 Watts-hour battery capacity and shall comply with emergency standards set forth by the current NEC.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Power Supply/Driver Requirements: U.L. UL1310, Class 2 and UL48 compliant

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C.

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distribution

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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Type:	
Project Name:	
Notes:	

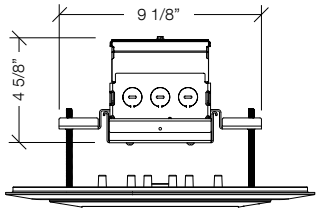
rev. 02.04.2015

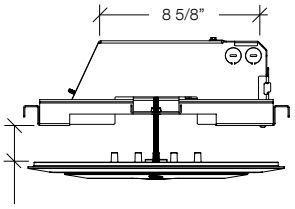
Ceileo (LED)

Recessed Canopy Luminaire
Max Weight: 11 lbs

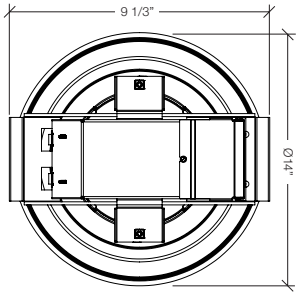
Sample	CLO		24NB-55		5K		T5W		UNV		RD		WHT
Ordering		/		/		/		/		/		/	
	A		**B**		**C**		**D**		**E**		**F**		**G**

HOUSING DIMENSIONS

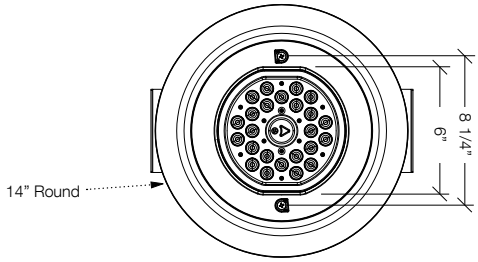


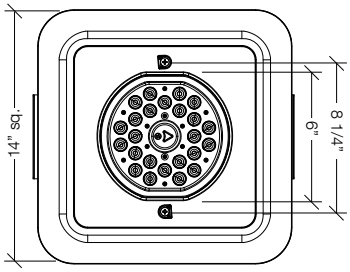


0" to 2" adjustable



STYLE DIMENSIONS





A. MODEL

CLO	Ceileo

B. ENGINE-WATTS

24NB-55	55 Watts - LED array

C. CCT - COLOR TEMP

3K	3000K
4K	4000K
5K	5000K *(std.)*

D. OPTICS

5X5	aisle lighter
T5R	type V, rectangular
T5QM	type V, square medium
T5QN	type V, square narrow
T5W	type V, round wide
3x5	vertical flood

E. VOLTAGE

UNV	120-277V

F. STYLE OPTIONS

RD	round
SQ	square

G. COLOR

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

Ceileo (LED)

Recessed Canopy Luminaire

Max Weight: 11 lbs

Applications: Ceileo is a commercial grade LED outdoor and indoor canopy downlight that utilizes high powered LEDs utilizing precise efficient optical control and on board wattage and lumen choices. Ceileo is designed to replace up to 175W and 250 Watt HID lamps with 55 watts, and at the same time reduce maintenance by delivery of over 200,000 hours of projected life.

Housing and LED Thermal Management: The Beacon Ceileo luminaire consists of a cast aluminum external housing and recessed driver housing. The cast aluminum housing provides direct-heat exchange between the LED light engine and the cool outdoor air. LED drivers are thermally isolated from the main housing.

The driver and wiring compartments comprise a min 20 gauge corrosion protected steel platform utilizing a J-box with snap-on cover for easy access. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring. The LED cast housing is designed to be easily removed for access and replacement.

LED Light Engine/Bezel: Each Ceileo luminaire is supplied with an optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A die cut foam silicone gasket ensures a weather-proof seal around each individual LED. The cartridge assembly is available in various lighting distributions using TIR designed acrylic optical lenses over each LED.

The Ceileo uses a 24-LED engine that can be field adjusted to four wattages (55, 45, 30,15 watts) and four lumen outputs. The adjustments are made by removing a small screw and using a small screw driver. The light engine comes standard with 70 CRI in 5000k temperature. The Ceileo comes standard with 0-10 OV dimming capability, with flicker-free dimming to 10%.

Institute Thermal Testing: Independent insitute thermal testing shall confirm solder point temperatures not to exceed 55ºC and driver case temperatures not to exceed 60ºC at 55-watts input power. At 30-watts input power solder point temperature shall not exceed 40-C and driver case temperatures not to exceed 55ºC.

Photometrics: The luminaire efficiency rating (LER) shall be a minimum of 95. The luminaire BUG rating shall not exceed B3-U1-G1. Depending on the optic, the peak candle power shall occur at 71 degrees in the vertical shall be no less than 2104. The lumens between 80 to 90 degrees shall not exceed 6%.

Thermal Regulation Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature near the LED solder point. Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage. The device shall be located in an area of the luminaire that is protected from the elements. Thermal circuit shall be designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V current-sinking control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV). Power factor is min .90 at full load. All electrical components are rated at 50,000 hours at full load and 40ºC ambient conditions per MIL- 217F Notice 2. Component-to -component wiring within the luminaire will carry no more than 80% of rated current and is rated by UL for use at 600VAC at 90°C or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 70 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40℃ to 40℃.

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall be listed to UL 1598 for use in wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information.

Power/Lumens & Distribution

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	55	5125-5615	93-100	96.19%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and calculated lifetimes shown are based on hours at the time of this printing. For current reported and calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	**CRI (Color Rendering)**
5100K = 1.0	min 67 CRI
4200K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

MTB

Metro LED Bollard

FEATURES

- Each Beacon Metro Bollard is a luminaire with an LED heat sink and an LED engine containing 24 high powered indirect LEDs. Die cast louvers are optional. The LED engine is concealed in shaft to eliminate glare. The optics are narrow beams designed to provide glare free indirect lighting.
- A die cast aluminum dome top secures to a one-piece die cast aluminum top assembly with concealed tamper resistant screws.
- Beacon LED Bollards feature The LED module and heat sink shall be removable and upgradable. The drivers shall be mounted on a removable plate and protected by a 10,000 amp transient surge protector.
- Luminaires are equipped with LED drivers that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load.
- The luminaire shall bear a CSA label and be marked suitable for wet locations.

ORDERING INFORMATION

	-		-		-		-		-		-		-		-		-	

MODEL
- **MTB** Metro Bollard

HEIGHT (OVERALL)
- **42** 42"
- **__** Custom

LENS FINISH
- **AC** Acrylic, Clear
- **AF** Acrylic, Frosted

ENGINE-WATTS
- **24NB-55** 55 Watts

CCT-COLOR TEMP
- **5K** 5000° K (std.)
- **4K** 4000° K
- **3K** 3000° K

VOLTAGE
- **UNV** 120-277V
- **347** 347V
- **480** 480V
- **__** Other

OPTICS
- **IND5** Indirect Type V (360° standard)

TOP OPTIONS
- **FLT** Flat Top
- **DMT** Dome Top

OPTIONS
- **HSS-120** Housing Side Shield 120°
- **HSS-180** Housing Side Shield 180°
- **OCS-BI** Microwave Motion Sensor [1]

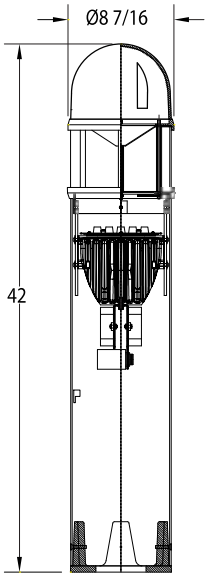
CONTROL OPTIONS
- **GENI-XX** Energeni [2]

COLOR
- **BBT** Basic Black Textured
- **BMT** Black Matte Textured
- **WHT** White Textured
- **MBT** Metallic Bronze Textured
- **BZT** Bronze Textured
- **DBT** Dark Bronze Textured
- **GYS** Gray Smooth
- **DPS** Dark Platinum Smooth
- **GNT** Green Textured
- **MST** Metallic Silver Textured
- **MTT** Metallic Titanium Textured
- **OWI** Old World Iron
- **RAL** _____

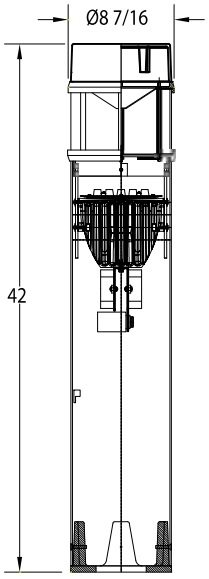
[1] **OCS-BI** motion sensor time delay operates ½ LEDs & half power
[2] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.

DETAILS

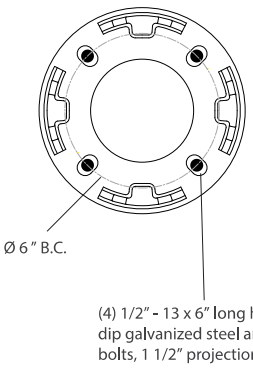
MTB-D



MTB-F



ANCHOR BOLT DETAIL



Environmental Quality Standards

The property is a 52,383 square foot lot with 14,203 SF of forested and shrub scrub wetlands that encumber the southwest portion of the parcel. A small tributary stream begins in the southwest corner of the site that flows southwest. The stream is tributary to Capisic Brook, which has been defined by Maine Department of Environmental Protection (MDEP) as an urban impaired stream. In addition, the City has a watershed management plan in place to protect the watershed.

The project has been developed to minimize the wetland impact and provide a stormwater management plan that responds to the water quality requirements for an urban impaired stream. The total wetland impact will be 3,105 SF. To limit the amount of impact, a retaining wall will be constructed to the extent necessary to construct the limited parking, circulation, underground stormwater treatment infrastructure and safety guard rail. Temporary wetland impacts associated with construction of the wall will be restored to wetland conditions by using saved wetland soils and planting of wetland vegetation.

Portland, Maine Yes. Life's good here.

Portland Police Department

July 11, 2014

Jon Bradley
Associate Director
38 Preble Street
Portland, ME 04101

Sent via email to jbradley@preblestreet.org

Dear Mr. Bradley,

Today I write in support of the successful partnerships between Preble Street Resources and Avesta Housing in providing an exceptional model that offers staff and support to those in need here in Portland. I firmly believe this partnership has increased success rates and improved outcomes for our homeless population.

I understand there is a proposal forthcoming of a housing development opportunity near Morrill's Corner. In light of the process moving forward, I would like to illustrate that a similar development, Logan Place, has successfully served as a tested model with no significant impact on the surrounding neighborhood.

The Portland Police Department believes the working relationship between Preble Street Resources and Avesta Housing continues to provide a valuable service to Portland's homeless population, our visitors, families, friends and neighbors.

Sincerely,

Vernon W. Malloch
Assistant Chief of Police

Portland Police Department

Memorandum

To: Helen Donaldson Date: October 10, 2014

From: Asst. Chief Vern Malloch

The Police Department has been asked by Planning Board staff to provide an analysis of calls for service (CFS) at Logan Place, 52 Frederick Street. We have provided raw data showing all the calls for police service from 2005 to September 22, 2014.

Annual CFS in the specified range average 72 with a high of 89 in 2013 and a low of 46 in 2008. As part of the analysis I have reviewed the type of calls and the outcome of some of the more serious call types in order to bring some context to the raw data. A spreadsheet contains the tally for certain call types by year. Not all call types were listed in the spreadsheet. I have focused on those believed to be of significance either because of number or type.

It is important to note that many of the calls fall into the behavioral health or mental health call type. During these calls the role of the police is usually to provide crisis stabilization and assist staff or emergency medical personnel. Call types such as follow ups and check the well-being are often a part of our ongoing efforts in responding to individuals with behavioral health problems.

Between 2005 and 2007 a significant number of CFS related to persons refusing to leave and persons bothering. This number reduced significantly after discussions with staff and policy changes were implemented. These call types remain relatively low in number.

Calls related to drug violations were examined for any patterns. During the period under review there were 38 of these calls. None resulted in arrests or police reports being generated. Five calls reported suspicious activity outside that might have been drug transactions. None were ever substantiated. Six of the calls were suicide attempts or accidental overdoses of prescription medication by residents. The remainder of the drug related CFS were all staff and residents reporting the smell of marijuana coming from various apartments. None of these calls resulted in any police reports or enforcement action. Enforcement of marijuana violations is difficult in residential settings like this because of the use of medical marijuana and an inability to distinguish legal uses from illegal. In 2014 there have been no calls of this nature.

In 2013 and 2014 there were 20 CFS for assaults. This is an alarmingly high number and represents a significant increase over earlier years under review. A closer examination revealed that sixteen of the calls involved the same resident acting as the aggressor toward other residents and staff. He suffers from severe dementia and in many instances he was transported to a hospital for evaluation. Six of the calls resulted in police reports. He was arrested or summonsed several times. None of the assaults resulted in serious injury and the victims never required medical attention. Most of the assaults involved pushing, slapping, or pouring beverages on someone.

In 2014 there were four weapons violations listed. In prior years there had been none. In reviewing the calls two were found to have been reported by residents and involved unknown people on a nearby walking path who were displaying knives or swords. One call was for a person hunting ducks with a firearm

along the Fore River. In the fourth incident a resident was arrested for possession of an illegal knife. This was the only weapons call related to Logan Place.

Analysis concludes that calls for service are higher than we would like. On a positive note, few calls resulted in police reports or arrests. None of the CFS were for serious crime types. The majority of CFS examined were generated by staff or residents, not neighbors.

We can anticipate an increase in police calls for service with development of any otherwise vacant parcel. Housing of the chronically homeless as takes place at Logan Place further increases the likelihood of an increase. Data review suggests there has been no negative impact on the neighborhood from a public safety standpoint. Other reports and studies have shown the population targeted for housing in this model draw significantly more police resources when they are homeless.

year	total cfs	RTL/bothe	Behavior	Asst FD	Intox Per	Drugs	Assault	Threat/har	Indecent	Theft	Fight	Weapons
2005	88	29	14	4	6	1	2	6	0	2	0	0
2006	82	23	16	2	4	0	3	3	0	3	1	0
2007	80	15	18	3	5	6	1	4	1	4	0	0
2008	46	4	11	3	2	2	4	3	0	0	0	0
2009	49	4	9	5	2	5	4	1	0	3	0	0
2010	65	5	18	6	0	6	2	3	0	2	0	0
2011	77	11	10	8	4	8	3	4	2	0	0	0
2012	71	4	4	15	1	8	6	5	0	5	1	0
2013	89	7	13	10	1	2	10	4	0	4	1	0
2014	74	6	8	5	6	0	10	1	0	0	2	4

AVESTA HOUSING

Att. T

April 24, 2015

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for the development of 30 affordable apartment units at 72 Bishop Street.

Meeting Location: Park Danforth, 777 Stevens Avenue

Meeting Date: Tuesday, May 5th

Meeting Time: 6:00 pm

The city code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions, please call Brooks More, Avesta Housing 245-3339.

Sincerely,

Brooks More
Avesta Housing

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

307 Cumberland Avenue • Portland, Maine 04101
207-553-7777 • 1-800-339-6516 Voice/TTY
207-553-7778 Fax • www.avestahousing.org

NeighborWorks® CHARTERED MEMBER

Neighborhood Meeting Certification

for

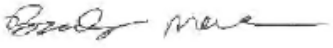
72 Bishop Street

I, Brooks More, hereby certify that a neighborhood meeting relative to the above-referenced property was held on May 5th, 2015 at The Park Danforth at 6:00pm.

I also certify that on April 24th, 2015, 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,



Brooks More May 15, 2015

Attached to this certification are:

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

MEETING MINUTES

72 BISHOP STREET

NEIGHBORHOOD MEETING

May 5, 2015

PARK DANFORTH AUDOITORIUM

777 STEVENS AVENUE

Greg Payne: Introduced the team and overview of the project program, population and expected timeline.

Bob Metcalf: Reviewed the site plan as the same concept as presented during the zone change process. He reviewed the layout, circulation, landscaping, lighting and drainage, including water quantity and quality. He addressed questions raised by the abutters during the zone change process that were specific to engineered plans. Bob reviewed the expected parking demand for the proposed use and indicated that a traffic report has been submitted with the application. The proposed sidewalk extension was also presented, identifying potential grading easement, s, conflicts with existing vegetation and signs located in the right of way.

Janet Parker: Mayfield Street Resident asked to clarify the drainage and the landscaping. She also expressed concerns with the sidewalk along her property on Bishop Street regarding responsibility for snow removal and loss of trees along her sideline.

Bob Metcalf: Responded that the runoff from the site will not exceed what presently leaves the site and that the nature of the soil material used to raise the site will allow for some infiltration. The system has been designed to also address water quality as required do to the location in the Impaired Watershed for the Capisic Brook.

Note: Josh Praver; direct abutter arrived at 7:15. Bob Metcalf reviewed the site for a second time.

Ben Walter: Reviewed the architecture and interior program space and how the building would be used by residents and staff. He addressed how security systems (monitor cameras) and sign in desk at the main lobby functioned. Ben discussed how the interior space and access to the exterior public spaces would function. He discussed the elevations and character of the building including materials being proposed to respond to a quality building that will be low maintenance and last a long time.

Josh Praver: Concerned with how this would impact his property adjacent to this site. Raised concerns with this being a shelter and also did not think the architecture was a quality or interesting design.

Ben Walter: Responded that this is not a shelter and proceeded to provide an over view of the resident population and how it would function. Greg Payne and Jon Bradley followed up with additional discussion of the function and clientele/resident and program.

Josh Praver: He expressed concern with how a new sidewalk would impact his property.

Bob Metcalf: Responded that the sidewalk was within the city right of way and that his sign encroached into the right of way and would need to be relocated. The existing trees are close to the edge of the proposed sidewalk and will be protected during construction of the sidewalk. There is one that is very close to the lot line.

Alan Thibeault UNE: Asked for clarification of the age group expected.

Jon Bradley: Responded that the population will be older chronically homeless individuals that are medically compromised. Old in the homeless population begins in the 50"s. Individuals are less mobile, will be supervised.

Josh Praver: Requested a copy of the site plan as he could not really understand what was being proposed and wanted an opportunity to study the plan. Greg Payne agreed to provide him with a PDF of the plan. (Subsequently sent by M&A).

Greg Payne: Thanked everyone for coming and hoped we had addressed their questions and indicated that we would be on a workshop agenda, date pending.

AVESTA HOUSING

April 24, 2015

Dear Neighbor:

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If you have any questions, please call Brooks More, Avesta Housing 245-3339.

Sincerely,

Brooks More
Avesta Housing

Note:
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NeighborWorks CHARTERED MEMBER

72 BISHOP STREET

NEIGHBORHOOD MEETING

May 5, 2015

PARK DANFORTH AUDOITORIUM

777 STEVENS AVENUE

SIGN IN SHEET:

NAME	STREET ADDRESS	EMAIL ADDRESS
Janet Parker	9 Mayfield St. Pthd.	jpparker2011@gmail.com
Alan Thibeault	UNE	athibeault@une.edu
Josit PRAJER	68 Bishop St	JUATREE@AOL.COM

72 BISHOP STREET

NEIGHBORHOOD MEETING

May 5, 2015

PARK DANFORTH AUDOITORIUM

777 STEVENS AVENUE

SIGN IN SHEET:

NAME	STREET ADDRESS	EMAIL ADDRESS
Caroline Fernandes	199 Summit St	carolinezfernandes@gmail.com
Greg Payne	Avesta	gpayne@avestahousing.org
Jon Bradley	Preble Street	Jbradley@preblestreet.org
BOB METCALF	METCALF & ASSOCIATES	rmetcalf@metcalfassociates.biz
Brooks More	Avesta	bmore@avestahousing.org

Att. U

Mitchell & Associates
LANDSCAPE ARCHITECTS

The Staples School
70 Center Street
Portland, Maine 04101
P: 207.774.4427
F: 207.874.2460
www.mitchellassociates.biz

May 22, 2015

Ms. Nell Donaldson, Planner
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

RE: 72 Bishop Street

Dear Nell and Planning Board Members,

The following documentation and supporting information have been prepared in response to staff review comments received on May 12, 2015 and May 13, 2015, responses are in **Italic**.

Woodard & Curran Memorandum: David Senus, P.E. (Dated May 11, 2015)

Comments

1. Stamped Boundary Survey: Stamped boundary survey is required before the public hearing.

The survey has been stamped by a Maine licensed professional surveyor and is included in this submission. We received additional comments from William Clark on May 20, 2015 requesting the applicant to confirm the location of an existing City storm water line that crosses the UNE and the proposed development parcel and provide information regarding an easement. We are in the process of scheduling additional survey field work. We are requesting that this information be provided as a condition of approval.

2. Temporary Waiver for photmetric plan and construction management plan.

The construction management plan has been submitted and the photometric plan will be submitted under separate cover.

3. The applicant should note that electrical/communications service to the project site will be required to be underground.

The applicant is proposing underground electric/communication service. This has been noted on the Grading, Drainage and Utilities Plan, Sheet L3. Final

location of the services are being explored. The most direct connection to the building will require an easement from the adjacent Masonic Lodge which is being pursed, the other options include a new pole set along Bishop Street in front of the building or extending service conduit underground within the public right of way from the existing pole to the west of the site. All of these options are being considered. We are requesting that final location of these services be a condition of approval.

4. b. General Standards: The project will result in a net increase in impervious area of approximately 17,382 square feet. As such, the project is required to include stormwater management features for Stormwater quality control. The following comments should be addressed:

i) From the HydroCAD model, it appears that the Applicant has proposed to treat sufficient amount of impervious area with a paver drain system and filter cartridges for roof runoff: however, the area proposed to receive treatment should be identified on a plan and tabulated/calculated to show compliance with the General Standards (95% of new impervious area treated, 80% of new developed area treated).

The General Standards have been addressed. 96% of new impervious surface and 91% of the developed area has been treated using MDEP approved methods. This exceeds Maine DEP Chapter 500. The calculations have been included on the drawings as well as I Appendix C of the Stormwater Report. The roof drip edge is being used as a treatment method as suggested. Additionally, vegetated underdrain filters are proposed as treatment methods for some of the landscaped areas including the swale in the rear (westerly side). [includes responses to comments ii) and iv)]

Roof Filter System: The treatment associated with the in-line filter system requires coordination with the manufacture to determine the treatment being provided. This is subject to final roof and internal drain design. Given that this is providing additional treatment above the required treatment we are requesting that this information be provided as a condition of approval. Attached is a copy of the manufactures product documentation.

5. Urban Impair Stream Standard: The Applicant has noted that the project will adhere to the Urban Impaired Stream Standard for development; however, it is unclear how the Applicant is proposing to meet the Standard. The Applicant should provide calculations of the in-lieu fee compensation amount or identify mitigation measures in accordance with the Urban Impaired Stream Standard.

The Urban Impaired Stream Standard is addressed in the stormwater report. The in-lieu compensation calculations have been included. The fee in-lieu for compensation is $1,927, refer to Appendix C of the stormwater report for calculations.

6. The Bishop Street Stormwater Management Narrative prepared by Ransom Consulting, Inc., dated April 10, 2015, refers to Appendices A and B, which include a Post-Construction Stormwater Management Plan and Stormwater BMP Inspection and Maintenance Requirements; however, it does not appear that these appendices have been received at this time.

Appendices A and B were erroneously not included with the previous submission, and are included in this submission.

7. The Applicant has proposed a porous paver strip along the proposed retaining wall, which exceeds five feet in height. A geotechnical report has been provided that specifies the parameters for the wall design engineer; however, at this time, the geotechnical report does not appear to include an evaluation of the impact of the porous pavement and associated R-Tank storage system on the wall design. The Applicant should clarify whether infiltration from the porous pavers adjacent to the proposed retaining wall and the adjacent below grade stormwater storage has been evaluated/considered by the geotechnical engineer.

The Applicant requested SW Cole Engineering, the project geotechnical engineer review the details and they provided the following recommendations. To address potential impacts from frost conditions on the wall, they have recommended that the R-Tank system be located a minimum of 4.5 feet from the back of the retaining wall. We have revised the plans and details accordingly.

8. The R-Tank system does not appear to be lined with a water tight liner.

Detail 1 Sheet L7 has been revised to show the use of 20 mil poly liner that extends along the back of the retaining wall and wraps the R-Tank system.

9. Outlet Control Structure outlet protection and J-drain connection.

The stormwater design has been modified to construct a vegetated soil filter with a perforated 6 inch drain pipe that will connect to the Outlet Control structure. Refer to detail 8/L7.

10. Bituminous sidewalk detail.

The bituminous sidewalk detail (Detail 4/L5) has been modified to reflect the City of Portland Standard.

11. Sidewalk ramp detail:

A sidewalk ramp detail (Detail 1/L9) has been added to Sheet L9, Bishop Street Sidewalk Extension Plan. Note: The final detail for the crosswalk ramps at Mayfield Street will be coordinated with City Staff.

12. Required Details:

The following details have been provided:

- ***Detectable Warning Strip (Detail 2/L9 & Detail 15/L5)***
- ***Catch Basin (Detail 3/L7)***
- ***Storm Drain Trench (Detail 13/L6)***
- ***Vegetated Soil Filter (Detail 8/L7)***

13. Beehive grate for recommendation for field inlet

Detail 9/L6 'NDS 12'' Sq. Shallow Catch basin' has been modified to reflect a beehive grate. A second NDS structure is proposed along the easterly side of the building and will be provided with the Beehive grate as recommended.

14. Utility letters.

An ability to serve letter from Portland Water District has been included in this submission.

A wastewater capacity application was submitted to Frank Brancley, City of Portland, on 4-10-15 and we are awaiting a response.

15. The Applicant should provide a written summary of their assessment of state and federal wetland regulations relative to the proposed plan (types of wetlands present on the site, setback requirements, acceptable amount of wetland disturbance/fill).

The Applicant had the wetland assessment complete by CES, Inc. Engineers-Environmental Scientist-Surveyors. Their assessment identified the undeveloped area of the site as a palustrine, forested and shrub-scrub wetland (PF01 7 PSS1) along the southern rear property line. A stream begins in the southwest corner of the parcel that follows to the southwest and is identified as a tributary stream to Capisic Brook, and identified by MDEP as an Urban Impaired Stream.

The Applicant met with Bob Green, MDEP to review the impact and was advised that the project is eligible for a NRPA Tier 1 permit review. Of note, Mr. Green was very positive about how the applicant took great efforts to minimize impact to the wetland. In addition, ACOE advised that the project is eligible for streamlined Category 1 review process that is a review of the NRPA Permit documentation submitted to MDEP. A copy of the application will be submitted under separate cover.

Traffic Review

TY Lin: Tom Errico comments dated May 13, 2015

- A sidewalk is being constructed on Bishop Street, as identified during the zoning amendment process. I find it acceptable although the sidewalk should be extended to the corner at Forest Avenue and Stevens Avenue. I would suggest that the applicant develop a concept a plan for review and approval. I can work with the applicant in the development of the plan from a traffic perspective, particularly how it interfaces with the existing parking lot.

The Applicant during the zone map change process discussed with the Planning Board the willingness to extend public sidewalk along Bishop Street up to the existing sidewalk that terminates approximately XX feet from Mayfield Street. The extent of the sidewalk discussed was 500 linear feet +/- from the site to the existing sidewalk and is what the design submitted includes. The applicant will meet with staff to discuss this further.

- The applicant has requested a waiver from the City's Technical Design Standards as it relates to off-street parking requirements. Gorrill-Palmer has provided a summary of the parking needs based primarily on staffing requirements. According to the analysis, 12 spaces will be sufficient for the demand needs. This demand calculation assumes that none of the proposed tenants will be allowed to have vehicles. In general I find the estimate to be reasonable, but I would suggest that a condition of approval note that if automobile ownership is permitted for residents, the project shall return to the Planning Board for review.

Randy Dunton, Gorrill-Palmer, has reviewed comment with and provides the following response:

The 11 parking spaces identified as needed in the traffic evaluation letter from Gorrill Palmer to Mitchell & Associates dated April 7, 2015, was a preliminary assessment based on the operations of Logan's Place. Logan's place has only had one vehicle associated with a resident of the facility. Since that initial assessment, we have further refined the anticipated residence of the proposed Bishop Street facility, and they are anticipated to be more elderly and medically confined and would therefore be even less likely to have a vehicle of their own. However, in the unlikely event that a resident have a vehicle, there would be a space available for them on-site with only 11 parking spaces identified as needed to accommodate non-residents, and 12 on site spaces available. Therefore, we respectfully request that the applicant not be required to return to the Planning Board if a resident should own a vehicle.

- The applicant should provide general details as it relates to a construction management plan. I do not support a waiver for this request.

The applicant is requesting that the Construction Management Plan be a condition of approval. Currently the Applicant does not have a contractor selected for the project.

Public Services: David-Margolis-Pineo dated May 12, 2015

1. Stamped Boundary Survey Required:

The boundary survey has been stamped by a Maine Licensed Professional Surveyor and is included in this submission. See responses to William Clark's comments below.

2. The applicant has agreed to extend a sidewalk to Forest Avenue. The plans show the sidewalk terminating at the parking lot prior to Forest Avenue. It is desirable to have the sidewalk continued through this parking lot area to Forest Ave. Drive cut location(s) will need to be determined with the parking lot owner.

The Applicant during the zone map change process discussed with the Planning Board the willingness to extend public sidewalk along Bishop Street up to the existing sidewalk that terminates approximately 145+/- feet from Mayfield Street. The extent of the sidewalk discussed was 500 linear feet +/- from the site to the existing sidewalk and is what the design submitted includes.

3. Please show the sidewalk being constructed along the street right of way. It is realized that several trees imped the alignment. As indicated on the plan, grading and construction easements will need to be executed by the applicant for construction of the sidewalk.

The sidewalk is shown as close to the right of way line with minimal deviations to reduce impact to established street trees. The sidewalk extension along Bishop Street is a city amenity that the applicant has been asked to pay to construct. Grading and construction easements are for the city and should be the responsibility of the City to obtain.

4. An existing stormwater drain is shown crossing the applicant's property. An easement will need to be shown on the survey plan for this utility. For an accurate easement, the cross-country drain manholes will need to be located. If necessary, the City can assist with locating.

We have coordinated with William Clark who has provided city records for locating the cross-country storm drain and manholes. This information has been provided to Owen Haskell, Inc. to update the plan. This will require additional field survey documentation to the location of buried structure and topographic data.

Regarding the easement area, we discussed with Mr. Clark that the easement area associated with the Bishop Street property will be limited to the area of the site impacted by the 15 FT off-set from the storm drain line. The extent of the easement on abutting properties will be the City's responsible to obtain.

5. The grading plan needs to show the existing stormwater drainage system. Show all field inlets, rim elevation, pipe size and pipe invert elevations.

The existing stormwater drain pipe that cuts across the southerly edge of the property has been added to the grading plan. All field inlets, rim elevations, pipe size and pipe invert elevations have been noted on Sheet L3, including information off-site on abutting property.

7. This department has concerns regarding the wetland impacts and encroachment on the stream. We would like to see the wetland delineation line shown on the post-construction site plan to more clearly define the area of impact. A comparison of pre and post wetlands delineation is requested. Please show the limits of temporary construction activity on the wetlands area.

The project is sited 135 feet from the stream which is well beyond the required 75 foot stream setback. The applicant has minimized disturbance to the adjacent wetlands. A plan has been prepared to reflect the pre and post wetland areas as well as the temporary wetland impacts. The total permanent wetland disturbance is 3,105 square feet. We had reviewed the wetland impact with MDEP during the zone map amendment process and were informed that based on the preliminary assessment of impact, that was greater than what is proposed appeared to meet the criteria under the NRPA Tier1 process.

9. All catchbasins capturing stormwater discharging into an urban impaired watershed, the applicant is requested to install four foot diameter catchbasins with three foot sumps.

Catch basin Detail 3/L7 has been added to the site details.

Planting/Landscape Review

City Arborist; Jeff Tarling, dated May 12, 2015

1. Tree & habitat protection measures.

Note 22 on the Sheet L2, Layout and Lighting Plan has been added to address Mr. Tarling' comment to assure additional protections to trees and defining the work zone. Note 22 states "PRIOR TO SITE CLEARING, CONTRACTOR SHALL COORDINATE WITH PROJECT LANDSCAPE ARCHITECT TO DEMARCATE TREES FOR PROTECTION AND WETLAND AREAS TO BE PROTECTED. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. In addition, this has been added as note 10 on the Planting Plan

2. Native Plants: The landscape plant material selected for the UNE edge should be exclusively native plants to New England

The area along the UNE edge is within the wetland area. The planting plan has been revised to provide native plantings. We have substituted the proposed arborvitae varieties with wetland tolerant native Atlantic White Cedar and Hemlock for the evergreen buffer. The plant schedule has been revised to specify 5FT – 6FT trees.

3. Bishop Street buffering/landscape tree planting- The project currently is wide open visually on the Bishop Street side near the Deering Lodge. Landscape buffering is recommended. This can be on the narrow strip of project land or on Deering Lodge property by agreement. Larger shade trees would be ideal. Planting trees along or within the Bishop Street right of way would be acceptable as well. This would also be a landscape condition.

The B-2c Zone does not require a side yard setback. The building is offset from the property line to address building code requirements for fenestration as well as for construction, drainage and access for building maintenance. A grass vegetated (drainage) soil filter is proposed within the narrow strip along the west side of the building. No plantings are proposed along this side of the building. Understory street trees are proposed within the Bishop Street right of way, under the existing overhead utilities along the Masonic Lodge frontage. In addition, we have proposed additional plant material along the Bishop Street frontage to respond to the requirement for an "attractive street frontage".

Planning Staff Review

Urban Designer; Caitlin Cameron, dated April 29, 2015

Standard 1: Building 'Bay' elements.

Responses to architectural comments shall be provided by CWS Architects under separate cover.

Standard 5: More detail is requested regarding fence heights and material around the property- visual and sound screening is desirable between the parking and neighboring property as well as between the outdoor seating area and neighboring property. What will be the landscape treatment at the northeast face of the building?

As stated on Sheet L2, Site Layout & Lighting Plan, the following fences are shown:

- ***A 6' height solid wood fence was provided along the south west side of building to screen the seating area in the rear of the building.***

- ***A 42'' height wood picket fence along the rear retaining wall between the forested wetland and the landscaped seating area.***

- ***A wood post and guardrail are shown along the top of the retaining wall within the parking lot area. The detail for this is shown on Sheet L6 (Detail 1/L6).***

- ***Regarding visual and sound screening of the parking lot, the brunt of the parking area is abutting University of New England (UNE) property which is used for sporting fields. Fencing along this property line would offer little in protection due to the grade change and the height of fence that would be required to screen the parking. Extensive evergreen plantings have been used in this location to provide year round visual and sound buffering. A row of large canopy trees have been proposed along the driveway into the parking lot to buffer the rear wall of the adjacent commercial property building.***

- ***The northeast face of the building has a row of flowering cherry trees and shrub plantings along the building face to reinforce the base of the building architecture. The northwest side of the building has been maintained as a grass strip to allow for drainage and construction. Plantings have been added along the road frontage and between the ROW line and the building.***

Comments from Public Services

William Clark: email dated May 20, 2015

1. Contours and elevations shown on structures need to be corrected to NGVD29 prior to approval.

The topographic survey will be revised and adjustments to the Grading, Drainage and Utility Plan will be corrected as necessary.

2. The plan states "Based on the City of Portland GIS, there is a sewer line that crosses this property. The GIS sewer mapping is not considered a completed product as field verification needs to be performed and if no easements exist, one is needed.

We have coordinated with William Clark who has provided city records for locating the cross-country storm drain and manholes. This information has been provided to Owen Haskell, Inc. to update the plan. This will require additional field survey documentation to the location of buried structure and topographic data.

Regarding the easement area, we discussed with Mr. Clark that the easement area associated with the Bishop Street property will be limited to the area of the site impacted by the 15 FT off-set from the storm drain line. The extent of the easement on abutting properties will be the City's responsible to obtain.

3. Survey work is needed to locate the stormwater structures to prepare a 30 foot wide easement for the storm drain. Plans 431/30 and 247/10 in the Engineering Archives show the layout for the storm drain as tied into the lines of Bishop Street and will be helpful in creating the 30 foot wide easement. Drain manholes will need to be located along rim and pipe invert elevations.

We received engineering plans from Mr. Clark to assist in locating the storm drain in question. Note: Owen Haskell, Inc. performed a survey for Westbrook College, now UNE in 1974 and the manhole off-site to the easterly side line was located at that time. During field survey for the 72 Bishop Street development, the manhole could not be located, assumed to be buried. Based on the information provided by Mr. Clark, Owen Haskell, Inc. will try narrow down the search area to determine the location of the structure. Rim and invert information may not be available if the structure is substantially buried. Also it is located on an abutters' property. Updated plans will be submitted upon completion.

4. Site Benchmark: DPS Engineering does not use the top of hydrant spindles as benchmarks. Please use the bonnet bolt over the main hydrant connection.

The benchmark shall be revised as requested.

Additional Staff Comments

- Will there be outside surveillance cameras.

There will be building mounted surveillance cameras to monitor the exterior area including the outdoor seating area.

- How does the site plan address crime prevention requirements.

The site design is a compact layout that has high visibility from the street, is well lit, meeting the city lighting standards as well as having a 24 hour surveillance program with 24/7 staff monitoring. The outdoor active space at the main entry is highly visible from the community room and front desk. The outdoor seating and activity area to the rear is enclosed by a 6 FT tall solid fence along the westerly side, wrapping around the seating area to a point along the retaining wall where the fence changes to a 4 FT high wood picket fence. The easterly side of the site is separated from abutting uses by a retaining wall that ranges from about 3FT to just over 5 FT tall with a dense landscaped buffer adjacent to an existing undisturbed woodland area. As stated above there will also be surveillance camera's monitoring the exterior of the building.

- Sewer Capacity Letter

We still have not received a letter from Public Services regarding sewer capacity.

- Provide details on location of HVAC/mechanical units

These elements are still being developed and will be provided as soon as they have been identified.

Planning Board Comments

- Provide context of the building within the Bishop Street neighborhood

CWS Architects will provide detailed information in response to this request under separate cover.

- Provide information regarding buffering adjacent to the Bishop Street development

We have revised the plans to reflect the depth of wooded area between the project site and the adjacent properties. As you will see, the major portion of the site where it abuts UNE is significantly wooded, the closest open area on the UNE property (athletic field) is approximately 110 FT away. The preserved woodland area is denoted by the limit of clearing line.

- A question was raised concerning the level of water quality treatment for site runoff.

Regarding water quality treatment, the proposed infrastructure to treat storm water quality exceeds the MDEP Chapter 500 standards for an Urban Impaired Stream as well as the expectation for preserving the Capisic Brook watershed.

- The Planning Board requested that the Applicant reach out to the neighbors, specifically the ones in attendance at the workshop meeting.

  Avesta has had discussions with one of the Mayfield Street residents and has prepared and provided requested documentation that has also been provided for the Board in this submission. We are in the process of trying to schedule a meeting with the direct abutter to address his concerns.

- A question was raised about the bike rack being the city standard detail.

The proposed bike racks are located on the project site and are not within the public right of way and our understanding is that the city standard only applies to racks with in the public right of way.

Enclosed for your review are the following:

- Revised Site Plans, 24 x 36 and 11x17
- Revised Site Detail Sheets 24 x 36 and 11 x 17
- Photometric Plan to be submitted under separate cover
- Update Architectural information to be submitted under separate cover
- Revised Stormwater Report documentation prepared by Ransom Consulting
- Housing First for Homeless Individuals with Compromised Health statement prepared by Avesta.
- Light Fixture Cut Sheets

Should you or staff have any additional questions or comments, please do not hesitate to contact me.

Sincerely,
Mitchell & Associates

Robert B. Metcalf, Principal
Maine Licensed Landscape Architect

Enclosure

cc: Greg Payne
Brooks More
Ben Walter
Steve Bradstreet
Randy Dunton

Att. V

Bishop Street Apartments

Housing First for Homeless Individuals with Compromised Health

THE NEED

The daily census at Portland shelters includes a number of individuals who have chronic medical conditions in addition to being homeless and struggling with mental health and/or substance abuse issues. Homeless individuals experience relatively short life spans and suffer debilitating conditions at a much earlier age than the general public. Many have developed conditions such as COPD, diabetes, heart disease, and other illnesses that are exacerbated by having no stable living situation and inadequate services and medical interventions. These individuals become high utilizers of medical resources—especially emergency department and in-patient hospitalization—caught in an ongoing cycle that is costly and inhumane.

Without appropriate housing, patients are discharged to shelters, return to shelters, or sleep outside. Living in situations where there is no follow up that might treat recurring symptoms of illness, where they experience inadequate care and neglect, their health simply continues to deteriorate.

Data that confirms the current challenges for shelters and medical providers is included below in the *Research and Evidence Based Practices* section.

PROJECT DESIGN

Housing First

The 30 residents of Bishop Street Apartments will all come from shelters, or will have been sleeping outside or in some other unstable, non-permanent situation. All will have been homeless, with priority given to individuals whose homelessness and instability has lasted years. Individuals will be selected using criteria developed to assess vulnerability and based on specific medical conditions and concerns. We will prioritize those who cannot or have not succeeded in other housing options and those whose needs are the greatest.

All units are subsidized and tenants will pay from 30% of their incomes, down to zero if they have no income. Portland Housing Authority has committed site-based vouchers for Bishop Street. Preble Street staff will provide outreach to potential tenants who may be wary of accepting housing, will assist tenants in filling out applications, and work with Avesta Housing staff to make sure that new tenants understand expectations in the building.

Building Design

The architectural design incorporates 30 efficiency apartments, office space, and common spaces for tenants to use for activities and socializing. The Avesta and Preble Street initial successful housing first project, Logan Place, provides a blueprint for ensuring a needed combination of support and privacy and of independence and community.

Bishop Street Apartments will include outside areas accessible to tenants, a common kitchen for occasional shared meals, and parking for guests and service providers who work with tenants. Since it is

probable that a high percentage of the residents of the building will have some level of mobility issues, all spaces within the building (including all apartments) and on the site will be designed for handicap accessibility.

In addition, to meet the needs of the individuals who are medically compromised, the project will have a medical partner, and the building will include a private medical office and care room to maximize follow-up care and home-based services for the tenants. The design is currently being reviewed by Maine Medical Center staff to make certain that there is adequate support for on-site services.

Staffing and Support

Preble Street will provide housing support and case management staff 24 hours per day with a minimum of three workers at all times. This pattern allows monitoring of the entry, common space, and individual units to ensure safety and to respond to specific tenant concerns while enabling workers to intervene in individual crises as required. Given the challenges of the target population, it is anticipated that many tenants will seek support as they struggle with mental health and/or substance abuse disorders that can require assistance at all times of the day.

A priority for Preble Street case managers will be to encourage all tenants to access mainstream resources, connecting them to health, mental health, and substance abuse services as well as socialization and vocational opportunities. We expect that many tenants will ultimately accept community integration or ACT (Assertive Community Treatment) level support. Although the acceptance of services is not required to live at Bishop Street Apartments, experience with other housing first programs indicates that nearly all tenants will eventually engage with Preble Street in developing individual goals and participating in activities aimed at meeting their goals.

Preble Street staffing includes an experienced master's level program coordinator, master's level supervisors, and team leaders. On-site supervision and 24-hour access to a clinical on-call system ensure that staff receives appropriate supervision and crisis support.

Medical staff will be available on site during specific hours and will coordinate daily with Preble Street case management and supervisory staff to coordinate referrals, follow up, and monitoring of individual tenants who may have health-related concerns. When needed, tenants may receive additional in-home services ranging from help with daily activities to visiting nurses. Medications prescribed to tenants will be maintained by tenants, with medical staff assisting in monitoring use and symptoms and making recommendations and changes as appropriate.

Preble Street will also work with community volunteers and interns to develop on-site activities that will include communal meals, outings, and on-site recreational programming.

Research and Evidence Based Practices

Housing First is one of the few evidence-based practices targeting homeless individuals. Studies of individuals in housing first programs have shown that they are as likely to remain housed as those who enter more restrictive housing systems;[1] and that, when housed, there is an increase in use of key support services and a decrease in use of many costly and inappropriate services such as emergency rooms and police and ambulance transport.[2] Studies conducted in Maine support these findings;[3] in fact, a seven-year follow up on Logan Place tenants indicated that, for almost all, stability was maintained and use of inappropriate community resources decreased.[4] The only exceptions to decreasing medical costs were formerly homeless individuals whose deteriorating health required a level of care that could only be provided with the type of on-site partnership envisioned for Bishop Street.

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[1] US DHHS, SAMHSA, *National Registry of Evidence Based Practices*, 2009; Pearson, C., Montgomery, E., and Locke, G, " Housing Stability Among Homeless Individuals with Serious mental Illness participating in Housing First" in Journal of Community Psychiatry, Vol.37:3, 404-417, 2009.

[2] US Interagency Council on Homelessness, Research and Evaluation, *Cost-Effectiveness Studies; National Alliance to End Homelessness Report on Housing First*, 2011 Mackelprang, J., Collins, S., and Califaset, S. "Housing First is Associated with Reduced use of Emergency Services" *Prehospital Emergency Care*, Vol.8:4, 46-82, 2014.

[2] Mondello, M., Bradley, J., Chalmers-McLaughlin, T. Shore, N., *Cost of Rural Homelessness: Rural Permanent Supportive Housing Cost Analysis*, 2009; Chalmers-McLaughlin, T. Bradley, J, Schmidt, E. *Cost Study of Logan Place Housing First Program,* 2009

[3] Chalmers, McLaughlin and Bradley, J. "Logan Place 7 Years Later: Is it Still Cheaper to Support People in Housing First Settings?" Presentation at the National Housing First Conference, Chicago, 2014.

Att. W

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June 23, 2015

Ms. Nell Donaldson, Planner
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

RE: 72 Bishop Street

Dear Nell and Planning Board Members,

The following documentation and supporting information have been prepared in response to staff review comments received on June 4, 2015 responses are in **Italic**.

Comments from Nell Donaldson: email dated June 4, 2015

1. Plan numbering
   The plat plan has been changed to Sheet 2A. Plan sheets have been added to the current submission set therefore sheet numbers have changed. There are not two L7 Sheets within the current submission.

2. Tree clearing within the Mason's property.
   The applicant is not proposing clearing on the Mason's property. Trees are located near the property line and the graphic on sheet L1 does not clearly show the tree trunks, only the canopy. The applicant is having a surveyor locate the trees along the property line to confirm ownership.

3. The post-development stormwater plan does not show the post development wetland line. DPS requested that a plan show the temporary construction related disturbance to the wetland.

   We have added the post-development wetland line to the post-development stormwater plan.
   Sheet L1, Existing Conditions Plan shows graphically the areas of wetland disturbance with a key defining the areas of total wetland area, wetland impact, and temporary (construction related) wetland impact.

4. Keith Gatreau requests an additional no parking sign adjacent to striped areas of the parking lot.

   We have added an additional sign at the southern end of the parking lot.

5. HVAC and Mechanical equipment location.

   HVAC equipment will be located on the roof and within the mechanical room. The mechanical room is located on the northwest side of the building and is shown on Sheet M1.01, First Floor Mechanical Plan.

6. Photometric Plan

   A photometric plan was submitted via email on 6/17/15. The bollard fixture has louvers to provide light source cut off above horizontal. The cut sheets for all light fixtures were submitted via email on 6/17/15.

Comments regarding the Draft Subdivision Plat

Nell Donaldson: email dated June 4, 2015

1. Add easements in graphic and list format.

The two utility easements have been labelled and noted on the plan.

2. Waiver List.

The waiver list was revised.

Regarding the easement area, we discussed with Mr. Clark that the easement area associated with the Bishop Street property will be limited to the area of the site impacted by the 15 FT off-set from the storm drain line. The extent of the easement on abutting properties will be the City's responsibility to obtain.

3. The limit of disturbed wetland line and associated notes should appear on the plat plan.

The disturbed wetland line and associated notes have been added to the plat plan.

4. Snow Removal

Note 22 has been added to the plat plan (Sheet 2A) stating that snow shall not be stored or dumped in wetland areas.

4. Site Benchmark: DPS Engineering does not use the top of hydrant spindles as benchmarks. Please use the bonnet bolt over the main hydrant connection.

The benchmark shall be revised as requested. The surveyor is currently updating the survey to address all of Mr. Clark's comments.

Additional Staff Comments

- Will there be outside surveillance cameras.

There will be building mounted surveillance cameras to monitor the exterior area including the outdoor seating area.

David Senus, P.E.

- (1) NRPA permitting.

The applicant has submitted an application for NRPA Tier 1 and ACOE Category 1 permits. Copies of the permit approval shall be submitted upon receipt.

- (2) Stamped Boundary Survey.

The stamped boundary has been submitted. Additional survey work is scheduled for late June. When the location of the city stormwater line is determined and the benchmark reset, the survey will be resubmitted.

- (3) Construction Management Plan

A construction management plan was submitted via email on 6/17/15.

- (4) Photometric Plan

A photometric plan was submitted via email on 6/17/15.

- (5) Electric locations

The applicant is negotiating with the property to the west owned by the Masons to secure a utility easement. The plans have been updated to reflect the anticipated electric route.

- (6bi) In-line roof drain filters

The manufacture information is included in this submission. Two filter locations are identified Sheet M1.01, First Floor Mechanical Plan. Note: treatment of roof area is being provided to exceed treatment required for an urban impaired stream.

- (7) Urban Impaired Stream Standard

The applicant has agreed to pay $1,927 as an in-lieu compensation fee to comply with the Urban Impaired Stream Standard.

- (8) Post Construction Inspection and Maintenance Plan

The post construction inspection and maintenance plan has been prepared by Ransom Consulting Engineers and is included in this submission.

- (9) Vegetated Soil Filter

The vegetated soil filter on the west side of the building has been labeled on Sheet 3 and a note added clarifying the requirement to pitch to the filter.

- (10) OCS Outlet Apron

Detail 5/L7, OCS Outlet Apron, has been modified to include length, width and depth of apron as well as rip rap stone size, per Maine Erosion and Sediment Control BMP Manual. Sheet L7 is included in this submission.

- (11) Sewer Capacity Letter

Frank Brancley has provided an ability to serve letter for sanitary service. The letter was submitted via email on 6/19/15

- (12) Sheet L3, Catchbasin invert

The invert out elevation has been revised. Sheet L3 is included in this submission.

David Margolis-Pineo, June 12, 2015

- (1) No comment required

- (2) Sidewalk Extension to Forest Avenue

The applicant is reviewing the costs associated with extending the sidewalk to Forest Avenue.

- (3) Extended Sidewalk Construction

The applicant requests the city obtain necessary construction easements to construct the extended sidewalk. The applicant will meet with the impacted property owners to review sidewalk plan, including benefit of improvements and mitigation provisions. The applicant is currently modifying the sidewalk plan per discussions with city engineering. The revised plan will be submitted once completed.

- (4) Stormdrain easement

The applicant has scheduled survey work to locate the stormdrain and establish the portion of the easement impacting the Bishop Street property. This information will be submitted as soon as available.

- (5) No comment required

- (6) No comment required

- (7) Wetland Limit line

Both temporary wetland disturbance and wetland disturbance areas are defined on Sheet L3. The temporary and wetland disturbance areas are also calculated and defined on Sheet L1.

- (8) No comment required

- (9) No comment required

Enclosed for your review are the following:

- Revised Site Plans
- Revised Site Detail Sheet L7
- Revised Architectural Drawings (emailed 6/01/15) and Elevations (emailed 6/17/15)
- Context Images (emailed 6/17/15)
- Sheet M1.01, First Floor Mechanical Plan
- Photometric Plan (emailed 6/17/15)
- Stormwater Inspection and Maintenance Plan prepared by Ransom Consulting
- Light Fixture Cut Sheets (emailed 6/17/15)
- Stamped Survey (emailed 6/17/15)
- Construction Management Plan (emailed 6/17/15)
- Sewer Capacity Letter (emailed 6/19/15)
- Bio Clean Filter In-line Roof Drain Manufacturer Product Sheets:
    - Bio Clean Downspout Filter TSS & Hydrocarbons Removal Testing
    - Bio Clean Downspout Brochure
    - Downspout Certificate of Listing

Should you or staff have any additional questions or comments, please do not hesitate to contact me.

Sincerely,
Mitchell & Associates

Robert B. Metcalf, Principal
Maine Licensed Landscape Architect

Enclosure

cc: Greg Payne
Brooks More
Ben Walter
Steve Bradstreet

Att. X

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July 9, 2015

Ms. Nell Donaldson, Planner
and Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101

RE: 72 Bishop Street

Dear Nell and Planning Board Members,

The following documentation and supporting information is an update to our previous response letter dated June 23, 2015 as well as additional comments based upon meetings with staff, new responses are in **Bold text**.

Comments regarding the Draft Subdivision Plat

Nell Donaldson: email dated June 4, 2015

1. Add easements in graphic and list format.

The two utility easements have been labelled and noted on the plan.

The applicant has had initial discussion with a member of the lodge to discuss the utility easement across the lodge property as well as the ability to plant trees along the westerly property line. They received a positive response that said, that individual needs to bring it before the lodge officers for final approval.

Storm Drain Easement

Regarding the storm drain easement area, we discussed with Mr. Clark that the easement area associated with the Bishop Street property will be limited to the area of the site impacted by the 15 FT off-set from the storm drain line. The extent of the easement on abutting properties will be the City's responsibility to obtain. **June 23, 2015 Response**

The additional field survey documentation has been completed and shown on corresponding plans. We need to note that the existing manhole structure off site in the south east corner is buried and not accessible. This structure was previously located (not buried) by Owen Haskell, Inc. in 1974 for what was then Westbrook College. This is the location that was used in preparing the survey plan for 72 Bishop Street, all of the other structures were located. The easement has been located on the 72 Bishop Street property.

4. Site Benchmark: DPS Engineering does not use the top of hydrant spindles as benchmarks. Please use the bonnet bolt over the main hydrant connection.

The benchmark shall be revised as requested. The surveyor is currently updating the survey to address all of Mr. Clark's comments. **The benchmark location has been changed as requested and the datum has been corrected. Note, the corrected topography required modifications to the site grading plan.**

David Senus, P.E.

- (1) NRPA permitting.

The applicant has submitted an application for NRPA Tier 1 and ACOE Category 1 permits. **A copy of the application was provided under separate cover.** ***Copy of the permit approval shall be submitted upon receipt.***

- (2) Stamped Boundary Survey.

The stamped boundary has been submitted. Additional survey work is scheduled for late June. When the location of the city stormwater line is determined and the benchmark reset, the survey will be resubmitted. **The updated survey work has been added to the subdivision plan and will be added to the existing conditions survey plan. Upon review and approval of the revised plans, a new stamped boundary survey and subdivision plan shall be provided.**

David Margolis-Pineo, June 12, 2015

- (2) Sidewalk Extension to Forest Avenue

See comment above.

The applicant is reviewing the costs associated with extending the sidewalk to Forest Avenue. **The applicant is willing to construct the last section of sidewalk (continuous open curb cut section) that has been added by the planning staff to the project. We have had initial discussions with City staff concerning the potential of the City providing the used granite required for this added section of sidewalk and will continue to have discussion as the design of the sidewalk improvements are finalized. We would like point out again that during the zoning process when the applicant was asked by the planning board if the applicant would be willing to extend sidewalk from their site to the existing sidewalk on Bishop Street when the site plan application was submitted. Their understanding was to construct sidewalk up to the existing sidewalk (500 feet from the site to the existing sidewalk) east of Mayfield Street, not to Forest Avenue.**

The additional survey for this section of sidewalk is scheduled for next week and as soon as we have the updated information we will prepare a draft plan for discussion with staff and Tom Errico.

Enclosed is a draft of the sidewalk plan up to the east side of Mayfield Street that we have been discussing with staff. The plan reflects the most recent changes per discussions on July 8, 2015.

At the request of an abutter, the applicant will add a note to the subdivision plan and site plan as follows:

Avesta Housing will replace street trees located along the back side (right of way) of the new sidewalk should the trees die or show significant stress up to one year from completion of construction. Determination of replacement shall be made by the City Arborist.

- (3) Extended Sidewalk Construction

The applicant requests the city obtain necessary construction easements to construct the extended sidewalk. The applicant will meet with the impacted property owners to review sidewalk plan, including benefit of improvements and mitigation provisions. The applicant is currently modifying the sidewalk plan per discussions with city engineering. The revised plan will be submitted once completed. **The applicant has met with the abutters to review the design of the sidewalk and the need to obtain grading easements along their respective frontages.**

Enclosed for your review are the following:

- Revised Site Plan
- Updated Subdivision Plan
- Draft Sidewalk Plan (Not including additional section)

Should you or staff have any additional questions or comments, please do not hesitate to contact me.

Sincerely,
Mitchell & Associates

Robert B. Metcalf, Principal
Maine Licensed Landscape Architect

Enclosure

cc: Greg Payne
Brooks More
Ben Walter

LEGEND

- IRON PIPE OR ROD FOUND
- IRTBS 5/8" IRON ROD TO BE SET
- WATER VALVE
- MANHOLE
- HYDRANT
- CATCH BASIN
- UTILITY POLE
- SIGN
- MB MAILBOX
- GM GAS METER
- GV GAS VALVE
- x101.27 SPOT ELEVATION
- FENCE
- CURB
- OHW OVERHEAD WIRES
- T TELEPHONE
- W WATER LINE
- SS SANITARY SEWER
- SD STORM DRAIN
- G GAS LINE
- 100 1' CONTOUR
- EDGE OF WOODS
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB/BUSH

LOCATION MAP N.T.S.

WARREN AVE, ALDER AVE, BISHOP ST, FOREST AVE, MAYFIELD ST, MORRILL, ARBOR, SITE

BISHOP STREET (PAVED – PUBLIC 50' WIDE)

MAYFIELD STREET (50' WIDE)

LOT AREA = 52,383 S.F. 1.203 ACRES

N82°48'35"E 50.00' (DEED)

S07°11'25"E 155.50' DEED 155.22'

N47°31'01"E 483.91'

S61°29'47"W 467.98'

N18°15'13"W 468.68'

S72°35'59"W 289.91

N82°31'33"E 231.50'

S08°28'47"W

641.29' RR SPIKE FOUND TO FOREST AVE.

347.75'

294.75' DEED

103.63' DEED

74.47' PLAN REF. 3

TM 293-C-1 N/F DEERING LODGE BUILDING CORP. 13212/14 "MASONS"

TM 293-C-4 N/F BISHOP STREET LLC 23608/212

TM 293-C-5 N/F UNIVERSITY OF NEW ENGLAND

DETAIL N.T.S.

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ***ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.***

GRAPHIC SCALE

0 15' 30' 60' 120'

PLAN REFERENCES

1. *"PLAN OF LAND IN PORTLAND, MAINE FOR WESTBROOK COLLEGE AUGUST 20, 1974 OWEN HASKELL, INC. JOB NO. 7445 P" REVISED 5/4/89*
2. *"BOUNDARY SURVEY ATHLETIC FIELD UNIVERSITY OF NEW ENGLAND STEVENS AVENUE & BISHOP STREET PORTLAND, MAINE OCTOBER 2007 COLONIAL SURVEYING COMPANY, LLC"*
3. *WORKING DRAWING OF MAYFIELD STREET, BISHOP STREET AND STEVENS AVENUE IN FILES OF H.I. & E.C. JORDAN – SURVEYORS*
4. *"SITE PLAN OF PROPERTY ON BISHOP STREET, PORTLAND, MAINE MADE FOR PLASMINE TECHNOLOGY, INC. OCT. 1, 1991 OWEN HASKELL, INC. JOB NO. 91163P"*

NOTES

1. *OWNERS OF RECORD: HED/WAY DEVELOPMENT, 24 SAND POINT ROAD, CUMBERLAND FORESIDE, MAINE 04110, CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 8575 PAGE 272.*
2. *LOCUS IS SHOWN AS BLOCK C LOT 2 AND 3 ON PORTLAND PROPERTY MAP 293.*
3. *BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM MAINE WEST NAD83 AND ELEVATIONS ARE NVGD29 AS BASED ON STATIC GPS COLLECTION AND OPUS CORRECTION.*
4. *BASED ON THE CITY OF PORTLAND GIS, THERE IS A SEWER LINE THAT CROSSES THIS PROPERTY. WE HAVE FOUND NO EVIDENCE OF THIS SEWER LINE ON THIS PROPERTY NOR HAVE WE FOUND A DEED FOR ANY EASEMENT RELATED TO THIS SEWER LINE.*
5. *WETLANDS DELINEATED BY CES, INC.*

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, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.

6-26-2015
DATE

JOHN C. SCHWANDA, PLS #1252

STATE OF MAINE JOHN C. SCHWANDA NO. 1252 PROFESSIONAL LAND SURVEYOR

REV.	DATE	DESCRIPTION
REV. 2	06/23/15	ADJUST ELEVATIONS, ADDITIONAL LOCATION
REV. 1	01/20/15	ADDITIONAL LOCATION / TOPOGRAPHY

BOUNDARY & TOPOGRAPHIC SURVEY

AT

72 BISHOP STREET, PORTLAND, MAINE

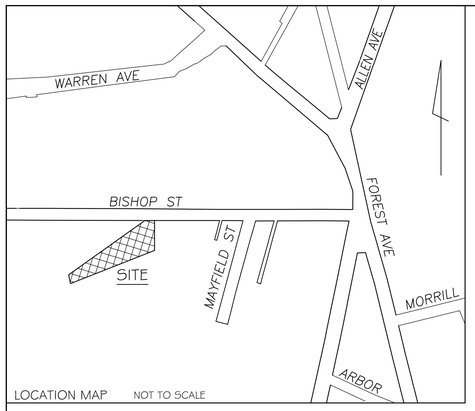
MADE FOR

AVESTA HOUSING

307 CUMBERLAND AVENUE, PORTLAND, MAINE

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

Drwn By	JCS	Date	Job No.
Trace By	JLW	JULY 17, 2014	2014-031P
Check By	JCS	Scale	Drwg. No.
Book No.	1125	1" = 30'	1



BISHOP STREET
(PAVED – PUBLIC 50' WIDE)

TM 293-C-1
N/F
DEERING LODGE BUILDING CORP.
13212/14
"MASONS"
ZONING: B-2C

TM 293-C-4
N/F
BISHOP STREET LLC
23608/212
ZONING: B-2C

TM 293-C-5
N/F
UNIVERSITY OF NEW ENGLAND

DMH RIM=99.81
INV. IN=87.4
INV. OUT=87.3

SMH RIM=98.64
INV. IN=86.8
INV. OUT=86.7

CB RIM=96.01
4" INV. IN=92.6
15" INV. OUT=92.5

DMH RIM=96.28
10" INV. IN=89.2
8" INV. IN=89.1
18" INV. IN=88.6
18" INV. OUT=88.4

CB RIM=95.96
4" INV. IN=92.4
10" INV. OUT=89.3

SMH RIM=96.69
INV. IN=87.9 8"
INV. OUT=87.8 8"

CB RIM=95.96
8" INV. OUT=91.0

MH RIM=96.23
FULL OF DIRT

MATCHLINE SHEET L7 - SIDEWALK PLAN

347.75'

TERMINATE EXISTING WATER SERVICE–SHUT CORPORATION VALVE AND CUT PIPE FROM WATER MAIN

N:311277.13 5/8" IRON ROD
E:2918341.58 TO BE SET

SITE BENCH MARK
TOP SPINDLE HYDRANT

5/8" IRON ROD N:311270.87
TO BE SET E:2918291.93

IPF 1974
0.32' W

N82°48'35"E
50.00' (DEED)

GRAVEL
PORCH
2 STORY WOOD FRAME
6" EVERGREEN
MB MAILBOXES
SHED
SHED
LAWN

S07°22'13"E 45.36'
S07°11'32"E 155.22' DEED 155.50'

DMH NOT FOUND
LOCATION TAKEN FROM PLAN REF.1
N82°31'33"E
231.50'

47"MAPLE
0.21'
CIRF #2013
N:311122.85
E:2918361.04

WETLAND LINE
LIMIT OF TEMP. DISTURBED WETLAND
TEMPORARY DISTURBED WETLAND BEHIND RETAINING WALL SHALL BE RESTORED TO WETLAND CONDITION– REUSE RETAINED WETLAND SOIL. PROVIDE APPROVED WETLAND SEED MIX

EXISTING WOODED AREA

LOT AREA = 52,383 S.F.
1.203 ACRES

TOTAL WETLAND IMPACT= 3,105 SF

TOTAL WETLAND ON SITE= 14,203 SF

LIMIT OF TEMPORARY DISTURBED WETLAND
TEMPORARY DISTURBED WETLAND BEHIND RETAINING WALL SHALL BE RESTORED TO WETLAND CONDITION– REUSE RETAINED WETLAND SOIL. PROVIDE APPROVED WETLAND SEED MIX

WETLAND A–FORESTED AND SCRUB–SHRUB WETLAND

N47°31'01"E
183.91'

155.14'
N42°58'13"W

467.98'
S61°29'47"W

N:310944.05
E:2917935.10

N:310899.52
E:2917949.79

N18°51'51"W
48.89'

STREAM
UPLAND
30'

DMH FOUND RIM=93.73
DRAIN LINE INFORMATION TAKEN FROM PLAN REF.1

DMH NOT FOUND
LOCATION TAKEN FROM PLAN REF.1

DETAIL
N.T.S.
0.5'
2-1/4"IPF
0.4'
CIRF
0.2'
1"IPF LOOSE
DOWN 0.5'
4.8'
0.2'

WETLAND KEY

TOTAL WETLAND	(14,203 SF)
WETLAND IMPACT	(3,105 SF)
TEMPORARY WETLAND IMPACT	(1,024 SF)

LEGEND

- PROPERTY LINE
- CONTOUR
- IRON ROD FOUND
- MANHOLE
- CATCHBASIN
- WATER VALVE
- HYDRANT
- UTILITY POLE
- LIMIT OF VEGETATION
- CURRENT ZONE LINE
- WETLAND

RESOURCE NOTES:

1. WETLANDS AND STREAMS SHOWN HEREON WERE FIELD IDENTIFIED BY CES, INC. IN JULY 2014. WETLANDS WERE FIELD DELINEATED IN GENERAL ACCORDANCE WITH 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND THE 2012 NORTHCENTRAL AND NORTHEAST REGIONAL SUPPLEMENT (VERSION 2.0). PROPOSED WETLAND IMPACTS SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. STREAMS WERE FIELD INDENTIFIED IN ACCORDANCE WITH MAINE NATURAL RESOURCES PROTECTION ACT (NRPA) DEFINITIONS.

PLAN REFERENCES:

1. "PLAN OF LAND IN PORTLAND, MAINE FOR WESTBROOK COLLEGE. AUGUST 20, 1974 OWEN HASKELL, INC. JOB NO. 7445 P" REVISED 5/4/89
2. "BOUNDARY SURVEY ATHLETIC FIELD UNIVERSITY OF NEW ENGLAND STEVENS AVENUE + BISHOP STREET PORTLAND, MAINE OCTOBER 2007 COLONIAL SURVEYING COMPANY, LLC"
3. WORKING DRAWING OF MAYFIELD STREET, BISHOP STREET AND STEVENS AVENUE IN FILES OF H.J. + E.C. JORDAN – SURVEYORS
4. SITE PLAN OF PROPERTY ON BISHOP STREET, PORTLAND, MAINE MADE FOR PLASMINE TECHNOLOGY, INC. OCT. 1, 1991 OWEN HASKELL, INC. JOB NO. 9116-3P"

NOTES:

1. OWNERS OF RECORD: HED/WAY DEVELOPMENT, 24 SAND POINT ROAD, CUMBERLAND FORESIDE, MAINE 04110. CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 8575 PAGE 272.
2. LOCUS IS SHOWN AS BLOCK C LOT 2 AND 3 ON PORTLAND PROPERTY MAP 293.
3. BEARINGS ARE GRID NORTH AND ELEVATIONS ARE NAVD88 AS BASED ON STATIC GPS COLLECTION AND OPUS CORRECTION.
4. EXISTING WETLANDS: 14,203 SF
5. PRIOR TO SITE CLEARING, CONTRACTOR SHALL COORDINATE WITH PROJECT LANDSCAPE ARCHITECT TO DEMARCATE TREES FOR PROTECTION AND WETLAND AREAS TO BE PROTECTED. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

LICENSED LANDSCAPE ARCHITECT
ROBERT B. METCALF
No. 1815

Prepared For:

Owner:

AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:

MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel.: 207-774-4427

72 BISHOP STREET

Portland, Maine

Bishop Street

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:
Revised: 5-22-15
Revised: 6-22-15

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Title:
EXISTING CONDITIONS PLAN

Scale: 1"= 20'
0 10 20 40 ft.

North:

Sheet No.:
L1

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GENERAL NOTES:

1. SITE AREA: 52,383 SF OR 1.20 ACRES

2. APPLICANT: AVESTA 72 BISHOP, LP
307 CUMBERLAND AVENUE
PORTLAND, MAINE 04101

3. OWNER: AVESTA HOUSING DEVELOPMENT CORP.
307 CUMBERLAND AVENUE
PORTLAND, MAINE 04101

4. ZONING DISTRICT: B-2-C COMMUNITY BUSINESS DISTRICT

5. PARCEL IS SHOWN AS LOT 2 AND LOT 3, BLOCK C ON CITY OF PORTLAND ASSESSORS MAP 293.

6. DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 31827, PAGE 271.

7. SPACE AND BULK STANDARDS:

	REQUIRED	PROPOSED
MINIMUM LOT SIZE:	NONE	52,383 SF
MINIMUM STREET FRONTAGE:	20 FEET	50 FEET
FRONT YARD SETBACK	NONE	18 FEET
REAR YARD SETBACK	10 FEET	10 FEET
SIDE YARD SETBACK	NONE	5 FEET
FRONT YARD MAXIMUM	10 FEET	18 FEET
MAXIMUM IMPERVIOUS SURFACE RATIO:	NONE	35%
MAXIMUM HEIGHT OF STRUCTURES:	45 FEET	39 FEET
MAXIMUM RESIDENTIAL DENSITY:	1,500 SF/UNIT	1,746 SF/UNIT

8. EXISTING CONDITIONS AND BOUNDARY INFORMATION TAKEN FROM A PLAN ENTITLED 'BOUNDARY + TOPOGRAPHIC SURVEY AT 72 BISHOP STREET, PORTLAND, MAINE' PREPARED BY OWEN HASKELL, INC. DATED JULY 17, 2014.

9. BEARINGS ARE GRID NORTH AND ELEVATIONS ARE NAVD88 AS BASED ON STATIC GPS COLLECTION AND OPUS CORRECTION.

10. WETLAND DELINEATION PERFORMED BY C.E.S. INC., LEWISTON MAINE, JUNE 2014. FLAGGED WETLAND AREA WAS SURVEYED BY OWEN HASKELL, INC., FALMOUTH, MAINE, JULY 2014.

11. PROPOSED DWELLING UNITS: 30 (SRO) EFFICIENCY APARTMENT UNITS

12. OFF-STREET PARKING REQUIREMENTS:
REQUIRED: 1/DWELLING UNIT =30 PARKING SPACES
PROPOSED: 10 STANDARD PARKING SPACES
2 HANDICAP PARKING SPACE

13. BICYCLE PARKING:
REQUIRED: 2 SPACES/5 DWELLING UNITS
12 SPACES (30 NEW DWELLING UNITS)
PROPOSED: 12 SPACES

14. EXISTING IMPERVIOUS: 1,304 +/- SF (2.5% OF SITE)
PROPOSED IMPERVIOUS: 18,686 +/- SF (35% OF SITE)

15. FLOOR AREA CALCULATIONS

FIRST FLOOR:	7,310 SF
SECOND FLOOR:	7,240 SF
THIRD FLOOR:	5,940 SF
TOTAL	20,490 SF

16. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY AND ALL UTILITIES CONNECTING TO INFRASTRUCTURE WITHIN THE ROAD SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.

17. THE CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR UNDERTAKING THE WORK IN A SAFE AND EFFICIENT MANNER, IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY REGULATIONS. ALL WORK AREAS SHALL BE DELINEATED CLEARLY AND FENCED AS APPROPRIATE TO PREVENT UNAUTHORIZED ACCESS. THE SITE SHALL BE LEFT IN A SAFE, ORDERLY AND TIDY MANNER AT THE END OF EACH WORK DAY.

18. UTILITY SERVICE CONNECTIONS SHALL CONFORM TO STANDARDS FOR INDIVIDUAL UTILITY PROVIDERS

19. EXISTING WETLANDS: 14,203 SF
IMPACTED WETLANDS: 3,105 SF

20. SITE LIGHTING SHALL MEET THE CITY OF PORTLAND STANDARDS AS OUTLINED IN SECTION 12 OF THE CITY OF PORTLAND TECHNICAL DESIGN STANDARDS. SITE LIGHTING SHALL ADHERE TO SECTION 12.2.5 LIGHT TRESPASS-LIGHTING SHALL NOT BE GREATER THAN 0.1 FOOTCANDLES AT THE PROPERTY LINE.

21. PRIOR TO SITE CLEARING, CONTRACTOR SHALL COORDINATE WITH PROJECT LANDSCAPE ARCHITECT TO DEMARCATE TREES FOR PROTECTION AND WETLAND AREAS TO BE PROTECTED. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.- SEE NOTE 10 SHEET L4

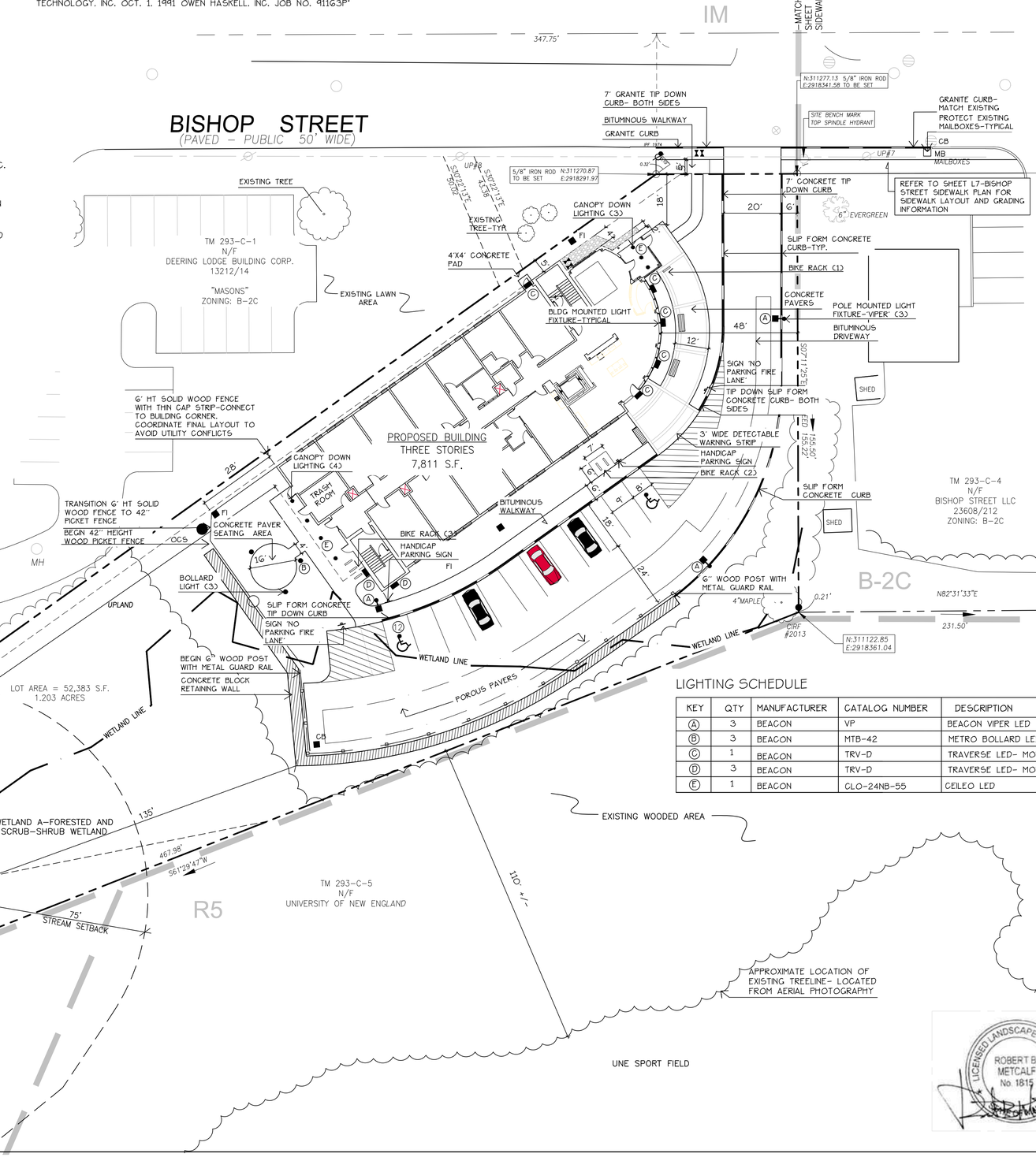
PLAN REFERENCES

1. 'PLAN OF LAND IN PORTLAND, MAINE FOR WESTBROOK COLLEGE. AUGUST 20, 1974 OWEN HASKELL, INC. JOB NO. 7445 P' REVISED 5/4/89

2. 'BOUNDARY SURVEY ATHLETIC FIELD UNIVERSITY OF NEW ENGLAND STEVENS AVENUE + BISHOP STREET PORTLAND, MAINE OCTOBER 2007 COLONIAL SURVEYING COMPANY, LLC'

3. WORKING DRAWING OF MAYFIELD STREET, BISHOP STREET AND STEVENS AVENUE IN FILES OF H.J. + E.C. JORDAN - SURVEYORS

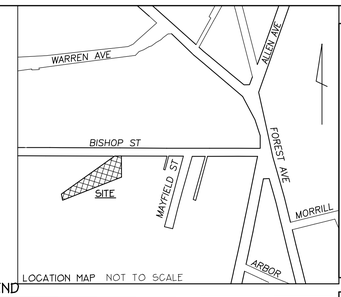
4. SITE PLAN OF PROPERTY ON BISHOP STREET, PORTLAND, MAINE MADE FOR PLASMINE TECHNOLOGY, INC. OCT. 1, 1991 OWEN HASKELL, INC. JOB NO. 911G3P'



LIGHTING SCHEDULE

REFER TO ELECTRICAL ENGINEERING PLANS FOR LIGHTING SCHEDULE AND FIXTURE ORDERING INFORMATION.

KEY	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP
Ⓐ	3	BEACON	VP	BEACON VIPER LED	
Ⓑ	3	BEACON	MTB-42	METRO BOLLARD LED	
Ⓒ	1	BEACON	TRV-D	TRAVERSE LED- MOUNTING HEIGHT 10'	
Ⓓ	3	BEACON	TRV-D	TRAVERSE LED- MOUNTING HEIGHT 16'	
Ⓔ	1	BEACON	CLO-24NB-55	CEILEO LED	



LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
IRON PIPE/MAG NAIL	I.R.F./I.P.F.	
GRANITE MONUMENT		
CATCHBASIN		CB
FIELD INLET		FI
HYDRANT		
UTILITY POLE		
FENCE		
DEC. TREE		
EVERGREEN TREE		
LIGHT POLE		
BLDG MOUNTED LIGHT		
CURB		
OVERHEAD WIRES	EOHW	
SOIL BORINGS		
WATER VALVE		
GAS VALVE		
SIGN		
WETLAND		
OUTLET CONTROL STRUCTURE		OCS
WETLAND IMPACT		

Prepared For:
Owner:
AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:
MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel.: 207-774-4427

72 BISHOP STREET
Portland, Maine
Bishop Street

Date: APRIL 10, 2015

Issued For: SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:
Rev: 5/22/15
Rev: 6/22/15

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Title: LAYOUT AND LIGHTING PLAN

Scale: 1"= 20'
0 10 20 40 ft.

North:

Sheet No.: L2

LICENSED LANDSCAPE ARCHITECT
ROBERT B. METCALF
No. 1815
STATE OF MAINE

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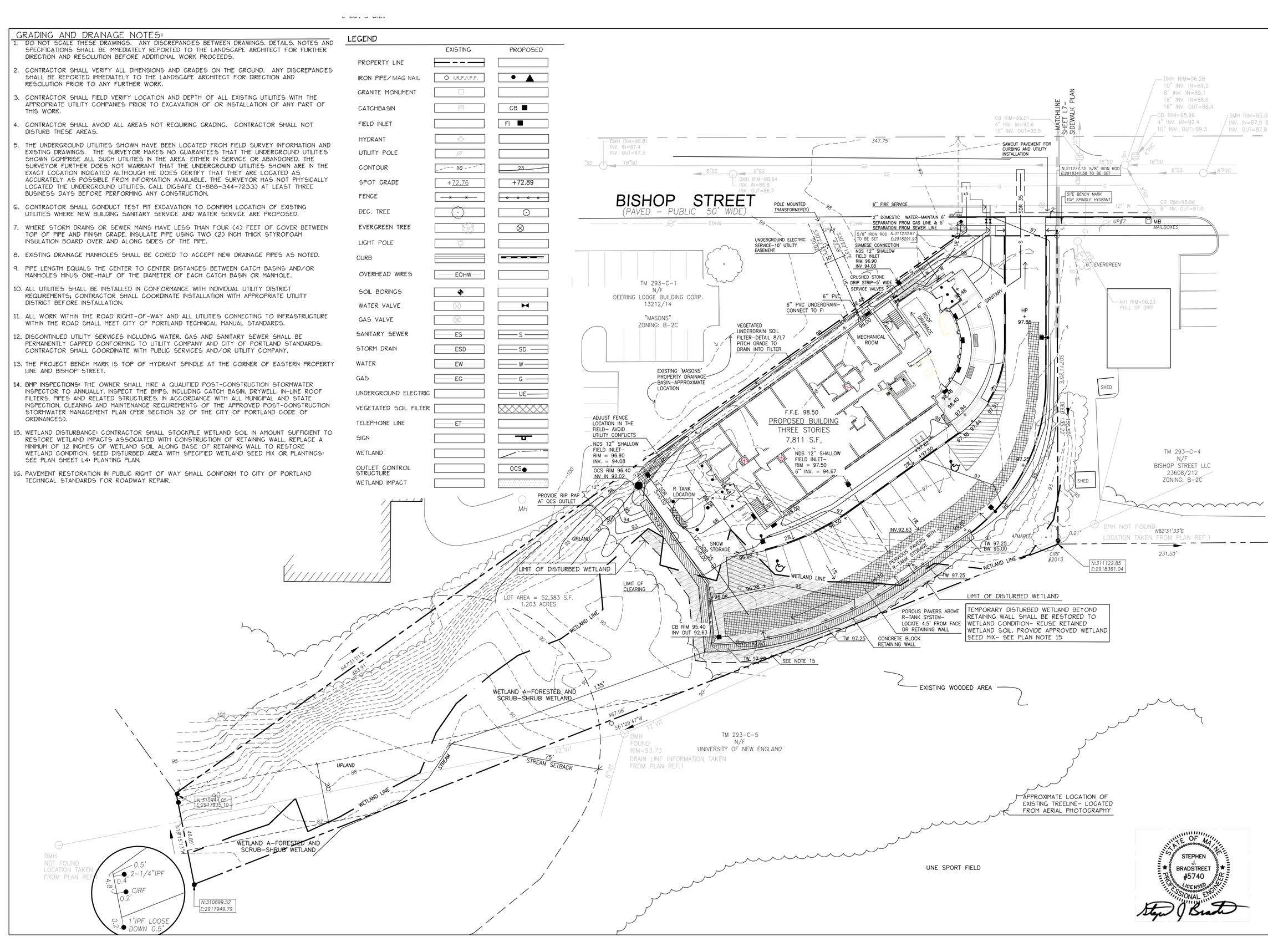
GRADING AND DRAINAGE NOTES:

1. DO NOT SCALE THESE DRAWINGS. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, NOTES AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT FOR DIRECTION AND RESOLUTION PRIOR TO ANY FURTHER WORK.
3. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES WITH THE APPROPRIATE UTILITY COMPANIES PRIOR TO EXCAVATION OF OR INSTALLATION OF ANY PART OF THIS WORK.
4. CONTRACTOR SHALL AVOID ALL AREAS NOT REQUIRING GRADING. CONTRACTOR SHALL NOT DISTURB THESE AREAS.
5. 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 DIGSAFE (1-888-344-7233) AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.
6. CONTRACTOR SHALL CONDUCT TEST PIT EXCAVATION TO CONFIRM LOCATION OF EXISTING UTILITIES WHERE NEW BUILDING SANITARY SERVICE AND WATER SERVICE ARE PROPOSED.
7. WHERE STORM DRAINS OR SEWER MAINS HAVE LESS THAN FOUR (4) FEET OF COVER BETWEEN TOP OF PIPE AND FINISH GRADE, INSULATE PIPE USING TWO (2) INCH THICK STYROFOAM INSULATION BOARD OVER AND ALONG SIDES OF THE PIPE.
8. EXISTING DRAINAGE MANHOLES SHALL BE CORED TO ACCEPT NEW DRAINAGE PIPES AS NOTED.
9. PIPE LENGTH EQUALS THE CENTER TO CENTER DISTANCES BETWEEN CATCH BASINS AND/OR MANHOLES MINUS ONE-HALF OF THE DIAMETER OF EACH CATCH BASIN OR MANHOLE.
10. ALL UTILITIES SHALL BE INSTALLED IN CONFORMANCE WITH INDIVIDUAL UTILITY DISTRICT REQUIREMENTS; CONTRACTOR SHALL COORDINATE INSTALLATION WITH APPROPRIATE UTILITY DISTRICT BEFORE INSTALLATION.
11. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY AND ALL UTILITIES CONNECTING TO INFRASTRUCTURE WITHIN THE ROAD SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
12. DISCONTINUED UTILITY SERVICES INCLUDING WATER, GAS AND SANITARY SEWER SHALL BE PERMANENTLY CAPPED CONFORMING TO UTILITY COMPANY AND CITY OF PORTLAND STANDARDS. CONTRACTOR SHALL COORDINATE WITH PUBLIC SERVICES AND/OR UTILITY COMPANY.
13. THE PROJECT BENCH MARK IS TOP OF HYDRANT SPINDLE AT THE CORNER OF EASTERN PROPERTY LINE AND BISHOP STREET.
14. **BMP INSPECTIONS:** THE OWNER SHALL HIRE A QUALIFIED POST-CONSTRUCTION STORMWATER INSPECTOR TO ANNUALLY, INSPECT THE BMPS, INCLUDING CATCH BASIN, DRYWELL, IN-LINE ROOF FILTERS, PIPES AND RELATED STRUCTURES, IN ACCORDANCE WITH ALL MUNICIPAL AND STATE INSPECTION. CLEANING AND MAINTENANCE REQUIREMENTS OF THE APPROVED POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN (PER SECTION 32 OF THE CITY OF PORTLAND CODE OF ORDINANCES).
15. WETLAND DISTURBANCE: CONTRACTOR SHALL STOCKPILE WETLAND SOIL IN AMOUNT SUFFICIENT TO RESTORE WETLAND IMPACTS ASSOCIATED WITH CONSTRUCTION OF RETAINING WALL. REPLACE A MINIMUM OF 12 INCHES OF WETLAND SOIL ALONG BASE OF RETAINING WALL TO RESTORE WETLAND CONDITION. SEED DISTURBED AREA WITH SPECIFIED WETLAND SEED MIX OR PLANTINGS: SEE PLAN SHEET L4: PLANTING PLAN.
16. PAVEMENT RESTORATION IN PUBLIC RIGHT OF WAY SHALL CONFORM TO CITY OF PORTLAND TECHNICAL STANDARDS FOR ROADWAY REPAIR.

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
IRON PIPE/MAG NAIL	O I.R.F./I.P.F.	● ▲
GRANITE MONUMENT	□	
CATCHBASIN		CB ■
FIELD INLET		FI ■
HYDRANT		
UTILITY POLE		
CONTOUR	50	23
SPOT GRADE	+72.76	+72.89
FENCE	X X	
DEC. TREE		
EVERGREEN TREE		
LIGHT POLE		
CURB		
OVERHEAD WIRES	EOHW	
SOIL BORINGS		
WATER VALVE		
GAS VALVE		
SANITARY SEWER	ES	S
STORM DRAIN	ESD	SD
WATER	EW	W
GAS	EG	G
UNDERGROUND ELECTRIC		UE
VEGETATED SOIL FILTER		
TELEPHONE LINE	ET	
SIGN		
WETLAND		
OUTLET CONTROL STRUCTURE		OCS●
WETLAND IMPACT		



Prepared For:

Owner:

AVESTA BISHOP STREET LP
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Tel.: 207-553-7777

Prepared By:

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72 BISHOP STREET

Portland, Maine

Bishop Street

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:
Rev: 5/22/15
Rev: 6/22/15

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Title:
GRADING, DRAINAGE & UTILITIES PLAN

Scale: 1"= 20'

0 10 20 40 ft.

STATE OF MAINE
STEPHEN J. BRADSTREET
#5740
LICENSED PROFESSIONAL ENGINEER

North:

Sheet No.:
L3

MAI

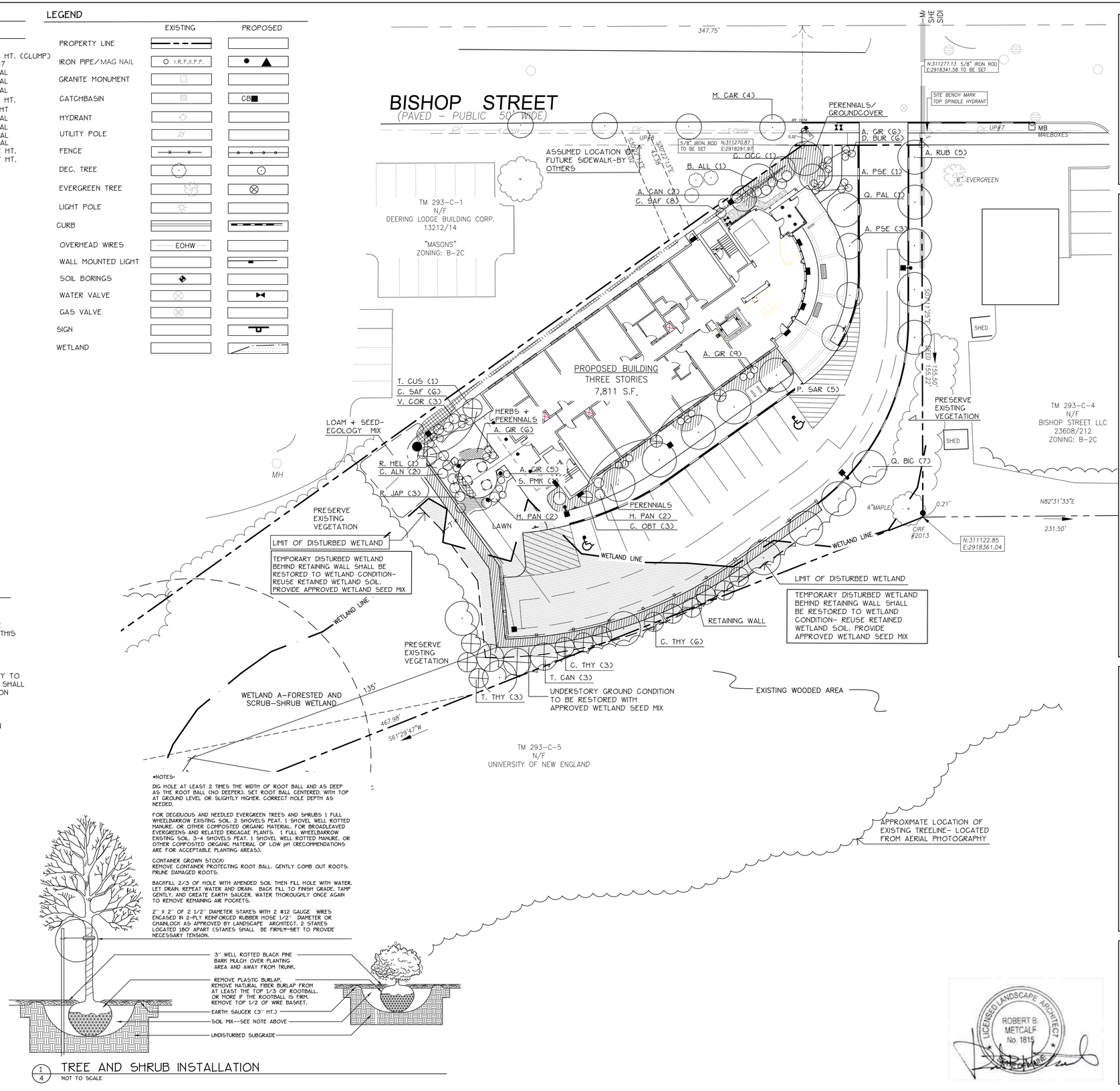
PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
A. CAN	2	AMELANCHIAR CANADENSIS	SHADBLOW	5'-6' HT. (CLUMP)
A. PSE	4	ACER PSEUDOSIEBOLDIANUM	KOREAN MAPLE	#7
A. RUB	5	ACER RUBURM	RED MAPLE	2" CAL
B. ALL	1	BETULA ALLEGHANIENSIS	YELLOW BIRCH	2" CAL
C. OCC	1	CELTIS OCCIDENTALIS	HACKBERRY	2" CAL
C. THY	12	CHAMAECYPARIS THYOIDES	ATLANTIC WHITE CEDAR	5'-6' HT.
C. OBC	3	CHAMACYPARIS OBTUSA 'COMPACTA'	COMPACT HINOKI FALSECYPRESS	3'-4' HT
M. CAR	4	MALUS 'CARDINAL'	CARDINAL FLOWERING CRAB	2" CAL
P. SAR	5	PRUNUS SARGENTII	SARGENT CHERRY	2" CAL
Q. BIC	7	QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL
Q. PAL	1	QUERCUS PALUSTRIS	PIN OAK	2" CAL
T. CUS	2	TAXUS CUSPIDATA 'CAPITATA'	UPRIGHT JAPANESE YEW	5'-6' HT.
T. CAN	3	TSUGA CANADENSIS	CANADIAN HEMLOCK	5'-6' HT.
SHRUBS				
A. GIR	26	AZALEA GIRARD'S FUSCHIA	GIARDS FUSCHIA AZALEA	#3
C. ALN	2	CLETHRA ALNIFOLIA 'RUBY SPICE'	RUBY SPICE SUMMERSWEET	#3
C. SAF	14	CORNUS SERICEA 'ARCTIC FIRE'	RED TWIG DOGWOOD	#3
D. BUR	9	DAPHNE BURKWOODII	CAROL MACKIE DAPHNE	#3
H. PAN	4	HYDRANGEA PANICULATA 'QUICKFIRE'	QUICKFIRE HYDRANGEA	#3
P. JAP	3	PIERIS JAPONICA	ANDOMEDA	#3
R. HEL	1	RHODODENDRON 'HELLIKI'	HELLIKI RHODODENDRON	#3
S. PMK	1	SYRINGA PATULA 'MISS KIM'	MISS KIM LILAC	3' HT
V. COR	3	VACCINIUM CORYUMBOSUM	HIGHBUSH BLUEBERRY	#3
PERENNIALS/GROUNDCOVERS				
A. UVA	20	ARCTOSTAPHYLOS UVA-URSI	BEARBERRY	1 QT
A. ALI	18	ASTILIBE 'ALIVE + KICKING'	FALSE SPIREA	1 QT
C. MOR	21	CAREX MORROWII 'EVERGOLD + ICE MIX'	EVERGOLD + ICE MIX SEDGE	1 QT
H. LS	15	HEMEROCALLIS 'LADY SCARLET'	LADY SCARLET DAYLILY	1 QT
H. GUA	32	HOSTA 'GUACAMOLE'	GUACAMOLE HOSTA	1 QT
FERNS				
A. NIP	18	ATHYRIUM NIPONIGUM 'PICTUM'	JAPANESE PAINTED FERN	POT
A. PED	18	ANDIANTUM PEDATUM 'MAIDENHAIR'	MAIDENHAIR FERN	POT
D. ERB	15	DRYOPTERIS ERYTHROSRA 'BRILLANCE'	WOOD FERN	POT
P. POL	15	POLYSTICHUM POLYBLEPHARUM	JAPANESE TASSEL FERN	POT

*NOTE- PERENNIALS TO BE FIELD LOCATED- COORDINATE WITH PROJECT LANDSCAPE ARCHITECT

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
IRON PIPE/MAG NAIL	I.R.F./I.P.F.	
GRANITE MONUMENT		
CATCHBASIN		CB
HYDRANT		
UTILITY POLE		
FENCE		
DEC. TREE		
EVERGREEN TREE		
LIGHT POLE		
CURB		
OVERHEAD WIRES	EOHW	
WALL MOUNTED LIGHT		
SOIL BORINGS		
WATER VALVE		
GAS VALVE		
SIGN		
WETLAND		



GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, NOTES AND SPECS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. **CONTRACTOR SHALL FURNISH AND PLACE 12 INCHES OF LOAM IN ALL SHRUB BEDS, 30 INCHES IN ALL TREE PITS, AND 6 INCHES UNDER ALL TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.**
6. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN" LATEST EDITION.
7. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
10. PRIOR TO SITE CLEARING, CONTRACTOR SHALL COORDINATE WITH PROJECT LANDSCAPE ARCHITECT TO DEMARCATE TREES FOR PROTECTION AND WETLAND AREAS TO BE PROTECTED. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH (DO NOT EXCEED 3" DEPTH).
12. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
13. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
14. DAMAGE TO EXISTING SITE IMPROVEMENTS DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
15. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY AND ALL UTILITIES CONNECTING TO INFRASTRUCTURE WITHIN THE ROAD SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
16. ECOLOGY SEED MIX: 80% HARD FESCUE, 20% CHEWINGS FESCUE

1/4 TREE AND SHRUB INSTALLATION
NOT TO SCALE

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72 BISHOP STREET

Portland, Maine

Bishop Street

Date: APRIL 10, 2015

Issued For: SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions: Rev: 5/22/15

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Title: PLANTING PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.: L4

LICENSED LANDSCAPE ARCHITECT ROBERT B. METCALF No. 1815 STATE OF MAINE

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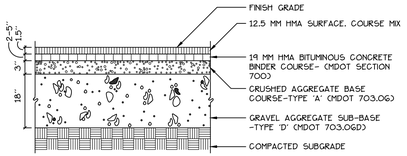
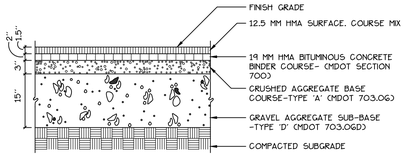


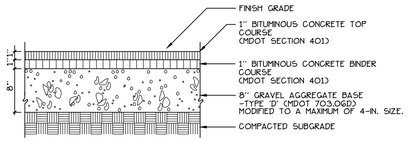
1 L5 BITUMINOUS PAVEMENT- ROAD- CITY OF PORTLAND STANDARD

NOT TO SCALE



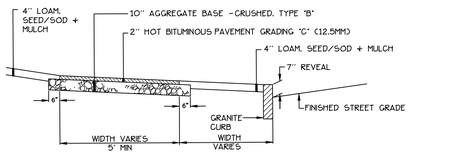
2 L5 BITUMINOUS PAVEMENT- PARKING LOT

NOT TO SCALE



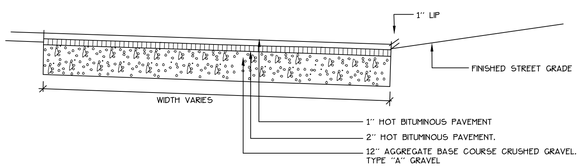
3 L5 BITUMINOUS SIDEWALK

NOT TO SCALE



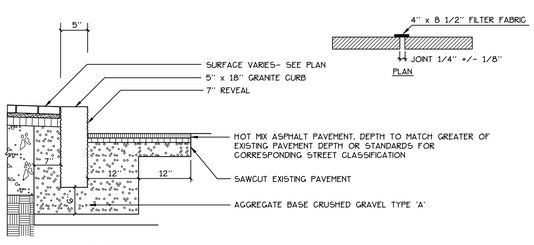
4 L5 BITUMINOUS SIDEWALK WITH GRANITE CURB- CITY OF PORTLAND

NOT TO SCALE



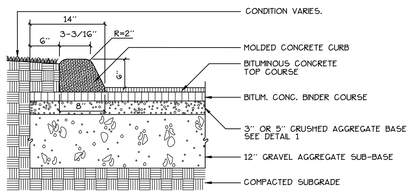
5 L5 BITUMINOUS DRIVEWAY APRON

NOT TO SCALE



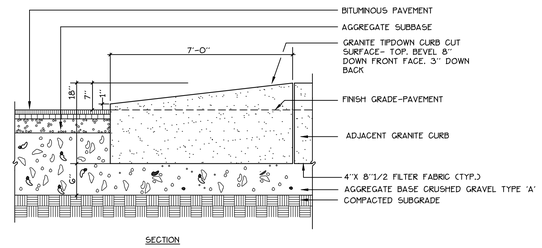
6 L5 VERTICAL GRANITE CURB- CITY RIGHT OF WAY

NOT TO SCALE



7 L5 SLIPFORM CONCRETE CURB-DRIVEWAY

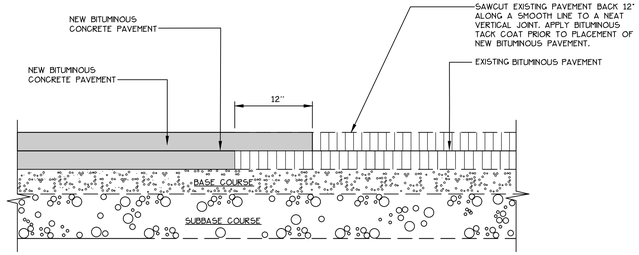
NOT TO SCALE



SECTION

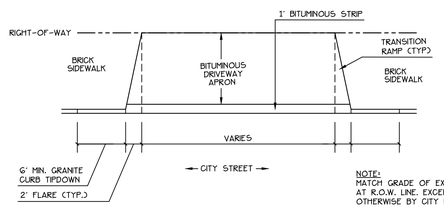
8 L5 GRANITE TIP-DOWN CURB

NOT TO SCALE



9 L5 PAVEMENT SAWCUT DETAIL

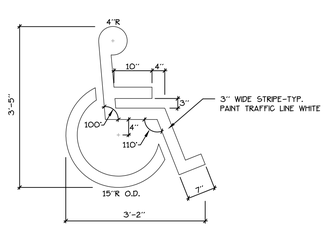
NOT TO SCALE



NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R.O.W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER

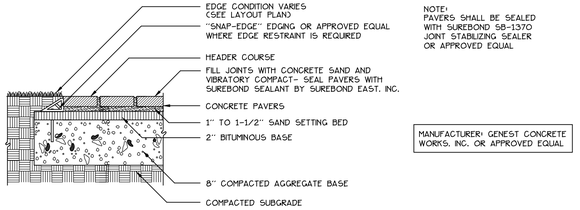
10 L5 DRIVEWAY APRON LAYOUT

NOT TO SCALE



11 L5 ACCESSIBLE SPACE MARKINGS

NOT TO SCALE

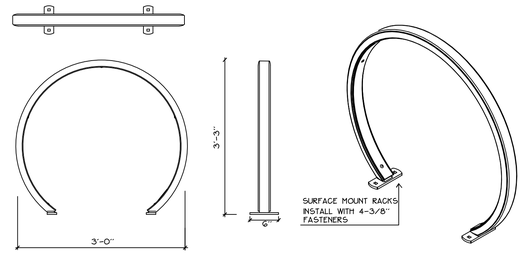


NOTE:
PAVERS SHALL BE SEALED WITH SUREBOND SB-1370 JOINT STABILIZING SEALER OR APPROVED EQUAL

MANUFACTURER: GENEST CONCRETE WORKS, INC. OR APPROVED EQUAL

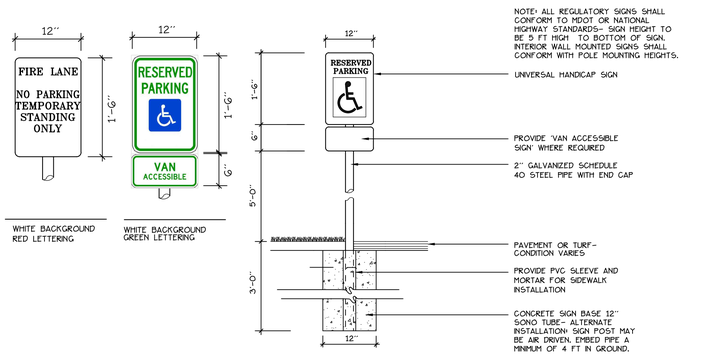
12 L5 CONCRETE PAVERS

NOT TO SCALE



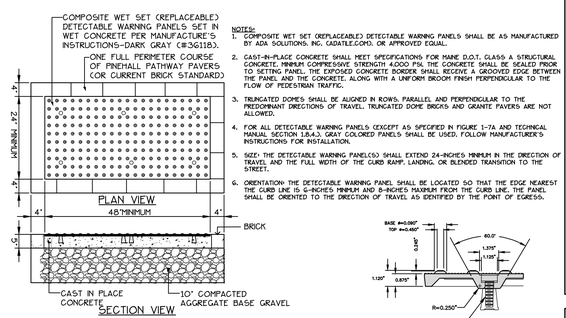
13 L5 SPORTWORKS 'OAHU' BIKE RACK DETAIL

NOT TO SCALE



14 L5 HANDICAP PARKING SIGNAGE AND REGULATORY SIGNS

NOT TO SCALE



NOTES:
1. COMPOSITE WET SET (REPLACEABLE) DETECTABLE WARNING PANELS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. CADATILE-COMO, 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 PANEL. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND THE 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 DIRECTIONS OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. FOR ALL DETECTABLE WARNING PANELS (EXCEPT AS SPECIFIED IN FIGURE 1-7A AND TECHNICAL MANUAL SECTION 1.8.4.3, GRAY COLORED PANELS SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
5. SIZE: THE DETECTABLE WARNING PANEL(S) SHALL EXTEND 24-INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
6. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 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.

15 L5 SIDEWALK RAMP DETECTABLE WARNING TILE

NOT TO SCALE

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72 Bishop Street
72 Bishop Street Portland, Maine

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:
Rev. 5/22/15

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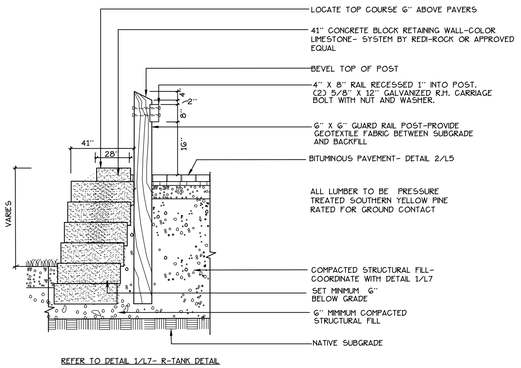
Title:
SITE DETAILS

Scale:
AS SHOWN

LICENSED LANDSCAPE ARCHITECT
ROBERT B. METCALF
No. 1815

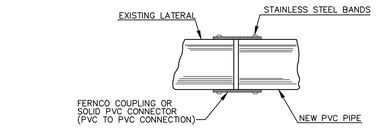
Sheet No.:
L5



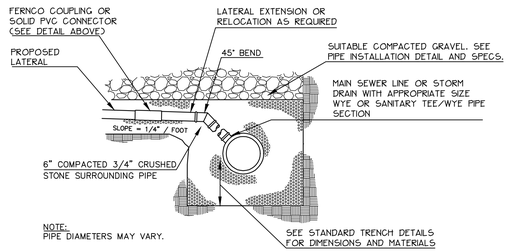
1 LG — CONCRETE SEGMENTAL RETAINING WALL WITH GUARDRAIL

NOT TO SCALE

NOTES:
1. LOCATIONS AND ELEVATIONS OF STUBS ON THE PLANS ARE TO BE CONSIDERED AS APPROXIMATE AND MAY BE ADJUSTED AS DIRECTED TO SUIT FIELD CONDITIONS.
2. HOUSE CONNECTIONS AND CATCH BASIN CONNECTIONS TO BE MAIN LINE OF THE SEWER, SHALL CONSIST OF AN APPROPRIATE "Y" BRANCH CONNECTION AS SHOWN ON THE PLANS, OR AS DIRECTED. ACTUAL "Y" LOCATIONS FOR THE HOUSE CONNECTIONS AND CATCH BASIN CONNECTIONS SHALL BE DETERMINED DURING CONSTRUCTION. THE CONTRACTOR SHALL KEEP A COMPLETE RECORD OF "Y" LOCATIONS WHICH SHALL BE GIVEN TO THE CITY OF PORTLAND UPON COMPLETION OF THE CONTRACT. ALL PVC TO PVC COUPLING SHALL BE "SOLID PVC COUPLINGS".



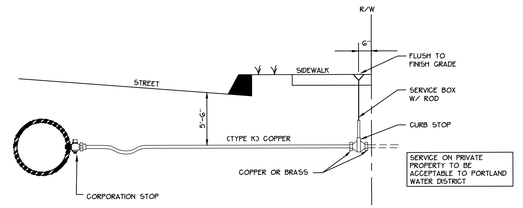
FERNCO COUPLING FOR REPAIR OR REPLACEMENT



SECTION

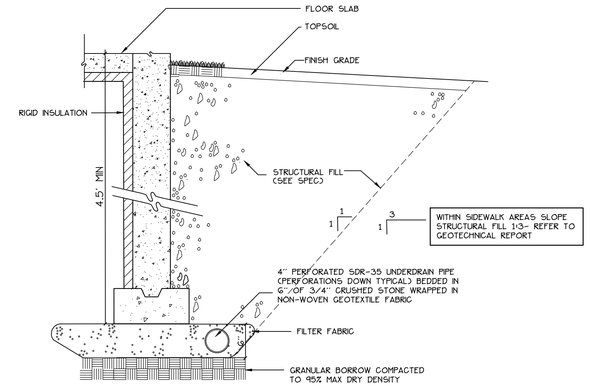
5 LG — TYPICAL LATERAL WYE CONNECTION DETAIL

NOT TO SCALE



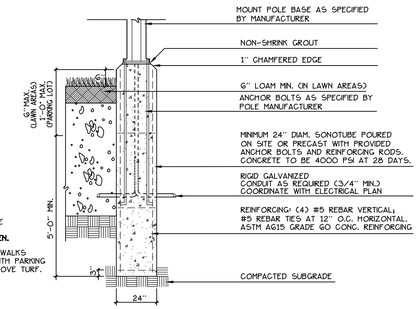
8 LG — TYPICAL RESIDENTIAL WATER SERVICE CONNECTION

NOT TO SCALE



9 LG — FOUNDATION UNDERDRAIN

NOT TO SCALE

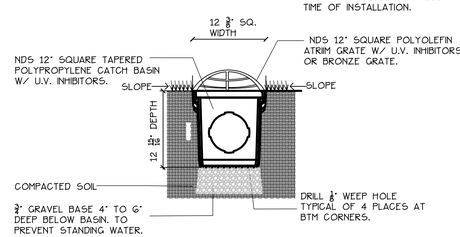


NOTES:
1. POLES MOUNTED IN PARKING AREAS SHALL HAVE A CONCRETE BASE SET 1'-0" ABOVE PAVEMENT OR UNPROTECTED EDGES OF PARKING LOTS- **PAINT BASE DARK GREEN.**
2. POLES MOUNTED ON INSIDE EDGE OF SIDEWALKS AND GRASSED AREAS NOT ASSOCIATED WITH PARKING SPACES, SHALL BE MOUNTED 6 INCHES ABOVE TURF.

2 LG — LIGHT POLE BASE

NOT TO SCALE

NOTE
GRATE TO BE ATTACHED TO CATCH BASIN WITH SCREW PROVIDED AT TIME OF INSTALLATION.

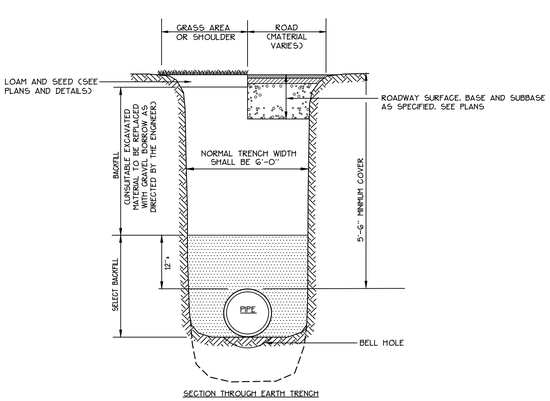


6 LG — NDS 12" SQ. SHALLOW CATCHBASIN

NOT TO SCALE

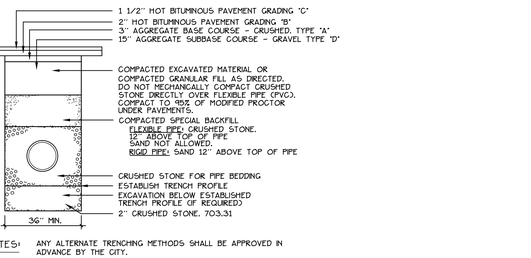
3 LG — TELEPHONE / CABLE T.V. + STREET LIGHTING TRENCH

NOT TO SCALE



7 LG — PORTLAND WATER DISTRICT PIPE TRENCH DETAIL

NOT TO SCALE

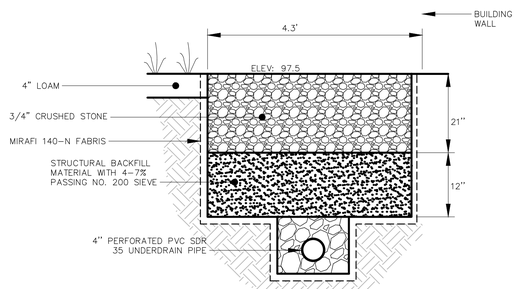


NOTES: ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.

ALL TRENCH DIMENSIONS SHALL BE IN CONFORMANCE WITH THE CITY OF PORTLAND'S DETAIL FIGURE II-13 OF THE TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.

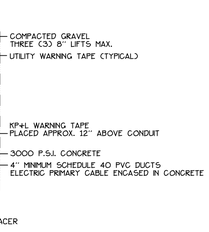
10 LG — PIPE TRENCH DETAIL

NOT TO SCALE



11 LG — ROOF DRIPLINE FILTER DETAIL

NOT TO SCALE



4 LG — ELECTRIC TRENCH

NOT TO SCALE

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72 Bishop Street

72 Bishiop Street
Portland, Maine

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:
Rev. 5/22/15

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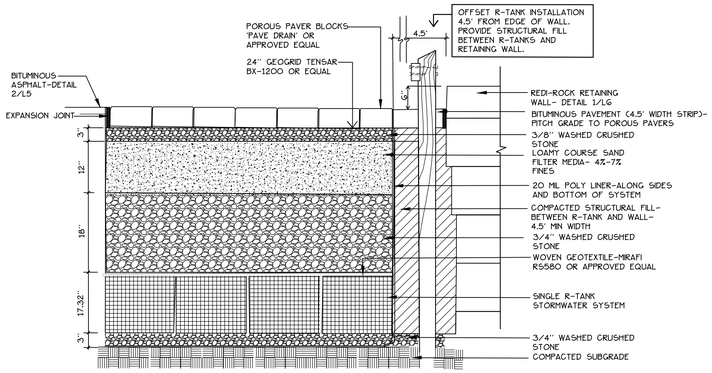
Title:
SITE DETAILS

Scale:
AS SHOWN

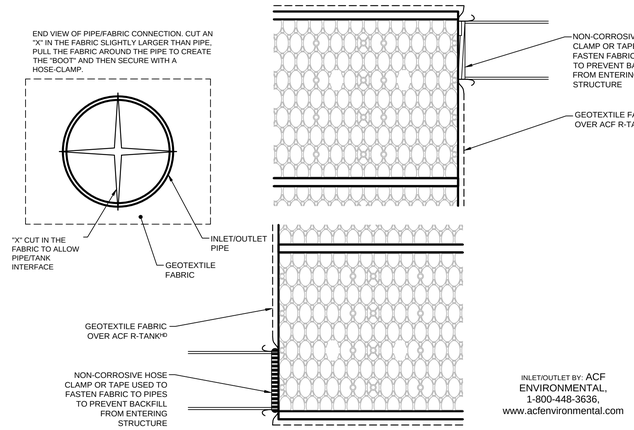
LICENSED LANDSCAPE ARCHITECT
ROBERT B. METCALF
No. 1815

Sheet No.:
L6



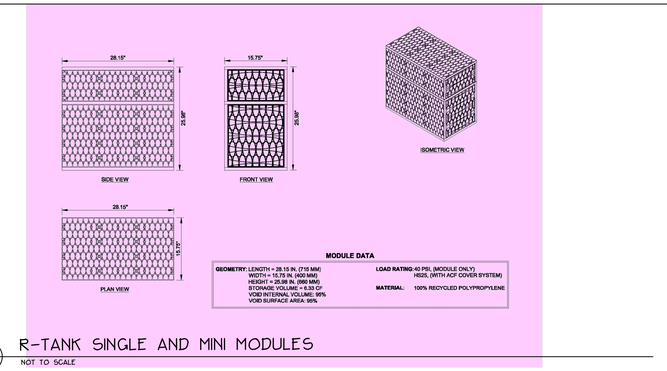
1 L7 POROUS PAVERS + R-TANK STORMWATER SYSTEM

NOT TO SCALE



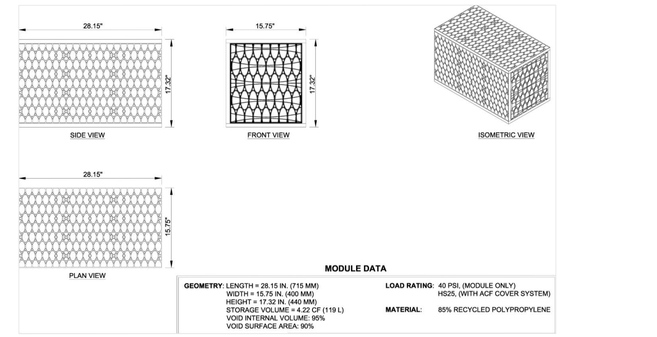
4 L7 R-TANK INLET/OUTLET

NOT TO SCALE



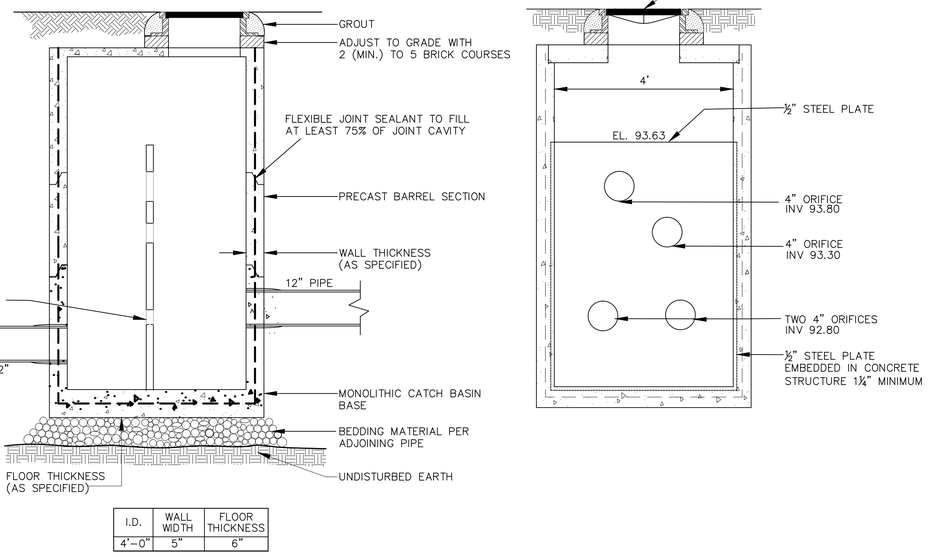
6 L7 R-TANK SINGLE AND MINI MODULES

NOT TO SCALE



7 L7 R-TANK SINGLE MODULES

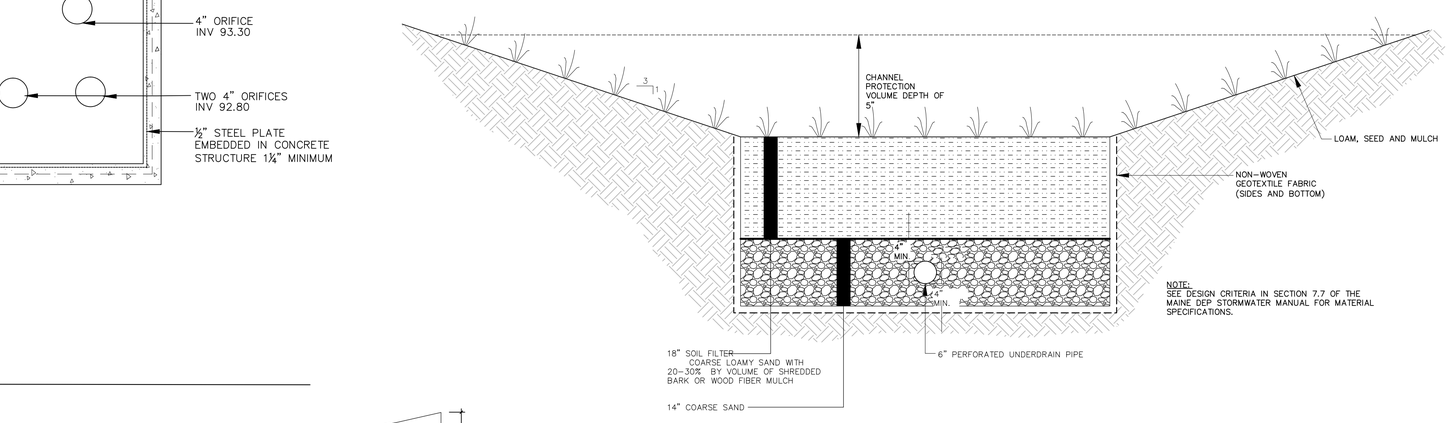
NOT TO SCALE



I.D.	WALL WIDTH	FLOOR THICKNESS
4'-0"	5"	6"

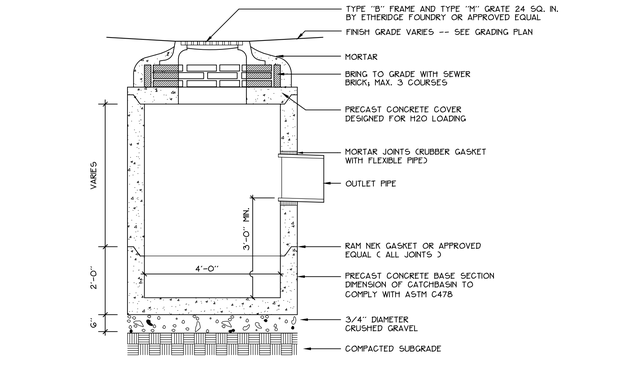
2 L7 FLOW CONTROL STRUCTURE

NOT TO SCALE



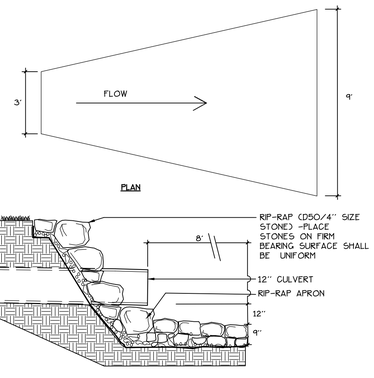
8 L7 VEGETATED SOIL FILTER (WEST SIDE OF BUILDING)

NOT TO SCALE



3 L7 PRECAST CONCRETE CATCHBASIN

NOT TO SCALE



5 L7 OCS OUTLET APRON AND RIP-RAP DETAIL

NOT TO SCALE

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72 Bishop Street

72 Bishop Street Portland, Maine

Date: APRIL 10, 2015

Issued For: SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions: Rev. 5/22/15

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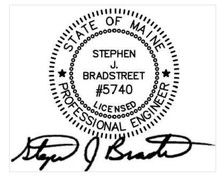
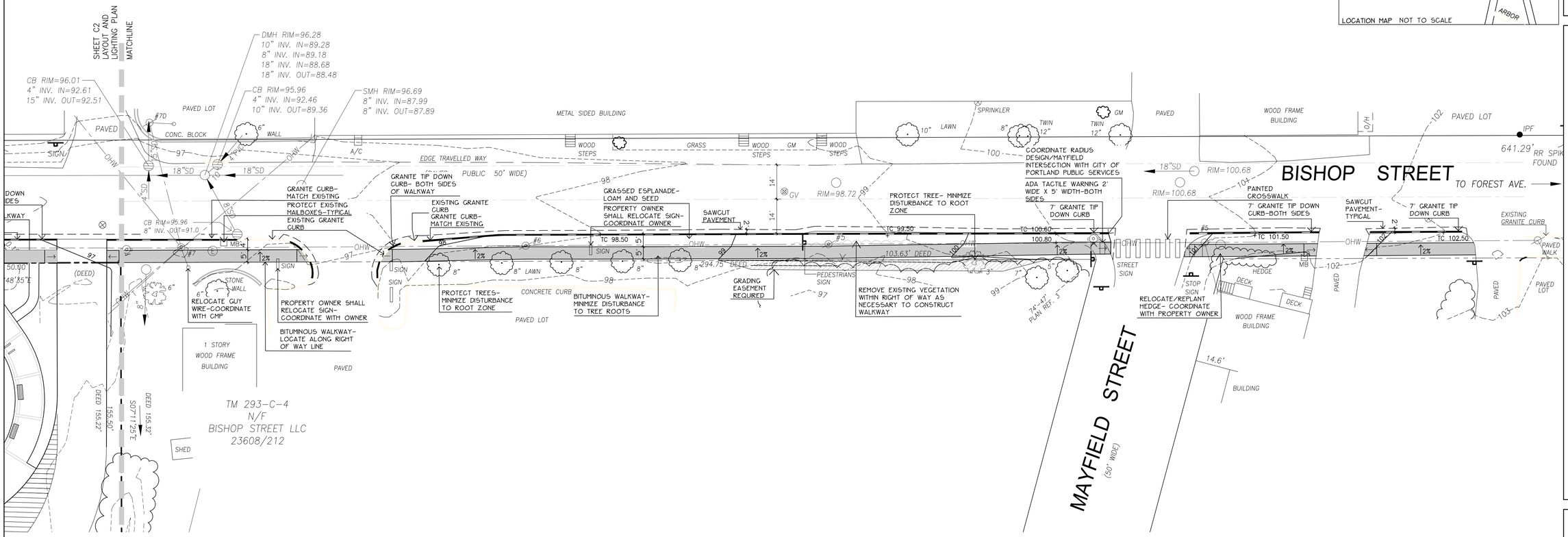
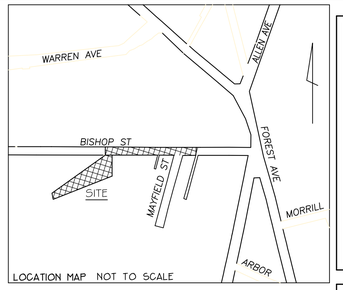
Title: STORMWATER DETAILS

Scale: AS SHOWN



Sheet No.: L7





GENERAL NOTES:

1. EXISTING CONDITIONS AND BOUNDARY INFORMATION TAKEN FROM A PLAN ENTITLED 'BOUNDARY + TOPOGRAPHIC SURVEY AT 72 BISHOP STREET. PORTLAND, MAINE" PREPARED BY OWEN HASKELL, INC. DATED JULY 17, 2014.

2. BEARINGS ARE GRID NORTH AND ELEVATIONS ARE NAVD88 AS BASED ON STATIC GPS COLLECTION AND OPUS CORRECTION.

3. 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 THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-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.

Prepared For:

Owner:

AVESTA BISHOP STREET LP
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Tel.: 207-553-7777

Prepared By:

MITCHELL & ASSOCIATES
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72 BISHOP STREET

Portland, Maine

Bishop Street

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:

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Title:
BISHOP STREET
SIDEWALK PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.:
L7

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EROSION AND SEDIMENTATION CONTROL PLAN

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION OF A 21,374 SF. 30 UNIT. APARTMENT BUILDING IN PORTLAND. MAINE. THIS PLAN IS BASED ON THE STORMWATER MANAGEMENT FOR MAINE VOLUME III BMPs TECHNICAL DESIGN MANUAL DATED JANUARY 2006.

THE PROJECT CONSISTS OF CONSTRUCTION OF A PROPOSED 3-STORY BUILDING WITH A 7,804 SF FOOTPRINT AND PARKING AREA. THE ASSOCIATED GRADING DEFINES THE LIMITS OF PROPOSED EARTH MOVEMENT FOR THE DEVELOPMENT. THE HORIZONTAL AND VERTICAL PLACEMENT PROPOSED BUILDING ADDITION AND PARKING LOT HAVE BEEN DESIGNED TO MAXIMIZE THE TOPOGRAPHIC OPPORTUNITIES AVAILABLE.

B. EROSION CONTROL PRACTICES/TEMPORARY MEASURES

THE FOLLOWING TEMPORARY MEASURES TO CONTROL EROSION AND SEDIMENTATION SHALL BE UTILIZED: EACH GROUND AREA. OPENED OR EXPOSED. WHETHER DIRECTLY OR INDIRECTLY DUE TO THE DEVELOPMENT. SHALL BE MINIMIZED AND SHALL BE STABILIZED WITHIN 15 DAYS OF INITIAL DISTURBANCE OF SOIL AND SHALL BE PERMANENTLY STABILIZED WITHIN SEVEN DAYS OF FINAL GRADING.
THIS STATEMENT APPLIES TO DISTURBED AREAS BEYOND THE LIMITS OF THE PROPOSED BUILDING. EXPOSED AREAS SHALL BE STABILIZED PRIOR TO A RAIN EVENT.

TEMPORARY SOIL STABILIZATION SHALL BE EITHER BY TEMPORARY MULCHING. TEMPORARY SEEDING. PERMANENT BASE GRAVEL. OR ASPHALT BINDER COURSE AS FOLLOWS:

TEMPORARY SEEDING: SEED SHALL BE AROOSTOOK RYE APPLIED AT 2.60#/1000 SF.
LIME SHALL BE AGRICULTURAL GROUND LIMESTONE APPLIED AT 138#/1000 SF.
FERTILIZER SHALL BE 10-10-10 CLASSIFICATION APPLIED AT 13.8#/1000 SF.
MULCH SHALL CONSIST OF HAY AND STRAW MULCH AND SPREAD EVENLY AT A RATE OF 70-90#/1000 SF.
TEMPORARY SEEDING SHALL ONLY BE MADE BETWEEN APRIL 15 AND OCTOBER 1. AND SHALL NOT BE PLACED OVER SNOW.

TEMPORARY MULCHING: MULCH SHALL CONSIST OF CHOPPED HAY OR STRAW MULCH AND SPREAD BY MECHANICAL BLOWER EVENLY AT A RATE OF 150-200#/1000 SF. TEMPORARY MULCH SHALL BE REMOVED PRIOR TO PERMANENT SOIL STABILIZATION. MULCH MUST NOT BE PLACED OVER SNOW. SNOW SHALL BE REMOVED PRIOR TO MULCHING.

PERMANENT BASE GRAVEL: BASE GRAVEL UNDER PAVEMENT SHALL BE SUITABLE AS TEMPORARY SOIL STABILIZATION UNDER THE FOLLOWING CONDITIONS:
a. SLOPES SHALL BE LESS THAN EIGHT PERCENT,
b. GRAVEL SHALL MEET THE SPECIFICATIONS FOR BASE OR SUBBASE GRAVEL FOR THE PROPOSED COMPLETED PAVEMENT.
ASPHALT BINDER COURSE: ASPHALT BINDER SHALL MEET THE SPECIFICATIONS FOR THE ASPHALT BINDER COURSE FOR THE PROPOSED COMPLETED PAVEMENT.

C. EROSION CONTROL PRACTICES/PERMANENT MEASURES

THE FOLLOWING PERMANENT MEASURES TO CONTROL EROSION AND SEDIMENTATION SHALL BE UTILIZED:
1. PERMANENT SEEDING SHALL BE PERFORMED DURING CONSTRUCTION OPERATIONS AS EACH DISTURBED AREA HAS BEEN BROUGHT TO FINISH GRADE. PERMANENT SEEDINGS SHALL BE MADE AS DORMANT SEEDING AFTER THE FIRST KILLING FROST. DORMANT SEEDING AND MULCH SHALL BE USED AT TWO TIMES THE PERMANENT SEEDING AND MULCHING RATE SHOWN BELOW FOR BOTH LAWN AS WELL AS EMBANKMENTS. SEED. LOAM. LIME. FERTILIZER AND MULCH ARE TO BE AS FOLLOWS:

SEED: THE SEED MIXTURE SHALL CONSIST OF SEED PROPORTIONED BY WEIGHT. ALL SEED SHALL BE FRESH. CLEAN. 'NEW CROP' SEED. HARMLESS INERT MATTER AND WEED SEEDS SHALL BE PERMITTED UP TO ONE PERCENT OF THE GROSS WEIGHT OF EACH VARIETY OF SEED. ALL SEED SUPPLIED SHALL BE PACKED IN APPROVED CONTAINERS BEARING THE MANUFACTURER'S NAME AND ANALYSIS OF CONTENTS. THE FOLLOWING MATERIALS AND APPLICATION RATES SHALL BE REQUIRED FOR PERMANENT SEEDING:

LAWN

CREEPING RED RESCUE:	0.69#/1000 SF
KENTUCKY BLUEGRASS:	0.57#/1000 SF
PERENNIAL RYE GRASS:	0.46#/1000 SF
REDTOP:	0.12#/1000 SF
TOTAL:	1.84#/1000 SF

LOAM SHALL BE FREE OF GRASSES. ROOTS. LARGE STONE AND INORGANIC DEBRIS. PLACE LOAM AT FOUR INCHES MINIMUM DEPTH OVER ALL DISTURBED AREAS. FINAL GRADING OF ALL LAWN AREAS TO BE APPROVED BY LANDSCAPE ARCHITECT BEFORE SEEDING.

LIME: LIME SHALL BE AGRICULTURAL GROUND LIMESTONE AND APPLIED AS PER RECOMMENDATION OF A STATE COMMERCIAL SOIL TESTING LABORATORY. FERTILIZER: FERTILIZER SHALL BE 10-20-20 CLASSIFICATION AND APPLIED AS PER RECOMMENDATION OF A STATE COMMERCIAL SOIL TESTING LABORATORY.

MULCH: MULCH SHALL CONSIST OF HAY OR STRAW MULCH. MULCH SHALL BE SPREAD EVENLY AT A RATE OF TWO AND ONE HALF TONS PER ACRE OVER ALL SEEDING. AFTER APPLICATION. THE MULCH SHALL BE THOROUGHLY WETTED. IN STEEP AREAS. THE MULCH SHALL BE HELD IN PLACE BY THE USE OF JUTE EROSION CONTROL NETTING OR APPROVED ALTERNATIVE NETTING MATERIAL. NOTE: ALL EXPOSED SOIL MUST BE COVERED REGARDLESS OF MULCHING RATES SPECIFIED.

THE CONTRACTOR SHALL MAINTAIN THE SEEDED AND MULCHED AREAS UNTIL FINAL ACCEPTANCE OR THE WORK. MAINTENANCE SHALL CONSIST OF PROVIDING PROPER WATERING. PROTECTION AGAINST TRAFFIC AND REPAIRING ANY AREAS DAMAGED DUE TO WIND. WATER. EROSION. FIRE OR OTHER CAUSES. SUCH DAMAGED AREAS SHALL BE REPAIRED TO REESTABLISH THE CONDITION AND GRADE OF THE SOIL PRIOR TO SEEDING AND SHALL THEN BE REFERTILIZED. RESEEDED AND REMULCHED.

D. WINTER CONSTRUCTION

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. 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 UNDERTAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. 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 SHALL 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.

E. CONSTRUCTION SEQUENCE

THE GENERAL SEQUENCE OF WORK SHALL BE AS FOLLOWS:
1. INSTALL EROSION CONTROL DEVICES.
2. GRADE SITE.
3. TEMPORARILY STABILIZE DISTURBED AREAS BY MULCHING ALL EXPOSED SOIL WITHIN 15 DAYS OF INITIAL DISTURBANCE.
4. COMPLETE SITE CONSTRUCTION WORK
5. CONSTRUCT PARKING AREA
6. INSTALL PERMANENT VEGETATION ON ALL EXPOSED AREAS WITHIN 15 DAYS OF FINAL GRADING.
7. PERFORM CONTINUING MAINTENANCE ON ALL EROSION AND SEDIMENTATION CONTROL DEVICES AND MEASURES.

F. SITE INSPECTION + MAINTENANCE

WEEKLY INSPECTIONS. AS WELL AS ROUTINE INSPECTIONS FOLLOWING RAINFALLS OF 0.5" OVER A CONSECUTIVE 24-HOUR PERIOD. SHALL BE CONDUCTED BY THE SITE CONTRACTOR OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES UNTIL FINAL ACCEPTANCE OF THE PROJECT. NECESSARY REPAIRS SHALL BE MADE TO CORRECT UNDERMINING OR DETERIORATION. FINAL ACCEPTANCE SHALL INCLUDE A SITE INSPECTION TO VERIFY THE STABILITY OF ALL DISTURBED AREAS AND SLOPES. UNTIL FINAL INSPECTION. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL IMMEDIATELY BE CLEANED. AND REPAIRED BY THE SITE CONTRACTOR AS REQUIRED. DISPOSAL OF ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR. CONTINUED TEMPORARY MAINTENANCE AND LONG TERM PROVISIONS FOR PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL FACILITIES AFTER ACCEPTANCE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF AVESTA HOUSING.

CONSTRUCTION SPECIFICATIONS:

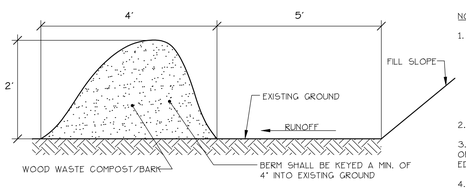
1. STONE SIZE: AASHTO DESIGNATION M 43. SIZE NO. 2 (2.5" TO 1.5"). USE CRUSHED STONE.
2. LENGTH: AS EFFECTIVE. BUT NOT LESS THAN 50 FEET.
3. THICKNESS: NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINT OF INGRESS OR EGRESS.
5. WASHING: WHEN NECESSARY. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED. IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN. DITCH. OR WATERCOURSE THROUGH THE USE OF SAND BAGS. GRAVEL. BOARDS OR OTHER APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONES AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED. DROPPED. WASHED. OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

1 / L8 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

ALLATION DETAIL

BAG DETAIL

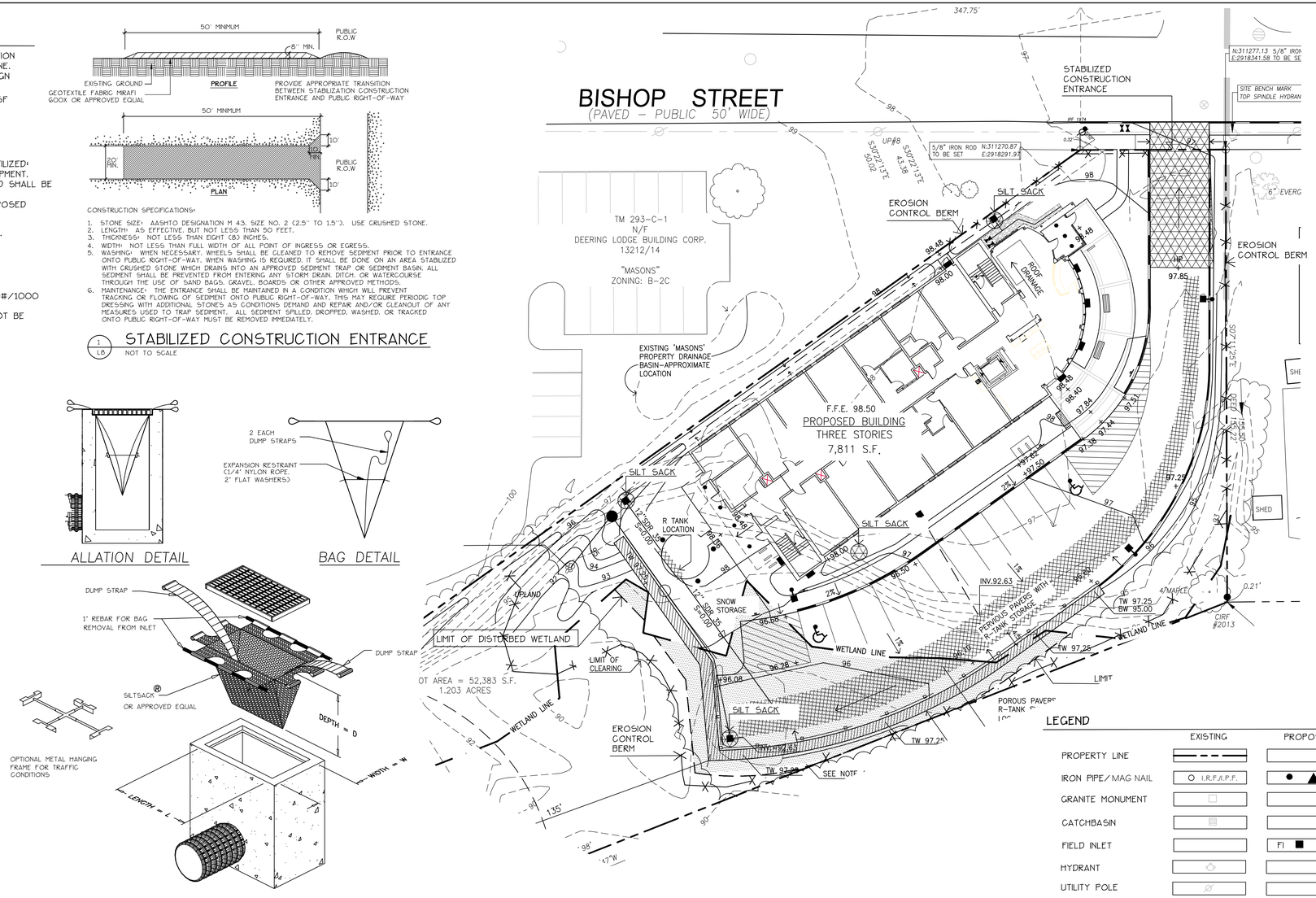
2 / L8 INLET SEDIMENT CONTROL DEVICE
NOT TO SCALE



NOTES:

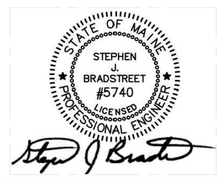
1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:
   A. MOISTURE CONTENT - 30-60%.
   B. pH - 5.0 - 8.0.
   C. SCREEN SIZE - 100% LESS THAN 3". MAX. 70% LESS THAN 1".
   D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION.
   E. NO STONES LARGER THAN 2" IN DIAMETER.
   F. SILTS. CLAYS OR SUGAR SANDS ARE NOT ACCEPTABLE IN THE MIX.
2. THE COMPOST BERM SHALL BE PLACED. UNCOMPACTED. ALONG A RELATIVELY LEVEL CONTOUR.
3. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE. AT THE TOE OF SHALLOW SLOPES. ON FROZEN GROUND. LEDGE OUT CROPS. VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.

3 / L8 EROSION CONTROL MIX
NOT TO SCALE



LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
IRON PIPE/ MAG NAIL	O I.R.F./I.P.F.	● ▲
GRANITE MONUMENT	□	
CATCHBASIN		
FIELD INLET		FI ■
HYDRANT		
UTILITY POLE		
CONTOUR	50	23
SPOT GRADE	+72.76	+72.89
FENCE	x x	o o o o
DEC. TREE		⊙
EVERGREEN TREE		⊗
LIGHT POLE		
CURB		
SOIL BORINGS	✥	
WATER VALVE	⊗	⋈
GAS VALVE	⊗	
SIGN		
WETLAND		
SILT FENCE		X X



Prepared For:

Owner:

AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:

MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel.: 207-774-4427

72 BISHOP STREET
Bishop Street
Portland, Maine

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:
Rev: May 22, 2015

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Title:
EROSION AND SEDIMENTATION CONTROL PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.:
L8

GENERAL NOTES:

1. SITE AREA: 52,383 SF OR 1.20 ACRES

2. APPLICANT: AVESTA 72 BISHOP, LP
307 CUMBERLAND AVENUE
PORTLAND, MAINE 04101

3. OWNER: AVESTA HOUSING DEVELOPMENT CORP.
307 CUMBERLAND AVENUE
PORTLAND, MAINE 04101

4. ZONING DISTRICT: B-2-C COMMUNITY BUSINESS DISTRICT

5. PARCEL IS SHOWN AS LOT 2 AND LOT 3, BLOCK C ON CITY OF PORTLAND ASSESSORS MAP 293.

6. DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 31827, PAGE 271.

7. SPACE AND BULK STANDARDS:

	REQUIRED	PROPOSED
MINIMUM LOT SIZE:	NONE	52,383 SF
MINIMUM STREET FRONTAGE:	20 FEET	50 FEET
FRONT YARD SETBACK	NONE	18 FEET
REAR YARD SETBACK	10 FEET	10 FEET
SIDE YARD SETBACK	NONE	5 FEET
FRONT YARD MAXIMUM	10 FEET	18 FEET
MAXIMUM IMPERVIOUS SURFACE RATIO:	NONE	35%
MAXIMUM HEIGHT OF STRUCTURES:	45 FEET	39 FEET
MAXIMUM RESIDENTIAL DENSITY:	1,500 SF/UNIT	1,746 SF/UNIT

8. EXISTING CONDITIONS AND BOUNDARY INFORMATION TAKEN FROM A PLAN ENTITLED 'BOUNDARY + TOPOGRAPHIC SURVEY AT 72 BISHOP STREET, PORTLAND, MAINE' PREPARED BY OWEN HASKELL, INC. DATED JULY 17, 2014.

9. BEARINGS ARE GRID NORTH AND ELEVATIONS ARE NAVD88 AS BASED ON STATIC GPS COLLECTION AND OPUS CORRECTION.

10. WETLAND DELINEATION PERFORMED BY C.E.S. INC., LEWISTON MAINE, JUNE 2014. FLAGGED WETLAND AREA WAS SURVEYED BY OWEN HASKELL, INC., FALMOUTH, MAINE, JULY 2014.

11. PROPOSED DWELLING UNITS: 30 (SRO) EFFICIENCY APARTMENT UNITS

12. OFF-STREET PARKING REQUIREMENTS:
REQUIRED: 1/DWELLING UNIT =30 PARKING SPACES

PROPOSED: 10 STANDARD PARKING SPACES
2 HANDICAP PARKING SPACE

13. BICYCLE PARKING:
REQUIRED: 2 SPACES/5 DWELLING UNITS
12 SPACES (30 NEW DWELLING UNITS)
PROPOSED: 12 SPACES

14. EXISTING IMPERVIOUS: 1,304 +/- SF (2.5% OF SITE)
PROPOSED IMPERVIOUS: 18,686 +/- SF (35% OF SITE)

15. FLOOR AREA CALCULATIONS

FIRST FLOOR:	7,310 SF
SECOND FLOOR:	7,240 SF
THIRD FLOOR:	5,940 SF
TOTAL	20,490 SF

16. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY AND ALL UTILITIES CONNECTING TO INFRASTRUCTURE WITHIN THE ROAD SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.

17. THE CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR UNDERTAKING THE WORK IN A SAFE AND EFFICIENT MANNER, IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY REGULATIONS. ALL WORK AREAS SHALL BE DELINEATED CLEARLY AND FENCED AS APPROPRIATE TO PREVENT UNAUTHORIZED ACCESS. THE SITE SHALL BE LEFT IN A SAFE, ORDERLY AND TIDY MANNER AT THE END OF EACH WORK DAY.

18. UTILITY SERVICE CONNECTIONS SHALL CONFORM TO STANDARDS FOR INDIVIDUAL UTILITY PROVIDERS

19. EXISTING WETLANDS: 14,203 SF
IMPACTED WETLANDS: 3,105 SF

20. SITE LIGHTING SHALL MEET THE CITY OF PORTLAND STANDARDS AS OUTLINED IN SECTION 12 OF THE CITY OF PORTLAND TECHNICAL DESIGN STANDARDS. SITE LIGHTING SHALL ADHERE TO SECTION 12.2.5 LIGHT TRESPASS-LIGHTING SHALL NOT BE GREATER THAN 0.1 FOOTCANDLES AT THE PROPERTY LINE.

21. PRIOR TO SITE CLEARING, CONTRACTOR SHALL COORDINATE WITH PROJECT LANDSCAPE ARCHITECT TO DEMARCATE TREES FOR PROTECTION AND WETLAND AREAS TO BE PROTECTED. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.- SEE NOTE 10 SHEET L4

22. SNOW IS PROHIBITED FROM BEING DUMPED OR STORED IN WETLAND AREAS. ON SITE STORAGE SHALL BE LIMITED TO UPLAND AREAS AS DEFINED ON THE PLAN OR HAULED OFF SITE.

PLAN REFERENCES

1. 'PLAN OF LAND IN PORTLAND, MAINE FOR WESTBROOK COLLEGE. AUGUST 20, 1974 OWEN HASKELL, INC. JOB NO. 7445 P' REVISED 5/4/89

2. 'BOUNDARY SURVEY ATHLETIC FIELD UNIVERSITY OF NEW ENGLAND STEVENS AVENUE + BISHOP STREET PORTLAND, MAINE OCTOBER 2007 COLONIAL SURVEYING COMPANY, LLC'

3. WORKING DRAWING OF MAYFIELD STREET, BISHOP STREET AND STEVENS AVENUE IN FILES OF H.J. + E.C. JORDAN - SURVEYORS

4. SITE PLAN OF PROPERTY ON BISHOP STREET, PORTLAND, MAINE MADE FOR PLASMINE TECHNOLOGY, INC. OCT. 1, 1991 OWEN HASKELL, INC. JOB NO. 911G3P'

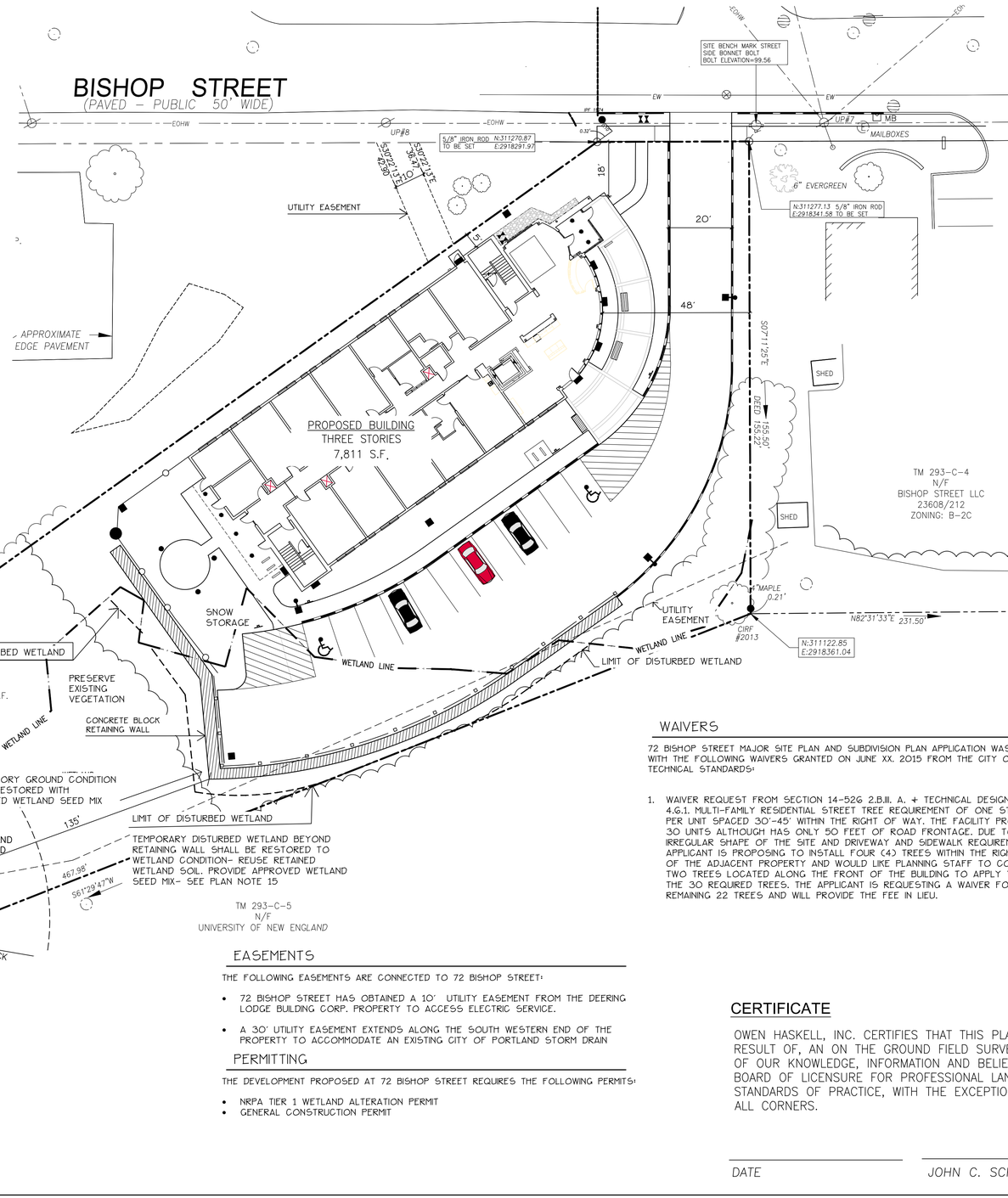
CONDITIONS OF APPROVAL

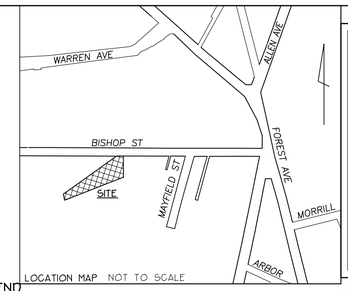
ON JUNE XX, 2015, THE PORTLAND PLANNING BOARD APPROVED THE 72 BISHOP STREET APPLICATION FOR MAJOR SITE PLAN AND SUBDIVISION PLAN SUBJECT TO THE CITY OF PORTLAND STANDARD CONDITIONS OF APPROVAL AND THE FOLLOWING CONDITIONS:

SUBDIVISION
1. THE APPLICANT SHALL REVISE THE SUBDIVISION PLAT TO THE SATISFACTION OF THE PLANNING AUTHORITY, DEPARTMENT OF PUBLIC SERVICES, AND CORPORATION COUNSEL.

SITE PLAN
1. THE APPLICANT SHALL PROVIDE A DETAILED CONSTRUCTION MANAGEMENT PLAN, TO BE APPROVED BY THE DEPARTMENT OF PUBLIC SERVICES, PRIOR TO ANY BUILDING PERMIT BEING ISSUED.

2. THE APPLICANT SHALL MAKE A CONTRIBUTION TO THE CITY'S STREET TREE FUND FOR 22 STREET TREES PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.





LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
IRON PIPE/MAG NAIL	I.R.F./I.P.F.	
GRANITE MONUMENT		
CATCHBASIN		CB
FIELD INLET		FI
HYDRANT		
UTILITY POLE		
FENCE		
DEC. TREE		
EVERGREEN TREE		
LIGHT POLE		
BLDG MOUNTED LIGHT		
CURB		
OVERHEAD WIRES		
SOIL BORINGS		
WATER VALVE		
GAS VALVE		
SIGN		
WETLAND		
OUTLET CONTROL STRUCTURE		
WETLAND IMPACT		

WAIVERS

72 BISHOP STREET MAJOR SITE PLAN AND SUBDIVISION PLAN APPLICATION WAS APPROVED WITH THE FOLLOWING WAIVERS GRANTED ON JUNE XX, 2015 FROM THE CITY OF PORTLAND TECHNICAL STANDARDS:

1. WAIVER REQUEST FROM SECTION 14-526 2.B.III. A. + TECHNICAL DESIGN MANUAL 4.6.1. MULTI-FAMILY RESIDENTIAL STREET TREE REQUIREMENT OF ONE STREET TREE PER UNIT SPACED 30'-45' WITHIN THE RIGHT OF WAY. THE FACILITY PROPOSES 30 UNITS ALTHOUGH HAS ONLY 50 FEET OF ROAD FRONTAGE. DUE TO THE IRREGULAR SHAPE OF THE SITE AND DRIVEWAY AND SIDEWALK REQUIREMENTS THE APPLICANT IS PROPOSING TO INSTALL FOUR (4) TREES WITHIN THE RIGHT OF WAY OF THE ADJACENT PROPERTY AND WOULD LIKE PLANNING STAFF TO CONSIDER THE TWO TREES LOCATED ALONG THE FRONT OF THE BUILDING TO APPLY TOWARDS THE 30 REQUIRED TREES. THE APPLICANT IS REQUESTING A WAIVER FOR THE REMAINING 22 TREES AND WILL PROVIDE THE FEE IN LIEU.

EASEMENTS

THE FOLLOWING EASEMENTS ARE CONNECTED TO 72 BISHOP STREET:

- 72 BISHOP STREET HAS OBTAINED A 10' UTILITY EASEMENT FROM THE DEERING LODGE BUILDING CORP. PROPERTY TO ACCESS ELECTRIC SERVICE.
- A 30' UTILITY EASEMENT EXTENDS ALONG THE SOUTH WESTERN END OF THE PROPERTY TO ACCOMMODATE AN EXISTING CITY OF PORTLAND STORM DRAIN

PERMITTING

THE DEVELOPMENT PROPOSED AT 72 BISHOP STREET REQUIRES THE FOLLOWING PERMITS:

- NRPA TIER 1 WETLAND ALTERATION PERMIT
- GENERAL CONSTRUCTION PERMIT

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, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.

DATE

JOHN C. SCHWANDA, PLS #1252

Approved: Portland Planning Board

Date:

Chair,

Board Members,

Prepared For:
Owner:
AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:
MITCHELL & ASSOCIATES
Landscape Architects
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70 Center Street
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Tel.: 207-774-4427

72 BISHOP STREET

Portland, Maine

Bishop Street

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:
Rev: 5/22/15
Rev: 6/22/15

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Title:
SUBDIVISION PLAT PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.: L2A

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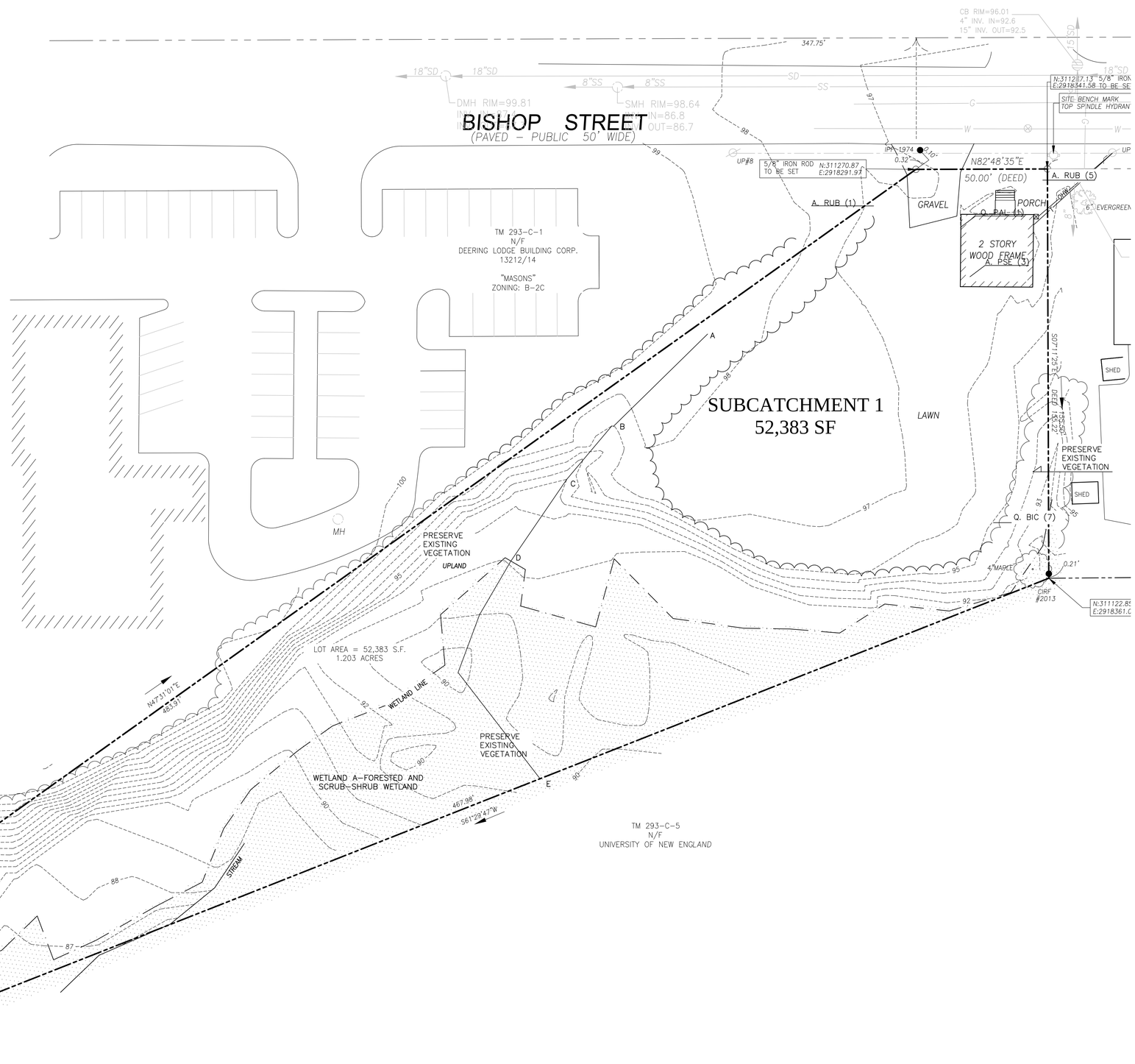
GENERAL NOTES:

1. SITE AREA: 52,383 SF OR 1.20 ACRES
2. IMPERVIOUS AREA: 826 S.F. BUILDING
   380 S.F. GRAVEL DRIVE
   1,206 S.F. TOTAL
3. LANDSCAPED AREA: 14,646 S.F. GRASS
   36,531 S.F. VEGETATED WETLANDS
   51,177 S.F. TOTAL



STATE OF MAINE
STEPHEN J. BRADSTREET
#5740
LICENSED PROFESSIONAL ENGINEER

Prepared For:
Owner:
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Tel.: 207-553-7777

Prepared By:
RANSOM
Consulting Engineers and Scientists
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72 BISHOP STREET

Bishop Street

Portland, Maine

Date: April 10, 2015

Issued For: Site Plan and Subdivision Plan Review

Revisions:

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Title: PRE-DEVELOPMENT STORMWATER PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.: SW 1

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GENERAL NOTES:

1. SITE AREA: 52,383 SF OR 1.20 ACRES

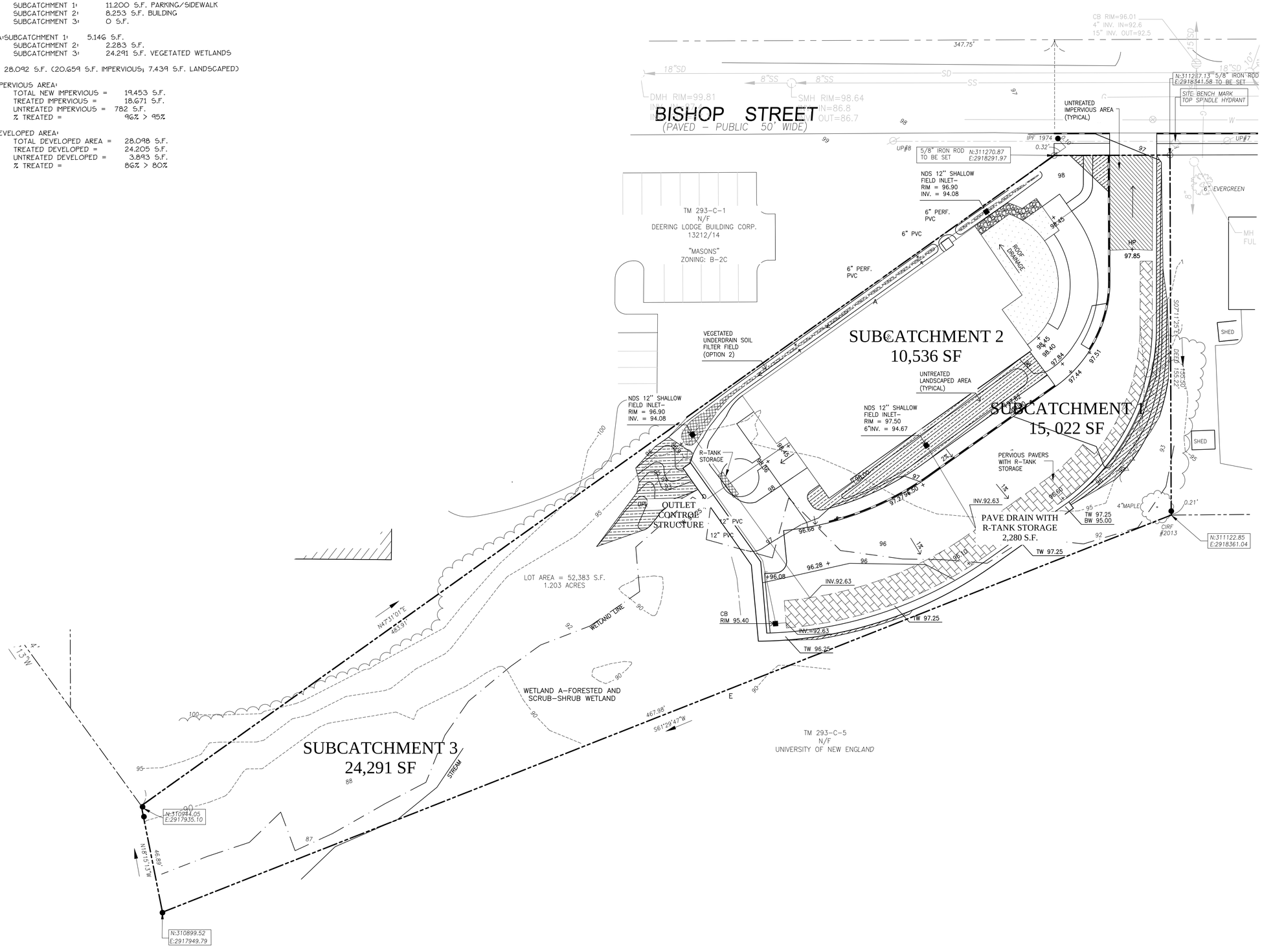
2. IMPERVIOUS AREA: SUBCATCHMENT 1: 11,200 S.F. PARKING/SIDEWALK
   SUBCATCHMENT 2: 8,253 S.F. BUILDING
   SUBCATCHMENT 3: 0 S.F.

3. LANDSCAPED AREA: SUBCATCHMENT 1: 5,146 S.F.
   SUBCATCHMENT 2: 2,283 S.F.
   SUBCATCHMENT 3: 24,291 S.F. VEGETATED WETLANDS

4. DEVELOPED AREA: 28,092 S.F. (20,659 S.F. IMPERVIOUS; 7,439 S.F. LANDSCAPED)

5. TREATMENT OF IMPERVIOUS AREA:
   TOTAL NEW IMPERVIOUS = 19,453 S.F.
   TREATED IMPERVIOUS = 18,671 S.F.
   UNTREATED IMPERVIOUS = 782 S.F.
   % TREATED = 96% > 95%

6. TREATMENT OF DEVELOPED AREA:
   TOTAL DEVELOPED AREA = 28,098 S.F.
   TREATED DEVELOPED = 24,205 S.F.
   UNTREATED DEVELOPED = 3,893 S.F.
   % TREATED = 86% > 80%



STATE OF MAINE
STEPHEN J. BRADSTREET #5740 LICENSED PROFESSIONAL ENGINEER

Prepared For:
Owner:
AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:
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Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel.: 207-774-4427

K:\Image\RNSM NEW.JPG

72 BISHOP STREET

Portland, Maine

Bishop Street

Date: APRIL 10, 2015

Issued For: SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:

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Title: POST DEVELOPMENT STORMWATER PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.: SW 2

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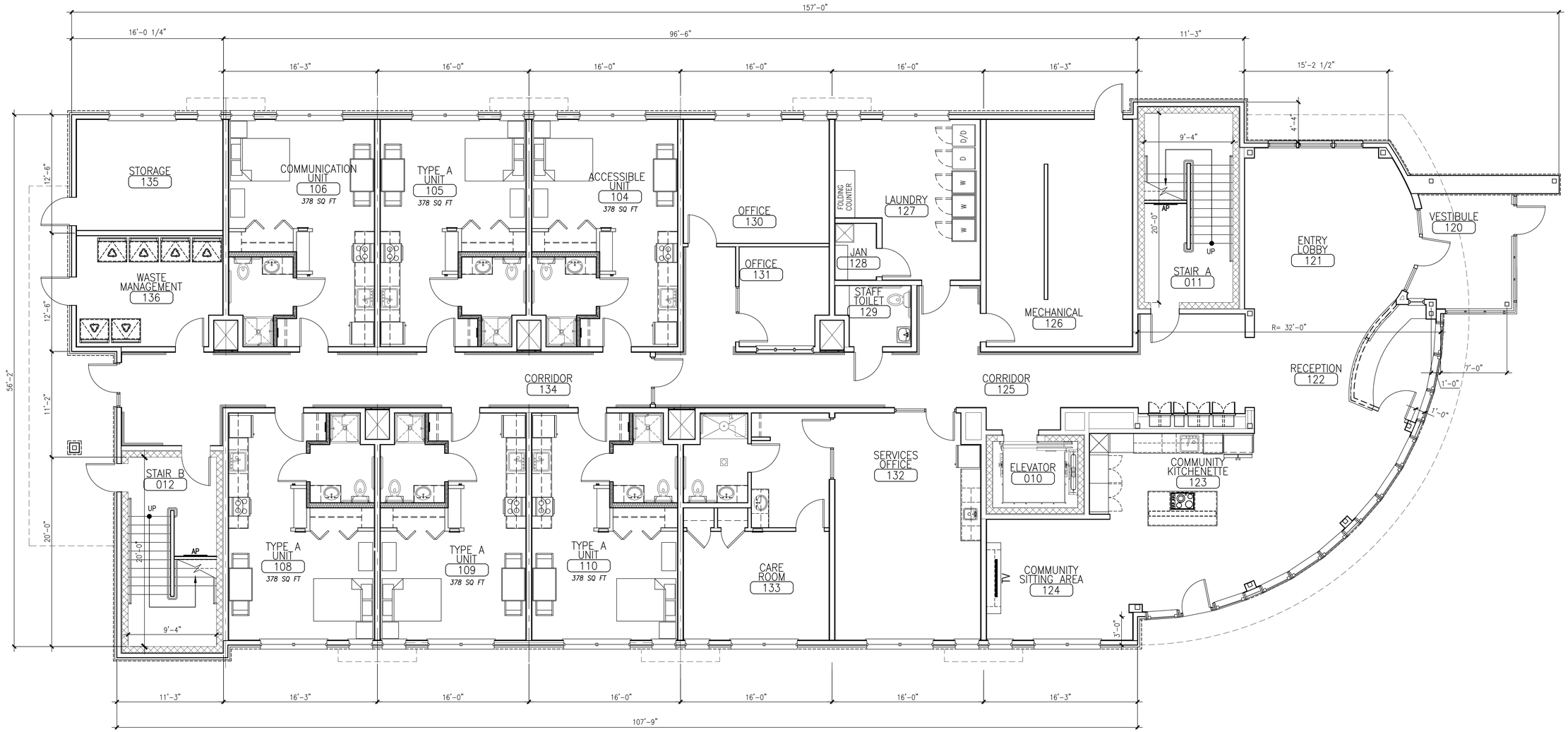

A5 FIRST FLOOR PLAN

SCALE: 3/16" = 1'-0"

M:\2014 Design Projects\14013 Avesta 72 Bishop Street\1-Drawings\Base Floor Plan

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN

PLANNING + DESIGN
CONSTRUCTION SERVICES

DESIGNER

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OWNER

AVESTA BISHOP STREET LP

307 CUMBERLAND AVE.,
PORTLAND, MAINE 04101

PROJECT

BISHOP STREET APARTMENTS

PORTLAND, MAINE 04101

DRAWING

FIRST FLOOR PLAN

CWS PROJECT NUMBER:

REVISIONS

DRAWING NUMBER
A1.01

SCALE: AS NOTED
DATE: 05/29/15

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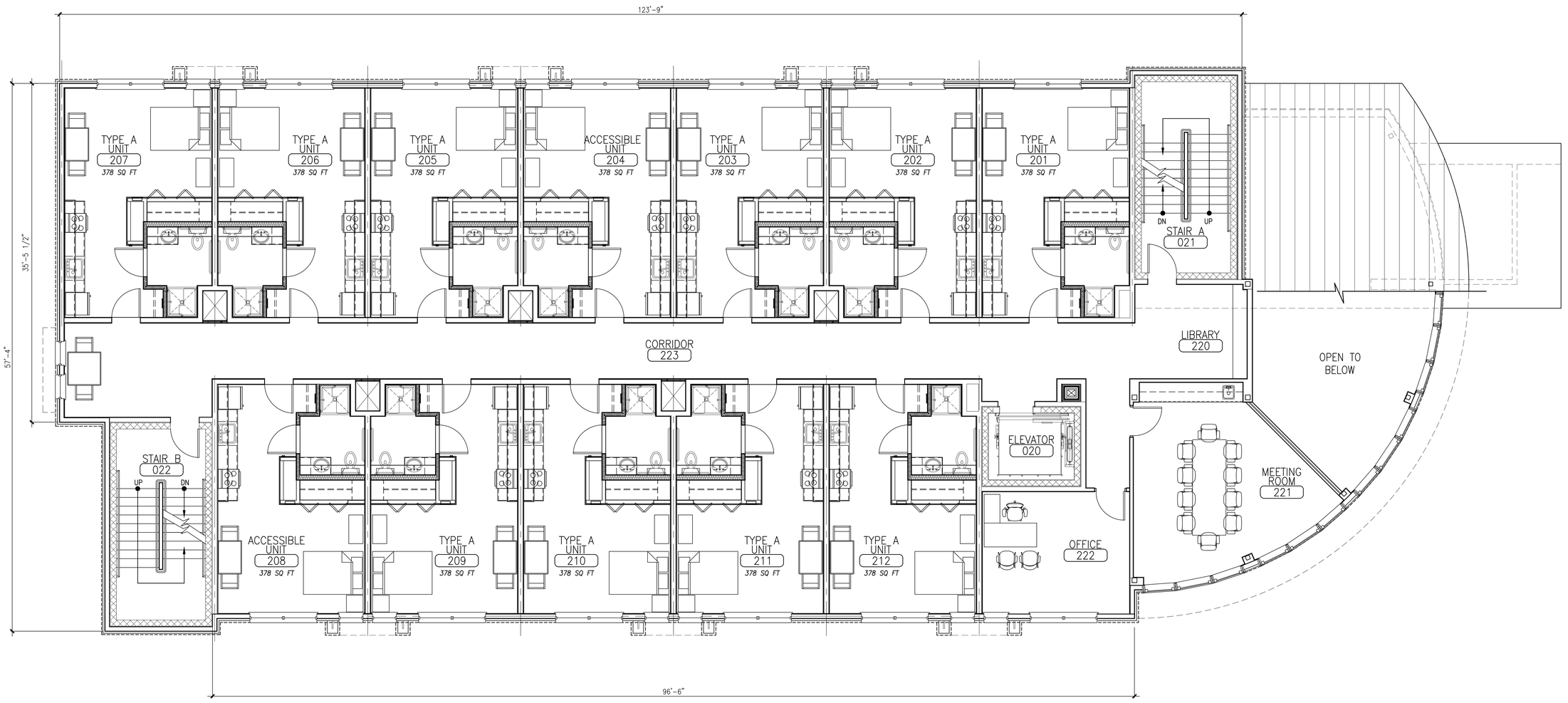

A5 SECOND FLOOR PLAN

SCALE: 3/16" = 1'-0"

W:\2014 Design Projects\14013 Avesta 72 Bishop Street\1-Drawings\Base Second Floor

DESIGNER

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OWNER

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307 CUMBERLAND AVE.,
PORTLAND, MAINE 04101

PROJECT

BISHOP STREET APARTMENTS
PORTLAND, MAINE 04101

DRAWING

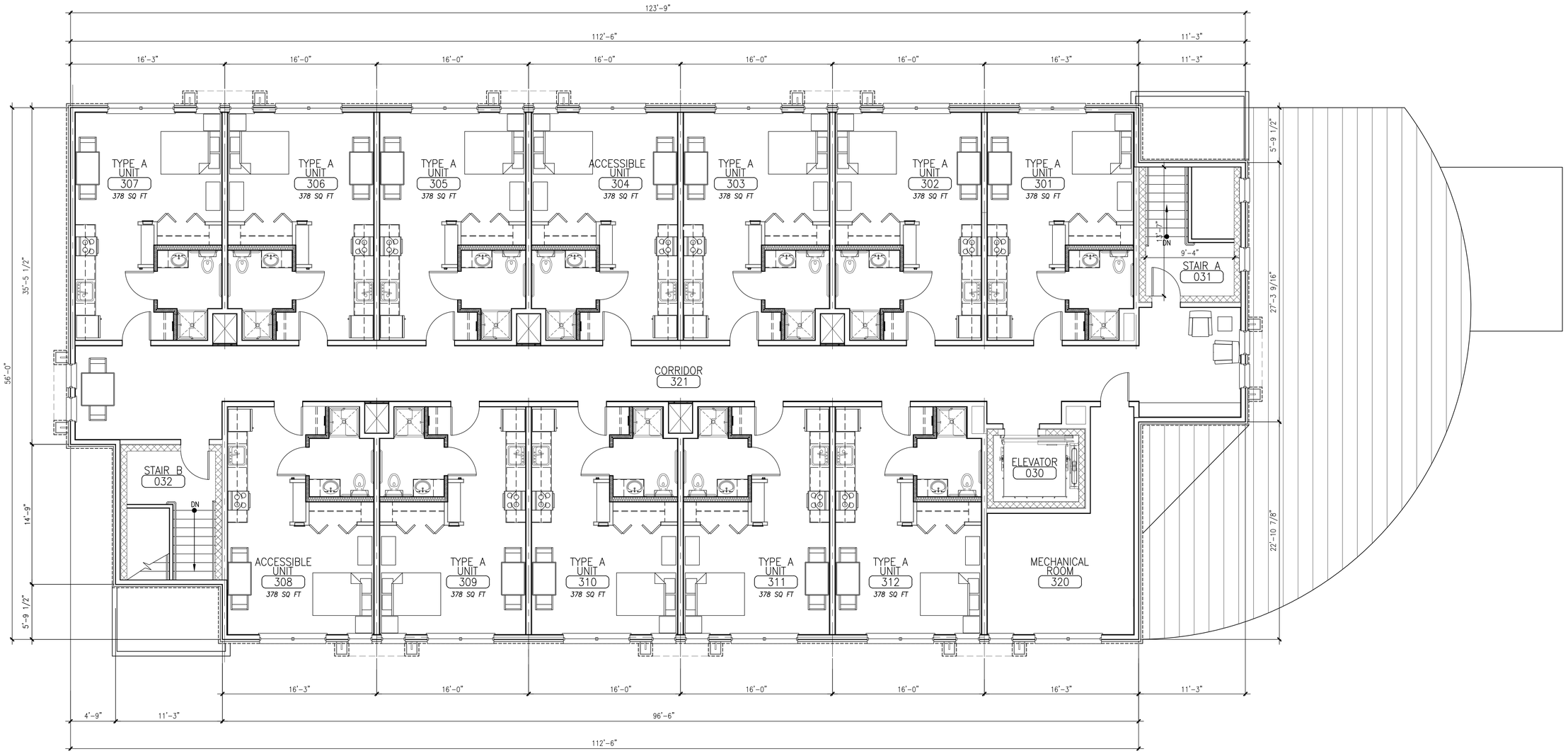
SECOND FLOOR PLAN

CWS PROJECT NUMBER:

REVISIONS

DRAWING NUMBER
A1.02

SCALE: AS NOTED
DATE: 05/29/15



A5 THIRD FLOOR PLAN

SCALE: 3/16" = 1'-0"

W:\2014 Design Projects\14013 Avesta 72 Bishop Street\1-Drawings\Base Third Floor

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PORTLAND, MAINE 04101

PROJECT

BISHOP STREET APARTMENTS

PORTLAND, MAINE 04101

DRAWING

THIRD FLOOR PLAN

CWS PROJECT NUMBER:

REVISIONS

DRAWING NUMBER
A1.03

SCALE: AS NOTED
DATE: 05/29/15

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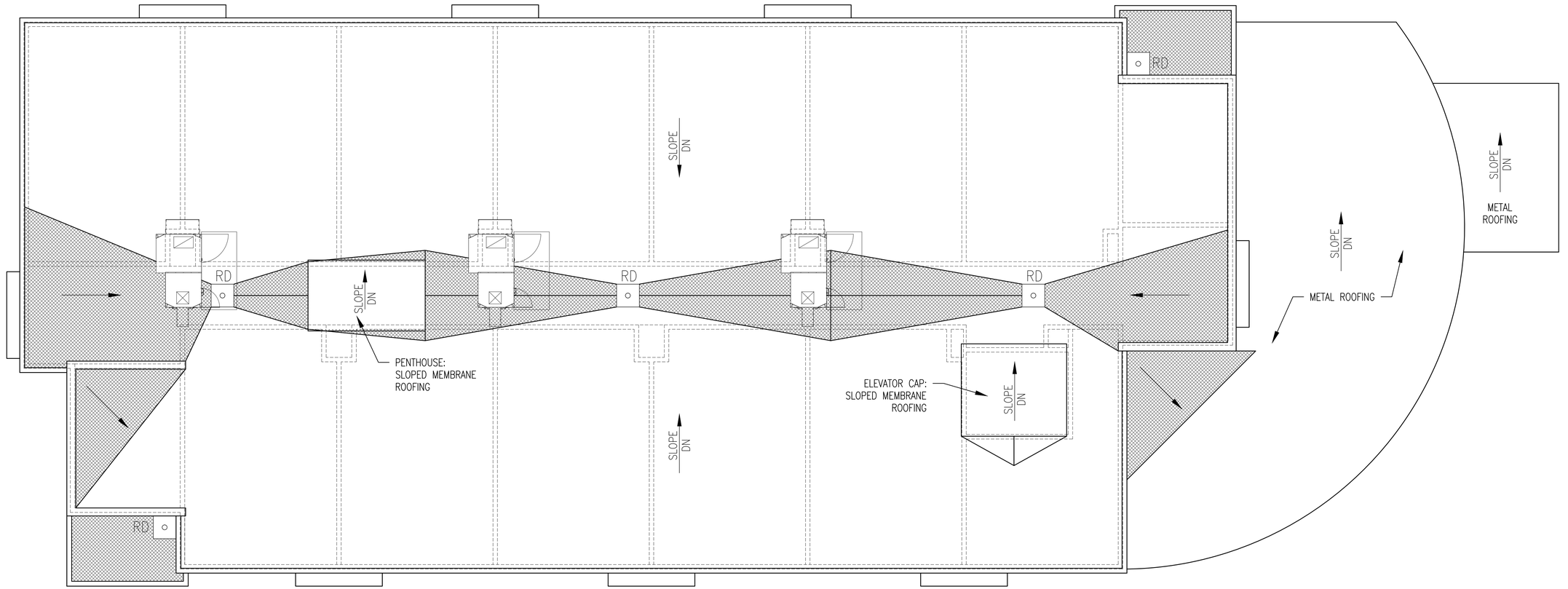

A5 **ROOF PLAN**

SCALE: 3/16" = 1'-0"

M:\2014 Design Projects\14013 Avesta 72 Bishop Street\1-Drawings\Base Roof Plan

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PROJECT
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PORTLAND, MAINE 04101

DRAWING
ROOF PLAN
CWS PROJECT NUMBER:

REVISIONS

DRAWING NUMBER
A1.0R

SCALE: AS NOTED
DATE: 05/29/15

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DOWNSPOUT FILTER LOCATION

STORAGE 135

WASTE MANAGEMENT 136

COMMUNICATION UNIT 106 — 378 SQ FT

TYPE A UNIT 105 — 378 SQ FT

ACCESSIBLE UNIT 104 — 378 SQ FT

OFFICE 130 — 5AC

OFFICE 131 — 5AC

LAUNDRY 127

JAN 128

STAFF RESTROOM 129

MECHANICAL 126

DOWNSPOUT FILTER LOCATION

TBB

TCP

MB

METERS

HP

SPRINKLER

WATER

5AC

EA

SA

800 CFM

8"x18" SUPPLY DUCT TO ROOF.

AP

UP

STAIR A 011

ENTRY LOBBY 121

VESTIBULE 120

CUH

RECEPTION 122

CORRIDOR 134

CORRIDOR 125

COMBINATION FD / SD, TYP.

TYPICAL ARRANGEMENT AT ALL APARTMENTS.

10"x8" GREASE DUCT TO ROOF.

STAIR B 012

TYPE A UNIT 108 — 378 SQ FT

TYPE A UNIT 109 — 378 SQ FT

TYPE A UNIT 110 — 378 SQ FT

SERVICES OFFICE 132

CARE ROOM 133

ELEVATOR 010

COMMUNITY KITCHENETTE 123

8"x10"

KH-1

KH-1 CONTROL PANEL W/ KEYED GAS SHUTOFF.

COMMUNITY SITTING AREA 124

A5 FIRST FLOOR MECHANICAL PLAN

SCALE: 3/16" = 1'-0"

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OWNER

AVESTA

307 CUMBERLAND AVE.,
PORTLAND, MAINE
04101

PROJECT

72 BISHOP STREET

PORTLAND, MAINE

DRAWING

FIRST FLOOR MECHANICAL PLAN

CWS PROJ. NO.: 14.013

REVISIONS

PROJECT NORTH

DRAWING NUMBER
M1.01

SCALE: AS NOTED

DATE: 04/15/15

PROGRESS REVIEW

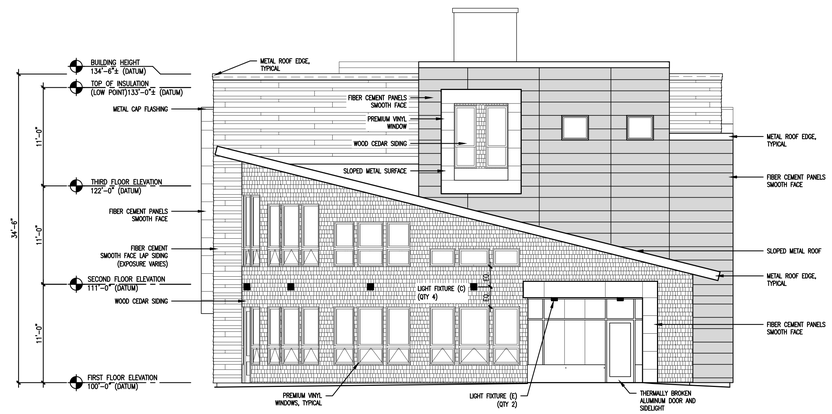
PROPOSED LIGHTING FIXTURES
A – 18' POLE BEACON VIPOR
B – BEACON METRO BOLLARDS
C – BEACON TRAVERSE (LED) 10'
D – BEACON TRAVERSE (LED) 16'
E – BEACON CEILEO (LED)
F – STEP LIGHT (LED)

A2 NORTH ELEVATION

SCALE: 1/8" = 1'–0"

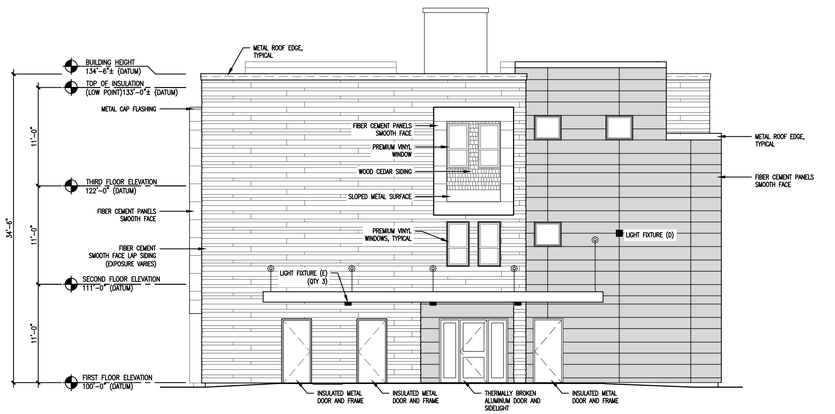
A5 SOUTH ELEVATION

SCALE: 1/8" = 1'–0"



A3 EAST ELEVATION

SCALE: 1/8" = 1'–0"



E3 WEST ELEVATION

SCALE: 1/8" = 1'–0"

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
434 Cumberland Avenue Portland ME 04101
OFFICE: 207 774 4441 CWSARCH.COM

DESIGNER
CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN
434 CUMBERLAND AVENUE
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T. 207-774-4441
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OWNER
AVESTA BISHOP STREET, LP
307 CUMBERLAND AVE.,
PORTLAND, MAINE 04101

PROJECT
BISHOP STREET APARTMENTS
72 BISHOP STREET
PORTLAND, MAINE 04101

DRAWING
EXTERIOR ELEVATIONS
CWS PROJECT NUMBER: 14.013

REVISIONS

DRAWING NUMBER
A3.00

SCALE: AS NOTED
DATE: ##/##/####

ISSUED FOR

CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN

72 Bishop Street

Housing First Apartments

EXISTING CONTEXT IMAGES:

72 Bishop Street

Housing First Apartments

PROPOSED CONTEXT:

DEVELOPMENT POTENTIAL CONTEXT:

72 Bishop Street

Housing First Apartments

PROPOSED CONTEXT:

DEVELOPMENT POTENTIAL CONTEXT:

72 Bishop Street

Housing First Apartments

PROPOSED CONTEXT:

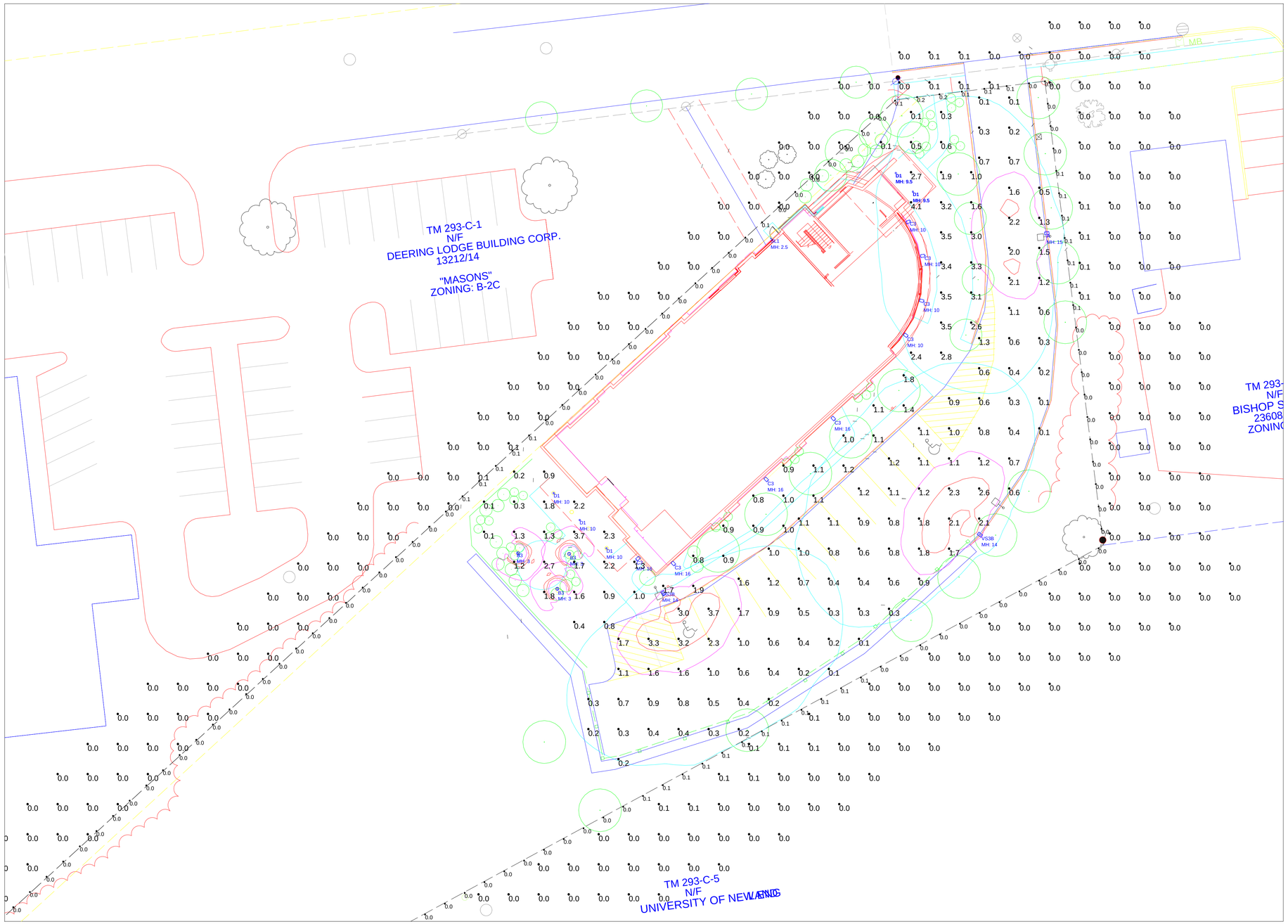
DEVELOPMENT POTENTIAL CONTEXT:

Plan 24

Calculation Summary								
Label	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**	**# Pts**	**PtSpcLr**	**PtSpcTb**
Drive and Parking	0.97	3.7	0.1	9.70	37.00	102	10	10
EAST SIDE	2.25	4.1	0.1	22.50	41.00	21	10	10
Outside Property	N.A.	0.1	0.0	N.A.	N.A.	389	10	10
Property Line	N.A.	0.2	0.0	N.A.	N.A.	161	7.5	N.A.
SOUTH SIDE	1.14	1.9	0.8	1.43	2.38	18	10	10
WEST side	N.A.	3.7	0.1	N.A.	N.A.	22	10	10
WHOLE SITE	0.48	N.A.	N.A.	N.A.	N.A.	442	10	10

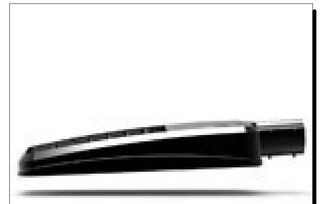
Luminaire Schedule (note fixture cataloge numbers are not complete)						
Type	**Symbol**	**Qty**	**Lum. Lumens**	**LLF**	**Lum. Watts**	**Description**
VS3B		2	4092	0.820	70	VP-S/22NB-70/BLC/4K
A		1	3558	0.820	50	VP-S/22NB-50/BLC/4K
C3		8	2744	0.520	27	60% FACTORY DIM 24NB-55-T3-4K
D1		5	773	0.550	14.6	50% DIM 1020-B1-10-LRTD4-9014-M2-30KS-80-NCSM
SL1		1	66	0.900	4.4	MSLHH30K8 WH
B3		3	567	0.900	18.7	VRB1-15L3K

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS MAY SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES TAKEN AS SHOWN IN CALCULATION SUMMARY UNLESS OTHERWISE INDICATED.
4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
7) CHECK GRAPHIC SCALE. DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY OCCUR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.



PLAN VIEW

BEACON TRAVERSE



BEACON VIPER

KIM LED BOLLARD

Bishop St site ltg rev 6-5-15.AGI

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

TITLE
BISHOP STREET
PORTLAND, ME
LIGHTING LAYOUT

Date:6/29/2015

ARCHITECT/ENGINEER:
MITCHELL & ASSOCIATES

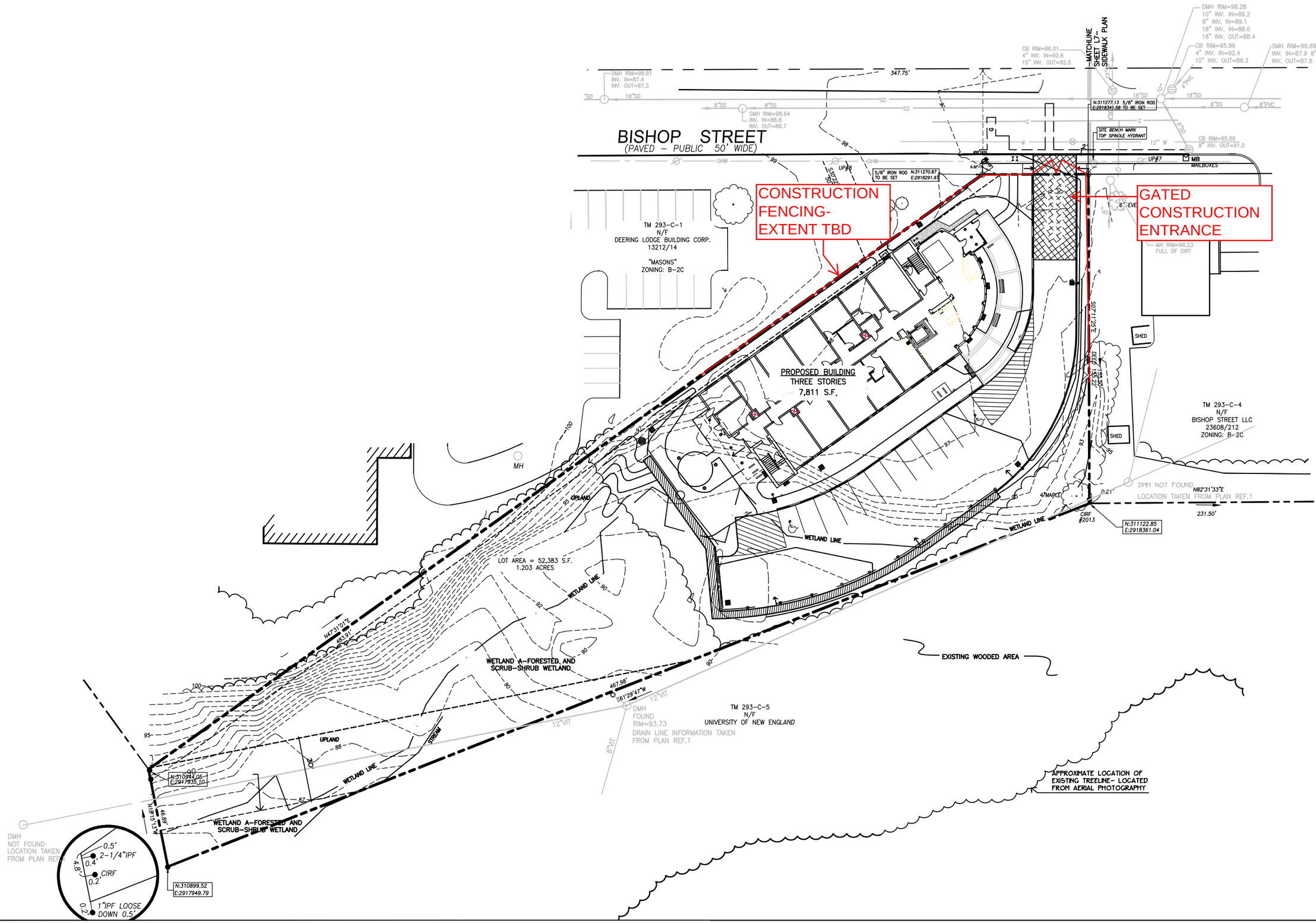
SCALE **NOT TO SCALE**

Page 1 of 1

SWANEY LIGHTING ASSOCIATES, INC.

NOTICE: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SWANEY LIGHTING ASSOCIATES.
ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT THE DRAWING WILL BE TREATED AS CONFIDENTIAL. THIS DRAWING IS TO BE USED FOR NO PURPOSE OTHER THAN AS DETAILED IN WRITING TO SWANEY LIGHTING ASSOCIATES AND IS NOT TO BE COPIED. IT IS TO BE RETURNED UPON REQUEST AND IS NOT TO BE COMMUNICATED, DISCLOSED OR COPIED; EXCEPT AS NOTED IN THE PARAGRAPH BELOW, WITHOUT OUR WRITTEN CONSENT.
NOTICE: THE INTENT OF THIS LIGHTING LAYOUT IS TO SUGGEST THE BEST UTILIZATION OF LIGHTING FIXTURES INCLUDED IN THIS DRAWING. IT IS PROVIDED USING FIXTURE PHOTOMETRICS AS SUBMITTED BY THE MANUFACTURER. WHILE SWANEY LIGHTING ASSOCIATES, INC. HAS MADE EVERY EFFORT TO ENSURE THAT THE PERFORMANCE SHOWN IN IES FILE IS NOT THE RESPONSIBILITY OF THE MANUFACTURER, IT'S USE FOR ANY OTHER PURPOSE IS NOT AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.

Plan 25



Prepared For:

Owner:

AVESTA BISHOP STREET LP
307 Cumberland Avenue
Portland, Maine 04101
Tel.: 207-553-7777

Prepared By:

MITCHELL & ASSOCIATES
Landscape Architects
The Staples School
70 Center Street
Portland, Maine 04101
Tel.: 207-774-4427

72 BISHOP STREET

Portland, Maine

Bishop Street

Date:
APRIL 10, 2015

Issued For:
SITE PLAN AND SUBDIVISION PLAN REVIEW

Revisions:

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Title:
CONSTRUCTION MANAGEMENT PLAN

Scale: 1"= 20'

0 10 20 40 ft.

North:

Sheet No.:
A

PC1

From: michael joyce <mjoyce790@gmail.com>
To: HCD@portlandmaine.gov
Date: 5/26/2015 8:49 AM
Subject: 72 Bishop St.

Dear Ms. Donaldson,

At the Planning Board workshop on 5/19/15, there was a question as to if the residents at the proposed facility at 72 Bishop St. would be allowed to have cars. The developer stated that the residents would be allowed to have as many vehicles as they wished.

The city's traffic engineer, Tom Errico, has based his trip generation forecast on information provided by Gorrill-Palmer, the developer's traffic consultant. On page 6 of your Planning Division Memorandum of 5/15/15, Mr. Errico states "This demand calculation assumes that none of the proposed tenants will be allowed to have a vehicle." Mr. Errico further states that " if automobile ownership is permitted for residents, the Project shall return to the Planning Board for review."

When will this Planning Board review be held? Please keep me informed as to the time and place of this review session.

Thank you,

Michael Joyce
9 Mayfield St.
Portland, Me. 04103
mjoyce790@gmail.com